METRO SOLID WASTE LICENSE APPLICATION FORM

Suttle Road Recovery Facility
Attachment 1 to Application

8. Solid Waste To Be Accepted and Activities Conducted
For each material type accepted at the facility, list the expected posted public tip fee:

APPLIANCES W/ FREON OR MERCURY (PER UNIT)	15.00
CARDBOARD	0.00
CARPET / PAD (CLEAN, NON-COMMERCIAL)	91.25
CHIPPED WOOD	65.00
CHRISTMAS TREES (PER UNIT)	1.00
CLEAN CONCRETE / BRICK	25.00
COMPOSITION ROOFING	91.25
CONCRETE W/ REBAR	25.00
EWASTE (NO MORE THAN SEVEN PARTS PER LOAD PER DAY)	0.00
MIXED DRY WASTE C&D	91.25
MIXED DRY WASTE NON RECOVERABLE	93.50
METAL	0.00
ORGANICS (TYPE 3 YARD DEBRIS)	53.00
PROHIBITED WASTE FEE-PER OCCURRENCE	100.00
SHAKE AND TAR PAPER	91.25
SHEETROCK	91.25
SOD / DIRT / SAND	45.00
STYROFOAM- LESS THAN ONE YARD	10.00
STYROFOAM- MULTIPLE YARDS	7.50
TIRES W/O RIM (PER UNIT)	5.00
TIRES W/ RIM (PER UNIT)	15.00
WOOD (CLEAN)	65.00
WOOD (DEMOLITION)	65.00
YARD DEBRIS	53.00

9. Solid Waste to Be Accepted and Activities Conducted

Describe the purpose (activities to be performed and waste types to be received) of the proposed facility, include an estimate of the quantity of waste to be received annually.

WASTE TYPE	PURPOSE	QUANTITY
Mixed Dry Waste	Sorting for the purpose of recovery and recycling	18,500 tons/year
Yard Debris	Grinding and/or Reloading to compost facilities	550 tons/year
Land Clearing Debris (Large Stumps)	Grinding and Reloading for hogged fuel	675 tons/year
Wood Waste (clean/painted/treated/chipped)	Grinding and Reloading for hogged fuel	7,300 tons/year
Mixed Roofing Waste	Reloading to disposal, hogged fuel, or other approved end use	50 tons/year
E-Waste	Sorting, consolidating, and transfer for reuse or recycling	10 tons/year
Concrete (Clean / with Re-Bar)	Reloading for reuse or recycling	2,700 tons/year
Sod	Reloading for reuse or recycling	1,200 tons/year
Metal	Reloading for recycling	450 tons/year
Styrofoam	Reloading for reuse or recycling	5 tons/year
Tires	Storing, consolidating, and transfer for reuse or recycling	500 units/year
Christmas Trees	Grinding and Reloading for hogged fuel	25 units/year
Organic Waste (Food waste from Residential and Source Separated Commercial Customers)	Reload for compost feedstock	26,000 tons/year

10. Solid Waste, and/or Solid Waste Residual from processing of Solid Waste, delivered to this facility will be reloaded for transport to the following facility or facilities: *(Please list <u>all</u> facilities and include additional pages if necessary.)*

FACILITY NAME	WASTE TYPE	WASTE QUANTITY	PURPOSE
Tire Disposal and Recycling	Tires	500 units /year	Recycling
Total Reclaim	Electronics	10 tons	Recycling
Valley Landfills	Solid Waste	200 tons	Disposal
Wasco County Landfill	Solid Waste	8,000 tons	Disposal
Waste Express	Hazardous Waste	400 pounds	Disposal
Kerr Industries	Roofing	50 tons	Reuse/Recycling
Kerr Industries	Concrete	2,700 tons	Recycling
Metro Metals	Metal	450 tons	Recycling
SP Newsprint	Wood Waste	10,000 tons	Hogged Fuel
Capstone – Longview Mill	Wood Waste	4,000 tons	Hogged Fuel
Nature's Needs Compost Facility	Yard Debris	550 tons	Composting
International Paper	Styrofoam	25 tons	Recycle
Columbia Recycling	Cardboard	300 tons	Recycling
EFI	Cardboard	300 tons	Recycling
Nature's Needs Compost Facility	Organics	19,500 Tons	Composting
Recology NW Greenlands Aumsville	Organics	6,500 Tons	Composting
Columbia Recycling	Plastic	35 Tons	Recycling
Finley Buttes Landfill	Dry Waste Shaker Fines	1,900 Tons	Alternative Daily Cover

11. Provide the name, address, and function of all subcontractors involved in the facility operations:

NAME	ADDRESS	FUNCTION
Morrison Trucking	16710 SW Stellar Drive, Sherwood, OR 97410	Organics Hauling to Compost Facility
Brad Carter Trucking	13180 SW Butner Court, Beaverton, OR 97005	Organics Hauling to Compost Facility

12. List the anticipated quantity of wastes to be accepted annually.

GENERATOR TYPE	Tons Received	Tons Recovered	Tons Residual
• Commercial	48,600	42,138	1,624
• Industrial	5,600	1,960	186
• Residential	1,800	630	56
TOTAL	56,000	44,728	1,866

600 NORTHEAST GRAND AVENUE | PORTLAND, OREGON 97232 2736
TEL 503 797 1700 | FAX 503 797 1797

METRO

www.oregonmetro.gov

Solid Waste License Application

Mixed Non-Putrescible Waste Material Recovery Facility

METRO SOLID WASTE FACILITY LICENSE APPLICATION PACKET

METRO

Issued: May 2013

This packet contains an application for a Metro Solid Waste Facility License. You may also want to review the relevant sections of the Metro Code. The Metro Code can be accessed via the Metro web site at www.oregonmetro.gov. Solid waste facilities within the Metro boundary generally may operate only under the authorization of a License or Franchise.

Application for a new Solid Waste Facility License

Those wishing to apply for a new Metro Solid Waste Facility License must schedule a pre-application conference prior to submitting a final application form. Applicants should prepare for the pre-application conference by reviewing the application forms and drafting answers prior to the conference with Metro. To schedule the pre-application conference, contact Metro's Solid Waste Compliance and Cleanup Division at (503) 797-1835. The purpose of the pre-application conference is to determine what parts of the Metro Solid Waste Facility License Application you will need to submit, and to identify any potential issues specific to your proposal. Applications for new licenses are generally granted or denied within 120 days of the filing of a complete application. (See Metro Code section 5.01.060.) The fee for filing a license application is $300.

Renewal of an Existing License

Those wishing to renew an existing authorization without substantive changes to the current authorization must submit a completed *Renewal Application Form*, unless otherwise directed by Metro staff. License renewal applications must be submitted not less than 120 days prior to expiration of the existing license. Failure to submit applications in a timely fashion may result in a lapse of authority to operate. (See Metro Code section 5.01.087.) The fee for filing a license renewal application is $300.

Change of Authorization to an Existing License

A change in authorization of an existing license requires an application for a formal license amendment. The applicant cannot implement the change of authorization until it has been approved by Metro. (See Metro Code section 5.01.095.) The fee for filing an application for a change of authorization is $100.

Change of Ownership or Control of an Existing License

To transfer ownership or control of an existing license, an application for a formal license amendment is required. The applicant cannot transfer ownership or control of an existing license until it has been approved by Metro. (See Metro Code section 5.01.090.)

METRO

MAIL THIS APPLICATION TO:

DATE RECEIVED BY METRO:

Metro Finance and Regulatory Services
Solid Waste Compliance and Cleanup
600 NE Grand Avenue
Portland, OR 97232-2736
(503) 797-1835

Date of Pre-Application Conference: N/A – License Renewal

Solid Waste License Application
Material Recovery Facility

PART 1 – Standard License Application Information

Applicants applying to conduct material recovery must provide the following information:

1. Applicant Information (proposed Licensee)	
Facility Name:	Suttle Road Recovery Facility
Company Name:	Recology Portland, Inc.
Street Address:	4044 North Suttle Road
Mailing Address:	4044 North Suttle Road
City/State/Zip:	Portland, Oregon 97217
Registered Agent	Carl Peters, General Manager
Contact Person:	Ame LeCocq, Group Environmental Manager
Phone Number:	503-285-8777
Fax Number:	503-285-3811
E-mail Address:	alecocq@recology.com

2. Proposed Licensee's Owner or Parent Company (provide information for all owners)	
Name:	Recology
Address:	50 California Street, 24th Floor
City/State/Zip:	San Francisco, California, 94111
Phone Number:	415-875-1000
Fax Number:	415-875-1154
E-mail Address:	emerril@recology.com

3. Site Operator (if different from Proposed Licensee)	
Company Name:	***Same as Proposed Liecensee***
Contact Person:	"
Street Address:	"
Mailing Address:	"
City/State/Zip:	"
Phone Number:	"
Fax Number:	"
E-mail Address:	"

4. Site Description			
Tax Lot(s): R237942, R237943	Section: 32	Township: 2N	Range: 1E

5. Land Use	
Present Land Use Zone:	IH, Heavy Industrial
Is proposed use permitted outright?	Yes ***See Attachment E-1***
❑ If yes, attach a copy of a completed Metro or DEQ Land Use Compatibility Statement. (See also, Attachment F requirements)	
Is a conditional use permit (CUP) necessary for the facility?	Yes ***See Attachment E-2 and E-3***
❑ If yes, attach a copy of the CUP.	
Are there any land use issues presently pending?	No
If yes, explain:	N/A
Are any DEQ permits required?	Yes- Solid Waste Disposal Site Permit, and NPDES 1200-COLS Industrial Stormwater Discharge Permit ***See Attachment F-1 and F-2***
❑ If yes, list them and attach copies with this application. (See also, Attachment G requirements)	
Are any other local permits required? If yes, list them (see Attachment H requirements).	Yes- Non-System License- NSL # N-102-13(2) Non-System License- NSL # N-102-15 ***See Attachment G-1 and G-2***

6. Land Owner		
Is the applicant the sole owner of the property on which the facility is located?	■ YES	☐ NO (If you answer "NO", complete the rest of the information requested in this section and attach a copy of the Property Use Consent Form, signed by the owner(s) of the property. See Attachment J)
Name of Property Owner:	Recology, Inc.	
Mailing Address:	50 California Street, 24th Floor	
City/State/Zip:	San Francisco, California 94111	
Phone Number:	415-875-1000	

7. Public/Commercial Operations		
Will the facility be open to the public?	■ YES	☐ NO
Will the facility be open to non-affiliated commercial solid waste collectors?	■ YES	☐ NO
Will the facility be open to solid waste collection companies that collect waste from outside the boundary of Metro?	■ YES	☐ NO

Operating Hours and Traffic Volume:	PUBLIC	COMMERCIAL AFFILIATED	COMMERCIAL NON-AFFILIATED
Operating Hours	6am – 4pm Mon-Fri Closed Sat and Sun.	6am – 4pm Mon-Fri Closed Sat and Sun.	6am – 4pm Mon-Fri Closed Sat and Sun.
Estimated Vehicles Per Day	12	33	31

8. Solid Waste To Be Accepted and Activities Conducted

For each material type accepted at the facility, list the expected posted public tip fee: (attach additional pages if necessary)

WASTES / MATERIALS TO BE ACCEPTED	EXPECTED PUBLIC TIP FEE
See Attachment #1	

9. Describe the purpose (activities to be performed and waste types to be received) of the proposed facility. Include an estimate of the quantity of waste to be received annually.

WASTE TYPE	PURPOSE	QUANTITY
See Attachment #1		

10. Solid Waste, and/or Solid Waste Residual from processing of Solid Waste, delivered to this facility will be reloaded for transport to the following facility or facilities: (Please list all facilities and include additional pages if necessary.)

FACILITY NAME	WASTE TYPE	WASTE QUANTITY	PURPOSE *
See Attachment #1			

* For example: Disposal, Inert Fill, or Useful Material

11. Provide the name, address and function of all subcontractors involved in the facility operations:

NAME	ADDRESS	FUNCTION
See Attachment #1		

12. List the anticipated quantity of wastes to be accepted annually.

BY GENERATOR TYPE: *See Attachment #1*	Tons Received	Tons Recovered	Tons Residual
• Commercial			
• Industrial			
• Residential			
TOTAL			

13. Will you recover materials from this waste?				
BY WASTE TYPE:	Tons	YES	NO	Estimate of the maximum and typical lengths of time required to process each day's receipt of each waste / material type:
• Non-Putrescible Wastes:	70 tons/day	X		Avg. 10 hrs processing time Max. 20 hrs processing time
• Source-Separated Recyclables:	43 tons/day	X		(wood & recycling) Avg. 4 hrs processing time Max. 8 hrs processing time
• Source-Separated Yard Debris:	2 tons/day	X		Avg. 30 min processing time Max. 1 hr processing time
• Special Wastes:			X	
• Inerts:	7 tons/day	X		Avg. 10 hrs processing time Max. 20 hrs processing time
• Petroleum Contaminated Soil:			X	
• Other: Residential Organics	100 tons/day	X		Avg. 4 hrs processing time Max. 8 hrs processing time

PART 2 – Standard Attachments to License Application (License application continued)

- All of the following attachments (Attachments A – J) are required and must be submitted in order for a license application to be considered complete. Each attachment must be clearly labeled.
- Application submittals such as facility design, building plans, site plans and specifications must be prepared, as appropriate, by persons licensed in engineering, architecture, landscape design, traffic engineering, air quality control, and design of structures.

ATTACHMENT A: SITE PLAN

The applicant must submit a facility site plan that includes scaled maps and drawings showing the location of the facility at an appropriate scale, and no smaller than one inch equals 30 feet. The following information must be provided:	
(1)	The location of the facility on a tax lot map. ***See Attachment A-1***
(2)	Boundaries of the facility and property. ***See Attachment A-2***

(3) Location of all buildings on the property (existing and proposed) and other pertinent information with respect to the operation of the facility, to include:

a) scale and scale house location

b) fencing and gates

c) access roads

d) paved areas

e) vegetative buffer zones and berms

f) sorting line and other major materials recovery equipment

See Attachment A-3

(4) Identify any exterior stockpile footprints, the type of materials and the maximum height of each exterior material stockpile.

Stockpile foot prints are located on the site diagram (Attachment A-3). Stockpile height maximums are as follows:

Wood: 25 feet

Inert C & D: 12 feet

Compost: 12 feet

(5) Identify water sources for fire suppression.

Fire suppression onsite is provided by a sprinkler system within the processing and office building. A fire hydrant is located on Suttle Road outside of the entry gate.

(6) Designate on-site traffic flow patterns. ***See Attachment A-3***

(7) Identify where the sign(s) will be located on the facility site plan. ***See Attachment A-3***

Signs must be posted at all public entrances to the facility, and in conformity with local government signage regulations. These signs shall be easily and readily visible, and legible from off-site during all hours and shall contain at least the following information:

a) General facility information

(1) Name of the facility
(2) Address of the facility
(3) Emergency telephone number for the facility
(4) Operating hours during which the facility is open for the receipt of authorized waste
(5) Fees and charges for public customers;
(6) Metro's name and telephone number (503) 234-3000
(7) A list of authorized and prohibited wastes

b) Vehicle / traffic flow information or diagram.

c) Covered load requirements,

ATTACHMENT B: FACILITY DESIGN PLAN AND REPORT

The applicant shall submit a facility design plan and report that address the following:

(1) Facility Design Plan

a) Submit a proposed design providing a roofed structure enclosed on at least three sides and an impervious surface (e.g. asphalt, concrete) for the tipping floor, processing (sorting) areas, storage areas and reloading areas. ***See Attachment B-1***

b) Identify the location of all areas for load checking, receiving, processing, reload and storage areas, as applicable, for solid waste, source-separated recyclable materials, recovered materials, waste residuals, exterior stockpiles, hazardous waste, contaminated waste and other materials. See ***Attachment A-3***

c) Describe control measures to prevent fugitive dust, airborne debris and litter. Describe how the facility design will provide for shrouding and dust prevention for the receiving area, processing area, storage area, reload area, and all dry waste processing equipment and all conveyor transfer points where dust is generated. ***See Attachment C***

d) Identify the location for the storage of prohibited wastes removed during the load checking process that is separately secured or isolated. Identify containment areas to prevent leaking and contamination. ***See Attachment A-3***

e) Describe any additional facility design measures and procedures for the control of dust, windblown materials, airborne debris, litter and for the handling of the waste in the case of major processing facility breakdown. ***See Attachment C***

(2) Facility capacity.

a) Provide plans, reports and specifications to document that the size and configuration of the facility grounds, building and equipment, including the facility layout, drainage structures, building design, and major facility equipment, processing systems and storage areas are of sufficient capacity to accommodate seasonal throughput of all materials that will be delivered to and generated by the facility.

b) Provide the estimated capacity (cubic yards and tons) of the facility storage area(s) for incoming solid waste waiting to be processed, the estimated capacity (cubic yards and tons) for storage of recovered materials, and the estimated capacity (cubic yards and tons) for storage of processing residual.

See Attachment 1, Attachment C

(3) Fire prevention.

Submit proof of compliance with local and state fire codes.

See Attachment B-2 for a list of Fire Bureau permits and inspections during recent construction efforts. No other fire marshal inspections have occurred at the facility. Hazardous Substance Information Survey is no longer required for this facility due to lack of storage of threshold quantities of hazmat.

(4) Adequate vehicle accommodation.

Provide documentation to demonstrate that adequate on-site area at the facility's entrance, scales, loading and unloading points and exit points shall be provided to allow the number and types of vehicles expected to use the facility during peak times to safely queue off the public roads and right-of-way.

See Attachment B-3, Traffic Study from 2010

(5) Water contaminated by solid waste and solid waste leachate.

Submit a DEQ (or equivalent) approved plan with pollution control measures to protect surface and ground waters, including runoff collection and discharge and equipment cleaning and washdown water.

See Attachment B-4, Stormwater Pollution Control Plan

ATTACHMENT C: MATERIAL RECOVERY PRACTICES

See Attachment C – Operations Plan

Describe how material recovery will be conducted at the facility. Attach as many additional pages as necessary to address each of the following:	
(1)	A detailed description of how the proposed facility will further recycling or materials recovery processing within the Metro region.
(2)	A detailed description of the methods you will use for measuring and keeping records of incoming solid waste.
(3)	A detailed description of the methods you will use to distinguish loads of incoming source-separated recyclables from other materials.
(4)	A detailed description of the steps you will take to recover materials from solid waste. Include the material recovery methods and equipment to be used on site (e.g., sorting lines, hand picking, magnets, etc.)
(5)	The general markets for the materials recovered at the facility.
(6)	A detailed description of the methods you will use for measuring and keeping records of materials received, recovered from processing, and solid waste disposed - consistent with Metro's reporting requirements.

ATTACHMENT D: OPERATING PLAN

See Attachment C – Operations Plan

The applicant is required to develop and submit an operating plan for review and approval by the Manager of the Metro Solid Waste Regulatory Affairs Division. This section lists the procedures that must be included in the required facility operating plan. A proposed facility operating plan must be submitted with the completed license application subject to any additional elements as required in the license - if one is approved and issued. The operating plan shall describe at a minimum:	
(1)	The types of solid wastes to be accepted and handled at the facility.
(2)	A detailed description of how you will distinguish and manage loads of incoming source-separated recyclables from other materials.
(3)	Procedures for inspecting loads. The operating plan shall establish: a) Procedures for inspecting incoming loads for the presence of prohibited or unauthorized wastes. b) A set of objective criteria for accepting and rejecting loads. c) An asbestos testing protocol for all material that appears as if it may contain asbestos.
(4)	Procedures for processing and storage of loads. The operating plan shall establish procedures for: a) Processing of all authorized solid wastes. b) Reloading and transfer of authorized solid wastes. c) Managing stockpiles. d) Storing authorized solid wastes e) Minimizing storage times, and avoiding delay in processing and managing of all authorized solid wastes and recovered materials.

(5)	Procedures for rejecting or managing prohibited wastes. The operating plan shall describe procedures for rejecting, managing reloading and transporting to appropriate facilities or disposal sites any prohibited or unauthorized wastes discovered at the facility. The plan shall include procedures for managing: a) Hazardous wastes. b) Other prohibited solid wastes (e.g., putrescible waste, special waste). c) Procedures and methods for notifying generators not to place hazardous wastes or other prohibited wastes in drop boxes or other collection containers destined for the facility.
(6)	Procedures for odor prevention. The operating plan shall establish procedures for preventing all objectionable odors for being detected off the premises of the facility. The plan must include: a) A management plan that will be used to monitor and manage all objectionable odors of any derivation including malodorous loads delivered to the facility. b) Procedures for receiving and recording odor complaints, immediately investigating any odor complaints to determine the cause of odor emissions, and remedying promptly any odor problem at the facility.
(7)	Procedures for emergencies. The operating plan shall describe procedures to be followed in case of fire or other emergency.
(8)	Procedures for preventing and controlling nuisances, including noise, vectors, dust, litter, and odors. Include a description of how you will encourage delivery of waste in covered loads.
(9)	Procedures for fire prevention, protection, and control measures used at the facility.

ATTACHMENT E: INSURANCE

See Attachment D – Certificate of Insurance

Include proof of the following types of insurance, covering the applicant, its employees, and agents:	
(1)	The most recently approved ISO (Insurance Services Office) Commercial General Liability policy, or its equivalent, written on an occurrence basis. The policy must include coverage for bodily injury, property damage, personal injury, death, contractual liability, premises and products/completed operations. All insurance coverage must be a minimum of $1,000,000 per occurrence and $1,000,000 aggregate.
(2)	Automobile bodily injury and property damage liability insurance must be a minimum of $1,000,000 per occurrence and $1,000,000 aggregate.
(3)	All insurance coverage must be a minimum of $1,000,000 per occurrence and $1,000,000 aggregate.
(4)	Metro, its elected officials, departments, employees, and agents must be named as ADDITIONAL INSUREDS.
(5)	Certification of Workers' Compensation insurance including employer's liability. If the Licensee has no employees and will perform the work without the assistance of others, a certificate to that effect may be attached in lieu of the certificate showing current Workers' Compensation.

ATTACHMENT F: LAND USE COMPATIBILITY STATEMENT (LUCS)

The following information must be provided:
A copy of a completed Metro LUCS or DEQ LUCS. Metro LUCS is available at www.oregonmetro.gov. ***See Attachment E-1, E-2, and E-3***

ATTACHMENT G: DEQ PERMIT APPLICATIONS AND INFORMATION

The following information must be provided:
A duplicate copy of all applications for necessary DEQ permits and any other information required by or submitted to DEQ, including closure plans, financial assurance for the costs of closure of the facility, and conditional use permit or land use compatibility statement, if applicable. ***See Attachment F-1 – DEQ Solid Waste Disposal Site Permit*** ***F-2 – DEQ – NPDES 1200-COLS Industrial Stormwater Discharge Permit***

ATTACHMENT H: OTHER REQUIRED PERMITS

The following information must be provided:
A copy of any required federal, state, county, city or other permits, licenses, or franchises that have been granted or issued, not including materials required by Attachment G, or a copy of any applications for such other permits, licenses, or franchises. Copies of correspondence pertaining to such permits, licenses or franchises may be requested. ***See Attachment G-1 – Non-System License to NW Greenlands Aumsville*** ***G-2 – Non-System License to Nature's Needs***

ATTACHMENT I: CLOSURE PLAN AND FINANCIAL ASSURANCE

See Attachment H

The following information must be provided	
(1)	If a closure plan and financial assurance are required by DEQ, copies of these documents should be included with the application per Attachment G.
(2)	If DEQ does **not** require a closure plan for the facility, attach a closure document describing closure protocol and associated costs. Closure means those activities associated with restoring the site to its condition prior to engaging in the licensable activity. Closure may include, but is not limited to removal of all on-site solid waste stockpiles accumulated after being issued a Metro Solid Waste Facility License. The Closure protocol is the written protocol that specifies the activities required to properly close the facility and cease further solid waste activities.
(3)	If DEQ does **not** require any financial assurance for the costs of closure of the facility, attach proof of financial assurance for the costs of closure of the facility. Cost of closure means the costs associated with restoring the site to its condition prior to engaging in the licensable activity. These costs may include but are not limited to: a) the cost to load and transport accumulated solid waste stockpiles to an authorized disposal site or recycling facility; b) the cost to "tip" the waste at an authorized landfill or recycling facility; and c) other related costs such as site grading or additional disposal costs associated with restoring the site.

Examples of acceptable forms of financial assurance include, but are not limited to the following: surety bond, irrevocable letter of credit, closure insurance, escrow account.

If the DEQ does not issue a permit or require financial assurance, then the COO may waive the requirement for financial assurance if the applicant demonstrates that the cost to implement the closure plan will be less than $10,000.

ATTACHMENT J: PROPERTY USE CONSENT FORM

The following information must be provided:

If required in Part 1 of this application. Form is available at www.oregonmetro.gov.

PUBLIC NOTICE AND CONFIDENTIAL INFORMATION

This application and the supporting documentation may be subject to Metro's public notice procedures. Metro may notify and provide the public with an opportunity to review and comment on the proposed application. Such public notice may include, but is not limited to, the posting of the complete application on Metro's website.

The applicant may identify as confidential any reports, books, records, maps, plans, income tax returns, financial statements, contracts and other similar written materials of the applicant that are directly related to the proposed application and that are submitted to or reviewed by Metro. The applicant shall prominently mark any information that it claims confidential with the mark "CONFIDENTIAL" prior to submittal to or review by Metro. Metro shall treat as confidential any information so marked and will make a good faith effort not to disclose such information unless Metro's refusal to disclose such information would be contrary to applicable Oregon law, including, without limitation, ORS Chapter 192.

Within five (5) days of Metro's receipt of a request for disclosure of information identified by the applicant as confidential, Metro shall provide the applicant written notice of the request. The applicant shall have three (3) days within which time to respond in writing to the request before Metro determines, at its sole discretion, whether to disclose any requested information. The applicant shall pay any costs incurred by Metro as a result of Metro's efforts to remove or redact any such confidential information from documents that Metro produces in response to a public records request. These conditions shall not limit the use of any information submitted to or reviewed by Metro for regulatory purposes or in any enforcement proceeding. In addition, Metro may share any confidential information with representatives of other governmental agencies provided that, consistent with Oregon law, such representatives agree to continue to treat such information as confidential and make good faith efforts not to disclose such information.

APPLICANT CERTIFICATION: This form cannot be processed without a signature

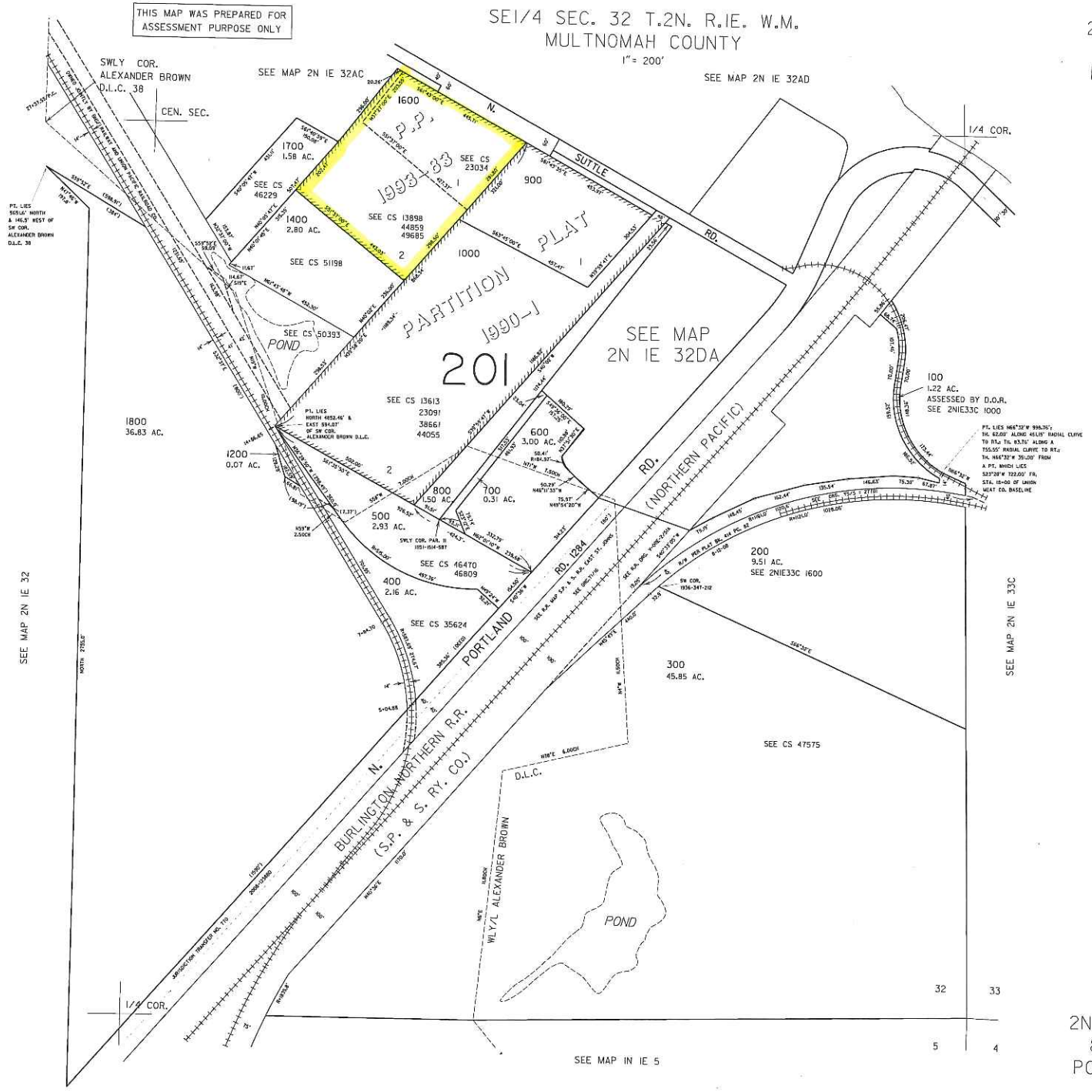
I certify under penalty of law that the information contained in this application is true and correct to the best of my knowledge. I agree to notify Metro within 10 days of any change in the information submitted as a part of this application.

SIGNATURE OF AUTHORIZED AGENT

TITLE General Mgr

PRINT NAME Carl E. Peters

DATE 2/26/15 PHONE 503-283-2015



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Property Boundary Map *(source: Portland Maps)*

Site Diagram for Recology's Material Recovery Facility
4044 N. Suttle Road
Portland, Oregon

NORTH

ORRCo

property line

joint bioswale

western swale

Recology outfall

ORRCo outfall

trailer staging & drop-box storage

drop-box storage

chain-link security fence

southern swale

ORRCo Wetlands

wood storage & processing

dry-waste receiving

in feed

fines storage

fines

sort line

HW/e-waste appliances

tire storage

leachate drain

organics bay

organics storage

load-out bay

leachate drain

leachate tank

storage

CB-4

CB-3

drop-box storage

inert C&D

water-quality structure

secondary entrance

compost bunker

styroform storage

CB-2

out-bound scale

drop-box storage

central swale with landscaping

parking

scale house

in-bound scale

N. Suttle Road

fire hydrant

office and break room

CB-1

landscaping

shop & maintenance

main entrance

Entry Signs (rates; accepted and prohibited waste lists)

Peninsula RR

= traffic flow

Note: Diagram based on topographic survey completed for Vista Consultants, LLC, dated 1/18/10.

0 30 60
Scale (feet)

Coles Environmental Consulting, Inc.
750 S. Rosemont Rd. West Linn, OR
(503) 636-3102, fax (503) 699-1980

Approx. Scale: 1" = 60'	Approved By	Date/Revision
		02/27/15
		Rev. 6

Figure 1. Site diagram of Recology's Materials Recovery Facility, 4044 N. Suttle Road, Portland, Oregon showing key site features.

FLOOR PLAN GENERAL NOTES

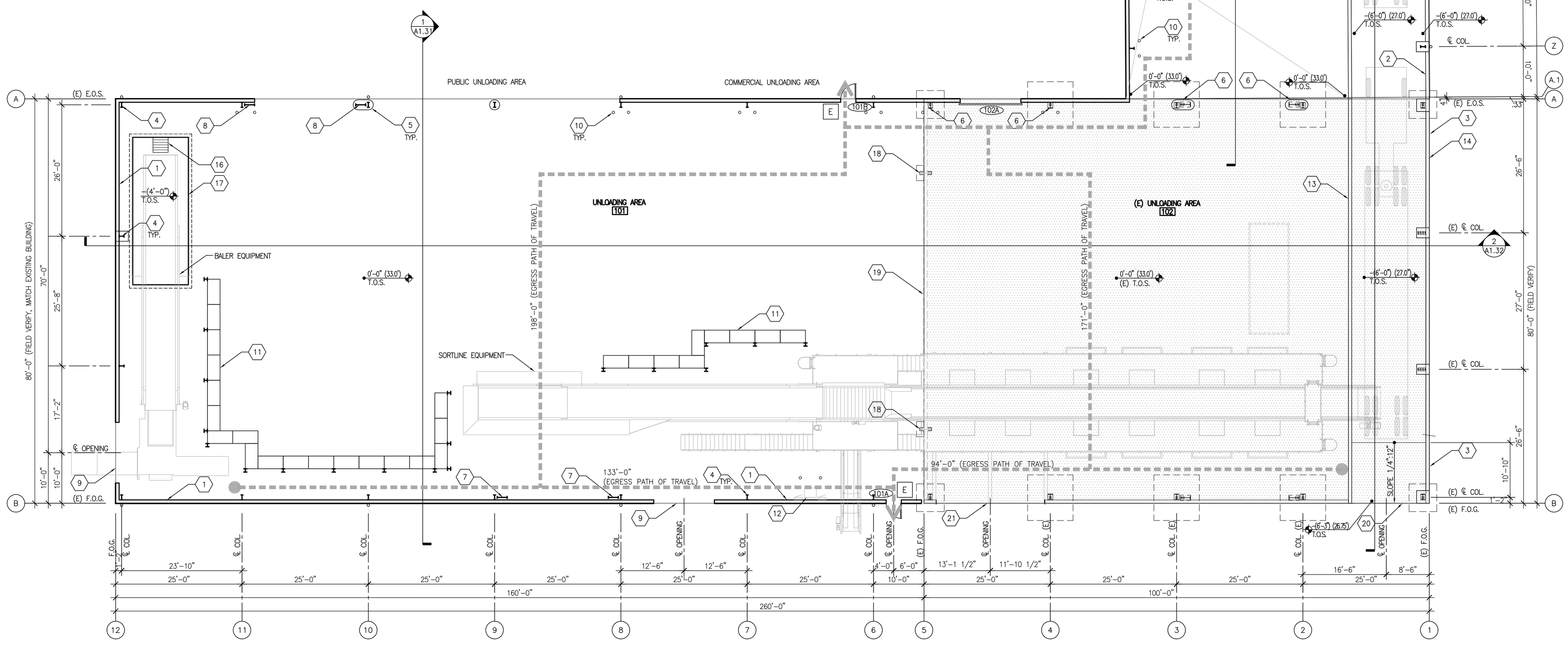
- GLASS USED IN DOORS AND WINDOWS LOCATED WITHIN A 24" ARC OF THE NEAREST VERTICAL EDGE OF A DOOR OR IN AREAS SUBJECT TO HUMAN IMPACT OR OTHER HAZARDOUS LOCATIONS SHALL BE TEMPERED OR OF AN APPROVED SAFETY GLAZING MATERIAL PER SECTION 2406 OF THE INTERNATIONAL BUILDING CODE (IBC).
- VENTILATION AND LIGHT SHALL BE PROVIDED AS PER SECTIONS 1203 AND 1205 OF THE IBC.
- ALL INSULATION INDICATED ON THE PLANS SHALL COMPLY WITH OR EXCEED THE REQUIREMENTS IN SECTION 719 OF THE IBC FOR SMOKE DENSITY AND FLAME SPREAD.
- PROVIDE CLASS B, DRY-CHEMICAL FIRE EXTINGUISHERS RATED FOR PRESSURIZED FLAMMABLE LIQUID AND GAS FIRES ON EACH FLOOR. PROVIDE A MINIMUM 2-A EXTINGUISHER AT EACH EXIT DOOR AND ONE SUCH THAT THE MAXIMUM TRAVEL DISTANCE DOES NOT EXCEED 75-FEET. COORDINATE FINAL LOCATIONS OF EACH WITH FIRE MARSHALL.
- PROVIDE EGRESS IDENTIFICATION PER SECTION 1011 OF THE IBC. VERIFY EXACT LOCATION OF SIGNS WITH FIRE MARSHAL AT TIME OF CONSTRUCTION.
- PROVIDE EGRESS ILLUMINATION PER SECTION 1006 OF THE IBC BY SEPARATE PERMIT.
- APPLICABLE CODES: ALL WORK SHALL BE IN CONFORMANCE WITH ALL FEDERAL, STATE, AND LOCAL CODES. SPECIFICATIONS AND STANDARDS SHALL MEAN, AND ARE INTENDED TO BE, THE LATEST EDITION, AMENDMENT OR REVISION OF SUCH REFERENCE STANDARD, IN EFFECT AS OF THE DATE OF THE CONTRACT DOCUMENTS.
- CONTRACTOR SHALL PROVIDE ALL NECESSARY TESTING AND COORDINATE ALL REQUIRED INSPECTIONS.
- CONTRACTOR TO VERIFY EXISTING CONDITIONS AND DIMENSIONS SHOWN OR IMPLIED PRIOR TO START OF CONSTRUCTION AND NOTIFY A/E OF ANY DISCREPANCIES.
- ALL HARDWARE SHALL COMPLY WITH REQUIREMENTS OF THE ADA.
- ALL NEW DOORS AND WINDOWS SHALL COMPLY WITH APPLICABLE ENERGY CODES.
- PROVIDE 18" MIN. CLEAR OPPOSITE DOOR LEVER ON PULL SIDE OF DOOR AND 12" MIN. CLEAR OPPOSITE DOOR LEVER ON PUSH SIDE PER ADA GUIDELINES
- GRID LINES ARE TO CENTERLINE OF COLUMNS UNLESS NOTED OTHERWISE.
- DIMENSIONS ARE TO GRID LINE OR FACE OF GIRT/STUD OR CENTERLINE OF OPENING UNLESS NOTED OTHERWISE.

LEGEND

NAME / ROOM ###	ROOM NAME / ROOM ###
###A	DOOR NUMBER -- SEE DOOR SCHEDULE
(E)	EXISTING
F.O.G.	FACE OF GIRT
℄	CENTERLINE
E.O.S.	EDGE OF SLAB
○D.S.	DOWNSPOUT
T.O.S.	TOP OF SLAB -- REFERENCE CIVIL DRAWINGS
	NEW METAL BUILDING WALL
	EXISTING WALL TO REMAIN
	HATCH INDICATES EXTENT OF EXISTING STRUCTURE
E	EXIT SIGN
	EGRESS PATH OF TRAVEL
	STARTING POINT OF EGRESS PATH OF TRAVEL -- (MOST REMOTE POINT OF THE AREA)

KEYNOTES

1. METAL WALL FRAMING BY METAL BUILDING MANUFACTURER
2. METAL WALL FRAMING BY METAL BUILDING MANUFACTURER ABOVE NEW CONCRETE RETAINING WALL
3. EXISTING METAL WALL FRAMING BY METAL BUILDING MANUFACTURER ABOVE NEW CONCRETE RETAINING WALL
4. STEEL COLUMN BY METAL BUILDING MANUFACTURER
5. STEEL COLUMN BY METAL BUILDING MANUFACTURER ENCASED IN CONCRETE TO 6'-0" ABOVE FINISHED FLOOR
6. EXISTING STEEL COLUMN AT BUILDING FRAME ENCASED IN CONCRETE TO 6'-0" ABOVE FINISHED FLOOR
7. PORTAL FRAME COLUMN BY METAL BUILDING MANUFACTURER
8. PORTAL FRAME COLUMN BY METAL BUILDING MANUFACTURER ENCASED IN CONCRETE TO 6'-0" ABOVE FINISHED FLOOR
9. 12'-0" WIDE x 12'-0" HIGH OPENING IN METAL BUILDING WALL
10. BOLLARD -- SEE 3/S4.01 -- CONCRETE BLOCK AT OWNER'S OPTION
11. CONCRETE BARRIER W/ STEEL COLUMN PUSH WALL -- SEE STRUCTURAL DRAWINGS
12. ELECTRICAL EQUIPMENT -- SEE STRUCTURAL DRAWINGS FOR HOUSEKEEPING PAD INFORMATION
13. CONCRETE RETAINING WALL TO 4'-0" ABOVE FINISH FLOOR
14. CONCRETE RETAINING WALL BELOW TO FINISH FLOOR LEVEL
15. TRENCH DRAIN, VERIFY ADA COMPLIANT STEEL BAR GRATING WHERE EGRESS PATH OF TRAVEL CROSSES TRENCH DRAIN -- SEE STRUCTURAL DRAWINGS
16. SUMP -- SEE STRUCTURAL DRAWINGS
17. 4'-0" DEEP PIT -- SEE STRUCTURAL DRAWINGS
18. REMOVE EXISTING COLUMN -- NON-BEARING "WIND" COLUMN
19. REMOVE EXISTING WALL/DOOR & ASSOCIATED FRAMING, RELOCATE DOOR
20. NEW 12'-0" WIDE x 16'-0" HIGH OPENING IN EXISTING WALL
21. NEW 21'-6" WIDE x 18'-0" HIGH OPENING IN EXISTING WALL
22. NOT USED
23. 1000 GALLON WASTE WATER TANK
24. SUMP AND PUMP
25. RELOCATED OVERHEAD DOOR -- SEE DETAILS 6 & 7/S6.01 FOR ADDITIONAL INFORMATION



TRUE NORTH PLAN NORTH

1 / A100 **MASTER FLOOR PLAN**

3/32" = 1'-0"

PBS Engineering + Environmental
1310 Main Street
Vancouver, WA 98660
360.690.4331 Main
866.727.0140 Fax
www.pbsenv.com

140 SW Arthur St., Ste 300
Portland, Oregon 97201 USA
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FAX 503.595.6548

LIVERMORE architecture & engineering, inc. industrial • commercial

140 SW Arthur Street, Suite 200
Portland, Oregon 97201
Phone: 503-892-3002
Fax: 503-892-3005

NOT FOR CONSTRUCTION

RECOLOGY OREGON MATERIAL RECOVERY, INC. - SUTTLE ROAD
4044 NORTH SUTTLE ROAD PORTLAND, OREGON 97217

MASTER FLOOR PLAN (EXISTING & EXPANSION A-1 AND A-2)

PROJECT:	210017.00
DRAWN:	CSN
CHECKED:	GML
DATE:	JULY 1, 2011

REVISIONS:

1 BUILDING PERMIT ISSUE
2 BID ISSUE
3 CITY COMMENTS

A1.00

ARCHITECTURAL DRAWING

S:\Data\CAD_Projects\1021\00117.00 Recology Suttle Road\00 Current\A1.00.dwg Sep 16, 2011 03:05pm danaea

FULL SIZE SHEET FORMAT IS 24 X 36; IF PRINTED SIZE IS OTHER THAN THIS FORMAT THEN SHEET HAS BEEN REDUCED AND INDICATED DRAWING SCALE MAY NOT BE ACCURATE.

PortlandMaps

Permit/Case Report Understand this Report

4044 N SUTTLE RD

Permit/Case Number	2011-184485-000-00-FS
IVR Number	3117118
Permit/Case Type	Fire Systems Permit Fire Sprinklers New
Work/Case Description	SPRINKLER - INSTALL NEW DRY SYSTEM IN EXISTING BUILDING AND BOTH NEW ADDITION WINGS. U/G BY OTHERS
Issue Date	10/26/2011
Final Date	4/19/2012
Latest Activity	4/19/2012
Status	Final Inspection Approved

Activities	Must Check	Activity Status	Last Activity	Completed	Staff Contact
Intake					
Completeness Check-Fire	Y	Approved	10/11/2011	10/11/2011	Winegarden,Faith 503-823-7077
Connect to F2K	Y	Completed	10/11/2011	10/11/2011	Winegarden,Faith 503-823-7077
Fire Bureau					
Fire Permit Plan Review	Y	Approved	10/26/2011	10/26/2011	Olley,Mike 503-823-3769
Underground Fire Main Cross-Reference	Y	Not Required	10/26/2011	10/26/2011	Winegarden,Faith 503-823-7077
Fire Permit Issuance					
Pre-Issuance Check - Fire	Y	Approved	10/26/2011	10/26/2011	Cower,Susan
Fire Bureau Inspections					
Confirm Water Supply	Y	Approved	04/18/2012	04/18/2012	Olley,Mike 503-823-3769
Hydrostatic Test	Y	Approved	04/13/2012	04/13/2012	Olley,Mike 503-823-3769
Cover	Y	Approved	04/18/2012	04/18/2012	Olley,Mike 503-823-3769
Signage	N	Approved	04/18/2012	04/18/2012	Olley,Mike 503-823-3769
Trip Test	N	Approved	04/18/2012	04/18/2012	Olley,Mike 503-823-3769
Final Inspection - Fire	Y	Approved	04/18/2012	04/18/2012	Olley,Mike 503-823-3769
Close Permit - FS	Y	Completed	04/19/2012	04/19/2012	Winegarden,Faith 503-823-7077

Please note: Permits/Cases created since January 1, 2000. Data updated twice daily. View disclaimer.

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City of Portland, Corporate GIS 2/24/2015

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Permit/Case Report Understand this Report

4044 N SUTTLE RD

Permit/Case Number	2011-191514-000-00-FS
IVR Number	3124198
Permit/Case Type	Fire Systems Permit Underground Fire Mains New
Work/Case Description	UNDERGROUND - INSTALL NEW UNDERGROUND FIRE LINE FOR NEW DRY FIRE SPRINKLER SYSTEM. SPRINKLER PERMIT #11-184485FS
Issue Date	11/17/2011
Final Date	4/10/2012
Latest Activity	4/10/2012
Status	Final Inspection Approved

Activities	Must Check	Activity Status	Last Activity	Completed	Staff Contact
Intake					
Completeness Check-Fire	Y	Approved	11/04/2011	11/04/2011	Winegarden,Faith 503-823-7077
Connect to F2K	Y	Completed	11/04/2011	11/04/2011	Winegarden,Faith 503-823-7077
Fire Bureau					
Fire Permit Plan Review	Y	Approved	11/17/2011	11/17/2011	Olley,Mike 503-823-3769
Fire Permit Issuance					
Pre-Issuance Check - Fire	Y	Approved	11/17/2011	11/17/2011	Cower,Susan
Fire Bureau Inspections					
Cover	N	Approved	04/06/2012	04/06/2012	Olley,Mike 503-823-3769
Hydrostatic Test	Y	Approved	04/10/2012	04/10/2012	Delval,Pete
Flush Inspection	Y	Approved	04/10/2012	04/10/2012	Delval,Pete
Final Inspection - Fire	Y	Approved	04/10/2012	04/10/2012	Delval,Pete
Close Permit - FS	Y	Completed	04/10/2012	04/10/2012	Winegarden,Faith 503-823-7077

Please note: Permits/Cases created since January 1, 2000. Data updated twice daily. View disclaimer.

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City of Portland, Corporate GIS 2/24/2015

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KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING
610 SW Alder Street, Suite 700, Portland, OR 97205 P 503.228.5230 F 503.273.8169

October 18, 2010 Project #: 11183.2

Robert Haley
City of Portland
1120 SW 5th Avenue
Portland, Oregon 97204

RE: Recology Suttle Road Material Recovery Facility Site Modifications

Dear Bob,

Recology Oregon Material Recovery, Inc. is proposing to modify their existing Material Recovery Facility (MRF) located at N. Suttle Road to accommodate several site modifications, including the acceptance of and initial processing of food waste. This proposal requires a conditional use permit. The purpose of this letter is to summarize the transportation related impacts associated with the proposed expanded operations and address the City of Portland conditional use approval criteria. The methodology of our analysis, pertinent findings, and our recommendations are documented in this letter.

BACKGROUND / PROPOSAL

Recology Oregon Material Recovery operates a MRF on N. Suttle Road in north Portland. This MRF currently accepts mixed dry waste from residential and commercial customers. This waste is delivered to the site, primarily by commercial vehicle, during the weekday and on weekends. Weekday hours are 6:00 a.m. to 5:00 p.m. and weekend hours are 8:00 a.m. to 12:00 p.m. These times will remain the same with the proposed modifications to the operations.

As part of an expanded recovery effort, Recology is proposing to modify the existing N. Suttle Road site, which will enable the acceptance of organic food wastes in addition to the current dry waste capabilities. These improvements include a new organic material storage structure, an expansion of the main material recovery building, site layout modifications, and site grading. Additional details are provided later in this report.

EXISTING CONDITIONS

The existing conditions analysis identifies the site conditions and current operational and geometric characteristics of the streets and multimodal facilities within the study area. These will be compared with future conditions later in this report.

Kittelson & Associates, Inc. staff visited and inventoried the existing site and surrounding study area in September 2010. At that time, KAI collected information regarding site conditions, adjacent land uses, existing traffic operations, and transportation facilities in the study area.

Site Conditions and Adjacent Land Uses

The existing MRF is located off of N. Suttle Road in a predominately heavy industrial area. Figure 1 illustrates the site vicinity map. The site is currently zoned Heavy Industrial "IH". All adjacent land uses involve various kinds of heavy industrial businesses.

Transportation Facilities

Table 1 summarizes the geometric characteristics of the existing transportation facilities and roadways in the study area. Figure 2 illustrates the existing lane configurations and traffic control devices in place at the study roadway intersections.

TABLE 1
EXISTING TRANSPORTATION FACILITIES

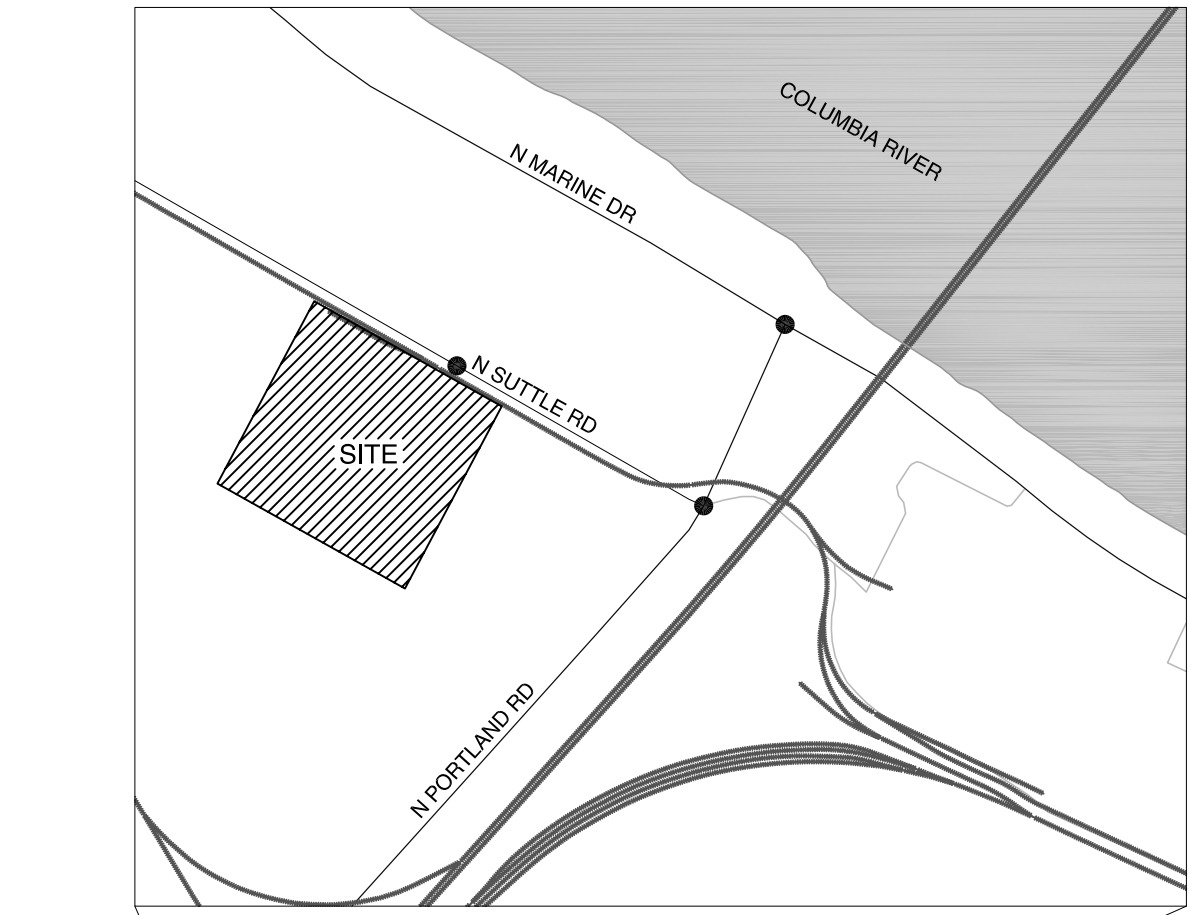
Roadway	Number of Lanes	Posted Speed	Sidewalks?	Bicycle Lanes?	Transit Service?	On-Street Parking?
N. Marine Drive	5	40 mph	Yes	No	Yes	No
N. Portland Drive	2/3	40 mph	Yes*	No*	No	No
N. Suttle Road	2	30 mph	No	No	No	No

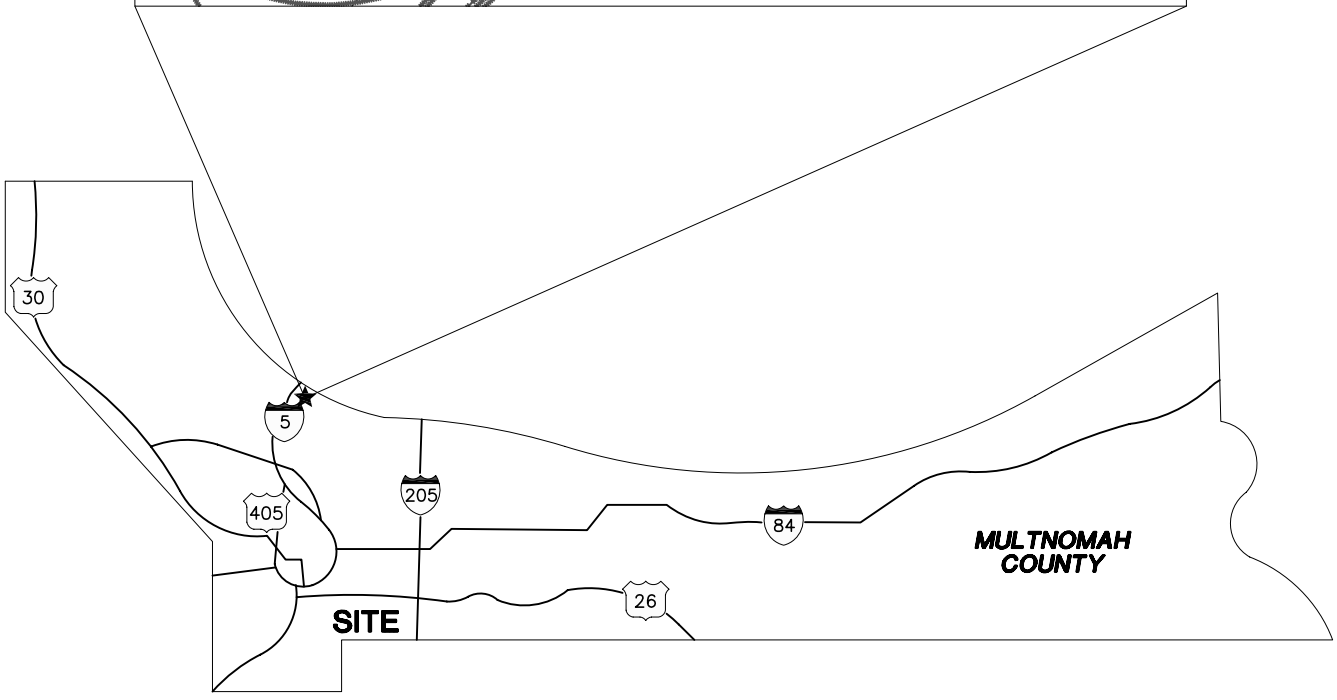
* Sidewalks exist along N. Portland Drive between N. Suttle Road and N. Marine Drive. South of there, sidewalk and bicycle activity occurs along an adjacent off-street recreational path.

Table 2 summarizes the street classifications for the study roadways as identified in the City of Portland Transportation System Plan (TSP). Each of the existing street classifications are appropriate for the current and proposed uses on the Recology site.

TABLE 2
STREET CLASSIFICATIONS

Street Classifications			
	N. Marine Drive	**N. Portland Drive**	**N. Suttle Road**
Traffic	Major City Traffic Street	Major City Traffic Street	Local Service Traffic Street
Transit	Transit Access Street	Major Transit Priority Street	Local Service Transit Street
Bicycle	Off Street Path	Off Street Path	Local Service Bikeway
Pedestrian	Off Street Path	Off Street Path	Local Service Walkway
Truck	Priority Truck Street	Priority Truck Street	Truck Access Street
Emergency	Major Emergency Response	Major Emergency Response	Minor Emergency Response





LEGEND

● - STUDY INTERSECTIONS

SITE VICINITY MAP
PORTLAND, OREGON

FIGURE 1

KITTELSON & ASSOCIATES, INC.
TRANSPORTATION ENGINEERING / PLANNING

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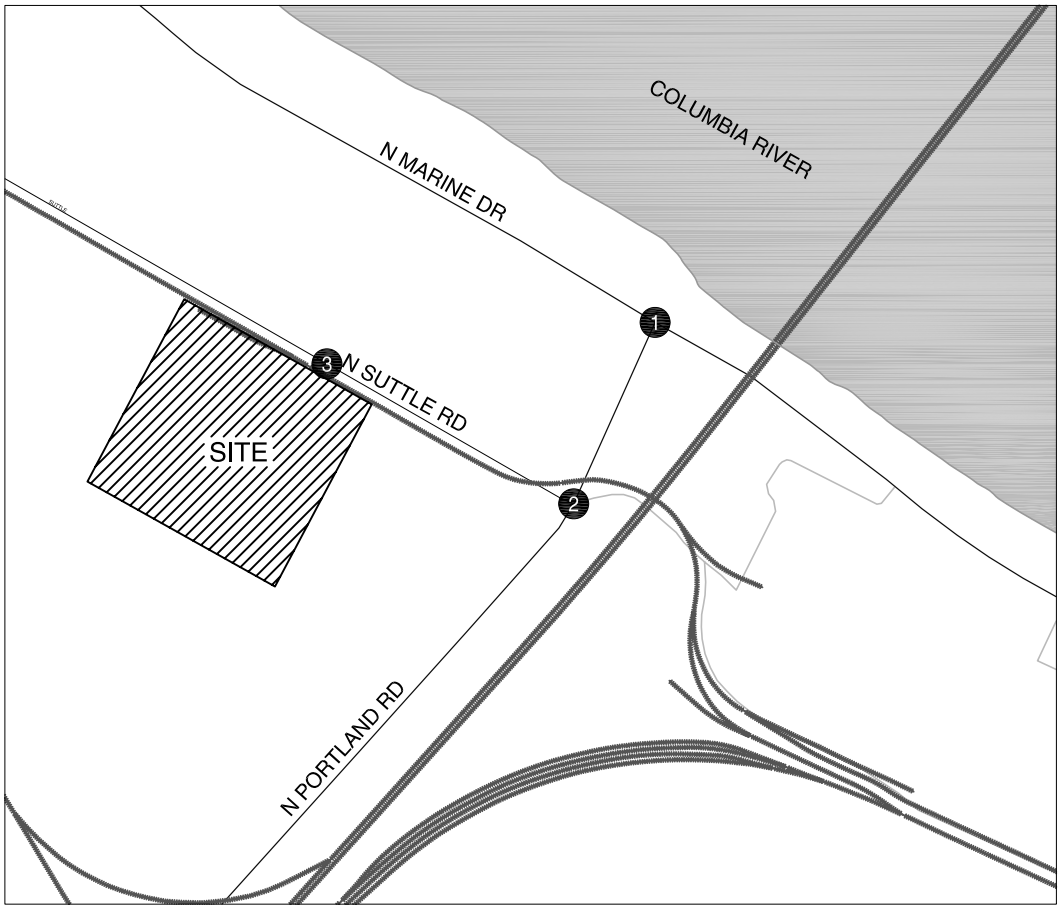

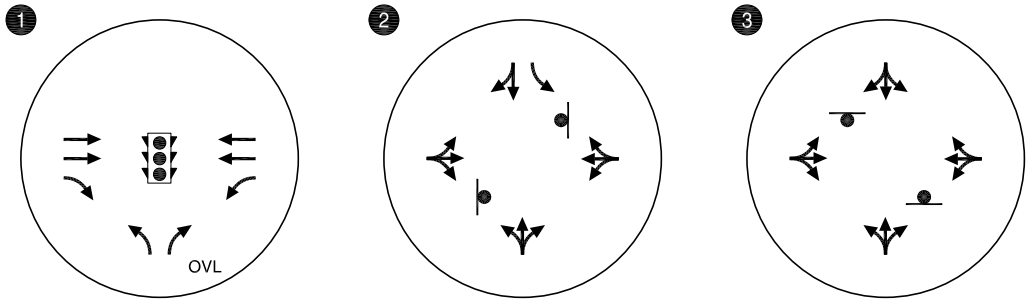

LEGEND

OVL - OVERLAP

- STOP SIGN

- TRAFFIC SIGNAL

EXISTING LANE CONFIGURATIONS AND TRAFFIC CONTROL DEVICES PORTLAND, OREGON

FIGURE 2

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Traffic Volumes and Peak Hour Operations

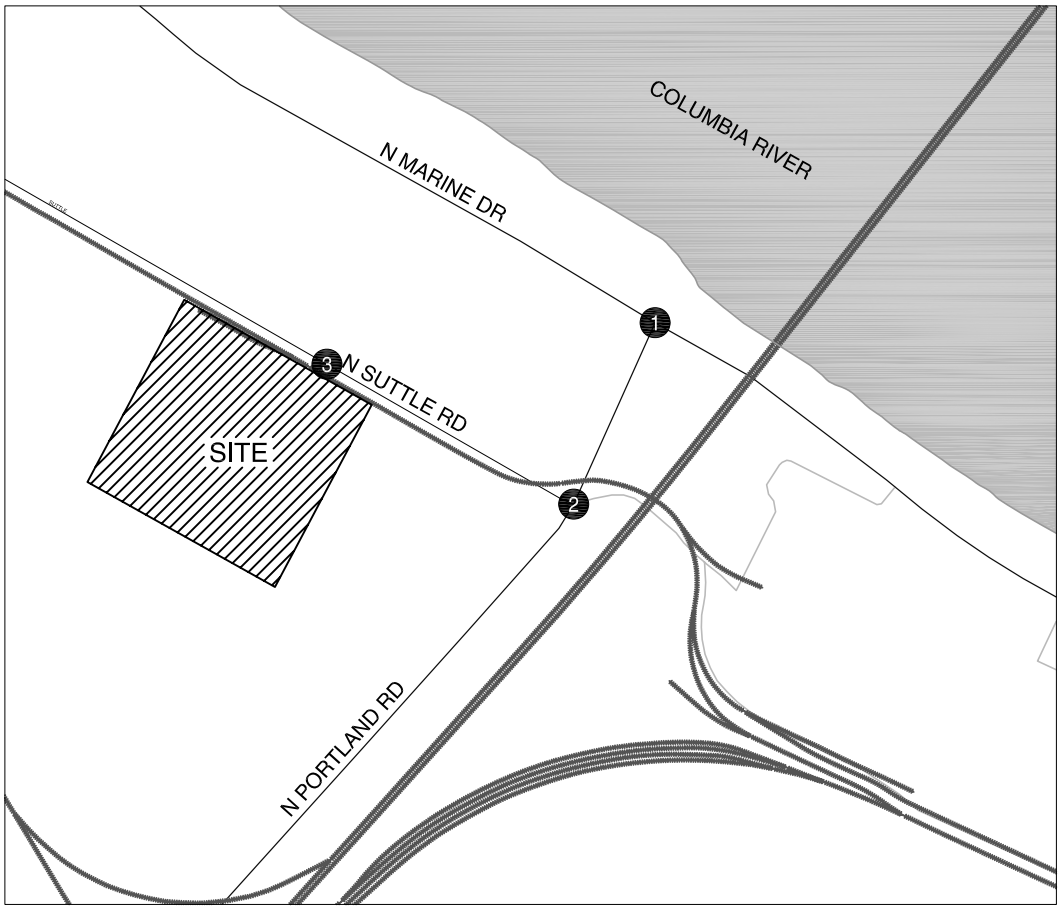
Manual turning-movement counts were conducted at the N. Marine Drive/N. Portland Drive, N. Portland Drive/N. Suttle Road, and N. Suttle Road/site driveway in September 2010. The counts were conducted on a typical mid-week day during the morning (7:00 to 9:00 a.m.) and evening (4:00 to 6:00 p.m.) peak periods. The morning peak hour was found to occur between 7:15 and 8:15 a.m. while the evening peak hour was found to occur between 4:00 and 5:00 p.m. Figure 3 provides a summary of the turning-movement counts, which are rounded to the nearest five vehicles per hour for the weekday a.m. and p.m. peak hours. *Appendix "A" contains the traffic count worksheets used in this study.*

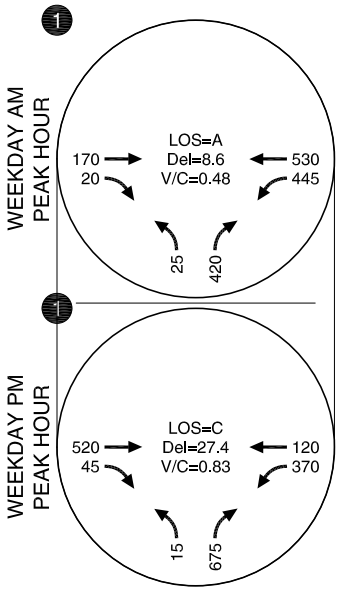
Current Levels of Service

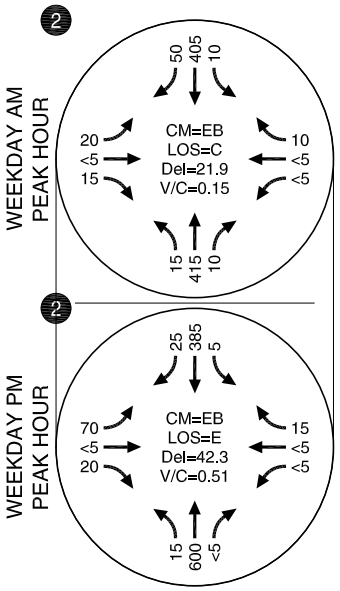
All level-of-service analyses described in this report were performed in accordance with the procedures stated in the 2000 *Highway Capacity Manual* (Reference 1). *A description of level of service and the criteria by which they are determined is presented in Appendix "B".* Appendix "B" also indicates how level of service is measured. The City of Portland considers level-of-service "D" or better as acceptable for signalized intersections.

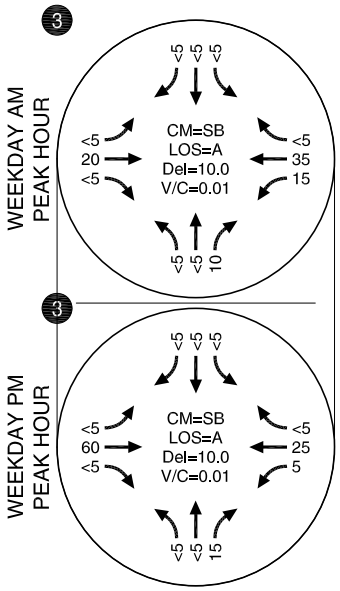
All intersection level-of-service evaluations used the peak 15-minute flow rate during the weekday p.m. peak hour. Using the peak 15-minute flow rate ensures that this analysis is based on a reasonable worst-case scenario.

Figure 3 summarizes the level-of-service analysis for the two study intersections and N. Suttle Road site driveway under existing weekday a.m. and p.m. peak hour traffic conditions. As shown, the intersections currently operate acceptably. It should be noted that the eastbound approach to the N. Portland Road/N. Suttle Road intersection currently operates at level of service "E" conditions during the weekday p.m. peak hour. The higher levels of delay on this approach are attributed to the high frequency of northbound and southbound through volumes on N. Portland Road. While this particular approach experiences higher levels of delay, the movement still has sufficient capacity. *Appendix "C" includes the level-of-service worksheets under year 2010 existing traffic conditions.*









LEGEND

CM = CRITICAL MOVEMENT (UNSIGNALIZED)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED)/CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED)
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED)/CRITICAL MOVEMENT CONTROL DELAY (UNSIGNALIZED)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

EXISTING TRAFFIC CONDITIONS
WEEKDAY AM AND PM PEAK HOUR
PORTLAND, OREGON

FIGURE 3

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FUTURE TRAFFIC CONDITIONS

The future traffic conditions analysis identifies how the transportation system will operate when the site use is expanded and operational.

Proposed Expanded Use Plans

As previously stated, the existing MRF is proposing to modify its operations, including several site improvements and the acceptance and processing of food waste. These improvements include:

- Construction of a new storage building adjacent to retail bunkers for compost, bark dust, and gravel.
- Expansion the size of the existing material recovery building from 3,000 square feet to 9,500 square feet, which will accommodate tipping bays, sorting lines, and an organic food waste receiving area.
- Construction of an additional scale on site, and
- Re-grading of the site to provide for improved storm water runoff.

Although a number of improvements are identified for the site, the existing site-access driveway will not be modified as part of the development proposal.

Trip Generation

The existing MRF is currently open for business between the hours of 6:00 a.m. and 5:00 p.m. During the regional weekday a.m. and p.m. peak traffic hours (7:15-8:15 a.m. and 4:00-5:00 p.m.), the site generates relatively minimal traffic volumes as shown in Figure 4 and re-summarized in Table 3.

Recology estimates that the accommodation of food waste is not anticipated to generate a significant increase in weekday a.m. and p.m. peak hour traffic. It is estimated that the site will see an increase in roughly 45 new truck trips to/from the site between the hours of 7:00 a.m. and 4:00 p.m. These trucks will consist of garbage style trucks (approximately 35 trucks) delivering food waste (mixed with organic waste) and semi-trucks (approximately 10 trucks) hauling away the processed waste for delivery to an off-site composing facility.

Based on this information and the inability to precisely estimate the arrival/departure patterns of the added truck trips during the weekday a.m. and p.m. peak hours, it is assumed that the expanded use of the site will generate a doubling of existing weekday a.m. and p.m. peak hour trips. This is much greater than anticipated by Recology. While conservative, this estimate will account for any variability in projected traffic increased with the expanded use.

TABLE 3 TRIP GENERATION ESTIMATES

	Daily Trips	Weekday AM Peak Hour			Weekday PM Peak Hour		
		Total	In	Out	Total	In	Out
Existing N. Suttle Road Site	300	25	15	10	20	5	15
Expanded Use Site	390	50	30	20	40	10	30

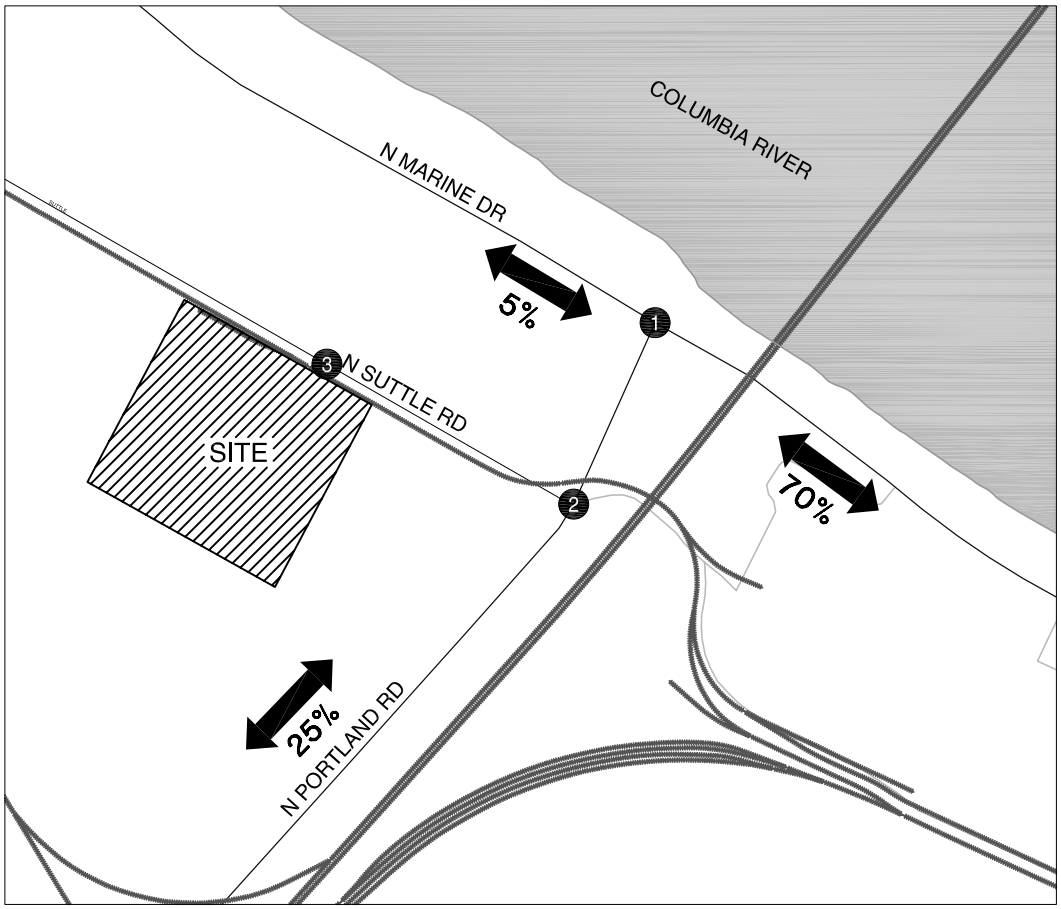
New Trip Distribution/Trip Assignment

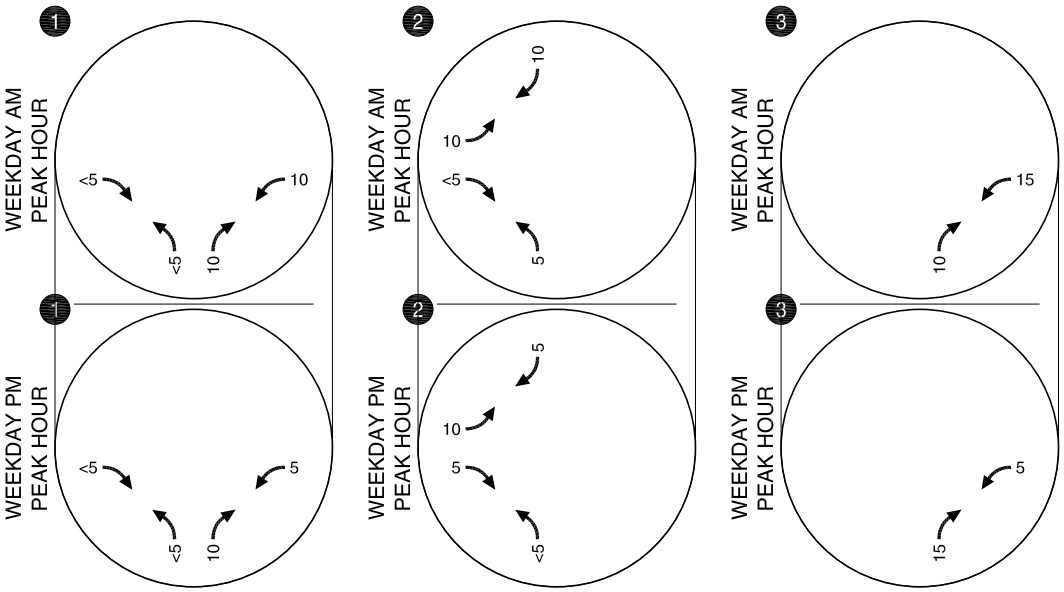
Figure 4 illustrates the estimated distribution of new site-generated trips onto the regional transportation network. This distribution pattern and trip assignment is based on a review of existing travel patterns to/from the site.

Future Traffic Conditions

Based on the trip generation estimates and the distribution/assignment information presented in Figure 4, Figure 5 summarizes the level-of-service analysis for the study intersections and site-access driveway under future weekday a.m. and p.m. peak hour traffic conditions. As shown, all intersections are forecast to continue to operate acceptably.

As with the existing conditions, the eastbound approach at the N. Portland Road/N. Suttle Road intersection is forecast to continue to operate at level of service "E" during the weekday p.m. peak hour. Although the intersection performance standards are being met, additional analysis was performed to determine if additional traffic control may be necessary to minimize delay for the approach. Based on the results of a preliminary signal warrant analysis, it was concluded that the intersection will not meet traffic signal warrants. Given these findings and the fact that the eastbound approach is forecast to operate with sufficient capacity, no additional traffic control improvements are recommended. *Appendix "E" includes the level-of-service worksheets under year 2011 future traffic conditions and the signal warrant analysis worksheets.*

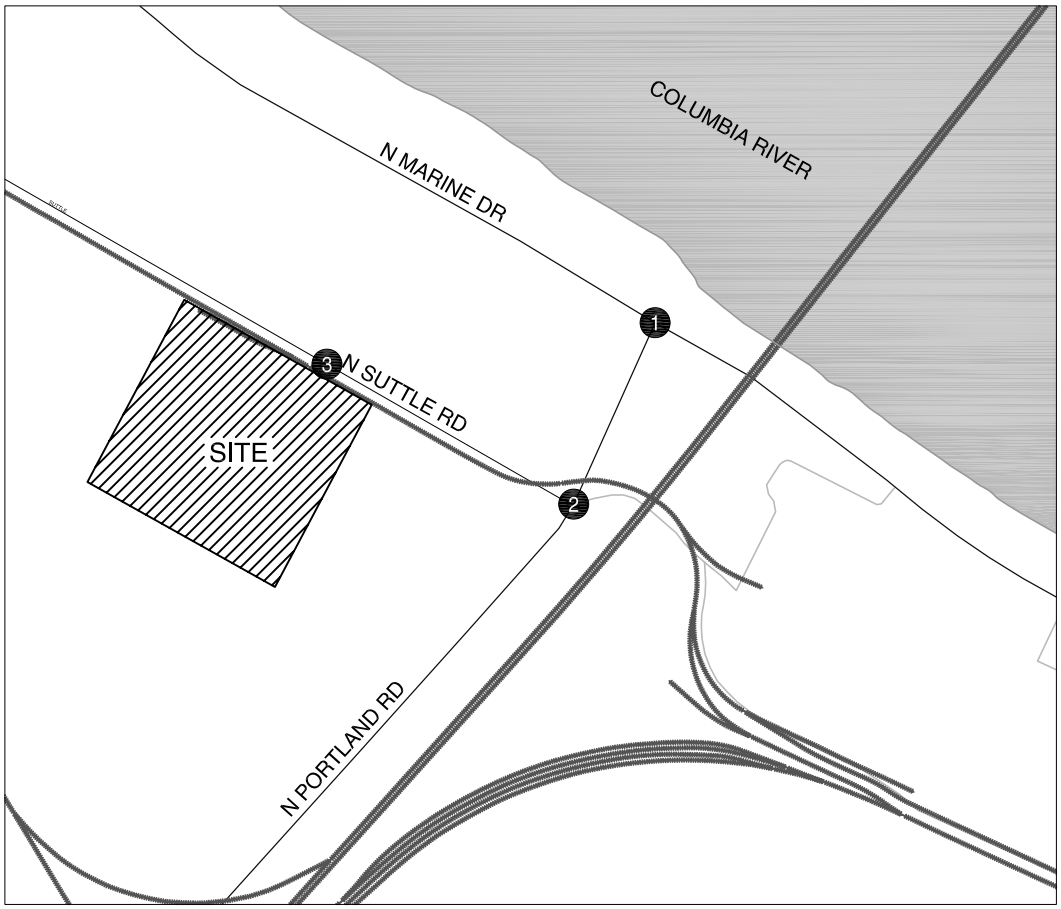


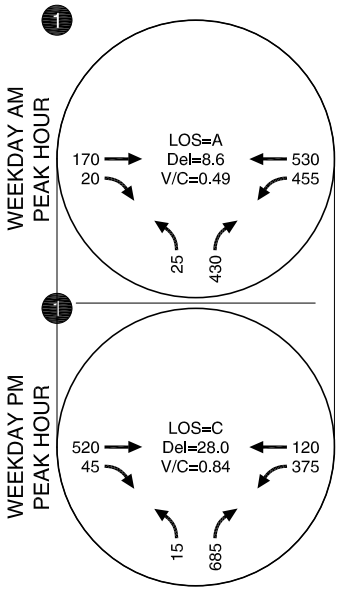


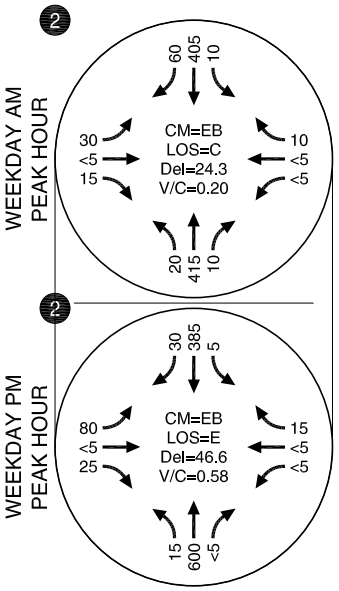
ESTIMATED TRIP DISTRIBUTION AND ASSIGNMENT
WEEKDAY AM AND PM PEAK HOUR
PORTLAND, OREGON

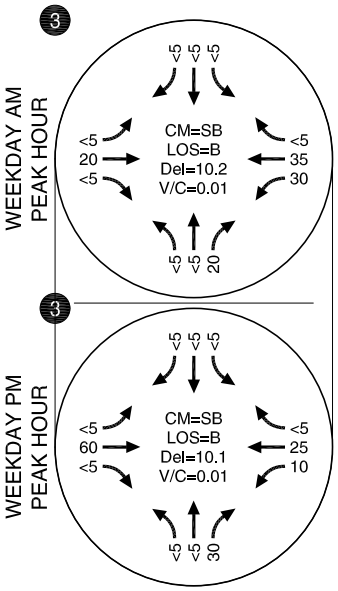
FIGURE 4

H:\profile\11183 - Recology Composting Facilities\dwgs\figs\11183.1_Fig01.dwg Oct 20, 2010 - 3:09pm - mhughart Layout Tab: 04









LEGEND

CM = CRITICAL MOVEMENT (UNSIGNALIZED)
LOS = INTERSECTION LEVEL OF SERVICE (SIGNALIZED)/CRITICAL MOVEMENT LEVEL OF SERVICE (UNSIGNALIZED)
Del = INTERSECTION AVERAGE CONTROL DELAY (SIGNALIZED)/CRITICAL MOVEMENT CONTROL DELAY (UNSIGNALIZED)
V/C = CRITICAL VOLUME-TO-CAPACITY RATIO

2011 TOTAL TRAFFIC CONDITIONS
WEEKDAY AM AND PM PEAK HOUR
PORTLAND, OREGON

FIGURE 5

H:\profile\11183 - Recology Composting Facilities\dwgs\figs\11183.1_Fig01.dwg Oct 20, 2010 - 3:10pm - mhughart Layout Tab: 05

ZONING CODE APPROVAL CRITERIA

The following sections address the transportation related approval criteria of Section 33.815 of the Portland Code.

Section 33.815.220F

In accordance with the pre-application conference materials, Kittelson & Associates, Inc. has completed a review of Section 33.815.220.F (items 1 and 2) for waste related conditional uses. Specifically, items 1. and 2. of the *Public Services* section are addressed below.

F. Public Services

1. N. Suttle Road is currently designated as a Local Service Traffic Street and a Truck Access Street. As outlined in the transportation analysis, the proposed expanded use is not anticipated to have a significant trip generation impact or generate trip types that are inconsistent with these two applicable street designations.

2. As outlined in the transportation analysis section of this report, the transportation system is capable of supporting the additional traffic estimated to be generated by the proposed expanded use. In summary, N. Suttle Road, N. Portland Road, & N. Marine Drive can support the MRF from a capacity, safety, and access standpoint.

Section 33.805.040.A

A review of Section 33.805.040.A has been prepared to address adjustments to the existing zoning code. Specifically, a review of the loading, driveway locations, parking access restricted street, and parking spaces has been prepared.

The proposed expanded use does not include any driveway modifications to N. Suttle Road, does not modify access for trucks or passenger cars, or modify the orientation or amount of parking spaces. As such, there no applicable transportation related adjustments to current zoning code regulations.

Transportation Code 254.030

To satisfy Transportation Code 254.030, a review of the site access loading has been addressed. As previously stated, the proposed expanded use does not include any driveway modifications to N. Suttle Road and does not modify access for trucks or passenger cars. All truck loading and unloading will occur completely on site with no anticipated impacts to N Suttle Road traffic.

TDM Elements

Although the nature of the business does not promote the application of wide scale Transportation Demand Management (TDM) measures, Recology is committed to working with its employees to encourage continued and increased instances of carpooling and transit usage.

FINDINGS AND RECOMMENDATIONS

As demonstrated in this report, the proposed Recology Site modification can be developed in a manner consistent with the transportation-related criteria associated with waste-related conditional uses. The existing transportation facilities are sufficient to facilitate any increases in traffic associated with the proposal.

We trust this letter adequately addresses the traffic impacts associated with the proposed Recology Suttle Road Material Recovery Facility Site Modification. Please contact us if you have any questions or comments.

Sincerely,
KITTELSON & ASSOCIATES, INC.

Matt Hughart, AICP
Senior Planner

Julia Kuhn, P.E.
Principal Engineer

REFERENCES

1. Transportation Research Board. *Highway Capacity Manual*. 2000.

APPENDIX

A. Traffic Counts Worksheets

B. Description of Level of Service

C. Existing Traffic Conditions Worksheets

D. Crash Data

E. 2011 Total Traffic Conditions Worksheets

Appendix A
TRAFFIC COUNT
WORKSHEETS

Type of peak hour being reported: System Peak

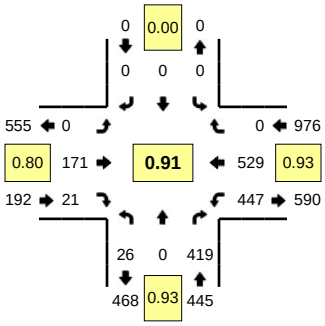
Method for determining peak hour: Total Entering Volume

LOCATION: N Portland Rd -- N Marine Dr

QC JOB #: 10532803

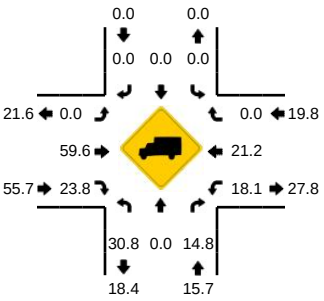
CITY/STATE: Portland, OR

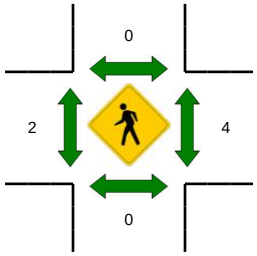
DATE: 9/15/2010

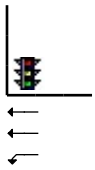


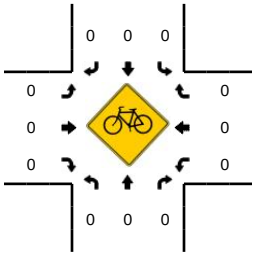
Peak-Hour: 7:15 AM -- 8:15 AM

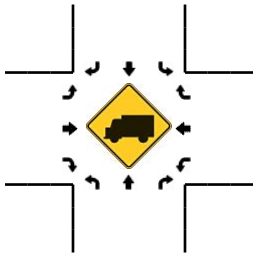
Peak 15-Min: 7:40 AM -- 7:55 AM

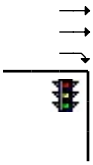


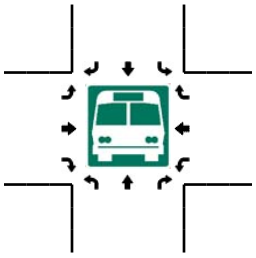












5-Min Count Period Beginning At	N Portland Rd (Northbound)				N Portland Rd (Southbound)				N Marine Dr (Eastbound)				N Marine Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	4	0	16	0	0	0	0	0	0	13	0	0	30	40	0	0	103	
7:05 AM	3	0	27	0	0	0	0	0	0	12	0	0	46	38	0	0	126	
7:10 AM	3	0	27	0	0	0	0	0	0	18	1	0	40	40	0	0	129	
7:15 AM	1	0	42	0	0	0	0	0	0	9	0	0	28	48	0	0	128	
7:20 AM	2	0	40	0	0	0	0	0	0	12	0	0	35	48	0	0	137	
7:25 AM	3	0	44	0	0	0	0	0	0	14	0	0	40	43	0	0	144	
7:30 AM	2	0	41	0	0	0	0	0	0	10	1	0	31	43	0	0	128	
7:35 AM	3	0	29	0	0	0	0	0	0	15	0	0	43	61	0	0	151	
7:40 AM	3	0	38	0	0	0	0	0	0	15	2	0	31	52	0	0	141	
7:45 AM	3	0	35	0	0	0	0	0	0	15	1	0	39	41	0	0	134	
7:50 AM	1	0	40	0	0	0	0	0	0	23	4	0	52	48	0	0	168	
7:55 AM	1	0	27	0	0	0	0	0	0	15	2	0	41	50	0	0	136	1625
8:00 AM	1	0	29	0	0	0	0	0	0	13	4	0	38	36	0	0	121	1643
8:05 AM	3	0	25	0	0	0	0	0	0	17	2	0	32	22	0	0	101	1618
8:10 AM	3	0	29	0	0	0	0	0	0	13	5	0	37	37	0	0	124	1613
8:15 AM	4	0	29	0	0	0	0	0	0	10	2	0	37	30	0	0	112	1597
8:20 AM	4	0	25	0	0	0	0	0	0	19	0	0	23	21	0	0	92	1552
8:25 AM	1	0	27	0	0	0	0	0	0	18	2	0	30	27	0	0	105	1513
8:30 AM	3	0	26	0	0	0	0	0	0	11	0	0	23	22	0	0	85	1470
8:35 AM	1	0	27	0	0	0	0	0	0	16	2	0	19	37	0	0	102	1421
8:40 AM	3	0	25	0	0	0	0	0	0	19	2	0	32	26	0	0	107	1387
8:45 AM	2	0	12	0	0	0	0	0	0	20	3	0	34	27	0	0	98	1351
8:50 AM	1	0	32	0	0	0	0	0	0	17	4	0	20	19	0	0	93	1276
8:55 AM	1	0	19	0	0	0	0	0	0	15	1	0	12	23	0	0	71	1211

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	28	0	452	0	0	0	0	0	0	212	28	0	488	564	0	0	1772
Heavy Trucks	12	0	68		0	0	0		0	120	4		80	100	0		384
Pedestrians		0				0				4				4			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

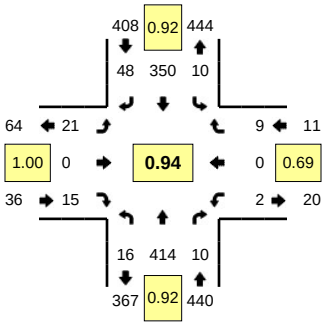
Report generated on 9/27/2010 11:05 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

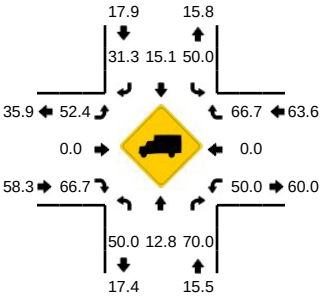
Type of peak hour being reported: System Peak | Method for determining peak hour: Total Entering Volume

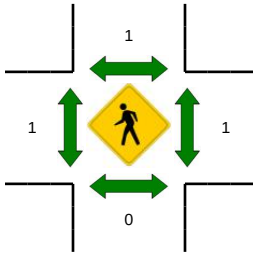
LOCATION: N Portland Rd -- N Suttle Rd | **QC JOB #:** 10532801

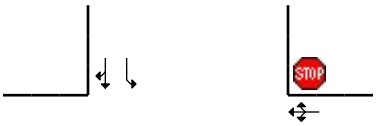
CITY/STATE: portland, OR | **DATE:** 9/14/2010

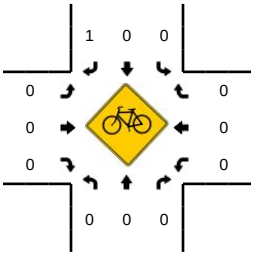


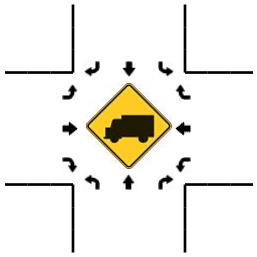
Peak-Hour: 7:15 AM -- 8:15 AM
Peak 15-Min: 7:40 AM -- 7:55 AM

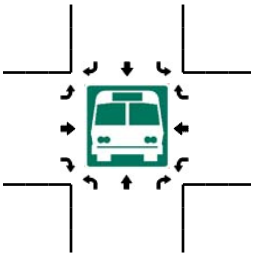












5-Min Count Period Beginning At	N Portland Rd (Northbound)				N Portland Rd (Southbound)				N Suttle Rd (Eastbound)				N Suttle Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
7:00 AM	1	24	0	0	1	31	2	0	1	0	0	0	0	0	0	0	60	
7:05 AM	0	19	0	0	0	29	5	0	2	0	0	0	0	0	0	0	55	
7:10 AM	0	28	0	0	1	42	3	0	1	0	0	0	1	0	0	0	76	
7:15 AM	2	32	0	0	1	25	3	0	1	0	2	0	0	0	0	0	66	
7:20 AM	0	30	0	0	0	31	4	0	1	0	2	0	1	0	1	0	70	
7:25 AM	2	39	1	0	0	21	2	0	1	0	1	0	0	0	1	0	68	
7:30 AM	0	24	1	0	2	22	1	0	1	0	2	0	0	0	0	0	53	
7:35 AM	3	50	0	0	1	35	2	0	2	0	1	0	0	0	0	0	94	
7:40 AM	1	44	1	0	0	20	3	0	1	0	0	0	1	0	1	0	72	
7:45 AM	0	35	0	0	1	33	6	0	1	0	0	0	0	0	1	0	77	
7:50 AM	2	36	1	0	0	41	7	0	0	0	2	0	0	0	1	0	90	
7:55 AM	2	25	1	0	1	28	6	0	2	0	1	0	0	0	0	0	66	847
8:00 AM	2	29	1	0	2	36	5	0	1	0	0	0	0	0	1	0	77	864
8:05 AM	1	32	0	0	1	26	4	0	6	0	1	0	0	0	2	0	73	882
8:10 AM	1	38	4	0	1	32	5	0	4	0	3	0	0	0	1	0	89	895
8:15 AM	2	34	2	0	0	26	3	0	2	0	0	0	1	0	2	0	72	901
8:20 AM	1	20	1	0	1	34	4	0	4	0	1	0	3	0	0	0	69	900
8:25 AM	1	21	0	0	1	25	2	0	1	0	0	0	0	0	2	0	53	885
8:30 AM	0	25	0	0	0	32	2	0	0	0	3	0	0	0	1	0	63	895
8:35 AM	5	26	2	0	0	35	0	0	3	0	0	0	0	0	0	0	71	872
8:40 AM	3	30	0	0	0	23	5	0	1	0	0	0	0	1	4	0	67	867
8:45 AM	0	17	2	0	0	39	2	0	1	0	3	0	1	0	1	0	66	856
8:50 AM	0	21	1	2	1	22	7	0	3	0	1	0	1	0	1	0	60	826
8:55 AM	2	15	1	0	0	20	4	0	3	0	1	0	0	0	1	0	47	807

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	12	460	8	0	4	376	64	0	8	0	8	0	4	0	12	0	956
Heavy Trucks	4	72	4		0	56	20		4	0	8		4	0	8		180
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 9/27/2010 11:05 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of peak hour being reported: Intersection Peak

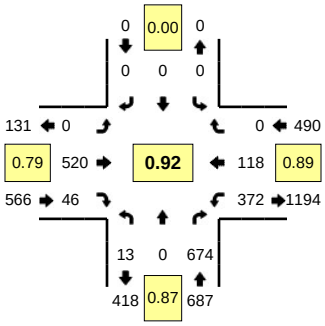
Method for determining peak hour: Total Entering Volume

LOCATION: N Portland Rd -- N Marine Dr

QC JOB #: 10532804

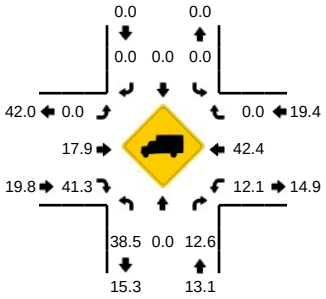
CITY/STATE: Portland, OR

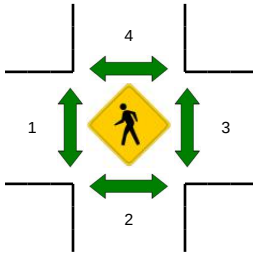
DATE: 9/15/2010

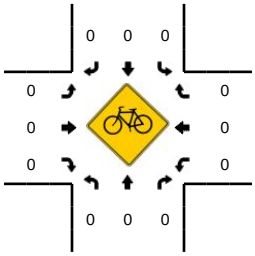


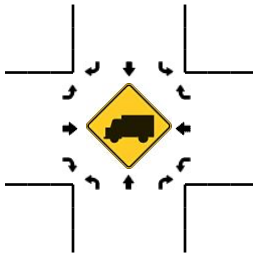
Peak-Hour: 4:00 PM -- 5:00 PM

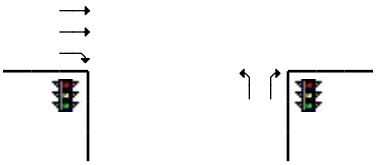
Peak 15-Min: 4:35 PM -- 4:50 PM

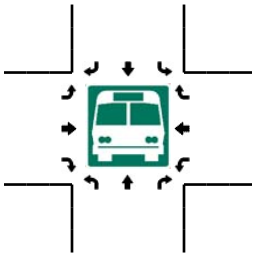












5-Min Count Period Beginning At	N Portland Rd (Northbound)				N Portland Rd (Southbound)				N Marine Dr (Eastbound)				N Marine Dr (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	0	53	0	0	0	0	0	0	41	2	0	36	13	0	0	145	
4:05 PM	2	0	60	0	0	0	0	0	0	57	5	0	31	12	0	0	167	
4:10 PM	0	0	35	0	0	0	0	0	0	50	8	0	34	11	0	0	138	
4:15 PM	0	0	57	0	0	0	0	0	0	52	6	0	30	9	0	0	154	
4:20 PM	2	0	66	0	0	0	0	0	0	34	4	0	28	15	0	0	149	
4:25 PM	1	0	51	0	0	0	0	0	0	47	1	0	23	6	0	0	129	
4:30 PM	1	0	45	0	0	0	0	0	0	38	3	0	37	9	0	0	133	
4:35 PM	0	0	52	0	0	0	0	0	0	62	6	0	31	12	0	0	163	
4:40 PM	3	0	63	0	0	0	0	0	0	44	6	0	30	4	0	0	150	
4:45 PM	2	0	74	0	0	0	0	0	0	39	4	0	33	7	0	0	159	
4:50 PM	1	0	55	0	0	0	0	0	0	31	1	0	31	12	0	0	131	
4:55 PM	1	0	63	0	0	0	0	0	0	25	0	0	28	8	0	0	125	1743
5:00 PM	0	0	52	0	0	0	0	0	0	34	2	0	19	5	0	0	112	1710
5:05 PM	1	0	48	0	0	0	0	0	0	32	5	0	28	11	0	0	125	1668
5:10 PM	2	0	47	0	0	0	0	0	0	40	4	0	29	4	0	0	126	1656
5:15 PM	1	0	44	0	0	0	0	0	0	37	3	0	34	4	0	0	123	1625
5:20 PM	1	0	50	0	0	0	0	0	0	28	0	0	44	11	0	0	134	1610
5:25 PM	1	0	49	0	0	0	0	0	0	38	3	0	25	8	0	0	124	1605
5:30 PM	2	0	43	0	0	0	0	0	0	37	2	0	44	9	0	0	137	1609
5:35 PM	0	0	34	0	0	0	0	0	0	36	1	0	22	7	0	0	100	1546
5:40 PM	0	0	38	0	0	0	0	0	0	16	1	0	21	12	0	0	88	1484
5:45 PM	1	0	44	0	0	0	0	0	0	17	1	0	35	10	0	0	108	1433
5:50 PM	1	0	35	0	0	0	0	0	0	17	0	0	19	7	0	0	79	1381
5:55 PM	1	0	37	0	0	0	0	0	0	16	1	0	25	2	0	0	82	1338

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	20	0	756	0	0	0	0	0	0	580	64	0	376	92	0	0	1888
Heavy Trucks	12	0	76		0	0	0		0	80	16		32	28	0		244
Pedestrians		0				8				0				0			8
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 9/27/2010 11:08 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Type of peak hour being reported: Intersection Peak

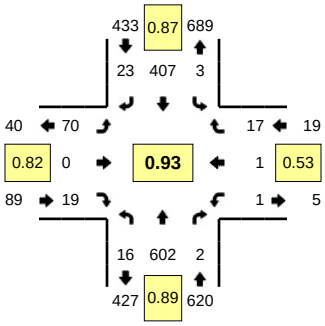
Method for determining peak hour: Total Entering Volume

LOCATION: N Portland Rd -- N Suttle Rd

QC JOB #: 10532802

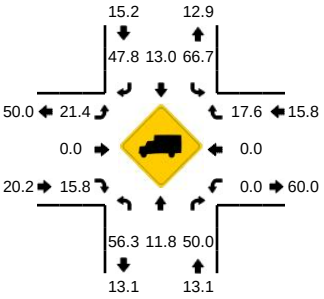
CITY/STATE: portland, OR

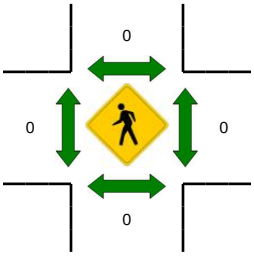
DATE: 9/15/2010

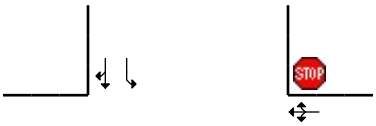


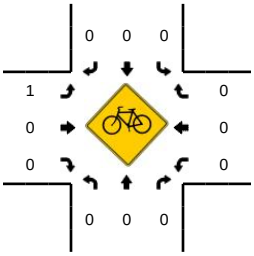
Peak-Hour: 4:00 PM -- 5:00 PM

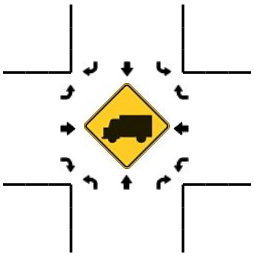
Peak 15-Min: 4:35 PM -- 4:50 PM

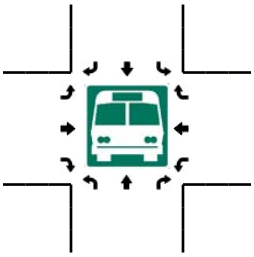












5-Min Count Period Beginning At	N Portland Rd (Northbound)				N Portland Rd (Southbound)				N Suttle Rd (Eastbound)				N Suttle Rd (Westbound)				Total	Hourly Totals
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U		
4:00 PM	0	46	0	0	1	45	2	0	4	0	3	0	1	0	3	0	105	
4:05 PM	1	56	0	0	0	32	3	0	6	0	2	0	0	0	2	0	102	
4:10 PM	2	30	2	0	1	38	2	0	5	0	0	0	0	1	2	0	83	
4:15 PM	3	54	0	0	1	34	2	0	3	0	2	0	0	0	2	0	101	
4:20 PM	3	54	0	0	0	29	3	0	10	0	3	0	0	0	0	0	102	
4:25 PM	2	40	0	0	0	26	2	0	6	0	0	0	0	0	4	0	80	
4:30 PM	1	46	0	0	0	37	1	0	7	0	2	0	0	0	0	0	94	
4:35 PM	1	46	0	0	0	32	2	0	3	0	5	0	0	0	2	0	91	
4:40 PM	2	67	0	0	0	38	2	0	6	0	0	0	0	0	1	0	116	
4:45 PM	1	58	0	0	0	35	2	0	7	0	1	0	0	0	0	0	104	
4:50 PM	0	46	0	0	0	32	0	0	9	0	0	0	0	0	1	0	88	
4:55 PM	0	59	0	0	0	29	2	0	4	0	1	0	0	0	0	0	95	1161
5:00 PM	1	48	0	0	0	23	0	0	8	0	1	0	0	0	0	0	81	1137
5:05 PM	0	39	0	0	0	29	0	0	6	0	3	0	0	0	0	0	77	1112
5:10 PM	0	47	0	0	1	34	0	0	2	0	0	0	0	0	1	0	85	1114
5:15 PM	1	51	0	0	0	29	1	0	0	0	2	0	0	0	2	0	86	1099
5:20 PM	1	39	0	0	0	44	1	0	5	1	0	0	0	0	0	0	91	1088
5:25 PM	0	44	0	0	0	30	0	0	4	0	1	0	0	0	1	0	80	1088
5:30 PM	0	43	0	0	0	38	1	0	1	0	0	0	0	0	0	0	83	1077
5:35 PM	1	35	0	0	0	31	1	0	0	0	2	0	0	0	0	0	70	1056
5:40 PM	0	41	0	0	0	23	1	0	0	0	1	0	0	0	0	0	66	1006
5:45 PM	0	36	0	0	0	29	0	0	1	0	0	0	0	0	0	0	66	968
5:50 PM	1	47	0	0	0	21	2	0	1	0	0	0	0	0	0	0	72	952
5:55 PM	0	32	0	0	0	30	1	0	2	0	0	0	0	0	0	0	65	922

Peak 15-Min Flowrates	Northbound				Southbound				Eastbound				Westbound				Total
	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	Left	Thru	Right	U	
All Vehicles	16	684	0	0	0	420	24	0	64	0	24	0	0	0	12	0	1244
Heavy Trucks	12	68	0		0	48	4		8	0	0		0	0	0		140
Pedestrians		0				0				0				0			0
Bicycles	0	0	0		0	0	0		0	0	0		0	0	0		0
Railroad																	
Stopped Buses																	

Comments:

Report generated on 9/27/2010 11:08 AM

SOURCE: Quality Counts, LLC (http://www.qualitycounts.net)

Quality Counts
TRANSPORTATION DATA COLLECTION SERVICES

16285 SW 85th Ave, Ste 302
Tigard, OR 97224
503-620-4242
www.qualitycounts.net

Suttle Road Recovery Facility

9/14/2010	In	Out	Total
5:00 AM	0	0	0
5:15 AM	0	1	1
5:30 AM	0	0	0
5:45 AM	3	0	3
6:00 AM	0	1	1
6:15 AM	1	1	2
6:30 AM	1	1	2
6:45 AM	3	1	4
7:00 AM	4	2	6
7:15 AM	1	3	4
7:30 AM	5	2	7
7:45 AM	5	3	8
8:00 AM	6	2	8
8:15 AM	3	2	5
8:30 AM	3	3	6
8:45 AM	3	5	8
9:00 AM	4	4	8
9:15 AM	4	5	9
9:30 AM	8	6	14
9:45 AM	1	3	4
10:00 AM	6	1	7
10:15 AM	5	4	9
10:30 AM	6	5	11
10:45 AM	2	5	7
11:00 AM	2	2	4
11:15 AM	4	5	9
11:30 AM	4	4	8
11:45 AM	5	3	8
12:00 PM	2	5	7
12:15 PM	7	5	12
12:30 PM	4	6	10
12:45 PM	5	5	10
1:00 PM	2	4	6
1:15 PM	6	3	9
1:30 PM	2	3	5
1:45 PM	3	3	6
2:00 PM	5	2	7
2:15 PM	8	6	14
2:30 PM	6	5	11
2:45 PM	1	3	4
3:00 PM	2	2	4
3:15 PM	3	0	3
3:30 PM	0	7	7
3:45 PM	0	1	1
4:00 PM	1	1	2
4:15 PM	0	1	1
4:30 PM	1	1	2
4:45 PM	1	0	1
5:00 PM	1	4	5

Suttle Road Recovery Facility

9/15/2010	In	Out	Total
5:00 AM	0	0	0
5:15 AM	0	0	0
5:30 AM	0	0	0
5:45 AM	5	0	5
6:00 AM	3	0	3
6:15 AM	1	1	2
6:30 AM	0	0	0
6:45 AM	0	1	1
7:00 AM	3	0	3
7:15 AM	4	2	6
7:30 AM	6	1	7
7:45 AM	4	3	7
8:00 AM	7	1	8
8:15 AM	5	4	9
8:30 AM	4	4	8
8:45 AM	3	4	7
9:00 AM	4	3	7
9:15 AM	6	5	11
9:30 AM	2	2	4
9:45 AM	5	5	10
10:00 AM	4	3	7
10:15 AM	3	4	7
10:30 AM	4	3	7
10:45 AM	6	3	9
11:00 AM	3	5	8
11:15 AM	6	5	11
11:30 AM	6	5	11
11:45 AM	2	3	5
12:00 PM	1	5	6
12:15 PM	3	3	6
12:30 PM	3	1	4
12:45 PM	4	2	6
1:00 PM	5	7	12
1:15 PM	9	4	13
1:30 PM	5	5	10
1:45 PM	10	4	14
2:00 PM	1	3	4
2:15 PM	7	3	10
2:30 PM	3	8	11
2:45 PM	3	3	6
3:00 PM	2	7	9
3:15 PM	0	0	0
3:30 PM	5	4	9
3:45 PM	2	2	4
4:00 PM	2	4	6
4:15 PM	3	1	4
4:30 PM	2	7	9
4:45 PM	0	4	4
5:00 PM	4	5	9

Appendix B
DESCRIPTION OF LEVEL OF SERVICE

Appendix B Level-of-Service Concept

Level of service (LOS) is a concept developed to quantify the degree of comfort (including such elements as travel time, number of stops, total amount of stopped delay, and impediments caused by other vehicles) afforded to drivers as they travel through an intersection or roadway segment. Six grades are used to denote the various level of service from "A" to "F".1

SIGNALIZED INTERSECTIONS

The six level-of-service grades are described qualitatively for signalized intersections in Table B1. Additionally, Table B2 identifies the relationship between level of service and average control delay per vehicle. Control delay is defined to include initial deceleration delay, queue move-up time, stopped delay, and final acceleration delay. Using this definition, Level of Service "D" is generally considered to represent the minimum acceptable design standard.

Table B-1 Level-of-Service Definitions (Signalized Intersections)

Level of Service	Average Delay per Vehicle
A	Very low average control delay, less than 10 seconds per vehicle. This occurs when progression is extremely favorable, and most vehicles arrive during the green phase. Most vehicles do not stop at all. Short cycle lengths may also contribute to low delay.
B	Average control delay is greater than 10 seconds per vehicle and less than or equal to 20 seconds per vehicle. This generally occurs with good progression and/or short cycle lengths. More vehicles stop than for a level of service A, causing higher levels of average delay.
C	Average control delay is greater than 20 seconds per vehicle and less than or equal to 35 seconds per vehicle. These higher delays may result from fair progression and/or longer cycle lengths. Individual cycle failures may begin to appear at this level. The number of vehicles stopping is significant at this level, although many still pass through the intersection without stopping.
D	Average control delay is greater than 35 seconds per vehicle and less than or equal to 55 seconds per vehicle. The influence of congestion becomes more noticeable. Longer delays may result from some combination of unfavorable progression, long cycle length, or high volume/capacity ratios. Many vehicles stop, and the proportion of vehicles not stopping declines. Individual cycle failures are noticeable.
E	Average control delay is greater than 55 seconds per vehicle and less than or equal to 80 seconds per vehicle. This is usually considered to be the limit of acceptable delay. These high delay values generally (but not always) indicate poor progression, long cycle lengths, and high volume/capacity ratios. Individual cycle failures are frequent occurrences.
F	Average control delay is in excess of 80 seconds per vehicle. This is considered to be unacceptable to most drivers. This condition often occurs with oversaturation. It may also occur at high volume/capacity ratios below 1.0 with many individual cycle failures. Poor progression and long cycle lengths may also contribute to such high delay values.

1 Most of the material in this appendix is adapted from the Transportation Research Board, Highway Capacity Manual, (2000).

Table B2 Level-of-Service Criteria for Signalized Intersections

Level of Service	Average Control Delay per Vehicle (Seconds)
A	<10.0
B	>10 and ≤20
C	>20 and ≤35
D	>35 and ≤55
E	>55 and ≤80
F	>80

UNSIGNALIZED INTERSECTIONS

Unsignalized intersections include two-way stop-controlled (TWSC) and all-way stop-controlled (AWSC) intersections. The 2000 Highway Capacity Manual (HCM) provides models for estimating control delay at both TWSC and AWSC intersections. A qualitative description of the various service levels associated with an unsignalized intersection is presented in Table B3. A quantitative definition of level of service for unsignalized intersections is presented in Table B4. Using this definition, Level of Service "E" is generally considered to represent the minimum acceptable design standard.

Table B3 Level-of-Service Criteria for Unsignalized Intersections

Level of Service	Average Delay per Vehicle to Minor Street
A	• Nearly all drivers find freedom of operation. • Very seldom is there more than one vehicle in queue.
B	• Some drivers begin to consider the delay an inconvenience. • Occasionally there is more than one vehicle in queue.
C	• Many times there is more than one vehicle in queue. • Most drivers feel restricted, but not objectionably so.
D	• Often there is more than one vehicle in queue. • Drivers feel quite restricted.
E	• Represents a condition in which the demand is near or equal to the probable maximum number of vehicles that can be accommodated by the movement. • There is almost always more than one vehicle in queue. • Drivers find the delays approaching intolerable levels.
F	• Forced flow. • Represents an intersection failure condition that is caused by geometric and/or operational constraints external to the intersection.

Table B4 Level-of-Service Criteria for Unsignalized Intersections

Level of Service	Average Control Delay per Vehicle (Seconds)
A	<10.0
B	>10.0 and ≤ 15.0
C	>15.0 and ≤ 25.0
D	>25.0 and ≤ 35.0
E	>35.0 and ≤ 50.0
F	>50.0

It should be noted that the level-of-service criteria for unsignalized intersections are somewhat different than the criteria used for signalized intersections. The primary reason for this difference is that drivers expect different levels of performance from different kinds of transportation facilities. The expectation is that a signalized intersection is designed to carry higher traffic volumes than an unsignalized intersection. Additionally, there are a number of driver behavior considerations that combine to make delays at signalized intersections less galling than at unsignalized intersections. For example, drivers at signalized intersections are able to relax during the red interval, while drivers on the minor street approaches to TWSC intersections must remain attentive to the task of identifying acceptable gaps and vehicle conflicts. Also, there is often much more variability in the amount of delay experienced by individual drivers at unsignalized intersections than signalized intersections. For these reasons, it is considered that the control delay threshold for any given level of service is less for an unsignalized intersection than for a signalized intersection. While overall intersection level of service is calculated for AWSC intersections, level of service is only calculated for the minor approaches and the major street left turn movements at TWSC intersections. No delay is assumed to the major street through movements. For TWSC intersections, the overall intersection level of service remains undefined: level of service is only calculated for each minor street lane.

In the performance evaluation of TWSC intersections, it is important to consider other measures of effectiveness (MOEs) in addition to delay, such as v/c ratios for individual movements, average queue lengths, and 95th-percentile queue lengths. By focusing on a single MOE for the worst movement only, such as delay for the minor-street left turn, users may make inappropriate traffic control decisions. The potential for making such inappropriate decisions is likely to be particularly pronounced when the HCM level-of-service thresholds are adopted as legal standards, as is the case in many public agencies.

Appendix C
EXISTING TRAFFIC CONDITIONS WORKSHEETS

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday AM Peak Hour

Scenario Report

Scenario:	AM
Command:	AM
Volume:	AM
Geometry:	AM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday AM Peak Hour

Turning Movement Report

Volume	Northbound			Southbound			Eastbound			Westbound			Total
Type	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
#1 Marine Dr/Portland Dr													
Base	25	0	420	0	0	0	0	170	20	445	530	0	1610
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	25	0	420	0	0	0	0	170	20	445	530	0	1610
#2 Portland Dr/Suttle Rd													
Base	15	415	10	10	405	50	20	0	15	2	1	10	953
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	15	415	10	10	405	50	20	0	15	2	1	10	953
#3 Suttle Road driveway													
Base	1	1	10	1	1	1	1	20	1	15	35	1	88
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	1	10	1	1	1	1	20	1	15	35	1	88

Traffix 7.9.0415 (c) 2007 Dowling Assoc. Licensed to KITTELSON, PORTLAND

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday AM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 Marine Dr/Portland Dr	A	8.6	0.479	A	8.6	0.479	+ 0.000 D/V
# 2 Portland Dr/Suttle Rd	C	21.9	0.000	C	21.9	0.000	+ 0.000 D/V
# 3 Suttle Road driveway	A	10.0	0.000	A	10.0	0.000	+ 0.000 D/V

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Marine Dr/Portland Dr

Cycle (sec):	80	Critical Vol./Cap.(X):		0.479
Loss Time (sec):	12 (Y+R=4.0 sec)	Average Delay (sec/veh):		8.6
Optimal Cycle:	38	Level Of Service:		A

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	5	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	0 1	0	0 0	0 0	0	0 2	0 1	1 0	2	0 0
Volume Module:7:15-8:15 a.m.												
Base Vol:	25	0	420	0	0	0	0	170	20	445	530	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	25	0	420	0	0	0	0	170	20	445	530	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91	0.91
PHF Volume:	27	0	462	0	0	0	0	187	22	489	582	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	27	0	462	0	0	0	0	187	22	489	582	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	27	0	462	0	0	0	0	187	22	489	582	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.82	1.00	0.73	1.00	1.00	1.00	1.00	0.77	0.69	0.79	0.79	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	1556	0	1385	0	0	0	0	2910	1302	1504	3007	0
Capacity Analysis Module:												
Vol/Sat:	0.02	0.00	0.33	0.00	0.00	0.00	0.00	0.06	0.02	0.33	0.19	0.00
Crit Moves:	****							****		****		
Green/Cycle:	0.06	0.00	0.72	0.00	0.00	0.00	0.00	0.13	0.13	0.66	0.79	0.00
Volume/Cap:	0.28	0.00	0.46	0.00	0.00	0.00	0.00	0.49	0.13	0.49	0.25	0.00
Delay/Veh:	37.4	0.0	5.0	0.0	0.0	0.0	0.0	33.4	31.2	7.3	2.3	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	37.4	0.0	5.0	0.0	0.0	0.0	0.0	33.4	31.2	7.3	2.3	0.0
LOS by Move:	D	A	A	A	A	A	A	C	C	A	A	A
HCM2kAvgQ:	1	0	5	0	0	0	0	3	1	6	2	0

Note: Queue reported is the number of cars per lane.

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Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #1 Marine Dr/Portland Dr

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0	0	0 1	0	0 0	0 0	0 0	2 0	1	1 0	2 0	0
Lane Group:	L	xxxx	R	xxxx	xxxx	xxxx	xxxx	T	R	L	T	xxxx
#LnsInGrps:	1	0	1	0	0	0	0	2	1	1	2	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		16			0			24			20	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		4			2			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.86	xxxx	0.86	xxxx	xxxx	xxxxx	xxxx	0.81	0.81	0.83	0.83	xxxxx
Grade Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx
Area Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx
LT Adj:	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.82	1.00	0.73	1.00	1.00	1.00	1.00	0.81	0.69	0.79	0.83	1.00
Usr Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	0.82	1.00	0.73	1.00	1.00	1.00	1.00	0.77	0.69	0.79	0.79	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday AM Peak Hour

Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #1 Marine Dr/Portland Dr

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
CrsswalkWid:	0.00	8.00		0.00	0.00		0.00	8.00		0.00	0.00	
CrsswalkLen:	0.00	60.00		0.00	0.00		0.00	24.00		0.00	0.00	
MinPedGrn:	0.00	18.22		0.00	0.00		0.00	9.20		0.00	0.00	
PedGrn:	0.00	18.22		0.00	0.00		0.00	9.20		0.00	0.00	
PedVolume:	0	4		0	0		0	0		0	0	
PedFlowRate:	0	18		0	0		0	0		0	0	
BikeVol:	0	0		0	0		0	0		0	0	
BikeFlwRate:	0	0		0	0		0	0		0	0	
PedOcc:	0.000	0.009		0.000	0.000		0.000	0.000		0.000	0.000	
BikeOcc:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
PedAfterOcc:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
rOcc:	0.000	0.009		0.000	0.000		0.000	0.000		0.000	0.000	
TurnVehAdj:	0.000	0.995		0.000	0.000		0.000	1.000		0.000	0.000	
Prt:	0.000	1.000		0.000	0.000		0.000	1.000		0.000	0.000	
Prta:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
Plt:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
Plta:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
PedBike Adj:	1.000	0.995		1.000	1.000		1.000	1.000		1.000	1.000	

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #1 Marine Dr/Portland Dr

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.06	0.00	0.72	0.00	0.00	0.00	0.00	0.13	0.13	0.66	0.79	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	0.6	0.0	4.3	0.0	0.0	0.0	0.0	2.0	0.4	5.5	1.8	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Q2:	0.4	0.0	0.9	0.0	0.0	0.0	0.0	0.9	0.1	1.0	0.3	0.0
HCM2KQueue:	1.0	0.0	5.2	0.0	0.0	0.0	0.0	2.9	0.6	6.5	2.1	0.0
70th%Factor:	1.20	1.20	1.19	1.20	1.20	1.20	1.20	1.19	1.20	1.19	1.19	1.20
HCM2k70thQ:	1.1	0.0	6.1	0.0	0.0	0.0	0.0	3.5	0.7	7.7	2.5	0.0
85th%Factor:	1.59	1.60	1.55	1.60	1.60	1.60	1.60	1.57	1.59	1.54	1.58	1.60
HCM2k85thQ:	1.5	0.0	8.0	0.0	0.0	0.0	0.0	4.6	0.9	10.0	3.3	0.0
90th%Factor:	1.78	1.80	1.71	1.80	1.80	1.80	1.80	1.75	1.79	1.69	1.76	1.80
HCM2k90thQ:	1.7	0.0	8.8	0.0	0.0	0.0	0.0	5.1	1.0	10.9	3.7	0.0
95th%Factor:	2.07	2.10	1.95	2.10	2.10	2.10	2.10	2.01	2.08	1.92	2.03	2.10
HCM2k95thQ:	2.0	0.0	10.1	0.0	0.0	0.0	0.0	5.9	1.2	12.4	4.3	0.0
98th%Factor:	2.63	2.70	2.37	2.70	2.70	2.70	2.70	2.50	2.66	2.31	2.55	2.70
HCM2k98thQ:	2.5	0.0	12.2	0.0	0.0	0.0	0.0	7.4	1.5	14.9	5.4	0.0

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday AM Peak Hour

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #1 Marine Dr/Portland Dr

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Run Speed:		30 MPH			30 MPH			30 MPH			30 MPH	
NumOfStops:	6.6	0.0	48.4	0.0	0.0	0.0	0.0	43.4	4.9	62.0	38.4	0.0

Name: year 1995 composite fleet
Fuel Consumption: 30.896 pounds
5.005 gallons
Carbon Dioxide: 96.397 pounds
Carbon Monoxide: 6.757 pounds
Hydrocarbons: 0.992 pounds
Nitrogen Oxides: 0.360 pounds

Name: year 2000 composite fleet
Fuel Consumption: 27.943 pounds
4.527 gallons
Carbon Dioxide: 87.182 pounds
Carbon Monoxide: 6.531 pounds
Hydrocarbons: 0.945 pounds
Nitrogen Oxides: 0.315 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Portland Dr/Suttle Rd

Average Delay (sec/veh): 1.2 Worst Case Level Of Service: C[21.9]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1! 0	0	1	0	0	1 0	0	0	1! 0	0	0	0	1! 0	0
Volume Module:7:15-8:15 a.m.																
Base Vol:	15	415	10		10	405	50		20	0	15		2	1	10	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	15	415	10		10	405	50		20	0	15		2	1	10	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95	
PHF Volume:	16	437	11		11	426	53		21	0	16		2	1	11	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
FinalVolume:	16	437	11		11	426	53		21	0	16		2	1	11	
Critical Gap Module:																
Critical Gp:	4.3	xxxx	xxxxx		4.3	xxxx	xxxxx		7.7	7.1	6.8		7.7	7.1	6.8	
FollowUpTim:	2.3	xxxx	xxxxx		2.4	xxxx	xxxxx		4.0	4.5	3.8		4.1	4.6	3.9	
Capacity Module:																
Cnflict Vol:	479	xxxx	xxxxx		448	xxxx	xxxxx		954	954	454		957	975	444	
Potent Cap.:	1014	xxxx	xxxxx		1032	xxxx	xxxxx		190	209	505		185	199	503	
Move Cap.:	1014	xxxx	xxxxx		1032	xxxx	xxxxx		182	204	505		175	193	502	
Volume/Cap:	0.02	xxxx	xxxx		0.01	xxxx	xxxx		0.12	0.00	0.03		0.01	0.01	0.02	
Level Of Service Module:																
2Way95thQ:	0.0	xxxx	xxxxx		0.0	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Control Del:	8.6	xxxx	xxxxx		8.5	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
LOS by Move:	A	*	*		A	*	*		*	*	*		*	*	*	

Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	250	xxxxx	xxxx	356	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	0.5	xxxxx	xxxxx	0.1	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	21.9	xxxxx	xxxxx	15.5	xxxxx
Shared LOS:	*	*	*	*	*	*	*	C	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			21.9			15.5		
ApproachLOS:	*			*			C			C		

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #2 Portland Dr/Suttle Rd

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HevVeh:	16%				18%				58%				64%			
Grade:	0%				0%				0%				0%			
Peds/Hour:	1				1				0				1			
Pedestrian Walk Speed: 4.00 feet/sec																
LaneWidth:	12 feet				12 feet				12 feet				12 feet			
Time Period: 0.25 hour																

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Suttle Road driveway

Average Delay (sec/veh): 3.0 Worst Case Level Of Service: A[10.0]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1! 0	0	0	0	1! 0	0	0	0	1! 0	0	0	0	1! 0	0
Volume Module:																
Base Vol:	1	1	10		1	1	1		1	20		1	15	35		1
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
Initial Bse:	1	1	10		1	1	1		1	20		1	15	35		1
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00		1.00	1.00	1.00		1.00
PHF Adj:	0.85	0.85	0.85		0.85	0.85	0.85		0.85	0.85		0.85	0.85	0.85		0.85
PHF Volume:	1	1	12		1	1	1		1	24		1	18	41		1
Reduct Vol:	0	0	0		0	0	0		0	0		0	0	0		0
FinalVolume:	1	1	12		1	1	1		1	24		1	18	41		1
Critical Gap Module:																
Critical Gp:	7.9	7.3	7.0		7.9	7.3	7.0		4.7	xxxx	xxxxx		4.7	xxxx	xxxxx	
FollowUpTim:	4.2	4.7	4.0		4.2	4.7	4.0		2.7	xxxx	xxxxx		2.7	xxxx	xxxxx	
Capacity Module:																
Cnflict Vol:	105	104	24		110	104	42		42	xxxx	xxxxx		25	xxxx	xxxxx	
Potent Cap.:	729	668	876		723	668	855		1272	xxxx	xxxxx		1293	xxxx	xxxxx	
Move Cap.:	719	658	876		704	658	855		1272	xxxx	xxxxx		1293	xxxx	xxxxx	
Volume/Cap:	0.00	0.00	0.01		0.00	0.00	0.00		0.00	xxxx	xxxx		0.01	xxxx	xxxx	
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.0	xxxx	xxxxx		0.0	xxxx	xxxxx	
Control Del:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		7.8	xxxx	xxxxx		7.8	xxxx	xxxxx	
LOS by Move:	*	*	*		*	*	*		A	*	*		A	*	*	
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	838	xxxxx		xxxx	730	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	0.1	xxxxx		xxxxx	0.0	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shrd ConDel:	xxxxx	9.4	xxxxx		xxxxx	10.0	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	*	A	*		*	A	*		*	*	*		*	*	*	
ApproachDel:	9.4				10.0				xxxxxx				xxxxxx			
ApproachLOS:	A				A				*				*			

Note: Queue reported is the number of cars per lane.

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Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #3 Suttle Road driveway

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HevVeh:	75%				75%				58%				58%			
Grade:	0%				0%				0%				0%			
Peds/Hour:	0				0				0				0			
Pedestrian Walk Speed: 4.00 feet/sec																
LaneWidth:	12 feet				12 feet				12 feet				12 feet			
Time Period: 0.25 hour																

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday PM Peak Hour

Scenario Report

Scenario:	PM
Command:	PM
Volume:	PM
Geometry:	PM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday PM Peak Hour

Turning Movement Report

Volume	Northbound			Southbound			Eastbound			Westbound			Total
Type	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
#1 Marine Dr/Portland Dr													
Base	15	0	675	0	0	0	0	520	45	370	120	0	1745
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	15	0	675	0	0	0	0	520	45	370	120	0	1745
#2 Portland Dr/Suttle Rd													
Base	15	600	2	5	385	25	70	0	20	1	1	15	1139
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	15	600	2	5	385	25	70	0	20	1	1	15	1139
#3 Suttle Road driveway													
Base	1	1	15	1	1	1	1	60	1	5	25	1	113
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	1	15	1	1	1	1	60	1	5	25	1	113

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday PM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 Marine Dr/Portland Dr	C	27.4	0.827	C	27.4	0.827	+ 0.000 D/V
# 2 Portland Dr/Suttle Rd	E	42.3	0.000	E	42.3	0.000	+ 0.000 D/V
# 3 Suttle Road driveway	A	10.0	0.000	A	10.0	0.000	+ 0.000 D/V

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Base Volume Alternative)

Intersection #1 Marine Dr/Portland Dr

Cycle (sec): 80 Critical Vol./Cap.(X): 0.827
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 27.4
Optimal Cycle: 77 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	5	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1	0	0	0	1	0	0	0	0	0	0	2	0	1	1	0	2	0	0
Volume Module:4:00 - 5:00 p.m.																			
Base Vol:	15	0	675	0	0	0	0	520	45	370	120	0
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	0	675	0	0	0	0	520	45	370	120	0
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92	0.92
PHF Volume:	16	0	734	0	0	0	0	565	49	402	130	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	16	0	734	0	0	0	0	565	49	402	130	0
PCE Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
FinalVolume:	16	0	734	0	0	0	0	565	49	402	130	0
Saturation Flow Module:												
Sat/Lane:	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900	1900
Adjustment:	0.84	1.00	0.75	1.00	1.00	1.00	1.00	0.79	0.70	0.80	0.80	1.00
Lanes:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	2.00	1.00	1.00	2.00	0.00
Final Sat.:	1597	0	1424	0	0	0	0	3007	1334	1516	3032	0
Capacity Analysis Module:												
Vol/Sat:	0.01	0.00	0.52	0.00	0.00	0.00	0.00	0.19	0.04	0.27	0.04	0.00
Crit Moves:			****					****		****		
Green/Cycle:	0.30	0.00	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.32	0.55	0.00
Volume/Cap:	0.03	0.00	0.83	0.00	0.00	0.00	0.00	0.83	0.16	0.83	0.08	0.00
Delay/Veh:	19.7	0.0	18.2	0.0	0.0	0.0	0.0	37.7	25.1	36.4	8.6	0.0
User DelAdj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
AdjDel/Veh:	19.7	0.0	18.2	0.0	0.0	0.0	0.0	37.7	25.1	36.4	8.6	0.0
LOS by Move:	B	A	B	A	A	A	A	D	C	D	A	A
HCM2kAvgQ:	0	0	17	0	0	0	0	10	1	12	1	0

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Base Volume Alternative

Intersection #1 Marine Dr/Portland Dr

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0	0	0 1	0	0 0	0 0	0	0 2	0 1	1	0 2	0 0
Lane Group:	L	xxxx	R	xxxx	xxxx	xxxx	xxxx	T	R	L	T	xxxx
#LnsInGrps:	1	0	1	0	0	0	0	2	1	1	2	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		13			0			20			19	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		3			1			2			4	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.89	xxxx	0.89	xxxx	xxxx	xxxxx	xxxx	0.83	0.83	0.84	0.84	xxxxx
Grade Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx
Area Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx
LT Adj:	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00
HCM Sat Adj:	0.84	1.00	0.75	1.00	1.00	1.00	1.00	0.83	0.70	0.80	0.84	1.00
Usr Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	0.84	1.00	0.75	1.00	1.00	1.00	1.00	0.79	0.70	0.80	0.80	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
2000 HCM Operations Method
Base Volume Alternative

Intersection #1 Marine Dr/Portland Dr

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
CrsswalkWid:	0.00	8.00		0.00	0.00		0.00	8.00		0.00	0.00	
CrsswalkLen:	0.00	60.00		0.00	0.00		0.00	24.00		0.00	0.00	
MinPedGrn:	0.00	18.22		0.00	0.00		0.00	9.21		0.00	0.00	
PedGrn:	0.00	18.22		0.00	0.00		0.00	9.21		0.00	0.00	
PedVolume:	0	3		0	0		0	2		0	0	
PedFlowRate:	0	13		0	0		0	17		0	0	
BikeVol:	0	0		0	0		0	0		0	0	
BikeFlwRate:	0	0		0	0		0	0		0	0	
PedOcc:	0.000	0.007		0.000	0.000		0.000	0.009		0.000	0.000	
BikeOcc:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
PedAfterOcc:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
rOcc:	0.000	0.007		0.000	0.000		0.000	0.009		0.000	0.000	
TurnVehAdj:	0.000	0.996		0.000	0.000		0.000	0.991		0.000	0.000	
Prt:	0.000	1.000		0.000	0.000		0.000	1.000		0.000	0.000	
Prta:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
Plt:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
Plta:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
PedBike Adj:	1.000	0.996		1.000	1.000		1.000	0.991		1.000	1.000	

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Base Volume Alternative

Intersection #1 Marine Dr/Portland Dr

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.30	0.00	0.62	0.00	0.00	0.00	0.00	0.23	0.23	0.32	0.55	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	0.3	0.0	12.7	0.0	0.0	0.0	0.0	6.3	0.9	8.3	0.7	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Q2:	0.0	0.0	4.0	0.0	0.0	0.0	0.0	3.3	0.2	3.6	0.1	0.0
HCM2KQueue:	0.3	0.0	16.7	0.0	0.0	0.0	0.0	9.6	1.1	11.8	0.8	0.0
70th%Factor:	1.20	1.20	1.17	1.20	1.20	1.20	1.20	1.18	1.20	1.17	1.20	1.20
HCM2k70thQ:	0.3	0.0	19.4	0.0	0.0	0.0	0.0	11.4	1.3	13.9	1.0	0.0
85th%Factor:	1.60	1.60	1.47	1.60	1.60	1.60	1.60	1.52	1.59	1.50	1.59	1.60
HCM2k85thQ:	0.5	0.0	24.5	0.0	0.0	0.0	0.0	14.6	1.7	17.8	1.3	0.0
90th%Factor:	1.79	1.80	1.57	1.80	1.80	1.80	1.80	1.65	1.78	1.62	1.78	1.80
HCM2k90thQ:	0.5	0.0	26.2	0.0	0.0	0.0	0.0	15.9	1.9	19.2	1.4	0.0
95th%Factor:	2.09	2.10	1.74	2.10	2.10	2.10	2.10	1.85	2.07	1.81	2.07	2.10
HCM2k95thQ:	0.6	0.0	29.0	0.0	0.0	0.0	0.0	17.8	2.2	21.4	1.7	0.0
98th%Factor:	2.68	2.70	1.98	2.70	2.70	2.70	2.70	2.18	2.62	2.10	2.64	2.70
HCM2k98thQ:	0.8	0.0	32.9	0.0	0.0	0.0	0.0	21.0	2.8	24.9	2.1	0.0

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday PM Peak Hour

Fuel Consumption and Emissions
2000 HCM Operations Method
Base Volume Alternative

Intersection #1 Marine Dr/Portland Dr

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Run Speed:	30 MPH			30 MPH			30 MPH			30 MPH		
NumOfStops:	2.9	0.0	142.7	0.0	0.0	0.0	0.0	134	9.8	93.0	15.4	0.0

Name: year 1995 composite fleet
Fuel Consumption: 59.969 pounds
9.715 gallons
Carbon Dioxide: 187.105 pounds
Carbon Monoxide: 14.703 pounds
Hydrocarbons: 2.658 pounds
Nitrogen Oxides: 0.691 pounds

Name: year 2000 composite fleet
Fuel Consumption: 56.465 pounds
9.147 gallons
Carbon Dioxide: 176.172 pounds
Carbon Monoxide: 14.427 pounds
Hydrocarbons: 2.603 pounds
Nitrogen Oxides: 0.629 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #2 Portland Dr/Suttle Rd

Average Delay (sec/veh): 3.7 Worst Case Level Of Service: E[42.3]

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Uncontrolled			Uncontrolled			Stop Sign			Stop Sign		
Rights:	Include			Include			Include			Include		
Lanes:	0 0 1! 0 0			1 0 0 1 0			0 0 1! 0 0			0 0 1! 0 0		
Volume Module:4:00 - 5:00 p.m.												
Base Vol:	15	600	2	5	385	25	70	0	20	1	1	15
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Initial Bse:	15	600	2	5	385	25	70	0	20	1	1	15
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
PHF Adj:	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93	0.93
PHF Volume:	16	645	2	5	414	27	75	0	22	1	1	16
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
FinalVolume:	16	645	2	5	414	27	75	0	22	1	1	16
Critical Gap Module:												
Critical Gp:	4.2	xxxx	xxxxx	4.3	xxxx	xxxxx	7.3	6.7	6.4	7.3	6.7	6.4
FollowUpTim:	2.3	xxxx	xxxxx	2.3	xxxx	xxxxx	3.7	4.2	3.5	3.6	4.1	3.4
Capacity Module:												
Cnflict Vol:	441	xxxx	xxxxx	647	xxxx	xxxxx	1125	1118	427	1127	1130	646
Potent Cap.:	1063	xxxx	xxxxx	879	xxxx	xxxxx	168	192	591	171	192	447
Move Cap.:	1063	xxxx	xxxxx	879	xxxx	xxxxx	159	188	591	162	188	447
Volume/Cap:	0.02	xxxx	xxxx	0.01	xxxx	xxxx	0.47	0.00	0.04	0.01	0.01	0.04

Level Of Service Module:												
2Way95thQ:	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx
Control Del:	8.4	xxxx	xxxxx	9.1	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx
LOS by Move:	A	*	*	A	*	*	*	*	*	*	*	*
Movement:	LT - LTR - RT			LT - LTR - RT			LT - LTR - RT			LT - LTR - RT		
Shared Cap.:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	190	xxxxx	xxxx	378	xxxxx
SharedQueue:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	2.6	xxxxx	xxxxx	0.2	xxxxx
Shrd ConDel:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	42.3	xxxxx	xxxxx	15.0	xxxxx
Shared LOS:	*	*	*	*	*	*	*	E	*	*	C	*
ApproachDel:	xxxxxx			xxxxxx			42.3			15.0		
ApproachLOS:	*			*			E			C		

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #2 Portland Dr/Suttle Rd

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HevVeh:	13%			15%			20%			16%		
Grade:	0%			0%			0%			0%		
Peds/Hour:	0			0			0			0		
Pedestrian Walk Speed: 4.00 feet/sec												
LaneWidth:	12 feet			12 feet			12 feet			12 feet		
Time Period: 0.25 hour												

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Base Volume Alternative)

Intersection #3 Suttle Road driveway

Average Delay (sec/veh): 2.1 Worst Case Level Of Service: A[10.0]

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
Control:	Stop Sign						Stop Sign						Uncontrolled						Uncontrolled					
Rights:	Include						Include						Include						Include					
Lanes:	0	0	1!	0	0		0	0	1!	0	0		0	0	1!	0	0		0	0	1!	0	0	
Volume Module:																								
Base Vol:	1	1	15	1	1	1	1	60	1	5	25	1												
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
Initial Bse:	1	1	15	1	1	1	1	60	1	5	25	1												
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00												
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85												
PHF Volume:	1	1	18	1	1	1	1	71	1	6	29	1												
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0												
FinalVolume:	1	1	18	1	1	1	1	71	1	6	29	1												
Critical Gap Module:																								
Critical Gp:	7.9	7.3	7.0	7.9	7.3	7.0	4.3	xxxx	xxxxx	4.3	xxxx	xxxxx												
FollowUpTim:	4.2	4.7	4.0	4.2	4.7	4.0	2.4	xxxx	xxxxx	2.4	xxxx	xxxxx												
Capacity Module:																								
Cnflict Vol:	116	116	71	125	116	30	31	xxxx	xxxxx	72	xxxx	xxxxx												
Potent Cap.:	715	657	821	706	657	869	1473	xxxx	xxxxx	1422	xxxx	xxxxx												
Move Cap.:	710	654	821	687	654	869	1473	xxxx	xxxxx	1422	xxxx	xxxxx												
Volume/Cap:	0.00	0.00	0.02	0.00	0.00	0.00	0.00	xxxx	xxxx	0.00	xxxx	xxxx												
Level Of Service Module:																								
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx												
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	7.5	xxxx	xxxxx												
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*												
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT												
Shared Cap.:	xxxx	801	xxxxx	xxxx	725	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx												
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Shrd ConDel:	xxxxx	9.6	xxxxx	xxxxx	10.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx												
Shared LOS:	*	A	*	*	A	*	*	*	*	*	*	*												
ApproachDel:	9.6			10.0			xxxxxx			xxxxxx														
ApproachLOS:	A			A			*			*														

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Existing Traffic Conditions, Weekday PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Base Volume Alternative

Intersection #3 Suttle Road driveway

Approach:	North Bound						South Bound						East Bound						West Bound					
Movement:	L	-	T	-	R		L	-	T	-	R		L	-	T	-	R		L	-	T	-	R	
HevVeh:	75%						75%						20%						20%					
Grade:	0%						0%						0%						0%					
Peds/Hour:	0						0						0						0					
Pedestrian Walk Speed: 4.00 feet/sec																								
LaneWidth:	12 feet						12 feet						12 feet						12 feet					
Time Period: 0.25 hour																								

Appendix D
CRASH DATA

120 SWIFT

N Marine Drive @ N Portland Road (Hwy 120)
January 1, 2005 through December 31, 2009

SER# / INVEST	SPEED	ALC	DRUGS	SCHL	WORK	DATE / DAY / TIME	COUNTY / CITY / URBAN AREA	RD# / COMPNT / MLG / MILEPNT	FC / TYP	CONN # / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
04468	Y	N	N	N	N	04/19/2007	MULTNOMAH	1 16			INTER	3-LEG	N	N	CLR	ANGL-OTH	01	NONE 1	TURN-R											050,010,013	32,01,08
CITY						Thu	PORTLAND N	0 0		N MARINE DR	SE		TRF SIGNAL	N	DRY	TURN		PRVTE	SW SE									000	050,010,013	24
						11A	PORTLAND UA	1.04		N PORTLAND RD	06	0		N	DAY	PDO		SEMI TOW		01	DRVR	NONE	42	M	OR-Y OR<25		052,047,007	017		32,01,08
																	02	NONE 1	STOP											
																		PRVTE	SE NW										011		00
																		SEMI TOW		01	DRVR	NONE	43	M	OTH-Y N-RES		000	000		00
12023	N	N	N	N	N	10/10/2007	MULTNOMAH	1 16			INTER	3-LEG	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT												07
CITY						Wed	PORTLAND N	0 0		N MARINE DR	SW		TRF SIGNAL	N	WET	SS-O		PRVTE	SW NE									000		00
						8P	PORTLAND UA	1.04		N PORTLAND RD	06	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	NONE	00	U	UNK UNK		026	000		07
																	02	NONE 0	STOP											
																		PRVTE	SW NE										011		00
																		PSNGR CAR		01	DRVR	INJC	46	M	OR-Y OR<25		000	000		00
12379	Y	Y	N	N	N	10/31/2008	MULTNOMAH	1 16			INTER	3-LEG	N	Y	RAIN	FIX OBJ	01	NONE 0	STRGHT											079,010,086	33,01
CITY						Fri	PORTLAND N	0 0		N MARINE DR	CN		TRF SIGNAL	N	WET	FIX		PRVTE	SW NE									000	079,010,086	00
						2A	PORTLAND UA	1.04		N PORTLAND RD	02	0		N	DLIT	INJ		PSNGR CAR		01	DRVR	INJC	53	M	OR-Y OR<25		051,047	000		33,01
05452	N	N	N			05/12/2007	MULTNOMAH	1 16			INTER	3-LEG	N	N	RAIN	O-1TURN	01	NONE 0	STRGHT											010	02
NO RPT						Sat	PORTLAND N	0 0		N MARINE DR	CN		TRF SIGNAL	N	WET	TURN		PRVTE	NW SE									000		00
						5P	PORTLAND UA	1.04		N PORTLAND RD	03	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	53	F	OTH-Y N-RES		000	000		00
																	02	NONE 0	TURN-L											
																		PRVTE	SE SW									000	010	00
																		PSNGR CAR		01	DRVR	NONE	25	M	OR-Y OR<25		004	000		02

123 NORTHEAST PORTLAND

N Marine Drive @ N Portland Road (Hwy 120)
January 1, 2005 through December 31, 2009

SER# / INVEST	SPEED	ALCHL	DRUGS	SCHL	WORK	DATE / DAY / TIME	COUNTY / CITY / URBAN AREA	RD# COMPNT / MLG / MILEPNT	FC / TYP	CONN # / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CNTL	OFFRD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN EVENT	CAUSE
02829	N	N	N			03/09/2007	MULTNOMAH	1	16		INTER	3-LEG	N	N	CLR	S-1TURN	01	NONE 1	TURN-R										08,10
NO RPT						Fri	PORTLAND N	0	0	N MARINE DR	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	S E									000	00
						4P	PORTLAND UA	1.57		N PORTLAND RD	04	0		N	DAY	PDO		SEMI TOW		01	DRVR	NONE	45	M	OR-Y		006,080	000	08,10
																										OR>25			
																	02	NONE 0	STRGHT										
																		PRVTE	S N									000	00
																		PSNGR CAR		01	DRVR	NONE	53	F	OTH-Y		000	000	00
																										N-RES			

OREGON DEPARTMENT OF TRANSPORTATION - TRANSPORTATION DEVELOPMENT DIVISION
TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT
URBAN NON-SYSTEM CRASH LISTING

CITY OF PORTLAND N, MULTNOMAH COUNTY

N Marine Drive @ N Portland Road (Hwy 120)
January 1, 2005 through December 31, 2009

SER# / INVEST	SPEED	ALC	DRUG	SCHL	WORK	DATE / DAY / TIME	CLASS / DIST FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
15029	N	N	N	N	N	12/29/2008	16	N MARINE DR	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 1	STRGHT											07
CITY						Mon	0	N PORTLAND RD	SE		TRF SIGNAL	N	DRY	REAR		PRVTE	SE NW									000		00
						1P			06	0		N	DAY	INJ		SEMI TOW		01	DRVR	NONE	27	M	OR-Y		043	000		07
																							OR>25					
															02	NONE	STOP											
																PRVTE	SE NW									011		00
																PSNGR CAR		01	DRVR	INJC	46	M	OR-Y		000	000		00
																							OR<25					
																		02	PSNG	INJC	48	F			000	000		00
01464	N	N	N	N	N	02/14/2009	16	N MARINE DR	INTER	3-LEG	N	N	CLD	S-1STOP	01	NONE 0	STRGHT											07
CITY						Sat	0	N PORTLAND RD	SE		L-TURN REF	N	DRY	REAR		UNKN	SE NW									000		00
						12P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	M	UNK		026	000		07
																							UNK					
															02	NONE 0	STOP											
																PRVTE	SE NW									012		00
																PSNGR CAR		01	DRVR	NONE	48	M	OR-Y		000	000		00
																							OR<25					
																		02	PSNG	NO<5	02	M			000	000		00
13643	N	N	N	N	N	12/21/2009	16	N MARINE DR	INTER	3-LEG	N	N	RAIN	S-1STOP	01	NONE 0	STRGHT											07
CITY						Mon	0	N PORTLAND RD	SE		TRF SIGNAL	N	WET	REAR		PRVTE	SE NW									000		00
						1P			06	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJB	18	M	OTH-Y		026	000		07
																							N-RES					
																		02	PSNG	INJC	17	M			000	000		00
																		03	PSNG	INJC	17	M			000	000		00
															02	NONE 1	STOP											
																PRVTE	SE NW									012		00
																SEMI TOW		01	DRVR	NONE	61	M	OR-Y		000	000		00
																							OR>25					
09425	N	N	N			08/19/2008	16	N MARINE DR	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE						Tue	0	N PORTLAND RD	SW		TRF SIGNAL	N	DRY	REAR		PRVTE	SW NE									000		00
						6P			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	M	OR-Y		026	000		07
																							N-RES					
															02	NONE 0	STOP											
																PRVTE	SW NE									011		00
																PSNGR CAR		01	DRVR	NONE	26	M	OR-Y		000	000		00
																							OR>25					
08164	N	N	N			08/13/2009	16	N MARINE DR	INTER	3-LEG	N	N	CLR	S-1STOP	01	NONE 0	STRGHT											07
NONE						Thu	0	N PORTLAND RD	NW		TRF SIGNAL	N	DRY	REAR		PRVTE	SW NE									000		00
						8A			06	0		N	DAY	PDO		PSNGR CAR		01	DRVR	NONE	00	M	OR-Y		026	000		07
																							OR<25					
															02	NONE 0	STOP											
																PRVTE	SW NE									011		00
																PSNGR CAR		01	DRVR	NONE	65	F	OR-Y		000	000		00
																							OR<25					

CITY OF PORTLAND N, MULTNOMAH COUNTY

N Marine Drive @ N Portland Road (Hwy 120)

January 1, 2005 through December 31, 2009

SER# / INVEST	SPEC	ALC	DRUG	SCHL	WORK	DATE / DAY / TIME	CLASS / DIST FROM	CITY STREET / FIRST STREET / SECOND STREET	RD CHAR / DIRECT / LOCTN	INT-TYP (MEDIAN) / LEGS (#LANES)	INT-REL / TRAF- / CONTL	OFF-RD / RNDBT / DRVWY	WTHR / SURF / LIGHT	CRASH TYP / COLL TYP / SVRTY	V#	SPCL USE / TRLR QTY / OWNER / VEH TYPE	MOVE / FROM / TO	P#	PRTC TYPE	INJ SVRTY	AGE	SEX	LICNS RES	PED LOC	ERROR	ACTN	EVENT	CAUSE
01633	N	N	N			02/16/2009	16	N MARINE DR	INTER	3-LEG	N	N	CLR	O-1TURN	01	NONE 0	STRGHT											08
NO RPT						Mon	0	N PORTLAND RD	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	NW SE									000		00
						6P			01	0		N	DUSK	PDO		PSNGR CAR		01	DRVR	NONE	56	M	OTH-Y N-RES		000	000		00
															02	NONE 0	TURN-L											
																PRVTE	SE SW									000		00
																PSNGR CAR		01	DRVR	NONE	63	F	OTH-Y N-RES		004	000		08
06424	N	N	N			06/06/2008	16	N MARINE DR	INTER	CROSS	N	N	CLD	ANGL-OTH	01	NONE 0	STRGHT											04
CITY						Fri	0	N PORTLAND RD	CN		TRF SIGNAL	N	DRY	TURN		PRVTE	SW NE									000		00
						7P			02	0		N	DAY	INJ		PSNGR CAR		01	DRVR	INJC	22	M	UNK OR<25		020	000		04
															02	NONE 1	TURN-L											
																PRVTE	SE SW									000		00
																SEMI TOW		01	DRVR	NONE	43	M	OR-Y OR<25		000	000		00

ACTION CODE TRANSLATION LIST

ACTION CODE	SHORT DESCRIPTION	LONG DESCRIPTION
000	NONE	NO ACTION OR NON-WARRANTED
001	SKIDDED	SKIDDED
002	ON/OFF V	GETTING ON OR OFF STOPPED OR PARKED VEHICLE
003	LOAD OVR	OVERHANGING LOAD STRUCK ANOTHER VEHICLE, ETC.
006	SLOW DN	SLOWED DOWN
007	AVOIDING	AVOIDING MANEUVER
008	PAR PARK	PARALLEL PARKING
009	ANG PARK	ANGLE PARKING
010	INTERFERE	PASSENGER INTERFERING WITH DRIVER
011	STOPPED	STOPPED IN TRAFFIC NOT WAITING TO MAKE A LEFT TURN
012	STP/L TRN	STOPPED BECAUSE OF LEFT TURN SIGNAL OR WAITING, ETC.
013	STP TURN	STOPPED WHILE EXECUTING A TURN
015	GO A/STOP	PROCEED AFTER STOPPING FOR A STOP SIGN/FLASHING RED.
016	TRN A/RED	TURNED ON RED AFTER STOPPING
017	LOSTCTRL	LOST CONTROL OF VEHICLE
018	EXIT DWY	ENTERING STREET OR HIGHWAY FROM ALLEY OR DRIVEWAY
019	ENTR DWY	ENTERING ALLEY OR DRIVEWAY FROM STREET OR HIGHWAY
020	STR ENTR	BEFORE ENTERING ROADWAY, STRUCK PEDESTRIAN, ETC. ON SIDEWALK OR SHOULDER
021	NO DRVR	CAR RAN AWAY - NO DRIVER
022	PREV COL	STRUCK, OR WAS STRUCK BY, VEHICLE OR PEDESTRIAN IN PRIOR COLLISION BEFORE ACC. STABILIZED
023	STALLED	VEHICLE STALLED
024	DRVR DEAD	DEAD BY UNASSOCIATED CAUSE
025	FATIGUE	FATIGUED, SLEEPY, ASLEEP
026	SUN	DRIVER BLINDED BY SUN
027	HDLGHTS	DRIVER BLINDED BY HEADLIGHTS
028	ILLNESS	PHYSICALLY ILL
029	THRU MED	VEHICLE CROSSED, PLUNGED OVER, OR THROUGH MEDIAN BARRIER
030	PURSUIT	PURSUING OR ATTEMPTING TO STOP ANOTHER VEHICLE
031	PASSING	PASSING SITUATION
032	PRKOFFRD	VEHICLE PARKED BEYOND CURB OR SHOULDER
033	CROS MED	VEHICLE CROSSED EARTH OR GRASS MEDIAN
034	X N/SGNL	CROSSING AT INTERSECTION - NO TRAFFIC SIGNAL PRESENT
035	X W/ SGNL	CROSSING AT INTERSECTION - TRAFFIC SIGNAL PRESENT
036	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
037	BTWN INT	CROSSING BETWEEN INTERSECTIONS
038	DISTRACT	DRIVER'S ATTENTION DISTRACTED
039	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
040	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
041	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
042	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
043	PLAYINRD	PLAYING IN STREET OR ROAD
044	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
045	WORK ON	WORKING IN ROADWAY OR ALONG SHOULDER
050	LAY ON RD	STANDING OR LYING IN ROADWAY
051	ENT OFFRD	ENTERING / STARTING IN TRAFFIC LANE FROM OFF-ROAD
088	OTHER	OTHER ACTION
099	UNK	UNKNOWN ACTION

CAUSE CODE TRANSLATION LIST

CAUSE CODE	SHORT DESCRIPTION	LONG DESCRIPTION
00	NO CODE	NO CAUSE ASSOCIATED AT THIS LEVEL
01	TOO-FAST	TOO FAST FOR CONDITIONS (NOT EXCEED POSTED SPEED
02	NO-YIELD	DID NOT YIELD RIGHT-OF-WAY
03	PAS-STOP	PASSED STOP SIGN OR RED FLASHER
04	DIS--RAG	DISREGARDED R-A-G TRAFFIC SIGNAL.
05	LEFT-CTR	DROVE LEFT OF CENTER ON TWO-WAY ROAD
06	IMP-OVER	IMPROPER OVERTAKING
07	TOO-CLOS	FOLLOWED TOO CLOSELY
08	IMP-TURN	MADE IMPROPER TURN
09	DRINKING	ALCOHOL OR DRUG INVOLVED
10	OTHR-IMP	OTHER IMPROPER DRIVING
11	MECH-DEF	MECHANICAL DEFECT
12	OTHER	OTHER (NOT IMPROPER DRIVING)
13	IMP LN C	IMPROPER CHANGE OF TRAFFIC LANES
14	DIS TCD	DISREGARDED OTHER TRAFFIC CONTROL DEVICE
15	WRNG WAY	WRONG WAY ON ONE-WAY ROADWAY
16	FATIGUE	DRIVER DROWSY/FATIGUED/SLEEPY
18	IN RDWY	NON-MOTORIST ILLEGALLY IN ROADWAY
19	NT VISBL	NON-MOTORIST CLOTHING NOT VISIBLE
20	IMP PKNG	VEHICLE IMPROPERLY PARKED
21	DEF STER	DEFECTIVE STEERING MECHANISM
22	DEF BRKE	INADEQUATE OR NO BRAKES
24	LOADSHFT	VEHICLE LOST LOAD OR LOAD SHIFTED
25	TIREFAIL	TIRE FAILURE
26	PHANTOM	PHANTOM / NON-CONTACT VEHICLE
27	INATTENT	INATTENTION
30	SPEED	DRIVING IN EXCESS OF POSTED SPEED
31	RACING	SPEED RACING (PER PAR)
32	CARELESS	CARELESS DRIVING (CITATION ISSUED)
33	RECKLESS	RECKLESS DRIVING (CITATION ISSUED)
34	AGGRESV	AGGRESSIVE DRIVING (PER PAR)
35	RD RAGE	ROAD RAGE (PER PAR)

COLLISION TYPE CODE TRANSLATION LIST

COLL CODE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OTH	MISCELLANEOUS
-	BACK	BACKING
0	PED	PEDESTRIAN
1	ANGL	ANGLE
2	HEAD	HEAD-ON
3	REAR	REAR-END
4	SS-M	SIDESWIPE - MEETING
5	SS-O	SIDESWIPE - OVERTAKING
6	TURN	TURNING MOVEMENT
7	PARK	PARKING MANEUVER
8	NCOL	NON-COLLISION
9	FIX	FIXED OBJECT OR OTHER OBJECT

CRASH TYPE CODE TRANSLATION LIST

CRASH TYPE	SHORT DESCRIPTION	LONG DESCRIPTION
&	OVERTURN	OVERTURNED
0	NON-COLL	OTHER NON-COLLISION
1	OTH RDWY	MOTOR VEHICLE ON OTHER ROADWAY
2	PRKD MV	PARKED MOTOR VEHICLE
3	PED	PEDESTRIAN
4	TRAIN	RAILWAY TRAIN
6	BIKE	PEDALCYCLIST
7	ANIMAL	ANIMAL
8	FIX OBJ	FIXED OBJECT
9	OTH OBJ	OTHER OBJECT
A	ANGL-STP	ENTERING AT ANGLE - ONE VEHICLE STOPPED
B	ANGL-OTH	ENTERING AT ANGLE - ALL OTHERS
C	S-STRGHT	FROM SAME DIRECTION - BOTH GOING STRAIGHT
D	S-1TURN	FROM SAME DIRECTION - ONE TURN, ONE STRAIGHT
E	S-1STOP	FROM SAME DIRECTION - ONE STOPPED
F	S-OTHER	FROM SAME DIRECTION-ALL OTHERS, INCLUDING PARKING
G	O-STRGHT	FROM OPPOSITE DIRECTION - BOTH GOING STRAIGHT
H	O-1TURN	FROM OPPOSITE DIRECTION - ONE TURN, ONE STRAIGHT
I	O-1STOP	FROM OPPOSITE DIRECTION - ONE STOPPED
J	O-OTHER	FROM OPPOSITE DIRECTION-ALL OTHERS INCL. PARKING

DRIVER LICENSE CODE TRANSLATION LIST

LIC CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NOT LICENSED (HAD NEVER BEEN LICENSED)
1	OR-Y	VALID OREGON LICENSE
2	OTH-Y	VALID LICENSE, OTHER STATE OR COUNTRY
3	SUSP	SUSPENDED/REVOKED

DRIVER RESIDENCE CODE TRANSLATION LIST

RES CODE	SHORT DESC	LONG DESCRIPTION
1	OR<25	OREGON RESIDENT WITHIN 25 MILE OF HOME
2	OR>25	OREGON RESIDENT 25 OR MORE MILES FROM HOME
3	OR-?	OREGON RESIDENT - UNKNOWN DISTANCE FROM HOME
4	N-RES	NON-RESIDENT
9	UNK	UNKNOWN IF OREGON RESIDENT

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
000	NONE	NO ERROR
001	WIDE TRN	WIDE TURN
002	CUT CORN	CUT CORNER ON TURN
003	FAIL TRN	FAILED TO OBEY MANDATORY TRAFFIC TURN SIGNAL, SIGN OR LANE MARKINGS
004	L IN TRF	LEFT TURN IN FRONT OF ONCOMING TRAFFIC
005	L PROHIB	LEFT TURN WHERE PROHIBITED
006	FRM WRNG	TURNED FROM WRONG LANE
007	TO WRONG	TURNED INTO WRONG LANE
008	ILLEG U	U-TURNED ILLEGALLY
009	IMP STOP	IMPROPERLY STOPPED IN TRAFFIC LANE
010	IMP SIG	IMPROPER SIGNAL OR FAILURE TO SIGNAL
011	IMP BACK	BACKING IMPROPERLY (NOT PARKING)
012	IMP PARK	IMPROPERLY PARKED
013	UNPARK	IMPROPER START LEAVING PARKED POSITION
014	IMP STRT	IMPROPER START FROM STOPPED POSITION
015	IMP LGHT	IMPROPER OR NO LIGHTS (VEHICLE IN TRAFFIC)
016	INATTENT	FAILED TO DIM LIGHTS (UNTIL 4/1/97) / INATTENTION (AFTER 4/1/97)
017	UNSF VEH	DRIVING UNSAFE VEHICLE (NO OTHER ERROR APPARENT)
018	OTH PARK	ENTERING, EXITING PARKED POSITION WITH INSUFFICIENT CLEARANCE OR OTHER IMPROPER PARKING MANEUVER
019	DIS DRIV	DISREGARDED OTHER DRIVER'S SIGNAL
020	DIS SGNL	DISREGARDED TRAFFIC SIGNAL
021	RAN STOP	DISREGARDED STOP SIGN OR FLASHING RED
022	DIS SIGN	DISREGARDED WARNING SIGN, FLARES OR FLASHING AMBER
023	DIS OFCR	DISREGARDED POLICE OFFICER OR FLAGMAN
024	DIS EMER	DISREGARDED SIREN OR WARNING OF EMERGENCY VEHICLE
025	DIS RR	DISREGARDED RR SIGNAL, RR SIGN, OR RR FLAGMAN
026	REAR-END	FAILED TO AVOID STOPPED OR PARKED VEHICLE AHEAD OTHER THAN SCHOOL BUS
027	BIKE ROW	DID NOT HAVE RIGHT-OF-WAY OVER PEDALCYCLIST
028	NO ROW	DID NOT HAVE RIGHT-OF-WAY
029	PED ROW	FAILED TO YIELD RIGHT-OF-WAY TO PEDESTRIAN
030	PAS CURV	PASSING ON A CURVE
031	PAS WRNG	PASSING ON THE WRONG SIDE
032	PAS TANG	PASSING ON STRAIGHT ROAD UNDER UNSAFE CONDITIONS
033	PAS X-WK	PASSED VEHICLE STOPPED AT CROSSWALK FOR PEDESTRIAN
034	PAS INTR	PASSING AT INTERSECTION
035	PAS HILL	PASSING ON CREST OF HILL
036	N/PAS ZN	PASSING IN "NO PASSING" ZONE
037	PAS TRAF	PASSING IN FRONT OF ONCOMING TRAFFIC
038	CUT-IN	CUTTING IN (TWO LANES - TWO WAY ONLY)
039	WRNGSIDE	DRIVING ON WRONG SIDE OF THE ROAD
040	THRU MED	DRIVING THROUGH SAFETY ZONE OR OVER ISLAND
041	F/ST BUS	FAILED TO STOP FOR SCHOOL BUS

ERROR CODE TRANSLATION LIST

ERROR CODE	SHORT DESCRIPTION	FULL DESCRIPTION
042	F/SLO MV	FAILED TO DECREASE SPEED FOR SLOWER MOVING VEHICLE
043	TO CLOSE	FOLLOWING TOO CLOSELY (MUST BE ON OFFICER'S REPORT)
044	STRDL LN	STRADDLING OR DRIVING ON WRONG LANES
045	IMP CHG	IMPROPER CHANGE OF TRAFFIC LANES
046	WRNG WAY	WRONG WAY ON ONE-WAY ROADWAY (VEHICLE IS DELIBERATELY TRAVELING ON WRONG SIDE)
047	BASCRULE	DRIVING TOO FAST FOR CONDITIONS (NOT EXCEEDING POSTED SPEED)
048	OPN DOOR	OPENED DOOR INTO ADJACENT TRAFFIC LANE
049	IMPEDING	IMPEDING TRAFFIC
050	SPEED	DRIVING IN EXCESS OF POSTED SPEED
051	RECKLESS	RECKLESS DRIVING (PER PAR)
052	CARELESS	CARELESS DRIVING (PER PAR)
053	RACING	SPEED RACING (PER PAR)
054	X N/SGNL	CROSSING AT INTERSECTION - NO TRAFFIC SIGNAL PRESENT
055	X W/SGNL	CROSSING AT INTERSECTION - TRAFFIC SIGNAL PRESENT
056	DIAGONAL	CROSSING AT INTERSECTION - DIAGONALLY
057	BTWN INT	CROSSING BETWEEN INTERSECTIONS
059	W/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER WITH TRAFFIC
060	A/TRAF-S	WALKING, RUNNING, RIDING, ETC., ON SHOULDER FACING TRAFFIC
061	W/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT WITH TRAFFIC
062	A/TRAF-P	WALKING, RUNNING, RIDING, ETC., ON PAVEMENT FACING TRAFFIC
063	PLAYINRD	PLAYING IN STREET OR ROAD
064	PUSH MV	PUSHING OR WORKING ON VEHICLE IN ROAD OR ON SHOULDER
065	WK IN RD	WORKING IN ROADWAY OR ALONG SHOULDER
070	LAYON RD	STANDING OR LYING IN ROADWAY
073	DIS POL	DISREGARDING POLICE (ELUDING)
080	FAIL LN	FAILED TO MAINTAIN LANE
081	OFF RD	RAN OFF ROAD
082	NO CLEAR	DRIVER MISJUDGED CLEARANCE
083	OVRSTEER	OVER CORRECTING
084	NOT USED	CODE NOT IN USE
085	OVRLOAD	OVERLOADING OR IMPROPER LOADING OF VEHICLE WITH CARGO OR PASSENGERS
097	UNA DIS TC	UNABLE TO DETERMINE WHICH DRIVER DISREGARDED TRAFFIC CONTROL DEVICE

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
001	FEL/JUMP	OCCUPANT FELL, JUMPED OR WAS EJECTED FROM MOVING VEHICLE
002	INTERFER	PASSENGER INTERFERED WITH DRIVER
003	BUG INTF	ANIMAL OR INSECT IN VEHICLE INTERFERED WITH DRIVER
004	PED INV	PEDESTRIAN INVOLVED (NON-PEDESTRIAN ACCIDENT)
005	SUB-PED	"SUB-PED": PEDESTRIAN INJURED SUBSEQUENT TO COLLISION, ETC.
006	BIKE INV	TRICYCLE-BICYCLE INVOLVED
007	HITCHIKR	HITCHHIKER (SOLICITING A RIDE)
008	PSNGR TOW	PASSENGER BEING TOWED OR PUSHED ON CONVEYANCE
009	ON/OFF V	GETTING ON OR OFF STOPPED OR PARKED VEHICLE (OCCUPANTS ONLY)
010	SUB OTRN	OVERTURNED AFTER FIRST HARMFUL EVENT
011	MV PUSHD	VEHICLE BEING PUSHED
012	MV TOWED	VEHICLE TOWED OR HAD BEEN TOWING ANOTHER VEHICLE
013	FORCED	VEHICLE FORCED BY IMPACT INTO ANOTHER VEHICLE, PEDALCYCLIST OR PEDESTRIAN
014	SET MOTN	VEHICLE SET IN MOTION BY NON-DRIVER (CHILD RELEASED BRAKES, ETC.)
015	RR ROW	AT OR ON RAILROAD RIGHT-OF-WAY (NOT LIGHT RAIL)
016	LT RL ROW	AT OR ON LIGHT-RAIL RIGHT-OF-WAY
017	RR HIT V	TRAIN STRUCK VEHICLE
018	V HIT RR	VEHICLE STRUCK TRAIN
019	HIT RR CAR	VEHICLE STRUCK RAILROAD CAR ON ROADWAY
020	JACKNIFE	JACKKNIFE; TRAILER OR TOWED VEHICLE STRUCK TOWING VEHICLE
021	TRL OTRN	TRAILER OR TOWED VEHICLE OVERTURNED
022	CN BROKE	TRAILER CONNECTION BROKE
023	DETACH TRL	DETACHED TRAILING OBJECT STRUCK OTHER VEHICLE, NON-MOTORIST, OR OBJECT
024	V DOOR OPN	VEHICLE DOOR OPENED INTO ADJACENT TRAFFIC LANE
025	WHEELOFF	WHEEL CAME OFF
026	HOOD UP	HOOD FLEW UP
028	LOAD SHIFT	LOST LOAD, LOAD MOVED OR SHIFTED
029	TIREFAIL	TIRE FAILURE
030	PET	PET: CAT, DOG AND SIMILAR
031	LVSTOCK	STOCK: COW, CALF, BULL, STEER, SHEEP, ETC.
032	HORSE	HORSE, MULE, OR DONKEY
033	HRSE&RID	HORSE AND RIDER
034	GAME	WILD ANIMAL, GAME (INCLUDES BIRDS; NOT DEER OR ELK)
035	DEER ELK	DEER OR ELK, WAPITI
036	ANML VEH	ANIMAL-DRAWN VEHICLE
037	CULVERT	CULVERT, OPEN LOW OR HIGH MANHOLE
038	ATENUATN	IMPACT ATTENUATOR
039	PK METER	PARKING METER
040	CURB	CURB (ALSO NARROW SIDEWALKS ON BRIDGES)
041	JIGGLE	JIGGLE BARS OR TRAFFIC SNAKE FOR CHANNELIZATION
042	GDRL END	LEADING EDGE OF GUARDRAIL
043	GARDRAIL	GUARD RAIL (NOT METAL MEDIAN BARRIER)
044	BARRIER	MEDIAN BARRIER (RAISED OR METAL)
045	WALL	RETAINING WALL OR TUNNEL WALL
046	BR RAIL	BRIDGE RAILING (ON BRIDGE AND APPROACH)
047	BR ABUT	BRIDGE ABUTMENT (APPROACH ENDS)
048	BR COLMN	BRIDGE PILLAR OR COLUMN (EVEN THOUGH STRUCK PROTECTIVE GUARD RAIL FIRST)
049	BR GIRDR	BRIDGE GIRDER (HORIZONTAL STRUCTURE OVERHEAD)
050	ISLAND	TRAFFIC RAISED ISLAND
051	GORE	GORE
052	POLE UNK	POLE - TYPE UNKNOWN
053	POLE UTL	POLE - POWER OR TELEPHONE
054	ST LIGHT	POLE - STREET LIGHT ONLY
055	TRF SGNL	POLE - TRAFFIC SIGNAL AND PED SIGNAL ONLY
056	SGN BRDG	POLE - SIGN BRIDGE
057	STOPSIGN	STOP OR YIELD SIGN
058	OTH SIGN	OTHER SIGN, INCLUDING STREET SIGNS
059	HYDRANT	HYDRANT

EVENT CODE TRANSLATION LIST

EVENT CODE	SHORT DESCRIPTION	LONG DESCRIPTION
060	MARKER	DELINEATOR OR MARKER (REFLECTOR POSTS)
061	MAILBOX	MAILBOX
062	TREE	TREE, STUMP OR SHRUBS
063	VEG OHED	TREE BRANCH OR OTHER VEGETATION OVERHEAD, ETC.
064	WIRE/CBL	WIRE OR CABLE ACROSS OR OVER THE ROAD
065	TEMP SGN	TEMPORARY SIGN OR BARRICADE IN ROAD, ETC.
066	PERM SGN	PERMANENT SIGN OR BARRICADE IN/OFF ROAD
067	SLIDE	SLIDES, ROCKS OFF OR ON ROAD, FALLING ROCKS
068	FRGN OBJ	FOREIGN OBSTRUCTION/DEBRIS IN ROAD (NOT GRAVEL)
069	EQP WORK	EQUIPMENT WORKING IN/OFF ROAD
070	OTH EQP	OTHER EQUIPMENT IN OR OFF ROAD (INCLUDES PARKED TRAILER, BOAT)
071	MAIN EQP	WRECKER, STREET SWEEPER, SNOW PLOW OR SANDING EQUIPMENT
072	OTHER WALL	ROCK, BRICK OR OTHER SOLID WALL
073	IRRGL PVMT	SPEED BUMP, OTHER BUMP, POTHOLE OR PAVEMENT IRREGULARITY (PER PAR)
075	CAVE IN	BRIDGE OR ROAD CAVE IN
076	HI WATER	HIGH WATER
077	SNO BANK	SNOW BANK
078	HOLE	CHUCKHOLE IN ROAD, LOW OR HIGH SHOULDER AT PAVEMENT EDGE
079	DITCH	CUT SLOPE OR DITCH EMBANKMENT
080	OBJ F MV	STRUCK BY ROCK OR OTHER OBJECT SET IN MOTION BY OTHER VEHICLE (INCL. LOST LOADS)
081	FLY-OBJ	STRUCK BY OTHER MOVING OR FLYING OBJECT
082	VEH HID	VEHICLE OBSCURED VIEW
083	VEG HID	VEGETATION OBSCURED VIEW
084	BLDG HID	VIEW OBSCURED BY FENCE, SIGN, PHONE BOOTH, ETC.
085	WIND GUST	WIND GUST
086	IMMERSED	VEHICLE IMMERSED IN BODY OF WATER
087	FIRE/EXP	FIRE OR EXPLOSION
088	FENC/BLD	FENCE OR BUILDING, ETC.
089	OTH ACDT	ACCIDENT RELATED TO ANOTHER SEPARATE ACCIDENT
090	TO 1 SIDE	TWO-WAY TRAFFIC ON DIVIDED ROADWAY ALL ROUTED TO ONE SIDE
092	PHANTOM	OTHER (PHANTOM) NON-CONTACT VEHICLE (ON PAR OR REPORT)
093	CELL-POL	CELL PHONE (ON PAR OR DRIVER IN USE)
094	VIOL GDL	TEENAGE DRIVER IN VIOLATION OF GRADUATED LICENSE PGM
095	GUY WIRE	GUY WIRE
096	BERM	BERM (EARTHEN OR GRAVEL MOUND)
097	GRAVEL	GRAVEL IN ROADWAY
098	ABR EDGE	ABRUPT EDGE
099	CELL-WTN	CELL PHONE USE WITNESSED BY OTHER PARTICIPANT
100	UNK FIXD	UNKNOWN TYPE OF FIXED OBJECT
101	OTHER OBJ	OTHER OR UNKNOWN OBJECT, NOT FIXED
104	OUTSIDE V	PASSENGER RIDING ON VEHICLE EXTERIOR
105	PEDAL PSGR	PASSENGER RIDING ON PEDALCYCLE
106	MAN WHLCHR	PEDESTRIAN IN NON-MOTORIZED WHEELCHAIR
107	MTR WHLCHR	PEDESTRIAN IN MOTORIZED WHEELCHAIR
110	N-MTR	NON-MOTORIST STRUCK VEHICLE
111	S CAR VS V	STREET CAR/TROLLEY (ON RAILS AND/OR OVERHEAD WIRE SYSTEM) STRUCK VEHICLE
112	V VS S CAR	VEHICLE STRUCK STREET CAR/TROLLEY (ON RAILS AND/OR OVERHEAD WIRE SYSTEM)
113	S CAR ROW	AT OR ON STREET CAR/TROLLEY RIGHT-OF-WAY
114	RR EQUIP	VEHICLE STRUCK RAILROAD EQUIPMENT (NOT TRAIN) ON TRACKS
120	WIRE BAR	WIRE OR CABLE MEDIAN BARRIER
124	SLIPPERY	SLIDING OR SWERVING DUE TO WET, ICY, SLIPPERY OR LOOSE SURFACE
125	SHLDR	SHOULDER GAVE WAY

FUNCTIONAL CLASSIFICATION TRANSLATION LIST

FUNC CLASS	DESCRIPTION
01	RURAL PRINCIPAL ARTERIAL - INTERSTATE
02	RURAL PRINCIPAL ARTERIAL - OTHER
06	RURAL MINOR ARTERIAL
07	RURAL MAJOR COLLECTOR
08	RURAL MINOR COLLECTOR
09	RURAL LOCAL
11	URBAN PRINCIPAL ARTERIAL - INTERSTATE
12	URBAN PRINCIPAL ARTERIAL - OTHER FREEWAYS AND EXP
14	URBAN PRINCIPAL ARTERIAL - OTHER
16	URBAN MINOR ARTERIAL
17	URBAN COLLECTOR
19	URBAN LOCAL
78	UNKNOWN RURAL SYSTEM
79	UNKNOWN RURAL NON-SYSTEM
98	UNKNOWN URBAN SYSTEM
99	UNKNOWN URBAN NON-SYSTEM

HIGHWAY COMPONENT TRANSLATION LIST

CODE	DESCRIPTION
0	MAINLINE STATE HIGHWAY
1	COUPLET
3	FRONTAGE ROAD
6	CONNECTION
8	HIGHWAY - OTHER

INJURY SEVERITY CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
1	KILL	FATAL INJURY
2	INJA	INCAPACITATING INJURY - BLEEDING, BROKEN BONES
3	INJB	NON-INCAPACITATING INJURY
4	INJC	POSSIBLE INJURY - COMPLAINT OF PAIN
5	PRI	DIED PRIOR TO CRASH
7	NO<5	NO INJURY - 0 TO 4 YEARS OF AGE

LIGHT CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	DAY	DAYLIGHT
2	DLIT	DARKNESS - WITH STREET LIGHTS
3	DARK	DARKNESS - NO STREET LIGHTS
4	DAWN	DAWN (TWILIGHT)
5	DUSK	DUSK (TWILIGHT)

MEDIAN TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	NONE	NO MEDIAN
1	RSDMD	SOLID MEDIAN BARRIER
2	DIVMD	EARTH, GRASS OR PAVED MEDIAN

MILEAGE TYPE CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
0	REGULAR MILEAGE
T	TEMPORARY
Y	SPUR
Z	OVERLAPPING

MOVEMENT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	STRGHT	STRAIGHT AHEAD
2	TURN-R	TURNING RIGHT
3	TURN-L	TURNING LEFT
4	U-TURN	MAKING A U-TURN
5	BACK	BACKING
6	STOP	STOPPED IN TRAFFIC
7	PRKD-P	PARKED - PROPERLY
8	PRKD-I	PARKED - IMPROPERLY

PEDESTRIAN LOCATION CODE TRANSLATION LIST

CODE	LONG DESCRIPTION
00	AT INTERSECTION - NOT IN ROADWAY
01	AT INTERSECTION - INSIDE CROSSWALK
02	AT INTERSECTION - IN ROADWAY, OUTSIDE CROSSWALK
03	AT INTERSECTION - IN ROADWAY, XWALK AVAIL UNKNWN
04	NOT AT INTERSECTION - IN ROADWAY
05	NOT AT INTERSECTION - ON SHOULDER
06	NOT AT INTERSECTION - ON MEDIAN
07	NOT AT INTERSECTION - WITHIN TRAFFIC RIGHT-OF-WAY
08	NOT AT INTERSECTION - IN BIKE PATH
09	NOT-AT INTERSECTION - ON SIDEWALK
10	OUTSIDE TRAFFICWAY BOUNDARIES
15	NOT AT INTERSECTION - INSIDE MID-BLOCK CROSSWALK
18	OTHER, NOT IN ROADWAY
99	UNKNOWN LOCATION

ROAD CHARACTER CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	INTER	INTERSECTION
2	ALLEY	DRIVEWAY OR ALLEY
3	STRGHT	STRAIGHT ROADWAY
4	TRANS	TRANSITION
5	CURVE	CURVE (HORIZONTAL CURVE)
6	OPENAC	OPEN ACCESS OR TURNOUT
7	GRADE	GRADE (VERTICAL CURVE)
8	BRIDGE	BRIDGE STRUCTURE
9	TUNNEL	TUNNEL

PARTICIPANT TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	OCC	UNKNOWN OCCUPANT TYPE
1	DRVR	DRIVER
2	PSNG	PASSENGER
3	PED	PEDESTRIAN
4	CONV	PEDESTRIAN USING A PEDESTRIAN CONVEYA
5	PTOW	PEDESTRIAN TOWING OR TRAILERING AN OB
6	BIKE	PEDALCYCLIST
7	BTOW	PEDALCYCLIST TOWING OR TRAILERING AN
8	PRKD	OCCUPANT OF A PARKED MOTOR VEHICLE
9	UNK	UNKNOWN TYPE OF NON-MOTORIST

TRAFFIC CONTROL DEVICE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
000	NONE	NO CONTROL
001	TRF SIGNAL	TRAFFIC SIGNALS
002	FLASHBCN-R	FLASHING BEACON - RED (STOP)
003	FLASHBCN-A	FLASHING BEACON - AMBER (SLOW)
004	STOP SIGN	STOP SIGN
005	SLOW SIGN	SLOW SIGN
006	REG-SIGN	REGULATORY SIGN
007	YIELD	YIELD SIGN
008	WARNING	WARNING SIGN
009	CURVE	CURVE SIGN
010	SCHL X-ING	SCHOOL CROSSING SIGN OR SPECIAL SIGNAL
011	OFCR/FLAG	POLICE OFFICER, FLAGMAN - SCHOOL PATROL
012	BRDG-GATE	BRIDGE GATE - BARRIER
013	TEMP-BARR	TEMPORARY BARRIER
014	NO-PASS-ZN	NO PASSING ZONE
015	ONE-WAY	ONE-WAY STREET
016	CHANNEL	CHANNELIZATION
017	MEDIAN BAR	MEDIAN BARRIER
018	PILOT CAR	PILOT CAR
019	SP PED SIG	SPECIAL PEDESTRIAN SIGNAL
020	X-BUCK	CROSSBUCK
021	THR-GN-SIG	THROUGH GREEN ARROW OR SIGNAL
022	L-GRN-SIG	LEFT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
023	R-GRN-SIG	RIGHT TURN GREEN ARROW, LANE MARKINGS, OR SIGNAL
024	WIGWAG	WIGWAG OR FLASHING LIGHTS W/O DROP-ARM GATE
025	X-BUCK WRN	CROSSBUCK AND ADVANCE WARNING
026	WW W/ GATE	FLASHING LIGHTS WITH DROP-ARM GATES
027	OVRHD SGNL	SUPPLEMENTAL OVERHEAD SIGNAL (RR XING ONLY)
028	SP RR STOP	SPECIAL RR STOP SIGN
029	ILUM GRD X	ILLUMINATED GRADE CROSSING
037	RAMP METER	METERED RAMPS
038	RUMBLE STR	RUMBLE STRIP
090	L-TURN REF	LEFT TURN REFUGE (WHEN REFUGE IS INVOLVED)
091	R-TURN ALL	RIGHT TURN AT ALL TIMES SIGN, ETC.
092	EMR SGN/FL	EMERGENCY SIGNS OR FLARES
093	ACCEL LANE	ACCELERATION OR DECELERATION LANES
094	R-TURN PRO	RIGHT TURN PROHIBITED ON RED AFTER STOPPING

095	BUS STPSGN	BUS STOP SIGN AND RED LIGHTS
099	UNKNOWN	UNKNOWN OR NOT DEFINITE

VEHICLE TYPE CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
01	PSNGR CAR	PASSENGER CAR, PICKUP, ETC.
02	BOBTAIL	TRUCK TRACTOR WITH NO TRAILERS (BOBTAIL)
03	FARM TRCTR	FARM TRACTOR OR SELF-PROPELLED FARM EQUIPMENT
04	SEMI TOW	TRUCK TRACTOR WITH TRAILER/MOBILE HOME IN TOW
05	TRUCK	TRUCK WITH NON-DETACHABLE BED, PANEL, ETC.
06	MOPED	MOPED, MINIBIKE, MOTOR SCOOTER, OR MOTOR BICYCLE
07	SCHL BUS	SCHOOL BUS (INCLUDES VAN)
08	OTH BUS	OTHER BUS
09	MTRCYCLE	MOTORCYCLE
10	OTHER	OTHER: FORKLIFT, BACKHOE, ETC.
11	MOTRHOME	MOTORHOME
12	TROLLEY	MOTORIZED STREET CAR/TROLLEY (NO RAILS/WIRES)
13	ATV	ATV
14	MTRSCTR	MOTORIZED SCOOTER
15	SNOWMOBILE	SNOWMOBILE
99	UNKNOWN	UNKNOWN VEHICLE TYPE

WEATHER CONDITION CODE TRANSLATION LIST

CODE	SHORT DESC	LONG DESCRIPTION
0	UNK	UNKNOWN
1	CLR	CLEAR
2	CLD	CLOUDY
3	RAIN	RAIN
4	SLT	SLEET
5	FOG	FOG
6	SNOW	SNOW
7	DUST	DUST
8	SMOK	SMOKE
9	ASH	ASH

TRANSPORTATION DATA SECTION - CRASH ANALYSIS AND REPORTING UNIT

CRASH SUMMARIES BY YEAR BY COLLISION TYPE

N Portland Road (Hwy 120) @ N Suttle Road

January 1, 2005 through December 31, 2009

COLLISION TYPE	FATAL CRASHES	NON-FATAL CRASHES	PROPERTY DAMAGE ONLY	TOTAL CRASHES	PEOPLE KILLED	PEOPLE INJURED	TRUCKS	DRY SURF	WET SURF	DAY	DARK	INTER-SECTION	INTER-SECTION RELATED	OFF-ROAD
YEAR:														
TOTAL														
FINAL TOTAL														

Note: Legislative changes to DMV's vehicle crash reporting requirements, effective 01/01/2004, may result in fewer property damage only crashes being eligible for inclusion in the Statewide Crash Data File.

Appendix E
2011 TOTAL TRAFFIC CONDITIONS WORKSHEETS

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday AM Peak Hour

Scenario Report

Scenario:	AM
Command:	AM
Volume:	AM
Geometry:	AM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday AM Peak Hour

Turning Movement Report

Volume	Northbound			Southbound			Eastbound			Westbound			Total
Type	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
#1 Marine Dr/Portland Dr													
Base	25	0	420	0	0	0	0	170	20	445	530	0	1610
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
PassBy	0	0	8	0	0	0	0	0	1	9	0	0	18
Total	25	0	428	0	0	0	0	170	21	454	530	0	1628
#2 Portland Dr/Suttle Rd													
Base	15	415	10	10	405	50	20	0	15	2	1	10	953
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
PassBy	5	0	0	0	0	10	8	0	2	0	0	0	25
Total	20	415	10	10	405	60	28	0	17	2	1	10	978
#3 Suttle Road driveway													
Base	1	1	10	1	1	1	1	20	1	15	35	1	88
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
PassBy	0	0	10	0	0	0	0	0	0	15	0	0	25
Total	1	1	20	1	1	1	1	20	1	30	35	1	113

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Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday AM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/Veh	Base V/C	Future LOS	Future Del/Veh	Future V/C	Change in
# 1 Marine Dr/Portland Dr	A	8.6	0.479	A	8.6	0.487	+ 0.012 D/V
# 2 Portland Dr/Suttle Rd	C	21.9	0.000	C	24.3	0.000	+ 2.476 D/V
# 3 Suttle Road driveway	A	10.0	0.000	B	10.2	0.000	+ 0.285 D/V

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Marine Dr/Portland Dr

Cycle (sec): 80 Critical Vol./Cap.(X): 0.487
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 8.6
Optimal Cycle: 39 Level Of Service: A

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Protected				Protected				Protected				Protected			
Rights:	Ovl				Include				Include				Include			
Min. Green:	5	0	0		0	0	0		0	0	0		0	0	0	
Lanes:	1	0 0	0	1	0	0 0	0	0	0	0 0	2	0 1	1	0 2	0	0
Volume Module:7:15-8:15 a.m.																
Base Vol:	25	0	420		0	0	0		0	170	20		445	530	0	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	25	0	420		0	0	0		0	170	20		445	530	0	
Added Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
PasserByVol:	0	0	8		0	0	0		0	0	1		9	0	0	
Initial Fut:	25	0	428		0	0	0		0	170	21		454	530	0	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.91	0.91	0.91		0.91	0.91	0.91		0.91	0.91	0.91		0.91	0.91	0.91	
PHF Volume:	27	0	470		0	0	0		0	187	23		499	582	0	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
Reduced Vol:	27	0	470		0	0	0		0	187	23		499	582	0	
PCE Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
MLF Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
FinalVolume:	27	0	470		0	0	0		0	187	23		499	582	0	
Saturation Flow Module:																
Sat/Lane:	1900	1900	1900		1900	1900	1900		1900	1900	1900		1900	1900	1900	
Adjustment:	0.82	1.00	0.73		1.00	1.00	1.00		1.00	0.77	0.69		0.79	0.79	1.00	
Lanes:	1.00	0.00	1.00		0.00	0.00	0.00		0.00	2.00	1.00		1.00	2.00	0.00	
Final Sat.:	1556	0	1385		0	0	0		0	2910	1302		1504	3007	0	
Capacity Analysis Module:																
Vol/Sat:	0.02	0.00	0.34		0.00	0.00	0.00		0.00	0.06	0.02		0.33	0.19	0.00	
Crit Moves:	****									****			****			
Green/Cycle:	0.06	0.00	0.72		0.00	0.00	0.00		0.00	0.13	0.13		0.66	0.79	0.00	
Volume/Cap:	0.28	0.00	0.47		0.00	0.00	0.00		0.00	0.50	0.14		0.50	0.25	0.00	
Delay/Veh:	37.4	0.0	5.0		0.0	0.0	0.0		0.0	33.6	31.4		7.3	2.3	0.0	
User DelAdj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
AdjDel/Veh:	37.4	0.0	5.0		0.0	0.0	0.0		0.0	33.6	31.4		7.3	2.3	0.0	
LOS by Move:	D	A	A		A	A	A		A	C	C		A	A	A	
HCM2kAvgQ:	1	0	5		0	0	0		0	3	1		7	2	0	

Note: Queue reported is the number of cars per lane.

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Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #1 Marine Dr/Portland Dr

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0	0	0 1	0 0	0	0 0	0 0	2	0 1	1 0	2	0 0
Lane Group:	L	xxxx	R	xxxx	xxxx	xxxx	xxxx	T	R	L	T	xxxx
#LnsInGrps:	1	0	1	0	0	0	0	2	1	1	2	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		16			0			24			20	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < <			Other	> > > > > > > > > > > > > > >							
Cnft Ped/Hr:		4			2			0			0	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.86	xxxx	0.86	xxxx	xxxx	xxxxx	xxxx	0.81	0.81	0.83	0.83	xxxxx
Grade Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx
Area Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx
LT Adj:	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	0.99	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
HCM Sat Adj:	0.82	1.00	0.73	1.00	1.00	1.00	1.00	0.81	0.69	0.79	0.83	1.00
Usr Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	0.82	1.00	0.73	1.00	1.00	1.00	1.00	0.77	0.69	0.79	0.79	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < <			No	> > > > > > > > > > > > > > >							
Signal Type:	< < < < < < < < < < < <			Actuated	> > > > > > > > > > > > >							
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday AM Peak Hour

Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Intersection #1 Marine Dr/Portland Dr

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
CrsswalkWid:	0.00	8.00		0.00	0.00		0.00	8.00		0.00	0.00	
CrsswalkLen:	0.00	60.00		0.00	0.00		0.00	24.00		0.00	0.00	
MinPedGrn:	0.00	18.22		0.00	0.00		0.00	9.20		0.00	0.00	
PedGrn:	0.00	18.22		0.00	0.00		0.00	9.20		0.00	0.00	
PedVolume:	0	4		0	0		0	0		0	0	
PedFlowRate:	0	18		0	0		0	0		0	0	
BikeVol:	0	0		0	0		0	0		0	0	
BikeFlwRate:	0	0		0	0		0	0		0	0	
PedOcc:	0.000	0.009		0.000	0.000		0.000	0.000		0.000	0.000	
BikeOcc:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
PedAfterOcc:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
rOcc:	0.000	0.009		0.000	0.000		0.000	0.000		0.000	0.000	
TurnVehAdj:	0.000	0.995		0.000	0.000		0.000	1.000		0.000	0.000	
Prt:	0.000	1.000		0.000	0.000		0.000	1.000		0.000	0.000	
Prta:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
Plt:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
Plta:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
PedBike Adj:	1.000	0.995		1.000	1.000		1.000	1.000		1.000	1.000	

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday AM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #1 Marine Dr/Portland Dr

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.06	0.00	0.72	0.00	0.00	0.00	0.00	0.13	0.13	0.66	0.79	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	0.6	0.0	4.4	0.0	0.0	0.0	0.0	2.0	0.5	5.6	1.8	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Q2:	0.4	0.0	0.9	0.0	0.0	0.0	0.0	0.9	0.2	1.0	0.3	0.0
HCM2KQueue:	1.0	0.0	5.3	0.0	0.0	0.0	0.0	3.0	0.6	6.6	2.1	0.0
70th%Factor:	1.20	1.20	1.19	1.20	1.20	1.20	1.20	1.19	1.20	1.18	1.19	1.20
HCM2k70thQ:	1.1	0.0	6.3	0.0	0.0	0.0	0.0	3.5	0.7	7.9	2.5	0.0
85th%Factor:	1.59	1.60	1.55	1.60	1.60	1.60	1.60	1.57	1.59	1.54	1.58	1.60
HCM2k85thQ:	1.5	0.0	8.2	0.0	0.0	0.0	0.0	4.7	1.0	10.2	3.3	0.0
90th%Factor:	1.78	1.80	1.71	1.80	1.80	1.80	1.80	1.74	1.79	1.69	1.76	1.80
HCM2k90thQ:	1.7	0.0	9.0	0.0	0.0	0.0	0.0	5.2	1.1	11.2	3.7	0.0
95th%Factor:	2.07	2.10	1.95	2.10	2.10	2.10	2.10	2.01	2.08	1.91	2.03	2.10
HCM2k95thQ:	2.0	0.0	10.3	0.0	0.0	0.0	0.0	6.0	1.3	12.7	4.3	0.0
98th%Factor:	2.63	2.70	2.37	2.70	2.70	2.70	2.70	2.50	2.65	2.30	2.55	2.70
HCM2k98thQ:	2.5	0.0	12.5	0.0	0.0	0.0	0.0	7.4	1.6	15.3	5.4	0.0

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday AM Peak Hour

Fuel Consumption and Emissions
2000 HCM Operations Method
Future Volume Alternative

Intersection #1 Marine Dr/Portland Dr

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Run Speed:		30 MPH			30 MPH			30 MPH			30 MPH	
NumOfStops:	6.6	0.0	49.4	0.0	0.0	0.0	0.0	43.5	5.1	63.5	38.4	0.0

Name: year 1995 composite fleet
Fuel Consumption: 31.264 pounds
5.065 gallons
Carbon Dioxide: 97.545 pounds
Carbon Monoxide: 6.839 pounds
Hydrocarbons: 1.004 pounds
Nitrogen Oxides: 0.365 pounds

Name: year 2000 composite fleet
Fuel Consumption: 28.277 pounds
4.581 gallons
Carbon Dioxide: 88.223 pounds
Carbon Monoxide: 6.610 pounds
Hydrocarbons: 0.956 pounds
Nitrogen Oxides: 0.319 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Portland Dr/Suttle Rd

Average Delay (sec/veh): 1.6 Worst Case Level Of Service: C[24.3]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1! 0	0	1	0	0	1 0	0	0	1! 0	0	0	0	1! 0	0
Volume Module:7:15-8:15 a.m.																
Base Vol:	15	415	10		10	405	50		20	0	15		2	1	10	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	15	415	10		10	405	50		20	0	15		2	1	10	
Added Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
PasserByVol:	5	0	0		0	0	10		8	0	2		0	0	0	
Initial Fut:	20	415	10		10	405	60		28	0	17		2	1	10	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95		0.95	0.95	0.95	
PHF Volume:	21	437	11		11	426	63		29	0	18		2	1	11	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
FinalVolume:	21	437	11		11	426	63		29	0	18		2	1	11	
Critical Gap Module:																
Critical Gp:	4.3	xxxx	xxxxx		4.3	xxxx	xxxxx		7.7	7.1	6.8		7.7	7.1	6.8	
FollowUpTim:	2.3	xxxx	xxxxx		2.4	xxxx	xxxxx		4.0	4.5	3.8		4.1	4.6	3.9	
Capacity Module:																
Cnflict Vol:	489	xxxx	xxxxx		448	xxxx	xxxxx		970	969	459		974	996	444	
Potent Cap.:	1005	xxxx	xxxxx		1032	xxxx	xxxxx		185	205	501		180	192	503	
Move Cap.:	1005	xxxx	xxxxx		1032	xxxx	xxxxx		176	198	501		169	186	502	
Volume/Cap:	0.02	xxxx	xxxx		0.01	xxxx	xxxx		0.17	0.00	0.04		0.01	0.01	0.02	
Level Of Service Module:																
2Way95thQ:	0.1	xxxx	xxxxx		0.0	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Control Del:	8.7	xxxx	xxxxx		8.5	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
LOS by Move:	A	*	*		A	*	*		*	*	*		*	*	*	
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	233	xxxxx		xxxx	350	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	0.7	xxxxx		xxxxx	0.1	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	24.3	xxxxx		xxxxx	15.7	xxxxx	
Shared LOS:	*	*	*		*	*	*		*	C	*		*	C	*	
ApproachDel:	xxxxxx				xxxxxx				24.3				15.7			
ApproachLOS:	*				*				C				C			

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #2 Portland Dr/Suttle Rd

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HevVeh:	16%				18%				58%				64%			
Grade:	0%				0%				0%				0%			
Peds/Hour:	1				1				0				1			
Pedestrian Walk Speed: 4.00 feet/sec																
LaneWidth:	12 feet				12 feet				12 feet				12 feet			
Time Period: 0.25 hour																

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday AM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Suttle Road driveway

Average Delay (sec/veh): 4.3 Worst Case Level Of Service: B[10.2]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0 1! 0		0	0	0 1! 0		0	0	0 1! 0		0	0	0 1! 0		0
Volume Module:																
Base Vol:	1	1	10		1	1	1		1	20	1		15	35	1	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	1	1	10		1	1	1		1	20	1		15	35	1	
Added Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
PasserByVol:	0	0	10		0	0	0		0	0	0		15	0	0	
Initial Fut:	1	1	20		1	1	1		1	20	1		30	35	1	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.85	0.85	0.85		0.85	0.85	0.85		0.85	0.85	0.85		0.85	0.85	0.85	
PHF Volume:	1	1	24		1	1	1		1	24	1		35	41	1	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
FinalVolume:	1	1	24		1	1	1		1	24	1		35	41	1	
Critical Gap Module:																
Critical Gp:	7.9	7.3	7.0		7.9	7.3	7.0		4.7	xxxx	xxxxx		4.7	xxxx	xxxxx	
FollowUpTim:	4.2	4.7	4.0		4.2	4.7	4.0		2.7	xxxx	xxxxx		2.7	xxxx	xxxxx	
Capacity Module:																
Cnflict Vol:	140	139	24		151	139	42		42	xxxx	xxxxx		25	xxxx	xxxxx	
Potent Cap.:	688	636	876		676	636	855		1272	xxxx	xxxxx		1293	xxxx	xxxxx	
Move Cap.:	671	618	876		643	618	855		1272	xxxx	xxxxx		1293	xxxx	xxxxx	
Volume/Cap:	0.00	0.00	0.03		0.00	0.00	0.00		0.00	xxxx	xxxx		0.03	xxxx	xxxx	
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		0.0	xxxx	xxxxx		0.1	xxxx	xxxxx	
Control Del:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		7.8	xxxx	xxxxx		7.9	xxxx	xxxxx	
LOS by Move:	*	*	*		*	*	*		A	*	*		A	*	*	
Movement:	LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT		LT -	LTR -	RT	
Shared Cap.:	xxxx	848	xxxxx		xxxx	690	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
SharedQueue:	xxxxx	0.1	xxxxx		xxxxx	0.0	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shrd ConDel:	xxxxx	9.4	xxxxx		xxxxx	10.2	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
Shared LOS:	*	A	*		*	B	*		*	*	*		*	*	*	
ApproachDel:		9.4				10.2				xxxxxx				xxxxxx		
ApproachLOS:		A				B				*				*		

Note: Queue reported is the number of cars per lane.

Traffix 7.9.0415 (c) 2007 Dowling Assoc. Licensed to KITTELSON, PORTLAND

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday AM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #3 Suttle Road driveway

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
HevVeh:	75%				75%				58%				58%			
Grade:	0%				0%				0%				0%			
Peds/Hour:	0				0				0				0			
Pedestrian Walk Speed: 4.00 feet/sec																
LaneWidth:	12 feet				12 feet				12 feet				12 feet			
Time Period: 0.25 hour																

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday PM Peak Hour

Scenario Report

Scenario:	PM
Command:	PM
Volume:	PM
Geometry:	PM
Impact Fee:	Default Impact Fee
Trip Generation:	Default Trip Generation
Trip Distribution:	Default Trip Distribution
Paths:	Default Path
Routes:	Default Route
Configuration:	Default Configuration

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday PM Peak Hour

Turning Movement Report

Volume	Northbound			Southbound			Eastbound			Westbound			Total
Type	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Left	Thru	Right	Volume
#1 Marine Dr/Portland Dr													
Base	15	0	675	0	0	0	0	520	45	370	120	0	1745
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
PassBy	1	0	10	0	0	0	0	0	1	3	0	0	15
Total	16	0	685	0	0	0	0	520	46	373	120	0	1760
#2 Portland Dr/Suttle Rd													
Base	15	600	2	5	385	25	70	0	20	1	1	15	1139
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
PassBy	1	0	0	0	0	4	11	0	4	0	0	0	20
Total	16	600	2	5	385	29	81	0	24	1	1	15	1159
#3 Suttle Road driveway													
Base	1	1	15	1	1	1	1	60	1	5	25	1	113
Added	0	0	0	0	0	0	0	0	0	0	0	0	0
PassBy	0	0	15	0	0	0	0	0	0	5	0	0	20
Total	1	1	30	1	1	1	1	60	1	10	25	1	133

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday PM Peak Hour

Impact Analysis Report
Level Of Service

Intersection	Base LOS	Base Del/ Veh	Base V/ C	Future LOS	Future Del/ Veh	Future V/ C	Change in
# 1 Marine Dr/Portland Dr	C	27.4	0.827	C	28.0	0.836	+ 0.629 D/V
# 2 Portland Dr/Suttle Rd	E	40.7	0.000	E	46.6	0.000	+ 5.927 D/V
# 3 Suttle Road driveway	A	10.0	0.000	B	10.1	0.000	+ 0.145 D/V

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Operations Method (Future Volume Alternative)

Intersection #1 Marine Dr/Portland Dr

Cycle (sec): 80 Critical Vol./Cap.(X): 0.836
Loss Time (sec): 12 (Y+R=4.0 sec) Average Delay (sec/veh): 28.0
Optimal Cycle: 79 Level Of Service: C

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Control:	Protected			Protected			Protected			Protected		
Rights:	Ovl			Include			Include			Include		
Min. Green:	5	0	0	0	0	0	0	0	0	0	0	0
Lanes:	1 0	0	0 1	0 0	0	0 0	0 0	2	0 1	1 0	2	0 0
Volume Module:4:00 - 5:00 p.m.												
Base Vol:	15	0	675	0	0	0	0	520	45	370	120	0
Growth Adj:	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00
Initial Bse:	15	0	675	0	0	0	0	520	45	370	120	0
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0
PasserByVol:	1	0	10	0	0	0	0	0	1	3	0	0
Initial Fut:	16	0	685	0	0	0	0	520	46	373	120	0
User Adj:	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00
PHF Adj:	0.92 0.92		0.92	0.92 0.92		0.92	0.92 0.92		0.92	0.92 0.92		0.92
PHF Volume:	17	0	745	0	0	0	0	565	50	405	130	0
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0
Reduced Vol:	17	0	745	0	0	0	0	565	50	405	130	0
PCE Adj:	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00
MLF Adj:	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00
FinalVolume:	17	0	745	0	0	0	0	565	50	405	130	0
Saturation Flow Module:												
Sat/Lane:	1900 1900		1900	1900 1900		1900	1900 1900		1900	1900 1900		1900
Adjustment:	0.84 1.00		0.75	1.00 1.00		1.00	1.00 0.79		0.70	0.80 0.80		1.00
Lanes:	1.00 0.00		1.00	0.00 0.00		0.00	0.00 2.00		1.00	1.00 2.00		0.00
Final Sat.:	1597	0	1424	0	0	0	0 3007		1334	1516 3032		0
Capacity Analysis Module:												
Vol/Sat:	0.01 0.00		0.52	0.00 0.00		0.00	0.00 0.19		0.04	0.27 0.04		0.00
Crit Moves:			****					****		****		
Green/Cycle:	0.31 0.00		0.63	0.00 0.00		0.00	0.00 0.22		0.22	0.32 0.54		0.00
Volume/Cap:	0.04 0.00		0.84	0.00 0.00		0.00	0.00 0.84		0.17	0.84 0.08		0.00
Delay/Veh:	19.5 0.0		18.7	0.0 0.0		0.0	0.0 38.6		25.2	37.3 8.7		0.0
User DelAdj:	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00	1.00 1.00		1.00
AdjDel/Veh:	19.5 0.0		18.7	0.0 0.0		0.0	0.0 38.6		25.2	37.3 8.7		0.0
LOS by Move:	B	A	B	A	A	A	A	D	C	D	A	A
HCM2kAvgQ:	0	0	17	0	0	0	0	10	1	12	1	0

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Operations Method
Future Volume Alternative

Intersection #1 Marine Dr/Portland Dr

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
HCM Ops Adjusted Lane Utilization Module:												
Lanes:	1 0	0	0 1	0	0 0	0 0	0	0 2	0 1	1	0 2	0 0
Lane Group:	L	xxxx	R	xxxx	xxxx	xxxx	xxxx	T	R	L	T	xxxx
#LnsInGrps:	1	0	1	0	0	0	0	2	1	1	2	0
HCM Ops Input Saturation Adj Module:												
Lane Width:	12	12	12	12	12	12	12	12	12	12	12	12
CrsswalkWid:		8			8			8			8	
% Hev Veh:		13			0			20			19	
Grade:		0%			0%			0%			0%	
Parking/Hr:		No			No			No			No	
Bus Stp/Hr:		0			0			0			0	
Area Type:	< < < < < < < < < < < < < < < Other > > > > > > > > > > > > > > >											
Cnft Ped/Hr:		3			1			2			4	
ExclusiveRT:		Include			Include			Include			Include	
% RT Prtct:		0			0			0			0	
HCM Ops f(lt) Adj Case Module:												
f(lt) Case:	1	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	xxxx	1	xxxx	xxxx
HCM Ops Saturation Adj Module:												
Ln Wid Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Hev Veh Adj:	0.89	xxxx	0.89	xxxx	xxxx	xxxxx	xxxx	0.83	0.83	0.84	0.84	xxxxx
Grade Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
Parking Adj:	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx
Bus Stp Adj:	xxxx	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	xxxx	1.00	xxxx	1.00	xxxxx
Area Adj:	1.00	xxxx	1.00	xxxx	xxxx	xxxxx	xxxx	1.00	1.00	1.00	1.00	xxxxx
RT Adj:	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx	xxxx	xxxx	0.85	xxxx	xxxx	xxxxx
LT Adj:	0.95	xxxx	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.95	xxxx	xxxxx
PedBike Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.99	1.00	1.00	1.00
HCM Sat Adj:	0.84	1.00	0.75	1.00	1.00	1.00	1.00	0.83	0.70	0.80	0.84	1.00
Usr Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
MLF Sat Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	0.95	1.00	1.00	0.95	1.00
Fnl Sat Adj:	0.84	1.00	0.75	1.00	1.00	1.00	1.00	0.79	0.70	0.80	0.80	1.00
Delay Adjustment Factor Module:												
Coordinated:	< < < < < < < < < < < < < < < No > > > > > > > > > > > > > > >											
Signal Type:	< < < < < < < < < < < < < Actuated > > > > > > > > > > > > > > >											
DelAdjFctr:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday PM Peak Hour

Level Of Service Detailed Computation Report (Ped/Bike Sat Adj)
2000 HCM Operations Method
Future Volume Alternative

Intersection #1 Marine Dr/Portland Dr

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	- T	- R	L	- T	- R	L	- T	- R	L	- T	- R
CrsswalkWid:	0.00	8.00		0.00	0.00		0.00	8.00		0.00	0.00	
CrsswalkLen:	0.00	60.00		0.00	0.00		0.00	24.00		0.00	0.00	
MinPedGrn:	0.00	18.22		0.00	0.00		0.00	9.21		0.00	0.00	
PedGrn:	0.00	18.22		0.00	0.00		0.00	9.21		0.00	0.00	
PedVolume:	0	3		0	0		0	2		0	0	
PedFlowRate:	0	13		0	0		0	17		0	0	
BikeVol:	0	0		0	0		0	0		0	0	
BikeFlwRate:	0	0		0	0		0	0		0	0	
PedOcc:	0.000	0.007		0.000	0.000		0.000	0.009		0.000	0.000	
BikeOcc:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
PedAfterOcc:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
rOcc:	0.000	0.007		0.000	0.000		0.000	0.009		0.000	0.000	
TurnVehAdj:	0.000	0.996		0.000	0.000		0.000	0.991		0.000	0.000	
Prt:	0.000	1.000		0.000	0.000		0.000	1.000		0.000	0.000	
Prta:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
Plt:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
Plta:	0.000	0.000		0.000	0.000		0.000	0.000		0.000	0.000	
PedBike Adj:	1.000	0.996		1.000	1.000		1.000	0.991		1.000	1.000	

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday PM Peak Hour

Level Of Service Detailed Computation Report (HCM2000 Queue Method)
2000 HCM Operations Method
Future Volume Alternative

Intersection #1 Marine Dr/Portland Dr

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Green/Cycle:	0.31	0.00	0.63	0.00	0.00	0.00	0.00	0.22	0.22	0.32	0.54	0.00
ArrivalType:		3			3			3			3	
ProgFactor:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00
Q1:	0.3	0.0	13.0	0.0	0.0	0.0	0.0	6.3	0.9	8.4	0.7	0.0
UpstreamVC:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
UpstreamAdj:	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00	0.00
EarlyArrAdj:	1.00	0.00	1.00	0.00	0.00	0.00	0.00	1.00	1.00	1.00	1.00	0.00
Q2:	0.0	0.0	4.2	0.0	0.0	0.0	0.0	3.5	0.2	3.7	0.1	0.0
HCM2KQueue:	0.3	0.0	17.2	0.0	0.0	0.0	0.0	9.8	1.1	12.1	0.8	0.0
70th%Factor:	1.20	1.20	1.17	1.20	1.20	1.20	1.20	1.18	1.20	1.17	1.20	1.20
HCM2k70thQ:	0.4	0.0	20.0	0.0	0.0	0.0	0.0	11.5	1.3	14.2	1.0	0.0
85th%Factor:	1.60	1.60	1.47	1.60	1.60	1.60	1.60	1.52	1.59	1.50	1.59	1.60
HCM2k85thQ:	0.5	0.0	25.2	0.0	0.0	0.0	0.0	14.8	1.7	18.1	1.3	0.0
90th%Factor:	1.79	1.80	1.57	1.80	1.80	1.80	1.80	1.65	1.78	1.62	1.78	1.80
HCM2k90thQ:	0.6	0.0	26.9	0.0	0.0	0.0	0.0	16.1	1.9	19.6	1.4	0.0
95th%Factor:	2.09	2.10	1.73	2.10	2.10	2.10	2.10	1.85	2.06	1.81	2.07	2.10
HCM2k95thQ:	0.6	0.0	29.7	0.0	0.0	0.0	0.0	18.1	2.3	21.8	1.7	0.0
98th%Factor:	2.68	2.70	1.97	2.70	2.70	2.70	2.70	2.17	2.62	2.09	2.64	2.70
HCM2k98thQ:	0.8	0.0	33.8	0.0	0.0	0.0	0.0	21.2	2.9	25.3	2.1	0.0

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday PM Peak Hour

Fuel Consumption and Emissions
2000 HCM Operations Method
Future Volume Alternative

Intersection #1 Marine Dr/Portland Dr

Approach:	North Bound			South Bound			East Bound			West Bound		
Movement:	L	T	R	L	T	R	L	T	R	L	T	R
Run Speed:	30 MPH			30 MPH			30 MPH			30 MPH		
NumOfStops:	3.1	0.0	146.2	0.0	0.0	0.0	0.0	135	10.1	94.1	15.5	0.0

Name: year 1995 composite fleet
Fuel Consumption: 61.341 pounds
9.937 gallons
Carbon Dioxide: 191.383 pounds
Carbon Monoxide: 15.070 pounds
Hydrocarbons: 2.734 pounds
Nitrogen Oxides: 0.705 pounds

Name: year 2000 composite fleet
Fuel Consumption: 57.802 pounds
9.364 gallons
Carbon Dioxide: 180.343 pounds
Carbon Monoxide: 14.791 pounds
Hydrocarbons: 2.678 pounds
Nitrogen Oxides: 0.642 pounds

DISCLAIMER
The fuel consumption and emissions measures should be used with caution and only for comparisons of different signal timings, geometric design alternatives or for general planning applications, as these calculations are applied to the analysis of a single intersection within the CCG and TRAFFIX. Network models are more appropriate since they can account for the influence of the adjacent control measures and other system elements.

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #2 Portland Dr/Suttle Rd

Average Delay (sec/veh): 4.6 Worst Case Level Of Service: E[46.6]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
Control:	Uncontrolled				Uncontrolled				Stop Sign				Stop Sign			
Rights:	Include				Include				Include				Include			
Lanes:	0	0 1! 0	0		1	0 0 1	0		0	0 1! 0	0		0	0 1! 0	0	
Volume Module:4:00 - 5:00 p.m.																
Base Vol:	15	600	2		5	385	25		70	0	20		1	1	15	
Growth Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
Initial Bse:	15	600	2		5	385	25		70	0	20		1	1	15	
Added Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
PasserByVol:	1	0	0		0	0	4		11	0	4		0	0	0	
Initial Fut:	16	600	2		5	385	29		81	0	24		1	1	15	
User Adj:	1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00		1.00	1.00	1.00	
PHF Adj:	0.94	0.94	0.94		0.94	0.94	0.94		0.94	0.94	0.94		0.94	0.94	0.94	
PHF Volume:	17	638	2		5	410	31		86	0	26		1	1	16	
Reduct Vol:	0	0	0		0	0	0		0	0	0		0	0	0	
FinalVolume:	17	638	2		5	410	31		86	0	26		1	1	16	
Critical Gap Module:																
Critical Gp:	4.2	xxxx	xxxxx		4.3	xxxx	xxxxx		7.3	6.7	6.4		7.3	6.7	6.4	
FollowUpTim:	2.3	xxxx	xxxxx		2.3	xxxx	xxxxx		3.7	4.2	3.5		3.6	4.1	3.4	
Capacity Module:																
Cnflict Vol:	440	xxxx	xxxxx		640	xxxx	xxxxx		1118	1110	425		1122	1124	639	
Potent Cap.:	1063	xxxx	xxxxx		885	xxxx	xxxxx		170	194	593		172	193	452	
Move Cap.:	1063	xxxx	xxxxx		885	xxxx	xxxxx		161	190	593		162	189	452	
Volume/Cap:	0.02	xxxx	xxxx		0.01	xxxx	xxxx		0.54	0.00	0.04		0.01	0.01	0.04	
Level Of Service Module:																
2Way95thQ:	0.0	xxxx	xxxxx		0.0	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx	
Control Del:	8.4	xxxx	xxxxx		9.1	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx	
LOS by Move:	A	*	*		A	*	*		*	*	*		*	*	*	
Movement:	LT - LTR - RT				LT - LTR - RT				LT - LTR - RT				LT - LTR - RT			
Shared Cap.:	xxxx	xxxx	xxxxx		xxxx	xxxx	xxxxx		xxxx	193	xxxxx		xxxx	381	xxxxx	
SharedQueue:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	3.2	xxxxx		xxxxx	0.1	xxxxx	
Shrd ConDel:	xxxxx	xxxx	xxxxx		xxxxx	xxxx	xxxxx		xxxxx	46.6	xxxxx		xxxxx	14.9	xxxxx	
Shared LOS:	*	*	*		*	*	*		*	E	*		*	B	*	
ApproachDel:	xxxxxx				xxxxxx				46.6				14.9			
ApproachLOS:	*				*				E				B			

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #2 Portland Dr/Suttle Rd

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	- T	- R		L	- T	- R		L	- T	- R		L	- T	- R	
HevVeh:	13%				15%				20%				16%			
Grade:	0%				0%				0%				0%			
Peds/Hour:	0				0				0				0			
Pedestrian Walk Speed: 4.00 feet/sec																
LaneWidth:	12 feet				12 feet				12 feet				12 feet			
Time Period: 0.25 hour																

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday PM Peak Hour

Level Of Service Computation Report
2000 HCM Unsignalized Method (Future Volume Alternative)

Intersection #3 Suttle Road driveway

Average Delay (sec/veh): 3.2 Worst Case Level Of Service: B[10.1]

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
Control:	Stop Sign				Stop Sign				Uncontrolled				Uncontrolled			
Rights:	Include				Include				Include				Include			
Lanes:	0	0	1! 0	0	0	0	1! 0	0	0	0	1! 0	0	0	0	1! 0	0
Volume Module:																
Base Vol:	1	1	15	1	1	1	1	60	1	5	25	1				
Growth Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
Initial Bse:	1	1	15	1	1	1	1	60	1	5	25	1				
Added Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
PasserByVol:	0	0	15	0	0	0	0	0	0	5	0	0				
Initial Fut:	1	1	30	1	1	1	1	60	1	10	25	1				
User Adj:	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00	1.00				
PHF Adj:	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85	0.85				
PHF Volume:	1	1	35	1	1	1	1	71	1	12	29	1				
Reduct Vol:	0	0	0	0	0	0	0	0	0	0	0	0				
FinalVolume:	1	1	35	1	1	1	1	71	1	12	29	1				
Critical Gap Module:																
Critical Gp:	7.9	7.3	7.0	7.9	7.3	7.0	4.3	xxxx	xxxxx	4.3	xxxx	xxxxx				
FollowUpTim:	4.2	4.7	4.0	4.2	4.7	4.0	2.4	xxxx	xxxxx	2.4	xxxx	xxxxx				
Capacity Module:																
Cnflict Vol:	128	128	71	145	128	30	31	xxxx	xxxxx	72	xxxx	xxxxx				
Potent Cap.:	702	646	821	683	646	869	1473	xxxx	xxxxx	1422	xxxx	xxxxx				
Move Cap.:	695	640	821	648	640	869	1473	xxxx	xxxxx	1422	xxxx	xxxxx				
Volume/Cap:	0.00	0.00	0.04	0.00	0.00	0.00	0.00	xxxx	xxxx	0.01	xxxx	xxxx				
Level Of Service Module:																
2Way95thQ:	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx	0.0	xxxx	xxxxx	0.0	xxxx	xxxxx				
Control Del:	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx	7.4	xxxx	xxxxx	7.6	xxxx	xxxxx				
LOS by Move:	*	*	*	*	*	*	A	*	*	A	*	*				
Movement:	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT	LT -	LTR -	RT				
Shared Cap.:	xxxx	809	xxxxx	xxxx	705	xxxxx	xxxx	xxxx	xxxxx	xxxx	xxxx	xxxxx				
SharedQueue:	xxxxx	0.1	xxxxx	xxxxx	0.0	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shrd ConDel:	xxxxx	9.7	xxxxx	xxxxx	10.1	xxxxx	xxxxx	xxxx	xxxxx	xxxxx	xxxx	xxxxx				
Shared LOS:	*	A	*	*	B	*	*	*	*	*	*	*				
ApproachDel:	9.7			10.1			xxxxxx			xxxxxx						
ApproachLOS:	A			B			*			*						

Note: Queue reported is the number of cars per lane.

Kittelson & Associates, Inc. - Project 11183
Recology Suttle Road Site
Total Traffic Conditions, Weekday PM Peak Hour

Level Of Service Detailed Computation Report
2000 HCM Unsignalized Method
Future Volume Alternative

Intersection #3 Suttle Road driveway

Approach:	North Bound				South Bound				East Bound				West Bound			
Movement:	L	-	T	- R	L	-	T	- R	L	-	T	- R	L	-	T	- R
HevVeh:	75%				75%				20%				20%			
Grade:	0%				0%				0%				0%			
Peds/Hour:	0				0				0				0			
Pedestrian Walk Speed: 4.00 feet/sec																
LaneWidth:	12 feet				12 feet				12 feet				12 feet			
Time Period: 0.25 hour																

Traffix 7.9.0415 (c) 2007 Dowling Assoc. Licensed to KITTELSON, PORTLAND

STORMWATER POLLUTION CONTROL PLAN

Revised: December 1, 2014

For:

Recology Portland, Inc.
Suttle Road Recovery Facility

Located in the County of: Multnomah

Main Telephone Number: 503-285-8777

Facility Owner: Recology, Inc.

DEQ File Number: 120986

Street and Mailing Address:
4044 North Suttle Road
Portland, Oregon – 97217

CONTACT INFORMATION:

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	Cell Phone:	503-849-9114

Facility Contact, General Manager:

Carl Peters	Office Phone:	503-283-2015
	Cell Phone:	530-624-0706

Plan Prepared By:
Ame LeCocq and Holtech Engineering

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1.0 Introduction

1.1 General

The United States Environmental Protection Agency (EPA) requires a National Pollutant Discharge Elimination System (NPDES) permit for any facility that may discharge stormwater from a point source to surface waters or to conveyance systems that discharge to surface waters. This Storm Water Pollution Control Plan (referred to as the SWPCP or "the plan") is a requirement of the NPDES General Permit, Number 1200-COLS (referred to as "the permit") issued by Oregon Department of Environmental Quality (DEQ). A copy of this plan must be kept at the facility.

This SWPCP was prepared for the Recology Suttle Road Recovery Facility in accordance with Schedule A of the general permit. The SWPCP is a stormwater management plan that contains detailed information regarding a specific industrial site, the potential impacts that the site may pose to water quality, and best management practices (BMPs) that will be implemented on site to address stormwater pollution.

1.2 Definitions

Following are brief definitions of terms and acronyms used in this plan.

Benchmarks: Benchmarks are guideline concentrations, not effluent limitations. They are an adaptive management tool designed to assist in determining if the implementation of the SWPCP is reducing pollutant concentrations to below levels of concern, or if certain BMPs need to be modified, deleted, or added.

Benchmark Parameters: Benchmark parameters are physical, chemical, or biological constituents that are evaluated in stormwater discharges. The specific 1200-COLS benchmark parameters can be found in Schedule A of the permit.

BMPs: Best Management Practices are measures or controls that the facility uses to reduce pollutants at their source, to prevent the pollution of stormwater from the site.

CFR: Code of Federal Regulations

Controls: Controls for this plan refer to any structural or non-structural measures taken to reduce pollutants. This may include such things as covered storage areas or stormwater diversion.

DEQ: Oregon Department of Environmental Quality

NPDES: National Pollutant Discharge Elimination System

OAR: Oregon Administrative Rules

Point Source Discharge: This means a discharge from any conveyance, including any pipe, ditch, conduit, channel, or tunnel.

Significant Materials: These include, but are not limited to: raw materials, fuels, oils, greases, detergents, solvents, and hazardous materials.

Significant Quantity: This is the volume, concentration, or mass of pollutant in storm water that has the potential to cause pollution, contamination, or nuisance, and cause or contribute to a violation of water quality standards.

Stormwater: This is the runoff from a storm event, snowmelt runoff, and surface runoff drainage. It does not include infiltration and runoff from agricultural land.

SWPCP: Stormwater Pollution Control Plan.

TSS: Total Suspended Solids

1.3 Information Sources

This plan was prepared by Ame LeCocq (Group Environmental Manager) of Recology, and Robert Roholt of Holtech Engineering. Sources of information used to develop this plan and reference sources available for questions and/or additional information include the following:

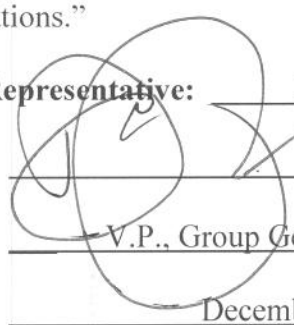
- NPDES General Permit, Number 1200-COLS (Effective Date: October 1, 2011)
- Oregon DEQ's Guidance Document "Industrial Stormwater Guidance: NPDES 1200-Z and 1200-COLS General Permits" (Dated December 2007)
- Storm Water Management for Industrial Activities, Developing Pollution Prevention Plans and Best Management Practices, EPA 832-R-92-006
- DEQ Industrial Stormwater Permits – Stormwater Pollution Control Plan Check List (Updated 2011)
- City of Portland Stormwater Management Manual (2008)
- Recology corporate environmental staff members
- DEQ Industrial Stormwater Permits – Tier II Revised Stormwater Pollution Control Plan Checklist

2.0 Plan Certification and Annual Review

2.1 Signature Requirements

"In accordance with the requirements set forth in 40 CFR 122.22, I certify under penalty of law that this document and all attachments were prepared under my direction or supervision in accordance with a system designated to assure that qualified personnel properly gather and evaluate the information submitted. Based on my inquiry of the person or persons who manage the system, or those persons directly responsible for gathering the information, the information is, to the best of my knowledge and belief, true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment for knowing violations."

Authorized Representative: Dave Vaughn

Signature: 

Title: V.P., Group General Manager

Date: December 15, 2014

2.2 Annual Plan Review

Each year in the fall, all aspects of the SWPCP, administrative and operational, will be reviewed for accuracy and effectiveness. The annual review will include a site inspection and SWPCP procedures review. The SWPCP will be updated at this time to reflect any variations, personnel changes, spill occurrences, or modifications in the facility's operation that have occurred since the previous update and could impact the stormwater quality.

In accordance with Schedule A.8 of the Permit, SWPCP revisions must be submitted only if they are made for any of the following reasons:

- If there are changes in site contact(s);
- If the revision to the SWPCP is in response to a corrective action or inspection;
- If there are changes to the site or control measures that may significantly change the nature of pollutants present in stormwater discharge; or significantly increase the pollutants(s) levels, discharge frequency, discharge volume, or flow rate; and,
- If there are changes to the monitoring locations or outfalls.

If submission of SWPCP revisions is required, Recology will submit the revised pages of the SWPCP or site map to The City of Portland within 30 days of making such revisions.

3.0 Site and Source Description

3.1 General Site and Source Description

The Suttle Road Material Recovery Facility (MRF) is located at 4044 N Suttle Rd., Portland, Oregon 97217. It encompasses tax lots R237942, R237943, Section 32, Township 2N, Range 1E, City of Portland, Multnomah County, and State of Oregon.

Recology operates a Material Recovery Facility (MRF) building and an adjacent yard at this location. The total area of this site is approximately six acres, including the MRF building and the surrounding area. The MRF building is enclosed on three sides and consists of a 20,800 square foot (sf) concrete floor that includes an area for tipping and sort line.

The facility operates Monday through Friday. Commercial and public vehicles are accepted at the facility between 6 a.m. and 4 p.m. on weekdays. Hours may be extended as necessary. Incoming and outgoing vehicles are weighed using onsite scales, and directed by scale house personnel to the appropriate location.

The primary activity onsite is to accept loads of mixed dry solid wastes for the purpose of conducting material recovery. Maintenance of the facilities and equipment are secondary activities to the operation. Dry solid waste materials are tipped onto the concrete floor inside the MRF building, and then loaded onto an elevated sort line. Dry waste is then sorted to extract materials that have recoverable value. Recovered materials are loaded into containers and shipped to markets. Paper, cardboard, metal, and plastic recovered from this stream are stored within covered drop boxes outside of the MRF building until they are hauled offsite for recycling. The sort line also contains a second belt, which is used to collect "fines" (materials smaller than 2 inches in diameter) and convey them into a covered drop box, which are then loaded into a trailer and transported to a landfill and used as alternative daily cover (ADC).

Adjacent to the MRF building is a 6,300 square foot three sided building used for the acceptance of organics (residential food scraps mixed with yard debris). This material is consolidated with loads of clean yard debris (received from residential and commercial customers such as landscaping companies) and then shipped offsite to a licensed composting facility. This portion of the building and the load out tunnel for transfer trailers is equipped with leachate collection drains, which flow into a leachate collection tank. This tank is pumped by a licensed contractor, and the liquids are transported offsite to a wastewater treatment facility.

Wood is collected outdoors, to the south of the MRF building. Wood recovered from the sort line or delivered by customers (including painted and treated wood from construction and demolition, and large brush and stumps) is stockpiled in this area until it is processed into

biomass fuel (also known as hog fuel) by using a portable grinder. The ground wood material is then loaded into a trailer and shipped offsite to customers.

E-waste (such as televisions, computers, monitors, etc.) is received from self-haul/public customers. Acceptable e-waste items are bulked together in large Gaylord boxes or on pallets and stored under cover within the hazardous materials staging area until shipped to a local processor. Used oils and antifreeze are stored within the maintenance shop, on the first floor of the office building, inside containment in labeled containers until they are collected by a vendor for offsite recycling.

Appliances (such as freezers, refrigerators, and air conditioners) are received at the facility and stored under cover within the hazardous materials staging area until shipped to a local recycler.

Waste tires are accepted and stored within a covered, contained trailer outside of the MRF building. Once the container is full, it is shipped for recycling.

Construction and demolition (C&D) debris is received at the facility. Inert materials are accepted and stored outdoors in a designated stockpile area until they are loaded into transfer trailers and shipped offsite for recycling. Inert materials consist of construction and demolition debris, and may include the following items: cured concrete, brick and masonry, ceramic materials such as clay or porcelain, sod, etc. Customers must verify that these materials are not contaminated with municipal solid wastes or hazardous wastes before they are received.

Finished compost is sold at the facility. This material is delivered to the facility by truckload and stored outdoors within an ecoblock bunker.

Other types of construction and demolition debris, such as plaster, fiberglass, doors and textiles may be received at the facility. These materials are received, stored and sorted within the MRF building and kept from coming into contact with stormwater runoff. Some of these materials (such as plasters) must be accompanied by analytical from a certified laboratory stating that the material does not contain asbestos. This analytical is kept onsite.

Loads of roofing material, consisting of clean asphalt shingles only (no built up roofing) are stored within a covered drop box to prevent contact with stormwater until they are shipped offsite for recycling.

Hazardous materials (such as cleaners and solvents, pesticides, oil products, paint, fluorescent light tubes, etc.) are not intentionally collected at the facility. However, these materials are sometimes inadvertently received within loads of mixed dry waste. If this occurs, these materials are removed from the waste stream and stored within containment skids under cover in the hazardous materials staging area. A licensed vendor collects this material on a weekly basis for recycling or disposal.

Maintenance and repair of heavy equipment is conducted onsite. Maintenance facilities consist of an open-sided covered maintenance bay, and a fully enclosed shop, on the first floor of the office building. Any welding, cutting, or grinding will take place only within these areas. Regular maintenance of the equipment (such as fluid and filter changes) will take place within these areas as well. Any rinsing of equipment will be done within the organics building,

ensuring that any rinse water is collected within the leachate collection system (segregated from stormwater runoff) and shipped offsite to a wastewater treatment facility.

Mobile fueling is conducted on a daily basis (Monday through Friday) by a contracted vendor. Fueling typically takes place in late afternoon or early evening hours, when all the trucks are parked at the facility. Operators attempt to park equipment near the MRF building or near the scale house, but fueling may take place in other areas if equipment is not staged in these areas. The vendor has specific procedures that must be adhered to in order to minimize the potential for stormwater contamination (which include attending the vehicle at all times during the fueling process, placing drip pans below the fueling nozzle, etc.).

Washing of equipment only occurs at the facility with cold water and no soap (herein referred to as rinsing). Rinsing activities occur only within the organics building, ensuring that water is collected within floor drains that flow into a storage tank and treated as wastewater (hauled offsite for disposal at a licensed facility and kept separate from stormwater runoff).

3.2 General Location Map

The General Location Map is attached in this plan (see Figure 1). The site is approximately one mile west of I-5 and one-half mile south of the Columbia River. The site is bordered to the north by Suttle Road, to the west and east by industrial properties, and to the south by wetlands.

3.3 Site Map

The site map included in this plan (see Figure 2) shows drainage areas, drainage patterns, the discharge point, vehicle parking and drop box storage areas, location of significant material storage areas and stormwater control measures.

3.4 Impervious Areas

The site consists of approximately 6 acres, which is equivalent to 261,360 square feet. The majority of the site consists of impervious area, consisting of building roof tops and paved surfaces. The estimated impervious area is 5 acres, which is equivalent to 217,800 square feet. Therefore, it is estimated that approximately 83% of the entire facility consists of impervious area.

3.5 Surface Water Drainage Patterns

Surface water drainage within the site can be classified into two distinct areas: the lower basin and the upper basin. The lower basin consists mainly of the northern and eastern portions of the site. All runoff from this portion of the facility flows into two stormwater catch basins (CB-1 and CB-2), which feed into a vegetated swale, adjacent to the office building. This unlined swale flows into a sedimentation vault, and then into a vault equipped with a Contech Stormwater Filtration Unit (consisting of 14 canisters filled with filtration media). From the Contech Stormwater Filtration Unit, water flows to a lined, vegetated retention swale along the western

property line. In this area, there is also a third catch basin (CB-3) that flows directly into the lined, vegetated swale along the western property line.

The upper basin portion of the facility consists of the areas that surround the material recovery building. Surface water flows either directly to the lined western retention swale by way of sheet flow, into an unlined conveyance swale along the southern edge of the property that empties into the lined western retention swale, or to a single catch basin (CB-4) which flows directly into the lined western retention swale. Runoff from the areas to the south and east of the material recovery building flow to the unlined vegetated swale adjacent to the office building, then into a sedimentation vault, the Contech Stormwater Filtration Unit, and finally to the western retention swale. The western swale discharges via a gooseneck pipe in the center of the swale.

3.6 Potential Pollutants

Accepting and processing mixed dry waste and residential organics occur within buildings. There is risk of debris and sediment being tracked and blown out from the MRF building.

Recovered materials (such as cardboard, paper, plastic, scrap metal, etc.) are stored outside in covered or tarped drop boxes to reduce the likelihood of contact with stormwater. There is a risk of minimal stormwater contact during tarp application or removal.

Maintenance is conducted within the shop or maintenance bay (or rarely within the MRF building if necessary). Equipment fueling is done outside. There is risk of fuel, oil and grease contamination from fueling and equipment breakdown.

Any equipment rinsing is conducted within the organics building, ensuring that rinse water is collected and treated as wastewater (kept separate from stormwater runoff). The entrance to the organics building is sloped inward towards the trench drain, which reduces track out from this area.

There is some risk of stormwater pollution from vehicles and mobile equipment that could leak fluids or track-out materials from the processing areas. Routine maintenance and daily inspection of onsite equipment reduces the risk of fluid leaks.

Pollutants that have the greatest potential of being present in the stormwater discharge are:

- Oil, grease, fuels and automotive fluids from vehicles and heavy equipment
- Oil, grease, fuels and automotive fluids from maintenance and fueling of the equipment used onsite
- Sediment and debris tracked-out from activities within the buildings
- Fine particles and metals from tire wear, truck brakes and blowing debris
- Sediment and small particles from storing inert materials, compost, and storing and processing wood onsite

3.7 Significant Materials

The table below lists the significant materials stored onsite, their location, and the method of protection from stormwater exposure. Quantities are not listed, as these vary by week.

Material	Location	Stormwater Protection Method
Mixed Dry Waste	MRF Building	Tipped, Stored and Processed indoors
Organics (residential food scraps mixed with yard debris)	Organics Building	Tipped, stored, and loaded indoors, organics building is equipped with leachate collection drains that keep liquids separate from stormwater
Petroleum products (includes motor oils, hydraulic fluids, antifreeze)	Maintenance Shop	Stored indoors, on spill containment pallets
Hazardous Materials (recovered paint, solvents, cleaners, etc.)	Hazardous Materials Staging Area	Covered storage area, stored within containment skids, removed from site weekly
Leachate / Rinse Water	Organics Building	Collected within leachate tank, hauled offsite for disposal
Electronic Waste (E-Waste)	Hazardous Materials Staging Area	Covered storage area, stored in Gaylord boxes or on pallets
Fluorescent Lamps	Hazardous Materials Staging Area	Covered storage area, stored within closed containers
Appliances	Hazardous Materials Staging Area	Covered storage area
Scrap Metal	MRF Building, or outside MRF Building	Stored within covered or tarped drop boxes
Tires	Trailer outside MRF Building	Stored within a covered, contained trailer
Wood	Outside, south of MRF Building	Application of water for dust suppression when processing, routine sweeping of sediment from storage of wood wastes, use of waddles or other sediment barriers around the wood storage area (if needed)
Inert Materials, Compost for Retail Sale	Outside, within ecoblock enclosure, NW portion of the property	Application of water for dust suppression, use of waddles or other sediment barriers around storage area (if needed)

3.8 Receiving Waters

The stormwater runoff from the facility flows first into one of two channels within a joint bioswale on Oil Re-Refining Company's property (Recology's western neighbor). From this channel, stormwater flows into a privately owned wetland south of the joint swale, then through a series of inverted pipes and finally into a culvert that runs beneath the BNSF railway and ultimately into Smith Lake. Smith Lake is located within the Columbia Slough watershed, and is hydrologically connected to the Columbia Slough.

3.9 Stormwater Sampling Locations

The system is designed to discharge stormwater from Recology's retention swale into one channel of a joint bioswale on Oil Re-Refining Company's property, just south of the Recology site. In the event that stormwater is discharged from the Recology site, the stormwater sampling location (identified as SR1) would be the located at the end of the Recology channel within the joint bio-swale. Recology anticipates the retention swale will discharge, but this may not happen within the first months of the rainy season. If stormwater is retained within the Recology retention swale and discharge did not occur, these conditions will be documented by staff in writing within a discharge log, and by photograph if possible.

Samples will be collected and analyzed in accordance with the conditions set forth in Schedule B of the Permit.

4.0 Best Management Practices

4.1 Narrative Technology-Based Effluent Limits

In accordance with Schedule A.1 of the Permit, Recology will employ specific Best Management Practices (BMPs) to meet technology based requirements. In order to minimize the risk of contact of significant materials to storm water runoff and discharge, best management practices (BMPs) are employed throughout the facility. BMPs have been put into place to prevent potential pollutants from coming into contact with storm water.

4.1.1 Minimize Exposure

- Liquid materials stored onsite for maintenance of operational equipment (such as oils, antifreeze, fuels, and solvents) are stored under cover, where the potential for exposure to stormwater is minimal.

- Materials stored outdoors are equipped with covers to prevent stormwater contamination when practicable. Any drop boxes of recyclable materials stored outside and awaiting shipment would be covered, either a lidded box or a tarp, to prevent stormwater from coming into contact with the materials.

- Outdoor stockpiles of material, such as construction and demolition debris, finished compost and wood wastes will be maintained in such a manner as to minimize stormwater contamination to the extent practicable. Tarps are placed over the stockpiled material whenever practicable to prevent stormwater contact. Waddles or other sediment barriers may be placed around these storage areas to ensure that fine sediment and particles do not carry into the stormwater system. Sweeping of areas surrounding these stockpiles will be conducted to reduce and collect sediment.

- All hazardous substances are stored under cover within secondary containment devices to prevent leaks and spills from contaminating stormwater.

- All rinsing will take place within the organics building or load out tunnel so that rinse water is collected within the leachate collection drains and tank. The leachate collection drains and tank are cleaned out regularly as needed. All liquids collected within the load out tunnel and organics bay will be shipped offsite for disposal at a permitted wastewater facility.

- Drip pans or absorbents are used under or around leaking or leak-prone vehicles that cannot be stored indoors to prevent leaks or spills from contaminating stormwater.

- Pavement slopes away from buildings and processing areas to keep stormwater from entering the processing areas.

- Spill kits are stationed in the maintenance bay, shop and hazardous materials storage area. In the event of a spill, operators are trained to employ emergency spill response and clean up procedures to limit the impact on stormwater conveyance systems onsite.

- Loading and unloading of materials are conducted inside the building whenever possible to minimize exposure to stormwater.

- Maintenance on equipment is conducted under cover, within the maintenance bay or shop whenever possible. All supplies used for maintenance (such as tools, lubricants, etc.) are stored within these covered areas and not exposed to stormwater. Onsite mechanics ensure equipment is maintained to prevent the likelihood of a release to the environment. Pre-trip inspections are completed daily by operators. Heavy equipment, such as loaders and skid steers, are stored indoors whenever possible during non-operational hours to reduce the likelihood of a release to the environment.

4.1.2 Oil and Grease

- Any spills or leaks are cleaned up promptly, using absorbents or other effective measures to prevent discharge of pollutants.

- Mesh bags containing oil absorbent media may be placed inside the catch basins as an additional preventative measure, if needed, to further absorb oil and grease within stormwater runoff. These bags can remain in the catch basins at all times to provide additional treatment for oil and grease. Should these bags be used, they will be inspected monthly, and cleaned and replaced as needed.

4.1.3 Waste Chemicals and Material Disposal

- Any waste chemicals generated by the maintenance of equipment onsite (such as used oil, antifreeze, cleaners, etc.) will be stored under cover until such time as they are shipped offsite for proper recycling or disposal.

- Any drop boxes of recyclable materials stored outside and awaiting shipment would be covered until shipped offsite for recycling. The cover may consist of a temporary cover, such as a tarp, lidded drop box, or by storing the container indoors.

- Organics and mixed dry waste received at the facility will be stored indoors, in such a way as to minimize exposure of pollutants to stormwater, and shipped offsite regularly for proper recycling or disposal.

- Outdoor stockpiles of material, such as construction and demolition debris and wood wastes, will be maintained in such a manner as to minimize stormwater contamination to the extent practicable. Waddles or other sediment barriers may be placed around these storage areas to ensure that fine sediment and particles do not carry into the stormwater system. Sweeping of areas surrounding these stockpiles will be conducted to reduce and collect sediment.

4.1.4 Erosion and Sediment Control

- Any exposed areas susceptible to erosion are landscaped to the extent possible. Swales onsite are vegetated to reduce the likelihood of erosion.

- Dirt and debris are deposited on paved surfaces from vehicles using the facilities. Sediment in stormwater discharge is controlled with catch basin filters, within the sedimentation vault or the Contech Stormwater Filtration Unit. Catch basins are inspected and cleaned a minimum of once per month by a contracted vendor.

- A vacuum sweeper truck is utilized at the facility to sweep and collect sediment from all paved areas. The sweeper is deployed at a minimum frequency of once per week, but may be utilized more often if needed to control sediment.

4.1.5 Debris Control

- Catch basin filters are meant to minimize waste and floatable debris from entering the main stormwater swale at the facility. Additionally, booms or socks may be used in areas susceptible to debris from wind or track-out. Should these additional methods be utilized, these devices are inspected at a minimum frequency of once per month.

- Litter patrols are conducted regularly to attempt to collect any garbage or debris and dispose of it properly.

4.1.6 Dust Generation and Vehicle Tracking of Industrial Materials

- A vacuum sweeper truck is utilized at the facility to sweep and collect dust and off-site tracking of materials from all paved areas. The sweeper is deployed at a minimum frequency of once per week, but may be utilized more frequently if needed to control dust and tracking.

- Water may be applied to outdoor stockpiles of wood or construction and demolition materials during the loading, unloading or processing of these materials to reduce the amount of airborne dust produced.

4.1.7 Housekeeping

Good housekeeping practices are enforced at the facility by site management. Some of these practices include:

- Orderly storage and proper labeling of materials stored onsite
- Prompt clean up of any spilled liquids, including minor drips of oil or fuel
- Proper disposal of waste materials, such as used oils, oil filters, etc.
- Regular parking lot sweeping, using a vacuum sweeper unit
- Regular inspections to evaluate industrial activities and BMPs employed at the facility
- Regular litter patrols to collect and properly dispose of any garbage or litter onsite
- Proper maintenance of vehicles parked onsite

4.1.8 Spill Prevention and Response Procedures

This facility has oils and fuels that are stored onsite, but these materials are stored under cover to minimize their exposure to stormwater. All containers are properly labeled as to their contents. Equipment maintenance is performed onsite, within the indoor shop or maintenance bay. Company vehicles and equipment are inspected daily and properly maintained, and any minor drips or spills from vehicles will be promptly cleaned up. Leaking equipment will be reported to maintenance personnel for repair.

Spill absorbent materials will be maintained at the facility, and inspected during the monthly site inspections to be sure they are fully stocked. These materials may consist of any of the following: spill absorbent materials, spill pads, and spill booms. Additional equipment that could be used in spill response, such as shovels and brooms, are also kept onsite at all times.

Common methods that can be used for controlling spills include:

Absorption: Use absorbent materials, such as sawdust, spill pads, or spill booms to absorb liquids. When absorbents become contaminated, they retain the properties of the absorbed liquid. Therefore, contaminated absorbent resulting from a spill will be handled in compliance with all local, state, and federal regulations.

Dikes, Dams, Diversions, and Retention: These are temporary physical barriers that may be used to retain spills, change the direction of the flow of liquid, or minimize storm water run-off to the impacted area.

Overpacking: Leaking drums or containers may be placed in larger containers to hold the leaking liquid.

In general, the methods listed above for controlling spills should be implemented as follows:

Small Spills Confined to Immediate Area: Place absorbent materials in direct contact with the liquid, working inward from the farthest point of progression of the liquid. The quicker the response, the smaller the contaminated area will be.

Larger Spills and Spills Escaping from Immediate Area: If liquid begins to spread outside of the immediate area, attempts should be made to stop the flow before it enters the stormwater catch basin by building up absorbent materials to prevent contamination. In the event the liquid enters a storm drain or sewer, absorbent materials should be used at the discharge points, or in the aggregation points to collect the material. To prevent a spill from leaving the property, the gooseneck discharge pipe within the center of the western swale could be rotated upward, preventing any liquid from entering the pipe and effectively trapping the spill within the lined western swale.

Spill response clean up and notification procedures will be implemented as follows:

1. Identify and stop the source of the spill.
2. Ensure the safety of all personnel and customers/contractors that are onsite.
3. Contain the spill and keep it from migrating off site and/or into water sources, using the equipment available (spill kit, shovel, etc.)
4. Once the spill is contained, contact the following Recology personnel:

   General Manager
   Carl Peters 530-624-0706

   Recology Group Environmental Manager:
   Ame LeCocq 503-849-9114

5. Begin clean up operations
6. Properly dispose of all clean up materials in accordance with local, state, and federal regulations

In the event of a large spill at the facility, SRRF would contact an outside contractor for assistance in responding to the spill. The current contractor for SRRF is:

Cowlitz Clean Sweep
55 International Way
Longview, WA – 98632
360-423-6316

Or,

NRC Environmental
6211 N. Ensign Street
Portland, OR – 97217
503-283-1150 or 1-800-337-7455

The Environmental Manager will evaluate the spill to determine whether or not it is reportable, and be responsible for completing the notification if necessary.

The Environmental Manager will notify Oregon Emergency Response System (OERS) at 1-800-452-0311, The City of Portland Spill Hotline at 503-823-7180, and the National Response Center at 1-800-424-8802 immediately of any spills over 42 gallons of oil on land, or if any quantity enters or threatens to impact the waters of the State. If this occurs, the Environmental Manager will be responsible for coordinating with Oregon DEQ and documenting all activities concerning the spill clean up activities.

4. 2 Preventative Maintenance Program

Inspecting and monitoring equipment used on site is important in preventing problems that can lead to leaks or spills of potential contaminants for stormwater runoff. Additionally, inspecting and monitoring stormwater conveyance systems is important to ensure these systems (such as swales and piping) are functioning properly.

A monthly stormwater inspection form will be used to evaluate the industrial practices and BMPs at the facility. This form is located within this plan, and meets the requirements of Schedule B.7 of the Permit. Any discovery of deficiencies that could allow significant materials to enter the storm system shall be recorded and corrected promptly.

Recology will adhere to its Operations and Maintenance (O&M) Plan to ensure proper function of the vegetative swales.

Catch basins at the facility will be cleaned by a contracted vendor at a minimum frequency of once per month.

Annual maintenance for the stormwater conveyance system is performed each year, prior to the onset of the rainy season. This annual maintenance includes removal and replacement of the Contech Filtration Canisters, removal of sediment and debris from the catch basins and sedimentation vaults, and may include cleaning of the stormwater conveyance lines if needed. Records of this maintenance will be kept onsite at the facility.

4.3 Employee Training

All equipment operators will be trained in the proper operation of the equipment according to the manufacturer's recommendations, in order to reduce the likelihood of a mishap that might result in a spill.

All employees will be informed and educated (within 30 days of their hire date and annually) on general stormwater quality concerns, goals of the SWPCP and proper sanitation and operational practices implemented to protect and maintain stormwater quality (such as housekeeping practices, equipment washing practices, etc.). Any stormwater training sessions will be documented, including the names of all employees in attendance. Refresher training will be held each year for all employees onsite.

4.4 Non-Stormwater Discharges

The facility does not have any known non-stormwater discharges not authorized by a NPDES permit. Rinsing of equipment only occurs at the facility with cold water and no soap. Rinsing activities occur only within the organics building, ensuring that water is collected within floor drains that flow into a storage tank and treated as wastewater (hauled offsite for disposal at a licensed facility and kept separate from stormwater runoff).

4.5 Control Measures for Technology Based Effluent Limits

In accordance with the Permit, Recology has selected and installed control measures to meet the narrative technology based effluent limits.

Catch basin filtration inserts are used within the catch basins onsite, and are designed to filter solids, trash, metals and hydrocarbons from the stormwater runoff.

Bags of Metalzorb© filtration media are placed at a minimum within selected catch basins, inlet pipes and within the conveyance swales on the property (other locations may be identified for Metalzorb media). Metalzorb is a high capacity sponge that effectively removes dissolved metals from stormwater runoff. Dissolved metals are captured within the media and held so they cannot leach out.

Mesh socks containing passive chitosan flocculent will be utilized within the joint swale, and potentially other locations within the stormwater treatment system, to enhance the removal of particulate matter within the stormwater by acting as a coagulant.

Vegetated swales are utilized at the facility to reduce the velocity of the stormwater flow and filter out pollutants and sediments. The central and southern swales on the property are unlined, and therefore promote infiltration of stormwater.

In addition to catch basins and sedimentation vaults, a large portion of the stormwater runoff from the facility flows through a stormwater treatment vault prior to discharge into the western retention swale. This stormwater treatment vault is equipped with Contech stormwater filtration canisters which remove sediment, metals and hydrocarbons from stormwater.

As stated within Section 4.2 of this Plan, the stormwater treatment vault and sedimentation vault will be maintained and cleaned on an annual basis at minimum. The catch basins will be cleaned monthly at minimum.

4.6 Sector Specific Requirements for Industrial Activity

In accordance with Schedule E of the Permit, Recology has completed an evaluation of the sector specific requirements for industrial activity. The facility operates under SIC Code 5093, and therefore the facility must meet the requirements listed within Subpart N – Sector N of the permit, specific to "Scrap Recycling and Waste Recycling Facilities."

In addition to the good housekeeping measures required by Section A.4 of the Permit, the facility will include the following measures to meet these additional requirements (permit citations are referenced in each section below):

Inbound Recyclable and Waste Material Control Program (E.N.1.1.1)
The facility will minimize the chance of accepting materials that could be significant sources of pollutants by:

- Following load screening procedures outlined within the facility's Operations Plan (including signage notifying customers of acceptable and prohibited materials, verbal screening conducted by scale house attendants, and having trained spotters in attendance when loads of material are tipped)
- Proper segregation, storage and recycling or disposal of prohibited materials that are inadvertently discovered during sorting of incoming materials
- Tipping materials within the processing building to limit the exposure to stormwater
- Provide training to employees onsite regarding acceptable and prohibited materials
- Ensure liquid wastes generated by maintenance of equipment conducted onsite is properly labeled, materially compatible and non-leaking containers; and stored in such a manner as to limit the exposure to stormwater; and recycle these materials in accordance with local, state and federal regulations

Scrap and Waste Material Stockpiles and Storage (Outdoor) (E.N.1.1.2)
Wood is collected outdoors, to the south of the MRF building. Wood recovered from the sort line or delivered by customers (including painted and treated wood from construction and demolition, and large brush and stumps) is stockpiled in this area until it is processed into biomass fuel (also known as hog fuel) by using a portable grinder. The ground wood material is then loaded into a trailer and shipped offsite to customers.

Additionally, construction and demolition (C&D) debris is received at the facility. Inert materials, such as brick, concrete, sod, etc. are stored outdoors in piles until they are loaded into transfer trailers and shipped offsite for recycling.

The facility will minimize contact of stormwater runoff with stockpiled materials, processed materials and non-recyclable wastes by:

- Storing recyclable materials in covered containers whenever possible (covers may consist of storing the containers indoors, using lidded containers, or tarping containers)
- Tarping both inert materials and retail compost bunkers whenever practicable to reduce stormwater contact
- Using vegetated swales and strips and catch basin filters to facilitate settling or filtering of pollutants
- A vacuum sweeper truck is utilized at the facility to sweep and collect dust and off-site tracking of materials from all paved areas. The sweeper is deployed at a minimum frequency of once per week, but may be utilized more frequently if needed to control dust and tracking.

- If necessary, straw waddles or other sediment barriers may be placed around the stockpile area, to reduce the amount of sediment or debris from these areas that may be carried within the stormwater runoff.

Stockpiling of Turnings Exposed to Cutting Fluids (Outdoor Storage) (E.N.1.1.3)
This section of the permit is not applicable to SRRF.

Scrap and Waste Material Stockpiles and Storage (Covered or Indoor Storage) (E.N.1.1.4)
The facility will minimize contact of residual liquids and particulate matter from materials stored indoors or under cover with surface runoff by:

- Ensuring that good housekeeping practices are maintained at the facility
- Not allowing any rinse water from equipment rinsing to discharge to the stormwater system onsite
- Ensuring that the trench drains within the load out bay and organics bay remain segregated from stormwater onsite
- Conducting sorting of incoming materials indoors

Scrap and Recyclable Waste Processing Areas (E.N.1.1.5)
The facility will minimize potential for surface runoff coming into contact with processing equipment by:

- Using water as a dust suppressant during the grinding of wood waste onsite
- Processing wood in an area where runoff will flow into a vegetated retention swale, which will facilitate settling or filtering of pollutants
- Ensuring that preventative maintenance on equipment is conducted
- Ensuring that good housekeeping practices are maintained at the facility
- Conduct inspection on processing equipment regularly
- Using dry absorbents and sound clean up practices to collect and recycle spilled or leaking fluids

Scrap Lead-Acid Battery Program (E.N.1.1.6)
This section of the permit is not applicable to SRRF.

Spill Prevention and Response Procedures (E.N.1.1.7)
This section of the permit is not applicable to SRRF, as the facility has no outdoor equipment with hydraulic reservoirs exceeding 150 gallons.

Supplier Notification Program (E.N.1.1.8)
This section of the permit is not applicable to SRRF. However, signage and scale house attendants do notify incoming customers of materials that are and are not acceptable at the facility.

Schedule E.N.1.2, Waste Recycling Facilities (Liquid Recyclable Materials) of the permit is not applicable to SRRF, as liquid wastes are not accepted for recycling at the facility.

Schedule E.N.1.3, Recycling Facilities (Source-Separated Materials) of the permit is not applicable to SRRF, as the permit states that this section is applicable to facilities that only receive source-separated recyclables, primarily from non-industrial and residential sources.

Additional SWPCP Requirements (E.N.2)

Drainage Area Site Map

Schedule E.N.2 of the permit requires that the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff be documented within the SWPCP:

- Scrap and waste material storage areas, outdoor scrap and waste processing equipment, and containment areas for turnings exposed to cutting fluids.

The areas where scrap and waste materials are stored and processed are identified on the site diagram within this plan. There are no containment areas for turnings exposed to cutting fluids, so this portion of the requirement is not applicable.

Schedule E.N.2 of the permit is not applicable to SRRF, as the facility is not subject to Schedule E.N.1.1.3.

Sector-Specific Benchmarks

Sampling for additional parameters specified within sub-sector N of the permit will be required for SRRF. The following table identifies the parameters and benchmark monitoring concentrations applicable to the facility:

Parameter	Benchmark Monitoring Concentration
Chemical Oxygen Demand	120mg/L
Total Aluminum	0.75 mg/L
Total Iron	1.0 mg/L

5.0 Stormwater Monitoring

5.1 Monitoring Requirements

The stormwater monitoring program has been developed in accordance with Schedule A of the 1200-COLS General Permit.

If stormwater discharge from the site occurs, a grab sample of stormwater will be collected from the only outfall at the facility (designated SR1) to be analyzed for the following constituents.
In accordance with Schedule B Section b of the Permit, DEQ will identify in Recology's permit assignment letter any impairment pollutants that must be monitored, and reference concentrations for these pollutants.

Parameter	Benchmark	Sampling Frequency[1]
pH	5.5-8.5 SU	4 X per yr. through permit*
Total Suspended Solids	50 mg/L	4 X per yr. through permit*
Oil & Grease	10 mg/L	4 X per yr. through permit*
Total Copper	0.036 mg/L	4 X per yr. through permit*
Total Lead	0.060 mg/L	4 X per yr. through permit*
Total Zinc	0.24 mg/L	4 X per yr. through permit*
Total Phosphorus	0.16 mg/L	4 X per yr. through permit*
E. coli	406 counts/100 ml	4 X per yr. through permit*
BOD_5	33 mg/L	4 X per yr. through permit*
Chemical Oxygen Demand	120mg/L	4 X per yr. through permit*
Total Aluminum	0.75 mg/L	4 X per yr. through permit*
Total Iron	1.0 mg/L	4 X per yr. through permit*
Mercury	N/A	4 X over the first 3 years**
PCBs	N/A	4 X over the first 3 years**
Total Cadmium	N/A	8 X over the first 3 years***
Total Chromium	N/A	8 X over the first 3 years***
Total Nickel	N/A	8 X over the first 3 years***

[1] = This is the minimum sampling frequency required by the permit.
**= Sample four times per year; 2 samples collected before December 31st and 2 samples collected after January 1st throughout the duration of the permit coverage unless a waiver for the parameter is established.*

***= Sample four times over the first 3 years of coverage; 2 samples collected before December 31st and 2 samples collected after January 1st.*
****= Sample eight times over the first three years of coverage; 2 samples collected before December 31st and 2 samples collected after January 1st.*

Since discharge may not occur within the first months of the stormwater year due to onsite retention, visual inspections of the discharge outfall will be conducted whenever possible during heavy rain events, and documented in writing within the discharge log and by photograph if possible, to demonstrate that no discharge took place.

5.2 Sampling Procedures

Only personnel trained in water quality sampling procedures will be assigned to perform the sampling activities. Sample collection, preservation, and transportation will be in accordance with established procedures under 40 CFR 136.

Stormwater discharge samples will be collected in laboratory supplied sample containers and properly preserved according to the analysis required. Samples will be stored and transported at the proper temperature, according to laboratory recommendations.

A chain of custody (COC) maintains a record of sample collection, transfer of samples between personnel, sample shipping, and receipt by the testing laboratory. Sample information will be entered on the COC documents from the time of collection. If there is any transfer of samples prior to shipment, the COC will reflect the change of possession. All samples will be entered on the COC form.

5.3 Reporting and Records Retention

An annual report will be submitted to The City of Portland Bureau of Environmental Services (BES) no later than July 31 each year. This report will contain the grab sampling and visual monitoring data for the previous monitoring period (July 1 through June 30), reported on the department-approved Industrial Stormwater Discharge Monitoring Report (DMR) Form.

The following information will be retained at the facility for no less than three years:

- Sampling data and completed DMR Forms
- Chain of Custody Forms
- Official laboratory reports including analysis reports

5.4 Monitoring Waiver

In accordance with Schedule B, Condition 4 of the permit, if the geometric mean of four consecutive sampling results is below the statewide benchmarks for any parameter specified in Section 5.1 of this plan, Recology may submit a request to exercise the monitoring waiver clause within the permit, relieving the facility of all sampling requirements for the remainder of the

permit term. If The City of Portland BES does not comment within 30 days of the request, Recology will consider this request approved.

5.5 Tier II Corrective Actions for Benchmark Exceedances

In accordance with Schedule A.12 of the Permit, SRRF has evaluated the sampling results collected during the 2nd year of permit coverage, and determined that the geometric mean of the samples collected at the facility's one outfall exceed benchmarks in Schedule A.9 of the Permit. The parameters exceeding the geometric mean include the following:

Parameter	Benchmark	Geometric Mean Calculation for Year 2 of Permit Coverage
E.coli	406 counts/100 mL	1,329 counts/100 mL
Total Phosphorus	0.16 mg/L	0.27 mg/L

Exceedances were also noted during the second year of permit coverage for Sector Specific Benchmarks. Iron was exceeded during all four sampling events. Aluminum was exceeded during the first two sampling events, though were beneath benchmark for the last two sampling events.

Based on this information, SRRF has developed additional treatment measures to implement at the facility with the goal of achieving the benchmarks in Schedule A.9 of the permit in future discharges.

Description of Additional Treatment Measures

As described in Section 3.5 of this plan, all stormwater runoff at SRRF eventually drains into the lined, vegetated retention swale along the western portion of the property, and discharges offsite via a gooseneck pipe in the center of the swale. Two above ground concrete treatment vaults will be installed within the swale. The gooseneck will be removed and the discharge pipe will be fitted to allow connection of the two vaults to the discharge pipe.

A layer of sand will be placed into the bottom of the swale. This sand will serve as a cushion for the vaults to ensure the liner within the swale is not damaged. Water will flow through an 8-inch diameter entry point on the outside of each vault into a pre-settling chamber. Water will then flow over a separating wall within the vault to a second chamber filled with PathShield Antimicrobial Filter Media. The treated water will then flow out of the vaults through the discharge pipe and discharge offsite.

The new antimicrobial filter media vaults were designed to meet both the hydraulic and flow requirements of the swale in which they are being placed. The current swale is designed to discharge at an elevation of 22.0' feet. With the new vaults, the swale will be discharging at 22.02 feet. To provide hydraulic head to move the water through the vault system, the inlet elevation to the vaults will be 22.52 feet. This will not significantly impact the performance of the rest of the system.

The volume of flow calculated in modeling studies shows the design storm for a two-year 24 hour peak flow to be 2.4 cubic feet per second. The studies completed on the PathShield Antimicrobial Filter Media shows a > 99.9% efficacy of treatment at 20 gallons per minute, per square foot of treatment area. Each vault will have 27.6 square feet of treatment surface for a total treatment area of 55.2 square feet. Multiplying 55.2 square feet times 20 gallons per minute per square foot gives a treatment flow of 1,104 gallons per minute or 2.45 cubic feet per second. This slightly exceeds the design peak flow during a two-year storm.

Flows larger than the design flow will bypass the treatment system and flow into the outfall by way of the bypass opening in the outfall discharge pipe.

The treatment system will also have a sediment removal feature and should remove a significant amount of material that is currently escaping causing elevated levels of phosphorus and other metals. It is anticipated that the amount of treatment of these parameters will bring them into compliance with the requirements.

Rationale for Selection of Additional Treatment Measures and Projected Reduction of Pollutant Concentrations

PathShield is a passive filter media that effectively reduces coliform bacteria without releasing, discharging, or leaching any antimicrobial agents, chemicals, or heavy metals. The media kills coliform bacteria as the organisms physically move over the hostile surface of the media granules, and has demonstrated a 92% - 99.9% efficacy rate for reduction of e.coli in wastewater and stormwater applications.

Total Phosphorus, Iron and Aluminum levels have historically correlated with levels of Total Suspended Solids (TSS) within the stormwater runoff. It is assumed then that utilizing the pre-settling chambers within the vaults will allow for a greater reduction in these parameters (potentially up to a 60% reduction may be seen).

Since all stormwater runoff from the facility is discharged from the western retention swale, the placement of the vaults within this swale will ensure treatment of 100% of the stormwater runoff generated onsite.

Cost Estimates and Schedule for Installation of Additional Treatment Measures

Engineering, construction, and installation of the treatment measures outlined above are estimated to cost approximately $85,000. A projected schedule is included below:

- The treatment vaults will be constructed by the end of September 2014
- Installation of the sand, vaults and media should occur by October 15, 2015

Maintenance of Additional Treatment Measures

In order to remain effective, the vaults will require regular cleaning and removal of sediment and solids. Currently, SRRF contracts with a vendor to conduct monthly catch basin cleaning, and annual cleaning of the Contech vault system onsite. This vendor will also perform sediment removal from the treatment vaults. A monthly maintenance schedule will be implemented during the first three to six months to determine the required frequency of sediment removal. Following this initial time frame, sediment removal may happen less frequently on an as-needed basis.

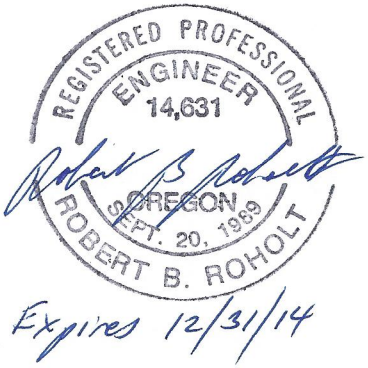
According to documentation provided by the manufacturer of PathShield Filter Media, if the media is kept clean and free of sediment it continues to effectively reduce E.coli levels in stormwater runoff. This is because the media does not rely on physical trapping; it is not consumed, and is not affected by seasonal temperature changes. The media can be rinsed with water in the event that it becomes fouled with sediment. If this were to occur, all rinsing will take place within the organics building or load out tunnel so that rinse water is collected within the leachate collection drains and tank.

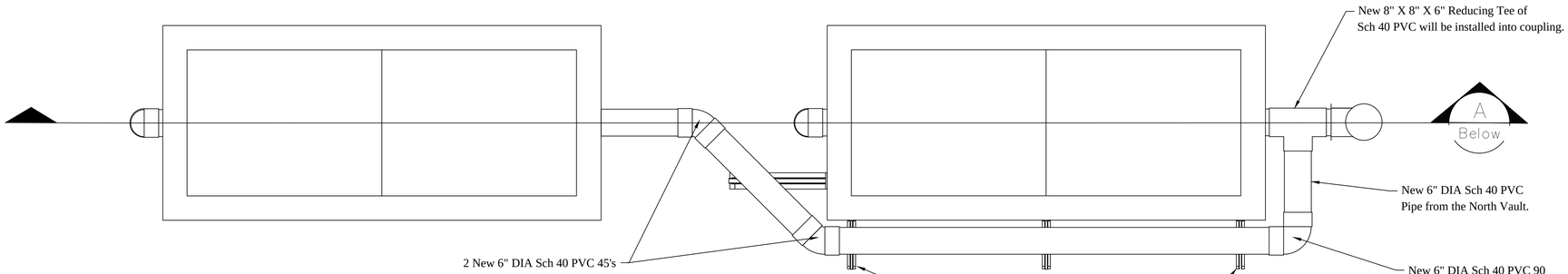
Samples can be collected directly from the top of the discharge pipe to evaluate the efficacy of the treatment system. Following installation and initial sampling, SRRF may choose to move its designated sampling location to this point or to the end of the discharge pipe that drains into the Recology channel of the joint swale. Any movement of the sampling point would be submitted to and approved by the City of Portland Bureau of Environmental Services.

Engineer Certification

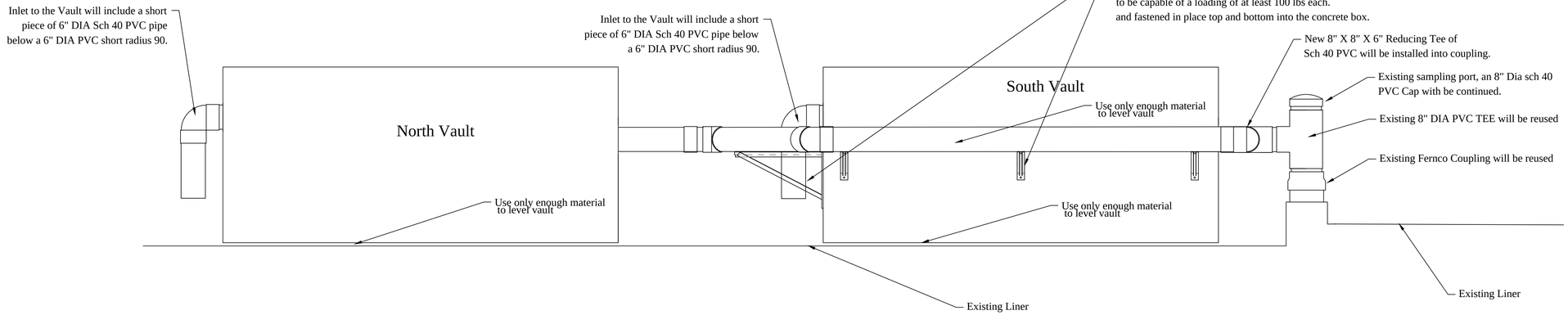
I certify that Section 5.3 of this Stormwater Pollution Control Plan was prepared under my direction, and that I have overseen the engineering and design of these additional treatment measures.

Robert Roholt, P.E.
Holtech Engineering

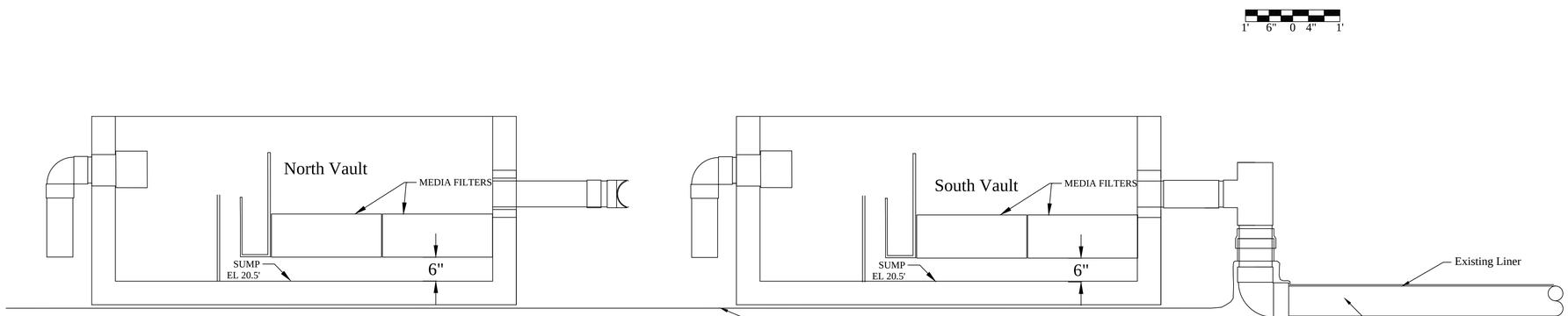




Plan View



Elevation View



Elevation View

Section A View

General Notes

1. The current South Vault will become the future North Vault and will sit directly on the liner at the same horizontal elevation.

2. The Northern Vault will have a 6" discharge line which will be routed around the South Vault and into the eight inch line that flows from the South Vault into the discharge line. The sampling point will be the same, the vertical discharge line.

REGISTERED PROFESSIONAL ENGINEER
14,631
OREGON
SEPT. 20, 1989
ROBERT B. ROHOLT
Renews: 12/31/16

No.	Revision/Issue	Date

Firm Name and Address

Holtech Civil and Environmental Engineering

Project Name and Address

Recology Suttle Road Ecoli Treatment Vaults

Project	Sheet
Ecoli Vaults	1 of 1
Date: 12/7/2014	
Scale: 3/4" = 1'	

Figures

Figure 1: General Location Map
Figure 2: Site Diagram

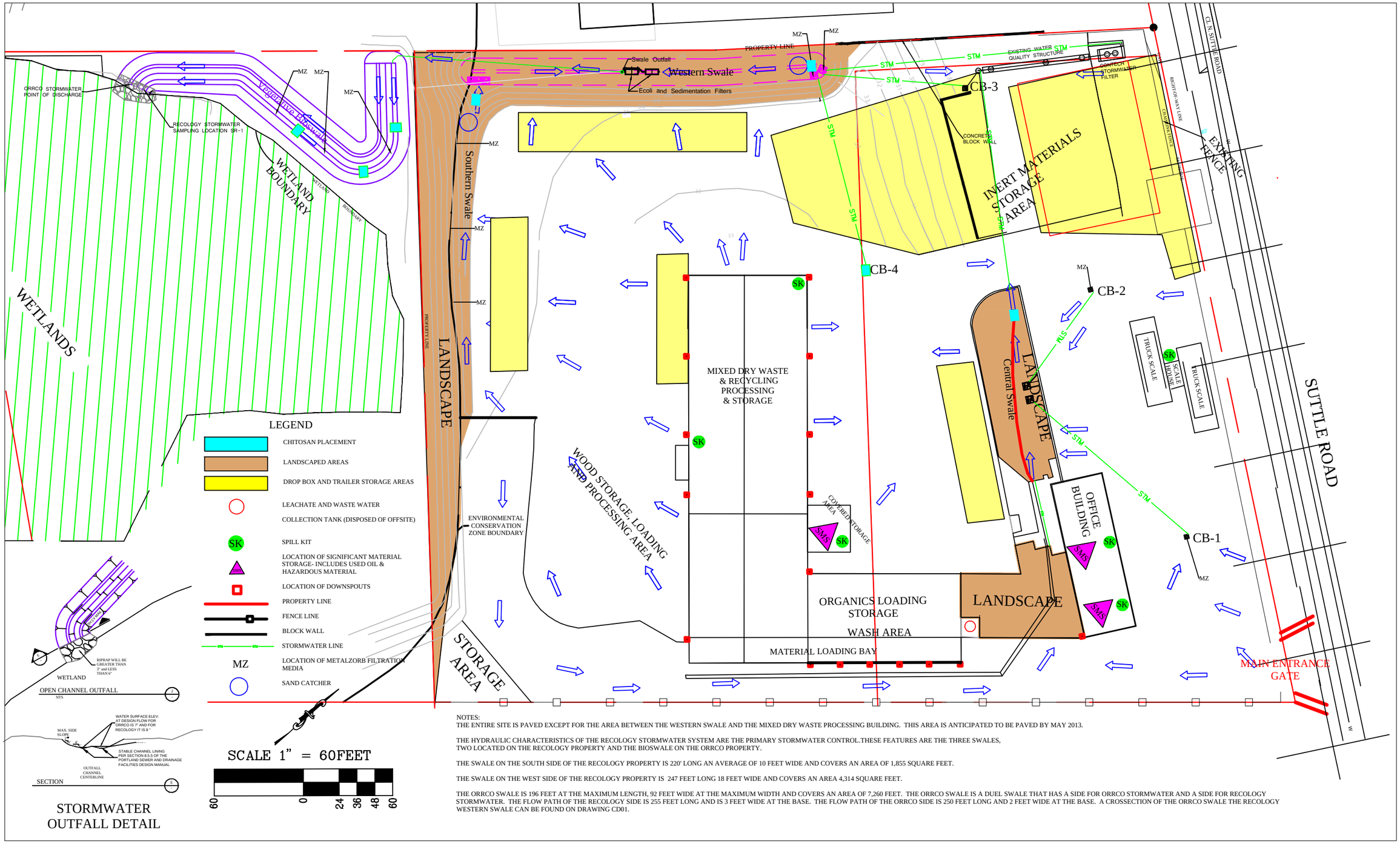
Figure 1
General Location Map

General Location Map – Figure 1
Recology - Suttle Road Recovery Facility
4044 North Suttle Road, Portland, Oregon - 97217

= Location of - Suttle Road Recovery Facility

Figure 2
Site Diagram

RECOLOGY PORTLAND INC.
SUTTLE ROAD RECOVERY FACILITY
4044 N.SUTTLE ROAD
PORTLAND, OREGON 97217
SITE DIAGRAM 12/2014



STORMWATER OUTFALL DETAIL

NOTES:
THE ENTIRE SITE IS PAVED EXCEPT FOR THE AREA BETWEEN THE WESTERN SWALE AND THE MIXED DRY WASTE PROCESSING BUILDING. THIS AREA IS ANTICIPATED TO BE PAVED BY MAY 2013.

THE HYDRAULIC CHARACTERISTICS OF THE RECOLOGY STORMWATER SYSTEM ARE THE PRIMARY STORMWATER CONTROL.THESE FEATURES ARE THE THREE SWALES, TWO LOCATED ON THE RECOLOGY PROPERTY AND THE BIOSWALE ON THE ORRCO PROPERTY.

THE SWALE ON THE SOUTH SIDE OF THE RECOLOGY PROPERTY IS 220' LONG AN AVERAGE OF 10 FEET WIDE AND COVERS AN AREA OF 1,855 SQUARE FEET.

THE SWALE ON THE WEST SIDE OF THE RECOLOGY PROPERTY IS 247 FEET LONG 18 FEET WIDE AND COVERS AN AREA 4,314 SQUARE FEET.

THE ORRCO SWALE IS 196 FEET AT THE MAXIMUM LENGTH, 92 FEET WIDE AT THE MAXIMUM WIDTH AND COVERS AN AREA OF 7,260 FEET. THE ORRCO SWALE IS A DUEL SWALE THAT HAS A SIDE FOR ORRCO STORMWATER AND A SIDE FOR RECOLOGY STORMWATER. THE FLOW PATH OF THE RECOLOGY SIDE IS 255 FEET LONG AND IS 3 FEET WIDE AT THE BASE. THE FLOW PATH OF THE ORRCO SIDE IS 250 FEET LONG AND 2 FEET WIDE AT THE BASE. A CROSSECTION OF THE ORRCO SWALE THE RECOLOGY WESTERN SWALE CAN BE FOUND ON DRAWING CD01.

Forms

Monthly Site Inspection Form
Discharge Log
Annual Review Form

Stormwater Inspection Report Form

General Information			
Site Name	Suttle Road Recovery Facility – 4044 N. Suttle Road,, Portland, Oregon, 97217		
NPDES Permit Number	1200-COLS	**DEQ File Number**	120986
Date of Inspection		**Start/End Time**	
Inspector's Name			
Inspector's Title			
Type of Inspection: ❑ Regular (Monthly) ❑ Pre-storm event ❑ During storm event ❑ Post-storm event			
Weather Information			
Weather at time of this inspection? ❑ Clear ❑Cloudy ❑ Rain ❑ Sleet ❑ Fog ❑ Snowing ❑ High Winds ❑ Other: Temperature:			
Have any discharges occurred since the last inspection? ❑Yes ❑No **If yes, describe:**			
Are there any discharges at the time of this inspection? ❑Yes ❑No **If yes, describe:**			

Site Inspection and BMP Evaluation

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
1	Have the paved areas been swept since the last inspection?	❑Yes ❑No	❑Yes ❑No	
2	Is trash/litter being collected and placed in proper containers?	❑Yes ❑No	❑Yes ❑No	
3	Are vehicle and equipment storage, cleaning, and maintenance areas free of spills or leaks and in good condition?	❑Yes ❑No	❑Yes ❑No	

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
4	Are materials that are potential stormwater contaminants stored inside or under cover, and properly labeled?	❑Yes ❑No	❑Yes ❑No	
5	Is the organics bay well maintained?	❑Yes ❑No	❑Yes ❑No	
6	Is all rinse water being diverted to the leachate collection system (drains and tank)?	❑Yes ❑No	❑Yes ❑No	
7	Is the general housekeeping at the facility satisfactory?	❑Yes ❑No	❑Yes ❑No	
8	Have there been any spills onsite since the last inspection?	❑Yes ❑No	❑Yes ❑No	
9	Was there any equipment maintenance (welding, grinding, etc.) taking place during this inspection? If yes, was it conducted in designated areas?	❑Yes ❑No	❑Yes ❑No	
10	Inspect SR1 (outfall): Was any discharge noted? (Attached any photographs taken to this report)	❑Yes ❑No	❑Yes ❑No	
11	If discharge was noted, were samples collected?	❑Yes ❑No	❑Yes ❑No	
12	Are the swales clean and functioning properly?	❑Yes ❑No	❑Yes ❑No	
13	Are there insects or vectors noted within the swales? (If yes, record any control activities taking place)	❑Yes ❑No	❑Yes ❑No	
14	Are there any safety hazards in relation to the swales?	❑Yes ❑No	❑Yes ❑No	

	BMP/activity	Implemented?	Maintenance Required?	Corrective Action Needed and Notes
15	Was there standing water in the swales at the time of this inspection? If yes, note observations (such as smell, turbidity, etc.)	❑Yes ❑No	❑Yes ❑No	
16	Is sediment accumulating within the swales? (If so, document sediment removal).	❑Yes ❑No	❑Yes ❑No	
17	Is the vegetation in good condition? (Note any invasive species present, replacement plants, etc.)	❑Yes ❑No	❑Yes ❑No	
18	Are the inlets, outlets, piping, etc. of the swales in good condition? (Note any damaged items and replacement activities)	❑Yes ❑No	❑Yes ❑No	
19	Are catch basins clean and functioning properly?	❑Yes ❑No	❑Yes ❑No	
Note any additional details regarding the inspection here:				

Signature:_____

Date:_____

Recology Portland, Inc.
Suttle Road Recovery Facility
Stormwater Discharge Log

Date	Discharge Noted at Outfall? (Y/N)	Did it rain in the last 24 hrs? (Y/N)	Is it raining at time of observation? (Y/N)	Photograph taken? (Y/N)	Observer (Initials)

ANNUAL REVIEW FORM

Date of Review: _____

Period Covered: _____

Reviewer(s): _____ _____

_____ _____

Check all that apply:

- ❑ SWPCP Plan Reviewed
- ❑ SWPCP Plan Updated
- ❑ Site Inspection
- ❑ Records Reviewed
- ❑ Reports Completed & Filed
- ❑ Employee Education Completed

SUMMARY OF CHANGES: _____

OPERATIONS PLAN

RECOLOGY PORTLAND, INC.
SUTTLE ROAD RECOVERY FACILITY

4044 N.SUTTLE ROAD
PORTLAND, OREGON 97217

REVISION DATE: FEBRUARY 24, 2015

ACRONYMS AND ABBREVIATIONS

ACM	Asbestos-Containing Material
ACWM	Asbestos Containing Waste Material
DEQ	Oregon Department of Environmental Quality
ft	Foot
H&S	Health and Safety
MRF	Material Recovery Facility
NPDES	National Pollutant Discharge Elimination System
O&M	Operation and Maintenance
OAR	Oregon Administrative Rule
PPE	Personal Protective Equipment
RPI	Recology Portland, Inc.
SWFOP	Solid Waste Facility Operations Plan

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1 Introduction

1.1 Purpose

This Solid Waste Disposal Facility Operations Plan ("Plan") was prepared in compliance with Oregon Administrative Rules (OAR) 340-096-0040(4). The Plan pertains to a Mixed Dry Solid Waste Material Recovery Facility (MRF) and Source Separated Food Waste Reload Facility operated by Recology Portland, Inc. (RPI) located at 4044 Suttle Road, Portland, Oregon, 97217. This plan contains procedures for handling, storing, and processing mixed dry solid waste and source separated organics (which consists of residential food scraps mixed with yard debris). Special waste procedures for asbestos-containing materials and mixed roofing wastes are also summarized in this operation plan.

The SWFOP is part of the supporting documentation required by the Oregon Department of Environmental Quality (DEQ) for Solid Waste Permit #501. The facility also operates in accordance with Metro License #L-102-11B.

1.2 Regulatory Requirements

Operations at the RPI MRF facility are in conformance with the requirements governing solid waste facilities as defined in OAR 340.093 through OAR 340.097.

Any time this operation plan is updated, RPI shall submit an updated plan to DEQ and Metro for approval, prior to implementing operational changes.

1.3 Overview of Operations

RPI operates a MRF building and an adjacent yard at this location. The total area of this site is approximately six acres, including the MRF building and the surrounding area. The MRF building is enclosed on three sides and consists of a 20,800 square foot (sf) concrete floor that includes an area for tipping and processing, and a mechanical sort line. Dry solid waste materials will be tipped onto the concrete floor. A spotter and or an equipment operator are present to witness the tipping of the load. Material is then manually sorted to extract recoverable materials primarily utilizing a 12 station BHS sort line. Manual floor sorting may also be conducted within the MRF building. Adjacent to the MRF building is a 6,300 square foot three sided building used for the acceptance of organics (residential food scraps mixed with yard debris). With the exception of wood and inert construction and demolition debris (such as cured concrete, brick and masonry, ceramic materials such as clay or porcelain, sod, etc.), all mixed dry solid waste

materials are managed within MRF building. All loads delivered to and exiting the facility are weighed on an inbound and outbound scale.

2 Facility Description

2.1 Site Location and Topography

The RPI Suttle Road Recovery Facility is located at 4044 N Suttle Rd., Portland, Oregon 97217. It encompasses tax lots R237942, R237943, Section 32, Township 2N, Range 1E, City of Portland, Multnomah County, and State of Oregon.

The site is approximately one mile west of I-5 and one-half mile south of the Columbia River (see the attached figure). The site is bordered to the north by Suttle Road, to the west and east by industrial properties, and to the south by wetlands. The site is primarily flat and consists of pervious and impervious surfaces.

2.2 Facility Layout – Site Access and Egress

Loads of mixed dry solid waste and loads of organics are hauled to the MRF by truck through the entry gate. Incoming organic loads are typically delivered in front or side load collection trucks. All trucks tipping material at the MRF are required to weigh in at the scales.

Loads containing construction and demolition debris (inerts), wood, and woody yard debris (which may be designated as hog fuel) are tipped near the appropriate outdoor storage area. Loads of mixed dry solid waste or source-separated recyclables (including loads of metal) are tipped inside the MRF building. Type 3 organics loads are tipped onto the concrete pad inside the organics receiving area adjacent to the MRF building. After unloading, trucks are required to weigh out at the scale before leaving the site.

At present, the access road leading to the scales is approximately 250 feet long and has sufficient space to accommodate six trucks in queue. Trucks going from the MRF building to weigh out at the scale can also queue along the access road on the south and west sides of the office building; the private access road is approximately 250 feet long and can accommodate an additional six trucks. Vehicles delivering waste to the facility will be instructed not to park or queue on public streets or roads, except under emergency conditions.

2.3 Stormwater Management

Mixed dry solid waste is tipped, sorted, and processed inside the MRF building and is not exposed to stormwater. Likewise, type 3 organic loads will be tipped and reloaded within the organics building, and not exposed to stormwater. Construction and demolition debris (inerts), wood, and woody yard debris (which may be designated as hog fuel) are stored in outside

stockpiles piles in designated areas. Metal and recoverable extracted from the mixed dry waste stream are stored in covered drop boxes outdoors.

The facility is covered under a NPDES 1200-COLS permit and operates under a DEQ approved Stormwater Pollution Control Plan (SWPCP). The SWPCP outlines industrial activities conducted onsite, as well as Best Management Practices (BMPs) that outline how stormwater will be protected and managed at the facility.

2.4 Leachate Management System

A leachate collection and management system has been engineered for the organics tipping and reload area. Incoming organics are tipped onto a concrete pad that allows for liquids to drain from the material and collect within a floor drain that runs the length of the building. A second leachate collection drain in the floor of the truck load out bay would collect any liquids produced by the process of loading organics into transfer trailers (including spillage of food waste during the loading process, etc.). This liquid is pumped into a storage tank and pumped by a licensed contractor, who hauls this wastewater offsite for disposal. Any rinsing activities conducted onsite would occur in these areas where the liquid could be collected within the leachate collection drains and storage tank, ensuring these liquids do not enter the stormwater system onsite.

The mixed dry solid waste accepted at the facility is not expected to produce leachate. If water accumulates on the floor of the MRF building (from misting of loads for dust suppression, etc.), it will be absorbed with wood chips, eco bags, booms, and/or absorbent materials. These materials will be collected with shovels or pushed with a loader into the residual waste pile or transfer truck, and loaded into a suitable container for disposal at an appropriate offsite disposal location.

2.5 Surface Water and Surface Drainage Control

Surface water drainage within the site can be classified into two distinct areas: the lower basin and the upper basin. The lower basin consists mainly of the northern and eastern portions of the site. All runoff from this portion of the facility flows into two stormwater catch basins (CB-1 and CB-2), which feed into a vegetated swale, adjacent to the office building. This unlined swale flows into a sedimentation vault, and then into a vault equipped with a Contech Stormwater Filtration Unit (consisting of 14 canisters filled with filtration media). From the Contech Stormwater Filtration Unit, water flows to a lined, vegetated retention swale along the western property line. Two above ground concrete treatment vaults are installed within the swale that contain filtration media. In this area, there is also a third catch basin (CB-3) that flows directly into the lined, vegetated swale along the western property line.

The upper basin portion of the facility consists of the areas that surround the material recovery building. Surface water flows either directly to the lined western retention swale by way of sheet

flow, into an unlined conveyance swale along the southern edge of the property that empties into the lined western retention swale, or to a single catch basin (CB-4) which flows directly into the lined western retention swale. Runoff from the areas to the south and east of the material recovery building flow to the unlined vegetated swale adjacent to the office building, then into a sedimentation vault, the Contech Stormwater Filtration Unit, and finally to the western retention swale. The western swale discharges via a gooseneck pipe in the center of the swale.

3 General Facility Operations

3.1 Hours of Operation

The RPI MRF facility operates Monday through Friday. Commercial and public vehicles are accepted at the facility between 6 a.m. and 4 p.m. on week days. Processing of waste material occurs Monday through Friday between 6 a.m. and 9:00 p.m. on week days. The facility is closed on Saturday and Sunday. Hours may be changed if necessary.

3.2 Access Control

Access to the site is controlled by two gates, both facing Suttle Road. The main entrance gate is located on the eastern side of the entrance from Suttle Road. A secondary gate is located on the western side of the entrance from Suttle Road, and is typically used only for transfer trailers entering the facility. Vehicular access is limited on all four sides by six foot fencing. During non-business hours, the fence gates are closed and locked to prevent unauthorized entry and dumping.

A sign posted at the front of the scale instructs vehicles to proceed onto the scale and await directions from an attendant. From the scales, vehicles are directed by site employees to the appropriate area to unload. After unloading, the vehicles weigh out at the scales to complete their transaction and then exit the site.

3.3 Reporting Requirements

The facility maintains records to document when and how much material enters and leaves the facility. Truck logs and scale tickets document the weight of dry waste loads entering the MRF facility and the quantity of recyclable and residual material exported off site.

RPI's management maintains all records for facility management purposes, Metro and DEQ reporting, and inspections. An annual report summarizing the weight of material is submitted to DEQ on a DEQ-approved form. Material weights are also reported to Metro monthly.

For incoming loads of mixed roofing waste, RPI keeps records of the source of the waste, load weights, and the date and time each load is received. Records for outgoing loads track the weight, date, and time of each load. These load records are submitted to DEQ by the fifth of each month.

3.4 Opportunity to Recycle

All materials deemed recyclable are recycled. This may include, but is not limited to: wood, yard debris, metal, cardboard, certain plastics, and polystyrene foam separated from the mixed dry waste loads during sorting. As markets for other recyclables are developed, RPI continually seeks to maximize diversion from landfilling.

3.5 Litter Prevention

In accordance with Section 6.7 of the facility's Metro License, operations personnel will keep all areas within the site and all vehicle access roads within ¼ mile of the site free of litter and debris generated as a result of the facility's operation. Regular litter patrols will be conducted for this purpose.

3.6 Vector Prevention and Control

Vectors, such as flies, rodents, and birds, will be minimized by implementing good housekeeping procedures, and expediting the reloading and shipment offsite of incoming organics materials. RPI does not anticipate incoming organic materials remaining onsite for any period longer than 48 hours. A contract will be maintained with a pest control company. All measures will be taken to control conditions which might attract and encourage vectors.

RPI does not consider wildlife (in particular, coyotes) from adjacent natural areas as vectors. The RPI facility is completely fenced to attempt to deter wildlife from entering the facility. The organics bay roll up door will be closed during non-business hours to reduce the attraction of wildlife. If evidence is found that suggests coyotes or other wildlife have been onsite (tracks, feces, evidence of fence damage, etc.), or if employees visually site coyotes or other wildlife, RPI will report this occurrence to Metro within 24 hours of such a discovery. RPI and Metro's Naturalist staff will then discuss the implementation of additional management practices that will prevent the facility from attracting coyotes and other wildlife.

3.7 Dust, Odor, and Noise Control

Numerous BMPs for nuisance control will be implemented at the MRF facility in order to minimize potential nuisance conditions.

The MRF facility is located in a predominantly industrial area. Noises generated by operations at the facility are consistent with normal industrial noise levels at the various operating facilities in the complex. All equipment has appropriate mufflers and other noise reducing mechanisms.

Odors are mitigated by the implementation of good housekeeping measures. The reloading and shipment offsite of incoming organics will be expedited to ensure that materials are not stored onsite longer than necessary. Equipment used to load, unload and push organic wastes will be rinsed at least once every seven days. Regular odor monitoring will be conducted by trained staff members at a minimum of once per month in an effort to evaluate the effectiveness of these

practices. The odor monitoring will consist of travelling to designated locations on and offsite to determine whether or not a food waste odor is detected, and recording this on a log. Staff conducting the odor monitoring will be instructed on how to record their findings in the log, and what types of odors to record (i.e., whether or not an odor was detected, and if an odor is detected, a descriptor of that odor).

Fugitive dust emissions will be controlled by using water to mist loads as necessary. If water does not sufficiently control dust, commercially available misting systems designed specifically for MRFs will be evaluated, purchased, and installed if necessary. .

3.8 Equipment Washing Facilities

Equipment and truck rinsing is either done within a containment system that collects wash water and prevents it from discharging to the stormwater system, or at an off-site location. For on-site washing, a steam cleaner, pressure washer or garden hose is used to remove dirt from equipment. Soap is not used in the washing process. To reduce odors, equipment used to load, unload, or push organics wastes will be washed at least once every seven days, and a log of these cleaning activities is kept onsite in the employee break room downstairs. All equipment rinsing will take place within the organics building, to allow any rinsing water to flow to the leachate collection system for disposal. Haulers that deliver residential organics to the facility will be given the opportunity to rinse out their trucks with a garden hose, for no more than 2 minutes. Operations staff reserves the right to revoke the ability to rinse out the trucks if the leachate collection tank is full, or if haulers take advantage of the 2 minute limit. No wash water is discharged to the storm system.

3.9 Facility Operation Equipment

Facility operation equipment used at the site includes the following:

- 1 large excavator
- 1 small excavator
- 3 front end loaders
- 1 grinder
- 2 yard tractors
- 1 propane forklift
- 1 sort line

Additional equipment from other Recology facilities would be available in the event that onsite equipment was to be taken out of commission for any reason or to handle increased inbound volumes.

3.9.1 Maintenance Records and Schedules

All equipment used in the onsite operations, as well as RPI owned and/or operated vehicles used to transfer or transport solid waste to and from the facility is maintained to prevent leaks and spills from occurring. Vehicle maintenance is performed on a regularly scheduled basis by a Recology mechanic. Maintenance records for all RPI operating equipment is maintained by the mechanic, and will be made available for inspection to Metro or DEQ upon request.

3.9.2 Onsite Maintenance

Whenever possible, any onsite equipment repair or maintenance will be performed within the 20 ft. x 35 ft. maintenance area, on the lower floor of the northern building onsite. This maintenance area is designed to provide a protected and contained area for onsite heavy equipment maintenance. Maintenance materials used on-site may include the following:

- standard hand tools
- air compressor
- welder

Limited amounts of motor oil, antifreeze and hydraulic oil may be stored within this area. Storage of any oils onsite, including used oils and spent antifreeze, will occur in 55-gallon barrels. The barrels will be stored in a manner that protects the environment (i.e., under cover, on spill pallets, with secured lids and proper labels). A spill kit will be kept within the maintenance area.

3.9.3 Complaint Response Procedures

A sign is posted on the front of the scale office stating how customers can file a complaint. Complaints are able to be received by phone, vial email, or in person by scale house personnel. Each complaint is logged at the time it is received. The person filing the complaint is contacted if possible and informed how the complaint has been addressed. The complaint form contains the following:

- The nature of the complaint
- The date the complaint was received
- The name, address and telephone number of the person or persons making the complaint
- Actions taken by the operator in response to the complaint

Odor complaints will be investigated immediately by RPI staff to attempt to determine the source, and remedy the deficiency or address the cause as soon as practicable.

3.10 Closure Protocol

In accordance with Section 5.01.060 of the Metro Code, SRRF has submitted a Closure Plan and Financial Assurance to Metro, which outlines procedures that would take place in the event of the closure of the facility.

RPI does not anticipate any short term closure of the facility. Should any short term interruptions to the flow of the business occur, the site will be secured during the duration. Any residuals or prohibited materials would be shipped offsite, and storage of recyclables would be maintained in such a manner as to not cause nuisance conditions.

3.11 Community Outreach Plan

In accordance with Section 7.12 of the Metro License, SRRF has developed and implemented a community outreach plan with surrounding communities that may be impacted by the facility food waste operations. This community outreach plan is in the form of a Good Neighbor Agreement with the St. Johns Neighborhood Association. The Good Neighbor Agreement is kept onsite within the Compliance Binder in the upstairs office, and can be viewed by Metro or DEQ at their request.

4 Waste Handling Operations

4.1 Acceptable Wastes

Acceptable materials include select loads of "dry," non-putrescible wastes containing a high percentage of recyclable materials. Acceptable recyclable materials are corrugated, kraft, and mixed waste paper, metals, plastics, yard debris, wood, mixed roofing materials, dry asphalt, construction and demolition wastes (concrete, rock, brick), land clearing debris, gypsum wallboard (untreated & unpainted), plaster, electronic waste (E-waste), appliances (refrigerators, freezers, and air conditioners) and Styrofoam. Additionally, the facility may accept loads of source separated food wastes from residential collection efforts.

4.1.1 Prohibited and Unacceptable Wastes

The MRF is prohibited from receiving, processing, reloading or disposing of any solid waste not authorized in the Metro License or DEQ Solid Waste permit. The MRF will not knowingly accept or retain any material amounts of the following types of waste: built-up or flat roofing; special wastes (friable and non-friable asbestos containing materials, septage and sewage sludge); creosote-treated wood waste; lead acid batteries; liquid waste for disposal; vehicles; infectious, biological or pathological waste; radioactive waste; hazardous waste; and any waste prohibited by the DEQ, METRO Regional Government or the City of Portland permits, codes or regulations. In conformance with the Metro License, prohibited wastes must be removed from the facility within 90 days of receipt unless required to be removed sooner by DEQ or a local government.

4.1.2 Asbestos Containing Waste Materials

The RPI MRF at Suttle Road is neither designed nor permitted to accept regulated asbestos containing waste materials (ACWM). As a result, our procedures are intended to exclude these materials from being knowingly received. If asbestos containing material is received, the basic procedure is to isolate that portion of the tip floor by cordoning it off with safety cones and/or tape, and stop operations in that area until the ACWM is removed either by the generator or a licensed asbestos handling contractor. The material will be wetted down and double bagged for disposal. Sampling will only be performed by a trained and qualified individual. Laboratory analysis will be completed by a qualified independent laboratory.

Training: Prior to the RPI MRF receiving any dry waste material for sorting and recovery, RPI supervisory personnel are trained in the following:

- Recognition of common friable and non-friable asbestos-containing waste material (ACWM), such as (but not limited to) built-up roofing and flat roofing.
- Procedures for handling ACWM. Employees are directed to not handle or disturb suspected ACWM, but rather to notify their supervisor, and cordon off the area to limit access.
- Procedures for inspecting incoming loads of dry waste for the presence of ACWM (employees are trained to identify layered roofing materials, and follow waste screening procedures).
- Emergency Response Procedures for handling suspected friable ACWM. Employees are directed to not handle or disturb suspected ACWM, but rather to notify their supervisor, and cordon off the area to limit access.

The supervisory personnel who have been trained then train sorting personnel and scale operations workers on the Special Waste Management Plan for ACWM and the above listed procedures. If any ACWM is suspected by these workers they will notify one of the supervisors so that the appropriate plan details can be implemented immediately. Every attempt will be made to identify and contact the generator of the material, to determine if asbestos sampling and testing have occurred.

Disposal: Friable or regulated ACWM will be disposed offsite within 90 days of receipt as required by RPI's solid waste license.

4.1.3 Creosote-Treated Wood Waste

Creosote-treated wood waste will not be accepted by SRRF.

4.1.4 Mixed Roofing

The MRF is not permitted to accept built up roofing wastes. All incoming loads of waste material are received and inspected in accordance with Section 4.2 of this plan. Loads containing mixed roofing waste are typically unloaded and processed within the MRF building, and may be transferred into a 30-yard covered drop box. The procedure for accepting and processing mixed roofing is as follows:

- Loads are weighed in at the scale; personnel will query all incoming vehicles as to their origin and contents.
- Loads are directed to the MRF building to dump and unload.
- Once tailgates are opened, loads are visually inspected prior to dumping for the presence of prohibited materials, then once again after the mixed roofing has been unloaded.

- Empty trucks are re-weighed to calculate the tonnage of material dumped and for tonnage record keeping.

Mixed roofing will not be stockpiled onsite in large amounts at SRRF. Once the site has received enough mixed roofing to fill a 30-yard drop box, it will be shipped offsite.

4.2 Waste Receiving

Loads of incoming materials are visually inspected at the time they are tipped. All loads of mixed dry waste tipped within the MRF building are thoroughly inspected and sorted by personnel trained to identify prohibited waste. Any prohibited wastes (see Section 4.1.1 and 4.1.2) will be rejected and/or reloaded. If prohibited materials are discovered in a load that has been tipped on the MRF floor, the prohibited wastes will be separated and reloaded for proper disposal offsite either by the generator or by an appropriately licensed contractor. In order to discourage attempts to dispose of unauthorized material RPI may back charge all costs to the offending generator. If a pattern of recurring violation occurs, RPI reserves the right to suspend facility privileges and/or seek legal remedy against the generator and/or hauler involved depending on the nature and severity of the issue.

Prohibited wastes will be disposed of in a timely manner at an appropriate offsite disposal facility. In no case will prohibited waste remain on site for more than 90 days after receipt.

4.2.1 Incoming Waste

All loads will enter the facility through the main entry gate into the queuing area prior to the scale. All loads are weighed, and personnel will query each vehicle as to its contents and the presence of any prohibited wastes. Loads of already source separated materials are directed to the appropriate location for unloading without having to be sorted through the MRF portion of the facility.

Loads that originate from Recology-Foster Road Material Recovery Facility (FMRF) will arrive via a walking floor or similar style transfer trailer. The material will be unloaded within the MRF building. If during unloading material breaks the plane of the building, the trailer will stop unloading, material will be pushed inside the building and unloading will continue.

In situations where there is no space for loads from FMRF to be unloaded, the loaded trailer will be staged until space within the MRF is available. No mixed dry waste from FMRF will be tipped outside the MRF building.

4.2.2 Load Checking

Load checking activities begin at the scalehouse. Scale employees will query customers as to the origin and contents of the load, and are instructed to notify tip floor personnel if an incoming load has an obvious problem so that the tip floor personnel can screen this vehicle more closely.

Some materials (such as plasters) must be accompanied by analytical from a certified laboratory stating that the material does not contain asbestos. Scale house personnel are trained to request documentation from such loads prior to allowing the truck to proceed to the tip floor.

During the visual inspections at the tip floor, personnel are trained to identify any prohibited wastes, and attempt to stop the driver who delivered unacceptable materials before they leave the facility. Whenever possible, prohibited wastes will be reloaded onto the delivering vehicle.

4.2.3 Rejection Procedures

RPI reserves the right to reject all or part of any loads containing prohibited or unauthorized waste, at its discretion. A load rejection form is included within this plan to be completed by a trained employee whenever a load is rejected.

4.2.4 Storage and Processing

All dry mixed material loads are unloaded inside the MRF building as soon as practicable after the load has been accepted. Recyclable materials are removed during processing and sorting and placed in containers for preparation for sale to recycling markets. Other materials are loaded into containers for disposal.

Wood, and woody yard debris separated from loads of mixed dry solid waste sorted in the MRF is transported with front-end loaders to the outside stockpile.

Clean gypsum wallboard is stockpiled into covered drop boxes, and is transported offsite for recycling or beneficial use.

Electronic Waste (E-Waste) will be collected and stored under cover (just outside the MRF building). Units will be stored in boxes or on pallets to prevent accidental breakage. E-Waste will be sent offsite for recycling. RPI does not intend to dismantle, disassemble, grind, or shred E-Waste. If a CRT is broken, it will not be accepted (these would be returned to the hauler or generator). This refers to the CRT itself, and not to the cabinet or housing of the unit.

If a broken CRT is discovered or accidentally accepted, or if a CRT breaks during storage or movement onsite, the following procedures will be implemented:

1. Inform the supervisor or lead operator of the breakage discovery.
2. Put on proper Personal Protective Equipment (PPE) prior to managing the material (this includes gloves, dust mask and safety goggles).
3. Gently collect debris using designated small broom and dust pan, or if the breakage is small, using paper towels and water. Collect all broken glass and components and place into a plastic bag.

4. Lightly spray the area with water and wipe up with paper towels to ensure all small particulate matter is collected.

5. Place paper towels into the bag and seal or close the bag.

6. Place the bag into a second plastic bag, along with dust mask and gloves. Seal or close the secondary bag.

7. Label the bag as "universal waste", or place into a container labeled "universal waste."

Fluorescent light tubes that are recovered from incoming dry waste will be collected and stored in closed containers and under cover (just outside the MRF building). These containers will be properly labeled, and collected by a licensed contractor for recycling. If a fluorescent tube breaks during storage or movement onsite, the cleanup procedures described in the electronic waste section above will be followed.

Appliances, such as refrigerators, freezers, and air conditioners will be collected and stored indoors or under cover, in a controlled and orderly manner. RPI employees will be instructed to inspect these units carefully prior to receiving them, to ensure they are empty (no food wastes are remaining inside the units). Appliances will then be collected by a licensed contracted vendor who will perform recovery of any remaining refrigerants and recycling of the units.

In accordance with the facility's Oregon DEQ Solid Waste Permit, the facility is permitted to accept up to 100 whole waste tires for storage and removal. Additionally, the facility is permitted to accept up to 2,000 whole waste tires as long as a contract is maintained with a waste tire carrier to remove the tires from the site. Waste tires will be collected and stored inside a covered or closed storage container, and kept from coming into contact with stormwater runoff.

Incoming loads of organics (green waste mixed with food scraps from residential sources) will be directed to tip onto the concrete pad within the organics receiving area. A loader will be used to push the waste into a stockpile, where additional yard debris or other green wastes may be blended into the stockpile. Liquids from this waste stream will be collected from the concrete pad into a floor drain, and then pumped into a storage tank and hauled offsite for disposal. Throughout the day, trailers will arrive at the facility to transport these materials offsite to a permitted composting facility. The reloading of organic wastes will be expedited to ensure that materials are not stored onsite longer than necessary. Onsite storage of organic wastes is limited to no longer than 48 hours.

RPI does not process (shred, sort, etc.) the organics prior to reloading and shipping the material to a composting facility. However, if obvious contamination or prohibited materials are found within the incoming loads of organics, these materials may be removed by the spotter or equipment operator prior to reloading the organics for shipment. Staff will not specifically target small items for removal (such as soda bottles, non-compostable food wrappers, etc.), or sort

through loads specifically for the purpose of contamination removal. Staff will only remove large items that are visually obvious to be municipal solid waste or prohibited materials (such as bags obviously containing garbage, oil filters or oil containers, large residential yard items such as garden hoses, basketballs, etc.).

Incoming loads of organics containing more than a minor amount of contamination (plastics or non-compostables) may be rejected, or re-directed to the Metro Central Transfer Station for sorting or pre-processing before being shipped to a compost facility. If a hauler delivers a heavily contaminated organics load to the facility, Recology will:

- Use heavy equipment to segregate this load from other organics in the Bay, ensuring the material is clearly separated from acceptable organics or areas where incoming trucks may tip.
- Contact the hauler who delivered the load and inform them that this material is unacceptable at SRRF. The hauler will be asked to return to the facility, where their truck or drop box will be reloaded. Recology operators will use loaders or other equipment onsite to reload the material in question into the hauler's truck or container. If the hauler does not have a container that can be re-loaded, Recology will reload the rejected organics into a suitable container for transport to Metro Central Transfer Station and charge the customer for use of this container.
- The hauler will be directed to transport this material to Metro Central Transfer Station, where the contamination can be managed, or the load can be disposed of as wet waste.
- Recology reserves the right to charge a customer for any additional handling and or disposal costs associated with delivery of contaminated organics loads.

Incoming loads of organics that have reached a state of decomposition sufficient enough to generate significant odors may be rejected, or mixed into larger amounts of yard debris to minimize the odors.

RPI will minimize storage times to avoid unnecessary delays in processing the materials onsite.

4.2.5 Grinding Procedures

Wood waste and woody yard debris may be ground outside to produce biomass fuel (hog fuel) near the exterior stockpile location behind the MRF building. Alternatively, wood waste and woody yard debris may be stockpiled in this area and reloaded to be processed at another facility. Water may be used to mist material prior to and during grinding to reduce dust generation, if needed. Ground materials are loaded into trucks for transportation offsite to appropriate reuse

facilities. Wood chips or other residuals are used to absorb water generated from dust mitigation, if needed.

Should SRRF choose to segregate clean wood from painted and treated wood, signs will be posted to clearly designate the different locations for painted and treated wood from that of clean wood tipping and storage areas.

4.2.6 Sorting and Recovery

A small excavator and/or a small front end loader will feed incoming materials onto a sort line, where these materials will be sorted by employees for the purpose of removing recyclable materials. Recyclable materials are placed into appropriate containers and processed or transported to market (examples: paper, cardboard, plastics, metals, Styrofoam, etc.), or removed to outdoor stockpiles outside the building (examples: wood, woody yard debris, concrete, etc.).

Alternatively, floor sorting may also be conducted at SRRF. Floor sorting will consist of an excavator or loader spreading material out onto the MRF floor, and laborers physically extracting recoverable from the material.

Prior to performing any material recovery, the material loaded onto the sort line passes across a 1-inch screen to remove fines. These fines are captured within a drop box beneath a conveyor belt. The drop boxes are tarped and stored outdoors until enough fines have been generated to load an awaiting transfer trailer (approximately 1-2 days), where they are shipped to a landfill for use as alternative daily cover (ADC).

Residual materials not deemed recoverable are reloaded into transfer trailers and shipped offsite for disposal.

Typically, sorting of organic waste is not conducted at SRRF. Organics are loaded into transfer trailers and transported to licensed compost facilities. However, should operations staff discover prohibited or hazardous materials within a load of organics; they may remove this material for appropriate handling or storage.

4.2.7 Measuring

All incoming loads to be sorted at the MRF and all source separated materials received are weighed and the weights are recorded electronically. In addition, all outgoing recycled materials are weighed and recorded. Incoming and outgoing weight reports are generated for DEQ and Metro Regional Government and available for other government agencies if requested.

4.2.8 Stockpile Management

RPI management will monitor the volume of incoming and outgoing materials, and adjust the flow of shipments accordingly to ensure that the size of the outdoor stockpiles do not become excessive in size, and that materials at the facility remain manageable by onsite staff.

4.3 Waste Control

The MRF is contained in a covered building within a gated facility. Access by people and vehicles entering the facility are controlled by RPI personnel. All loads are inspected. Signs listing acceptable and prohibited materials are posted for the public to read. Prohibited wastes that can't be reloaded on the offender vehicle and rejected are isolated and stored prior to removal and disposal.

5 Inspection and Maintenance Schedule

All equipment is inspected daily, before use, for breakage, leaks, fluid levels, tire pressures, and wear and tear. The maintenance schedule is unique to each individual piece of equipment and maintained by an employee service technician. The cleaning/replacement of filters, oil and lubrication are done on a schedule or an as needed basis. The facility is maintained using good housekeeping practices. All facility problems are reported to the SRRF Supervisor.

6 Contingency Plan

6.1 Safety Program

Monthly safety committee meetings are held and recorded for the facility. Any training sessions or safety meetings held for facility employees are lead by qualified and informed personnel and are documented. Regular inspections are completed at the facility to ensure employees are wearing the proper personal protective equipment; fire extinguishers are in good working condition, etc. All safety concerns, problems and violations shall be reported immediately to the RPI Operations Manager.

In accordance with Section 11 of the facility's Solid Waste Permit, fires will be reported to DEQ within 24 hours of discovery.

6.2 Emergency Contacts

A detailed list of Emergency Contacts is included within the facility's Emergency Preparedness and Contingency Plan, which is kept onsite at the facility.

Fire / Medical Emergencies Dial:	911
METRO Solid Waste	503-234-3000
ODEQ	503-229-5263
Oregon Emergency Response Service (OERS)	800-452-0311
Spill Response-National Response Center	800-424-8802
RPI Environmental Manager	503-849-9114
RPI Safety Manager	971-300-7553

6.3 Emergency Access

Operations Supervisor Jason Scott –503-519-6901

Operations Manager: Greg Moore – 503-804-6867

General Manager: Carl Peters – 503-283-2015

6.4 Personal Protective Equipment

All persons working in the MRF Building doing sorting work will wear the following personal protective equipment (PPE): hard hat, safety glasses, gloves, reflective clothing (safety vests), safety shoes and hearing protection as appropriate.

6.5 Onsite Emergency Equipment

Fire extinguishers are mounted on the heavy equipment and at strategic locations in the MRF Building. Eyewash stations are located near the MRF Building for eye flushing if needed.

6.6 Spill Prevention and Response Procedures

Oil absorbent materials including pads and booms are stored near material storage areas, and spill kits are located at key areas of the facility. These materials will allow Recology employees to quickly contain accidental spills or leaks resulting from equipment failure. Additional spill response procedures are outlined within the Emergency Preparedness and Contingency Plan for the facility.

6.7 Disposal Procedures for Prohibited Waste

Any prohibited waste that is discovered in a load brought to the MRF is addressed on an individual basis. For example, ACWM will be disposed of according to the ACWM plan and tires and lead acid batteries will be properly collected, stored, and sent to an appropriate recycler. All prohibited items will be disposed of properly.

7 Job Description and Training

7.1 Description of Personnel Duties

MRF Building Supervisor/Lead Operator: Supervises unloading of incoming vehicles, sorting of all loads for recyclables, and the recovery and placing of all recyclables into the proper containers.

The supervisor will ensure that PPE is worn and safe practices are followed by all workers in the MRF building. The supervisor will monitor the safe operation of equipment and workers in close proximity to the equipment. The supervisor will ensure good housekeeping practices are maintained continually. The supervisor will coordinate with management to conduct regular meetings with the workers and MRF equipment operators to discuss safety and job tasks to be performed.

MRF Building Equipment Operators: Equipment operators will check their equipment for fuel levels, leaks, breaks, excessive wearing of parts, fluid levels, and cleanliness prior to the start of their shift. Equipment operators will be alert and watch for workers in close proximity to the operation of their equipment. Equipment operators will sort and load materials as directed by the MRF Supervisor.

MRF Building Workers (Includes Spotters): Workers will wear the proper PPE as directed by the MRF Supervisor while working in the MRF Facility. Workers will practice safe work habits at all times while on company property and in company vehicles. Workers will work at the direction of the MRF Building Supervisor and report any problems or questions to the supervisor. Spotters will visually inspect incoming loads as they are tipped. Sorters will physically sort these materials. Any time prohibited wastes are identified, sorters will immediately notify the MRF building supervisor as well as the driver delivering the material in question.

7.2 Personnel Training

All MRF facility personnel are trained on the following:

- Applicable operations equipment
- PPE to be worn and used properly.
- Emergency procedures including fire, medical, violence and accidents.

- Spill prevention and response.
- Firefighting equipment and procedures.
- Dust and nuisance prevention and control procedures.
- Monitoring of all incoming loads.

Figures

Figure 1 – Site Diagram

Figure 2 – General Location Map

Figure 1:

Site Diagram

Site Diagram for Recology's Material Recovery Facility
4044 N. Suttle Road
Portland, Oregon

NORTH

ORRCo

property line

joint bioswale

western swale

Recology outfall

ORRCo outfall

trailer staging & drop-box storage

drop-box storage

chain-link security fence

southern swale

ORRCo Wetlands

wood storage & processing

dry-waste receiving

in feed

fines storage

fines

sort line

HW/e-waste appliances

tire storage

leachate drain

organics bay

organics storage

load-out bay

leachate drain

leachate tank

storage

CB-4

CB-3

drop-box storage

inert C&D

water-quality structure

secondary entrance

compost bunker

styroform storage

CB-2

out-bound scale

drop-box storage

central swale with landscaping

parking

scale house

in-bound scale

N. Suttle Road

fire hydrant

office and break room

CB-1

landscaping

shop & maintenance

main entrance

Entry Signs (rates; accepted and prohibited waste lists)

Peninsula RR

= traffic flow

Note: Diagram based on topographic survey completed for Vista Consultants, LLC, dated 1/18/10.

0 30 60
Scale (feet)

Coles Environmental Consulting, Inc.
750 S. Rosemont Rd. West Linn, OR
(503) 636-3102, fax (503) 699-1980

Approx. Scale: 1" = 60'	Approved By	Date/Revision
		02/27/15
		Rev. 6

Figure 1. Site diagram of Recology's Materials Recovery Facility, 4044 N. Suttle Road, Portland, Oregon showing key site features.

Figure 2:

General Location Map

General Location Map – Figure 2
Recology - Suttle Road Recovery Facility
4044 North Suttle Road, Portland, Oregon - 97217

= Location of - Suttle Road Recovery Facility

Forms

Complaint Log

Load Rejection Form

Suttle Road Material Recovery Facility Complaint Log

Date	Nature of Complaint	Name/Address/Phone Number of Complaintant	Actions taken/Resolution
.			

Unacceptable Waste Form

✓ Use this form to report and track unacceptable waste delivered to the facility. Information to complete this form is collected by Recology staff. Fill out the form and forward to the Operations Manager, via email with attached pictures for review and further action.

RPI Facility Location: _____

Date of incident: _____ Outbound Scale Time: _____

Type of incident (check one): □ hospital □hazmat □ asbestos containing waste □other

If "other" is checked above, please specify: _____

Area: _____ Witness: _____

First Responder: _____ TIME: Start _____ End _____

Hauler info:

Company name: _____

Contact name: _____

Contact phone: _____

Trk. #: _____

Generator info:

Generator name: _____

Contact name: _____

Contact phone: _____

Address: _____

Initial Inventory of waste:

Hazard Description (containers, commercial appearance?) Est. amount (gal. / lbs.)

Corrosive		
Toxic		
Flammable		
Medical Waste		
Asbestos Containing Waste		
Other		

Photos taken? Y N

Recology staff notified: Who: _____ Date: _____ Time: _____

Who: _____ Date: _____ Time: _____

Comments:

_____

_____

_____

_____

_____

Form completed by: _____ Date: _____
(print name)

Was generator billed? _____ Yes _____ No

Expenses incurred (supplies, labor and disposal)

Contractor $_____ Internal $_____ Disposal $_____ Total $_____

Evidence of final disposition (Attach copy of correspondence, bill and additional supporting documentation):

_____ Removed by generator_____ signature Date:_____
By signing this statement, you are acknowledging that this material is unacceptable for disposal at this Recology Portland, Inc. Material Recovery Facility. It is your responsibility to find a legal disposal option for this material. DEQ will be notified that you have assumed responsibility for disposal of hazardous waste.

_____ Removed by hauler _____ signature Date:_____
By signing this statement, you are acknowledging that this material is unacceptable for disposal at this Recology Portland, Inc. Material Recovery Facility. It is your responsibility to find a legal disposal option for this material.

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY): 9/29/2014

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER
Beecher Carlson Insurance Services
21650 Oxnard Street, Suite 1600
Woodland Hills, CA 91367

www.beechercarlson.com

CONTACT NAME: Beecher Carlson Insurance Services
PHONE (A/C, No, Ext): 818-598-4200 FAX (A/C, No): 770-870-3043
E-MAIL ADDRESS:

INSURER(S) AFFORDING COVERAGE	NAIC #
INSURER A : ACE American Insurance Company	22667
INSURER B : Lexington Insurance Company	19437
INSURER C : XL Insurance America, Inc.	24554
INSURER D :	
INSURER E :	
INSURER F :	

INSURED
Recology Portland Inc.
9345 N. Harborgate Street
Portland OR 97203

COVERAGES **CERTIFICATE NUMBER:** 21795499 **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS		
A	✓ COMMERCIAL GENERAL LIABILITY ☐ CLAIMS-MADE ☑ OCCUR ✓ SIR: $500,000 GEN'L AGGREGATE LIMIT APPLIES PER: ✓ POLICY ☐ PRO-JECT ☐ LOC ☐ OTHER:	✓		XSL G27627249	10/1/2014	10/1/2015	EACH OCCURRENCE	$	1,500,000
							DAMAGE TO RENTED PREMISES (Ea occurrence)	$	1,500,000
							MED EXP (Any one person)	$	0
							PERSONAL & ADV INJURY	$	1,500,000
							GENERAL AGGREGATE	$	2,000,000
							PRODUCTS - COMP/OP AGG	$	2,000,000
								$	
A	AUTOMOBILE LIABILITY ✓ ANY AUTO ☐ ALL OWNED AUTOS ☐ SCHEDULED AUTOS ☐ HIRED AUTOS ☐ NON-OWNED AUTOS	✓		SCA H08868815	10/1/2014	10/1/2015	COMBINED SINGLE LIMIT (Ea accident)	$	2,000,000
							BODILY INJURY (Per person)	$	
							BODILY INJURY (Per accident)	$	
							PROPERTY DAMAGE (Per accident)	$	
							Auto Physical Damage	$	Self Insured
B	✓ UMBRELLA LIAB ✓ OCCUR ☐ EXCESS LIAB ☐ CLAIMS-MADE ☐ DED ☐ RETENTION $			065463216	10/1/2014	10/1/2015	EACH OCCURRENCE	$	5,000,000
							AGGREGATE	$	5,000,000
								$	
C	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? Y/N ☐ N/A (Mandatory in NH) If yes, describe under DESCRIPTION OF OPERATIONS below			RWD5000402-01	10/1/2014	10/1/2015	✓ PER STATUTE ☐ OTH-ER		
							E.L. EACH ACCIDENT	$	1,000,000
							E.L. DISEASE - EA EMPLOYEE	$	1,000,000
							E.L. DISEASE - POLICY LIMIT	$	1,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

If additional insured (ADDL INSR) and/or subrogation waived (SUBR WVD) boxes are checked, applicable blanket policy endorsements apply in favor of the DESIGNATED ENTITY where required by written contract, but only as respects liability arising out of work performed by or on behalf of the insured.
See ADDITIONAL REMARKS SCHEDULE for schedule of locations
NOTE: MCS90 is attached to the Auto policy.
DESIGNATED ENTITY: Metro, an Oregon Metropolitan Service District

CERTIFICATE HOLDER

Metro Solid Waste Operations
Parks and Environmental Services
600 NE Grand Avenue
Portland OR 97232-2736

CANCELLATION

SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.

AUTHORIZED REPRESENTATIVE
Pam Brooskin
(WDHLS) Pam Brooskin

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AGENCY CUSTOMER ID: _____

LOC #: _____

ADDITIONAL REMARKS SCHEDULE

Page ____ of ____

AGENCY	NAMED INSURED
Beecher Carlson Insurance Services	Recology Portland Inc. 9345 N. Harborgate Street Portland OR 97203
POLICY NUMBER	
CARRIER / NAIC CODE	EFFECTIVE DATE:

ADDITIONAL REMARKS

THIS ADDITIONAL REMARKS FORM IS A SCHEDULE TO ACORD FORM,

FORM NUMBER: 25 **FORM TITLE:** Certificate of Liability (01/14)

CERTIFICATE HOLDER: Metro Solid Waste Operations Parks and Environmental Services

ADDRESS: 600 NE Grand Avenue Portland OR 97232-2736

SCHEDULE OF LOCATIONS

Recology Portland Inc. - 4044 N Suttle Rd., Portland OR 97217
Dan Davis Recycling Yard - 4001 Willamette Fall Rd., West Linn, OR 97068
Recology Foster Road Recovery Facility - 6400 101st Ave., Portland, OR 97266.
Metro Central Transfer Station - 6161 NW 61st Ave., Portland, OR 97210

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ADDENDUM

ADDITIONAL INSURED - DESIGNATED PERSON OR ORGANIZATION

Named Insured			Endorsement Number
Recology Inc.			17
Policy Symbol	Policy Number	Policy Period	Effective Date of Endorsement
XSL	G27627249	10/01/2014 to 10/01/2015	
Issued By (Name of Insurance Company)			
ACE American Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the following:

EXCESS COMMERCIAL GENERAL LIABILITY POLICY

SCHEDULE

Name of Person or Organization: Metro, an Oregon Metropolitan Service District, its elected officials, departments, employees and agents.

A. **Section II – Who Is An Insured** is amended to include as an additional insured the person(s) or organization(s) shown in the Schedule, but only with respect to liability for "bodily injury", "property damage" or "personal and advertising injury" caused, in whole or in part, by your acts or omissions or the acts or omissions of those acting on your behalf:

1. In the performance of your ongoing operations; or

2. In connection with your premises owned by or rented to you.

However:

1. The insurance afforded to such additional insured only applies to the extent permitted by law; and

2. If coverage provided to the additional insured is required by a contract or agreement, the insurance afforded to such additional insured will not be broader than that which you are required by the contract or agreement to provide for such additional insured.

B. With respect to the insurance afforded to these additional insureds, the following is added to **Section III – Limits Of Insurance And Retained Limit:**

If coverage provided to the additional insured is required by a contract or agreement, the most we will pay on behalf of the additional insured is the amount of insurance:

1. Required by the contract or agreement; or
2. Available under the applicable Limits of Insurance shown in the Declarations;

whichever is less.

This endorsement shall not increase the applicable Limits of Insurance shown in the Declarations.

Authorized Representative

 Includes copyrighted material of Insurance Services Office, Inc., with its permission.

ADDITIONAL INSURED –
DESIGNATED PERSONS OR ORGANIZATIONS

Named Insured			Endorsement Number
Recology Inc.			7
Policy Symbol	Policy Number	Policy Period	Effective Date of Endorsement
SCA	H08868815	10/01/2014 to 10/01/2015	
Issued By (Name of Insurance Company)			
ACE American Insurance Company			

Insert the policy number. The remainder of the information is to be completed only when this endorsement is issued subsequent to the preparation of the policy.

THIS ENDORSEMENT CHANGES THE POLICY. PLEASE READ IT CAREFULLY.

This endorsement modifies insurance provided under the following:

BUSINESS AUTO COVERAGE FORM
AUTO DEALERS COVERAGE FORM
MOTOR CARRIER COVERAGE FORM
EXCESS BUSINESS AUTO COVERAGE FORM
EXCESS TRUCKERS COVERAGE FORM

Additional Insured(s):

Metro, an Oregon Metropolitan Service District, its elected officials, departments, employees and agents.

A. For a covered "auto," Who Is Insured is amended to include as an "insured," the persons or organizations named in this endorsement. However, these persons or organizations are an "insured" only for "bodily injury" or "property damage" resulting from acts or omissions of:

1. You.
2. Any of your "employees" or agents.
3. Any person operating a covered "auto" with permission from you, any of your "employees" or agents.

B. The persons or organizations named in this endorsement are not liable for payment of your premium.

Authorized Representative

FORM MCS-90 Revised 06/12/2014 **OMB No.: 2126-0008 Expiration: 06/30/2016**

A Federal Agency may not conduct or sponsor, and a person is not required to respond to, nor shall a person be subject to a penalty for failure to comply with a collection of information subject to the requirements of the Paperwork Reduction Act unless that collection of information displays a current valid OMB Control Number. The OMB Control Number for this information collection is 2126-0008. Public reporting for this collection of information is estimated to be approximately 2 minutes per response, including the time for reviewing instructions, gathering the data needed, and completing and reviewing the collection of information. All responses to this collection of information are mandatory. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden to: Information Collection Clearance Officer, Federal Motor Carrier Safety Administration, MC-RRA, Washington, D.C. 20590.

United States Department of Transportation
Federal Motor Carrier Safety Administration

Endorsement for Motor Carrier Policies of Insurance for Public Liability under Sections 29 and 30 of the Motor Carrier Act of 1980

FORM MCS-90

Issued to Recology Portland Inc. *(Motor Carrier name)* **of** Oregon *(Motor Carrier state)*

Dated at Wilmington, DE 19803 **on this** 8th **day of** October , 20 14

Amending Policy Number: SCA H08868815 **Effective Date:** 10/01/2014

Name of Insurance Company: ACE American Insurance Company

Countersigned by: _____
(authorized company representative)

The policy to which this endorsement is attached provides primary or excess insurance, as indicated for the limits shown *(check only one)*:

[X] *This insurance is primary and the company shall not be liable for amounts in excess of $* 500,000 *for each accident.*

[ ] *This insurance is excess and the company shall not be liable for amounts in excess of $* _____ *for each accident in excess of underlying limit of $* _____ *for each accident.*

Whenever required by the Federal Motor Carrier Safety Administration (FMCSA), the company agrees to furnish the FMCSA a duplicate of said policy and all its endorsements. The company also agrees, upon telephone request by an authorized representative of the FMCSA , to verify that the policy is in force as of a particular date. The telephone number to call is: 215 - 640 - 4555

Cancellation of this endorsement may be effected by the company of the insured by giving (1) thirty-five (35) days notice in writing to the other party (said 35 days notice to commence from the date the notice is mailed, proof of mailing shall be sufficient proof of notice), and (2) if the insured is subject to the FMCSA's registration requirements under 49 U.S.C. 13901, by providing thirty (30) days notice to the FMCSA (said 30 days notice to commence from the date the notice is received by the FMCSA at its office in Washington, DC).

DEFINITIONS AS USED IN THIS ENDORSEMENT

Accident includes continuous or repeated exposure to conditions which results in bodily injury, property damage, or environmental damage which the insured neither expected nor intended.

Motor Vehicle means a land vehicle, machine, truck, tractor, trailer, or semitrailer propelled or drawn by mechanical power and used on a highway for transporting property, or any combination thereof.

Bodily Injury means injury to the body, sickness, or disease to any person, including death resulting from any of these.

Property Damage means damage to or loss of use of tangible property.

Environmental Restoration means restitution for the loss, damage, or destruction of natural resources arising out of the accidental discharge, dispersal, release or escape into or upon the land, atmosphere, watercourse, or body of water, of any commodity transported by a motor carrier. This shall include the cost of removal and the cost of necessary measures taken to minimize or mitigate damage to human health, the natural environment, fish, shellfish, and wildlife.

Public Liability means liability for bodily injury, property damage, and environmental restoration.

(continued on next page)

MC1622r (06-14) Wolters Kluwer Financial Services | Uniform Forms™

The insurance policy to which this endorsement is attached provides automobile liability insurance and is amended to assure compliance by the insured, within the limits stated herein, as a motor carrier of property, with Sections 29 and 30 of the Motor Carrier Act of 1980 and the rules and regulations of the Federal Motor Carrier Safety Administration (FMCSA).

In consideration of the premium stated in the policy to which this endorsement is attached, the insurer (the company) agrees to pay, within the limits of liability described herein, any final judgment recovered against the insured for public liability resulting from negligence in the operation, maintenance or use of motor vehicles subject to the financial responsibility requirements of Sections 29 and 30 of the Motor Carrier Act of 1980 regardless of whether or not each motor vehicle is specifically described in the policy and whether or not such negligence occurs on any route or in any territory authorized to be served by the insured or elsewhere. Such insurance as is afforded, for public liability, does not apply to injury to or death of the insured's employees while engaged in the course of their employment, or property transported by the insured, designated as cargo. It is understood and agreed that no condition, provision, stipulation, or limitation contained in the policy, this endorsement, or any other endorsement thereon, or violation thereof, shall relieve the company from liability or from the payment of any final judgment, within the limits of liability herein described, irrespective of the financial condition, insolvency or bankruptcy of the insured. However, all terms, conditions, and limitations in the policy to which the endorsement is attached shall remain in full force and effect as binding between the insured and the company. The insured agrees to reimburse the company for any payment made by the company on account of any accident, claim, or suit involving a breach of the terms of the policy, and for any payment that the company would not have been obligated to make under the provisions of the policy except for the agreement contained in this endorsement.

It is further understood and agreed that, upon failure of the company to pay any final judgment recovered against the insured as provided herein, the judgment creditor may maintain an action in any court of competent jurisdiction against the company to compel such payment.

The limits of the company's liability for the amounts prescribed in this endorsement apply separately to each accident and any payment under the policy because of anyone accident shall not operate to reduce the liability of the company for the payment of final judgments resulting from any other accident.

SCHEDULE OF LIMITS — PUBLIC LIABILITY

Type of carriage	Commodity transported	January 1, 1985
(1) For-hire (in interstate or foreign commerce, with a gross vehicle weight rating of 10,000 or more pounds).	Property (nonhazardous)	$750,000
(2) For-hire and Private (in interstate, foreign, or intrastate commerce, with a gross vehicle weight rating of 10,000 or more pounds).	Hazardous substances, as defined in 49 CFR 171.8, transported in cargo tanks, portable tanks, or hopper-type vehicles with capacities in excess of 3,500 water gallons; or in bulk Division 1.1, 1.2, and 1.3 materials, Division 2.3, Hazard Zone A, or Division 6.1, Packing Group I, Hazard Zone A material; in bulk Division 2.1 or 2.2; or highway route controlled quantities of a Class 7 material, as defined in 49 CFR 173.403.	$5,000,000
(3) For-hire and Private (in interstate or foreign commerce, in any quantity; or in intrastate commerce, in bulk only; with a gross vehicle weight rating of 10,000 or more pounds).	Oil listed in 49 CFR 172.101; hazardous waste, hazardous materials, and hazardous substances defined in 49 CFR 171.8 and listed in 49 CFR 172.101, but not mentioned in (2) above or (4) below.	$1,000,000
(4) For-hire and Private (In interstate or foreign commerce, with a gross vehicle weight rating of less than 10,000 pounds).	Any quantity of Division 1.1, 1.2, or 1.3 material; any quantity of a Division 2.3, Hazard Zone A, or Division 6.1, Packing Group I, Hazard Zone A material; or highway route controlled quantities of a Class 7 material as defined in 49 CFR 173.403.	$5,000,000

*The schedule of limits shown does not provide coverage. The limits shown in the schedule are for information purposes only.

12-184033 PR

Oregon Department of Environmental Quality
LAND USE COMPATIBILITY STATEMENT (LUCS)

SECTION 1 - TO BE COMPLETED BY APPLICANT

A. Applicant Name: Recology Oregon Material Recovery	**B. Project Name:** Suttle Road Recovery Facility
Contact Name: Ame LeCocq	**Physical Address:** 4044 N. Suttle Road
Mailing Address: 4044 N. Suttle Road	**City, State, Zip:** Portland, Oregon - 97217
City, State, Zip: Portland, Oregon - 97217	**Tax Lot #:** R237942, R237943
Telephone: 503-849-9114	**Township:** 2N **Range:** 1E **Section:** 32
Tax Account #: 27-1051450	**Latitude:** 45 degrees 36' 50.867"
	Longitude: -122 degrees 42' 35.7825"

C. Describe the project, include the type of development, business, or facility and services or products provided (attach additional information if necessary):
Recology Oregon Material Recovery, Inc. operates a Material Recovery Facility (MRF) at 4044 North Suttle Road, Portland, Oregon, 97217.

A revision to the current 1200-C permit as well as an application for a new 1200-COLS permit will be submitted to Oregon Department of Environmental Quality for processing.

The 1200-COLS permit will allow the facility to discontinue the use of an Underground Injection Control (UIC) System and replace it with a retention swale and eventual off site discharge of stormwater runoff from the facility.

D. Check the type of DEQ permit(s) or approval(s) being applied for at this time.

- ☐ Air Quality Notice of Construction
- ☐ Air Contaminant Discharge Permit *(excludes portable facility permits)*
- ☐ Air Quality Title V Permit
- ☐ Air Quality Indirect Source Permit
- ☐ Parking/Traffic Circulation Plan
- ☐ Solid Waste Land Disposal Site Permit
- ☐ Solid Waste Treatment Facility Permit
- ☐ Solid Waste Compost Facility Registration or Permit
- ☐ Solid Waste Letter Authorization Permit
- ☐ Solid Waste Material Recovery Facility Permit
- ☐ Solid Waste Energy Recovery Facility Permit
- ☐ Solid Waste Transfer Station Permit
- ☐ Waste Tire Storage Site Permit
- ☐ Pollution Control Bond Request
- ☐ Hazardous Waste Treatment, Storage, or Disposal Permit
- ☐ Clean Water State Revolving Fund Loan Request
- ☐ Wastewater/Sewer Construction Plan/Specifications *(includes review of plan changes that require use of new land)*
- ☐ Water Quality NPDES Individual Permit
- ☐ Water Quality WPCF Individual Permit *(for onsite construction-installation permits use the DEQ Onsite LUCS form)*
- ☑ Water Quality NPDES Stormwater General Permit *(1200-A, 1200-C, 1200-CA, 1200-COLS, and 1200-Z)*
- ☐ Water Quality General Permit *(all general permits, except 600, 700-PM, 1700-A, and 1700-B when they are mobile.)*
- ☐ Water Quality 401 Certification for federal permit or license

E. This application is for: ☐ Permit Renewal ☑ New Permit ☑ Permit Modification ☐ Other:

SECTION 2 - TO BE COMPLETED BY CITY OR COUNTY PLANNING OFFICIAL

Instructions: Written findings of fact for all local decisions are required; written findings from previous actions are acceptable. For uses allowed outright by the acknowledged comprehensive plan, DEQ will accept written findings in the form of a reference to the specific plan policies, criteria, or standards that were relied upon in rendering the decision with an indication of why the decision is justified based on the plan policies, criteria, or standards.

A. The project proposal is located: ☑ Inside city limits ☐ Inside UGB ☐ Outside UGB

B. Name of the city or county that has land use jurisdiction *(the legal entity responsible for land use decisions for the subject property or land use)*:
City of Portland

Oregon Department of Environmental Quality
LAND USE COMPATIBILITY STATEMENT (LUCS)

SECTION 2 - TO BE COMPLETED BY CITY OR COUNTY PLANNING OFFICIAL

Applicant Name: Recology | **Project Name:** Settle Road Recovery Fcty

C. Is the activity or use allowed under Measure 49? ☒ No, Measure 49 is not applicable ☐ Yes; if yes, then check one:

- ☐ Express; approved by DLCD order #:
- ☐ Conditional; approved by DLCD order #:
- ☐ Vested; approved by local government decision or court judgment docket or order #:

D. Is the activity or use compatible with your acknowledged comprehensive plan as required by OAR 660-031?
Please complete this form to address the activity or use for which the applicant is seeking approval (see 1.C on the previous page). If the activity or use is to occur in multiple phases, please ensure that your approval addresses the phases described in 1.C. For example, if the applicant's project is described in 1.C as a subdivision and the LUCS indicates that only clearing and grading are allowed outright but does not indicate whether the subdivision is approved, DEQ will delay permit issuance until approval for the subdivision is obtained from the local planning official.

- ☐ The activity or use is not regulated by the acknowledged comprehensive plan; explain:
- ☐ **YES**, the activity or use is pre-existing nonconforming use allowed outright by *(provide reference for local ordinance)*:
- ☐ **YES**, the activity or use is allowed outright by *(provide reference for local ordinance)*:
- ☒ **YES**, the activity or use received preliminary approval that includes requirements to fully comply with local requirements; findings are attached.
- ☐ **YES**, the activity or use is allowed; findings are attached.
- ☐ **NO**, see 2.C above, activity or use allowed under Measure 49; findings are attached.
- ☐ **NO**, *(complete below or attach findings for noncompliance and identify requirements the applicant must comply with before compatibility can be determined)*:
  Relevant specific plan policies, criteria, or standards:

  Provide the reasons for the decision:

Additional comments (attach additional information as needed):

A retention swale and offsite discharge of stormwater was approved by the City of Portland in Land Use file number LU 12-100368 CU EN. The activity, if it is according to verbal descriptions and site plans in the Decision of the Hearings Officer for LU 12-100368 CU EN (see attached), has received preliminary City approval.

Planning Official Signature: Stacey M Castleberry **Title:** Senior City Planner

Print Name: Stacey M Castleberry **Telephone #:** 503-823-7986 **Date:** 9/24/12

If necessary, depending upon city/county agreement on jurisdiction outside city limits but within UGB:

Planning Official Signature: **Title:**

Print Name: **Telephone #:** **Date:**

OFFICE OF THE
CITY AUDITOR
ENSURING OPEN AND ACCOUNTABLE GOVERNMENT

CITY OF PORTLAND

Office of City Auditor LaVonne Griffin-Valade

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Portland, OR 97201
phone: (503) 823-7307 - fax: (503) 823-4347
web: www.portlandoregon.gov/auditor/hearings

DECISION OF THE HEARINGS OFFICER

I. GENERAL INFORMATION

File No.: LU 10-203967 CU AD (HO 4110005)

Applicant's Representatives: Michael Robinson, Attorney
Perkins Coie LLP
1120 NW Couch Street, 10th Floor
Portland, OR 97209-4128

Steve Gramm, Engineering Consultant
PBS Environmental
1310 Main Street
Vancouver, WA 98660

Applicant/Owner: Dave Dutra
Recology Oregon Material Recovery, Inc.
4044 N Suttle Road
Portland, OR 97217

Recology Oregon Material Recovery, Inc.
50 California Street, 24th Floor
San Francisco, CA 94111

Hearings Officer: Gregory J. Frank

Bureau of Development Services (BDS) Staff Representative: Sheila Frugoli

Site Address: 4044 N SUTTLE ROAD

Legal Description: LOT 1, PARTITION PLAT 1993-83; LOT 2, PARTITION PLAT 1993-83

Tax Account No.: R649733280, R649733290

State ID No.: 2N1E32D 01600, 2N1E32D 01500

Quarter Section: 1726

Neighborhood: St. Johns

Business District: Columbia Corridor Association

District Neighborhood Coalition: North Portland Neighborhood Services

Plan District: None

Zoning: IHch, Heavy Industrial zone with the Environmental Conservation and Aircraft Landing overlay zones.

Other Designation: The southern most portion of the site, designated with the Environmental Conservation overlay zone, is also within the Smith and Bybee Lakes Natural Resource Management Plan.

Land Use Review: Type III, CU AD, Conditional Use and Adjustment Review

BDS Staff Recommendation to Hearings Officer: Part approval with conditions, part denial (requested adjustment to PCC 33.254.040 B.)

Public Hearing: The hearing was opened at 1:30 p.m. on April 6, 2011, in the 3rd floor hearing room, 1900 SW 4th Avenue, Portland, Oregon, and was closed at 2:59 p.m. The record was held open until 4:30 pm on April 7, 2011 for new written evidence, and until 4:30 pm on April 14, 2011 for Applicant's final rebuttal. The Applicant requested that the record be closed effective April 11, 2011 (Exhibit H.19). The Hearings Officer closed the record on April 14, 2011.

Testified at the Hearing:
Sheila Frugoli, BDS Staff Representative
Michael Robinson, 1120 NW Couch Street, 10th floor, Portland, OR 97209
Dave Dutra, 6161 NW 61st Avenue, Portland, OR 97210
Clinton Doxsee, St. Johns Neighborhood Association, 8540 N Charleston Avenue, Portland, OR 97203

Proposal: Recology Oregon Material Recovery Inc. ("Applicant") proposes to begin accepting mixed yard debris/food waste at 4044 N Suttle Road (the "Site") for recycling. Currently landscape materials and wood debris, as well as building materials and other dry, non-perishable materials, are accepted at the Site for recycling. The mixed yard debris/food waste will be delivered to the Material Recovery Facility ("MRF") on the Site via garbage collection trucks; approximately 35 trucks per day. Mixed yard debris/food waste will also be accepted, at the MRF, from private self-haulers and the general public. The mixed yard debris/food waste will be unloaded in an area designated as "Yard Wastes/Organics Receiving Area." (See Exhibit H.4b.). The material will be

sorted and mixed with yard and other wood waste materials that are currently accepted at the Site. Compostable material will be loaded onto semi-trucks, approximately 10 per day, for shipment to an off-site composting facility. Organic materials (mixed yard debris/food waste) will be stored in the MRF for no more than a 48-hour period before it is hauled to another site. The Site will operate 6 a.m. to 6 p.m., Monday through Friday, and 7 a.m. to 5 p.m. on Saturday.

Applicant will sort the waste material in the MRF. The MRF will include a drain system to collect and contain liquids (leachate) from the food waste materials. The leachate will be transported off of the Site. Additionally, an existing 11,097 square foot pole building and small office structure will be removed and replaced with a new 2-story, 3,675 square foot building. The Site will be reconfigured and re-contoured to accommodate the new buildings, truck scales and new truck circulation system. New landscaping will be installed on the southern edge of the Site to satisfy the Smith and Bybee Lakes Natural Resource Management Plan's landscaping buffer requirement. Lastly, the Applicant intends to add an approximately 2,000 square foot exterior area for the retail sale of exterior landscape-type materials such as compost, soil, mulch and gravel.

The following Adjustments are also requested: (1) Waive the requirement that the Waste-Related activities occur entirely within an enclosed structure; (2) Reduce the required 100-foot setback to 30 feet for the Waste-Related use; (3) Waive the required L1 landscaping standard in the required setback area; (4) Allow the location of the required 6-foot fence to be located along the perimeter of the site rather than the interior side of the required setback area; (5) Waive the required perimeter parking lot landscaping; and (6) Waive the required interior parking lot landscaping.

Relevant Approval Criteria:
In order to be approved, this proposal must comply with the approval criteria of Title 33, Portland Zoning Code. The applicable approval criteria are:

- 33.815.220, A-I, Conditional Use Review for Waste-Related use
- 33.805.040.A-F, Adjustments

II. ANALYSIS

Site and Vicinity: This application deals with the Site (a 5.3-acre parcel) in the Rivergate Industrial area of the City of Portland and is presently used by Recology for building material recycling and processing of large amounts of wood debris and landscape materials for composting. A pre-fab office "trailer" is located near the front property line that faces N Suttle Road. The building provides space for the employees and monitoring of the truck weight scales. A small parking area serves the employees. A large covered open wood structure provides cover for additional drop-off and further back is a large metal structure with open sides. The building appears to be used for processing and storage of materials. Also, there are large mounds of landscape material, earth-moving heavy equipment and truck loading areas.

The Site is located in an area developed with heavy industrial uses. The area is commonly known as the Rivergate Industrial District. Immediately north, on the other side of N Suttle Road, is a warehouse and distribution facility for a major tire sales company. The eastern abutting lot is used

for semi-truck storage/distribution. An oil recycling business is located on the western abutting lot. The Site contains numerous large tank containers and large truck facilities. The property that is immediately south of the site is privately owned and vacant. A rail spur runs between N Suttle Road and the Site. Rail cars are stored/moved in this area. North Suttle Road is a narrow, unimproved roadway that terminates approximately 1,600 feet to the west of the Site. North Suttle Road links to N Marine Drive, a major east-west corridor via N Portland Road, a north-south corridor. East of N Portland Road is a rail line.

Zoning: The Site is zoned IH, Heavy Industrial with an "h," Aircraft Landing and "c" Environmental Conservation overlay zone. The portion of the Site within the c overlay is also within the Smith and Bybee Lakes Natural Resource Management Plan. The Heavy Industrial zone is one of three zones that implement the Industrial Sanctuary Comprehensive Plan Map designation. The zone provides areas where industrial uses may locate, including those uses that are not desirable in other zones due to their objectionable impacts or appearance. Waste-Related use facilities are permitted in the IH zone only through an approved Conditional Use review. The "h" overlay limits the height of structures and vegetation in order to provide safer operating conditions for aircraft in the vicinity of the Portland International Airport. The height limit of the overlay zone is, at its lowest point on the Site, approximately 650 feet. The southern-most edge of the Site is located within the "c" Environmental Conservation overlay zone and the Smith and Bybee Lakes Natural Resource Management Plan (NRMP) boundary. The "c" overlay conserves important environmental resources in areas where the resources can be protected while still allowing environmentally sensitive development. The Smith and Bybee Lakes NRMP provides an alternative to case-by-case Environmental reviews. The NRMP identifies specific improvements that must be made to the properties and determines the procedure and approval criteria for development that triggers an Environmental review.

Land Use History: City records indicate there are no prior land use reviews for this site.

Agency Review: A "Request for Response" was mailed February 7, 2011. The following bureaus have responded with no issues or concerns:

- Water Bureau (Exhibit E.3)
- Fire Bureau (Exhibit E.4)
- Life Safety Plan Review Section of BDS (Exhibit E.6)
- Bureau of Parks-Forestry Division (Exhibit E.7)

The **Bureau of Environmental Services (BES)** responded with no objection to the requested Conditional Use and Adjustment review. The proposed development will be subject to BES' standards and requirements during the permit review process. BES indicated that based on correspondence with staff from Oregon Department of Environmental Quality ("DEQ") Solid Waste and UIC Programs, the current UIC system is permitted by DEQ. At the time that the Applicant submits a request to modify the existing Stormwater Disposal Permit ("SWDP") to receive approval for the proposed new waste activities on the Site, DEQ will remove the UIC from the SWDP and

instead regulate it under the Water Quality UIC Program, which will require either authorization by rule or a Water Pollution Control Facility Permit (WPCF) to continue operating the UIC.

Per DEQ, the Applicant must submit a UIC WPCF permit application prior to issuance of an amended SWDP permit. Because DEQ will require that stormwater flowing into the UIC meets water quality standards either through rule authorization or a WPCF permit, and permit application will be a condition of SWD permit issuance, BES is satisfied that an option for disposing stormwater on this site is available. Other specific comments, as they relate to the approval criteria, are included in the findings below (Exhibit E.1).

The **Site Development Section of BDS** responded with the following comment:

> "Floodplain. The Site is within the 100-year floodplain. The 100-year floodplain boundary is shown on the proposed development plan along with estimated quantities for fill and excavation below the base flood elevation. It appears that this proposal can comply with requirements of Title 24.50 for floodplain development at the time of building permit review. No further information is required for purposes of this land use review.
>
> Erosion control. Erosion prevention and sediment control requirements found in Title 10 apply to both site preparation work and development. Full compliance with the erosion control requirements of Title 10, as well as maintenance of the erosion control elements, such as silt fences on private property, storm drain inlet protection and bio bags in the public right-of-way, is the responsibility of the property owner, the developer and the builders of structures on the site. Please refer to the City of Portland *Erosion and Sediment Control Manual* for additional information regarding erosion and sediment control requirements.
>
> Geotechnical. A geotechnical report specific to the final foundation design will be required at the time of building permit review, due to variable soil types previously placed on the site (Exhibit E.5)."

The **Portland Bureau of Transportation (PBOT)** submitted a written response stating they had no objection to approval of the application. The response states that PBOT reviewed the application for its potential impacts regarding the public right-of-way, traffic impacts and conformance with adopted policies, street designations, Title 33, Title 17, and for potential impacts upon transportation services. PBOT also stated:

> "The original transportation assessment did not explicitly account for a portion of the Site that will be used for a more focused sale of soil amendment (mulch and shredded bark) material to the general public (no more than 3,000 square feet). No retail sales are currently offered at the Site. Based on conversations with Applicant, it is anticipated that there could be up to ten transactions on a typical weekday associated with soil amendment sales. It is likely that some of these transactions will be made by customers dropping off recycling materials (thereby already accounted for in the original transportation assessment letter). Further, these transactions will most likely occur throughout a typical day. However, to be

conservative with the regional intersection operations, the Applicant's traffic engineer has assumed that approximately half of these transactions would occur during the weekday a.m. peak hour and the other half would occur during the weekday p.m. peak hour.

The existing uses at the site generate 300 daily trips, with 25 occurring in the a.m. peak hour, and 20 in the p.m. peak hour. With the expanded use including soil amendment sales, the total daily trips will be 410, with 60 in the a.m. peak hour, and 50 in the p.m. peak hour. This is a net increase of 110 daily trips, with 35 in the a.m. peak hour, and 30 in the p.m. peak hour.

Future Traffic Conditions
Based on the trip generation estimates and the distribution/assignment information presented in Figure 4, Figure 5 summarizes the level-of-service analysis for the study intersections and site-access driveway under future weekday a.m. and p.m. peak hour traffic conditions. As shown, all intersections are forecast to continue to operate acceptably. As with the existing conditions, the eastbound approach at the N Portland Road/N Suttle Road intersection is forecast to continue to operate at level of service "E" during the weekday p.m. peak hour. Although the intersection performance standards are being met, additional analysis was performed to determine if additional traffic control may be necessary to minimize delay for the approach. Based on the results of a preliminary signal warrant analysis, it was concluded that the intersection will not meet traffic signal warrants. Given these findings, and the fact that the eastbound approach is forecast to operate with sufficient capacity, no additional traffic control improvements are recommended.

Section 33.815.220.F
In accordance with the pre-application conference materials, Kittelson & Associates, Inc. has completed a review of Section 33.815.220.F (items 1 and 2) for Waste-Related Conditional Uses. Specifically, items 1 and 2 of the Public Services section are addressed below.

F. Public Services
1. N Suttle Road is currently designated as a Local Service Traffic Street and a Truck Access Street. As outlined in the transportation analysis, the proposed expanded use is not anticipated to have a significant trip generation impact or generate trip types that are inconsistent with these two applicable street designations.

2. As outlined in the transportation analysis prepared by Kittelson & Associates, the transportation system is capable of supporting the additional traffic estimated to be generated by the proposed expanded use in addition to the existing uses in the area. In summary, N Suttle Road, N Portland Road and N Marine Drive can support the MRF from a capacity, safety, and access standpoint.

Section 33.805.040.A
A review of Section 33.805.040.A has been prepared to address Adjustments to the existing Zoning code. Specifically, a review of the loading, driveway locations, parking access restricted street, and parking spaces has been prepared.

The proposed expanded use does not include any driveway modifications to N Suttle Road, does not modify access for trucks or passenger cars, or modify the orientation or amount of parking spaces. As such, there are no applicable transportation-related Adjustments to current Zoning code regulations." (Exhibit E.2).

Neighborhood Review: A Notice of Public Hearing was mailed on March 15, 2011. At of the completion of the Staff Report (Exhibit H.2), two written responses were received from interested persons, in response to the proposal.

1. A representative from Columbia Biogas submitted written comments. The letter expressed opposition to the application as submitted. Columbia Biogas objected primarily on the grounds that the application, as submitted, would result in negative impacts to nearby properties because of noxious odors and its attraction of rodents/vermin. The Hearings Officer addresses these concerns in the relevant approval criteria below.

2. The St. Johns Neighborhood Association ("SJNA") submitted the following comments: SJNA made contact with Applicant to learn more about proposed changes in waste-management operations and any impacts that might occur as a result. Board members of the SJNA toured the Site and discussed initial concerns over the proposal. SJNA held a land use specific general meeting where Applicant made a presentation of their proposal and answered questions from neighborhood residents.

In general, the SJNA supports creating additional recycling opportunities. Applicant's plan to add a mixed yard debris/food waste transfer station is a step in the right direction in creating a sustainable community. The concerns of the SJNA are over adverse impacts that may be a result of the proposed land use. SJNA submitted a proposed Good Neighbor Agreement (Exhibit H.12) into the record. The Hearings Officer will address impacts identified by SJNA in the relevant approval criteria below.

ZONING CODE APPROVAL CRITERIA

CONDITIONAL USES

33.815.220 Mining and Waste Related These approval criteria allow these uses in locations where their large size and potential nuisance and environmental impacts will not harm surrounding land uses. The approval criteria are as follows:

A. There are adequate nearby lands available for the development of more intense industrial uses;

Findings: The Site is located in an IH, Heavy Industrial zone, which allows a mix of uses with a strong industrial orientation. The North Portland Harbor, also known as the Rivergate area, is comprised of many very large industrial properties that are currently used and available for intense industrial use. According to a Portland Development Commission report, 2004 Industrial Districts Atlas, there are over 4,000 acres of industrial land in the Rivergate area.

Although the mixed yard debris/food waste processing and transfer functions are classified as Waste-Related uses, their presence will not result in permanent impacts to the Site or surrounding development. Unlike a Mining Use, Applicant's proposed business operations will take place on the land surface. When Applicant's operation is removed, the Site will be available for other industrial uses. Additionally, the deposit, sorting and reloading of the mixed yard debris/food waste will be confined to a structure located on a specific area of the Site. The remainder of the Site will continue to be used for recycling and landscape material processing; uses that are categorized as industrial activities and are in conformance with the base zone.

In both the short and long term, there are adequate nearby lands available for development of more intense industrial uses. The Hearings Officer finds this approval criterion is met.

B. The proposed use will not significantly alter the overall industrial character of the area, based on the existing proportion and type of industrial uses;

Findings: As noted above, there is a significant amount of industrial development in the immediate vicinity. The proposed Waste-Related use will be one of two facilities (Applicant is proposing a similar facility at SE 101st) that will be accepting mixed yard debris/food waste. Applicant proposes to accept mixed yard debris/food waste from local commercial garbage haulers who remove yard debris from residences in the Portland area. Applicant also proposes to accept mixed yard debris/food waste from private "self haulers" and the general public. The mixed yard debris/food waste materials will be off-loaded into a covered, partially enclosed structure.[1] Employees will then sort through the material for non-organic items. Once trash is removed, the material will be stored on the Site, within the building, for not more than a 48-hour period (Condition K). The material will then be hauled, via semi-trucks, to another location for composting.

The Site is located in a relatively isolated location. The self-haulers and general public who wish to utilize the Applicant's services may not be familiar with the industrial area. To minimize confusion and conflict with other truck and industrial traffic, BDS staff recommended a condition be imposed that requires the Applicant to provide clear directional maps in information made available to customers and commercial haulers. Also, BDS

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[1] Applicant proffered the argument that the structure where the mixed yard debris/food waste is off-loaded, sorted and re-loaded is a fully enclosed structure (Exhibits H.14 and H.19). For the purposes of this approval criterion and decision, the Hearings Officer considers the building "partially enclosed" and not "fully enclosed."

recommended a prominent sign be located at the Site's entrance gate. BDS stated that the sign should identify Applicant's facility and include contact information and a telephone number so that an Applicant's representative may be contacted at any time. The Hearings Officer finds these BDS suggestions to be reasonable and appropriate.

The building where the mixed yard debris/food waste will be off-loaded, sorted and re-loaded is approximately least 300 feet from the nearest public street. The mixed yard debris/food waste building is approximately 30 feet from the east property line. Applicant is requesting six Adjustments. The requested Adjustments are summarized below:

1. Waive the requirements that the Waste-Related use occur entirely within an enclosed structure.
2. Reduce the required 100-foot setback for Waste-Related uses along the east property line.
3. Waive the landscaping standard ("L1") within 100-foot setback area.
4. Waive the upgrade (nonconforming development) requirements for the parking lot on the Site.
5. Allow the location of the required 6-foot tall fence to be located along the perimeter of the Site.
6. Waive the requirement that the Waste-Related processing activities must be confined within an entirely enclosed structure.

The Adjustment requests and their individual and cumulative impacts will be analyzed later in this decision.

The new building will have complete, solid walls along its east and south sides. The neighboring property, to the east of the Site, contains numerous semi-trucks and cargo containers. At different locations, near the outer edge of the Site, segments of retaining wall that vary in height from 2.5 feet to 8 feet will be constructed to contain exterior activities on the Site. At certain locations the retaining wall could serve as a visual screen. Applicant is proposing the installation of a landscape buffer along the southern edge of the Site, to fulfill requirements of the Smith and Bybee Lakes NRMP. BDS staff recommended conditions related to plant selection, spacing and maintenance (see the findings under criterion D).

In order to maintain physical separation and protect the facility from trespass and unauthorized dumping, as well as to meet development standard 33.254.080.B, a fence, at least 6 feet tall, must be installed along the entire length of the Site. BDS staff, however, recommended a condition that requires the fence to be located on the interior side of the Environmental Conservation overlay zone and proposed landscape buffer. A locked gate, to access the planting area for maintenance and other purposes, is allowed.

Applicant's traffic consultant submitted a traffic analysis (Exhibits A.2 and A.6), noting that the existing uses at the Site generate 300 daily trips, with 25 occurring in the a.m. peak hour, and 20 in the p.m. peak hour. With the expanded use including soil amendment sales, Applicant's traffic consultant estimated 410 total daily trips; 60 in the a.m. peak hour, and 50

in the p.m. peak hour. This is a net increase of 110 daily trips, with 35 in the a.m. peak hour, and 30 in the p.m. peak hour. Based on the trip generation estimates and the distribution/assignment information, Applicant's traffic consultant projected all relevant intersections will continue to operate acceptably. As with the existing conditions, the eastbound approach at the N Portland Road/N Suttle Road intersection is forecast to continue to operate at Level of Service "E" during the weekday p.m. peak hour. Although the intersection performance standards are being met, additional analysis was performed to determine if additional traffic control may be necessary to minimize delay for the approach. Based on the results of a preliminary signal warrant analysis, Applicant's traffic consultant concluded that the intersection would not meet traffic signal warrants. PBOT reviewed Applicant's traffic analysis and found that no additional traffic control improvements are recommended at the N Portland Road/N Suttle Road intersection.

The Hearings Officer finds that this proposal will not alter the overall industrial character of the area or change the current level of service at the nearby intersections. As stated above, most of the Site will continue to be available for industrial uses. BDS staff recommended conditions that require the Applicant to offer driving directions for customers; the sign posted at the Site with contact information. Moreover, BDS recommended a six-foot tall chain-link fence is required along the entire boundary of the Site. The Hearings Officer concurs with these BDS staff recommendations. The Hearings Officer finds that the BDS staff recommended fence will provide separation of the Waste-Related use and the other industrial activities on the Site. The Hearings Officer finds that the Waste-Related and landscape recycling operation will not alter the industrial character of the area.

C. There will be no significant health or safety risk to nearby uses;

Findings: Generally, Waste-Related uses have operational and physical features that could create potential health or safety risks to nearby uses, such as noxious odors, excessive noise, the attraction of disease-carrying organisms, air and water pollution and traffic issues. A response to the possible impacts is provided below.

Odor: The mixed yard debris/food waste will be off-loaded from trucks in a partially enclosed structure. The organic material will be stored in the building for no more than a 48-hour period before getting transported offsite. (See Condition K.) Applicant is requesting an Adjustment to Section 33.254.040.B, which requires the processing occur within a fully enclosed structure.

One opponent who submitted a written statement (Exhibit F.1) indicated that approval of this application, as presented by Applicant, would create "odor problems in the community." This opponent indicated that to adequately address odor issues the Applicant would need to "conduct all waste handling processes within a fully enclosed building with state of the art biofilters to control odors." (Exhibit F.1). This opponent stated that "even the unloading of trucks" would need to be done within a closed building and with odor controls. This opponent objected to the granting of an Adjustment to the enclosed structure requirement. Another

opponent submitted a written statement (Exhibit H.8) voicing concerns about the creation of odors by the operation of Applicant's yard debris/food waste transfer activities.

Applicant responded to the concerns expressed in Exhibit F.1 (Exhibit H.5). Applicant stated the following:

"As an initial matter, Biogas does not understand this application. For example, Biogas states in the thirds paragraph on the first page of its letter that Recology proposes to 'store' food waste. This is not the case. Recology's plan is to receive food waste mixed with green (yard) waste and transport it to an off-site composting site the same day that it is received, or, at most, leave it on site for no more than 48 hours. As explained below, in the event some residual amount of food waste is on site at the end of daily operations, Recology will place a biofilter (such as wood chips or green (yard) waste) over the food waste to control odor.

Second, Biogas incorrectly believes that Recology is proposing to compost food waste at this site. Recology has stated in its application that the Suttle Road facility is a transfer facility and not a composting facility. Food waste (which will constitute less than 5% of incoming mixed green/food waste material received at the facility) will be transported to off-site composting facilities.

Third, Recology proposes to modify the building elevation (Exhibit 1) so that only one set of truck doors to the Material Recovery Facility ('MRF') building on the north wall will be unenclosed and open on a daily basis. The entrance on the west wall will be open only during operations and will be closed during other times. In order to understand why the adjustment to the 'fully enclosed' building is needed, it is necessary to understand how the facility will operate.

The MRF building will be open during business hours (between 7 am and 5 pm weekdays and 7 am and noon on Saturday) and will allow receipt of waste materials and transport operations to occur. The MRF building design allows two sets of three (3) trucks to simultaneously deliver waste materials to the MRF building. The need for two sets of three (3) trucks to simultaneously to deliver product to both doors is based on through-put capacities for the facility. The facility is essentially a transfer building where small loads of mixed green/food waste are consolidated into larger truck loads for transport to off-site composting facilities.

The existing MRF structure will be expanded by adding another area to it so that it resembles an 'L'. The north part of the building (the foot of the 'L') will have a truck door with three (3) truck bays where mixed green/food waste will be received. This area will be approximately 60 feet wide (based on columns centered at 20 feet). During the day, when daily operations are occurring, a roll-up door will be open. However, when operations are concluded, the door will be lowered and sealed during non-operation hours.

> The second truck door which will be open are three (3) truck bays for trucks that will receive dry waste and construction and demolition materials. This is a 75 foot wide opening with three 20 foot wide truck bays (based on column spacing, as noted above).
>
> Based on Recology's extensive experience (both at Metro Central in Portland and elsewhere) with transferring mixed green/food waste, there will be no odor from the three (3) truck bays for the deliver of mixed green/food waste. Recology expects all of this waste to be removed by the end of operations on a daily basis. In the event that has not occurred, Recology will use hogged fuel (such as wood chips) or clean, green waste at the site as a biofilter by spreading it over the remaining food waste. This will effectively prohibit odor creation and vector problems. This is a simple, proven and cost-effective method to control odor."

The Hearings Officer finds that Applicant's statements are credible. The Hearings Officer finds that if Applicant adheres to its proposed operational plan, and by imposing appropriate conditions of approval (i.e. condition restricting mixed yard debris/food waste to 48 hours at Applicant's facility – Condition K), odors emanating from the Site will not present significant health or safety risks to nearby uses.

The Hearings Officer also notes that the liquid by-product from the waste material, aka leachate, will be collected and piped into a tank. The Applicant intends to spray the leachate onto landscape materials or dispose of the liquid off of the Site. BDS staff recommended, in a condition, requiring Applicant to dispose of the liquid by-product (leachate) into the sanitary sewer system or transport it to another properly permitted site.

Disease Transmission (Vector Control): It is possible that exposed mixed yard debris/food waste will attract insects such as flies, rodents such as rats, and possibly other wildlife such as raccoons and birds. This possibility is a concern for nearby properties, including the neighboring Smith and Bybee Lakes recreational area.

Applicant commented (Exhibits H.4, H.5 and H.19) that the design and operation of the building on the Site will minimize disease transmission (vector control) issues. Applicant, as discussed in the quoted section above about odors, notes that the location of the area where mixed yard debris/food waste are dumped, sorted and re-loaded is an enclosed area; bay doors to be open only during operating hours. Applicant stated that 95% of the mixed yard debris/food waste will be yard debris and approximately 5% will be food waste. Applicant stated that the dry waste open doors are a sufficient distance from the location of the mixed yard debris/food waste to minimize any attractiveness to insects, rodents, and birds. Applicant stated that typically mixed yard debris/food waste deposited at the Site would be removed the same day and if not, the material would not stay on the Site for more than 48 hours. Applicant represented that it would "employ on a full-time basis a pest control service." (Exhibit H.5).

The Hearings Officer finds that with the imposition of conditions of approval and the adherence of Applicant to its operation plan, that disease transmission (vector control) will not present a significant health or safety risk to nearby uses.

Stormwater/Water Pollution: BES reviewed the application and determined that the proposed improvements have been designed to meet Stormwater Management Manual ("SWMM") requirements. Stormwater from impervious surface will flow to collection swales/ditches located along the southern edge of the paving and then flow to a detention pond with a waterproof liner.

BES notes the Applicant's project narrative (page 5) indicates that leachate collected within the material recovery building (where the mixed yard debris/food waste will be off-loaded, sorted and re-loaded – hereafter the "MRF") will be collected and "either disposed of off-site or *sprayed on organic waste*, if the liquid will not create offensive odors" (emphasis added). It is not clear from this narrative whether it is intended that the leachate would be sprayed on the food waste within the covered MRF, or on yard or other organic waste located outside the building. If the latter, BES cautioned the Applicant because any overspray or runoff from outdoor storage piles would need to be collected and discharged to the sanitary only sewer. Discharging this type of waste to a storm system is prohibited per State and Local laws. When discharging leachate and process water to the sanitary sewer system, additional charges apply. Additionally, this type of wastewater can be odiferous, and could generate odors that are not desirable to the community. After treatment, stormwater runoff will be directed to an existing underground infiltration facility that has permit approval from the Oregon DEQ. See additional findings under criterion 33.815.220.F.3. In order to combat odor problems as well as address stormwater management requirements, BDS staff recommended a condition that requires the collected leachate to be taken off of the Site for disposal. The Hearings Officer concurs with the BDS staff recommendation.

Noise: The sound of garbage truck off-loading and other distribution activities will be minimal, given that the facility will operate only during daytime hours, 6 a.m. to 6 p.m., Monday through Friday and Saturdays 7 a.m. to 5 p.m. Because the mixed yard debris/food waste off-loading, sorting and re-loading will occur in the MRF, discernible noise outside the MRF will be minimized. The Hearings Officer finds that the noise from this facility will not differ or exceed the noise generated by other truck and material loading activities located in the Rivergate industrial area.

Dust/Air Pollution: The Site currently accepts a large amount of debris, 250 to 400 tons per day. The transfer of mixed yard debris/food waste within the MRF will not generate additional dust.

Traffic Impacts and Safety: The application addressed possible traffic capacity and safety issues. Applicant's traffic consultant reports that N Suttle Road, N Marine Drive and N Portland Avenue can support the additional traffic generated from a capacity, safety and access standpoint. See findings under criterion 33.815.220.F.

In summary, the Hearings Officer finds that impacts from the activities proposed in this application, with conditions of approval, are expected to be minimal. With conditions, this approval criterion is met.

D. There will not be significant detrimental environmental impacts to any nearby environmentally sensitive areas;

Findings: The Site abuts the Smith and Bybee Lakes area, an environmentally-sensitive resource that encompasses approximately 1,870 acres. A small portion of the Site is designated with the Environmental Conservation overlay zone and is within the Smith and Bybee Lakes NRMP. The City's environmental assessment report--Wildlife Habitat Areas for the Columbia Corridor, adopted April 1989, states:

> Smith and Bybee Lakes is the most complex and unique natural area within Portland's Urban Growth Boundary...Extensive amounts of adage habitat (ecotone) is found at the wetland and is one of the sites most significant and basic natural resources for wildlife (page 107).

BDS staff, in the Staff Report (Exhibit H.2), expressed concern that odors emanating from the MRF doors/bays (cardboard and dry waste off-loading area) would create a risk of odors escaping and attracting insects and scavengers (such as rodents, raccoons, and birds). The Hearings Officer finds that so long as Applicant adheres to its proposed operational plan, and with the imposition of conditions of approval, odors that could attract insects and scavengers will be minimal.

To address a requirement of the Smith and Bybee Lakes NRMP (Policy 22B), the Applicant is proposing to plant a large number of trees and shrubs along the southern property line of the Site. The native plants will help re-establish the riparian fringe and act as a visual screen between industrial operations and the large water body.

The BES written response states that to best protect the resource and lessen the impact of the industrial site on the wetland, the buffer should be composed of native trees and shrubs appropriate to the Lower Columbia River ecosystem and specifically the Smith and Bybee Natural Area (e.g. cottonwood, Red-Osier dogwood, spiraea, etc.). BES also supports a requirement that the Applicant be responsible to monitor and maintain the vegetated area for a defined period of time in order to ensure establishment of the plantings. To fully comply with the requirements of the NRMP, BDS staff recommended condition G; specification of a minimum number of trees, shrubs and amount of ground cover and identifies acceptable species and spacing requirements. BDS staff also recommended condition H to ensure the landscape buffer will be monitored and maintained. Because fences are not allowed within designated environmental resource areas, the required fence must be located on the interior side of the Environmental Conservation overlay zone and proposed landscape buffer. A locked gate, to access the planting area for maintenance and other purposes, is allowed. The Hearings Officer

concurred with the above-stated BDS staff recommendations; including conditions G and H and locating the fence on the interior side of the Environmental Conservation overlay zone line.

The Hearings Officer finds, if Applicant adheres to its operational plan and conditions of approval are imposed, this approval criterion is met.

E. The proposed use adequately addresses potential nuisance-related impacts such as litter;

Findings: Potential nuisance-related impacts, such as odor, noise, disease transmission (vector control), are discussed above in the findings for PCC 33.815.220 C and D and those findings are incorporated herein. Litter, a potential nuisance-related impact, is not expected to be an issue. The off-loading, sorting, and re-loading of yard debris/food waste will occur in the MRF. Litter issues will be dealt with inside the MRF.

In order to maintain physical separation, as well as to meet development standard 33.254.080.B, a fence, at least 6 feet tall, must be installed along all sides of the Site. The required fence will serve to protect the facility from trespass and unauthorized dumping and to contain litter from leaving the Site.

The Hearings Officer finds that all potential nuisance-related impacts have been addressed satisfactorily so long as Applicant adheres to its proposed operation plan and conditions of approval are imposed. The Hearings Officer finds, with the imposition of conditions of approval, that this approval criterion is met.

F. Public services.

1. The proposed use is in conformance with either the street designations shown in the Transportation Element of the Comprehensive Plan;

2. The transportation system is capable of supporting the proposed use in addition to the existing uses in the area. Evaluation factors include street capacity, level of service or other performance measures; access to arterials; connectivity; transit availability; on-street parking impacts; access requirements; neighborhood impacts; impacts on pedestrian, bicycle, and transit circulation; and safety for all modes; and

Findings: The Site directly fronts N Suttle Road which terminates 1,600 feet west of the Site. North Suttle Road intersects N Portland Road, which connects to N Marine Drive. The Site and surrounding area are within a designated Freight District.

The Transportation Element of the Comprehensive Plan designates the abutting and nearby streets as follows:

Rights-of-Way	Traffic Classification	Transit Classification	Bicycle Classification	Pedestrian Classification
N Suttle Road	Local Service	None	Local	Local
N Portland Road	Major City Traffic Street	Community Transit	Off-Street Path	Off-Street Path
N Marine Drive	Major City Traffic Street	Transit Access	Local	Local

PBOT reviewed the Applicant's transportation analysis (Exhibits A.2 and A.6) and indicated it had no concerns. As outlined in the Applicant's response, and summarized above, under criterion C, the proposed new Waste-Related use is not anticipated to have a significant trip generation impact or generate trip types that are inconsistent with the street designations. The transportation system is capable of supporting the additional traffic that is estimated to be generated by the use.

PBOT staff noted that the acceptance of mixed yard debris/food waste at the Site could generate 410 daily trips, with 60 in the a.m. peak hour and 50 in the p.m. peak hour. Based on the trip generation estimates, and the distribution/assignment information and the level-of-service analysis for the study intersections, PBOT indicated that all intersections are forecast to continue to operate acceptably.

The SJNA raised an ongoing problem with trucks cutting through the neighborhood's residential areas. To address this problem, BDS staff recommended a condition requiring trucks associated with the Waste-Related operation to use only designated major traffic streets, regional trafficways and streets within the Rivergate Freight District. Through compliance with this condition, the Hearings Officer finds this approval criterion is met.

3. Public services for water supply, police and fire protection are capable of serving the proposed use, and proposed sanitary waste disposal and stormwater disposal systems are acceptable to the Bureau of Environmental Services.

Findings: There is an existing 5/8" metered service which provides water to this location from the existing 24-inch water main in N Suttle Road. Both the Fire and Water Bureaus reviewed the proposal and did not require any additional water service-related improvements. The Police Bureau did not raise issues or objections to the proposal.

BES reported that there is a 10-inch concrete public sanitary gravity sewer located in N Suttle Road that can serve the Site. There is no public storm-only sewer available to the Site. BES reviews stormwater management facilities on private property for the feasibility of infiltration, pollution reduction, flow control, and off-site discharges. BES has reviewed the Performance Approach stormwater report from PBS Engineering and Environmental dated March 7, 2011. The report details the stormwater collection, flow-control, treatment, and infiltration system that currently exists. For proposed development, PBS proposes collection swales/ditches

along the southern edge of the proposed pavement, which then flow to a detention pond with a waterproof liner. A new flow-control manhole with a small orifice will delay the peak flow of water from the new developed area from exceeding the allowed flow rates for the StormFilter water quality system.

After treatment, runoff will be directed into the existing infiltration gallery ("UIC"). Based on correspondence with staff from Oregon DEQ's Solid Waste and UIC Programs, the current UIC system is permitted by DEQ under existing Solid Waste Disposal Permit #501. At the time that Recology submits a request to modify the existing SWDP to receive approval for the proposed new waste activities on the site, DEQ will remove the UIC from the SWDP and instead regulate it under the Water Quality UIC Program, which will require either authorization by rule or a Water Pollution Control Facility Permit to continue operating the UIC. Per DEQ, Recology must submit a UIC WPCF permit application prior to issuance of an amended SWD permit. Because Oregon DEQ will require that stormwater flowing into the UIC meets water quality standards either through rule authorization or a WPCF permit, and permit application will be a condition of SWD permit issuance, BES is satisfied that an option for disposing stormwater on this site is available. Therefore, Applicant's proposal for water quality, flow-control, and infiltration of stormwater were deemed, by BES, sufficient to determine that the stormwater management approval criterion has been met for this review. At the time of permit review, BES staff will verify compliance with the SWMM and Title 17.

The Hearings Officer finds this approval criterion is met.

G. The proposal complies with the regulations of Chapter 33.254, Mining and Waste-Related Uses;

Findings: The regulations of Chapter 33.254 and discussion of how the proposal addresses them are as follows:

33.254.020 Limitations

A. Accessory uses. Concrete batching, asphalt mixing, rock crushing, or clay bulking in connection with a Mining use are prohibited except in IH and IG zones.

B. Hazardous wastes. The disposal of hazardous wastes, as defined by OAR 340.100 to 340.110, is prohibited.

Findings: The proposed use involves the acceptance of mixed yard debris/food waste, the material is sorted and then re-loaded to larger trucks to transporting to a location off of the Site for composting. The proposal does not involve mining activity or disposal of hazardous waste. Therefore, the Hearings Officer finds that this standard will be met.

33.254.030 Location and Vehicle Access Uses must be located so that vehicle access is restricted to Major City Traffic Streets or to streets in Freight Districts, as designated in the Transportation Element of the Comprehensive Plan.

Findings: North Suttle Road is a designated Local Service Street, but is within a designated Freight District. The Hearings Officer finds that this standard is met.

33.254.040 Operations

A. On-site queuing. The site layout must include adequate areas to accommodate the peak number of vehicles expected to come to the site at any one time.

Findings: The Applicant's traffic consultant prepared a traffic impact study to assess the adequacy of transportation services (Exhibits A.2 and A.6). Applicant's traffic analysis states the proposed use does not include any driveway modifications to N Suttle Road and does not modify access for trucks or passenger cars. All truck loading and unloading will occur on the Site with no anticipated impacts to N Suttle Road traffic. PBOT reviewed the analysis and concluded that the transportation system is adequate to support the proposed use. The Hearings Officer finds this standard is met.

B. Processing of waste products. In the case of Waste-Related uses other than landfills and composting operations, all activities relating to the receiving, sorting, processing, storage, transfer, and shipping of wastes must take place entirely within enclosed structures. The transfer of waste products from one vehicle or container to another vehicle or container and the cleaning of such vehicles or containers must be done within a containment area designed to ensure that waste materials will be confined so as to not enter the groundwater or any water body.

Findings: As already discussed under numerous approval criteria above, the Applicant is requesting an Adjustment to waive this requirement. See the findings under the Adjustment criteria, below.

C. Liquid waste pretreatment. The use, if other than a sewage treatment facility, must provide pretreatment of any liquids being discharged into the City's stormwater or sanitary disposal system. The pretreatment must meet the standards of the Bureau of Environmental Services.

Findings: As stated in findings above, BDS staff recommended a condition that requires the residual liquid from the food waste (leachate) to be contained and removed from the Site. Surface stormwater will be treated and then directed to a DEQ-permitted underground infiltration facility. BES has reviewed the proposal and finds that the proposal can satisfy this requirement. The Hearings Officer concurs with the BDS and BES recommendations and comments above. The Hearings Officer finds this standard can be met.

D. Posted information. A sign must be posted near the entrance to the site, stating the telephone number(s) where a representative of the use may be reached at all times.

Findings: BDS staff recommended a condition requiring a sign, with the necessary contact information, be posted at the truck and customer entrance. The Hearings Officer finds that compliance with this condition will satisfy this requirement.

33.254.050 Traffic Impact Study A traffic impact study must be submitted for the proposed use. As part of the study, measures must be proposed for mitigating traffic impacts resulting from vehicles going to and from the site. The study must also include a plan and mechanisms to ensure that traffic, especially trucks, travel primarily on truck routes or major City traffic streets when near the site. The traffic study must include information of proposed access points, types of vehicles, and frequency of trips.

Findings: As discussed under criterion F, the Applicant's consultant submitted a traffic impact study to assess the adequacy of transportation services. PBOT reviewed the analysis and concluded that the transportation system is adequate to support the proposed use. The Hearings Officer finds this standard is met.

33.254.060 Nuisance Mitigation Plan The applicant must submit a mitigation plan that addresses potential nuisance impacts which might be created by the proposed use. The plan must include the following components:

A. **Off-site impacts.** The plan must document that the use will comply with the off-site impact standards stated in Chapter 33.262;

Findings: The SJNA, in a letter to BDS staff, requested that Applicant and staff work together for the purpose of entering into a Good Neighbor Agreement ("GNA"). A SJNA representative, at the hearing, submitted a draft of a GNA between SJNA and the Applicant. Although there is no condition of approval requiring the Applicant to abide by the terms of the GNA, the Hearings Officer finds the efforts of the Applicant to be commendable and is hopeful that Applicant will abide by its (GNA) terms. The Hearings Officer encourages the Applicant to continue to engage in a dialogue with the SJNA.

The Hearings Officer finds that if the Applicant adheres to its operational plan, and with conditions of approval, this criterion is met.

Below are the regulations of 33.262 and discussion of how the proposal addresses them:

> **33.262.050 Noise** The City noise standards are stated in Title 18, Nuisance Abatement and Noise Control. In addition, the Department of Environmental Quality has regulations which apply to firms adjacent to or near noise sensitive uses such as dwellings, religious institutions, schools, and hospitals.

Findings: Noise generated by Applicant's proposed handling of mixed yard debris/food waste will be primarily in the form of trucks and vehicles used for the delivery and removal of the mixed debris/food waste material. The trucks and equipment are similar to that used by many

nearby industrial uses. Equipment will meet noise standards stated in Title 18, Nuisance Abatement and Noise Control. The Hearings Officer finds this standard can be met.

33.262.060 Vibration

A. **Vibration standard.** Continuous, frequent, or repetitive vibrations which exceed 0.002g peak may not be produced. In general, this means that a person of normal sensitivities should not be able to feel any vibrations.
B. **Exceptions.** Vibrations from temporary construction and vehicles which leave the site (such as trucks, trains, airplanes and helicopters) are exempt. Vibrations lasting less than 5 minutes per day are also exempt. Vibrations from primarily on-site vehicles and equipment are not exempt.
C. **Measurement.** Seismic or electronic vibration measuring equipment may be used for measurements when there are doubts about the level of vibration.

Findings: This proposal does not involve activities such as manufacturing or demolition that require heavy pounding or breaking of materials and therefore will not create vibrations. The proposal will comply with this standard.

33.262.070 Odor

A. **Odor standard.** Continuous, frequent, or repetitive odors may not be produced. The odor threshold is the point at which an odor may just be detected
B. **Exception.** An odor detected for less than 15 minutes per day is exempt.

Findings: As discussed throughout this decision, the Hearings Officer finds that odors are a significant concern when handling food wastes. However, the Hearings Officer found (findings for PCC 33.815.220 C and D – the findings for those approval criteria are incorporated herein) that so long as Applicant adheres to its operational plan and conditions of approval are imposed, odor impacts will not be significant.

BDS staff recommended that the liquid waste be disposed of rather than sprayed on landscape debris. The Hearings Officer concurs with this BDS staff recommendation. The Hearings Officer finds this approval criterion is met.

33.262.080 Glare

A. **Glare standard.** Glare is illumination caused by all types of lighting and from high temperature processes such as welding or metallurgical refining. Glare may not directly, or indirectly from reflection, cause illumination on other properties in excess of a measurement of 0.5 foot candles of light.

B. **Strobe lights.** Strobe lights visible from another property are not allowed.

Findings: The proposal will not require excessively bright or special lighting such as strobe lights. The Hearings Officer finds this standard will be met.

B. Litter. For Waste-Related uses, the plan must address litter generated on the site and litter along roadways leading to the use that is generated by vehicles coming to the site. The plan must also address illegally dumped waste products near the site. The plan must provide for regular litter removal. The plan must also include means to limit litter from vehicles coming to site; and

Findings: BDS suggested that if Applicant were required to fully enclose the MRF, it would be less likely that litter would be swept/carried off of the Site by wind. The Hearings Officer notes that doors to the portion of the MRF where mixed yard debris/food waste unloading, sorting occurs will have doors that will be open during business hours and closed at all other hours. The Hearings Officer finds that truck bays in the cardboard and dry waste receiving area (the area where the building is not fully enclosed) are located a significant distance from the area where the mixed yard debris/food waste handing occurs. The Hearings Officer finds enclosing the cardboard and dry waste receiving area bays (presumably with roll-up doors) would have no discernable impact upon litter being dispersed from the mixed yard debris/food waste handling area of the MRF. The Hearings Officer finds, based upon testimony of Applicant's representatives, that trucks delivering mixed yard debris/food waste will back into the MRF, unload, and the material will then be sorted and re-loaded onto trucks for transport off of the Site. The Hearings Officer finds litter should not be a problem associated with the handling of the mixed yard debris/food waste. In addition, Applicant has committed to "a litter patrol on all streets within one-quarter mile of the site." (Exhibit H.19). Finally, the condition of approval to install a fence will further impede litter/trash from being carried off of the Site and discourage trespass and unauthorized dumping. The Hearings Officer finds the standard will be met.

C. Dust, mud, and vector control. The plan must provide mechanisms to limit impacts from dust, mud, and disease carrying organisms such as rats and mosquitoes.

Findings: The Hearings Officer incorporates the findings for PCC 33.815.220 C and D into the findings for this section/standard. The Hearings Officer finds that so long as Applicant adheres to its operational plan and conditions of approval are imposed, disease transmission (vector control) impacts will not be significant. The Hearings Officer finds that there should be no dust and/or mud impacts resulting from approval of this application. The Hearings Officer finds this standard will be met.

33.254.070 Reclamation Plan for Landfills The applicant for a landfill use in the Waste-Related use category must submit a reclamation plan. The Bureaus of Buildings and Environmental Services will provide a technical review of the plan. Mining uses are subject to State requirements for reclamation plans.

A. Contents of the reclamation plan. The reclamation plan must include the following:

1. Phasing and schedule of work to be conducted;
2. Phasing and schedule of reclamation to be conducted;
3. Materials to be used in the reclamation;

4. The effect of the reclamation on surface and subsurface drainage patterns;
5. Plans for future use of the land; and
6. A discussion of how the proposed reclamation plan is consistent with the future potential uses of the land, according to the zoning and the Comprehensive Plan designation.

B. Performance guarantee. The review body as part of the conditional use review may require the applicant to post a bond or other security with the City to ensure the completion of the reclamation plan. The security must comply with the regulations for performance guarantees stated in 33.700.050.

Findings: The proposal does not include a landfill. Therefore, the Hearings Officer finds this requirement does not apply.

33.254.080 Setbacks, Landscaping, and Screening Waste-Related uses are subject to the following setback, landscaping, and screening requirements. Mining uses are subject to State requirements for setbacks, landscaping, and screening.

A. Setback distance. Waste-Related uses must be set back 100 feet from all property and street lot lines that abut C, E, or I zones. A 200-foot setback is required along all property and street lot lines that abut OS or R zones.

Findings: The MRF will be located approximately 30 feet from the east property line. An Adjustment has been requested to reduce the setback requirement where the structure will be closer than 100 feet to the property line. See the Adjustment findings below.

B. Landscaping and screening requirements. The setback must be landscaped to at least the L1 standard. A fence at least 6 feet high must be provided on the interior side of the setback. The fence must be screened by a high hedge meeting the L3 standard. The landscaping standards are stated in Chapter 33.248, Landscaping and Screening. In addition, gates with fencing at least 6 feet high must be provided across all entrances. The property owner must maintain the fencing and gates in good repair.

Findings: Applicant is requesting an Adjustment to waive the landscaping standard along the west, north and east property lines and to allow the fence to be located on the outside of the required setback area. See Adjustment findings below.

33.254.090 Activities in Required Setbacks Extraction, movement, or stockpiling of mineral and aggregate resources or the disposal or storage of waste products within a required setback is prohibited. The tops and toes of cut and fill slopes must remain outside the required setback. Structures, exterior storage, and parking areas for trucks or equipment are not allowed within the required setbacks. Required setbacks includes all setbacks approved by the State for Mining uses.

Findings: As stated above, an Adjustment is requested to allow the handling of mixed yard debris/food waste, within the MRF, to be located within 30 feet of a property line. See the related findings below.

33.254.100 Underground Utilities All underground lines and conduits on a mining or landfill site and within 50 feet of the site must be protected from damage from the use. This includes storm and sanitary sewers, and water, gas, and electric lines.

Findings: The proposed activity is for food waste recycling and not mining or excavation. This requirement does not apply.

H. There is a reclamation or redevelopment plan which will ensure that the site will be suitable for an allowed use when the mining or landfill use is finished; and

Findings: This is not a mining or landfill project. This requirement does not apply.

I. Public benefits of the use outweigh any impacts which cannot be mitigated.

Findings: The mixed yard debris/food waste handling at the Site and another proposed Applicant operated facility to be located at SE Foster and SE 101st Avenue (LU 10-194818 CU AD) are integral to the implementation of a City of Portland food waste composting program. This application and LU 10-194818 CU AD involve proposals that will operate as transfer stations for garbage haulers and the members of the public to deliver the mixed yard debris/food waste to an accessible location. Thereafter, compostable mixed yard debris/food waste will be transferred to one or more separate location(s) for composting.

Composting businesses typically require transfer facilities. Many deliveries in smaller trucks from the urban area go to a single point where the waste material is separated and aggregated for composting. The material is then consolidated into larger trucks and is shipped to a composting facility. This reduces the number of trips to the composting facility, provides a place that efficiently sorts and consolidates the organic material, and offers another means of reducing the amount of materials being deposited into a landfill. Material is being diverted from the waste stream going to landfills and is recycled into compost for beneficial uses.

Based upon the findings for PCC 33.815.220 C, D, E and G (findings for those approval criteria are incorporated herein), the Hearings Officer finds that so long as Applicant adheres to its operational plan and conditions of approval are imposed, there will be no impacts which cannot be mitigated. The Hearings Officer finds, therefore, that the benefit to the public of a mixed yard debris/food waste transfer station outweighs any negative impacts that cannot be mitigated.

Adjustments

33.805.040 Approval Criteria The adjustment requests will be approved if the review body finds that the applicant has shown that either approval criteria A. through F. or approval criteria G. through I., below, have been met.

A. Granting the adjustment will equally or better meet the purpose of the regulation to be modified; and

Findings: The purpose of the Mining and Waste-Related development standard, as stated in Section 33.254.010 of the Zoning Code is as follows:

These regulations:

- *Reduce the impacts and nuisances resulting from mining and Waste-Related uses on surrounding land uses;*
- *Reduce the transportation impacts from these uses;*
- *Ensure that land used for these purposes is restored so that it may be reused; and*
- *Provide security measures so that these land uses are not a safety hazard to other land uses or to nearby residents.*

Exterior Processing/Activities Outside of a Fully Enclosed Structure:
The Hearings Officer finds the primary "purpose" to be addressed in this Adjustment request is oriented to the impacts and nuisances that may result from Waste-Related uses on surrounding lands. The Hearings Officer finds the primary impacts that may result from Applicant's proposed handling of mixed yard debris/food waste are odors, noise, disease transmission (vector control) and traffic. The Hearings Officer incorporates the findings for PCC 33.815.220 C, D and E as additional findings for this approval criterion. The Hearings Officer takes particular note of Applicant's description (as quoted in the findings for PCC 33.815.220 C) of the MRF floor plan and the location of the cardboard and dry waste receiving area open bays in relation to the area of the MRF that is devoted to handling mixed yard debris/food waste. The Hearings Officer finds no negative impacts or nuisances will originate from the cardboard and dry waste processing. The Hearings Officer also takes particular note that the doors to the receiving area for mixed yard debris/food waste will remain open during business hours. The Hearings Officer finds that so long as Applicant adheres to the proposed operational plan and conditions of approval are imposed (i.e. removal of mixed yard debris/food waste from the Site within 48 hours of delivery to the Site, installation of an internal drain and containment system for collecting leachate, ongoing contract with pest control company, responsibility for litter within a quarter mile of the Site, etc.) impacts and nuisances resulting from the Waste-Related uses will be minimal.

Building Setback: Applicant's request is to reduce the required 100-foot setback to 30 feet for the proposed MRF, in relation to the east property line. Again, the Hearings Officer finds that the primary purpose that is relevant to this Adjustment request relates to the reduction of

impacts and nuisances on surrounding land uses. The Hearings Officer incorporates the findings for PCC 33.815.220 C, D, and E as additional findings for this approval criterion. The Hearings Officer finds that the MRF will have solid walls along its east side; the side of the MRF closest to the east property line. The Hearings Officer finds that a retaining wall will exist on a portion of the east property line. The Hearings Officer finds a fence (6 feet high) will be in close proximity to the east property line. The Hearings Officer finds that the fence and retaining wall will provide some buffering between the neighboring property to the east and the Applicant's operations on the Site. The Hearings Officer finds that so long as the Applicant adheres to its operational plan and conditions of approval are imposed, the reduction of impacts and nuisances resulting from reducing the eastern setback will be satisfied.

Landscaping in Required Setback: The Hearings Officer incorporates the findings for PCC 33.815.220 C, D and E as additional findings for this approval criterion. The Hearings Officer finds that the relevant "purpose" related to this adjustment request is the reduction of impacts and nuisances resulting from the Waste-Related use. The Hearings Officer also finds that in the context of "impacts and nuisances resulting from the waste-related uses," visual impacts are most important when considering the requirement to install, or not, L1 landscaping. (See PCC 33.248.020 A for description of the L1 landscaping standard). The Hearings Officer finds that requiring installation of L1 landscaping has little, if any, affect on the identified possible nuisance impacts from approving this application (i.e. odor, disease transmission (vector control), noise and traffic). The Hearings Officer finds that with the installation of a retaining wall (portion of east property line) and fence, and the fact that the Site and surrounding area are zoned IH (Heavy Industrial), the purposes of PCC 33.254.010 will be equally met if the L1 landscaping adjustment is granted. The Hearings Officer takes note that for Applicant to comply with requirements of the Smith and Bybee Lakes NRMP, the Applicant must install landscaping along most of the south property line. BDS staff recommended conditions that specify the species, density and maintenance of the plantings. The Hearings Officer concurs with this BDS staff recommendation. The Hearings Officer finds that if Applicant adheres to its operational plan and conditions of approval are imposed, that the request for L1 landscaping standard adjustment, in the required setback, meets the purpose statement of PCC 33.254.010.

Fence Location: Standard 33.254.080.B requires a fence to be installed on the interior side of the required 100-foot setback. Applicant is requesting to waive this locational aspect of the requirement. To maintain separation and security for the Site, BDS staff recommended a condition that requires the installation of a tall fence that follows the property lines, except along the southern edge. On the south side, BDS staff recommended that the fence be placed on the interior side of the environmental zone and/or proposed planting area. BDS indicated that a locked gate could be placed on that side to provide access for maintenance and other purposes. The Hearings Officer concurs with the BDS staff recommendation above.

The intent for the parking lot landscaping, as stated in Section 33.266.130.A (Purpose) of the Zoning Code, is as follows:

- *The parking area layout standards are intended to promote safe circulation within the parking area, provide for the effective management of stormwater runoff from vehicle areas, and provide for convenient entry and exit of vehicles. The setback and landscaping standards:*
- *Improve and soften the appearance of parking areas;*
- *Reduce the visual impact of parking areas from sidewalks, streets, and especially from adjacent residential zones;*
- *Direct traffic in parking areas;*
- *Shade and cool parking areas;*
- *Reduce the amount and rate of stormwater runoff from vehicle areas;*
- *Reduce pollution and temperature of stormwater runoff from vehicle areas; and*
- *Decrease airborne and waterborne pollution.*

Perimeter and Interior Parking Lot Landscaping: The requirement for perimeter and interior parking lot landscaping applies as a nonconforming upgrade requirement per Section 33.258.070.D.2. The existing parking area will not be moved or modified with the proposed improvements on the site. There are approximately 15 parking spaces. Interior landscape areas are required for parking lots with more than 10 spaces. The parking area spans approximately 140 lineal feet along the N Suttle Road frontage. Perimeter landscaping, a low continuous screen (L2 landscaping standard – for description of the L2 standard see PCC 33.248.020) is required within a required 5-foot setback area.

The Hearings Officer finds that although additional landscaping would soften the appearance of the paved area and reduce the impacts of vehicle parking, this area is developed with heavy industrial uses where the undesirable appearance and impacts are generally not an issue. Applicant intends to install a landscape buffer along most of the southern property line. This buffer will provide visual and functional separation between the industrial use and the adjacent wetland resource. BES has reviewed the proposal and recommends approval without conditions. The Hearings Officer finds the purpose section of PCC 33.266.130.A is equally met by granting the requested perimeter and interior parking lot landscaping adjustment.

B. If in a residential zone, the proposal will not significantly detract from the livability or appearance of the residential area, or if in a C, E, or I zone, the proposal will be consistent with the classifications of the adjacent streets and the desired character of the area; and

Findings: As discussed under approval criterion 33.815.220.F.1, the proposal does not conflict with the street classifications and PBOT has no concerns. The Site is in an IH zone. The Heavy Industrial zone is characterized as a zone that "provides areas where all kinds of industries may locate including those not desirable in other zones due to their objectionable impacts or appearance."

Applicant is currently operating a large recycling facility with extensive exterior work activities at the Site. The proposed improvements include the construction of additional retaining walls, new buildings and an improved truck maneuvering and loading area; however,

the parking area will not change. Even with most of the Adjustments granted, the facility will not be dissimilar in character to many industrial sites found in the IH zone.

The Hearings Officer finds this approval criterion is met for all the Adjustments.

C. If more than one adjustment is being requested, the cumulative effect of the adjustments results in a project which is still consistent with the overall purpose of the zone; and

Findings: The Applicant is requesting an Adjustment to six distinct development standards. The purpose of the Industrial and Employment zones is found in 33.140.010, which states:

> ***33.140.010 General Purpose of the Zones*** *The employment and industrial zones are for areas of the City that are reserved for industrial uses and for areas that have a mix of uses with a strong industrial orientation. The zones reflect the diversity of industrial and business areas in the City. The zones differ in the mix of allowed uses, the allowed intensity of development, and the development standards. The regulations promote areas which consist of uses and developments which will support the economic viability of the specific zoning district and of the City. The regulations protect the health, safety and welfare of the public, address area character, and address environmental concerns. In addition, the regulations provide certainty to property owners, developers, and neighbors about the limits of what is allowed.*

Four of the six development standards requested for Adjustment are those that address possible impacts created by a Waste-Related use in an IH zone. Given the location of Applicant's proposed use, the surrounding zoning and land uses, the relevant purpose goals are still satisfied. The Hearings Officer finds that so long as Applicant adheres to its operational plan, and conditions of approval are imposed, this approval criterion is met.

D. City-designated scenic resources and historic resources are preserved; and

Findings: City-designated scenic resources are shown on the zoning map by the "s" overlay zone. Historic resources are designated by a large dot. There are no such resources present this Site. This criterion does not apply.

E. Any impacts resulting from the adjustment are mitigated to the extent practical; and

Findings: The Hearings Officer finds that Applicant's request to waive the fully enclosed structure requirement may create noise impacts; however, the Hearings Officer found those impacts not to be significant and therefore no mitigation is required. The Hearings Officer found that other possible impacts, such as odor and disease transmission (vector control), even with the granting of the adjustment to permit open bays to access the cardboard and dry storage area, would be minimal. The Hearings Officer found, therefore, that no mitigation is required for possible noise, odor and disease transmission (vector) impacts. The impacts of waiving the parking lot landscaping requirements will be mitigated by installing a dense

landscape buffer, with native species, along the southern property line. The vegetated buffer will protect and improve multiple functions of the wetland and natural area. BDS staff recommended conditions G and H to achieve a sufficient and sustainable edge. The Hearings Officer concurs with this BDS staff suggestion. The Hearings Officer also finds the imposition of conditions related to litter, pest control and the maximum time for a load of mixed yard debris/food waste to remain on the Site are necessary. The Hearings Officer finds that so long as the Applicant adheres to its operational plan, and conditions of approval are included with the approval of this application, this approval criterion is met.

F. If in an environmental zone, the proposal has as few significant detrimental environmental impacts on the resource and resource values as is practicable;

Findings: As stated above, an open structure has the potential to create detrimental impacts to the adjacent Smith and Bybee Lakes resource values. Staff recommended denial of the request to waive development standard 33.254.040.B (enclosed structure).

The Hearings Officer found, based upon the evidence in the record, that the potential detrimental impacts to adjacent Smith and Bybee Lakes' resources would not occur so long as the Applicant adheres to its operational plan and conditions of approval are imposed. Further, the Hearings Officer finds that the proposed landscape buffer, if planted and monitored consistent with conditions G and H, will mitigate impacts of waiving landscaping improvements in the existing parking lot. The Hearings Officer finds that if the Applicant adheres to its operational plan, and with conditions of approval, this criterion is met for the all requested Adjustments.

Development Standards
Unless specifically required in the approval criteria listed above, this proposal does not have to meet the development standards in order to be approved during this review process. The plans submitted for a building or zoning permit must demonstrate that all development standards of Title 33 can be met, or have received an Adjustment or Modification via a land use review prior to the approval of a building or zoning permit.

III. CONCLUSIONS

Applicant requested Conditional Use approval in order to be permitted to accept and recycle mixed yard debris/food waste at the Site. Four Adjustments were requested to waive or vary from development standards that specifically apply to Waste-Related uses. The Applicant also requested two Adjustments to waive parking lot upgrade requirements.

The Hearings Officer found that the relevant approval criteria for approving the Conditional Use and Adjustment requests were met, so long as the Applicant adhered to its operational plan and various conditions of approval were imposed.

IV. DECISION

Approval of a Conditional Use to establish a Waste-Related use that receives, sorts, handles, stores (temporarily, per Condition of Approval K below) and re-loads mixed yard debris/food waste in the MRF, as described in Exhibits A.1 through A.9.

Approval of an Adjustment to waive the requirement that the activities relating to the receiving, sorting, handling, storage (temporarily, per Condition of Approval K below) and transfer of mixed yard debris/food waste take place entirely within an enclosed structure (Section 33.254.040.B);

Approval of an Adjustment to reduce the Waste-Related setback (Section 33.254.080.A) from 100 feet to 30 feet between the structure containing the waste-material and the east property line;

Approval of an Adjustment to waive the L1, General Landscaping requirement within the required setback (Section 33.254.080.B);

Approval of an Adjustment to waive the requirement of a fence being installed on the interior side of the required setback (Section 33.254.080.B);

Approval of an Adjustment to waive the perimeter parking lot landscaping standard, applied as a nonconforming upgrade requirement to the existing parking area (Section 33.258.070.D.2 and 33.266.130.G.2), and

Approval of an Adjustment to waive the interior parking lot landscaping standard, applied as a nonconforming upgrade requirement to the existing parking area (Section 33.258.070.D.2 and 33.266.130.G.3), and

All approvals subject to the following conditions:

A. As part of the required building permit application submittal, the following development-related conditions (B through H) must be noted on each of the four required site plans or included as a sheet in the numbered set of plans. The sheet on which this information appears must be labeled "ZONING COMPLIANCE PAGE - Case File LU 10-203967 CU AD." All requirements must be graphically represented on the site plan, landscape, or other required plan and must be labeled "REQUIRED."

B. The mixed yard debris/food waste may not be received, sorted, handled, and stored (temporarily, per Condition of Approval K below) within the building addition labeled Expansion area A-1 (12,800 square feet).

C. The building addition, labeled Expansion A-2 (6,300 square feet) on Exhibit H.4c must be enclosed with exterior sliding/rolling exterior doors, per Exhibit H.4a.

D. An internal drain and containment system must be installed to collect the liquid waste (leachate) inside the MRF. The leachate must be taken to an off-site location for disposal or discharged into the sanitary sewer.

E. A sign that identifies the mixed yard debris/food waste recycling operation must be installed on entrance gates to the facility. The signs must include 24-hour emergency contact information.

F. A fence, at least 6 feet tall, must be installed along all sides of the Site. On the south side, the fence must be located on the interior side of the Environmental Conservation overlay zone and proposed landscape buffer. A locked gate, to access the planting area for maintenance and other purposes, is allowed.

G. Prior to final occupancy of the Waste-Related use processing building, landscaping must be installed in the portion of the Site that is located within the Environmental Conservation overlay zone as follows:

- A minimum of 65 native trees shall be planted—and shall be comprised of at least 15 each of cottonwood, cedar, maple, and oak, in conformance with C1.0; trees shall be spaced, on average, 15 feet apart.

- A minimum of 300 native shrubs shall be planted—and shall be comprised of at least 75 each of dogwood, currant, Douglas spiraea, and Shiny-leaf spiraea, in conformance with C1.0. Shrubs shall be spaced, on average, 5 feet apart.

- The planting area shall be seeded at a rate of 10 pounds per 1000 square feet, with native grasses, sedges, and forbs selected from the Portland Native Plant List.

H. The landscape professional or designer of record shall monitor the required plantings in the Environmental zone for three years to ensure survival and replacement as described below. The landowner is responsible for ongoing survival of required plantings beyond the designated three-year monitoring period.

The landowner or landscape professional must provide a minimum of three letters (to serve as monitoring and maintenance reports) to the Land Use Services Division of the Bureau of Development Services (Attention: LUS Planner for LU 10-203967 CU AD) containing the monitoring information described below. Submit the first letter within 12 months following installation of the plantings. Submit subsequent letters every 12 months following the date of the first monitoring letter. All letters shall contain the following information:

a. A count of the number of planted trees that have died. One replacement tree must be planted for each dead tree (replacement must occur within one planting season).
b. The percent coverage of native shrubs and ground covers. If less than 80 percent of the planting area is covered with native shrubs or groundcovers at the time of the annual

count, additional shrubs and groundcovers shall be planted to reach 80 percent cover (replacement must occur within one planting season).

c. A list of replacement plants that were installed.
d. Photographs of the planted area and a site plan, in conformance with condition G, showing the location and direction of photos.
e. A description of the method used and the frequency for watering required trees, shrubs, and groundcovers for the first two summers after planting. All irrigation systems shall be temporary and aboveground.
f. An estimate of percent cover of invasive species (English ivy, Himalayan blackberry, Reed canary grass, teasel, clematis) within 10 feet of all plantings. Invasive species must not exceed 20 percent cover during the monitoring period.

I. All public information, including Internet and marketing information, must include a directional map that identifies the Suttle Road Recology facility.

J. Trucks and associated Applicant's businesses, including commercial haulers, must be instructed to use only designated major traffic streets, regional trafficways and the streets in the Rivergate Freight District when transporting waste to and from the Site.

K. Organics containing food waste must only be accepted, sorted and temporarily stored in the portion of the MRF identified for "organics and yard wastes" (Exhibit H.4b). Organics containing food waste must be removed from the Site within forty-eight (48) hours of delivery to the Site.

L. Applicant, or any successor in interest that accepts mixed yard debris/food waste at the Site, shall be responsible for collecting litter on public right-of-ways, on a regular basis, for a distance of ¼ road mile from the boundary of the Site.

M. Applicant, or any successor in interest that accepts mixed yard debris/food waste at the Site, shall maintain a contract with a licensed pest control company to monitor and respond to vector control issues.

Gregory J. Frank, Hearings Officer

April 29, 2011
Date

Application Determined Complete:	February 3, 2011	
Report to Hearings Officer:	March 25, 2011	
Decision Mailed:	April 29, 2011	
Last Date to Appeal:	4:30 p.m., May 13, 2011	
Effective Date (if no appeal):	May 16, 2011	Decision may be recorded on this date.

Conditions of Approval. This project may be subject to a number of specific conditions, listed above. Compliance with the applicable conditions of approval must be documented in all related permit applications. Plans and drawings submitted during the permitting process must illustrate how applicable conditions of approval are met. Any project elements that are specifically required by conditions of approval must be shown on the plans, and labeled as such.

These conditions of approval run with the land, unless modified by future land use reviews. As used in the conditions, the term "applicant" includes the applicant for this land use review, any person undertaking development pursuant to this land use review, the proprietor of the use or development approved by this land use review, and the current owner and future owners of the property subject to this land use review.

Appeal of the decision. ANY APPEAL OF THE HEARINGS OFFICER'S DECISION MUST BE FILED AT 1900 SW 4TH AVENUE, PORTLAND, OR 97201 (503-823-7526). Until 3:00 p.m., Tuesday through Friday, file the appeal at the Development Services Center on the first floor. Between 3:00 p.m. and 4:30 p.m., and on Mondays, the appeal must be submitted at the Reception Desk on the 5th Floor. **An appeal fee of $11,144.00 will be charged (one-half of the application fee for this case).** Information and assistance in filing an appeal can be obtained from the Bureau of Development Services at the Development Services Center.

Who can appeal: You may appeal the decision only if you wrote a letter which is received before the close of the record on hearing or if you testified at the hearing, or if you are the property owner or applicant. If you or anyone else appeals the decision of the Hearings Officer, City Council will hold an evidentiary hearing, one in which new evidence can be submitted to them. Upon submission of their application, the applicant for this land use review chose to waive the 120-day time frame in which the City must render a decision. This additional time allows for any appeal of this proposal to be held as an evidentiary hearing.

Appeal Fee Waivers: Neighborhood associations recognized by the Office of Neighborhood Involvement may qualify for a waiver of the appeal fee provided that the association has standing to appeal. The appeal must contain the signature of the Chairperson or other person authorized by the association, confirming the vote to appeal was done in accordance with the organization's bylaws.

Neighborhood associations, who wish to qualify for a fee waiver, must complete the Type III Appeal Fee Waiver Request for Organizations Form and submit it prior to the appeal deadline. The Type III Appeal Fee Waiver Request for Organizations Form contains instructions on how to apply for a fee waiver, including the required vote to appeal.

Recording the final decision.
If this Land Use Review is approved the final decision must be recorded with the Multnomah County Recorder. A few days prior to the last day to appeal, the City will mail instructions to the applicant for recording the documents associated with their final land use decision.

- A building or zoning permit will be issued only after the final decision is recorded.

The applicant, builder, or a representative may record the final decision as follows:

- By Mail: Send the two recording sheets (sent in separate mailing) and the final Land Use Review decision with a check made payable to the Multnomah County Recorder to: Multnomah County Recorder, P.O. Box 5007, Portland OR 97208. The recording fee is identified on the recording sheet. Please include a self-addressed, stamped envelope.

- In Person: Bring the two recording sheets (sent in separate mailing) and the final Land Use Review decision with a check made payable to the Multnomah County Recorder to the County Recorder's office located at 501 SE Hawthorne Boulevard, #158, Portland OR 97214. The recording fee is identified on the recording sheet.

For further information on recording, please call the County Recorder at 503-988-3034
For further information on your recording documents please call the Bureau of Development Services Land Use Services Division at 503-823-0625.

Expiration of this approval. An approval expires three years from the date the final decision is rendered unless a building permit has been issued, or the approved activity has begun.

Where a site has received approval for multiple developments, and a building permit is not issued for all of the approved development within three years of the date of the final decision, a new land use review will be required before a permit will be issued for the remaining development, subject to the Zoning Code in effect at that time.

Zone Change and Comprehensive Plan Map Amendment approvals do not expire.

Applying for your permits. A building permit, occupancy permit, or development permit may be required before carrying out an approved project. At the time they apply for a permit, permittees must demonstrate compliance with:

- All conditions imposed herein;
- All applicable development standards, unless specifically exempted as part of this land use review;
- All requirements of the building code; and
- All provisions of the Municipal Code of the City of Portland, and all other applicable ordinances, provisions and regulations of the City.

EXHIBITS
NOT ATTACHED UNLESS INDICATED

A. Applicant's Submittal
   1. Project Proposal and Response to Approval Criteria, submitted December 23, 2010
   2. Traffic Analysis, prepared by Kittelson and Associates, dated October 18, 2010
   3. Applicant's letter responding to staff's completeness review, dated January 26, 2011
   4. Additional Adjustment Request, response to approval criteria, submitted January 28, 2011
   5. Traffic Analysis Letter, dated February 16, 2011
   6. Traffic Analysis Addendum, dated March 9, 2011
   7. Additional Information identifying proposed revisions to project, March 9, 2011
   8. Stormwater Management Report- Performance Approach, submitted March 9, 2011
   9. Information Regarding UIC permit by DEQ, memo from Erin Merrill to Stephen Himes, BES, dated February 16, 2011
   10. Request for Evidentiary Hearing and 120-Day Waiver
B. Zoning Map **(attached)**
C. Plans and Drawings
   1. Site Plan, Proposed Grading and Site Improvement Plan, submitted March 9, 2011 **(attached)**
   2. Existing Conditions
   3. Proposed Utilities Plan, submitted March 9, 2011
   4. Proposed Master Floor Plan, submitted March 9, 2011
   5. Proposed South and East Elevations, submitted March 9, 2011
   6. Proposed North and West Elevations, submitted March 9, 2011
   7. Proposed Office Building – Floor Plan, submitted March 9, 2011
   8. Proposed Office Building – Elevations, submitted March 9, 2011
   9. Site Plan, Proposed Grading and Site Improvement Plan, submitted January 28, 2011
   10. Proposed Utilities Plan, submitted January 28, 2011
   11. Proposed Master Floor Plan, submitted January 28, 2011
   12. Proposed North and West Elevations, submitted January 28, 2011
D. Notification information
   1. Request for Response
   2. Posting Letter Sent to Applicant
   3. Notice to be Posted
   4. Applicant's Statement Certifying Posting
   5 Mailing List
   6. Mailed Notice
E. Agency Responses
   1. Bureau of Environmental Services
   2. Bureau of Transportation Engineering and Development Review
   3. Water Bureau
   4. Fire Bureau
   5. Site Development Review Section of Bureau of Development Services

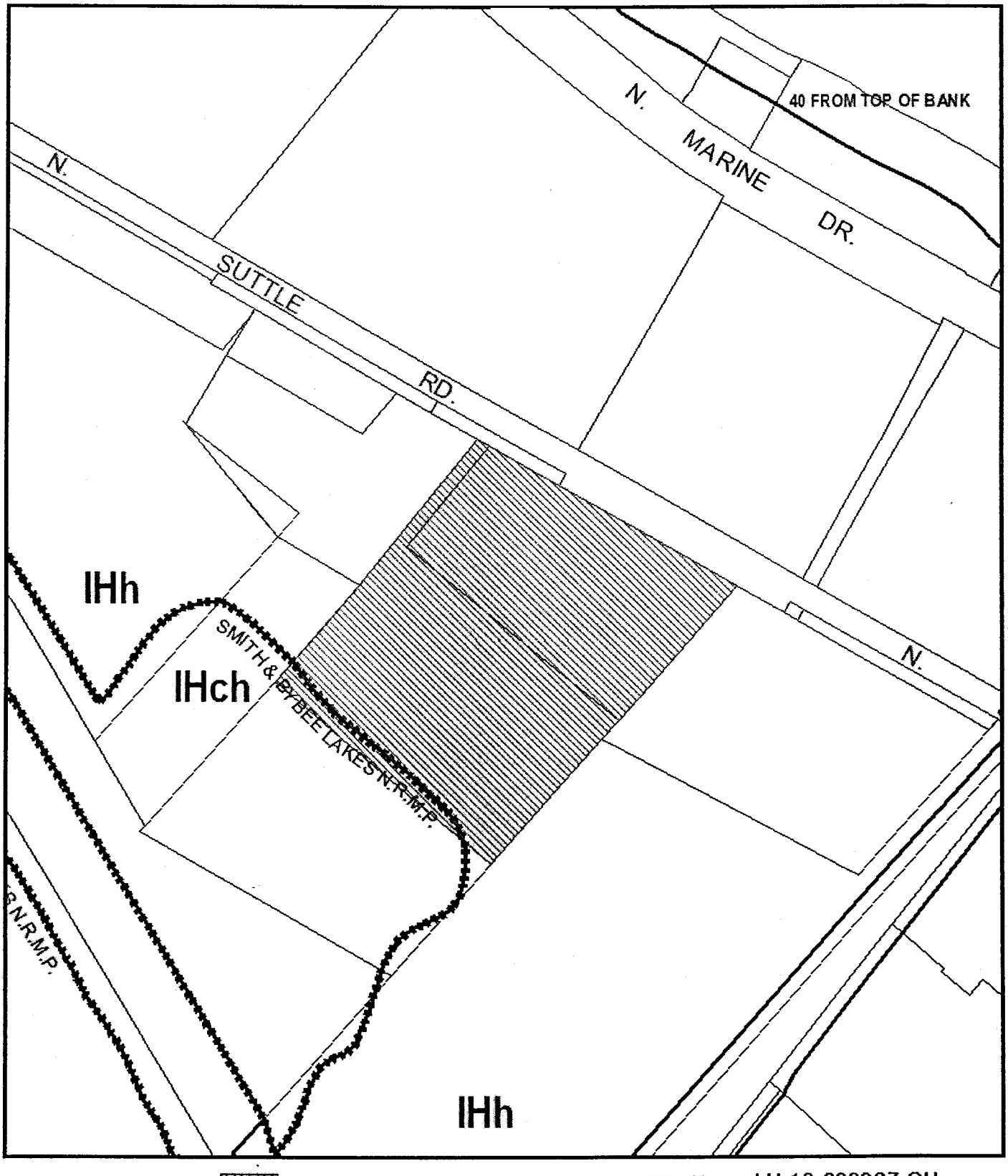
6. Life Safety Review Section of Bureau of Development Services
7. TRACS Print-Out – "No Concerns" Response from Bureau of Parks, Forestry Division

F. Letters
1. John McKinney, Columbia Biogas, March 10, 2011, raises concerns - Columbia Biogas, 721 NW 9th Avenue, Portland, OR 97209
2. Clinton J. Doxsee, Land Use Chair, St. Johns Neighborhood Association, March 11, 2011; 8540 N Charlston, Portland, OR 97203

G. Other
1. Original LUR Application
2. Site History Research
3. Incomplete Application Letter from Staff
4. Pre-Application Summary Report
5. Memo from Stephanie Rawson, DEQ to Stephen Himes, BES, March 2, 2011

H. Received in the Hearings Office
1. Hearing Notice - Frugoli, Sheila
2. Staff Report - Frugoli, Sheila
3. 3/21/11 letter with attachment - Briggs, W.L.
   a. Smith & Bybee Lakes Recreation Master Plan - June 1992 - Briggs, W.L.
4. 4/5/11 letter from Michael C. Robinson, Perkins Coie - Frugoli, Sheila
   a. Plan - Frugoli, Sheila **(attached)**
   b. Master Floor Plan - Frugoli, Sheila **(attached)**
   c. Site Summary - Frugoli, Sheila **(attached)**
   d. Enclose definition - Merriam-Webster Dictionary - Frugoli, Sheila
   e. Fully definition - Merriam-Webster Dictionary - Frugoli, Sheila
   f. Completely/complete definition - Merriam-Webster Dictionary - Frugoli, Sheila
5. 4/4/11 Letter, Robinson to Frugoli - Frugoli, Sheila
   a. Plan - Frugoli, Sheila
   b. Chapter 33.910 – Definitions - Frugoli, Sheila
6. 4/4/11 letter, Robinson to Frugoli - Frugoli, Sheila
   a. 3/24/11 letter from Kittelson & Associates, Inc. - Frugoli, Sheila
   b. Suttle Road Facility - Traffic Survey - Frugoli, Sheila
   c. Plan - Frugoli, Sheila
7. 4/5/11 Memo from Frugoli - Frugoli, Sheila
   a. Garth printout - Frugoli, Sheila
   b. Garth printout - Frugoli, Sheila
   c. Smith & Bybee Lakes Management Plan - Management Area - Frugoli, Sheila
   d. Smith & Bybee Lakes Management Plan – Projects - Frugoli, Sheila
8. Letter - Breunig, Gerald D. & Rohrbach, Diane M.
9. Site Map - Robinson, Michael
10. Master Floor Plan - Robinson, Michael
11. Site Map - Robinson, Michael
12. St. Johns NA Good Neighbor Agreement - Doxsee, Clinton J.
13. Large poster board - Site Map - Robinson, Michael
14. Large poster board - Master Floor Plan - Robinson, Michael

15. Requests to be added to mailing list - Hearings Office
16. 4/7/11 letter with attachment - Robinson, Michael
    a. Master Floor Plan - Robinson, Michael
17. 4/7/11 letter - Robinson, Michael
18. 4/7/11 Memo with attachment - Robinson, Michael
    a. 4/7/11 letter from Robinson - Robinson, Michael
19. Final written argument - Robinson, Michael

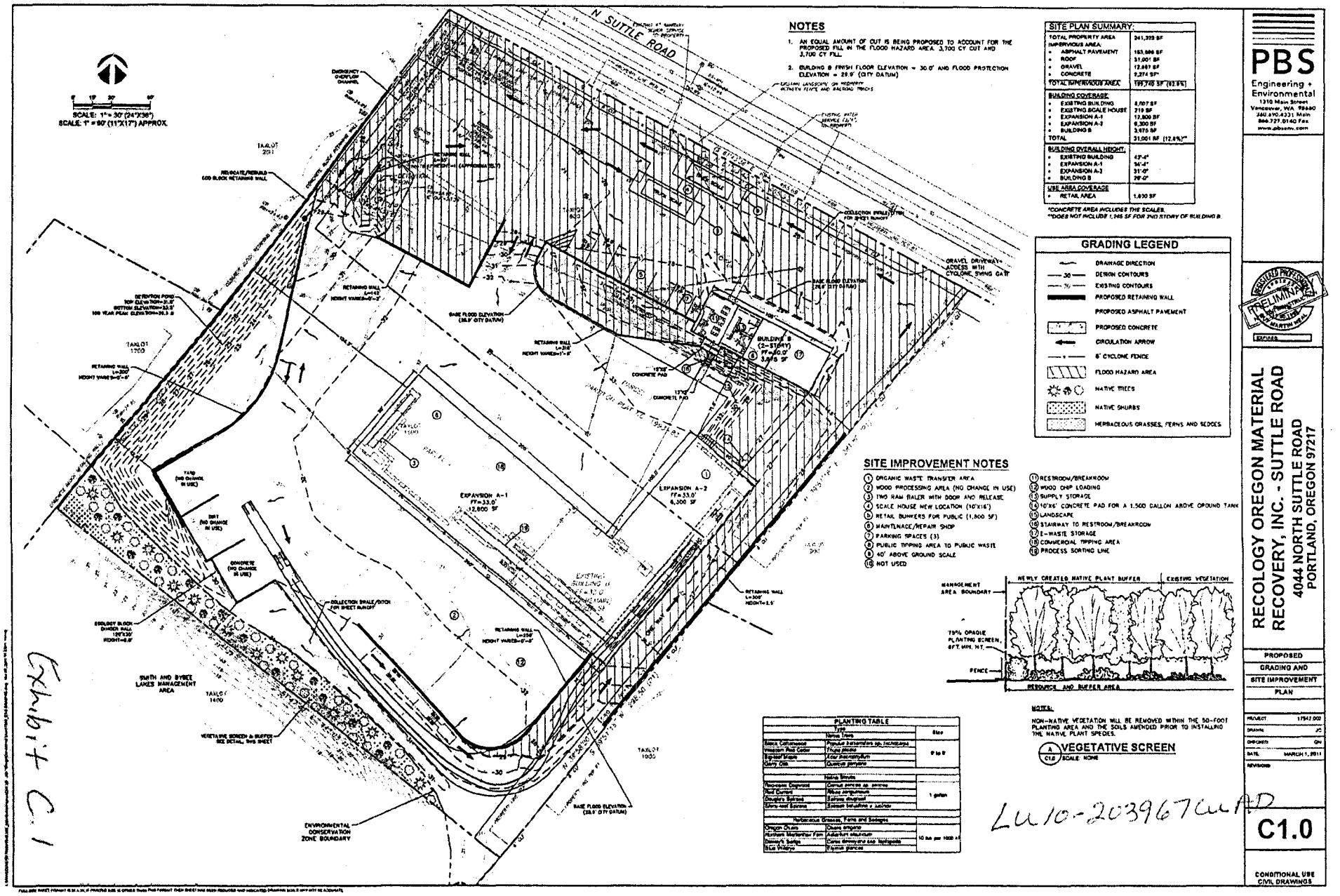


ZONING

Site

NORTH

File No. LU 10-203967 CU
1/4 Section 1726,1826
Scale 1 inch = 200 feet
State_Id 2N1E32D 1500
Exhibit B (Dec 30,2010)



NOTES

1. AN EQUAL AMOUNT OF CUT IS BEING PROPOSED TO ACCOUNT FOR THE PROPOSED FILL IN THE FLOOD HAZARD AREA. 3,700 CY CUT AND 3,700 CY FILL
2. BUILDING B FINISH FLOOR ELEVATION = 30.0' AND FLOOD PROTECTION ELEVATION = 29.9' (CITY DATUM)

SITE PLAN SUMMARY:

TOTAL PROPERTY AREA	241,325 SF
IMPERVIOUS AREA:	
• ASPHALT PAVEMENT	153,886 SF
• ROOF	31,001 SF
• GRAVEL	12,667 SF
• CONCRETE	9,274 SF*
TOTAL IMPERVIOUS AREA	199,748 SF (82.8%)
BUILDING COVERAGE:	
• EXISTING BUILDING	8,707 SF
• EXISTING SCALE HOUSE	219 SF
• EXPANSION A-1	12,800 SF
• EXPANSION A-2	6,300 SF
• BUILDING B	3,975 SF
TOTAL	31,001 SF (12.8%)**
BUILDING OVERALL HEIGHT:	
• EXISTING BUILDING	43'-4"
• EXPANSION A-1	34'-4"
• EXPANSION A-2	31'-0"
• BUILDING B	29'-0"
USE AREA COVERAGE	
• RETAIL AREA	1,500 SF

*CONCRETE AREA INCLUDES THE SCALES.
**DOES NOT INCLUDE 1,245 SF FOR 2ND STORY OF BUILDING B.

GRADING LEGEND

- DRAINAGE DIRECTION
- 30 DESIGN CONTOURS
- 30 EXISTING CONTOURS
- PROPOSED RETAINING WALL
- PROPOSED ASPHALT PAVEMENT
- PROPOSED CONCRETE
- CIRCULATION ARROW
- 6' CYCLONE FENCE
- FLOOD HAZARD AREA
- NATIVE TREES
- NATIVE SHURBS
- HERBACEOUS GRASSES, FERNS AND SEDGES

SITE IMPROVEMENT NOTES

1. ORGANIC WASTE TRANSFER AREA
2. WOOD PROCESSING AREA (NO CHANGE IN USE)
3. TWO RAM BALER WITH DOOR AND RELEASE
4. SCALE HOUSE NEW LOCATION (10'X16')
5. RETAIL BUNKERS FOR PUBLIC (1,500 SF)
6. MAINTENANCE/REPAIR SHOP
7. PARKING SPACES (3)
8. PUBLIC TIPPING AREA TO PUBLIC WASTE
9. 40' ABOVE GROUND SCALE
10. NOT USED
11. RESTROOM/BREAKROOM
12. WOOD CHIP LOADING
13. SUPPLY STORAGE
14. 10'X6' CONCRETE PAD FOR A 1,500 GALLON ABOVE GROUND TANK
15. LANDSCAPE
16. STAIRWAY TO RESTROOM/BREAKROOM
17. WASTE STORAGE
18. COMMERCIAL TIPPING AREA
19. PROCESS SORTING LINE

NOTES:
NON-NATIVE VEGETATION WILL BE REMOVED WITHIN THE 50-FOOT PLANTING AREA AND THE SOILS AMENDED PRIOR TO INSTALLING THE NATIVE PLANT SPECIES.

A C1.0 VEGETATIVE SCREEN
SCALE: NONE

PLANTING TABLE

Type	Name	Size
Trees		
Black Cottonwood	Populus balsamifera ssp. trichocarpa	8' to 9'
Western Red Cedar	Thuja plicata	
Bigleaf Maple	Acer macrophyllum	
Garry Oak	Quercus garryana	
Shrubs		
Red Flowering Currant	Ribes sanguineum	1 gallon
Douglas's Spirea	Spiraea douglasii	
Evergreen Huckleberry	Vaccinium ovatum	
Herbaceous Grasses, Ferns and Sedges		
Oregon Oxalis	Oxalis oregana	10 lbs per 1000 sf
Northern Maidenhair Fern	Adiantum pedatum	
Dewey's Sedge	Carex deweyana ssp. leptopoda	
Blue Wildrye	Elymus glaucus	

LU 10-203967 CU AD

EXHIBIT C.1

PBS
Engineering + Environmental
1310 Main Street
Vancouver, WA 98660
360.690.4331 Main
866.727.0140 Fax
www.pbsenv.com

REGISTERED PROFESSIONAL ENGINEER
OREGON
JULY 12, 1977
PRELIMINARY
NOT FOR CONSTRUCTION
LEE M. MARTIN
EXPIRES:

RECOLOGY OREGON MATERIAL RECOVERY, INC. - SUTTLE ROAD
4044 NORTH SUTTLE ROAD
PORTLAND, OREGON 97217

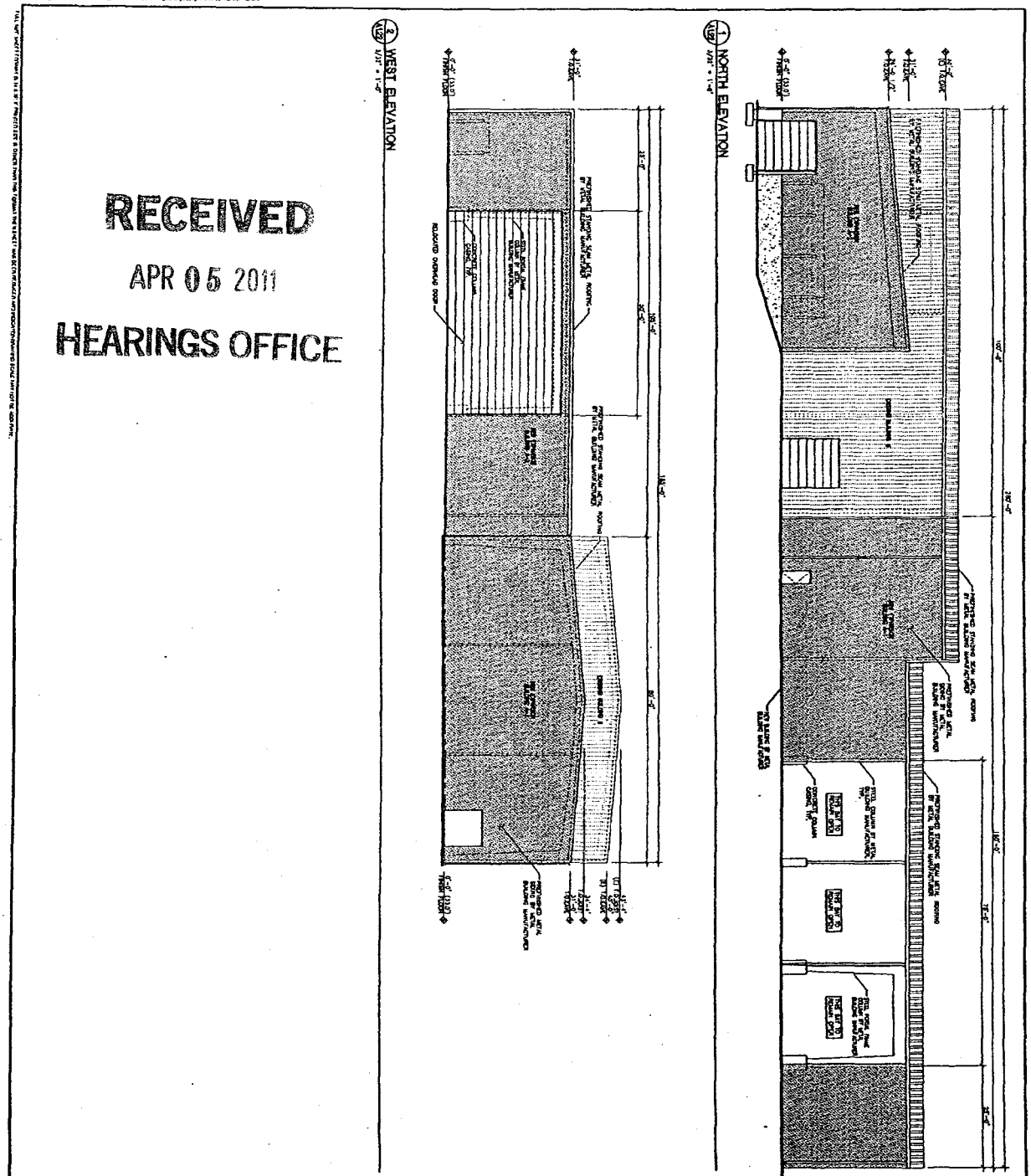
PROPOSED GRADING AND SITE IMPROVEMENT PLAN

PROJECT	17547.000
DRAWN	JC
CHECKED	GN
DATE	MARCH 1, 2011
REVISIONS	

C1.0

CONDITIONAL USE CIVIL DRAWINGS

RECEIVED
APR 05 2011
HEARINGS OFFICE



RECOLOGY OREGON MATERIAL RECOVERY, INC. - SUTTLE ROAD
4044 NORTH SUTTLE ROAD
PORTLAND, OREGON 97217

NOT FOR CONSTRUCTION

PBS Engineering + Environmental

NORTH & WEST ELEVATIONS

A1.22

ARCHITECTURAL DRAWING

CITY OF PORTLAND
HEARINGS OFFICE
Exhibit #H-4a

EXHIBIT 1

RECEIVED
APR 05 2011
HEARINGS OFFICE

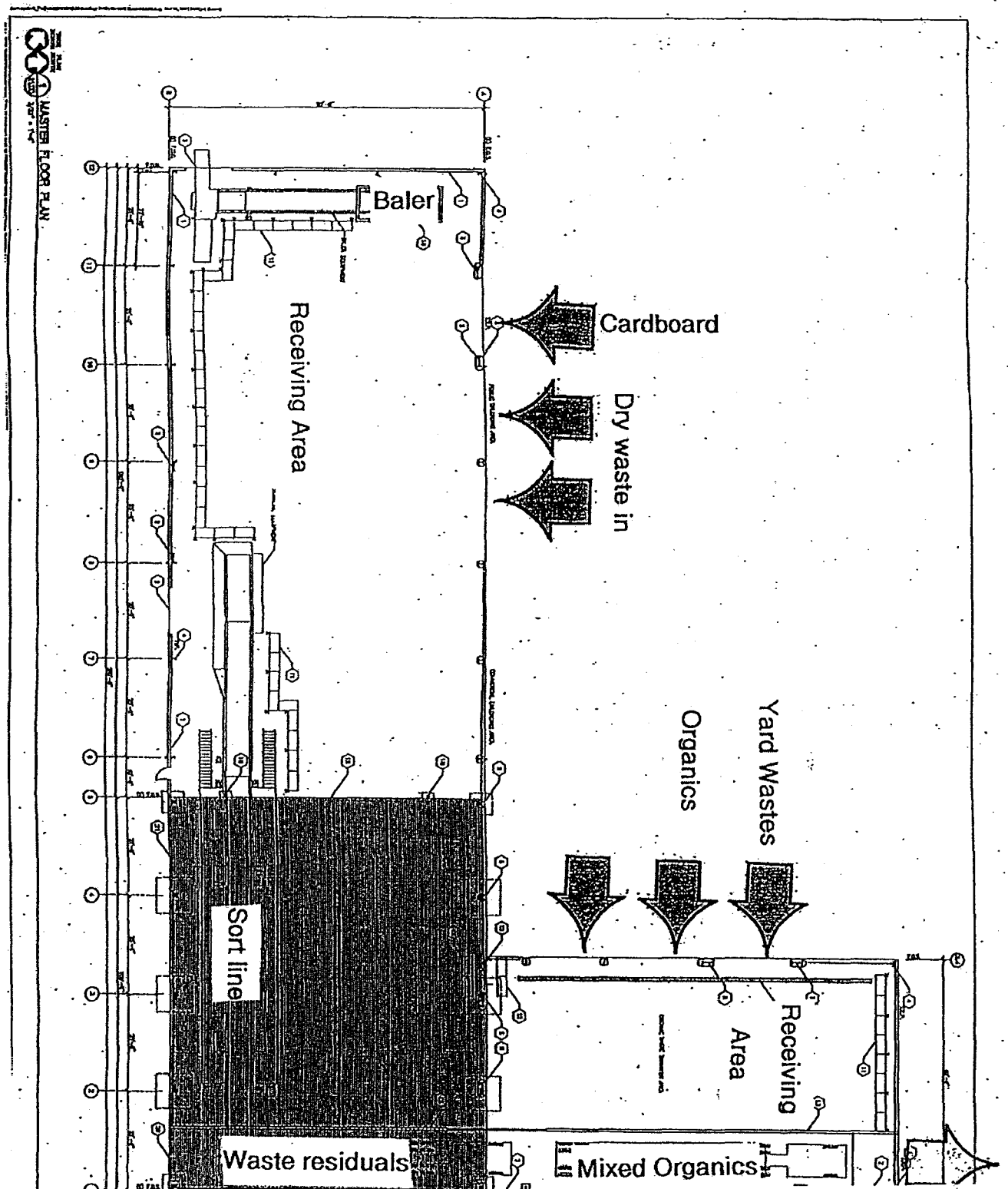


EXHIBIT 2

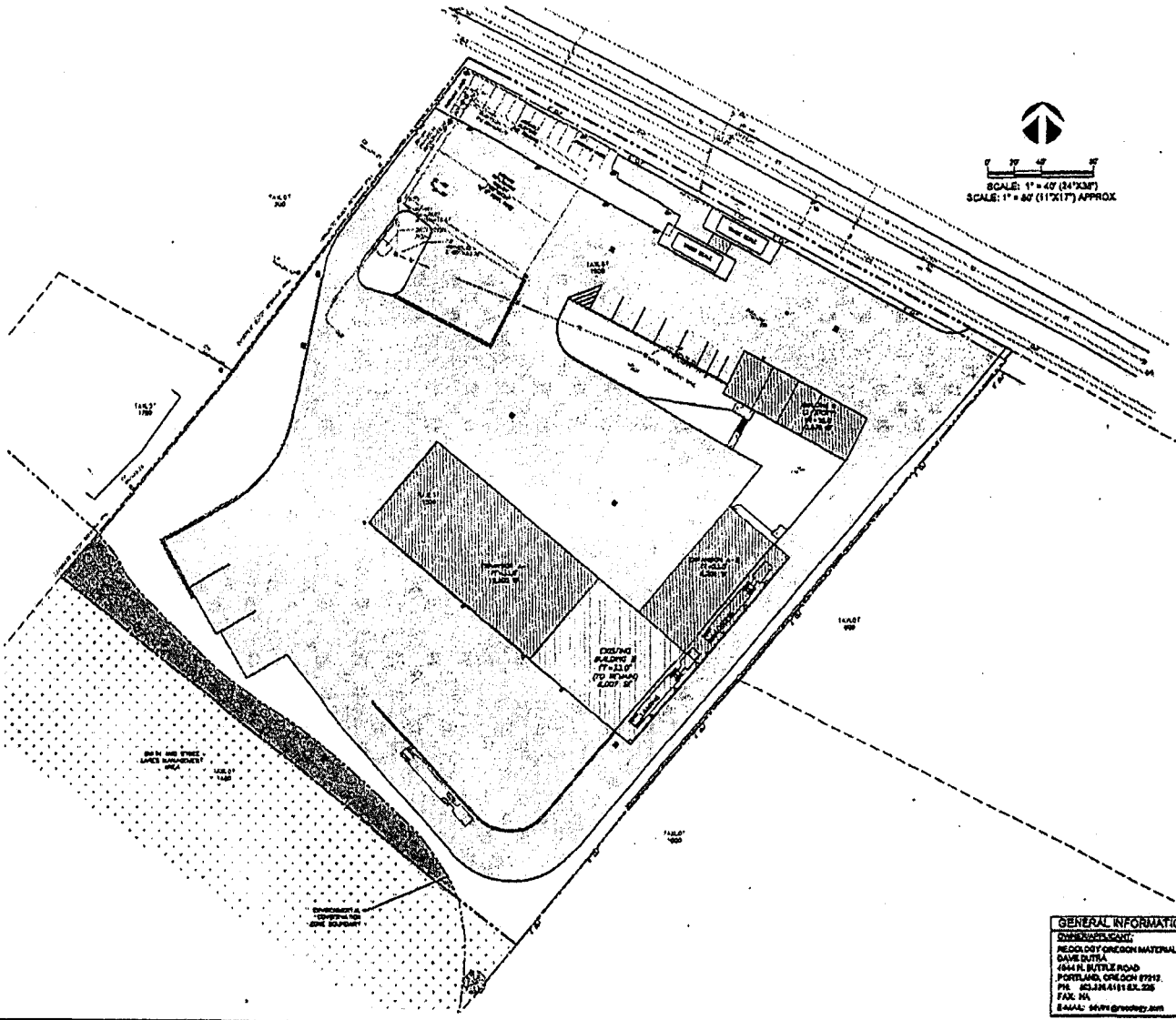
CITY OF PORTLAND
HEARINGS OFFICE
Exhibit #H-4b

RECEIVED
APR 05 2011
HEARINGS OFFICE

CITY OF PORTLAND
HEARINGS OFFICE
Exhibit #H-4c
Case # 4110005

RECOLOGY OREGON MATERIAL RECOVERY, INC
SUTTLE ROAD

4044 NORTH SUTTLE ROAD
PORTLAND, OREGON 97217



OFFICE OF THE
CITY AUDITOR
ENSURING OPEN AND ACCOUNTABLE GOVERNMENT

CITY OF PORTLAND

Office of City Auditor LaVonne Griffin-Valade

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DECISION OF THE HEARINGS OFFICER

I. GENERAL INFORMATION

File No.: LU 12-100368 CU EN (HO 4120011)

Applicants/Owners: Dunn Carney Allen Higgins & Tongue, LLC
Attention: Ty Wyman
851 SW 6th Avenue, Suite 1500
Portland, OR 97204

Perkins Coie, LLP
Attention: Michael Robinson
1120 NW Couch Street, 10th Floor
Portland, OR 97209-4128

Recology Oregon Material Recovery, Inc.
Attention: David Dutra
4044 N Suttle Road
Portland, OR 97217

Fuel Processors, Inc.
Attention: Bill Briggs
4150 N Suttle Road
Portland, OR 97217

Recology Oregon Material
9345 N Harborgate Street
Portland, OR 97203-6314

Burlington Northern Santa Fe Railroad
388 State Street, Suite 420
Salem, OR 97301

Hearings Officer: Gregory J. Frank

Bureau of Development Services (BDS) Staff Representatives: Stacey Castleberry and Sheila Frugoli

Site Address: 4044 and 4150 N Suttle Road and adjacent Burlington Northern Santa Fe Railroad right-of-way

Legal Description: LOT 1&2, PARTITION PLAT 1993-83; LOT 2, CANCEL INTO R237942 / PARTITION PLAT 1993-83, LOT 2; TL 1200 1.66 ACRES LAND & IMPS SEE R646369 (R951320281) FOR MACH & EQUIP, SECTION 32 2N 1E; TL 1100 0.48 ACRES, SECTION 32 2N 1E; TL 1700 1.58 ACRES, SECTION 32 2N 1E; TL 1400 2.81 ACRES, SECTION 32 2N 1E

Tax Account No.: R649733280, R649733290, R951320280, R951320370, R951320470, R951320570

State ID No.: 2N1E32D 01600, 2N1E32D 01500, 2N1E32AC 01200, 2N1E32AC 01100, 2N1E32D 01700, 2N1E32D 01400

Quarter Section: 1726

Neighborhood: St. Johns

Business District: Columbia Corridor Association

District Neighborhood Coalition: North Portland Neighborhood Services

Plan District: None

Other Designations: Smith & Bybee Lakes Natural Resource Management Plan area

Zoning: IHc h—Heavy Industrial base zone, with Environmental Conservation and Aircraft Landing Zone overlay zones

Land Use Review: Type III, CU EN—Conditional Use Review, and Environmental Review

BDS Staff Recommendation to Hearings Officer: Approval with conditions

Public Hearing: The hearing was opened at 1:44 p.m. on July 23, 2012, in the 3rd floor hearing room, 1900 SW 4th Avenue, Portland, Oregon, and was closed at 4:11 p.m. The record was held open until 4:30 p.m. on August 6, 2012, for Argument/Evidence from anyone; until 4:30 p.m. on August 20, 2012 for rebuttal from anyone and the issuance of a Revised Staff Report; until 4:30 p.m. on August 27, 2012, for anyone to comment on the Revised Staff Report with argument and evidence; and until 4:30 p.m. on September 4, 2012, for the Applicants' final argument. The record was closed at that time.

Testified at the Hearing:
Stacey Castleberry, BDS Planner
Elizabeth Reese Cadigan, 1900 SW 4th Avenue, Suite 5000, Portland, OR 97201
Bret Winkler, 1900 SW 4th Avenue, Suite 5000, Portland, OR 97201
Ty Wyman, 851 SW 6th Avenue, #1500, Portland, OR 97204
Michael Robinson, 1120 NW Couch Street, Tenth Floor, Portland, OR 97209
David Coles, 750 Rosemont Road, West Linn, OR 97068
Robert Roholt, 31150 NE Schaad Road, Newberg, OR 97132
Martin Shott, PO Box 529, Aurora, OR 97002
Troy Clark, 2821 NE Klickitat, Portland, OR 97212
Mark Pugh, 2020 SW 4th Avenue, Suite 400, Portland, OR 97201
Jim Brown, PO Box 31, Marylhurst, OR 97036

Introduction: The proposal in this case relates to real property referred to as the Site on Exhibit B (hereafter the "Subject Property") and drainage of stormwater from the Subject Property. A BDS Staff Report and Recommendation to the Hearings Officer was issued on June 15, 2012. (Exhibit H.4 – hereafter referred to as the "Original Staff Report"). At that time, BDS staff concluded that there was an absence of substantial evidence in the record to demonstrate that all of the applicable approval criteria are met. BDS staff recommended, in the Original Staff Report, the denial of the proposed remedial activity and stormwater management plan.

A public hearing was held on July 23, 2012, and supplemental information was submitted into the record by the Applicants (all persons identified above as the Applicants/Owners are referred to collectively as the "Applicants"), City staff and citizens.

BDS provided the Hearings Officer, on August 20, 2012, a Revised Staff Report and Recommendation to the Hearings Officer (Exhibit H.26 – hereafter referred to as the "Revised Staff Report"). BDS represented that the Revised Staff Report sought to address the Applicants' proposals in light of supplemental information entered into the record since June 15, 2012.

At the July 23, 2012, public hearing, excepting for BDS staff and a legal representative ("Brown") for a neighboring property ("Triggco Property"), all persons testifying and submitting documents were in favor of approval of the proposal or, in the alternative, only had questions about the proposal. Brown raised a number of concerns, at the hearing, related to the functionality of the proposed stormwater disposal from the Subject Property (See Exhibit H.13). Brown, in subsequent open-record submissions (Exhibits H.23 and H.24), stated that, "Triggco amends its position on the Application from one of opposition to one of support for the Applicants' proposal; and, requests the City to approve the Application."

The Hearings Officer relies, to a great extent, upon the Revised Staff Report, in making this decision.

Proposal: The requested land use review in this case is for two actions: (1) excavation and remedial cleanup of contaminated soils and wetland substrate at the Site; and (2) construction of facilities to treat and dispose of stormwater from the Subject Property.

One of the Applicants, Oil Re-Refining Company ("ORRCO") and Merit USA, Inc. own property located at 4150 N Suttle Road on which ORRCO operates an oil re-refining business (includes Tax Lots 1100, 1200, 1300, 1400, 1700). Another of the Applicants, Recology Oregon Material Recovery, Inc. ("Recology"), owns 4044 N Suttle Road and obtained a conditional use permit to operate a waste transfer facility there (LU 10-203967 CU AD) (includes Tax Lots 1500 and 1600). Triggco (not one of the Applicants in this case) owns real property immediately west of Tax Lots 1100, 1200, 1300, 1600 and 1700. Burlington Northern Santa Fe Railroad ("BNSF"), one of the listed Applicants, owns Tax Lot 500. See Exhibit H.28 which shows the locations of Tax Lots 500, 1100, 1200, 1300, 1400, 1600, and 1700 and the Triggco property.

ORRCO proposes to excavate and cap contaminated soils from portions of Tax Lots 1400 and 1700 and the surrounding wetland. This area was filled during the 1970s and 1980s with material later discovered to contain contaminants. The fill extended beyond the ORRCO Property to the southwest, about 25 feet onto the adjacent wetland, owned by the BNSF Railroad. ORRCO will excavate contaminated material from the wetland, and then restore the wetland. The anticipated depth of wetland excavation is less than 18 inches. The Applicants' site plans note that a total of 30,383 square feet of contaminated wetland area will be excavated and regraded for the remediation project (24,204 square feet on Tax Lot 1400 and 6,179 square feet on BNSF and adjacent property). The new side-slopes of Tax Lot 1700 (along the southeast and southwest property lines) will be covered with about two feet of clean soil, terraced, and planted with appropriate upland vegetative species. The southern portion of Tax Lot 1700 will be filled, graded and then paved with asphalt to act as a cap over residual soil contamination, preventing stormwater from infiltrating and moving contaminants into the wetland.

Recology proposes to revise the stormwater disposal system approved by LU 10-203967 CU AD (the approved Conditional Use Review for the transfer facility). The proposal now under review will remove an existing underground injection control well ("the UIC") from operation, and drain stormwater from the Recology property into a new engineered, conveyance channel (bioswale) discharging into the wetlands on ORRCO property (Tax Lot 1400), following removal of contaminants. The Applicants' site plans indicate the new channel on Tax Lot 1400 will be approximately 255 feet long, and will create approximately 7,260 square feet of permanent disturbance in the environmental zone. Stormwater from the new facility will eventually flow through an existing flow control structure, south to Smith Lake, part of the Columbia Slough system.

The Subject Property is within the City's Environmental Conservation overlay zone, within the *Natural Resource Management Plan for Smith and Bybee Lakes* ("Management Plan") area. The Management Plan identifies certain projects/actions that are in conformance with the Management Plan and therefore allowed with approval of a Type II land use review. The Management Plan does not identify remediation of contaminated upland or wetland areas. The Management Plan also does

not identify any new stormwater outfalls in the vicinity of this Subject Property. Therefore both actions described in this proposal are considered an "exception" to the Management Plan. On page 68 of the Management Plan (Application Case File, Exhibit G.7), it lists stormwater outfalls and private development projects not anticipated in the Plan as a major exception. Major exceptions require a Type III Environmental Review.

The Conditional Use Review (CU) is required in order to expand the Recology site and to utilize a different stormwater facility than the stormwater facility approved through LU 10-203967 CU AD. No other change to the facility or its operations is proposed. A Conditional Use review to amend LU 10-203967 CU AD must be approved before the stormwater and outfall facility may be relocated to Tax Lot 1400.

Relevant Approval Criteria:
In order to be approved, this proposal must comply with the criteria of Title 33. The relevant criteria are:

- *Natural Resource Management Plan for Smith and Bybee Lakes* **Approval Criteria for Major Exceptions, a through e**, including **Approval Criteria for Minor Exceptions, a through d**, page 68 of the Management Plan; and

- **33.815.220** Conditional Use Review for Waste-Related Use.

II. ANALYSIS

Site and Vicinity: The Subject Property, situated in north Portland, is between N Suttle Road and the BNSF Railroad right-of-way, north of Smith Lake. The immediate area is developed with heavy industrial uses. The general area is commonly known as the Rivergate Industrial District. North Suttle Road forms the north property line and is a narrow, unimproved roadway that terminates approximately 1,600 feet to the west of the Subject Property. North Suttle Road connects to N Marine Drive, a major east-west corridor via N Portland Road, a north-south corridor.

With regards to the physical limits of areas affected by the remediation proposal, plans submitted on June 26, 2012 (Exhibits C.18 through C.27) showed proposed grading around the southwest corner of the asphalt cap, extending beyond ORRCO property, and onto the 4301 N Suttle Road property, apparently owned by Triggco Real Estate, LLC. BDS staff communicated to the Applicants that without full code-required public notice, adding the Triggco property as part of the Subject Property would create a procedural error.

On July 19, 2012, the Applicants provided a letter stating that site plans would be revised to remove Triggco's property from the proposed project area (Exhibit H.11.c), and then on August 6, 2012, the Applicants did provide revised site plans (Exhibit H.21) indicating that no work is proposed on Triggco's property as part of this land use review.

While the overall "site" includes the entire ownership of the Recology and ORRCO properties, as well as a portion of the BNSF Railroad property, the project site for the purposes of this review include only Tax Lots 1400, 1600, 1700, and BNSF Railroad property, because the environmental regulations only pertain in these areas, and the Conditional Use only applies to the revised stormwater facility for Recology.

The Recology property is used for building material recycling and processing of large amounts of wood debris and landscape materials for composting. A small weighing depot building is located near the north property line that faces N Suttle Road. A new 3,500 square-foot storage and employee building is in the northeast corner of the site. A new 26,000 square-foot, open, metal structure used for accepting and processing blended food and yard debris waste, from residential sources, is situated centrally on the site. The Recology property also contains large mounds of landscape material, boulders, earth-moving equipment and paved truck loading and maneuvering areas.

The ORRCO property contains an oil recycling business located west of the Recology site, and includes numerous large tank containers and large truck facilities. The ORRCO site has a long history of heavy industrial use. Its northernmost building was constructed by 1970. A woodworking company used the property until 1976, at which time a used oil and petroleum-solvent recovery plant began operation. That use expanded over time into the central portion of the property. The southernmost structure on the ORRCO property was constructed by 1997. The southern portion of the ORRCO property has never been developed, although large quantities of fill were placed there in the 1990's. Tax lot 1400 (immediately southwest of the Recology property), owned by ORRCO, is a jurisdictional wetland area, including black cottonwood/willow forest and scrub shrub wetland areas, large expanses of reed canarygrass emergent wetland area, some open water, and filled upland at the northwest corner, where derelict vehicles are stockpiled. The Tax Lot 1400 wetland area drains into Smith Lake, situated south of the railroad.

Zoning: The Subject Property is zoned IH, Heavy Industrial with "h," Aircraft Landing and "c" Environmental Conservation overlay zones. The portion of the Subject Property, within the "c" overlay zone, is also within the Management Plan.

The Heavy Industrial zone is one of three zones that implement the Industrial Sanctuary Comprehensive Plan Map designation. The zone provides areas where industrial uses may locate, including those uses that are not desirable in other zones due to their objectionable impacts or appearance. Waste-Related facilities are permitted in the IH zone through Conditional Use review. The "h" overlay limits the height of structures and vegetation in order to provide safer operating conditions for aircraft in the vicinity of the Portland International Airport. The height limit of the overlay zone is, at its lowest point on the site, approximately 650 feet.

The southern portion of the Subject Property is located within the "c" Environmental Conservation overlay zone and the Management Plan. The "c" overlay conserves important environmental resources in areas where the resources can be protected while still allowing environmentally sensitive development. The Management Plan:

> "seeks to implement the management framework, provide the funding, and institute the processes needed to restore and maintain the lakes to the extent possible in a way that is 'faithful to their original natural condition.' The Management Plan proposes a set of policies and actions enabling the establishment of a major regional environmental and recreational resource for the Portland metropolitan area. The Management Plan adopts as its overall goal protection and enhancement of the natural resources at the Lakes and compatible recreational uses" (Management Plan, pages 1 and 5).

The Management Plan identifies specific improvements anticipated on the properties, and determines the procedure and approval criteria for development that triggers an Environmental Review.

Environmental Resources: The application of the environmental overlay zones is based on detailed studies that have been carried out within eight separate areas of the City. Environmental resources and functional values present in environmental zones are described in environmental inventory reports for these study areas.

The Subject Property is mapped as Site #55 and Water Feature #41, Smith and Bybee Lakes, within the *Inventory and Analysis of Wetlands, Water Bodies and Wildlife Habitat Areas for the Columbia Corridor* ("The Inventory"). The *Columbia Corridor Mapping Project* identifies high quality uplands and wetlands for all of Smith and Bybee Lakes. Identified resources and functional values for Site 55 includes drainageway functions, including fish habitat, drainage, flood storage, desynchronization, erosion control, sediment trapping, and pollution and nutrient retention and removal.

The Inventory describes Site #55 and Water Feature #41 as follows:

> "Smith and Bybee Lakes is the most complex and unique natural area within Portland's Urban Growth Boundary. It is about 2,000 acres of a type of habitat which was formerly widespread throughout the lower Columbia River riparian area. Almost all of the site is within the 100-year flood boundary. Even though this site scored the highest on the Wildlife Habitat inventory of all sites inventoried, there is still potential for further enhancement. Extensive amounts of edge habitat are found at this wetland, and are one of the site's most significant and basic natural resources for wildlife."
>
> "The Smith and Bybee Lakes area is the largest, most significant wetland area in the City of Portland, and the largest natural resource inventory area in the Columbia Corridor. It has tremendous habitat value and diversity, and should be protected."

The Management Plan also describes environmental resources within the identified area. It states:

> "Smith and Bybee Lakes and their associated sloughs and wetlands are remnants of formerly extensive river bottomlands located near the confluence of the Willamette and Columbia Rivers. The wildlife area is managed primarily for wildlife habitat protection and enhancement while providing passive recreation opportunities for the Portland metropolitan area. The Smith and Bybee Lakes Wildlife Area is composed of two lakes and a number of smaller ponds and sloughs. Considerable changes have occurred to these lakes that have had negative impacts on the lake's system: construction of dam and dikes, filling of wetlands and waterbodies, and introduction of exotic species of plants and animals."

Currently, the wildlife area contains open water, emergent, shrub/scrub, and forested wetlands as well as upland forest. Myriad wildlife species use the site, including more than 100 bird species and a variety of mammals, reptiles and amphibians, including western painted turtles, which are on the Oregon Department of Fish and Wildlife's sensitive species list.

Land Use History: A detailed list of the land use history of both the ORRCO and Recology properties is provided in Exhibit G.2 in the application case file. City records indicate that prior land use reviews include LU 10-203967 CU AD--Approval of a Conditional Use to establish a Waste-Related use that receives, sorts, handles, stores, and re-loads mixed yard debris/food waste; and approval of Adjustments to:

- waive the requirement that the activities relating to the receiving, sorting, handling, storage and transfer of wastes take place entirely within an enclosed structure;
- reduce the Waste-Related setback from 100 feet to 30 feet between the structure containing the waste-material and the east property line;
- waive the L1, General Landscaping requirement within the required setback;
- waive the requirement for a fence on the interior side of the required setback;
- waive the perimeter parking lot landscaping standard, applied as a nonconforming upgrade requirement to the existing parking area; and
- waive the interior parking lot landscaping standard, applied as a nonconforming upgrade requirement to the existing parking area.

Unless expressly modified by this land use review, all approvals and conditions of approval remain in effect for LU 10-203967 CU AD.

Applicants' Statement: A description of the proposal was provided on pages 4 and 5 of this decision. The Applicants have provided additional description of the project in the Stormwater Report (Exhibit A.6) and a statement of project need (see Exhibit A.5) copied below:

Proposed Improvements: (Exhibit A.6, page 1)

> "This joint stormwater project between ORRCO and Recology is actually part of two larger projects; ROMAR [reference is to Recology] is enlarging the operation of their N Suttle Road facility and ORRCo is working with the Oregon Department of

Environmental Quality (DEQ) to remediate contaminated wetland sediments and surface soils in the panhandle (tax lot 1700) caused in part by foundry wastes being used as fill to create the panhandle portion of the ORRCO site during the facility's early history. As part of the project, a stormwater management system is required to treat the precipitation accumulation on the site. Recology is currently using an Underground Injection Control (UIC) structure for the control of stormwater. However, the UIC is not adequate to handle stormwater from the entire site. Because of high ground water and issues of soil contamination, DEQ determined that the UIC was not appropriate for this site. The new stormwater management system will treat and release stormwater to the wetland on ORRCO's tax lot 1400."

Project Need: (Exhibit A.5, page 5)

"...The project is needed for the following reasons:

- Storm Drainage. The existing stormwater conveyance systems on the ORRCO Property and the Recology property are substandard to City of Portland regulations. The UIC was designed only to handle the stormwater from a portion of the Recology property. During sustained rain events the lower portion thereof has standing water. The stormwater trench on the ORRCO property was never engineered; in a significant rain event the water can flow directly into the wetland without any treatment.
- Environmental Cleanup. As mentioned above, portions of the panhandle and the wetland are currently contaminated with heavy metals from operations conducted on site and from contaminated fill material. Were the UIC forced to handle all stormwater from the site, it could produce a groundwater mound, which could cause soil contamination to migrate.
- Resource Restoration. As described in the December 21, 2011 Natural Resources Report by Martin Schott of Schott & Associates Inc. ('the Natural Resource Report') (Exhibit 4 hereto), natural resources on the Environmental-zoned portion of the site are degraded. A substantial element of the project is to replant that area in native species."

Agency Review: A "Request for Response" was mailed May 10, 2012. The following bureaus have responded with no issues or concerns:

- Bureau of Transportation Engineering ("PBOT")
- Water Bureau
- Portland Fire Bureau
- Portland Police Bureau
- BDS Life Safety Plan Review
- Portland Parks and Recreation, Urban Forestry

BDS Site Development and the Bureau of Environmental Services (BES) responded on June 8, 2012 with concerns regarding how the proposal meets Titles 10 and 24, and the Stormwater Management Manual (please refer to Exhibits E.6 and E.7). They stated that the Applicants did not submit all of the information requested (please refer to Exhibits E.1, E.2 and G.5) and that they cannot support the proposal.

BDS Site Development administers City Titles 10, Erosion Control, and 24, Building Regulations. Erosion control in and around water bodies included in environmental overlay zones affects impacts to environmental resources and functions, such as slope stability and water quality. In this case, erosion control is a listed function for Resource Site #55 in the *Inventory and Analysis of Wetlands, Water Bodies and Wildlife Habitat Areas for the Columbia Corridor*. Several approval criteria in this environmental review refer to impacts on resource values, water quality in the lakes, detection of potential environmental problems, and mitigation of adverse impacts on resource values. Flood storage is also a listed function for the resource site, and Title 24 includes requirements for balance cut and fill in the 100-year floodplain. These aspects of Titles 10 and 24 therefore relate directly to the environmental review approval criteria.

The U.S. Army Corps of Engineers ("Corps") responded (Exhibit E.8) that the proposal requires a Corps permit. Since one of the environmental review approval criteria requires review and approval by appropriate state and federal resource agencies, this is relevant.

The Applicants supplemented the application on June 26, 2012, with revised and full-sized site plans (Exhibits C.18 through C.27), and narrative information responding to BDS's and BES's need for additional information (Exhibit A.17). BDS Site Development issued a revised response, noting that, while additional geotechnical, flood hazard, and erosion control information may be required at permit time, they take no exception to the proposal as presented (Exhibit E.14).

BES issued a Revised Land Use Response on June 15, 2012 (see Exhibit E.11). There were outstanding technical questions pertaining to the type of treatment facility, the rate of discharge to the wetland, the drainage basin area, engineering details, and calculations. Questions regarding federal (US Army Corps of Engineers) approval of the proposal also remained.

BES issued a memorandum to the Hearings Officer on July 23, 2012 (Exhibit H.14), describing new information received from the Applicants. BES indicated that they had reviewed the new information. BES stated that the system as most recently proposed meets BES flow control and pollution reduction requirements, that the Applicants clarified the merits of the proposal relative to the Stormwater Management Manual's flow control requirements, that the Applicants clarified how the three main basins are related within the proposed treatment train, and that adequate details and calculations were provided in the stormwater report supplement. BES indicated that it is satisfied that the swales will not be lined, that maintenance easements over the swale may be addressed by conditions of approval, and that wetland impacts will be compensated for. BES requested selection of several different plant species for revegetation of the wetlands, and that wetlands not be restored with two feet of sand as the replacement substrate.

During his testimony at the hearing, and as a member of the Applicants' project team, Dr. Martin Schott, stated that silt loam topsoil, not clean sand, will be used to restore excavated wetlands, as depicted on corrected cross-section drawings provided by the Applicants on July 19, 2012. He also acknowledged BES concerns with the species *Rosa pisocarpa* in stormwater swale plantings and agreed that it would be removed from swale planting areas.

On August 6, 2012, revised site plans were submitted to the City by the Applicants (Exhibits H.21.a through H.21.j). Although the July 19, 2012 version of MERIT/FPI REMEDIATION CROSSECTIONS & HYDRAULIC PROFIELS Sheet 4 of 10 notes that all excavated wetland areas are to be restored with top soil (Exhibit H.11.c), the August 6, 2012, version of the same plan sheet (Exhibit H.21.d) (erroneously) notes excavated wetland to be restored with up to two feet of clean sand. This notation is in direct conflict with oral testimony provided by Dr. Schott and with the July 19, 2012 letter to Stacey Castleberry, with the accompanying cross section drawing.

The August 6, 2012, site plans remove *Rosa pisocarpa* from swale planting areas, consistent with BES' and Dr. Schott's testimony at the July 23, 2012 hearing.

On August 17, 2012, BES provided a memorandum to the Hearings Officer explaining that it concluded that the application meets the Stormwater Management Manual's Stormwater Hierarchy; that the point of discharge is the wetland on the ORRCO property; and that elevation information provided on both the Applicants' revised site plans, and on a survey attached to a Triggco letter, indicates stormwater has the opportunity to flow through the 18-inch pipes leading to the 4-foot culvert leading to Smith Lake. BES noted that maintenance of the culvert system is not within the purview of BES.

Neighborhood Review: A Notice of a Public Hearing on a Proposal in Your Neighborhood was mailed on June 5, 2012. The Original Staff Report was issued on June 15, 2012. A Notice of Rescheduled Public Hearing was sent out June 28, 2012. In response to the Original Staff Report, correspondence from three neighboring property owners, or the neighborhood association, was submitted to BDS staff (Exhibits F.1, F.2, and F.3).

The three letters (Exhibits F.1, F.2 and F.3) discuss stormwater impacts on the neighboring property to the northwest of the ORRCO site, at 4301 N Suttle Road; installation of the new stormwater management system prior to the heavy rain season, or some alternative means to minimize stormwater runoff pollution; and inquiries as to the listed Applicants and consultants for the proposal.

On June 20, 2012, BDS staff received an e-mailed letter from Jim Brown (Exhibit H.13), representing the adjacent property owner, Triggco Real Estate, LLC. In his e-mailed letter, in testimony at the July 23, 2012, hearing, and subsequently in written evidence (Exhibit H.23) Mr. Brown described stormwater ponding problems on the Triggco property and expressed concern that the Applicants' proposal would adversely impact Triggco's property. He raised questions regarding the ownership, and maintenance responsibility of the existing culverts that route water from wetland areas north of the railroad, under the railroad, and south to Smith Lake. Evidence submitted by Mr.

Brown raised technical stormwater facility design questions, similar to those described in BES's June 15, 2012 Response letter.

BDS Staff Comments: (BDS staff included the following comments in the Revised Staff Report):

> "BES responded to Triggco's concerns in a July 23, 2012 memorandum to the Hearings Officer (Exhibit H.14). BES concluded that while the expected rise in surface water elevation is minimal, the Applicants should provide more specific site elevation numbers to substantiate their claim that the project will not increase flooding on adjacent properties.
>
> On August 17, 2012, BES provided a memorandum to the Hearings Officer explaining that the application meets the Stormwater Management Manual's Stormwater Hierarchy; that the point of discharge is the wetland on the ORRCO property; and that elevation information provided on both the applicants' revised site plans, and on a survey attached to a Triggco letter, indicates stormwater has the opportunity to flow through the 18-inch pipes leading to the 4-foot culvert leading to Smith Lake. They note that maintenance of the culvert system is not within the purview of BES.
>
> On July 2, BDS received a letter from Metro's Advisory Committee for the Smith and Bybee Wetlands Natural Area (Exhibit H.10). In their letter they express a more desirable stormwater plan would include disposal to a municipal storm sewer, although they acknowledge that such an alternative is cost prohibitive to the applicants. They express support for the invasive species removal and revegetation of wetland and banks surrounding them, and concern with regards to water quality in Smith Lake, following implementation of the stormwater plan. They suggest that the applicants monitor water and soil quality at the discharge point into Smith Lake annually for five years, rather than merely at the wetland discharge point.
>
> At the July 23, 2012 hearing Dave Coles responded for the applicants, noting that surface waters entering Smith Lake originate from five other sources besides ORRCO and Recology, as well as from N Suttle Road. Nonetheless the applicants will monitor groundwater and surface water from the remediation area from 11 monitoring wells, quarterly for a minimum of one year following remediation, as required by DEQ."

A letter was received from Gerald Breunig and Diane Rohrbach (Exhibit H.12). The authors of Exhibit H.12 represented that they own real property "directly adjacent and east of both the Recology site and the wetland area that are the subject of this case file." The authors expressed concern that the City staff had not reviewed/researched the stormwater impacts upon their property

if the proposal were to be approved. The Hearings Officer notes that stormwater impacts are discussed, in the context of relevant approval criteria, in the findings below. The Hearings Officer also notes that the relevant approval criteria do not specifically require the Applicants to demonstrate "that their proposed storm water management system will not affect our [Bruenig/Rohrbach] property to the east."

ZONING CODE APPROVAL CRITERIA
ENVIRONMENTAL REVIEW
Zoning Code Section 33.430.030 describes the relationship of Chapter 33.430 to other environmental regulations. This section explains that Natural Resource Management Plans may contain regulations that supersede or supplement the regulations of this chapter. Whenever natural resource management plan provisions conflict with other provisions of this chapter, the natural resource management plan provisions supersede. Non-conflicting provisions supplement the provisions of this chapter. It lists the Management Plan as having additional regulations that may supersede or supplement the environmental regulations of Chapter 430.

The Management Plan mandates review procedures and approval criteria for projects in conformance with the Management Plan, for minor exceptions to the Management Plan, for major exceptions to the Management Plan, and for Management Plan Modifications.

As described in the Management Plan, the following Approval Criteria for Major Exceptions are applicable to the proposed hazardous waste remediation project and water quality/stormwater outfall project.

Approval Criteria for Major Exceptions
a. Same criteria as for minor exceptions.
Approval Criteria for Minor Exceptions:
a. The activity will have no negative long-term impact on the resource values of the Management Area.

Findings: Identified resource values of the Management Area include uplands and wetlands for all of Smith and Bybee lakes, drainageway functions, including fish habitat, drainage, flood storage, desynchronization, erosion control, sediment trapping and pollution and nutrient retention and removal. The Applicants provided an assessment of the resource values at the Subject Property and rated it with an overall habitat value score of 19 out of a possible 108 points, with resources related to the presence of long-standing water receiving the highest score (10 out of a possible 32). The Smith and Bybee Lakes inventory site, overall, received a Wildlife Habitat Inventory Score of 106 (The Inventory).

The Inventory describes the Smith and Bybee Lakes inventory site further as:

> "Even though this site scored the highest on the Wildlife Habitat Inventory of all sites inventoried, there is still potential for further enhancement," and
> "Extensive amounts of edge habitat (ecotone) is found at this wetland, and is one of the site's most significant and basic natural resources for wildlife."

Ecotone is defined as a transition area between two adjacent ecological communities, such as between wetland and upland areas.

The Applicants describe the project as,

> "Stormwater from both the ORRCO Property and the Recology Property will be directed through two separate sediment traps, oil/water separators, and separate bioswales before discharging into the wetland. Both facilities will have separate conveyance systems, sample collection/compliance points, and NPDES 1200-COLS permits."

The Applicants cite their stormwater report (Exhibit A.6 in the application case file) and notes that the project will improve values associated with stormwater management. The Applicants highlight the bioengineered features of the energy dissipation structure, as well as in-water erosion protection and bank stabilization features.

The Applicants, in Exhibit A.17, quantified the disturbance of the overall project as follows:

> "The project area, which is also the total area of temporary disturbance is as follows:
> **Recology**: 63,800 square feet, including:
> - 51,300 square feet of asphalt paving and
> - 12,500 square feet of swale and landscaping
>
> **ORRCO**: 92,000 square feet, including:
> - 30,800 square feet asphalt cap
> - 27,900 square feet landscaping and swale
> - 30,400 square feet current wetland to be restored
> - 2,900 square feet of new wetland to be created
>
> The permanent disturbance area includes the construction area (including the bioswale, graded panhandle, asphalt cap, and the Recology retention swale) with the exception of the currently contaminated wetlands, which will be restored to an improved condition."

With regards to potential impacts to wetlands on the site, the Applicants reference Exhibit A.9. Exhibit A.9 (March 27, 2012 Letter to Ty Wyman from Schott & Associates) notes that the wetlands are already contaminated, that contaminants will be removed, and clean fill will be used to restore the wetlands to their current elevation.

BES commented (Exhibit E.7) as follows:

> "As discussed in the pre-application conference, BES requires that a wetland biologist or similarly-qualified professional assess impacts this proposal will have on the wetland, including the additional water (quality, quantity) that will be discharged to it. The assessment should discuss at a minimum whether the impacts will change the wetland class, inundation levels and vegetation composition."

The Applicants described wetland impacts, in Exhibit A.17, as follows:

"The Applicants have submitted three exhibits from Martin R. Schott, Ph.D. ~

- October, 2011 wetland delineation;
- December 21, 2011 Merit/FPI Remediation & Recology Expansion: Natural Resources (hereinafter, the Natural Resource Report); and
- A March 27, 2012 letter to Ty Wyman of Dunn Carney.

The Natural Resource Report describes the quality of the existing wetland as follows: Using the same method set forth in the Inventory and Analysis of Wetlands, Water Bodies, and Wildlife Habitat Areas for the Columbia Corridor, [t]he assessment method breaks down the various habitat components into five categories: water, food, cover, other values, and unique features. Except for having water present for a good portion of the year the site received low scores for all habitat components. The water component had a score of 10 out of a possible 32 points, and most of the points were due to the long duration of standing water. The food component had a score of 3 out of a possible 24 points. The cover component had a score of 6 out of a possible 28 points. There is little structural diversity on the site. Most of the cover consists of herbaceous grasses or grass likes, and Himalaya blackberry.

There are a few trees, but they are mostly located in the northeast corner of the wetland. Because the wetland is located within an industrial area the site receives a great deal of disturbance. There are frequently people working on the railroad siding, located south of the project: There is heavy equipment being used on the Recology and ORRCo properties for daily operations. Essentially, there is no inter-dispersion with other habitats. Because of the disturbance and the lack of other habitats the site had a score of 1 out of a possible 14 points for the other value category. Finally, there are no unique features, such as habitat types, flora, or fauna. The site received no score for this component.

Overall, the site had a score of 19 out of a possible 108 points.

Dr. Schott's March 27 letter described impacts he expects the combined stormwater system to have on the enhanced wetland.

The storm water report prepared by R. Roholt, P.E., predicts that there will be no significant difference in the quantity of the water entering the wetland. Thus,

> the quantity of the water entering the wetlands will not change and will have no impact on the wetland. The storm water report also calculated that the rate of water entering the wetlands will be essentially unchanged from the existing conditions. This is due to the residence time in Recology's retention swale.
>
> The quality, quantity and rate of flow of water entering the wetland will not have a negative impact on the wetlands. In fact, because the contaminated areas within the wetlands will be cleaned up and replanted to native vegetation, and the upland panhandle will be capped with asphalt, the project will have a net improvement on the wetlands. Combine this with the development and planting of buffers with native species and there will be a significant improvement in the value of the wetland after the project is completed."

As described on page 9 of this decision, testimony from representatives of neighboring property owners, such as from Mr. Jim Brown and from Metro, raised concerns with technical aspects of stormwater impacts to both water quantity and water quality in the wetlands, and subsequently in Smith Lake. BES, as the City's bureau responsible for administering the Stormwater Management Manual, requested more specific site elevation numbers to substantiate claims by the Applicants that the project will not increase flooding on adjacent properties.

On August 17, 2012, BES responded (Exhibit H.25) to new information from the Applicants and from Triggco, that elevation information shows stormwater has the opportunity to flow through the 18-inch pipes leading to the 4-foot culvert leading to Smith Lake. BES indicated that the Stormwater Management Manual flow control and pollution reduction standards are met.

At the July 23, 2012, hearing, the Applicants provided testimony describing the water and soil monitoring that will be required of them by the Oregon State Department of Environmental Quality ("DEQ") to ensure no further soil or water contamination occurs as a result of this project. Such monitoring will ensure that contaminants do not enter downstream water bodies as a result of this project.

Regarding excavation impact on wetlands, site plans submitted by the Applicants on June 26, 2012 included cross-section views of upland, bank, and wetland areas to be excavated and then re-filled or capped to contain toxic materials. The Cross Sections and Hydraulic Profiles sheet (Exhibit C.21) noted "Contaminated Sediment Removed to a maximum depth of 2 [feet] and replaced with clean sand." During the July 23, 2012 public hearing, the Applicants stated that the notation of sand was in error and that silty loam topsoil would be used to replace excavated contaminated soils from wetland areas.

The Applicants' supplemental narrative (Exhibit A.17) described impacts to resources on page 7 as follows:

> "The cleanup of contaminated soils within the wetlands will result in approximately 0.772 acres of wetland impacts. The contaminated soils will be removed and then clean topsoil will be added to the cleanup area bringing the topography back to original elevations. In conjunction with the removal of contaminated soils, reed canary grass, an invasive species, will be removed from the wetlands where there are contaminated soils. All of the disturbed area (0.772 acres) will be planted with native herbaceous wetland plant species."

Similarly, the Merit/FPI Remediation and Recology Expansion Natural Resources report (Exhibit A.2) describes replacing excavated wetland soils with clean topsoil.

On August 6, 2012, revised site plans were submitted to the City by the Applicants (Exhibits H.21.a through H.21.j). Although the July 19, 2012 version of MERIT/FPI REMEDIATION CROSSECTIONS & HYDRAULIC PROFIELS Sheet 4 of 10 notes that all excavated wetland areas are to be restored with top soil (Exhibit H.11.c), the August 6, 2012 version of the same plan sheet (Exhibit H.21.d) (erroneously) notes excavated wetland to be restored with up to two feet of clean sand. This notation is in direct conflict with oral testimony provided by Dr. Martin Schott and with the July 19, 2012 letter to BDS staff planner Stacey Castleberry, with the accompanying cross section drawing (Exhibit H.11.c). Therefore Exhibit H.21.d cannot be approved, but rather Exhibit H.11.c should be approved in its place.

As described generally by the Applicants, removal of the contaminated sediments and replacement with clean topsoil, in concert with replanting native wetland vegetation (100 trees and 13,800 plugs) is self-mitigating. Further, enhancement of the upland buffer areas adjacent to the wetland with dense native tree and shrub plantings (259 trees and 1,634 shrubs) will offset the impacts of developing a stormwater swale through the upland buffer. The Hearings Officer finds that with the approval of Exhibit H.11.c (instead of Exhibit H.21.d) *this approval criterion can be met.*

b. The activity provides a buffer of equivalent quality, density, and resource value as required by the Management Plan.

Findings: The Applicants noted that

> "The Natural Resource Report (p. 6) presents a Mitigation Plan that depicts enhancement of the site with native plantings upon completion of the project [see Exhibit A.7]. (Exhibit 8 hereto is a plan showing this planting in more detail….)"

The Applicants provided a mitigation planting plan (Exhibits C.27 and H.21j) that indicated significant wetland and buffer plantings. Buffer plantings are proposed to cover 19,312 square feet and are comprised of 259 trees and 1,634 shrubs. The Applicants described the buffer to be planted with four different types of trees planted at a density equivalent to 10 feet on center, to form a visual barrier between the wetland and industrial area as they mature. The buffer would replace an existing blackberry community with a mixed forest scrub-shrub community (Exhibit A.17). Note that the Mitigation Planting Plan plant list includes 95 Oregon ash trees that are not shown on the graphic plan. These trees will be required to be planted and shown on plans at permit time.

LU 10- 203967 CU AD required the following plantings at the south property line of the Recology site:

- A minimum of 65 native trees comprised of at least 15 each of cottonwood, cedar, maple, and oak; spaced, on average, 15 feet apart.
- A minimum of 300 native shrubs comprised of at least 75 each of dogwood, currant, Douglas spiraea, and shiny-leaf spiraea, spaced, on average 5 feet apart.
- Seeded at a rate of 10 pounds per 1000 square feet, with native grasses, sedges, and forbs selected from the *Portland Native Plant List*.

Exhibits C.27 and H.21.j indicate that the LU 10-203967 CU AD plantings have been installed.

The Applicants described, in part, a five-year monitoring plan (see Exhibit A.5, page 13-14) to ensure survival of the proposed plantings as follows:

> "Upon completion of the plantings described in the Mitigation Plan, the wetland and its buffer will be monitored for five years pursuant to DSL guidelines. The monitoring will inspect the hydrology of the site and determine the percent survivorship of the planted trees and shrubs to insure they meet the success criteria typically required by DSL and the Army Corps of Engineers. The percent cover of each herbaceous species will be estimated. If non-native or invasive species are observed control measures will be designed.
>
> At the time of the fifth monitoring site visit, the wetland boundary will be redelineated to verify that the wetland restoration and wetland creation areas meet the three wetland criteria; wetland hydrology, dominance by hydrophytic vegetation, and hydric soils. During the monitoring of the wetlands the water quality facility will be monitored to verify that it is well vegetated, and functioning properly."

The monitoring program proposed by the Applicants will ensure survival of all proposed mitigation plantings. To confirm maintenance of the required plantings for the initial

establishment period, the Applicants must have the plantings inspected five years after plantings are installed.

The buffer plantings on the Recology property, together with the proposed 259 trees (including the 95 Oregon ash trees) and 1,634 shrubs on the ORRCO property, will provide a buffer of equivalent quality, density, and resource value as required by the Management Plan. The Hearings Officer finds that with conditions to include the 95 Oregon ash trees and a 5-year monitoring and maintenance plan, *this approval criterion will be met.*

c. A construction management plan is provided to minimize impacts on the resource area and provide complete restoration at time of construction. Success criteria must be met within two years of construction.

Findings: The Applicants noted that the remediation of the wetland, the construction of an upland containment site with a cap, and the installation of a stormwater treatment facility all require the use of large construction equipment like dump trucks, loaders, dozers, and excavators. The Applicants indicated that construction management procedures would be followed that will minimize impacts to the wetlands.

The Applicants' narrative Construction Management Plan (Exhibit A.17) described erosion control measures, clearing, construction of the haul road, and the sequence of excavation and dewatering of wetlands, placement of excavated material in upland areas, paving with asphalt, and planting of finished grades.

A graphic Construction Management Plan (Exhibit H.21.i), identified the temporary operational road as well as the extent of the project. To provide added protection of resources beyond the project limits and to inform contractors working in the field, BDS recommended that the Applicants should be required to provide temporary construction fencing at the "extent of project" line.

The Applicants proposed a five-year monitoring plan (see Exhibit A.5, page 13-14) to ensure survival of the proposed plantings as follows:

> "Upon completion of the plantings described in the Mitigation Plan, the wetland and its buffer will be monitored for five years pursuant to DSL guidelines. …The percent cover of each herbaceous species will be estimated. If non-native or invasive species are observed control measures will be designed."

In order to meet the two-year restoration timeline required by this criterion, BDS recommended that the Applicants should be required to provide BDS with a two-year monitoring report describing the survival of required plantings.

The monitoring program proposed by the Applicants will ensure longer term survival of all proposed mitigation plantings. To confirm maintenance of the required plantings for the

initial establishment period, the Applicants should have the plantings inspected by the City five years after plantings are installed.

The Construction Management Plan, together with the monitoring program described by the Applicants, will minimize impacts on the resource area and provide restoration of the site. The Hearings Officer finds that with conditions for construction fencing to further protect environmental resources, for a two-year monitoring report, and for inspection of proposed wetland and buffer plantings, *this approval criterion will be met.*

d. The activity is consistent with the Goal Statement and Objectives of the Plan.

Findings: The Goal Statement of the Management Plan is:

> "to protect and manage the Smith and Bybee Lakes area as an environmental and recreational resource for the Portland region. The lakes will be preserved as historical remnants of the Columbia River riparian and wetlands system. They will be maintained and enhanced, to the extent possible, in a manner that is faithful to their original natural condition…."

The findings provided by the Applicants related to this approval criterion are as follows:

> "The wetland on the site is an isolated portion of the Smith/Bybee Lakes SNRA, situated beyond the BNSF tracks northeast of Smith Lake proper. The goal statement recognizes a number of public values at stake (viz., environmental, natural, recreational, and historical resources of Smith & Bybee Lakes) and seeks to enhance all in a balanced way.
>
> The uses on the site have not changed since adoption of the NRMP. Thus, the question is whether reconfiguration of the upland storm water drainage to direct drainage to an enhanced wetland is, de facto, inconsistent with the goals set forth in this statement. We do not believe so. We believe that, to the contrary, by improving the quality of upland drainage and restoring a degraded wetland, the project tends to fulfill the goals set forth therein.
>
> Protection and management of environmental and natural resources. The goal statement describes these as the primary public values at stake. As to these public values, the project scores high. It will remediate environmental contamination and restore a degraded wetland.
>
> Protection and management of recreational resources. Given its location north of the railroad culvert, we see no feasible active recreational opportunity (and note

that, unlike Smith Lake proper) nothing in the NRMP suggests the site should be given to such uses.

Protection and management of historical resources. The goal statement recognizes two historical uses, as floodplain and wetland of the NRMP. Regarding the former, the statement does not suggest a desire to return to uncontrolled flooding. Furthermore, the statement explicitly recognizes wetlands among the historical use of the area; the project will enhance a currently degraded wetland."

With regards to the Objectives of the Management Plan, the Applicants' findings are summarized below:

Objective 2. Provide for and maintain habitat diversity representative of the lower Columbia River Floodplain wetlands.

The Applicants described wetland and upland plantings that will follow excavation and capping of contaminated soils, and construction of the new stormwater channel as:

"The planting of the buffer with native trees and shrubs will result in greater buffering of the wetlands from adjacent industrial activities. The resultant forested area will be both a visual and a physical separation of the wetland from the activities within the industrial areas. There will be four to five different wetland plant communities verses the current three communities."

The Applicants' supplemental narrative (Exhibit A.17) describes the result of the wetland remediation proposal as:

"In conjunction with the removal of contaminated soils, reed canary grass, an invasive species, will be removed from the wetlands where there are contaminated soils. All of the disturbed area (0.772 acres) will be planted with native herbaceous wetland plant species."

The Hearings Officer finds that the removal of contaminated sediments, along with replacing invasive exotic vegetation with native wetland species, is consistent with Objective 2.

Objective 3. Maintain and enhance water quality in the lakes.

The Applicants noted that consistency with the City's Stormwater Management Manual will ensure this objective is met. BES provided five separate responses to various revisions of the proposal and supplemental information provided by the Applicants. Ultimately, BES provided comments in support of the proposal with regards to water quality (Exhibit H.25). In Exhibit H.25, BES responded to new information from the Applicants and from Triggco, that the Stormwater Management Manual flow control and pollution reduction standards are met. The Hearings Officer concurs with the BES' (Exhibit H.25) comments.

Objective 4. Implement a monitoring program to assure early detection of potential environmental problems, and to quantify management programs.

The Applicants stated in findings presented in Exhibit A.5, that upon completion of the plantings described in the Mitigation Plan, the wetland and its buffer will be monitored for five years pursuant to DSL guidelines. The Applicants stated that:

> "The monitoring will inspect the hydrology of the site and determine the percent survivorship of the planted trees and shrubs to insure they meet the success criteria typically required by DSL and the Army Corps of Engineers. The percent cover of each herbaceous species will be estimated. If non-native or invasive species are observed control measures will be designed."
>
> "At the time of the fifth monitoring site visit, the wetland boundary will be redelineated to verify that the wetland restoration and wetland creation areas meet the three wetland criteria; wetland hydrology, dominance by hydrophytic vegetation, and hydric soils. During the monitoring of the wetlands the water quality facility will be monitored to verify that it is well vegetated, and functioning properly."

Regarding monitoring waters and soils for contamination, at the July 23, 2012 hearing, the Applicants stated that they will monitor groundwater and surface water from the remediation area from 11 monitoring wells, quarterly, for a minimum of one year following remediation, as required by DEQ. The Hearings Officer finds this objective is satisfied.

Objectives 1 and 8 are also applicable to the proposal:

Objective 1. Control water level in order to manage the lakes' environmental system.

Objective 8. Develop upland areas in a manner which is compatible with the preservation of the wetlands and use of the lakes for passive recreation.

In their supplemental findings of June 26, 2012 (Exhibit A.17), the Applicants elaborate on how the overall project will maintain floodplain functions and restore wetlands on the site. The Hearings Officer finds, based upon Exhibit A.17, that the overall project is consistent with the Goal Statement and Objectives of the Plan. The Hearings Officer finds that *this approval criterion is met.*

b. Review and Approval by appropriate State and Federal resource agencies.

Findings: The Applicants stated, in Exhibit A.4, that the hazardous material cleanup precludes Corps/DSL (US Army Corps of Engineers and Oregon Department of State Lands) jurisdiction. The Applicants stated in Exhibit A.5 that they will obtain necessary approvals including NPDES 1200-CA permit, NPDES Municipal Separate Storm Sewer Discharge Permit; and a joint Corps and State Lands Removal/Fill permit.

A letter from Dave Coles of the Oregon Department of State Lands (Exhibit A.10), on the one hand confirms the delineation performed by the Applicants' representative, and on the other hand alerts the Applicants that:

> "...a series of filling activities were conducted that converted visible wetlands to upland on the southern half of Tax Lot 1700 and the northern portion of Tax Lot 1400. Since the Department has no record of issuing a permit for these activities, I have forwarded this information to the Department's Resource Coordinator for Multnomah County..."

BES requested, in their June 8, 2012 comments (Exhibit E.7), confirmation of feedback from the Oregon Department of State Lands, the Corps regarding approval of work in wetlands, approval by DEQ of contamination removal, and DEQ approval of a 1200 C construction permit.

The Corps (Exhibit E.8) has commented that a Corps permit is required for work in jurisdictional wetlands.

The Applicants submitted in Exhibit A.17:

> "As noted previously, this request creates a Catch-22 in that these agencies will not grant such approval until the City approves the application. The applicants submit as Exhibit 2 hereto a June 21, 2012 email from the Corps that it has received our application. The applicants have asked DEQ to confirm its review and approval of the Recology portion of the project. We expect DEQ to review this request and submit something to the City soon. As to the ORRCO Property, the applicants will accept a condition of approval that review and approval of both remediation proposal and stormwater management proposal by DEQ, DSL, U.S. Army Corps of Engineers must precede any work on the site."

Given the iterative nature, between federal, state, and city agencies, of permitting in-water work, it is somewhat challenging to gain complete federal and state permit approval, absent local planning agency approval. Therefore it is a reasonable solution for the Applicants to demonstrate federal and state approval of the remediation work and the stormwater swale, as a condition to be met prior to issuance of city grading, building, or other development permits. The Hearings Officer finds that with such a condition, *this approval criterion can be met.*

c. There are no alternate sites within the urban area suitable for the use which will have less impact on the resource.

Findings: The Applicants argue that this approval criterion applies directly only to proposals to permit a primary use/development of land, as opposed to an accessory use/development such as that contemplated here.

The proposal to construct an engineered, lined stormwater conveyance channel roughly 270 feet long, will permanently displace approximately 12,000 square feet of undeveloped upland and riparian resource area within the Management Plan area and the environmental zone.

The Management Plan (page 68) provides a list of "Uses and Activities" under the heading "Minor Exceptions," and a second list of "Uses and Activities" under the heading "Major Exceptions." Both lists of "Uses and Activities" are presented in concert with the respective "Approval Criteria" that must be met to approve the described exceptions. "Storm water outfalls and passive water treatment areas not anticipated in the Plan" are listed there as a "Use and Activity" considered a "Major Exception." The "Approval Criteria for Major Exceptions" listed within the same section of the Management Plan includes this criterion that "there are no alternate sites within the urban area suitable for the use which will have less impact on the resource." This criterion refers to the "uses and activities" listed above and in the same section, and includes stormwater outfalls and passive water treatment areas.

Therefore, the Hearings Officer finds that the Applicants must provide an analysis of alternatives considered for the stormwater conveyance channel and outfall structure, including conducting stormwater treatment and conveyance on the developed tax lots, instead of in the Management Plan resource area, and the alternatives analysis must clearly demonstrate there are no other possible locations for the facilities with fewer impacts.

The Applicants explained the only area on the Subject Property low enough for the stormwater facility (other than the proposed location) is at the south end of Tax Lot 1700; and that this filled area encroaches into BNSF property and the fill contains metal contamination. The Applicants stated that the DEQ required contaminants be removed from the wetland up to the ORRCO (Tax Lot 1700) property line, and that the area within Tax Lot 1700 be capped (paved with asphalt). In their supplemental findings of June 26, 2012 (Exhibit A.17), the Applicants described the limitations created by existing topography and development on the ORRCO and Recology properties, and the need to place the new stormwater swale within the environmental zone of the Management Plan area. The Hearings Officer finds such explanation/description reasonable. Given such constraints, the Hearings Officer finds that *this approval criterion to be met.*

d. Any long-term adverse impacts of the proposal on the resource values protected or created by the Management Plan are mitigated within the Management Area.

Findings: The Applicants' proposed findings noted that design elements of the outfall and swale protect resource values recognized by the Management Plan, and that excavation of and capping of contaminated soils protects wetland vegetation. Further, the first approval criterion for environmental review (Criterion for Major/Minor Exceptions) stipulates that the activity will have no negative long-term impact on the resource values of the Management Area. Criterion a.a (Criterion for Major/Minor Exceptions) was determined to be met. To the extent that no negative long term impacts result from the project, the Hearings Officer finds that the impacts are either insignificant or are mitigated by the project itself. To the extent that Criterion a.a is met, the Hearings Officer finds that *this approval criterion is also met.*

e. The proposed exception is consistent with the purposes of the City of Portland Environmental Regulations (E Zone).

Findings: The Environmental Conservation zone conserves important resources and functional values in areas where the resources and functional values can be protected while allowing environmentally sensitive urban development.
Applicants assert that the project is consistent with these purpose statements as follows:

- Outfall protection will be installed at the three remaining outfalls to minimize erosion and turbidity.
- Spill containment facilities will be installed at the three outfalls to be utilized, to minimize the potential for a spill of toxic or hazardous material from trucks to enter the wildlife area.
- The use of native vegetation will enhance habitat values relative to existing conditions south of the wall and will emphasize the uniqueness of the area along the roadway frontage.

The approval criteria described above require that the project be designed, located, and constructed in a way that minimizes impacts to identified resources and functional values, and that mitigates adverse impacts to the resources. The City's environmental regulations as described in Zoning Code chapter 33.430 contain similar requirements, and a project that meets the approval criteria for Major Exceptions to the Management Plan will be consistent with the purposes of the environmental regulations of Zoning Code chapter 33.430. The Hearings Officer finds that *this approval criterion is met.*

CONDITIONAL USES

33.815.220 Mining and Waste Related These approval criteria allow these uses in locations where their large size and potential nuisance and environmental impacts will not harm surrounding land uses. The approval criteria are as follows:

A. There are adequate nearby lands available for the development of more intense industrial uses;

Findings: The Applicants propose to expand the exterior improvement area (development) by approximately 12,000 square feet on an adjacent ownership in order to construct a new stormwater bioswale/disposal system. The proposed new stormwater facility will serve the Recology site as well as the ORRCO/Merit USA site. Because the Recology site operates an approved Waste-Related Conditional Use at the site, BDS and the Portland City Attorney's Office determined that a Conditional Use Review was required in order to amend the original decision. Specifically, the current proposal is to remove an existing UIC well from operation, and drain stormwater from the property into a new proposed bioswale discharging into the wetlands on the adjacent ORRCO property lot. The adjacent tax lot was not identified in the original decision. Therefore, the Hearings Officer finds that Recology is expanding its site area for the facility. This amendment review is limited in scope only as it pertains to the

criteria that directly relates to this proposed stormwater facility. The Applicants did not propose any changes to the approved operation and/or conditions that were imposed for the Recology facility through LU 10-203967 CU AD.

This site is located within the North Portland Harbor, also known as the Rivergate area. It is comprised of many very large industrial properties that are currently used and available for intense industrial use. According to a Portland Development Commission report 2004 Industrial Districts Atlas, there are over 4,000 acres of industrial land in the Rivergate area. The Hearings Officer finds that a stormwater facility that serves both the ORRCO industrial use and the Recology facility, will have negligible impact to this area. There is adequate nearby land that is not environmentally-zoned, that is available for development of more intense industrial uses. The Hearings Officer finds that *this approval criterion is met.*

B. The proposed use will not significantly alter the overall industrial character of the area, based on the existing proportion and type of industrial uses;

Findings: As noted above, there is a significant amount of industrially-zoned land in the immediate vicinity. Recology has recently completed most of the construction of the improvements including new buildings and vehicle areas that were approved through LU 10-203967 CU AD. The food waste processing activities, as well as other exterior activities, are set back at least 300 feet from the public street. The new food-waste processing structure is set back over 100 feet from the south property line.

In Portland, stormwater bioswales are commonly used to manage stormwater for both large and small commercial and industrial developments. This Waste-Related Use does not require a specialized stormwater management system because of the waste products that are transferred and processed on site. The residual liquid waste, aka leachate, will be contained within the processing structure and removed from the site, per Condition D (LU 10-203967 CU AD). It is the new warehouse-like buildings, extensive paving and infiltration characteristics of the Recology portion of the Subject Property, that have led the Applicants to design a new large bioswale facility that will be shared by both Recology and ORRCO. The Hearings Officer finds that *this approval criterion is met.*

C. There will be no significant health or safety risk to nearby uses;

Findings: When analyzing Recology's operational and physical features, in case LU 10-203967 CU AD, that could create potential health or safety risks to nearby uses, the Hearings Officer considered odor, disease transmission, stormwater/water pollution, noise dust/air pollution and traffic safety impacts. Given the limited scope of this proposal, only the stormwater and water pollution impacts need to be considered.

As discussed extensively in findings for the Environmental Review approval criteria, BES and the BDS Site Development Section determined, per their supplemental responses (Exhibits

E.12 and E.14) that the proposal will not create water pollution and flood-related risks. Therefore, the Hearings Officer finds that *this approval criterion is met.*

D. There will not be significant detrimental environmental impacts to any nearby environmentally sensitive areas;

Findings: The Applicants submitted a concurrent Environmental Review application, which applies the criteria for Major Exceptions to the Management Plan. The findings, above, show that with conditions, the Environmental Review criteria can be met. Therefore, the Hearings Officer finds that *this approval criterion is met.*

E. The proposed use adequately addresses potential nuisance-related impacts such as litter;

Findings: As explained in findings above, the proposed stormwater facility will not be used to process and/or dispose of residual liquids from the mixed yard debris/food waste materials. A stormwater bioswale facility, that is designed and maintained per the City's Stormwater Management Manual requirements, will not create nuisance-related impacts. As proposed, the conditions imposed under LU 10-203967 CU AD will continue to apply. The Hearings Officer finds that *this approval criterion will continue to be met.*

F. Public services.

1. **The proposed use is in conformance with either the street designations shown in the Transportation Element of the Comprehensive Plan;**

2. **The transportation system is capable of supporting the proposed use in addition to the existing uses in the area. Evaluation factors include street capacity, level of service or other performance measures; access to arterials; connectivity; transit availability; on-street parking impacts; access requirements; neighborhood impacts; impacts on pedestrian, bicycle, and transit circulation; and safety for all modes; and**

Findings: The project site directly fronts N Suttle Road, which terminates 1,600 feet west of the site. North Suttle Road intersects N Portland Road which connects to N Marine Drive. The project site and surrounding area is within a designated Freight District.

The Transportation Element of the Comprehensive Plan designates the abutting and nearby streets as follows:

Rights-of-Way	Traffic Classification	Transit Classification	Bicycle Classification	Pedestrian Classification
N Suttle Road	Local Service	None	Local	Local
N Portland Road	Major City Traffic Street	Community Transit	Off-Street Path	Off-Street Path
N Marine Drive	Major City Traffic Street	Transit Access	Local	Local

PBOT reviewed the application for its potential impacts regarding the public right-of-way, traffic impacts and conformance with adopted policies, street designations, Title 33 and Title 17, and for potential impacts upon transportation services. PBOT staff provided the following comments (please refer to Exhibit E.4):

> "With regard to this proposal, the described grading, stormwater management facility construction and landscaping will not result in any transportation-related impacts. It is noted that transportation-related conditions of approval from LU 10-203967 CU AD, specifically conditions J and L, remain in effect."

The Hearings Officer finds the PBOT comments in Exhibit E.4, including those quoted above, to be credible. The Hearings Officer finds that *this approval criterion is met.*

3. Public services for water supply, police and fire protection are capable of serving the proposed use, and proposed sanitary waste disposal and stormwater disposal systems are acceptable to the Bureau of Environmental Services.

Findings: No issues or concerns were raised by Water, Fire and Police Bureau staff. In response to additional information submitted by the Applicants, the BDS Site Development Section and BES staff have determined that the application demonstrates that the proposed stormwater disposal system is acceptable.

In written testimony and at the public hearing, Mr. James Brown, an attorney representing the western abutting property—Triggco Real Estate, raised concerns about the efficacy of the proposed stormwater facility. Specifically, Mr. Brown noted concerns about the existing culverts that will carry the stormwater from the Applicants' shared bioswale to the wetland area. Mr. Brown raised concerns about the maintenance of the culverts. Mr. Brown also questioned whether or not the Applicants have authority to maintain the facilities; such as remove nuisance vegetation and debris. Mr. Brown, in supplemental submissions (Exhibits H.23 and H.24) stated the following:

> "Since the July 23 Hearing, we have had the opportunity to meet with the Applicants and their consultants to review the Application and to better understand its scope and potential impacts to Triggco's Property. As a result Triggco amends its position on the Application from one of opposition to one of support for the Applicants' proposal; and, requests the City to approve the Application."

Mr. Brown, despite the supportive comments above, did indicate that Triggco still had concerns with the "functionality of the Port's offsite stormwater management system." (Exhibit H.23)

In response, the July 23, 2012 BES memorandum to the Hearings Officer (Exhibit H.14) states that the system, as proposed, meets BES flow control and pollution reduction requirements, and that adequate details and calculations were provided in the stormwater report supplement.

Therefore, based upon the favorable response from the service bureaus and general support from Mr. Brown, the Hearings Officer finds that *this approval criterion is met.*

G. The proposal complies with the regulations of Chapter 33.254, Mining and Waste-Related Uses;

Findings: Except where modified through an approved Adjustment, the Hearings Officer found that the Waste-Related Use met all the applicable development standards of this Chapter when reviewed under LU 10-203967 CU AD. The proposed stormwater facility will serve both Recology and ORRCO. The stormwater management improvements do not conflict with the regulations of Chapter 33.254. The Hearings Officer finds that *this approval criterion is met.*

H. There is a reclamation or redevelopment plan which will ensure that the site will be suitable for an allowed use when the mining or landfill use is finished; and

Findings: *This is not a mining or landfill project. This requirement does not apply.*

I. Public benefits of the use outweigh any impacts which cannot be mitigated.

Findings: Under LU 10-203967 CU AD, the Hearings Officer found that as long as Recology adhered to the operational plan and the imposed conditions of approval, the benefit of a mixed yard debris/food waste transfer station outweighed any negative impacts.

Criterion D speaks directly to protecting nearby environmentally-sensitive areas from significant detrimental environmental impacts. This proposal is limited in scope, and the Hearings Officer finds that with conditions that mitigate the impacts to the protected resources, there will be no negative impact to the delineated jurisdictional wetland and the other environmental resourced identified in the Management Plan. Therefore, the Hearings Officer finds that there is no need to comparatively weigh the impacts and the public benefits of the facility. The Hearings Officer finds that *this approval criterion is met.*

DEVELOPMENT STANDARDS

Unless specifically required in the approval criteria listed above, this proposal does not have to meet the development standards in order to be approved during this review process. The plans submitted for a building or zoning permit must demonstrate that all development standards of Title 33 can be met, or have received an Adjustment or Modification via a land use review prior to the approval of a building or zoning permit.

III. CONCLUSIONS

The Applicants proposed excavation and remedial cleanup of contaminated soils and wetland substrate at the ORRCO site, and construction of facilities to treat and dispose of stormwater from the ORRCO site and the Recology site. The application required, under the Portland Zoning Code, a Conditional Use Review and an Environmental Review.

ORRCO proposes to excavate approximately 30,000 square feet of wetland area to a depth of less than two feet, placing excavated soils on the filled southern portions of the adjacent ORRCO property, where they will be capped with asphalt paving. Wetland and bank soils will be replaced, with up to two feet of silt loam topsoil, to current grade and areas will be planted with wetland and buffer vegetation.

Recology proposes to replace their underground injection control system with water quality swales on their property, and a 270-foot long dual swale on ORRCO property to the south. Stormwater from the Recology site and from the southern part of the ORRCO site will be routed through the swale with release into the wetland on Tax Lot 1400.

Mitigation will occur in wetlands and surrounding bank/or buffer areas on ORRCO property to the south and southwest of the Recology site. Mitigation will include over 31,000 square feet of wetland plantings, 19,000 square feet of buffer plantings, and 7000 square feet of swale plantings. 359 trees, 1,634 shrubs, and 13,800 wetland plugs will be planted.

As late as the July 23, 2012 public hearing, BDS staff maintained that the proposal did not adequately address the following issues:

- the physical extent of proposed remediation excavation (and whether or not Triggco property is included),
- the nature of the wetland restoration plan, and
- technical design elements of the stormwater management plan, and the resulting effect of stormwater plan on neighboring property to the west.

On August 6, 2012, the Applicants revised the proposal to exclude the Triggco property from the project area. The revised proposal involved remediation activities, and proposed stormwater swale only upon the ORRCO and Recology property within the environmental overlay zones.

Supplemental stormwater figures were submitted by the Applicants in response to questions iterated by BES before, during, and following the public hearing. BES responded to new information from the Applicants and from Triggco, that elevation information shows stormwater has the opportunity to flow through the 18-inch pipes leading to the 4-foot culvert leading to Smith Lake, and that the Stormwater Management Manual flow control and pollution reduction standards are met. BES noted that maintenance of the culvert system is not within the purview of BES.

The Hearings Officer found that with the supplemental information provided by the Applicants, as described in findings for the applicable approval criteria listed above, that Applicants demonstrated

that the impacts to environmental resources resulting from the proposal will be offset by removal of contaminated soils, followed by wetland restoration using silty loam topsoil and native plantings of wetland trees, shrubs, and groundcovers. The Hearings Officer found that planting of native upland trees and shrubs would provide a dense buffer between the wetlands and surrounding industrial uses. The Hearings Officer found that health and safety risks would be avoided and that public services, namely stormwater management, would be adequately provided. The Hearings Officer found that with conditions of approval to demonstrate approval by federal and state resource agencies, installation of construction management and erosion control mechanisms, and installation and success of restoration plantings, the Environmental Review and Conditional Use Review approval criteria can be met.

IV. DECISION

Approval of a Conditional Use Review for the expansion of a site with a Waste-Related Use for the construction of an approximate 270-foot long, lined bioswale) in the north corner of Tax Lot 1400 that will replace an existing underground injection control well. The bioswale will be located on Tax Lot 1400 (R323424) and will be shared, jointly by the owner of Tax Lot 1400. Approval is subject to the following condition:

A. Conditions of approval per LU 10-203967 CU AD, for the Waste-Related Use facility located on Tax Lot 1600 (R237942), shall remain in full force and effect.

Approval of an Environmental Review for:
- Construction of a 270± -foot long lined bioswale in the north corner of Tax Lot 1400;
- Excavation of approximately 30,383 square feet of contaminated wetland soils on Tax Lot 1400 and in BNSF Railroad right-of-way;
- Paving of approximately 35,000 square feet of contaminated soils at the south end of Tax Lot 1700;
- Temporary stockpiling of excavated soils on Tax Lot 1700; and
- Temporary dewatering of wetland areas on Tax Lot 1400;

within the Environmental Conservation overlay zone within the plan area of the Management Plan, as shown on the attached approved Exhibits H.21c, H.11.c, and H.21.e through H.21.j. Approval is subject to the following conditions:

A. All permits: Copies of the approved site plans (see attached) and Conditions of Approval listed below, shall be included within all plan sets submitted for permits (building, grading, Site Development, erosion control, etc.). These exhibits shall be included on a sheet that is the same size as the plans submitted for the permit and shall include the following statement, ***"Any field changes shall be in substantial conformance with approved Exhibits H.21c, H.11.c, and H.21.e through H.21.j from LU 12-100368 CU EN."***
1. A construction permit from BDS is required.
2. As part of any BDS permit application for this project, the Applicants shall submit documentation demonstrating Corps approval of proposed work.

B. Temporary construction fencing shall be installed along the "Extent of Project" line for the approved development, as depicted on the attached approved Construction Management Plan (Exhibit H.21.i), or as required by inspection staff during the plan review and/or inspection stages.
1. Tree Protection fencing shall be installed according to Zoning Code Section 33.248.068 (Tree Protection Requirements) around trees designated to remain, and around the perimeter of the newly installed buffer plantings (required by LU 10-203967 CU AD) at the south property line of the Recology property.
2. No mechanized construction vehicles are permitted outside of the approved "Extent of Project" line delineated by the temporary construction fence. All planting work, invasive vegetation removal, and other work to be done outside the Limits of Construction Disturbance, shall be conducted using handheld equipment.

C. A total of 359 trees, 1,634 shrubs, and 13,800 plugs, selected from the *Portland Plant List*, shall be planted, in substantial conformance with Exhibit H.21.j Remediation Landscaping Plan.
1. Ninety-five Oregon ash trees shall be included in the 359 trees to be planted.
2. Plantings shall be installed between October 1 and March 31 (the planting season).
3. Prior to installing required mitigation plantings, non-native invasive plants shall be removed from all areas within 10 feet of mitigation plantings, using handheld equipment.
4. All mitigation and remediation shrubs and trees shall be marked in the field by a tag attached to the top of the plant for easy identification by the City Inspector/Landscape Professional. All tape shall be a contrasting color that is easily seen and identified.
5. After installing the required mitigation plantings, the Applicants shall request inspection of Permanent Erosion Control Measures (IVR 210) by BDS, who will confirm that all required mitigation plantings have been installed. A letter of certification from the landscape professional or designer of record may be requested by BDS to document that the plantings have been installed according to the approved plans.

D. An inspection of Permanent Erosion Control Measures shall be required to document installation of the required mitigation plantings.
1. The **Permanent Erosion Control Measures** inspection (IVR 210) shall not be approved until the required mitigation plantings have been installed (as described in Condition C above);

--OR--

2. If the **Permanent Erosion Control Measures** inspection (IVR 210) occurs outside the planting season (as described in Condition C above), then the Permanent Erosion Control Measures inspection may be approved prior to installation of the required mitigation plantings – if the Applicants obtain a separate **Zoning Permit** for the purpose of ensuring an inspection of the required mitigation plantings by March 31 of the following year.

E. The landowner shall maintain the required plantings for five years to ensure survival and replacement. <u>The landowner is responsible for ongoing survival of required plantings during and beyond the designated two-year monitoring period.</u> The landowner shall:

1. Provide a two-year monitoring report to BDS Land Use Services, documenting the restoration of wetland areas and the survival of required plantings. This report shall be submitted two years following final approval of the Erosion Control or Zoning Permit required in Conditions C.5 and D, above.
2. Obtain a Zoning Permit for a final inspection at the end of the 5-year maintenance and monitoring period. The permit must be finaled no later than 5 years from the final inspection for the installation of mitigation planting, for the purpose of ensuring that the required plantings remain. Any required plantings that have not survived must be replaced.

F. Failure to comply with any of these conditions may result in the City's reconsideration of this land use approval pursuant to Portland Zoning Code Section 33.700.040 and /or enforcement of these conditions in any manner authorized by law.

Note: In addition to the requirements of the Zoning Code, all uses and development must comply with other applicable City, regional, state and federal regulations.

This decision applies to only the City's environmental regulations. Activities which the City regulates through PCC 33.430 may also be regulated by other agencies. In cases of overlapping City, special district, regional, state, or federal regulations, the more stringent regulations will control. City approval does not imply approval by other agencies.

Gregory J. Frank, Hearings Officer

9/10/12

Date

Application Determined Complete: May 2, 2012
Report to Hearings Officer: June 15, 2012
Revised Report to Hearings Officer: August 20, 2012
Decision Mailed: September 11, 2012
Last Date to Appeal: 4:30 p.m., September 25, 2012
Effective Date (if no appeal): September 26, 2012 Decision may be recorded on this date.

Conditions of Approval. This project may be subject to a number of specific conditions, listed above. Compliance with the applicable conditions of approval must be documented in all related permit applications. Plans and drawings submitted during the permitting process must illustrate how applicable conditions of approval are met. Any project elements that are specifically required by conditions of approval must be shown on the plans, and labeled as such.

These conditions of approval run with the land, unless modified by future land use reviews. As used in the conditions, the term "applicant" includes the applicant for this land use review, any person undertaking development pursuant to this land use review, the proprietor of the use or development approved by this land use review, and the current owner and future owners of the property subject to this land use review.

Appeal of the decision. ANY APPEAL OF THE HEARINGS OFFICER'S DECISION MUST BE FILED AT 1900 SW 4TH AVENUE, PORTLAND, OR 97201 (503-823-7526). Until 3:00 p.m., Tuesday through Friday, file the appeal at the Development Services Center on the first floor. Between 3:00 p.m. and 4:30 p.m., and on Mondays, the appeal must be submitted at the Reception Desk on the 5th Floor. **An appeal fee of $5,000 will be charged (one-half of the application fee for this case, up to a maximum of $5,000).** Information and assistance in filing an appeal can be obtained from BDS at the Development Services Center.

Who can appeal: You may appeal the decision only if you wrote a letter which is received before the close of the record on hearing or if you testified at the hearing, or if you are the property owner or applicant. If you or anyone else appeals the decision of the Hearings Officer, only evidence previously presented to the Hearings Officer will be considered by the City Council.

Appeal Fee Waivers: Neighborhood associations recognized by the Office of Neighborhood Involvement may qualify for a waiver of the appeal fee provided that the association has standing to appeal. The appeal must contain the signature of the Chairperson or other person authorized by the association, confirming the vote to appeal was done in accordance with the organization's bylaws.

Neighborhood associations, who wish to qualify for a fee waiver, must complete the Type III Appeal Fee Waiver Request for Organizations Form and submit it prior to the appeal deadline. The Type III Appeal Fee Waiver Request for Organizations Form contains instructions on how to apply for a fee waiver, including the required vote to appeal.

Recording the final decision.
If this Land Use Review is approved the final decision must be recorded with the Multnomah County Recorder. A few days prior to the last day to appeal, the City will mail instructions to the applicant for recording the documents associated with their final land use decision.

- A building or zoning permit will be issued only after the final decision is recorded.

The applicant, builder, or a representative may record the final decision as follows:

- By Mail: Send the two recording sheets (sent in separate mailing) and the final Land Use Review decision with a check made payable to the Multnomah County Recorder to: Multnomah County Recorder, P.O. Box 5007, Portland OR 97208. The recording fee is identified on the recording sheet. Please include a self-addressed, stamped envelope.
- In Person: Bring the two recording sheets (sent in separate mailing) and the final Land Use Review decision with a check made payable to the Multnomah County Recorder to the County

Recorder's office located at 501 SE Hawthorne Boulevard, #158, Portland OR 97214. The recording fee is identified on the recording sheet.

For further information on recording, please call the County Recorder at 503-988-3034
For further information on your recording documents please call the Bureau of Development Services Land Use Services Division at 503-823-0625.

Expiration of this approval. An approval expires three years from the date the final decision is rendered unless a building permit has been issued, or the approved activity has begun.
Where a site has received approval for multiple developments, and a building permit is not issued for all of the approved development within three years of the date of the final decision, a new land use review will be required before a permit will be issued for the remaining development, subject to the Zoning Code in effect at that time.

Applying for your permits. A building permit, occupancy permit, or development permit may be required before carrying out an approved project. At the time they apply for a permit, permittees must demonstrate compliance with:

- All conditions imposed herein;
- All applicable development standards, unless specifically exempted as part of this land use review;
- All requirements of the building code; and
- All provisions of the Municipal Code of the City of Portland, and all other applicable ordinances, provisions and regulations of the City.

EXHIBITS
NOT ATTACHED UNLESS INDICATED

A. Applicants' Statements
   1. (January 3, 2012) application for 4044 and 4150 N Suttle Road
   2. (January 3, 2012) Merit/FPI Remediation and Recology Expansion Natural Resources
   3. (January 3, 2012) Jurisdictional Wetland Determination
   4. (May 2, 2012) Response to incomplete letter
   5. (May 2, 2012) Applicants' amended (CU and EN) narrative
   6. (May 2, 2012) Stormwater Management Report
   7. (May 2, 2012) Merit/FPI Remediation and Recology Expansion Natural Resources
   8. (May 2, 2012) LU 10-203967 CU AD Decision of the Hearings Officer
   9. (May 2, 2012) ORRCO/Recology Projects/Impacts on Wetlands
   10. (May 2, 2012) DSL wetland concurrence letter
   11. (May 14, 2012) Perkins Coie 7-day extension of 120-day clock
   12. (May 14, 2012) Dunn Carney Allen Higgins & Tongue 7-day extension of 120-day clock
   13. (June 14, 2012) Schott & Associates ORRCO/Recology projects/Impacts on Wetlands
   14. (June 14, 2012) DEQ Record of Decision Remedial Action Alternative Merit Oil/Fuel Processors Inc.
   15. (June 14, 2012) Recology Mitigation Planting Plan
   16. (June 19, 2012) Request for Continuation of Public Hearing
   17. (June 26, 2012) Supplemental Narrative
   18. (July 2, 2012) Letter from the Applicants with attached letter from St. John's Neighborhood Association
   19. Photographs of Posted Notice
B. Zoning Map
C. Plans and Drawings
   1. Map depicting site area for LU 12-100368 CU EN
   2. Map depicting site area for LU 10-203967 CU AD
   3. Site plan of area for LU 10-203967 CU AD
   4. (January 3, 2012) Merit/FPI remediation erosion control plan (Site Plan of area for LU 12-100368 CU EN)
   5. Recology planting plan
   6. (January 3, 2012) Merit/FPI remediation mitigation plan
   7. (January 3, 2012) Merit/FPI remediation construction management plan
   8. (May 2, 2012) colored zone map exhibit
   9. (May 2, 2012) Merit/FPI remediation erosion control plan
   10. (May 2, 2012)ORRCO/Recology site plan
   11. (May 2, 2012) ORRCO/Recology construction management plan
   12. (May 2, 2012) ORRCO/Recology existing conditions plan
   13. (May 2, 2012) ORRCO/Recology stormwater areas and flows
   14. (May 2, 2012) ORRCO/Recology erosion control plan
   15. (May 2, 2012) ORRCO/Recology proposed project

16. (May 2, 2012) Merit/FPI remediation mitigation plan
17. (May 2, 2012) Merit/FPI remediation proposed project and plant list
18. (June 26, 2012) Merit/FPI remediation title page
19. (June 26, 2012) Merit/FPI remediation existing conditions
20. (June 26, 2012) Merit/FPI remediation site plan
21. (June 26, 2012) Merit/FPI remediation cross sections and hydraulic profiles
22. (June 26, 2012) Merit/FPI remediation details
23. (June 26, 2012) Merit/FPI remediation stormwater management plan
24. (June 26, 2012) Merit/FPI remediation grading and erosion control plan
25. (June 26, 2012) Merit/FPI remediation grading and erosion control plan details and notes
26. (June 26, 2012) Merit/FPI remediation construction management and dewatering plan
27. (June 26, 2012) Merit/FPI remediation landscape plan

D. Notification information
1. RFC Routing Slip for Large Plans
2. Request for response
3. Posting letter sent to applicants
4. Notice to be posted
5. Applicants' statement certifying posting
6. Mailing list
7. Mailed notice
8. June 15, 2012 Staff Report and Recommendation to the Hearings Officer
9. Mailing List & Notice of Rescheduled Public Hearing on a Proposal in Your Neighborhood
10. Notice of Rescheduled Hearing to be posted

E. Agency Responses
1. Site Development Review Section of BDS
2. BES
3. DEQ
4. PBOT Engineering and Development Review
5. Water Bureau
6. Site Development Review Section of BDS
7. BES
8. The Corps
9. TRACS Printout showing "No Concerns" from Portland Fire Bureau, BDS Life Safety Section, Portland Parks and Recreation Urban Forestry Section.
10. BES and DEQ
11. Revised BES
12. Supplemental BES
13. DEQ
14. Revised Site Development Review Section of BDS

F. Letters
1. St. Johns Neighborhood Association
2. James C. Brown and Associates, P.C.
3. Staff response to Lynne Paretchan

G. Other

1. Original LUR Application
2. Site History Research with attachments
3. Pre-Application Conference summary notes
4. Background information from LU 10-203967 CU AD
5. Letter of Incompleteness
6. E-mail correspondence and scheduling information
7. Management Plan
8. Environmental Review Submittal Checklist
9. Description of Rafton Series of soil classification
10. Engineering Description of Wetland Soils

H. Received in the Hearings Office

1. 5/14/12 letter from Michael C. Robinson - Poelwijk, Yvonne
2. 5/14/12 letter from Ty K. Wyman - Poelwijk, Yvonne
3. Hearing Notice - Castleberry, Stacey
4. Staff Report - Castleberry, Stacey
5. 6/19/12 letter with attachments - Robinson, Michael C.
   a. Request to Reschedule - Robinson, Michael C.
6. Rescheduled Hearing Notice - Castleberry, Stacey
7. 7/2/12 letter with attachment - Robinson, Michael C.
   a. 6/18/12 letter from St. Johns NA - Robinson, Michael C.
8. 7/12/12 Memo - Castleberry, Stacey
9. 7/12/12 Memo from Castleberry - Poelwijk, Yvonne
10. 7/2/12 letter - Clark, Troy
11. 7/19/12 Memo - Castleberry, Stacey
    a. Email String - Castleberry, Stacey
    b. 7/13/12 Letter from Roholt to Himes - Castleberry, Stacey
    c. 7/19/12 Letter from Wyman to Castleberry - Castleberry, Stacey **(attached)**
12. 7/23/12 Letter from Breunig and Rohrbach - Paretchan, Lynne
13. Email from Jim Brown - Castleberry, Stacey
14. 7/23/12 Memo from Steven Himes - Castleberry, Stacey
15. PowerPoint presentation - Castleberry, Stacey
16. Letter from Dale Svart - Robinson, Michael C.
17. Google Earth image - Brown, Jim
18. Photo - Brown, Jim
19. Record Closing Information - Hearings Office
20. 7/24/12 Letter - Robinson, Michael C.
21. 8/6/12 Letter - Wyman, Ty
    a. Oversize plan - Wyman, Ty
    b. Oversize plan - Wyman, Ty
    c. Oversize plan - Wyman, Ty **(reduced size attached)**
    d. Oversize plan - Wyman, Ty
    e. Oversize plan - Wyman, Ty **(reduced size attached)**
    f. Oversize plan - Wyman, Ty
    g. Oversize plan - Wyman, Ty

h. Oversize plan - Wyman, Ty
i. Oversize plan - Wyman, Ty
j. Oversize plan - Wyman, Ty **(reduced size attached)**

22. 8/6/12 Fax Coversheet - Wyman, Ty
    a. 8/6/12 Letter - Wyman, Ty
23. 8/6/12 Letter - Brown, Jim
    a. Photo printouts - Brown, Jim
    b. Site Survey - Brown, Jim
24. 8/10/12 Letter - Brown, Jim
    a. Color Photos (13) - Brown, Jim
25. 8/17/12 Memo - Himes, Stephen
26. Revised Staff Report - Castleberry, Stacey
27. 8/23/12 - Robinson, Michael C.
28. Tax Lot Map – Hearings Office **(attached)**

Dunn Carney Allen Higgins & Tongue LLP ATTORNEYS AT LAW

July 19, 2012

TY K. WYMAN

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Via Mercury Messenger Delivery

Stacey Castleberry
Planner, Land Use Services Division
City of Portland, Oregon
Bureau of Development Services, Land Use Services
1900 SW Fourth Avenue, Suite #5000
Portland, OR 97201

Re: Land Use Review LU 12-100368 CU EN
Our File No.: BRI24-7

Dear Stacey:

Thanks so much for your July 12 memorandum regarding the referenced case; it well crystallizes (and, we are thankful, narrows) the issues presented in the staff report. As to the specific issues that you highlight, we respond as follows:

1) Physical Scope of the Project. As we have discussed, this application is borne of the long history of industrial uses along N. Suttle Road. Those industries contaminated the land and this project will clean it up. The lead agency in such clean up actions, DEQ, issued a Record of Decision (ROD) in June 2011 approving ORRCO's remedial effort.

   Recology's ownership is not one of those in the area of contamination. However, in issuing the ROD, DEQ asked it to remove the existing UIC there. Recology thus asked ORRCO to install the stormwater outfall that is the subject of this Application. In completing this project, the Applicants will clean up the contamination, accommodate future storm drainage, and enhance a degraded wetland.

   From the start of the DEQ process right up to today, the Applicants have tried to cooperate with another affected owner, Triggco. This included submission of drawings including extending the remediation to the Triggco property.

   As its letter opposing the Application makes apparent, Triggco refuses to play ball. Such recalcitrance notwithstanding, Triggco simply has no

CITY OF PORTLAND
HEARINGS OFFICE
Exhibit #H-11c
Case # 4120011
Bureau Case # 12-100368 CU E

place to hide; DEQ's remediation order will force it to clean up its site. Relevant to this process, we will submit, either at or shortly after the hearing, plans modified to eliminate any improvements to Triggco's ownership; it will be forced to file its own land use application.

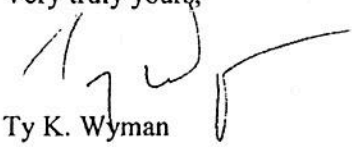
2) Wetland Restoration Following Excavation of Toxic Substrate. I understand that the reference, in the Applicants' drawing noted as Exhibit C.21, to replace contaminated sediment with "clean sand" was in error. In fact, the contamination will be replaced with two feet of topsoil. This correction is reflected on the attached, corrected C.21 drawing prepared by our PE, Rob Roholt.

3) Stormwater Management Facility Design. You were unable to attend with Stephen Himes the July 10 project meeting convened by DEQ. I understood at that time that our team had addressed all of the issues identified in the June 15 BES memo that you reference. I understand that Mr. Roholt has called Mr. Himes to confirm as much.

One item listed by BES was an objection that Susan Barthel voiced to a particular planting (Rosa Piso Carpa). We told Ms. Barthel that we will remove this particular plant from our plans. She tells us that, because she has already sent her comments to Mr. Himes, she will not send additional comments directly to you.

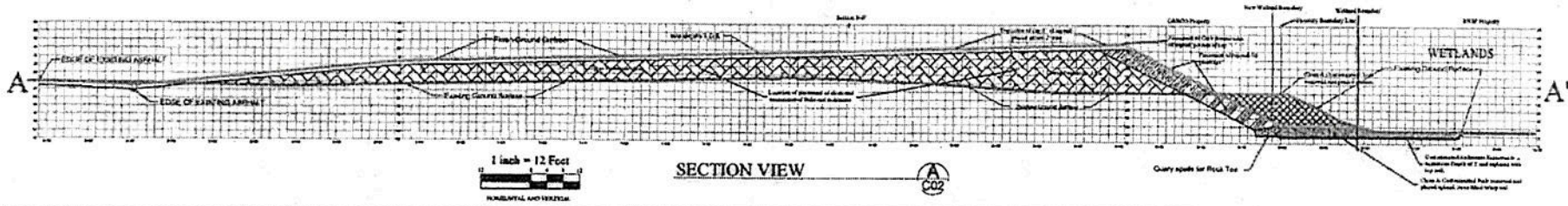
Thanks again for your assistance. Please forward this letter to the Hearings Officer. We will see you at the hearing.

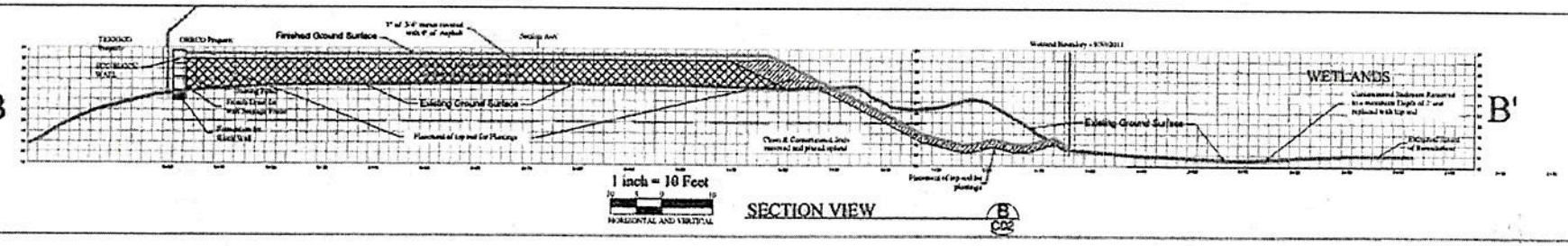
Very truly yours,

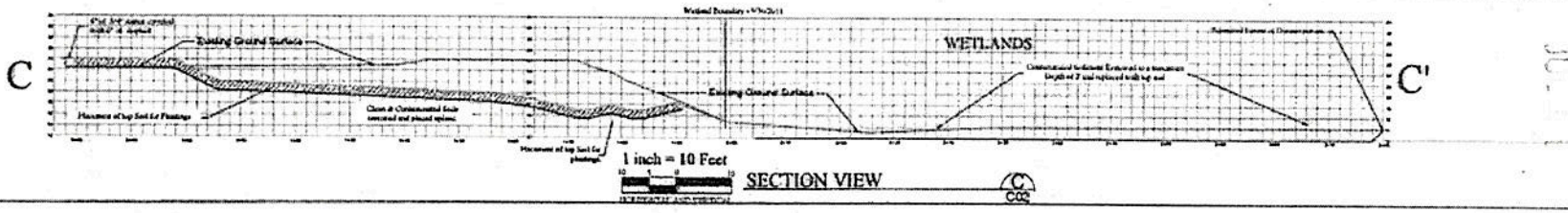


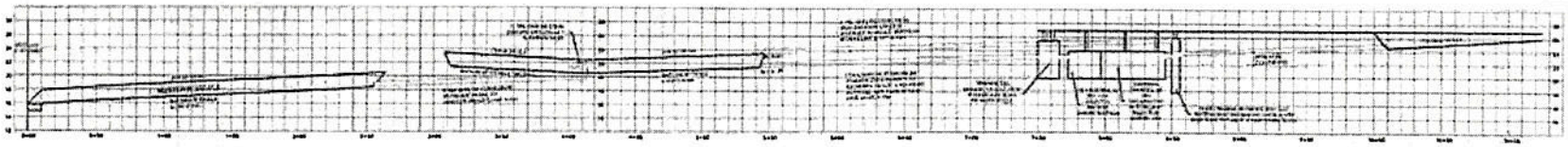
Ty K. Wyman

TKW:car
Enclosure
cc: Mr. Michael Robinson, Attorney for Recology, Inc. (via e-mail)
Mr. Dale Svart, Friends of Smith & Bybee Lakes (via e-mail)
Mr. Dan Moeller, Metro Smith & Bybee Management Committee (via e-mail)
Ms. Yvonne Poelwijk, City of Portland, Oregon Bureau of Development Services, Records Management (via e-mail)
Mr. Bill Briggs (via e-mail)
Mr. Rob Roholt (via e-mail)
Mr. Martin Schott (via e-mail)

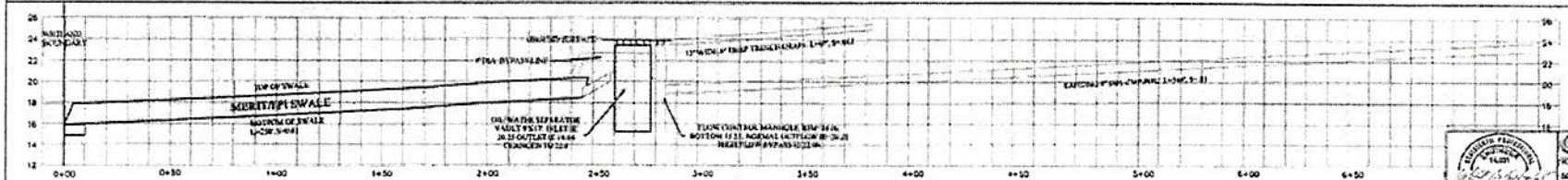








RECOLOGY STORMWATER HYDRAULIC GRADIENT 1" = 40' HORIZONTAL
1"=8' VERTICAL



ORRCO STORMWATER HYDRAULIC GRADIENT 1" = 25' HORIZONTAL
1"= 5' VERTICAL

BIOLTECH

MISSISSIPPI REMEDIATION
CROSSECTIONS & HYDRAULIC PROFILES

D I C 03

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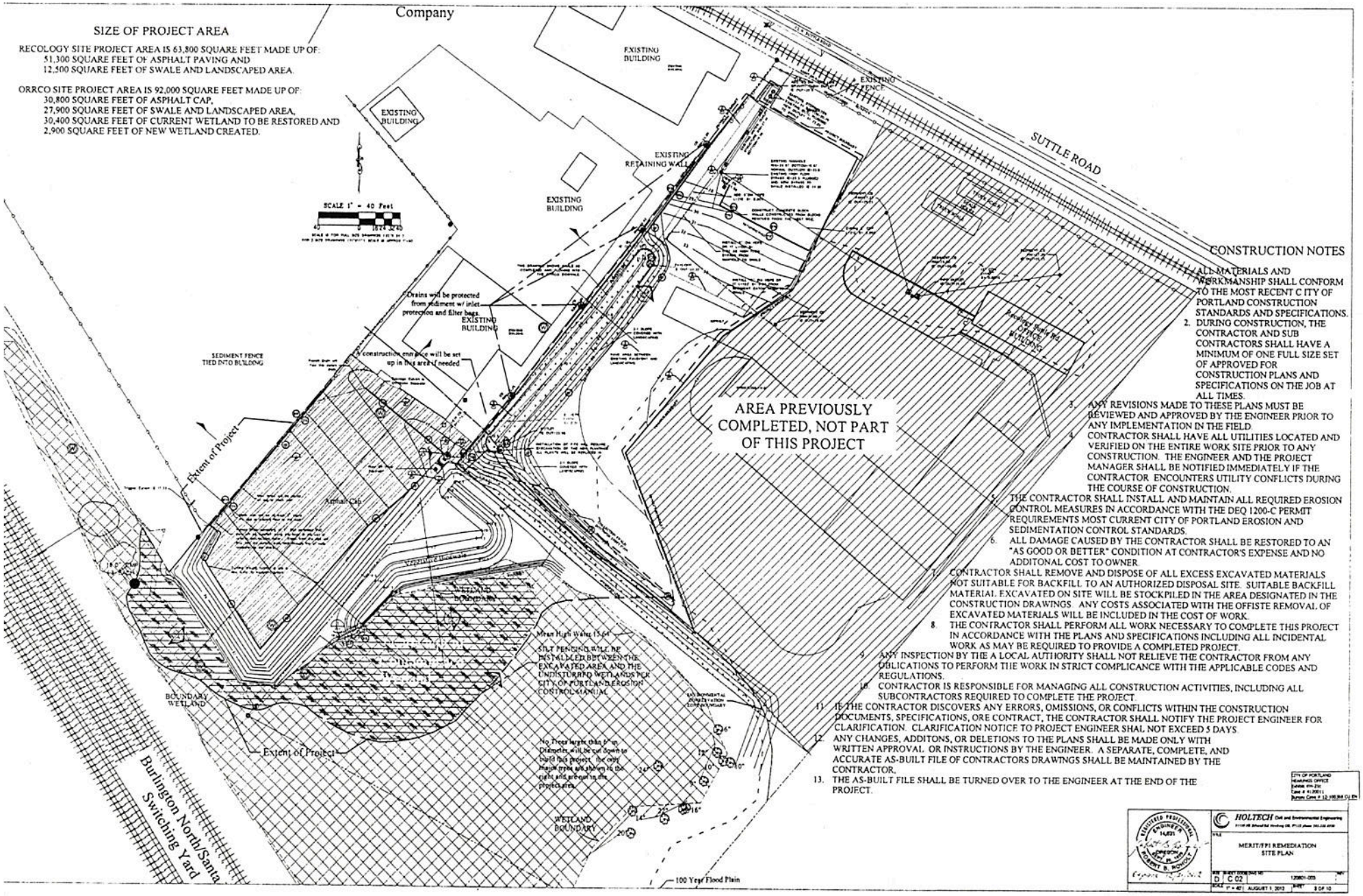
AUG 0 6 2012
HEARINGS OFFICE

Company

SIZE OF PROJECT AREA

RECOLOGY SITE PROJECT AREA IS 63,800 SQUARE FEET MADE UP OF:
51,300 SQUARE FEET OF ASPHALT PAVING AND
12,500 SQUARE FEET OF SWALE AND LANDSCAPED AREA.

ORRCO SITE PROJECT AREA IS 92,000 SQUARE FEET MADE UP OF:
30,800 SQUARE FEET OF ASPHALT CAP,
27,900 SQUARE FEET OF SWALE AND LANDSCAPED AREA,
30,400 SQUARE FEET OF CURRENT WETLAND TO BE RESTORED AND
2,900 SQUARE FEET OF NEW WETLAND CREATED.



CONSTRUCTION NOTES

1. ALL MATERIALS AND WORKMANSHIP SHALL CONFORM TO THE MOST RECENT C ITY OF PORTLAND CONSTRUCTION STANDARDS AND SPECIFICATIONS.
2. DURING CONSTRUCTION, THE CONTRACTOR AND SUB CONTRACTORS SHALL HAVE A MINIMUM OF ONE FULL SIZE SET OF APPROVED FOR CONSTRUCTION PLANS AND SPECIFICATIONS ON THE JOB AT ALL TIMES.
3. ANY REVISIONS MADE TO THESE PLANS MUST BE REVIEWED AND APPROVED BY THE ENGINEER PRIOR TO ANY IMPLEMENTATION IN THE FIELD.
4. CONTRACTOR SHALL HAVE ALL UTILITIES LOCATED AND VERIFIED ON THE ENTIRE WORK SITE PRIOR TO ANY CONSTRUCTION. THE ENGINEER AND THE PROJECT MANAGER SHALL BE NOTIFIED IMMEDIATELY IF THE CONTRACTOR ENCOUNTERS UTILITY CONFLICTS DURING THE COURSE OF CONSTRUCTION.
5. THE CONTRACTOR SHALL INSTALL AND MAINTAIN ALL REQUIRED EROSION CONTROL MEASURES IN ACCORDANCE WITH THE DEQ 1200-C PERMIT REQUIREMENTS MOST CURRENT CITY OF PORTLAND EROSION AND SEDIMENTATION CONTROL STANDARDS.
6. ALL DAMAGE CAUSED BY THE CONTRACTOR SHALL BE RESTORED TO AN "AS GOOD OR BETTER" CONDITION AT CONTRACTOR'S EXPENSE AND NO ADDITONAL COST TO OWNER.
7. CONTRACTOR SHALL REMOVE AND DISPOSE OF ALL EXCESS EXCAVATED MATERIALS NOT SUITABLE FOR BACKFILL TO AN AUTHORIZED DISPOSAL SITE. SUITABLE BACKFILL MATERIAL EXCAVATED ON SITE WILL BE STOCKPILED IN THE AREA DESIGNATED IN THE CONSTRUCTION DRAWINGS. ANY COSTS ASSOCIATED WITH THE OFFISTE REMOVAL OF EXCAVATED MATERIALS WILL BE INCLUDED IN THE COST OF WORK.
8. THE CONTRACTOR SHALL PERFORM ALL WORK NECESSARY TO COMPLETE THIS PROJECT IN ACCORDANCE WITH THE PLANS AND SPECIFICATIONS INCLUDING ALL INCIDENTAL WORK AS MAY BE REQUIRED TO PROVIDE A COMPLETED PROJECT.
9. ANY INSPECTION BY THE A LOCAL AUTHORITY SHALL NOT RELIEVE THE CONTRACTOR FROM ANY OBLICATIONS TO PERFORM THE WORK IN STRICT COMPLICANCE WITH THE APPLICABLE CODES AND REGULATIONS.
10. CONTRACTOR IS RESPONSIBLE FOR MANAGING ALL CONSTRUCTION ACTIVITIES, INCLUDING ALL SUBCONTRACTORS REQUIRED TO COMPLETE THE PROJECT.
11. IF THE CONTRACTOR DISCOVERS ANY ERRORS, OMISSIONS, OR CONFLICTS WITHIN THE CONSTRUCTION DOCUMENTS, SPECIFICATIONS, ORE CONTRACT, THE CONTRACTOR SHALL NOTIFY THE PROJECT ENGINEER FOR CLARIFICATION. CLARIFICATION NOTICE TO PROJECT ENGINEER SHAL NOT EXCEED 5 DAYS.
12. ANY CHANGES, ADDITONS, OR DELETIONS TO THE PLANS SHALL BE MADE ONLY WITH WRITTEN APPROVAL OR INSTRUCTIONS BY THE ENGINEER. A SEPARATE, COMPLETE, AND ACCURATE AS-BUILT FILE OF CONTRACTORS DRAWINGS SHALL BE MAINTAINED BY THE CONTRACTOR.
13. THE AS-BUILT FILE SHALL BE TURNED OVER TO THE ENGINEER AT THE END OF THE PROJECT.

CITY OF PORTLAND
HEARINGS OFFICE
Exhibit # H 21
Case # 4 H 20011
Applicant Case # 12-190 DR CU EN

REGISTERED PROFESSIONAL ENGINEER 14,021 OREGON ROBERT B. BOWEN

HOLTECH Civil and Environmental Engineering

TITLE: MERIT/FPI REMEDIATION SITE PLAN

DWG: C 02 | JOB: 120801-005 | SCALE: 1" = 40' | AUGUST 1, 2012 | SHEET: 3 OF 10

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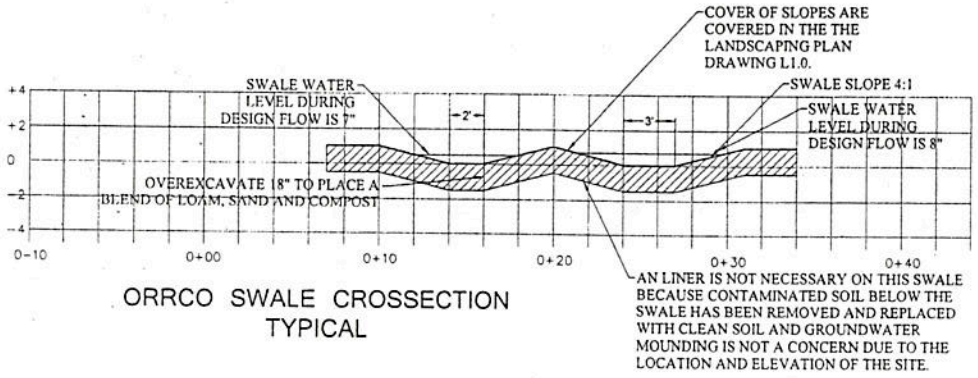
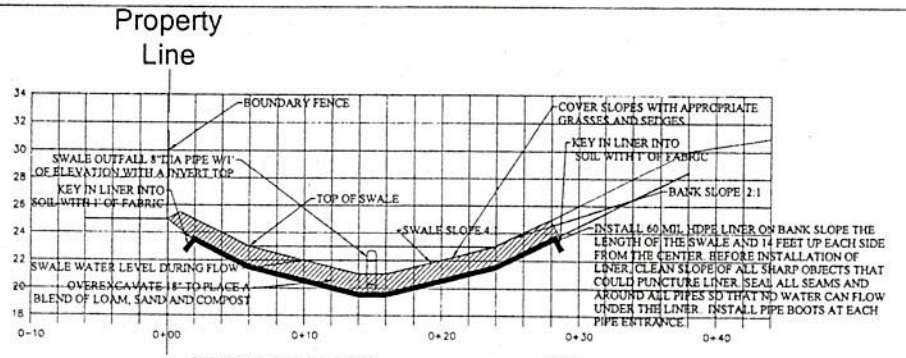
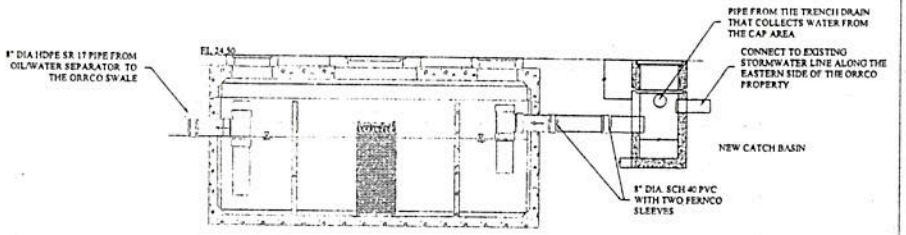
HEARINGS OFFICE



ORRCO SWALE CROSSECTION TYPICAL



SECTION VIEW
RECOLOGY SWALE
D
C02



NEW OIL/WATER SEPARATOR
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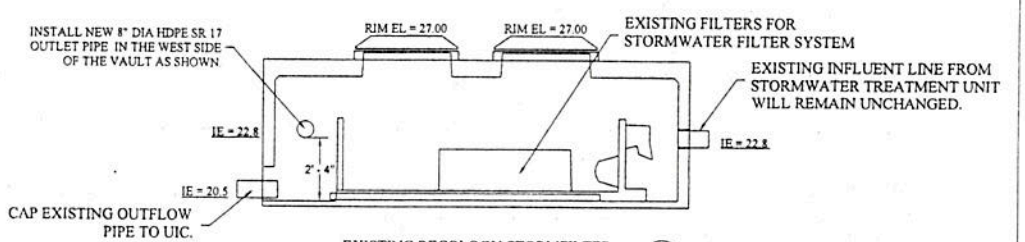
C02



EXISTING RECOLOGY STORMFILTER
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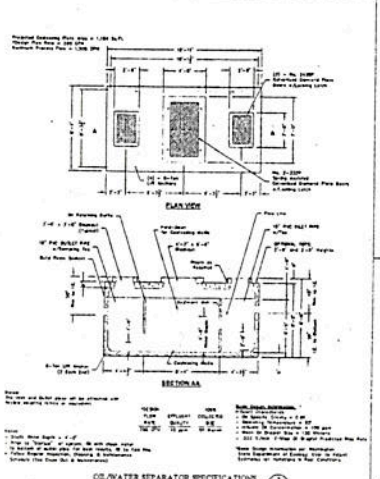

OIL/WATER SEPARATOR SPECIFICATIONS
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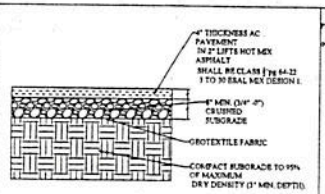

MERIT/FPI ASPHALT CAP CROSS SECTION
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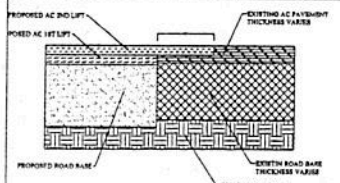

RECOLOGY MATCHING ASPHALT CROSS SECTION
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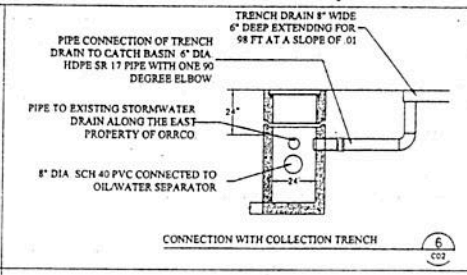
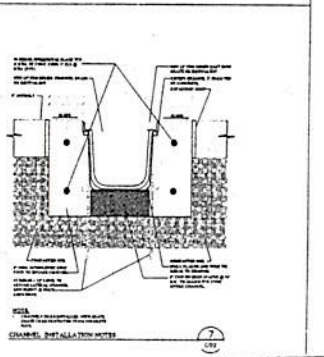


CONNECTION WITH COLLECTION TRENCH
6
C02



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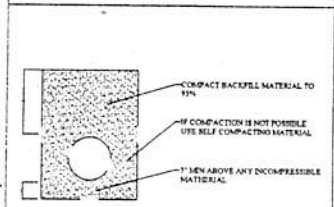

PIPE BEDDING CROSS SECTION
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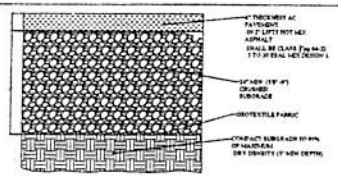
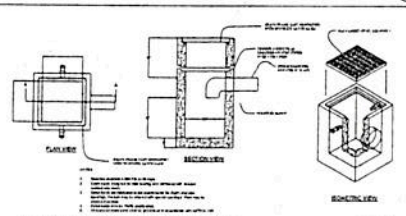
C02



RECOLOGY ASPHALT PAVEMENT CROSS SECTION
9
C02



CATCH BASIN INSTALLATION NOTES

CITY OF PORTLAND
HEARINGS OFFICE
Exhibit # 216
Case # 4.12001
Review Case # 12-100364 CU PR

REGISTERED PROFESSIONAL ENGINEER 14,821 OREGON 30 ROBERT B. HOWDY Expires: 12/31/2013

HOLTECH Civil and Environmental Engineering
10300 NE Ambassador Pl. Portland, OR. 97220 phone 503.256.6150

TITLE: MERIT/FPI REMEDIATION DETAILS

D	CD 01	120601-005	
SCALE: VARIES	AUGUST 1,2012	SHEET	5 OF 10

RECEIVED
AUG 0 6 2012
HEARINGS OFFICE

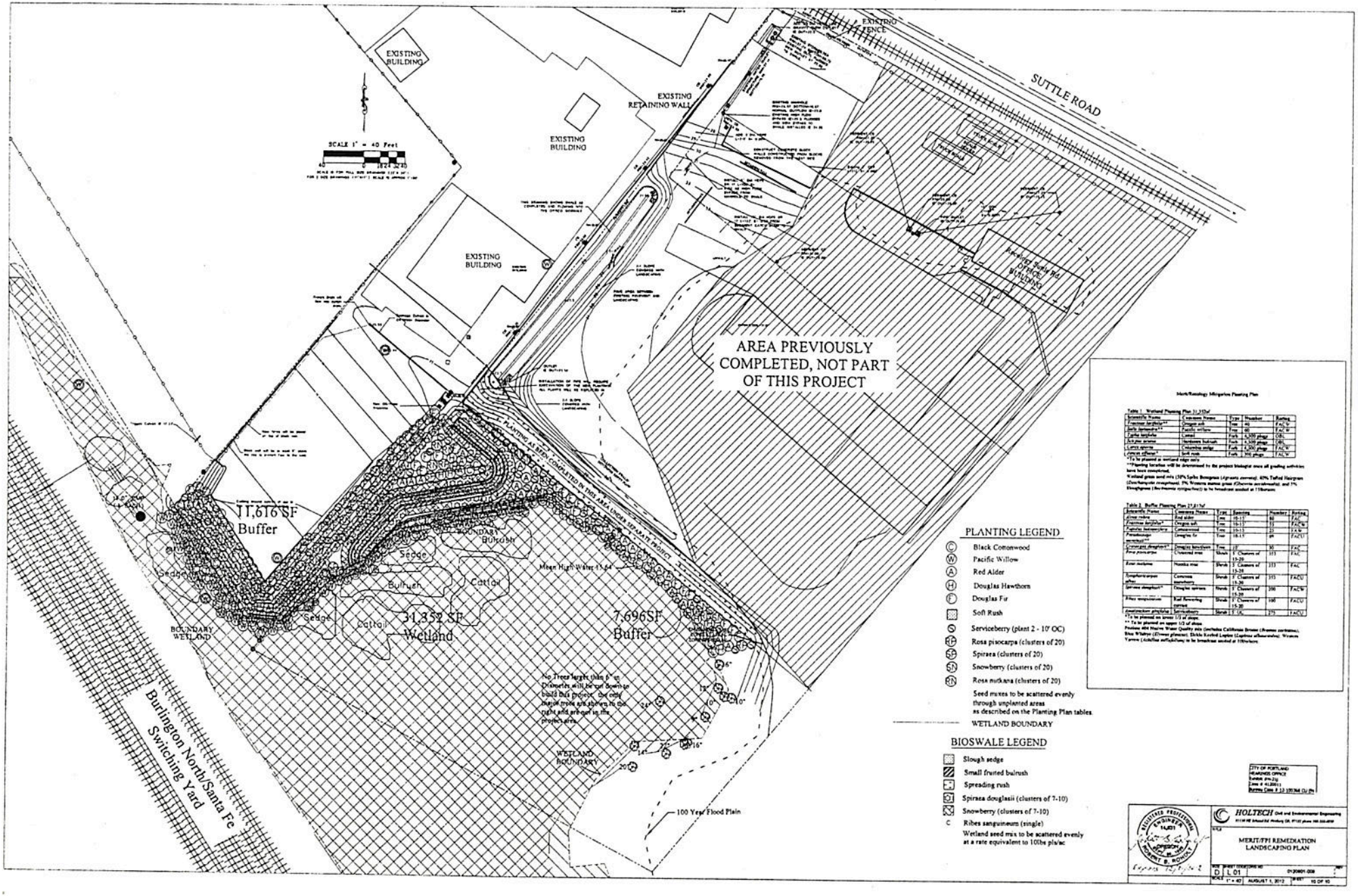
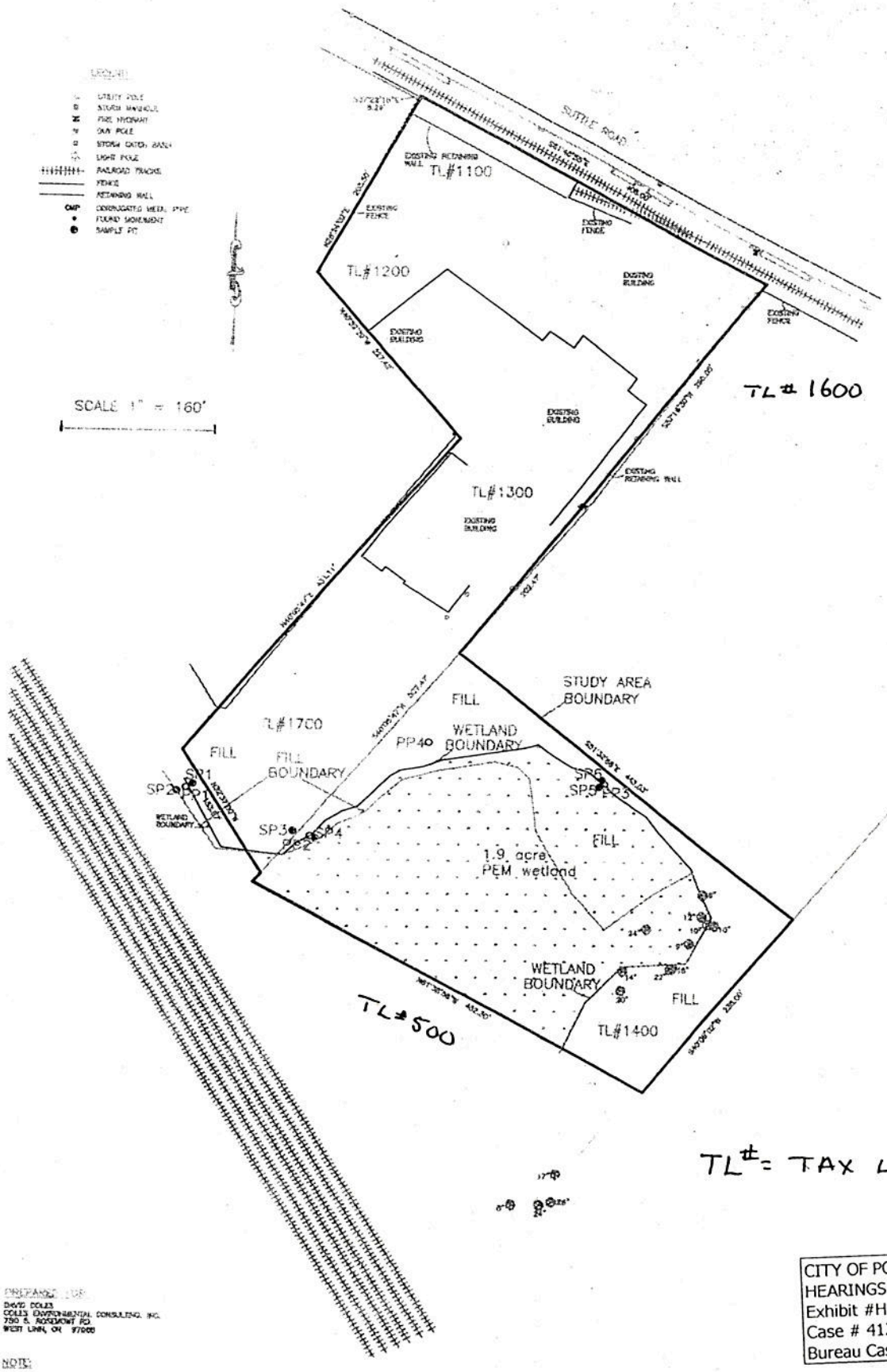


Figure 6 SITE SURVEY

LOCATED IN THE NE & SE 1/4 OF SECTION 32, T.2N, R.1E, W.M.,
CITY OF PORTLAND, MULTNOMAH COUNTY, OREGON
SURVEYED: SEPTEMBER, 2011



PREPARED BY:
DAVID DOLES
DOLES ENVIRONMENTAL CONSULTING, INC.
7750 S. ROSEMONT RD.
WEST LINN, OR 97068

NOTE:
ELEVATIONS ARE BASED OFF OF STATION NAME "NORTH" DATUM NGVD 1929, CITY OF PORTLAND HORIZONTAL CONTROL DATA, SURVEY #53128. ELEVATION = 28.174'
THIS SURVEY DOES NOT CONSTITUTE A BOUNDARY SURVEY AND SHOULD NOT BE CONSTRUED AS SUCH. PROPERTY LINES ARE BASED ON RECORD INFORMATION.

CITY OF PORTLAND
HEARINGS OFFICE
Exhibit #H-28
Case # 4120011
Bureau Case # 12-100368 CU EN

JOB NAME: FUEL PROCESSORS, INC. SITE SURVEY	
JOB LOCATION: PORTLAND, OREGON	
DRAWN BY: ACB	DATE DRAWN: 09/30/11
CHECKED BY: ACB	DATE SURVEYED: SEPT. 2011
DESIGNED BY:	REVISED:

PROPERTY SURVEYS • TOPOGRAPHIC/SITE SURVEYS
SUBDIVISION PLATS • ALTA SURVEYS • CONSTRUCTION STAKING

BENTHIN ENGINEERING, INC.
LICENSED IN OR AND WA
P.O. BOX 100, SHERWOOD, OR 97140

Permit Number: 501
Expiration Date: 6/30/2020

State of Oregon
Department of
Environmental
Quality

SOLID WASTE DISPOSAL SITE PERMIT 501
Material Recovery Facility Permit Addendum

Oregon Department of Environmental Quality
2020 SW 4th Ave, Suite 400
Portland OR 97201
Telephone: 503-229-5353

Issued in accordance with the provisions of ORS Chapter 459

ISSUED TO:

Recology Portland, Inc.
9345 N Harborgate
Portland OR 97203
503-285-8777

FACILITY NAME AND LOCATION:

Suttle Road Recovery Facility
4044 N. Suttle Rd
Portland OR 97217

OWNER:

Recology
50 California St, 24th Floor
San Francisco CA 94111-1968
415-875-1000

OPERATOR:

Larry Wilkins, General Manager
Recology Portland Inc
lwilkins@recology.com

ISSUED IN RESPONSE TO:

Written notification of changes to business names and contact addresses for permittee, facility owner, property owner, and operator, with application for corresponding permit modification, received Dec. 10, 2012.

ISSUED BY THE OREGON DEPARTMENT OF ENVIRONMENTAL QUALITY

Audrey O'Brien
Manager, Solid Waste Program
Northwest Region

February 26, 2013
Date

ADDENDUM NO. 6

In accordance with Oregon Administrative Rules 340-093-0070(6)(a)(A) and OAR 340-093-0113, Solid Waste Permit No. 501 is hereby amended as follows:

The name of the permittee, facility owner, and operator is Recology Portland, Inc., with contact addresses as in the table above.

The name of the property owner is Recology, with contact address as in the table above.

Addendum No. 6 supersedes Addendum No. 5.

TABLE OF CONTENTS

Introduction

This document is a Solid Waste Permit issued by the Oregon Department of Environmental Quality (DEQ) in accordance with Oregon Revised Statutes (ORS) 459 and Oregon Administrative Rules (OAR), Chapter 340.

In this document

This document contains the following sections:

Section	Topic	See Page
----	**Permit Administration**	**3**
1.0	Issuance	3
2.0	Disclaimers	3
3.0	Authority	4
4.0	Permit Modification	5
----	**Allowable Activities**	**6**
5.0	Authorizations	6
6.0	Prohibitions	7
----	**Site Design and Operations**	**9**
7.0	Operations Plan	9
8.0	Recordkeeping and Reporting	11
9.0	Site Design and Construction	12
10.0	Pollution Control	13
11.0	Operating Conditions	14
12.0	Recycling Requirements	16

PERMIT ADMINISTRATION

1.0 ISSUANCE

1.1	**In this section**	This section describes the parameters surrounding permit issuance including: • Permittee; • Permit number; • Permit term; • Facility type; • Facility owner/operator; • Basis for issuance • Definitions; and • Legal control of property.
1.2	**Permittee**	This permit is issued to **Recology Oregon Material Recovery, Inc.** and for the facility known as **Recology Suttle Road Recovery Facility**.
1.3	**Permit number**	This permit will be referred to as **Solid Waste Permit Number 501**.
1.4	**Permit term**	The issue date of this permit is the date this document is signed. The expiration date of this permit is **June 30, 2020.** Reference: ORS 459.245(2)
1.5	**Facility type**	The facility is permitted as a Solid Waste Material Recovery Facility (MRF).
1.6	**Facility owner/ operator**	The owner of this facility is: Recology Oregon Material Recovery, Inc. 50 California Street, 24th Floor San Francisco, California 94111 (415) 875-1110 The operator of the facility is: Recology Oregon Material Recovery, Inc. 6161 NW 61st Avenue Portland, Oregon 97210 (503) 226-6161
1.7	**Basis for issuance**	This permit is issued based upon the following documents submitted by the permittee: • A Solid Waste Permit Modification Application received May 3, 2011; and • A Land Use Compatibility Statement from City of Portland dated May 26, 2011.
1.8	**Definitions**	Unless otherwise specified, all terms are as defined in OAR 340-093-0030.
1.9	**Legal control of property**	The permittee must at all times maintain legal control of the disposal site property; including maintaining a current permit, contract or agreement that allows the operation of the facility if the site is not owned by the permittee.

2.0 DISCLAIMERS

2.1	**In this section**	This section describes disclaimer information for DEQ including: • Property rights; and • DEQ liability.

2.2	**Property rights**	The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights.
2.3	**DEQ liability**	DEQ, its officers, agents, or employees do not sustain any liability on account of the issuance of this permit or on account of the construction, maintenance, or operation of facilities pursuant to this permit.

3.0 AUTHORITY

3.1	**In this section**	This section describes the authority of the Oregon Department of Environmental Quality to issue this permit including: • Documents superseded; • Permittee responsibility and liability; • DEQ access to disposal site; • Other compliance; and • Penalties.
3.2	**Documents superseded**	This document is the primary Solid Waste Permit for the facility, superseding all other Solid Waste Permits issued for Recology Suttle Road Recovery Facility by DEQ.
3.3	**Permittee responsibility and liability**	Conditions of this permit are binding upon the permittee. The permittee must conduct all facility activities in compliance with the provisions of this permit. The permittee is liable for all acts and omissions of the permittee's contractors and agents in carrying out the operations and other responsibilities pursuant to this permit.
3.4	**DEQ access to disposal site**	The permittee must allow representatives of DEQ access to the disposal facility at all reasonable times for the purpose of making inspections, surveys, collecting samples, obtaining data and carrying out other necessary functions related to this permit. Reference: OAR 340-093-0050(6).
3.5	**Other compliance**	Issuance of this permit does not relieve the permittee from the responsibility to comply with all other applicable federal, state, or local laws or regulations. This includes the following solid waste requirements, as well as all updates or additions to these requirements: • Solid Waste Permit modification request received on May 3, 2011; • ORS Chapters 459, 459A, 465, and 466; • OAR Chapter 340; • Metro regulations; • Local ordinances; and • Any documents submitted by the permittee and approved by DEQ.
3.6	**Penalties**	Violation of permit conditions will subject the permittee to civil penalties of up to $25,000 for each day of each violation Reference: ORS 459.995(1)(a)

4.0 PERMIT MODIFICATION

4.1	**In this section**	This section describes information about when and how this permit may be modified including: • Permit review; • Modification; • Modification and revocation by DEQ; • Modification by permittee; • Public participation; and • Changes in ownership.
4.2	**Permit review**	During the life of the permit, DEQ may review the permit and determine whether or not the permit should be amended. DEQ reserves the right to amend the permit to address any significant new information or change in the status or operations at the facility. While not an exclusive list, the following factors will be used in making that determination: • Compliance history of the facility; • Changes in volume, waste composition, or operations at the facility; • Changes in state or federal rules which should be incorporated into the permit; • A significant release of pollutants to the environment from the facility; • Significant changes to a DEQ-approved site development plan and/or conceptual design; and • Other significant information or events.
4.3	**Modification**	At any time in the life of the permit, DEQ at its discretion may modify the permit, or the permittee may propose changes to the permit.
4.4	**Modification and revocation by DEQ**	The Director may, at any time before the expiration date, modify, suspend, or revoke this permit in whole or in part, in accordance with ORS 459.255, for reasons including but not limited to the following: • Violation of any terms or conditions of this permit or any applicable statute, rule, standard, or order of the Commission; • Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts; or • A significant change in the quantity or character of solid waste received or in the operation of the disposal site.
4.5	**Modification by permittee**	The permittee must apply for a modification to this permit if there is a significant change in facility operations or a deviation from activities described in this document.
4.6	**Public participation**	DEQ will issue a public notice to inform the public of any significant changes to the permit as required by DEQ rules. Reference: OAR 340-093-0100
4.7	**Changes in ownership**	The permittee must report to DEQ any changes in either ownership of the disposal site property or of the name and address of the permittee or operator within ten (10) days of the change.

ALLOWABLE ACTIVITIES

5.0 AUTHORIZATIONS

5.1 In this section

This section describes the activities the permittee is authorized to conduct in the facility including:

- Wastes authorized for receipt;
- Authorization of other wastes;
- Authorization of activities;
- Duration of authorization;
- Waste tire management;
- Electronic waste; and
- Salvaging and recycling.

5.2 Wastes authorized for receipt

This permit authorizes the permittee to accept putrescible and non-putrescible solid wastes, except those wastes specifically prohibited in Section 6.0 (Prohibitions). Solid waste includes but is not limited to: garbage, yard debris, wood, food waste, concrete, construction and demolition debris, waste paper and cardboard, discarded home and industrial appliances and recyclables.

A DEQ approved Special Waste Management Plan is required for acceptance of certain wastes that require special management due to the threat proposed to human health or the environment (See Special Waste Management Plans in Section 7).

Reference: Solid waste is defined in ORS 459.005

5.3 Authorization of other wastes

Wastes excluded from the above authorization may be authorized for acceptance only after DEQ approves the acceptance in writing.

DEQ may authorize the permittee to accept other wastes if:

- The permittee updates the Operations Plan that includes a Special Waste Management Plan (SWMP) if needed and submits it to DEQ for review and approval;
- DEQ approves the updated Operations Plan and Special Waste Management Plan (SWMP); and
- The permittee can demonstrate that the materials are not hazardous waste, as defined by state and federal regulations, or otherwise a threat to human health or waters of the state.

5.4 Authorization of activities

The permittee must conduct all activities in accordance with the provisions of this permit. Once approved by DEQ any permit-required plans become part of the permit by reference. DEQ may provide notice and opportunity for review of permit-required plans.

5.5 Duration of authorization

The authorization to accept solid waste will terminate at the time of site closure. After that time no solid waste may be accepted without written authorization by DEQ.

5.6 Waste tire management

The permittee is authorized to accept up to 100 whole tires for storage and removal.

This permit authorizes the permittee to accept up to 2,000 whole tires for storage and removal if the permittee maintains a contract with a waste tire carrier to remove the tires from the site.

Reference: OAR 340-64-0050(2)

5.7	**Electronic waste**	Electronic waste may be accepted for recycling if conducted in a controlled and orderly manner. Materials must be stored under cover and unexposed to the elements. This authorization is for collection only; this facility is not authorized to dismantle, disassemble or remanufacture electronic waste. Collection must be done according to a DEQ approved facility Operations Plan.
5.8	**Salvaging and recycling**	The permittee is authorized to conduct salvaging and recycling in a controlled and orderly manner.

6.0 PROHIBITIONS

6.1	**In this section**	This section describes specific prohibited materials and activities (except as described below) pertaining to the following: • Hazardous waste; • Liquid waste; • Batteries; • Recyclable materials; • Friable or non-friable asbestos containing materials; • Built-up roofing; • Infectious waste; • Contaminated soil; • Explosives; • Large home or industrial appliances; • Used oil; • Discarded or abandoned vehicles; • Tires for disposal; • Electronic waste disposal; • Large dead animals; • Household garbage; and • Open burning.
6.2	**Hazardous waste**	The permittee must not accept any regulated hazardous wastes. Reference: Section 11.3; hazardous wastes are defined in ORS 466.005 and OAR 340 Division 101 and 40 Code of Federal Regulations (CFR) 258.20(b). Note: Many electronic devices contain hazardous materials. If these materials are recovered for recycling, they do not meet the RCRA definition of hazardous waste. However, if the hazardous materials are released, disposed, or speculatively accumulated they may become hazardous waste and must be treated according to applicable hazardous waste rules and statutes including recordkeeping and reporting requirements.
6.3	**Liquid waste**	The permittee must not accept liquid waste for disposal. Definition: Liquid wastes are wastes that do not pass the paint filter test performed in accordance with EPA Method 9095B.
6.4	**Batteries**	The permittee must not accept lead acid batteries at the site. Exception: If lead-acid batteries are found mixed in municipal solid waste at the facility they must be removed and properly recycled.

6.5	**Recyclable materials**	The permittee may collect source separated recyclable material at the facility for recycling but must not transfer source separated recyclable material to a landfill for disposal. Exception: If DEQ determines that the source separated material is in a condition which makes the material unusable or not recyclable then it may be disposed. The permittee must consult with DEQ prior to disposal of any source separated recyclable materials.
6.6	**Friable or non-friable asbestos containing waste materials**	The permittee must not accept friable or non-friable asbestos or asbestos-containing material at the facility. Exception: Asbestos-containing waste material inadvertently accepted in waste received must be managed for disposal by the permittee according to a Special Waste Management Plan approved by DEQ which addresses procedures for receipt, handling, storage, spill cleanup and disposal of the asbestos-containing waste materials.
6.7	**Built-up roofing**	The permittee must not accept built up roofing wastes from industrial, commercial or residential tear-offs.
6.8	**Infectious waste**	The permittee must not accept infectious wastes at the facility.
6.9	**Contaminated soil**	The permittee must not accept petroleum contaminated or other contaminated soils.
6.10	**Explosives**	The permittee must not accept explosives at the facility.
6.11	**Large home or industrial appliances**	The permittee may accept large home or industrial appliances for recycling but must not knowingly dispose of large home or industrial appliances or transfer large home or industrial appliances to a landfill for disposal.
6.12	**Used oil**	The permittee may accept source separated used oil collected curbside by commercial refuse haulers, but must not accept used oil from other sources. The permittee must not knowingly dispose of or transfer used oil to a landfill for disposal.
6.13	**Discarded or abandoned vehicles**	The permittee must not accept discarded or abandoned vehicles at the facility.
6.14	**Tires for disposal**	The permittee may accept whole tires for recycling but must not knowingly dispose or transfer tires to a landfill for disposal.
6.15	**Electronic waste disposal**	The permittee must not knowingly accept the following covered electronic devices for disposal: • Computer monitors having a viewable area greater than four (4) inches diagonally; • Televisions having a viewable area greater than four (4) inches diagonally; • Desktop computers; or • Portable computers. Reference: ORS 459.247 and 459A.300-365.

6.16	**Large dead animals**	The permittee must not accept large dead animals at the facility.
6.17	**Open burning**	The permittee must not conduct open burning at the facility.

SITE DESIGN AND OPERATIONS

7.0 OPERATIONS PLAN

7.1	**In this section**	This section describes the requirements associated with preparing and implementing the facility Operations Plan including: • Operations plan; • Plan content; • Special Waste Management Plans; • Plan maintenance; and • Submittal address.
7.2	**Operations plan**	The permittee must operate the facility in accordance with DEQ approved facility Operations Plan and any DEQ approved Special Waste Management Plans, including any DEQ approved amendments.
7.3	**Plan content**	The facility Operations Plan must describe the current method of operation of the facility in accordance with all regulatory and permit requirements. Note: The Operations Plan must include among other things: • Waste unloading and handling; • Handling and removal of waste tires; • Management of transfer containers; • Washing equipment; • Maintaining leachate collection systems; • Maintaining surface water control structures; • Screening procedures for detection of unauthorized wastes; • Measures to prevent the attraction and sustenance of vectors; • Measures to improve operations and safely address the attraction of wildlife from the adjacent natural areas; • Feedstock Management Plan: procedures for monitoring and managing food waste loads intended to minimize contamination in feedstocks transferred to compost facilities or other processors; • Handling and removal of unauthorized wastes discovered at the facility; • Procedures for dealing with broken cathode ray tube (CRT) televisions or monitors; • Procedures for dealing with cleanup of an oil or hazardous materials spill, including the procedure for reporting the spill to the Oregon Emergency Response System (OERS) at 1-800-452-0311; • Procedures for handling, storage, and transporting of asbestos-containing wastes; • Establishing and maintaining the operating record; • Procedures for preventing the acceptance of covered electronic devices for disposal; • Providing fire protection equipment; and • Notifying DEQ about emergencies and fires.

7.4 Special Waste Management Plans

Individual Special Waste Management Plans are required as part of the Operations Plan, for certain waste materials that because of their nature can be potentially hazardous to human health or the environment and require careful handling at solid waste facilities. The plan must address, among other things, procedures for identification, characterization, receipt, handling, storage, spill, clean up and transport for either reuse, recovery or disposal of the material at an appropriately permitted facility

Special wastes requiring individual plans include but are not limited to:

- Fluorescent Bulbs and Lamps
- Friable and non-friable asbestos containing materials
- Septage, and
- Sewage sludges and grits

Notes:

1. Except as noted below, SWMPs are only required if the facility chooses to accept special solid wastes.
2. DEQ must approve a SWMP before the permittee may accept any special waste.

Exception: Even if it is listed as a prohibited waste in Section 6, a Special Waste Management Plan is required for friable and non-friable asbestos containing waste materials to address these wastes if inadvertently accepted in the waste stream.

Reference: Guidance on Special Waste Management Plans can be found in OAR 340-093-0190(1) and OAR 340-094-0040(11)(b)(J) and in Section 9.5 of DEQ's *Solid Waste Guidance Municipal Solid Waste Landfills*, dated September 1, 1996.

DEQ requires that a revised SWMP be submitted any time procedures change and/or the plan is updated within the life of the permit.

7.5 Plan maintenance

The permittee must revise the Operations Plan as necessary to keep the plan reflective of current facility conditions and procedures.

The permittee must submit revisions of the Operations Plan to DEQ for approval any time the Operations Plan is updated within the life of this permit.

7.6 Submittal address

All submittals to DEQ under this section must be sent to:

Oregon Department of Environmental Quality
Manager, Solid Waste Program
2020 SW Fourth Avenue, Suite 400
Portland, OR 97201
Telephone: (503) 229-5353

8.0 RECORDKEEPING AND REPORTING

8.1	**In this section**	This section describes recordkeeping and reporting information for the facility including: • Non-compliance reporting; • Permit display; • Access to records; • Data collection; • Submittal; • Fees; • Complaint log; • Recycling information; • Records; and • Submittal address.
8.2	**Non-compliance reporting**	In the event that any condition of this permit or of DEQ's rules is violated, the permittee must immediately take action to correct the unauthorized condition and immediately notify DEQ at: (503) 229-5353 Response: In response to such a notification, DEQ may conduct an investigation to evaluate the nature and extent of the problem, and to evaluate plans for additional corrective actions, as necessary.
8.3	**Permit display**	The permittee must display this permit, or a photocopy thereof, where it can be readily referred to by operating personnel.
8.4	**Access to records**	Upon request, the permittee must make all records and reports related to the permitted facility available to DEQ.
8.5	**Data collection**	The permittee must collect information on a monthly basis: • Number of compactor, drop box, and private vehicles that used the facility; • Volume (i.e., pounds, tons, cubic yards) of solid waste transferred and where; • Tons of incoming materials received; • Types and amounts of salvage or recyclables removed monthly; and • Tons of residual waste sent for disposal and where.
8.6	**Submittal**	The permittee must submit the information collected above, on an approved form, and the solid waste fee to DEQ in accordance with the annual invoice sent by DEQ.
8.7	**Fees**	The permittee must pay the Solid Waste Compliance Fee each year this permit is in effect. An invoice indicating the amount of the fee, set in accordance with DEQ's regulations, will be mailed by DEQ prior to the date due.

8.8	**Complaint log**	The permittee must maintain a log recording all written complaints, complaints received via telephone or in person by the facility operator or staff that specifically refer to a complaint of dust, odor, noise or other nuisance conditions caused by this facility. The log must also record the permittee's actions to investigate, make a determination as to the validity of the complaint, and resolve the nuisance problem, if possible, within two working days, but no longer than 10 working days of receiving the complaint. Reference: OAR 340-096-0040(4)(e)
8.9	**Recycling information**	The permittee must collect and submit to the wasteshed representative information about the amount of each material recovered for recycling or other beneficial purpose each quarter by January 25th of each year.
8.10	**Records**	The permittee must keep copies of all records and reports for five years from the date created.
8.11	**Submittal address**	Except where otherwise noted, all submittals to DEQ under Section 8.0 must be sent to the following address: Oregon Department of Environmental Quality Land Quality Division Solid Waste Program 811 SW Sixth Ave. Portland, OR 97204

9.0 SITE DESIGN AND CONSTRUCTION

9.1	**In this section**	This section describes specific conditions for site design and construction including: • Design; • Construction report; • "As Constructed" documents; • Completion of construction; and • Submittal address.
9.2	**Design**	The facility, including any additions, must be designed and constructed in accordance with the plans approved by DEQ and any amendments approved in writing by DEQ.
9.3	**Construction report**	Upon completion of construction, a report prepared by the project engineer must be submitted to DEQ verifying and certifying that the construction is in accordance with the approved plans. The engineer must report construction observations and identify any construction flaws or deviations from the approved plans.
9.4	**"As Constructed" documents**	"As Constructed" facility plans which note any changes from the original approved plans must be completed and submitted to DEQ within 90 days of completion of construction.
9.5	**Completion of construction**	When construction is nearly complete, the permittee must notify DEQ so that an inspection can be made before the facility is placed into operation.

9.6	**Submittal address**	All submittals to DEQ under Section 9.0 must be sent to: Oregon Department of Environmental Quality Manager, Solid Waste Program 2020 SW Fourth Avenue, Suite 400 Portland, OR 97201 Telephone: (503) 229-5353

10.0 POLLUTION CONTROL

10.1	**In this section**	This section describes activities the facility must perform in order to control pollution including: • Containers; • Vehicles; • Litter control; • Air quality; • Drainage; • Leachate prevention and management; • Stormwater management; and • Submittal address.
10.2	**Containers**	The permittee must clean all transfer containers as needed to maintain a sanitary operating environment, and to prevent malodors, unsightliness, and attraction of vectors.
10.3	**Vehicles**	All solid waste transfer vehicles and devices using public roads must be constructed, maintained, and operated so as to prevent leaking, shifting, or spilling of solid waste while in transit.
10.4	**Litter control**	Litter that results from facility operation must be controlled such that the entire disposal site and adjacent lands are maintained virtually free of litter at all times. Any debris from the facility must be retrieved and properly disposed of as soon as possible that operational day.
10.5	**Air quality**	Dust and malodors must be controlled in accordance with DEQ's rules on air pollution. According to OAR 340-208-0450, no person may cause or permit the emission of particulate matter larger than 250 microns in size at sufficient duration or quantity as to create an observable deposition upon the real property of another person when notified by DEQ that the deposition exists and must be controlled.
10.6	**Drainage**	The permittee must divert surface drainage around or away from waste handling and storage area and must maintain surface water diversion ditches or structures in a serviceable condition and free of obstructions and debris at all times. Any significant damage must be reported to DEQ and repairs made as soon as possible.
10.7	**Leachate prevention and management**	The permittee must operate the facility in a manner that deters leachate production to the maximum extent practicable. Leachate must be collected, removed and managed in a manner approved by DEQ to prevent malodors, public health hazards, and discharge to public waters.

10.8 Stormwater management

The permittee must manage and monitor stormwater in accordance with all federal and state requirements.

The permittee must monitor and maintain the current underground injection control system as described in DEQ approved Operations Plan and until the system is properly decommissioned and approved by the DEQ Underground Injection Control Program.

The permittee must complete the construction of a new stormwater management system approved by DEQ, or obtain a DEQ Underground Injection Control Water Pollution Control Facility permit no later than **December 3, 2012**.

Reference: OAR 340-044-0018(3)

10.9 Submittal address

Submittals to DEQ under Section 10.8 must be sent to:

Oregon Department of Environmental Quality
Manager, Underground Injection Control Program
2020 SW Fourth Avenue, Suite 400
Portland, OR 97201
Telephone: (503) 229-5263

and,

Oregon Department of Environmental Quality
Manager, Solid Waste Program
2020 SW Fourth Avenue, Suite 400
Portland, OR 97201
Telephone: (503) 229-5263

11.0 OPERATING CONDITIONS

11.1 In this section

This section describes specific conditions to which site operations must conform including:

- Waste removal;
- Discovery of prohibited waste;
- Spill response;
- Unloading area;
- Access;
- Material storage;
- Fire protection;
- Equipment;
- Roads;
- Signs;
- Vector control;
- Odor control; and
- Load covers.

11.2 Waste removal

The permittee must remove all waste from the facility at least as often as necessary to prevent malodors, unsightliness and attraction of insects or other vectors.

11.3	**Discovery of prohibited waste**	If prohibited wastes are discovered at the facility, the permittee must immediately isolate or remove the waste. In addition, the permittee must take digital photos of the prohibited waste to document its quantity, nature, identity, and source. If discovered wastes are hazardous or suspected to be hazardous, the permittee must, within 48 hours, notify DEQ and initiate procedures to identify and remove the waste. Hazardous wastes must be removed within 90 days, unless otherwise approved by DEQ. Temporary storage and transportation must be carried out in accordance with the rules of DEQ.
11.4	**Spill Response**	Any spill of oil or hazardous material must be cleaned up immediately as described in the facility Operations Plan. In addition to notifying the appropriate DEQ office, the permittee must immediately report the spill to the Oregon Emergency Response System (OERS) at 1-800-452-0311, if the spill is of a reportable quantity. Reportable quantities include: • ***Any*** amount of oil spilled to waters of the state; • Oil spills on land in excess of 42 gallons; • 200 pounds (25 gallons) of pesticide residue; • Hazardous materials that are equal to, or greater than, the quantity listed in the Code of Federal Regulations, 40 CFR Part 302 (List of Hazardous Substances and Reportable Quantities), and amendments adopted before July 1, 2002.
11.5	**Unloading area**	The area(s) for unloading of solid waste must be clearly defined by signs, fences, barriers, or other devices.
11.6	**Access**	Public access to the facility must be controlled as necessary to prevent unauthorized entry and dumping.
11.7	**Material storage**	All recovered materials and residual wastes must be stored as described in the facility Operations Plan. Material storage areas must be maintained in an orderly manner and kept free of litter. Stored materials must be removed at sufficient frequency to avoid creating nuisance conditions or safety hazards. Storage of materials outside a building must be stored in a manner to prevent nuisance conditions (dust, odor, vector, etc.) and environmental impacts (i.e., leachate impacts to groundwater or surface water). Reference: OAR 340-093-0210
11.8	**Fire protection**	The permittee must make arrangements with the local fire control agency to immediately acquire their services when needed and must provide adequate on-site fire protection as determined by the local fire control agency. The permittee must immediately and thoroughly extinguish any fire. The permittee must initiate and continue appropriate fire-fighting methods until all smoldering, smoking and burning ceases. The permittee must report fires to DEQ within twenty-four (24) hours at: (503)229-5353 The permittee must provide water in sufficient quantities for fire protection, dust suppression, and other site operations requiring water

11.9	**Equipment**	Permittee must provide equipment of adequate size and design to properly operate the facility at all times. In the event of an equipment breakdown, alternative equipment must be provided, unless an exemption from DEQ is granted in writing.
11.10	**Roads**	Roads from the facility property line to the active operational area must be constructed and maintained to deter, to the maximum extent practical, traffic hazards, dust and mud, and to provide reasonable all-weather access for vehicles using the site.
11.11	**Signs**	The permittee must post signs at the facility which are clearly visible and legible, providing the following information: • Name of facility; • Emergency telephone number; • Days and hours of operation; • Authorized and prohibited wastes; • Solid waste permit number; and • Operator's address.
11.12	**Vector Control**	The permittee must provide rodent and insect control measures as necessary to prevent vector production and sustenance. Note: Should wildlife, such as coyotes, from the adjacent natural areas become attracted to the facility, the permittee must consult with DEQ and with Metro and City of Portland wildlife biologists to implement improved measures to prevent the attraction of the wildlife, as necessary.
11.13	**Odor control**	The permittee must employ odor management measures to control and minimize odors that are likely to cause adverse impacts outside the facility boundaries.
11.14	**Load Covers**	The permittee must notify all in-coming haulers that loads must be covered or suitably cross-tied to prevent any load loss during shipment.

12.0 RECYCLING REQUIREMENTS

12.1	**In this section**	This section describes the requirements associated with the recycling operations of source separated materials conducted at the facility including: • Materials; • Receiving location; • Material use; • Recycling information; • Signs; and • Storage.

12.2 Materials

The permittee must provide a place for receiving the following source separated recyclable materials:

- ☒ ferrous scrap metal
- ☐ motor oil
- ☒ newspaper
- ☐ container glass
- ☐ hi-grade office paper
- ☒ non-ferrous scrap metal (including aluminum)
- ☒ corrugated cardboard and kraft paper (brown paper bags)
- ☐ tin cans

The permittee is encouraged to provide recycling opportunities for recyclable materials in addition to the list above.

12.3 Receiving location

The place for receiving recyclable material must be located at the facility or at another location more convenient to the population served by the facility. The recycling center must be available to every person whose solid waste enters the disposal site.

12.4 Material use

All source separated recyclable materials must be reused, recycled or recovered for energy. The permittee must not landfill or dispose of any source separated recyclable material.

12.5 Recycling information

The permittee must provide, or have available upon request, recycling information to disposal site users on printed handbills, which include the following:

- The location of the recycling center at the disposal site or another location;
- The hours of operation of the recycling center;
- Instructions for correct preparation of accepted source separated recyclable material;
- The material accepted for recycling; and
- Reasons why people should recycle.

In addition this material should be available on the permittee's internet web site.

12.6 Signs

A sign must be prominently displayed which indicates:

- The availability of recycling at the disposal site or another location;
- The materials accepted at the recycling center; and
- The hours of operation of the recycling center (if different than disposal site hours).

Note: the sign must indicate the recycling center location, if not at the facility site.

12.7 Storage

All recyclable materials, white goods and other bulky items must be stored in containers unless otherwise approved by DEQ. The storage area must be maintained in an orderly manner and kept free of litter. Recyclable materials must be removed at sufficient frequency to avoid creating nuisance conditions.

GENERAL PERMIT
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM
STORMWATER DISCHARGE PERMIT
Department of Environmental Quality
811 S.W. Sixth Avenue, Portland, OR 97204
Telephone: (503) 229-5630 or 1-800-452-4011 toll free in Oregon
Issued pursuant to ORS 468B.050 and The Federal Clean Water Act

ISSUED TO: 1/15/2012 Gen 1200-COLS NWR/Multnomah County
File Number: 120986 EPA Number: ORR607196

Recology Portland, Inc.
4044 North Suttle Rd
Portland, OR 97217

Site: Suttle Road Recovery Facility

SOURCES THAT ARE REQUIRED TO OBTAIN COVERAGE UNDER THIS PERMIT

A facility that may discharge stormwater from a point source to the Columbia Slough or to conveyance systems that discharge to the Columbia Slough.

1) The stormwater is associated with an industrial activity identified in *Table 1: Sources Covered* on p. 3 or *Table 2: Additional Industrial Activities Covered* on p. 4 below; or
2) The facility is notified in writing by the Director that coverage under this permit is required for its stormwater discharges (see Note 1 below).

Note 1:

1) Facility is designated by the Director as needing a stormwater permit pursuant to 40 CFR §122.26(a)(9)(i)(D). Facility discharges stormwater associated with an industrial activity that is not described in *Table 1: Sources Covered* on p. 3 below.
2) Facilities may apply for conditional exclusion from the requirement to obtain coverage under this permit if there is no exposure of industrial activities and materials to stormwater pursuant to 40 CFR §122.26(g); see Permit Coverage and Exclusion from Coverage on p. 5 below.
3) The following activities are not required to obtain coverage under this permit:
   (i) Construction activities; asphalt mix batch plants; concrete batch plants; and Standard Industrial Classification code 14, Mining and Quarrying of Nonmetallic Minerals, Except Fuels. These activities are required to obtain coverage under separate general permits.
   (ii) Any source that has obtained an individual NPDES permit for the discharge, unless the source is otherwise eligible for coverage under this permit and DEQ has approved the source's application for coverage under it.
   (iii) Any source that discharges to a sanitary sewer system and the discharge is approved by the sanitary sewer operator.

Greg K. Aldrich

Greg Aldrich, Administrator
Water Quality Division

Issuance Date: Oct. 1, 2011
Amended Date: March 28, 2012

PERMITTED ACTIVITIES

Until this permit expires, is modified or revoked, the permit registrant is authorized to construct, install, modify, or operate stormwater treatment or control facilities, and to discharge stormwater and non-stormwater discharges specifically authorized by the permit to public waters in conformance with all the requirements, limitations, and conditions set forth in the following schedules:

		Page
Permit Coverage and Exclusion From Coverage		5
Schedule A -	Technology Based Limitations, Water Quality Based Limitations, Stormwater Pollution Control Plan, Benchmarks and Corrective Actions	10
Schedule B -	Monitoring and Reporting Requirements	20
Schedule C -	Compliance Schedules	N/A
Schedule D-	Special Conditions	26
Schedule E -	Sector Specific Requirements	29
Schedule F -	General Conditions	91

Unless specifically authorized by this permit, by regulation issued by EPA, by another NPDES permit, or by Oregon Administrative Rule, any other direct or indirect discharge to waters of the state is prohibited, including discharges to an underground injection control system.

Schedule F contains General Conditions that are included in all general permits issued by DEQ. Should conflicts arise between Schedule F and any other schedule of the permit, the requirements in Schedule F will not apply.

Table 1. Sources Covered

Types of Industrial Sources Required to Obtain Coverage Under this Permit
Facilities with the following primary Standard Industrial Classification (SIC) codes: 10 Metal Mining 12 Coal Mining 13 Oil and Gas Extraction 20 Food and Kindred Products 21 Tobacco Products 22 Textile Mill Products 23 Apparel and Other Finished Products Made From Fabrics and Similar Material 24 Lumber and Wood Products, Except Furniture and 2491 Wood Preserving. (Activities with SIC 2411 Logging that are defined in 40 CFR §122.27 as silvicultural point source discharges are covered by this permit.) 25 Furniture and Fixtures 26 Paper and Allied Products 27 Printing, Publishing and Allied Industries 28 Chemicals and Allied Products (excluding 2874 Phosphate Fertilizer Manufacturing) 29 Petroleum Refining and Related Industries 30 Rubber and Miscellaneous Plastics Products 31 Leather and Leather Products 32 Stone, Clay, Glass, and Concrete Products 33 Primary Metal Industries 34 Fabricated Metal Products, Except Machinery and Transportation Equipment 35 Industrial and Commercial Machinery and Computer Equipment 36 Electronic and Other Electrical Equipment and Components, Except Computer Equipment 37 Transportation Equipment 38 Measuring, Analyzing, and Controlling Instruments; Photographic, Medical and Optical Goods; Watches and Clocks 39 Miscellaneous Manufacturing Industries 4221 Farm Product Warehousing and Storage 4222 Refrigerated Warehousing and Storage 4225 General Warehousing and Storage 5015 Motor Vehicle Parts, Used 5093 Scrap and Waste Materials
Facilities with the following primary SIC codes that have vehicle maintenance shops (including vehicle rehabilitation, mechanical repairs, painting, fueling, and lubrication), equipment cleaning operations, or airport deicing operations: 40 Railroad Transportation 41 Local and Suburban Transit and Interurban Highway Passenger Transportation 42 Motor Freight Transportation and Warehousing (excluding 4221 Farm Product Warehousing and Storage, 4222 Refrigerated Warehousing and Storage, and 4225 General Warehousing and Storage) 43 United States Postal Service 44 Water Transportation 45 Transportation by Air 5171 Petroleum Bulk Stations and Terminals, except as provided in Note 1 below.
Facilities storing, transferring, formulating, or packaging bulk petroleum products or vegetable oils, except as provided in the note below.
Steam Electric Power Generation including coal handling sites
Landfills, land application sites and open dumps
Hazardous Waste Treatment, Storage and Disposal Facilities.
Treatment works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage, recycling, and reclamation of municipal or domestic sewage (including land dedicated to the disposal of sewage sludge that are located within the confines of the facility) with the design flow capacity of 1.0 mgd or more, or required to have a pretreatment program under 40 CFR §403.

Note 1: Exemption for facilities storing, transferring, formulating, or packaging bulk petroleum products or vegetable oils:

A discharge permit is not needed if discharges are only from:

1) Stormwater that contacts oil-filled electrical equipment in transformer substations that are equipped with properly functioning oil spill prevention measures such as containment areas or oil/water separators.
2) Stormwater that contacts petroleum product receiving or dispensing areas or product dispensing equipment from which product is dispensed to final users, whether or not the stormwater is treated by an oil/water separator.
3) Stormwater that collects in a secondary containment area at a petroleum product dispensing site, where the secondary containment area is associated with storage tanks from which product is dispensed only to final users, and the discharge from the containment area is treated by an oil/water separator.
4) Stormwater that collects in a secondary containment area at a bulk petroleum product storage site, where the total storage capacity at the site does not exceed 150,000 gallons, and the discharge from the containment area is treated by an oil/water separator. A site with multiple containment areas is considered a single site for determining total storage capacity.

In addition to the industrial sources listed in Table 1, facilities with the following industrial activities listed in Table 2 below are required to obtain permit coverage under the NPDES 1200-COLS permit:

Table 2. Additional Industrial Activities Covered

Vehicle, machinery, equipment, and trailer maintenance including repairs, servicing, washing, and painting
Vehicle, machinery, equipment, and trailer storage including rental, sales, wrecked vehicles, fleet, and general storage (Note: Disposal/refuse containers are considered equipment and, when stored by a disposal/refuse contractor/vendor, are industrial activities covered by this permit.)
Materials storage including raw materials; bulk fuels, chemicals, detergents, and plastic pellets; finished materials; lumber and food products; wholesale gravel, sand, and soil stockpiles; and bulk liquids other than water
Waste handling, including recycled product storage, composting, tires, and bulk hazardous waste
Commercial animal operations such as kennels, race tracks, veterinarians not covered under a Confined Animal Feeding Operation permit
Fuel distribution and sales including bulk stations, fuel oil dealers, retail stations (manned and unmanned), fleet fueling, mobile fueling, and truck stops

PERMIT COVERAGE AND EXCLUSION FROM COVERAGE

1. **New Discharger to Impaired Waters** (see Schedule D.3, Definitions)
   a. A new discharger to an impaired water without a Total Maximum Daily Load (TMDL) for pollutant(s) must meet the following conditions to obtain coverage under this permit, cease the discharge or obtain an individual permit:
      i. Prevent all exposure to stormwater of the pollutant(s) for which the waterbody is impaired and document in the Stormwater Pollution Control Plan (SWPCP) procedures taken to prevent exposure onsite;
      ii. Document in SWPCP that the pollutant(s) for which the waterbody is impaired is not present at the site, or
      iii. Provide data and other technical information that demonstrates that the discharge is not expected to cause or contribute to an exceedance of the water quality standard for which the waterbody is impaired at the point of discharge to the waterbody if the pollutant(s) for which the waterbody is impaired are likely to be present at the site and DEQ has not issued a TMDL for the pollutant(s).
   b. A new discharger to an impaired water with a TMDL for pollutant(s) must meet the following conditions to obtain coverage under the permit:
      i. DEQ presumes that compliance with the terms and conditions of the permit complies with the TMDL and will grant the owner or operator coverage under the permit, unless the TMDL establishes wasteload allocation(s) and additional requirements for industrial stormwater discharges.
      ii. DEQ will inform the applicant if any additional limits or controls are necessary to be consistent with the assumptions of the wasteload allocation(s) in the TMDL(s), or if coverage under an individual permit is necessary.
   c. Conditions 1.a and b above do not apply if the waterbody is impaired for:
      i. Biological communities and no pollutant, including indicator or surrogate pollutants, is specified as causing the impairment; or
      ii. Temperature, hydrologic modifications, or impaired hydrology.

2. **New Application for Permit Coverage**
   a. The following facilities that are required to obtain coverage under this permit must:
      i. New facility – Submit to DEQ or Agent (see Schedule D.4 for description of Agent) at least 60 calendar days before the planned activity that requires permit coverage, unless a later date is approved by DEQ or Agent, a complete application that includes the following:
         1. DEQ-approved application form;
         2. One paper copy and one electronic PDF of the SWPCP. If an Agent is receiving the application materials, submit two copies of the SWPCP; and
         3. Applicable permit fees.
      ii. Existing facility with stormwater discharges associated with industrial activities identified in *Table 1: Sources Covered* on p. 3 or *Table 2: Additional Industrial Activities Covered* on p. 4 operating without coverage under any NPDES permit for those discharges – Immediately submit to DEQ or Agent, unless a later date is approved by DEQ or Agent, a complete application that includes the following:
         1. DEQ-approved application form;
         2. One paper copy and one electronic PDF of the SWPCP. If an Agent is receiving the application materials, submit two copies of the SWPCP; and
         3. Applicable permit fees.
      iii. Existing facility that is designated by the Director as needing a stormwater permit pursuant to 40 CFR §122.26(a)(9)(i)(D) or is conducting an industrial activity that is not described in

Table 1: Sources Covered on p. 3 or *Table 2: Additional Industrial Activities Covered* on p. 4 that is notified by the Director that coverage under this permit is required (see Note 1 of the cover page of the permit) – Within 90 calendar days of being notified by DEQ that permit coverage is required, submit to DEQ or Agent a complete application that includes the following:

1. DEQ-approved application form;
2. One paper copy and one electronic PDF of the SWPCP. If an Agent is receiving the application materials, submit two copies of the SWPCP; and
3. Applicable permit fees.

iv. Existing facility operating under permit coverage that intends to change industrial processes at the site to a new primary industrial sector – Submit to DEQ or Agent at least 60 calendar days before the planned change, unless a later date is approved by DEQ or Agent, a complete application that includes the following:

1. DEQ-approved application form;
2. One paper copy and one electronic PDF of the SWPCP. If an Agent is receiving the application materials, submit two copies of the SWPCP; and
3. Applicable permit fees.

v. Existing facility whose stormwater discharges are authorized by an individual NPDES permit and seeks coverage under this permit – Submit to DEQ or Agent a complete application that includes the following:

1. DEQ-approved application form;
2. One paper copy and one electronic PDF of the SWPCP. If an Agent is receiving the application materials, submit two copies of the SWPCP; and
3. Applicable permit fees.

b. Registration

i. Prior to granting the applicant registration under this permit, DEQ will provide a 30-calendar day public review period. DEQ will respond in writing to any public comments on the applicant's SWPCP.
ii. DEQ or Agent will notify the applicant in writing if registration is granted or denied.
iii. If registration is denied or the applicant does not wish to be regulated by this permit, the applicant may apply for an individual permit in accordance with OAR 340-045-0030.

3. Renewal Application Requirements for Facilities that DID NOT Exceed Benchmark(s) Based on the 4th year Benchmark Evaluation of Data Collected pursuant to Schedule A.9 of 1200-COLS permit that expired August 31, 2011.

a. To ensure uninterrupted permit coverage for industrial stormwater discharges, an owner or operator of a facility registered under the 1200-COLS permit that expired on August 31, 2011 must submit an updated SWPCP that meets the requirements of the new permit to DEQ or Agent, by December 31, 2011, unless a later date is approved in writing. Submit one paper copy and one electronic PDF of the SWPCP. If an Agent is receiving the application materials, submit two copies of the SWPCP.

b. Registration

i. Prior to granting the applicant registration under this permit, DEQ will provide a 30-calendar day public review period.
ii. DEQ or Agent will notify the applicant in writing if registration is approved or denied.
iii. If registration is denied or the applicant does not wish to be regulated by this permit, the applicant may apply for an individual permit. If the applicant applies for an individual permit in accordance with OAR 340-045-0030, the applicant's coverage under this permit will continue until DEQ grants or denies the applicant's individual permit application.

4. Renewal Application Requirements for Facilities that Exceed Benchmark(s) based on the 4th year Benchmark Evaluation pursuant to Schedule A.9 of 1200-COLS permit that expired August 31, 2011.

a. To ensure uninterrupted permit coverage for industrial stormwater discharges, an owner or operator of a facility registered under the 1200-COLS permit that expired on August 31, 2011 must submit an updated SWPCP that meets the requirements of the new permit to DEQ or Agent, by March 31, 2012, unless a later date is approved in writing. Submit one paper copy and one electronic PDF of the SWPCP. If an Agent is receiving the application materials, submit two copies of the SWPCP.

b. The owner or operators must include additional treatment measures in the SWPCP, which may include a combination of source control and treatment measures, with the goal of achieving the benchmark(s) in Schedule A.9 of this permit in future discharges. Include in the SWPCP the rationale for the selection of the measures and the projected reduction of pollutant concentration(s). A licensed professional engineer (PE) or certified engineering geologist (CEG) shall design and stamp the portion of the SWPCP that addresses the treatment measures.

c. The owner or operator may request a waiver from including the additional treatment measures in the SWPCP if:

   i. The benchmark exceedance(s) is attributed solely to the presence of the pollutant(s) in natural background and is not associated with industrial activities at the site (see Schedule D.3, Definitions). The updated SWPCP must include the investigation and analysis used to demonstrate that the exceedances are due to natural background conditions and include any data collected by the permit registrant or others (including literature studies) that describe the levels of natural background pollutants in the discharge.

   ii. Owner or operator implements or has implemented volume reduction measures, such as low impact development practices, that have or will result in reductions of the mass load of pollutants in the discharge below the mass equivalent of the benchmarks in Schedule A.9 of the permit. The updated SWPCP must include data and analysis to support this determination, including the description of the measure(s), date(s) implemented or expected to be implemented and the mass load analysis.

d. Registration

   i. Prior to granting the applicant registration under this permit, DEQ will provide a 30-calendar day public review period. DEQ will respond in writing to any public comments on the applicant's updated SWPCP.

   ii. DEQ or Agent will notify the applicant in writing if registration is approved or denied.

   iii. If registration is denied or the applicant does not wish to be regulated by this permit, the applicant may apply for an individual permit in accordance with OAR 340-045-0030. If the applicant applies for an individual permit in accordance with OAR 340-045-0030, the applicant's coverage under this permit will continue until DEQ grants or denies the applicant's individual permit application.

5. Name Change or Transfer of Permit Coverage

a. For a name change or transfer of permit coverage between legal entities, the owner or operator must submit to DEQ or Agent within 30 calendar days of the name change or planned transfer, a complete application that includes the following:

   i. DEQ-approved Name Change or Permit Transfer application form;

   ii. An updated SWPCP, if revisions are necessary to address changed conditions. Submit one paper copy and one electronic PDF of the SWPCP. If an Agent is receiving the application materials, submit two copies of the SWPCP; and

   iii. Applicable permit fees.

b. DEQ or Agent will notify the applicant in writing if the transfer is approved or denied. DEQ will transfer coverage under the permit after DEQ approves the application.
c. For a name change or transfer of permit coverage between legal entities that intend to change industrial processes at the site to a new primary industrial sector, the owner or operator must submit a new application for coverage under this permit as required in condition 2.a.iv above.

6. "No Exposure" Conditional Exclusion from Permit Coverage

a. An owner or operator that applies under 40 CFR §122.26(g)(2) for a "no exposure" conditional exclusion from coverage under this permit must:
   i. Protect industrial materials and activities from exposure to rain, snow, snow melt, and runoff by using a storm resistant shelter, except as provided in the Environmental Protection Agency (EPA) Guidance Manual for Conditional Exclusion from Stormwater Permitting Based on "No Exposure" of Industrial Activities to Stormwater (EPA 833-B-00-001, June 2000). Storm resistant shelters with unsealed zinc or copper roofing materials are not eligible for the "no exposure" conditional exclusion.
   ii. Ensure that contaminated soil or materials from previous operations is not exposed.
   iii. Complete and sign a certification, on a form approved by DEQ, that there is no stormwater exposure to industrial materials and activities from the entire facility, except as provided in 40 CFR §122.26(g)(2). The EPA Guidance Manual (EPA 833-B-00-001) may be used to determine whether the no exposure criteria are met.
   iv. Submit the signed certification to DEQ or Agent once every five years. If DEQ or Agent does not comment on the "no exposure" certification within 30 days, the "no exposure" conditional exclusion is deemed approved. DEQ or Agent may notify the applicant in writing or by email of its approval. The owner or operator must keep a copy of the certification on site and any notification of approval on site.
   v. Allow DEQ or Agent to inspect the facility to determine compliance with the "no exposure" conditions, and allow DEQ or Agent to make any "no exposure" inspection reports available to the public upon request.
   vi. Submit a copy of the "no exposure" certification to the municipal separate storm sewer system (MS4) operator (i.e., local municipality, district), upon their request, if facility discharges through an MS4; and allow inspection and public reporting by the MS4 operator.
b. Limitations for obtaining or maintaining the exclusion:
   i. This exclusion is available on a facility-wide basis only, not for individual outfalls.
   ii. If industrial materials or activities become exposed to rain, snow, snow melt, or runoff, the conditions for this exclusion no longer apply. In such cases, the discharge becomes subject to enforcement for un-permitted discharge. Any conditionally exempt discharger who anticipates changes in circumstances must apply for and obtain permit coverage before the change of circumstances.
   iii. DEQ or Agent retains the authority to make a determination that the "no exposure" conditional exclusion no longer applies and require the owner or operator to obtain permit coverage.

7. Authorized Non-Stormwater Discharges

a. Subject to the terms and conditions of the permit, the following non-stormwater discharges are authorized:
   i. Discharges from fire-fighting activities.
   ii. Fire hydrant flushings.
   iii. Potable water, including water line flushings.

iv. Uncontaminated condensate from air conditioners, coolers and other compressors, and from outside storage of refrigerated gases and liquids.
v. Irrigation drainage.
vi. Landscape watering, provided that all pesticides, herbicides, and fertilizer have been applied in accordance with manufacturer's instructions.
vii. Pavement wash waters where no detergents or hot water are used, no spills or leaks of toxic or hazardous materials have occurred (unless all spilled material has been removed), and surfaces are swept before washing.
viii. Vehicle washing that does not use detergents or hot water unless the 1700-A NPDES permit is required for the discharge.
ix. Routine external building washdown that does not use detergents or hot water.
x. Uncontaminated ground water or spring water.
xi. Foundation or footing drains where flows are not contaminated with process materials.
xii. Incidental windblown mist from cooling towers that collects on rooftops or adjacent portions of the facility, but not intentional discharges from the cooling tower (e.g., "piped" cooling tower blowdown or drains).

b. Piping and drainage systems for interior floor drains and process wastewater discharge points must be separated from the storm drainage system to prevent inadvertent discharge of pollutants to waters of the state, unless the process wastewater discharge is authorized by another NPDES permit that allows commingled outfalls. Discharge from floor drains to the stormwater drainage system is a violation of this permit.

c. Any other wastewater discharge or disposal, including stormwater mixed with wastewater, must be permitted in a separate permit, unless the wastewater is reused or recycled without discharge or disposal, or discharged to the sanitary sewer with approval from the sanitary sewer system operator.

8. Limitations on Coverage

a. Pursuant to OAR 340-045-0033(10), DEQ may deny permit coverage to an applicant or revoke a permit registrant's coverage under the permit and require the owner or operator to apply for and obtain an individual permit.

b. Coverage under this permit is not available under the following circumstances:
   i. The discharges are regulated by another NPDES permit, except a Municipal Separate Storm Sewer System (MS4) permit.
   ii. The discharges were included in a permit that has been or is in the process of being denied, terminated or revoked unless the source is otherwise eligible for coverage under this permit and DEQ approves the source's application to register under it and simultaneously revokes coverage under the other permit.
   iii. New discharger to waters designated as Outstanding Resource Waters for antidegradation purposes under 40 CFR 131.13(a)(3) and OAR 340-041-0004.

c. Any operator not wishing to be covered or limited by this general permit may make application for an individual NPDES permit in accordance with the procedures in OAR 340-045-0030.

SCHEDULE A

TECHNOLOGY BASED EFFLUENT LIMITATIONS

1. **Narrative Technology-Based Effluent Limits**

   The permit registrant must meet the following narrative technology based effluent limits and any additional sector specific limits in Schedule E of the permit.

   a. Minimize exposure - Minimize exposure of manufacturing, processing, material storage areas, including loading and unloading, disposal, cleaning, maintenance and fixed fueling areas, to rain, snow, snowmelt and runoff. To the extent technologically available and economically practicable and achievable in light of best industry practice, the permit registrant must do the following:
      i. Locate materials and activities indoors or protect them with storm resistant covers if stormwater from affected areas discharges to surface waters. Acceptable covers include, but are not limited to, permanent structures such as roofs or buildings and temporary covers such as tarps;
      ii. Use grading, berming, or curbing to divert stormwater away from these areas and prevent stormwater contamination;
      iii. Store all hazardous substances (see Schedule D.3, Definitions) within berms or other secondary containment devices to prevent leaks and spills from contaminating stormwater. If the use of berms or secondary containment devices is not possible, then store hazardous substances in areas that do not drain to the storm sewer system;
      iv. Locate materials, equipment and activities in containment and diversion systems, including the storage of leaking or leak-prone vehicles and/or equipment awaiting maintenance, to prevent leaks and spills from contaminating stormwater;
      v. Use drip pans or absorbents under or around leaking or leak-prone vehicles/equipment or store indoors. Drain fluids from equipment and vehicles prior to on-site storage or disposal;
      vi. Perform all cleaning operations indoors, under cover or in bermed areas that prevent runoff and run-on and also captures overspray;
      vii. Clean up spills or leaks promptly using absorbents or other effective methods to prevent discharge of pollutants and use spill/overflow protection equipment, and
      viii. Ensure that all washwater drains to a proper collection system such as a closed-loop system or sanitary sewer and not discharged to the stormwater drainage system unless the washwater is an authorized non-stormwater discharge listed in condition 6 of the Permit Coverage and Exclusion from Coverage section of the permit.

   b. Oil and Grease - Employ oil/water separators, booms, skimmers or other methods to eliminate or minimize oil and grease contamination of stormwater discharges.

   c. Waste Chemicals and Material Disposal - Recycle or properly dispose of wastes to eliminate or minimize exposure of pollutants to stormwater. Cover all waste contained in bins or dumpsters where there is a potential for drainage of stormwater through the waste to prevent exposure of stormwater to these pollutants. Acceptable covers include, but are not limited to, storage of bins or dumpsters under roofed areas and use of lids or temporary covers such as tarps.

   d. Erosion and Sediment Control - Stabilize exposed areas and contain runoff using structural and nonstructural controls to minimize erosion of soil at the site and sedimentation. Employ erosion control methods such as vegetating exposed areas, graveling or paving to minimize erosion of soil at the site. Employ sediment control methods such as detention facilities, vegetated filter strips, bioswales, flow velocity dissipation devices or other permanent erosion or sediment controls to minimize sediment loads in stormwater discharges. For activities that involve land disturbance, the permit registrant must contact the local municipality to determine if there are other applicable requirements related to stormwater control.

e. Debris Control - Employ screens, booms, settling ponds, or other methods to eliminate or minimize waste, garbage and floatable debris in stormwater discharges and ensure that this debris is not discharged to receiving waters.

f. Dust Generation and Vehicle Tracking of Industrial Materials - Minimize generation of dust and off-site tracking of raw, final or waste materials.

g. Housekeeping - Routinely clean all exposed areas that may contribute pollutants to stormwater using such measures as sweeping at regular intervals, litter pick-up, keeping materials orderly and labeled, prompt clean up of spills and leaks, proper maintenance of vehicles and stowing materials in appropriate containers.

h. Spill Prevention and Response Procedure - Minimize the potential for leaks, spills and other releases that may be exposed to stormwater and develop plans that include methods for spill prevention and clean-up and notification procedures. At a minimum, the permit registrant must implement the following:

   i. Procedures for plainly labeling containers (e.g., "Used Oil," "Spent Solvents," "Fertilizers and Pesticides," etc.) that could be susceptible to spillage or leakage to encourage proper handling and facilitate rapid response if spills or leaks occur;

   ii. Preventative measures such as barriers between material storage and traffic areas, secondary containment provisions, and procedures for material storage and handling;

   iii. Procedures for expeditiously stopping, containing, and cleaning up leaks, spills and other releases. Make the methods and procedures available to appropriate personnel. Employees who may cause, detect, or respond to a spill or leak must be trained in these procedures. Have the necessary clean-up material on-site and readily available, and

   iv. Procedures for notification of appropriate facility personnel, emergency agencies, and regulatory agencies. Contact information must be in locations that are readily accessible and available.

i. Preventative Maintenance - Regularly inspect, clean, maintain, and repair all industrial equipment and systems and materials handling and storage areas that are exposed to stormwater to avoid situations that may result in leaks, spills, and other releases of pollutants discharged to receiving waters. Clean, maintain and repair all control measures, including stormwater structures, catch basins, and treatment facilities to ensure effective operation and in a manner that prevents the discharge of pollution.

j. Employee Education - Develop and maintain an employee orientation and education program to inform personnel on the components and goals of the SWPCP. Train all employees who work in areas where industrial materials or activities are exposed to stormwater, or who are responsible for implementing activities necessary to meet the conditions of this permit (e.g., inspectors, maintenance personnel). Training must cover both the specific control measures used to achieve the narrative technology based effluent limits such as spill response procedures and good housekeeping practices, and the monitoring, inspection, reporting and documentation requirements in the permit. The education and training must occur within 30 calendar days of hiring an employee who works in areas where stormwater is exposed to industrial activities or conducts duties related to the implementation of the SWPCP, and annually thereafter.

k. Non-Stormwater Discharges - Eliminate any non-stormwater discharges not authorized by a NPDES permit (see condition 7 of the Permit Coverage and Exclusion from Coverage section of the permit for a list of authorized non-stormwater discharges).

2. **Numeric Technology Based Effluent Limits based on Stormwater Specific Effluent Limitations Guidelines** - The permit registrant with the following activities must comply with the applicable limitations:

Table 2. Numeric Effluent Limits based on Effluent Limit Guidelines

Regulated Activity	40 CFR Part/Subpart	Effluent Limit
Runoff from asphalt emulsion facilities	Part 443, Subpart A	See Schedule E.D.1
Runoff from material storage piles at cement manufacturing facilities	Part 411, Subpart C	See Schedule E.E.3
Runoff from hazardous waste landfills	Part 445, Subpart A	See Schedule E.K.3
Runoff from non-hazardous waste landfills	Part 445, Subpart B	See Schedule E.L.7
Runoff from coal storage piles at steam electric generating facilities	Part 423	See Schedule E.O.5

3. **Control Measures for Technology Based Effluent Limits**
   a. The permit registrant must select, design, install, implement and maintain control measures to meet the narrative and numeric technology based effluent limits in Schedule A.1, A.2 and Schedule E of the permit and described these measures in the SWPCP.
   b. For technology based effluent limits that require permit registrants to minimize pollutants in the discharge, permit registrants must reduce or eliminate pollutants to the extent achievable using control measures that are technologically available and economically practicable and achievable in light of best industry practice. In selecting the appropriate control measures to meet these limits, permit registrant may consider the age of the equipment and facilities involved, the processes employed, the engineering aspects of the application of various types of control techniques, the pollutant reductions likely to be achieved, any adverse environmental or energy effects of potential measures, and the costs of achieving pollutant reductions.
   c. The permit registrant must select, design, install, implement and maintain the control measures in accordance with good engineering practices and manufacturer's specifications. If the permit registrant deviates from manufacturer's specifications provide justification for such deviation in the SWPCP.
   d. DEQ or Agent may require the permit registrant to take corrective actions to meet the narrative and numeric technology based effluent limits in Schedule A.1, A.2 and Schedule E of the permit.
      i. If the permit registrant is failing to implement the control measures in the SWPCP, they must take corrective actions and implement the measures before the next storm event if practicable, unless otherwise approved by DEQ or Agent.
      ii. If modifications to the control measures are necessary to meet the technology limits in the permit, permit registrant must revise SWPCP within 30 days, unless otherwise approved by DEQ or Agent. Permit registrant must implement the corrective actions before the next storm event if practicable or no later than 60 days from discovering the violation, unless a later date is approved by DEQ or Agent.

WATER QUALITY BASED EFFLUENT LIMITATIONS

4. Water Quality Standards

a. The permit registrant must not cause or contribute to a violation of instream water quality standards as established in OAR 340-041.

b. If at any time the permit registrant becomes aware, or DEQ or Agent determines, that the discharge causes or contributes to an exceedance of water quality standards, permit registrant must take the following corrective actions:

i. Within 24 hours of discovering the violation:
   1. Investigate the conditions that triggered the violation and
   2. Review the SWPCP and the selection, design, installation and implementation of control measures to ensure compliance with the permit.

ii. Within 30 days of the discovering the violation, submit a Water Quality Standards Corrective Action report to DEQ or Agent that documents the following:
   1. The results of the investigation, including the date the violation discovered and a brief description of the conditions that triggered the violation;
   2. Corrective actions taken or to be taken, including date corrective action completed or expected to be completed, and
   3. Document whether SWPCP revisions are necessary. If permit registrant determines that SWPCP revisions are necessary based on the corrective action review, submit a revised SWPCP to DEQ or Agent with the report.

iii. Permit registrant must implement the corrective actions before the next storm event if practicable or no later than 60 days from discovering the violation, unless a later date is approved by DEQ or Agent.

c. DEQ may impose additional water quality-based limitations on a site-specific basis, or require the permit registrant to obtain coverage under an individual permit, if information in the application, required reports, or from other sources indicates that the discharge is causing or contributing to a violation of water quality standards, either in the receiving waterbody or a downstream waterbody. If DEQ determines that additional site specific requirements are necessary, DEQ will require the permit registrant to revise the SWPCP. DEQ will hold a 30-calendar day public review period on the revised SWPCP.

5. Discharges to Impaired Waters.

a. Existing Discharger to an Impaired Water with a TMDL for Pollutant(s)- Compliance with the terms and conditions of the permit complies with the Columbia Slough TMDL for pollutants approved by EPA on November 25, 1998. Permit registrant must meet Schedule A.4 and B.1.b of the permit. If DEQ revises the existing Columbia Slough TMDL or develops new TMDLs for other pollutants in the watershed after the issuance date of this permit that identify wasteload allocation(s) for pollutants and additional requirements for industrial stormwater discharges, DEQ will inform the permit registrant if any additional limits or controls are necessary to be consistent with the assumptions of the wasteload allocation(s) in the TMDL(s), or if coverage under an individual permit is necessary. If DEQ determines that additional site specific requirements are necessary, DEQ will require the permit registrant revise the SWPCP to incorporate the requirements. DEQ will hold a 30-calendar day public review period on the revised SWPCP.

b. Existing Discharger to an Impaired Water without a TMDL for Pollutant(s)- Permit registrant that discharges to an impaired water on the 303(d) list in effect at the time of permit assignment without a TMDL for the pollutant(s) must meet Schedule A.4 and B.1.b of the permit.

c. New Discharger to an Impaired Water - New discharges to impaired waters authorized to discharge under this permit must implement and maintain any control measures or conditions on the site that enabled the permit registrant to become eligible for permit coverage and modify such

measures or conditions as necessary pursuant to corrective action requirements in the permit. Permit registrant must meet Schedule A.4 and B.1.b of the permit.

STORMWATER POLLUTION CONTROL PLAN

6. Preparation and Implementation of SWPCP

a. The SWPCP must be prepared by a person knowledgeable in stormwater management and familiar with the facility.
b. The SWPCP must be signed and certified in accordance with 40 CFR §122.22.
c. Permit registrants must implement the SWPCP and any revisions to the plan. Failure to implement any of the control measures or practices described in the SWPCP is a violation of the permit.
d. The SWPCP must be kept current and updated as necessary to reflect any changes to the site. Update the SWPCP within 30 days of making the changes.

7. Required Elements

a. Title Page - The title page of the SWPCP must contain the following information:
   i. Name of the site.
   ii. Name of the site operator or owner.
   iii. The name of the person(s) preparing the SWPCP.
   iv. Site or file number as indicated on the permit.
   v. Contact person's name and telephone number.
   vi. Physical address, including county, and mailing address if different.
b. Site Description - The SWPCP must contain the following information, including any information required in Schedule E of the permit:
   i. A general location map showing the location of the site in relation to surrounding properties, transportation routes, surface waters and other relevant features.
   ii. A site map including the following:
      1. drainage patterns;
      2. drainage and discharge structures (piping, ditches, etc.);
      3. outline of the drainage area for each stormwater outfall;
      4. paved areas and buildings within each drainage area;
      5. areas used for outdoor manufacturing, treatment, storage, or disposal of significant materials;
      6. existing structural control measures for minimizing pollutants in stormwater runoff;
      7. structural features that reduce flow or minimize impervious areas;
      8. material handling and access areas;
      9. hazardous waste treatment, storage and disposal facilities;
      10. location of wells including waste injection wells, seepage pits, drywells, etc.;
      11. location of springs, wetlands and other surface waterbodies both on site and adjacent to the site;
      12. location of groundwater wells;
      13. location and description of authorized non-stormwater discharges;
      14. location of sampling points; and
      15. location of spill prevention and cleanup materials.
   iii. A description of industrial activities conducted at the site and significant materials stored, used, treated or disposed of in a manner that allows exposure to stormwater. Include in the description the methods of storage, usage, treatment or disposal.

iv. For each area of the site where a reasonable potential exists for contributing pollutants to stormwater runoff, a description of the potential pollutant sources that could be present in stormwater discharges.
v. A description of control measures installed and implemented to meet the technology and water quality based requirements in Schedule A.1 –A.5 and any applicable sector specific requirements in Schedule E of the permit. Include in the description how the stormwater control measures address potential pollutant sources from industrial activities and significant materials on-site, spills and leaks and authorized non-stormwater discharges.
vi. An estimate of the amount of impervious surface area (including paved areas and building roofs) and the total area drained by each stormwater outfall to be reported in area units.
vii. The name(s) of the receiving water(s) for stormwater drainage. If drainage is to a municipal storm sewer system, the name(s) of the ultimate receiving waters and the name of the municipality.
viii. The identification of the discharge outfall(s) and the point(s) where stormwater monitoring will occur as required by Schedule B.2.c. If multiple discharge outfalls exist but will not all be monitored, include a description of the outfalls and data or analysis supporting that the outfalls are representative as described in Schedule B.2.c.ii of the permit.

c. Procedures and Schedules -The SWPCP must contain the following information to meet the technology based effluent limits in Schedule A.1 of the permit
i. Spill Prevention and Response Procedure - Procedures for preventing and responding to spills and clean-up and notification procedures. Spills prevention plans required by other regulations may be substituted for this provision provided that stormwater management concerns are adequately addressed and the plan is kept onsite and included with the SWPCP. The location of clean-up materials must either be shown on the site drawings or indicated in the text of the SWPCP.
ii. Preventative Maintenance - Preventative maintenance procedures for conducting inspections, maintenance and repairs to prevent leaks, spills, and other releases and a schedule for regular pickup and disposal of waste materials, and inspections for leaks and conditions of drums, tanks and containers.
iii. Employee Education – Schedule for employee training.

d. Monitoring - If an existing facility is renewing its coverage under this permit and included the benchmarks from the previous permit in the SWPCP, update the SWPCP to reflect the benchmarks in Schedule A.9 and any applicable sector specific benchmarks in Schedule E of the permit.

8. SWPCP Revisions

a. Permit registrants must prepare SWPCP revisions in compliance with condition A.6 and clearly identify changes to activities on site and control measures.
b. Submission of all SWPCP revisions is not required. SWPCP revisions must be submitted only if they are made for any of the following reasons:
i. Change in site contact(s);
ii. In response to a corrective action or inspection;
iii. Changes to the site or control measures that may significantly change the nature of pollutants present in stormwater discharge; or significantly increase the pollutant(s) levels, discharge frequency, discharge volume or flow rate, and
iv. Changes to the monitoring locations or outfalls.
c. If submission of SWPCP revisions is required, permit registrant must submit the revised pages of the SWPCP or site map to DEQ or Agent within 30 days of making the revisions.
d. Review of the revisions by DEQ or Agent prior to implementation is not required, except revision to location of monitoring locations. If the permit registrant does not receive a response to the

revisions from DEQ or Agent within 30 days of receipt, the proposed revisions are deemed accepted.

e. DEQ or Agent may require the permit registrant revise the SWPCP at any time. The permit registrant must submit the revisions within 30 days, unless a later date is approved by DEQ or Agent.
f. SWPCP revisions are not subject to public notice and comment unless they are made in response to the water quality based effluent limit requirements in Schedule A.4 and A.5 of the permit.

STORMWATER DISCHARGE BENCHMARKS

9. Benchmarks

Benchmarks and reference concentrations for impairment pollutants are guideline concentrations, not limitations; a benchmark or reference concentration exceedance, therefore, is not a permit violation. They are designed to assist the permit registrant in determining whether its site controls are effectively reducing pollutant concentrations in stormwater discharged from the site. For facilities that are subject to federal limitations in Schedule A.2 of the permit, benchmarks apply to only those pollutants that are not limited by the federal regulations.

The following statewide benchmarks apply to each point source discharge of stormwater associated with industrial activity:

Table 3. Statewide Benchmarks

Parameter	Benchmark
Total Copper	0.036 mg/L
Total Lead	0.060 mg/L
Total Zinc	0.24 mg/L
pH*	5.5 – 8.5 SU
Total Suspended Solids*	50 mg/L
Total Oil & Grease*	10 mg/L
E. coli	406 counts/100 ml
BOD_5	33 mg/L
Total Phosphorus	0.16 mg/L

* See Schedule A.2 for list of facilities subject to federal limitations.

See Schedule E of the permit for the sector specific benchmarks that apply to certain industrial sectors/subsectors.

Permit registrants who also discharge stormwater from industrial activities covered under this permit to surface waters outside the Columbia Slough or to conveyance systems that discharge surface waters outside the Columbia Slough can apply the 1200-Z benchmarks to those discharges and are not required to obtain coverage under the 1200-Z permit.

CORRECTIVE ACTIONS FOR IMPAIRMENT POLLUTANTS AND BENCHMARKS EXCEEDANCES

10. Tier I Corrective Action Response to Exceedances of Impairment Pollutants and Benchmarks:

a. If stormwater sampling results exceed any of the statewide benchmarks in Schedule A.9 of the permit, sector specific benchmarks in Schedule E of the permit, or reference concentrations for impairment pollutants identified in the permit assignment letter, the permit registrant must within 30 calendar days of obtaining the monitoring results:
   i. Investigate the cause of the elevated pollutant levels.
   ii. Review the SWPCP and the selection, design, installation and implementation of control measures to ensure compliance with the permit. If permit registrant determines that SWPCP revisions are necessary based on corrective action review, submit the revised pages of the SWPCP to DEQ or Agent, including a schedule for implementing the control measures.
   iii. Summarize the following information in a Tier I report that is retained on site and submitted to DEQ or Agent upon request:
      1. The results of the investigation.
      2. Corrective actions taken or to be taken, including date corrective action completed or expected to be completed. Where the permit registrant determines that corrective action is not necessary, provide the basis for this determination.
      3. Document whether SWPCP revisions are necessary.

b. Implement the corrective actions before the next storm event if possible or as soon as practicable.

c. Permit registrants are exempt from the Tier I corrective action requirements for exceedances of benchmark parameters addressed by the Tier II corrective actions requirements in Schedule A.11 and A.12 below.

11. Tier II Corrective Actions for Facilities that exceeded Benchmarks based on 4th year Benchmark Compliance Evaluation required by 1200-COLS permit that expired August 2011 (see Condition 4 of Permit Coverage and Exclusion section)

a. Permit registrants are exempt from the Tier II corrective action requirements in condition A.12 of the permit.

b. No later than two years after obtaining permit coverage, the permit registrant must install and implement the stormwater treatment measures.

c. After the stormwater treatment measures are implemented, if sampling results continue to exceed the same benchmark parameter(s) that triggered the Tier II corrective action requirements, permit registrant must within 30 days of obtaining the sample results, evaluate whether the treatment measures were properly installed, maintained and implemented and whether modifications to these measures are necessary. Summarize these findings in a Tier II Benchmark Exceedance report that is retained on site and submitted to DEQ or Agent annually with the Discharge Monitoring Report form.

12. Tier II Corrective Action Response based on 2nd year Geometric Mean Benchmark Evaluation

a. Permit registrants must evaluate the sampling results collected during the 2nd year of permit coverage and determine if the geometric mean of the samples collected at each monitored outfall exceeds any benchmark in Schedule A.9 of the permit. The permit registrant must report this information in the Discharge Monitoring Report form for that monitoring year. Permit registrants are not required to conduct this evaluation for the benchmark parameter(s) where DEQ has granted a monitoring waiver in Schedule B.4 of the permit.

b. For the pH benchmark, Tier II corrective action requirements are triggered if more than three samples collected during the first two years of permit coverage are outside of the pH benchmark range.

c. If the geometric mean of the sampling results for any outfall monitored exceeds any statewide benchmark (or if more than three samples for any outfall monitored are outside of the pH benchmark range), permit registrant must:
   i. Revised SWPCP
      1. Revise the SWPCP to include additional stormwater treatment measures, which may include a combination of source control and treatment measures, with the goal of achieving the benchmark(s) in Schedule A.9 of the permit in future discharges. Include in the SWPCP the rationale for the selection of the measures, the projected reduction of pollutant concentration(s) and the schedule for implementing these measures.
      2. Have a licensed professional engineer (PE) or certified engineering geologist (CEG) design and stamp the portion of the SWPCP that addresses the stormwater treatment measures.
      3. Submit the revised SWCP to DEQ or Agent by December 31st of the 3rd year of permit coverage. If the permit registrant does not receive a response from DEQ or Agent within 30 days of receipt, the proposed revisions are deemed accepted.
   ii. Tier II Deadline - Implement the treatment measures by June 30th of the 4th year of permit coverage.
   iii. After the stormwater treatment measures are implemented, if sampling results continue to exceed the same benchmark parameter(s) that triggered the Tier II corrective action requirements, permit registrant must within 30 days of obtaining the sample results, evaluate whether the treatment measures were properly installed, maintained and implemented and whether modifications to these measures are necessary. Summarize these findings in a Tier II Benchmark Exceedance report that is retained on site and submitted to DEQ or Agent annually with the Discharge Monitoring Report form.

d. Tier II Waiver - Permit registrants may request a waiver from the requirements in Schedule A.12.c above if:
   i. The benchmark exceedance(s) is attributed solely to the presence of the pollutant(s) in natural background and is not associated with industrial activities at the site (see Schedule D.3, Definitions). The Tier II waiver report must include the investigation and analysis used to demonstrate that the exceedances are due to natural background conditions and include any data collected by the permit registrant or others (including literature studies) that describe the levels of natural background pollutants in the discharge.
   ii. Permit registrant implements or has implemented volume reduction measures, such as low impact development practices, that have or will result in reductions of the mass load of pollutants in the discharge below the mass equivalent of the benchmarks in Schedule A.9 of the permit. The Tier II Waiver report must include data and analysis to support this determination, including the description of the measure(s), date(s) implemented or expected to be implemented and the mass load analysis.
   iii. Permit registrant must submit a Tier II Waiver report to DEQ or Agent by December 31st of the 3rd year of permit coverage. DEQ or Agent will grant or deny the waiver request within 60 days of its receipt.

13. Permit Compliance

a. Any noncompliance with any of the requirements of this permit constitutes a violation of the Clean Water Act. Failure to take any required corrective actions in Schedule A.10 through A.12 of the permit constitute an independent, additional violation of this permit and the Clean Water Act. Any actions and time periods specified for remedying noncompliance do not absolve parties of the initial underlying violations.

b. Where corrective action is triggered by an event that does not itself constitute a violation, such as a benchmark exceedance, there is no permit violation for the corrective actions provided that the permit registrant takes the corrective action within the deadlines identified in the permit.

c. A new permit registrant with a new facility (that begins operation after October 1, 2011) or an existing facility (that was in operation before October 1, 2011 without a stormwater discharge permit) must implement stormwater control measures to meet new technology and water quality based requirements in Schedule A.1 – A.5, including applicable sector specific requirements in Schedule E of the permit, within 90 days of receiving permit coverage. Control measures that require capital improvements must be completed in accordance with the schedule set forth in the SWPCP, but must be completed within two years of receiving permit coverage.

SCHEDULE B
MONITORING REQUIREMENTS

1. Pollutant Parameters

a. Benchmarks - Permit registrants must monitor for the benchmark pollutants identified in Schedule A.9 of the permit. Permit registrants must also monitor for benchmarks specified for industrial sector(s), both the primary industrial activity and any co-located industrial activities, applicable to the discharge in Schedule E of the permit.

b. Impairment Pollutants

i. Permit registrants that discharge to an impaired water without a TMDL for pollutant(s) must monitor for impairment pollutants for which a standard analytical method exists (see 40 CFR Part 136). Permit registrants that discharge to an impaired water with a TMDL are not required to monitor for impairment pollutant addressed by the TMDL, unless the TMDL establishes wasteload allocation(s) and additional requirements for industrial stormwater discharges.

ii. Before granting coverage under the permit, DEQ will identify in the permit assignment letter the impairment pollutants that the permit registrants is required to monitor and reference concentrations for these pollutants. The reference concentrations will be based on the acute aquatic life criteria, if criteria are approved for the pollutant. If there is not an acute criteria for the pollutant, DEQ will use the chronic criteria. If there is not a chronic criteria for the pollutant, DEQ will use the human health criteria.

1. If the pollutant for which the waterbody is impaired is suspended solids, turbidity or sediment/sedimentation, permit registrants must monitor for Total Suspended Solids (TSS).
2. If the pollutant for which the waterbody is impaired is expressed in the form of an indicator or surrogate pollutant, permit registrants must monitor for that indicator or surrogate pollutant.
3. No monitoring is required when a waterbody's impairment is due to one of the following:
   (a) Biological communities are impaired but no pollutant, including indicator or surrogate pollutants, is specified as causing the impairment.
   (b) When a waterbody's impairment is related to hydrologic modifications, impaired hydrology, or temperature.

c. Numeric Effluent limits pursuant to Federal Effluent Limit Guidelines - Permit registrants subject to effluent limit guidelines must monitor for the parameters in Schedule A.2 of the permit at each outfall containing the discharges from activities identified in the guidelines.

d. Additional pollutants - There are no benchmarks, reference concentrations or numeric effluent limits for these pollutants. The purpose of this monitoring is to determine to what extent the pollutants are present in industrial stormwater discharges.

i. Permit registrants must monitor for cadmium, nickel, chromium.

ii. Permit registrants with the Industrial Sector M (Auto Salvage Facilities, SIC code 5015) as a primary industrial activity and any co-located industrial activities must sample for mercury.

iii. Permit registrants with the Sector N (Scrap Recycling Facilities, SIC code 5093), as a primary industrial activity and any co-located industrial must sample for mercury and PCBs.

2. Sampling Procedures

a. Grab Sampling

i. For each outfall monitored, collect a single grab sample of stormwater discharge or a series of composite samples. Grab composite or time or flow weighted composite samples may be used as an alternative, except when monitoring for pH, oil and grease and E. coli. Samples must be collected from same storm event.

ii. Permit registrants may use a single grab sample to satisfy multiple pollutant parameter monitoring requirements (e.g., required to monitor for zinc as benchmark and impairment pollutant).

b. Representative Sample - Samples must be representative of the discharge. Unless approved in writing by DEQ or Agent, all samples must be taken at monitoring points specified in the SWPCP before the stormwater joins or is diluted by stormwater from a different drainage area of the facility or areas outside the facility; wastewater, or any other wastestream, body of water or substance unless:
   i. Otherwise approved in writing by DEQ or Agent; or
   ii. On-site stormwater flows are combined to utilize a common treatment facility (for example, filter or settling pond). In this case, monitor the discharge from the treatment facility.

c. Multiple Point Source Discharges - Each stormwater outfall must be monitored unless:
   i. Outfall serves an area with no exposure of stormwater to industrial activities; or
   ii. Outfall has effluent that is substantially similar to the effluent(s) of a monitored outfall and the same BMPs are implemented and maintained at the similar outfalls or drainage areas that lead to the outfalls. Substantially similar effluent(s) are discharges from drainage areas serving comparable activities where the discharges are expected to be similar in composition. The determination of substantial similarity or effluent(s) must be based on past monitoring or an analysis of industrial activities and site characteristics. The data or analysis supporting that the outfalls are representative must be included in the SWPCP. This provision does not apply to outfall(s) covered by a numeric effluent limit.

d. Timing - Monitor the discharge during the first 12 hours of the discharge event, which is a measureable storm event resulting in an actual discharge from a site. If it is not practicable to collect the sample within this period, collect the sample as soon as practicable and provide documentation with the Discharge Monitoring Report form why it was not practicable to take samples within the period. Permit registrant is not required to sample outside of regular business hours or during unsafe conditions. Regular business hours are from 8 am to 5 pm on week days, unless the permit registrant specifies different hours in the SWPCP.

e. Monitoring Frequency - Permit registrants must monitor their stormwater discharge according to the frequency described in Table 4 below, unless a monitoring variance or waiver is granted by DEQ or Agent.
   i. Monitoring year is from July 1st to June 30th. The stormwater samples must be collected at least 14 days apart.
   ii. Permit registrant may collect more samples than the minimum frequency described below, but must report this additional data in the Discharge Monitoring Report form. These additional samples must be included to establish a monitoring waiver in Schedule B.4 or to conduct the geometric mean evaluation in Schedule A.12 of the permit.
   iii. Exceedance of Numeric Effluent Limit in Schedule A.2 of the permit - Conduct follow-up monitoring of any pollutant that exceeds the numeric effluent limit(s) within 30 days (or during the next measurable storm event should none occur within 30 days) of receiving the monitoring results. If the follow-up monitoring exceeds the numeric effluent limit, the permit registrant must monitor the discharge four times per year until compliance with the numeric effluent limit.

Table 4: Monitoring Frequency

Pollutant Category	Minimum Frequency
Benchmarks in Schedule A.9, and any applicable sector specific benchmarks in Schedule E	Four times per Year Two samples on or before Dec. 31 and two samples on or after Jan. 1.
Impairment Pollutants, if applicable	Two times per Year One sample on or before Dec. 31 and one sample on or after Jan. 1.
Numeric Effluent Limits Guidelines, if applicable	One time per Year, unless exceedance occurs
Additional Pollutants:	
Mercury and PCBs for facilities with SIC 5093	Four times over the first three years of permit coverage Two samples on or before Dec. 31 and two samples on or after Jan.1.
Mercury for facilities with SIC 5015	Four times over the first three years of permit coverage Two samples on or before Dec. 31 and two samples on or after Jan. 1.
Cadmium, Chromium and Nickel	Eight times over the first three years of permit coverage Two samples on or before Dec. 31 and two samples on or after Jan. 1.

3. Monitoring Variance

a. Permit registrants that obtain permit coverage after April 1st are granted a monitoring variance for any applicable impairment pollutants, additional pollutants or sector specific benchmarks or numeric effluent limitations for the remainder of the monitoring year, which ends on June 30th. For new facilities that were not registered under the previous permit or existing facilities that obtained a monitoring waiver for benchmarks(s) in the previous permit, this variance also applies to the benchmarks in Schedule A.9.

b. Permit registrants may request a monitoring variance for missed samples due to no discharge from the site if one of the following criteria is met:

i. State or federal authorities declared the year a drought year.

ii. Demonstrate that rainfall in the area where the permit registrant's facility is located was 20% or more below the three-year average rainfall for that area.
iii. Demonstrate to DEQ or Agent's satisfaction that discharge did not occur due to use of on-site retention system or other stormwater treatment system, or infrequent storm events of sufficient magnitude to produce run-off during normal business hours and safe conditions.

For each missed sample, report in the Discharge Monitoring Report form that no discharge occurred and include supporting data and analysis demonstrating why the monitoring did not occur.

4. Monitoring Waiver

a. Benchmark and Impairment Pollutant Monitoring
   i. A monitoring waiver may be requested in the following circumstances:
      1. If the geometric mean of four consecutive sampling results is below the statewide benchmarks in Schedule A.9 of the permit, sector specific benchmarks in Schedule E of the permit, or reference concentrations for impairment pollutants identified in the permit assignment letter, the permit registrant is not required to monitor for these pollutant(s) for the remainder of the permit term. The permit registrant must submit to DEQ or Agent the analytical laboratory results from the four sampling events.
         (a) Results from sampling events cannot be averaged.
         (b) Monitoring waivers may be allowed for individual parameters.
      2. If the exceedance(s) is attributed solely to the presence of the pollutant(s) in natural background and is not associated with industrial activities at the site, DEQ or Agent will consider these samples as being below the benchmark(s) or reference concentrations for impairment pollutant(s). Permit registrant must submit a Natural Background Waiver report to DEQ that describes the investigation and analysis to demonstrate that the exceedances are due to natural background conditions and includes any data collected by the permit registrant or others (including literature studies) that describe the levels of natural background pollutants in the discharge.
      3. If a facility is inactive and unstaffed and no industrial materials or activities are exposed to stormwater, the permit registrant is not required to conduct monitoring for the remainder of the permit term.
         (a) Permit registrant must provide documentation with the DMR indicating that the site is inactive and unstaffed, and that there are no industrial materials or activities exposed to precipitation, in accordance with the substantive requirements in 40 CFR 122.26(g)(4)(iii).
         (b) The statement must be signed and certified in accordance with Schedule F of the permit.
   ii. The permit registrant must submit to DEQ or Agent a request to exercise the monitoring waiver based on the conditions above and include the documentation to support the request. If DEQ or Agent does not comment within 30 calendar days, the monitoring waiver is deemed approved.
      1. There is no reduction in monitoring allowed for:
         (a) Visual observations, unless the site is inactive or unstaffed and there are no industrial materials or activities exposed to stormwater and permit registrant meets requirements in Schedule B.4.a.i.3 of the permit.
         (b) Monitoring for federal numeric effluent limit guidelines.
      2. Revocation of Monitoring Waiver
         (a) The permit registrant must reinstate the monitoring of stormwater discharge if:
            (i) Prior monitoring efforts used to establish the monitoring waiver were improper or sampling results were incorrect;

(ii) Changes to site conditions are likely to affect stormwater discharge characteristics;
(iii) Additional monitoring occurs and the sampling results exceed benchmark(s), or
(iv) For inactive or unstaffed sites, the facility becomes active and/or staffed or industrial materials or activities become exposed to stormwater

(b) DEQ or Agent will notify the permit registrant in writing if the monitoring waiver is revoked.

5. **Additional Monitoring**- DEQ may notify permit registrants in writing of additional discharge monitoring requirements. Any such notice will state the reasons for the monitoring, locations and pollutants to be monitored, frequency and period of monitoring, sample types and reporting requirements.

6. **A New Permit Registrant Discharging to Clackamas River, McKenzie River above Hayden Bridge (River Mile 15) or North Santiam River** (For potential or existing dischargers that did not have a permit prior to January 28, 1994, and existing dischargers that have a NPDES stormwater discharge permit but request an increased load limitation.)
   a. Not later than 180 calendar days after obtaining permit coverage, permit registrant must submit to DEQ a monitoring and water quality evaluation program. This program must be effective in evaluating the in-stream impacts of the discharge as required by OAR 340-041-0350.
   b. Within 30 calendar days of DEQ approval, the permit registrant must implement the monitoring and water quality evaluation program.

INSPECTIONS

7. **Permit registrant must meet the following inspection requirements:**
   a. Conduct inspections on a monthly basis when the facility is in operation of areas where industrial materials or activities are exposed to stormwater and areas where stormwater control measures, structures, catch basins, and treatment facilities are located.
      i. Inspect the facility for the following:
         1. Industrial materials, residue, or trash that may have or could come into contact with stormwater;
         2. Leaks or spills from industrial equipment, drums, tanks, and other containers;
         3. Offsite tracking of industrial or waste materials, or sediment where vehicles enter or exit the site, excluding employee only entrances and exits;
         4. Tracking or blowing of raw, final, or waste materials;
         5. Evidence of, or the potential for, pollutants entering the drainage system;
         6. Evidence of pollutants discharging to receiving waters at all outfall(s), unless outfalls are representative as described in Schedule B.2.c.ii, and the condition of and around the outfall;
         7. Presence of floating solids (associated with industrial activity), foam, visible oil sheen, discoloration of the stormwater discharge at all outfall(s), unless outfalls are representative as described in Schedule B.2.c.ii. Conduct visual observations when stormwater discharge is occurring during regular business hours and safe conditions, and
         8. Properly functioning stormwater control measures.
      ii. Exception for inactive or unstaffed sites as long as there are no industrial materials or activities exposed to stormwater. If circumstances change and industrial materials or activities become exposed to stormwater or the facility becomes active and/or staffed, this exception no longer applies and permit registrant must immediately resume monthly facility inspections.

iii. For exceptionally large facilities where monthly inspections of all areas identified above are infeasible, DEQ or Agent may approve in writing a modified inspection frequency.

b. Document the following in an inspection report that is retained on-site and submitted to DEQ or Agent upon request:
   i. The inspection date and time;
   ii. Control measures needing cleaning, replacement, maintenance, reconditioning or repair;
   iii. The condition of the drainage/conveyance system and need for maintenance;
   iv. Previously unidentified sources of pollutants, and
   v. Stormwater discharge observations and whether discharge contained floating solids (associated with industrial activity), foam, visible oil sheen, and was discolored. If these pollutants are present in the discharge, describe corrective action taken or will be taken to remedy the problem.

REPORTING AND RECORDKEEPING REQUIREMENTS

8. Reporting Monitoring Data

a. The permit registrant must submit a DEQ-approved Discharge Monitoring Report (DMR) form to DEQ or Agent by July 31st of each year. Identify in the DMR the sampling results for the previous monitoring year and include the laboratory results from the testing laboratory.
b. The permit registrant must report the minimum detection level and analytical methods for the parameters analyzed. Non-detections must be reported as "ND" with the detection level in mg/L parentheses, e.g., ND (0.005 mg/L). In calculating the geometric mean, one-half of the detection level must be used for non-detections.

9. Exceedance Report for Numeric Effluent Limits

If follow-up monitoring pursuant to Schedule B.2.e.iii of the permit exceeds a numeric effluent limit, permit registrant must submit an Exceedance Report to DEQ or Agent no later than 30 calendar days after receiving the lab results. The report must include the monitoring data from this monitoring event and the preceding monitoring event(s) and an explanation of the situation; what the permit registrant has done to correct the violation or intends to do if the corrective actions are not complete.

10. Record Keeping Procedures- Permit registrant must record and maintain at the facility the following information. All records must be retained by the permit registrant for at least three (3) years and made available to DEQ, Agent or local municipality upon request.

a. A copy of the SWPCP and any revisions, corrective actions reports, and monthly inspection reports.
b. Inspection, maintenance, repair and education activities.
c. Spills or leaks of significant materials (See Schedule D.3, Definitions) that impacted or had the potential to impact stormwater or surface waters. Include the corrective actions to clean up the spill or leak as well as measures to prevent future problems of the same nature.

SCHEDULE D
SPECIAL CONDITIONS

1. **Releases in Excess of Reportable Quantities.** This permit does not relieve the permit registrant of the reporting requirements of 40 CFR §117 Determination of Reportable Quantities for Hazardous Substances and 40 CFR §302 Designation, Reportable Quantities, and Notification.

2. **Availability of SWPCP and Monitoring Data.** The Stormwater Pollution Control Plan (SWPCP) or stormwater monitoring data must be made available to government agencies responsible for stormwater management in the permit registrant's area.

3. **Definitions**
   a. Capital Improvements means the following improvements that require capital expenditures:
      i. Treatment best management practices including but not limited to settling basins, oil/water separation equipment, grassy swales, detention/retention basins, and media filtration devices.
      ii. Manufacturing modifications that incur capital expenditures, including process changes for reduction of pollutants or wastes at the source.
      iii. Concrete pads, dikes and conveyance or pumping systems utilized for collection and transfer of stormwater to treatment systems.
      iv. Roofs and appropriate covers for manufacturing areas.
      v. Volume reduction measures, including low impact development control measures.
   b. Best Management Practices (BMPs**)** – schedules of activities, practices (and prohibitions of practices), structures, vegetation, maintenance procedures, and other management practices to prevent or reduce the discharge of pollutants to waters of the state. BMPs also include treatment requirements, operating procedures, and practices to control plant site runoff, spillage or leaks, sludge or waste disposal, or drainage from raw material storage. See 40 CFR 122.2.
   c. Co-located Industrial Activities means any industrial activities, excluding the primary industrial activity(ies), located on-site that are defined by the stormwater regulations at 122.26(b)(14)(i - ix, xi) and OAR 340-045-0033(5), and identified in *Table 1: Sources Covered* on page 3 of the permit. An activity at a facility is not considered co-located if the activity, when considered separately, does not meet the description of a category of industrial activity covered by the stormwater regulations or identified in Table 1 of the permit.
   d. Control Measure means any Best Management Practice or other method used to prevent or reduce the discharge of pollutants to waters of the state.
   e. Existing Discharger means an operator applying for coverage under this permit for dis charges authorized previously under an NPDES general or individual permit.
   f. Impaired Waters means those waters identified by a State or EPA pursuant to Section 303(d) of the Clean Water Act as not meeting applicable State water quality standards for one or more pollutants. This may include both waters with approved TMDLs, and those for which a TMDL has not yet been approved.
   g. Hazardous Substances as defined in 40 CFR §302 Designation, Reportable Quantities, and Notification.
   h. High Quality Waters means those waters that meet or exceed levels that are necessary to support the propagation of fish, shellfish, and wildlife; recreation in and on the water; and other designated beneficial uses for a given pollutant. Waters identified on the 303(d) list as not meeting applicable state water quality standards for a given pollutant are not high quality waters.
   i. Industrial Activity means the categories of industrial activities included in the definition of "stormwater discharges associated with industrial activity" as defined in 40 CFR 122.26(b)(14)(i)-(ix) and (xi).
   j. Industrial Stormwater means stormwater runoff from industrial activity.

k. Material Handling Activities include the storage, loading and unloading, transportation or conveyance of raw material, intermediate product, finished product, by-product or waste product.
l. Minimize means reduce or eliminate, or both, to the extent achievable using control measures (including best management practices) that are technologically available and economically practicable and achievable in light of best industry practice.
m. New Discharger means a facility from which there is a discharge, that did not commence the discharge at a particular site prior to August 13, 1979, that is not a new source, and that has never received a finally effective NPDES permit for discharges at that site. See 40 CFR 122.2.
n. New Source means any building, structure, facility, or installation from which there is or may be a "discharge of pollutants," the construction of that commenced: after promulgation of standards of performance under section 306 of the CWA that are applicable to such source, or after proposal of standards of performance in accordance with section 306 of the CWA that are applicable to such source, but only if the standards are promulgated in accordance with section 306 within 120 days of their proposal. See 40 CFR 122.2.
o. Outstanding Resource Waters means those waters designated by the commission where existing high quality waters constitute an outstanding state or national resource based on their extraordinary water quality or ecological values or where special water quality protection is needed to maintain critical habitat areas.
p. No exposure means all industrial materials or activities are protected by a storm-resistant shelter to prevent exposure to rain, snow, snowmelt, and/or runoff. See 40 CFR 122.26(g).
q. Natural background pollutants include substances that are naturally occurring in soils or groundwater. Natural background pollutants do not include legacy pollutants from earlier activity on the site, or pollutants in run-on from neighboring sources that are not naturally occurring.
r. Operator means any entity with a stormwater discharge associated with industrial activity that meets either of the following two criteria:
    i. The entity has operational control over industrial activities, including the ability to modify those activities; or
    ii. The entity has day-to-day operational control of activities at a facility necessary to ensure compliance with the permit (e.g., the entity is authorized to direct workers at a facility to carry out activities required by the permit).
s. Point Source Discharge means a discharge from any discernible, confined, and discrete conveyance, including but not limited to, any pipe, ditch, channel, tunnel, or conduit.
t. Primary industrial activity means any activities performed on-site that are (1) identified by the facility's primary SIC code; or (2) included in the narrative descriptions of 122.26(b)(14)(i), (iv), (v), or (vii), and (ix). Narrative descriptions in 40 CFR 122.26(b)(14) identified above include: (i) activities subject to stormwater effluent limitations guidelines, new source performance standards, or toxic pollutant effluent standards; (iv) hazardous waste treatment storage, or disposal facilities including those that are operating under interim status or a permit under subtitle C of the Resource Conservation and Recovery Act (RCRA); (v) landfills, land application sites and open dumps that receive or have received industrial wastes; (vii) steam electric power generating facilities; and (ix) sewage treatment works with a design flow of 1.0 mgd or more.
u. Significant Materials includes, but is not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical that a facility is required to report pursuant to section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ash, slag, and sludge that have the potential to be released with stormwater discharges.
v. Stormwater Associated With Industrial Activity includes, but is not limited to, stormwater discharges from the following:
    i. Industrial plant yards;

ii. Immediate access roads and rail lines used or traveled by carriers of raw materials, manufactured products, waste material, or by-products used or created by the facility;
iii. Material handling sites (Material handling activities include the storage, loading and unloading, transportation or conveyance of raw material, intermediate product, finished product, by-product or waste product.);
iv. Refuse sites;
v. Sites used for the application or disposal of process waste waters (as defined in 40 CFR § 401);
vi. Sites used for storage or maintenance of material handling equipment;
vii. Sites used for residual treatment, storage, or disposal; shipping and receiving areas;
viii. Manufacturing buildings;
ix. Storage areas (including tank farms) for raw materials, and intermediate and finished products;
x. Areas where industrial activity has taken place in the past and significant materials remain and are exposed to stormwater. Significant materials includes, but are not limited to: raw materials; fuels; materials such as solvents, detergents, and plastic pellets; finished materials such as metallic products; raw materials used in food processing or production; hazardous substances designated under section 101(14) of CERCLA; any chemical that a facility is required to report pursuant to section 313 of title III of SARA; fertilizers; pesticides; and waste products such as ash, slag, and sludge that have the potential to be released with stormwater discharges; and
xi. Stormwater run-on that commingles with stormwater discharges associated with industrial activity at the facility.

w. Stormwater Conveyance means a sewer, ditch, or swale that is designed to carry stormwater; a stormwater conveyance may also be referred to as a storm drain or storm sewer.
x. Total Maximum Daily Load (TMDL) is the sum of the individual Waste Load Allocations (WLAs) for point sources and Load Allocations (LAs) for nonpoint sources and background. See OAR 340-041-0002(65) and OAR 340-042-0030(15).
y. Treatment measures mean Best Management Practices that are intended to remove pollutants from stormwater. These measures include, but are not limited to: settling basins, oil/water separation equipment, detention/retention basins, media filtration devices, electrocoagulation, constructed wetlands and bioswales.
z. Wasteload Allocation (WLA) means the portion of receiving water's loading capacity that is allocated to one of its existing or future point sources of pollution. WLAs constitute a type of water quality-based effluent limitation. See OAR 340-041-0002(67).

4. **Local Public Agencies Acting as DEQ's Agent**

DEQ has authorized certain local governments and special districts to act as its Agent in implementing portions of this permit. The Agent may be authorized to conduct the following activities, including but not limited to: application and SWPCP review, inspections, monitoring data review, stormwater and wastewater monitoring, and verification and approval of no-exposure certifications. Where DEQ has entered into such an agreement, DEQ or its Agent will notify the permit registrant of where to submit no-exposure certifications, and other notifications or correspondence associated with this permit.

SCHEDULE E
SECTOR SPECIFIC REQUIREMENTS

1. **Sector Specific Requirements**
   Permit registrants must meet the sector-specific requirements in Schedule E of the permit associated with their primary industrial activity and any co-located industrial activities, as defined in Schedule D of the permit. The sector-specific requirements apply to the areas of the facility where the sector-specific activities occur. Facilities may be subject to more than one sector/subsector requirement.
2. These sector-specific requirements in Schedule E are in addition to the requirements in Schedule A and B of the permit.
3. If there is a conflict with requirements in the "Sources that are Required to Obtain Coverage under the Permit" section or the "Permit Coverage and Exclusion from Coverage" section of the permit, the requirements in Schedule E will not apply.
4. Table E-1 below identifies the sectors/subsectors that are required to meet the sector specific requirements in Schedule E of the permit.

Table E-1. Sectors of Industrial Activity with Sector Specific Requirements

SIC Code or Activity Code	Activity Represented
SECTOR A: TIMBER PRODUCTS	
2421	General Sawmills and Planing Mills
2411	Log Storage and Handling
2426	Hardwood Dimension and Flooring Mills
2429	Special Product Sawmills, Not Elsewhere Classified
2431-2439 (except 2434)	Millwork, Veneer, Plywood, and Structural Wood
2448	Wood Pallets and Skids
2449	Wood Containers, Not Elsewhere Classified
2451, 2452	Wood Buildings and Mobile Homes
2493	Reconstituted Wood Products
2499	Wood Products, Not Elsewhere Classified
2441	Nailed and Lock Corner Wood Boxes and Shook
SECTOR B: PAPER AND ALLIED PRODUCTS	
2631	Paperboard Mills
2611	Pulp Mills
2621	Paper Mills
2652-2657	Paperboard Containers and Boxes
2671-2679	Converted Paper and Paperboard Products, Except Containers and Boxes

Table E-1. Sectors of Industrial Activity with Sector Specific Requirements

SIC Code or Activity Code	Activity Represented
SECTOR C: CHEMICALS AND ALLIED PRODUCTS	
2873-2879	Agricultural Chemicals
2812-2819	Industrial Inorganic Chemicals
2841-2844	Soaps, Detergents, and Cleaning Preparations; Perfumes, Cosmetics, and Other Toilet Preparations
2821-2824	Plastics Materials and Synthetic Resins, Synthetic Rubber, Cellulosic and Other Manmade Fibers Except Glass
2833-2836	Medicinal Chemicals and Botanical Products; Pharmaceutical Preparations; in vitro and in vivo Diagnostic Substances; and Biological Products, Except Diagnostic Substances
2851	Paints, Varnishes, Lacquers, Enamels, and Allied Products
2861-2869	Industrial Organic Chemicals
2891-2899	Miscellaneous Chemical Products
3952 (limited to list of inks and paints)	Inks and Paints, Including China Painting Enamels, India Ink, Drawing Ink, Platinum Paints for Burnt Wood or Leather Work, Paints for China Painting, Artist's Paints and Artist's Watercolors
2911	Petroleum Refining
SECTOR D: ASPHALT PAVING AND ROOFING MATERIALS AND LUBRICANTS	
2951, 2952	Asphalt Paving and Roofing Materials
2992, 2999	Miscellaneous Products of Petroleum and Coal
SECTOR E: GLASS, CLAY, CEMENT, CONCRETE, AND GYPSUM PRODUCTS (some 1200-A)	
3251-3259	Structural Clay Products
3261-3269	Pottery and Related Products
3271-3275	Concrete, Gypsum, and Plaster Products
3211	Flat Glass
3221, 3229	Glass and Glassware, Pressed or Blown
3231	Glass Products Made of Purchased Glass
3241	Hydraulic Cement
3281	Cut Stone and Stone Products
3291-3299	Abrasive, Asbestos, and Miscellaneous Nonmetallic Mineral Products
SECTOR F: PRIMARY METALS	
3312-3317	Steel Works, Blast Furnaces, and Rolling and Finishing Mills
3321-3325	Iron and Steel Foundries
3351-3357	Rolling, Drawing, and Extruding of Nonferrous Metals
3363-3369	Nonferrous Foundries (Castings)
3331-3339	Primary Smelting and Refining of Nonferrous Metals

Table E-1. Sectors of Industrial Activity with Sector Specific Requirements

SIC Code or Activity Code	Activity Represented
3341	Secondary Smelting and Refining of Nonferrous Metals
3398, 3399	Miscellaneous Primary Metal Products
SECTOR G: METAL MINING (ORE MINING AND DRESSING)	
1021	Copper Ore and Mining Dressing Facilities
1011	Iron Ores
1021	Copper Ores
1031	Lead and Zinc Ores
1041, 1044	Gold and Silver Ores
1061	Ferroalloy Ores, Except Vanadium
1081	Metal Mining Services
1094, 1099	Miscellaneous Metal Ores
SECTOR H: COAL MINES AND COAL MINING-RELATED FACILITIES	
1221-1241	Coal Mines and Coal Mining-Related Facilities
SECTOR I: OIL AND GAS EXTRACTION AND REFINING	
1311	Crude Petroleum and Natural Gas
1321	Natural Gas Liquids
1381-1389	Oil and Gas Field Services
SECTOR J: MINERAL MINING AND DRESSING- Discharges Covered by 1200-A General Permit	
SECTOR K: HAZARDOUS WASTE TREATMENT, STORAGE, OR DISPOSAL FACILITIES	
HZ	Hazardous Waste Treatment, Storage, or Disposal Facilities
SECTOR L: LANDFILLS, LAND APPLICATION SITES, AND OPEN DUMPS	
LF	All Landfill, Land Application Sites and Open Dumps
LF	All Landfill, Land Application Sites and Open Dumps, except Municipal Solid Waste Landfill (MSWLF) Areas Closed in Accordance with 40 CFR 258.60
SECTOR M: AUTOMOBILE SALVAGE YARDS	
5015	Automobile Salvage Yards
SECTOR N: SCRAP RECYCLING FACILITIES	
5093	Scrap Recycling and Waste Recycling Facilities except Source-Separated Recycling
5093	Source-separated Recycling Facility
SECTOR O: STEAM ELECTRIC GENERATING FACILITIES	
SE	Steam Electric Generating Facilities, including coal handling sites

Table E-1. Sectors of Industrial Activity with Sector Specific Requirements

SIC Code or Activity Code	Activity Represented
SECTOR P: LAND TRANSPORTATION AND WAREHOUSING	
4011, 4013	Railroad Transportation
4111-4173	Local and Highway Passenger Transportation
4212-4231	Motor Freight Transportation and Warehousing
4311	United States Postal Service
5171	Petroleum Bulk Stations and Terminals
SECTOR Q: WATER TRANSPORTATION	
4412-4499	Water Transportation Facilities
SECTOR R: SHIP AND BOAT BUILDING AND REPAIRING YARDS	
3731, 3732	Ship and Boat Building or Repairing Yards
SECTOR S: AIR TRANSPORTATION FACILITIES	
4512-4581	Air Transportation Facilities
SECTOR T: TREATMENT WORKS	
TW	Treatment Works treating domestic sewage or any other sewage sludge or wastewater treatment device or system, used in the storage, treatment, recycling, and reclamation of municipal or domestic sewage, including land dedicated to the disposal of sewage sludge that are located within the confines of the facility, with a design flow of 1.0 mgd or more, or required to have an approved pretreatment program under 40 CFR Part 403.
SECTOR U: FOOD AND KINDRED PRODUCTS	
2041-2048	Grain Mill Products
2074-2079	Fats and Oils Products
2011-2015	Meat Products
2021-2026	Dairy Products
2032-2038	Canned, Frozen, and Preserved Fruits, Vegetables, and Food Specialties
2051-2053	Bakery Products
2061-2068	Sugar and Confectionery Products
2082-2087	Beverages
2091-2099	Miscellaneous Food Preparations and Kindred Products
2111-2141	Tobacco Products

Table E-1. Sectors of Industrial Activity with Sector Specific Requirements

SIC Code or Activity Code	Activity Represented
SECTOR V: TEXTILE MILLS, APPAREL, AND OTHER FABRIC PRODUCT MANUFACTURING; LEATHER AND LEATHER PRODUCTS	
2211-2299	Textile Mill Products
2311-2399	Apparel and Other Finished Products Made from Fabrics and Similar Materials
3131-3199	Leather and Leather Products (note: see Sector Z1 for Leather Tanning and Finishing)
SECTOR X: PRINTING AND PUBLISHING	
2711-2796	Printing, Publishing, and Allied Industries
SECTOR Y: RUBBER, MISCELLANEOUS PLASTIC PRODUCTS, AND MISCELLANEOUS MANUFACTURING INDUSTRIES	
3011	Tires and Inner Tubes
3021	Rubber and Plastics Footwear
3052, 3053	Gaskets, Packing and Sealing Devices, and Rubber and Plastic Hoses and Belting
3061, 3069	Fabricated Rubber Products, Not Elsewhere Classified
3081-3089	Miscellaneous Plastics Products
3931	Musical Instruments
3942-3949	Dolls, Toys, Games, and Sporting and Athletic Goods
3951-3955 (except 3952 – see Sector C)	Pens, Pencils, and Other Artists' Materials
3961, 3965	Costume Jewelry, Costume Novelties, Buttons, and Miscellaneous Notions, Except Precious Metal
3991-3999	Miscellaneous Manufacturing Industries
SECTOR Z: LEATHER TANNING AND FINISHING	
3111	Leather Tanning and Finishing
SECTOR AA: FABRICATED METAL PRODUCTS	
3411-3499 (except 3479)	Fabricated Metal Products, Except Machinery and Transportation Equipment, and Coating, Engraving, and Allied Services.
3911-3915	Jewelry, Silverware, and Plated Ware
3479	Fabricated Metal Coating and Engraving

Subpart A – Sector A – Timber Products.

E.A.1 Additional Technology-Based Effluent Limits.

E.A.1.1 Good Housekeeping. In areas where storage, loading and unloading, and material handling occur, perform good housekeeping to limit the discharge of wood debris, minimize the leachate generated from decaying wood materials, and minimize the generation of dust.

E.A.2 Additional SWPCP Requirements.

E.A.2.1 Drainage Area Site Map. Document in your SWPCP where any of the following may be exposed to precipitation or surface runoff: processing areas, treatment chemical storage areas, treated wood and residue storage areas, wet decking areas, dry decking areas, untreated wood and residue storage areas, and treatment equipment storage areas.

E.A.2.2 Inventory of Exposed Materials. Where such information exists, if your facility has used chlorophenolic, creosote, or chromium-copper-arsenic formulations for wood surface protection or preserving, document in your SWPCP the following: areas where contaminated soils, treatment equipment, and stored materials still remain and the management practices employed to minimize the contact of these materials with stormwater runoff.

E.A.2.3 Description of Stormwater Management Controls. Document measures implemented to address the following activities and sources: log, lumber, and wood product storage areas; residue storage areas; loading and unloading areas; material handling areas; chemical storage areas; and equipment and vehicle maintenance, storage, and repair areas. If your facility performs wood surface protection and preservation activities, address the specific control measures, including any BMPs, for these activities.

E.A.3 Sector-Specific Benchmarks

Table E.A-1 identifies benchmarks that apply to the specific subsectors of Sector A. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table E.A-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
General Sawmills and Planing Mills (SIC 2421)	Chemical Oxygen Demand (COD)	120.0 mg/L
Hardwood Dimension and Flooring Mills; Special Products Sawmills, not elsewhere classified; Millwork, Veneer, Plywood, and Structural Wood; Wood Pallets and Skids; Wood Containers, not elsewhere classified; Wood Buildings and Mobile Homes; Reconstituted Wood Products; and Wood Products Facilities not elsewhere classified (SIC 2426, 2429, 2431-2439 (except 2434), 2441, 2448, 2449, 2451, 2452, 2493, and 2499)	Chemical Oxygen Demand (COD)	120.0 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart B – Sector B – Paper and Allied Products.

E.B.1 Sector-Specific Benchmarks.

Table E.B-1 identifies benchmarks that apply to the specific subsectors of Sector B. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.B-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Paperboard Mills (SIC Code 2631)	Chemical Oxygen Demand (COD)	120 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart C – Sector C – Chemical and Allied Products Manufacturing, and Refining.

E.C.1 Sector-Specific Benchmarks

Table E.C-1 identifies benchmarks that apply to the specific subsectors of Sector C. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.C-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Agricultural Chemicals (SIC 2873-2879)	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Total Iron	1.0 mg/L
Industrial Inorganic Chemicals (SIC 2812-2819)	Total Aluminum	0.75 mg/ L
	Total Iron	1.0 mg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L
Soaps, Detergents, Cosmetics, and Perfumes (SIC 2841-2844)	Nitrate plus Nitrite Nitrogen	0.68 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart D – Sector D – Asphalt Paving and Roofing Materials and Lubricant Manufacturing.

E.D.1 Effluent Limitations Based on Effluent Limitations Guidelines

Table E.D-1 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other wastestreams that may be covered under this permit.

Table E.D-1[1]

Industrial Activity	Parameter	Effluent Limit
Discharges from asphalt emulsion facilities.	Total Suspended Solids (TSS)	23.0 mg/L, daily maximum 15.0 mg/L, 30-day avg.
	pH	6.0 - 9.0 s.u.
	Oil and Grease	15.0 mg/L, daily maximum
		10 mg/L, 30-day avg.

[1]Monitor annually.

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart E – Sector E – Glass, Clay, Cement, Concrete, and Gypsum Products.

E.E.1 Additional Technology-Based Effluent Limits.

E.E.1.1 Good Housekeeping Measures. With good housekeeping, prevent or minimize the discharge of spilled cement, aggregate (including sand or gravel), kiln dust, fly ash, settled dust, or other significant material in stormwater from paved portions of the site that are exposed to stormwater. Consider sweeping regularly or using other equivalent measures to minimize the presence of these materials. Indicate in your SWPCP the frequency of sweeping or equivalent measures. Determine the frequency based on the amount of industrial activity occurring in the area and the frequency of precipitation, but it must be performed at least once a week if cement, aggregate, kiln dust, fly ash, or settled dust are being handled or processed. You must also prevent the exposure of fine granular solids (cement, fly ash, kiln dust, etc.) to stormwater, where practicable, by storing these materials in enclosed silos, hoppers, or buildings, or under other covering.

E.E.2 Additional SWPCP Requirements.

E.E.2.1 Drainage Area Site Map. Document in the SWPCP the locations of the following, as applicable: bag house or other dust control device; recycle/sedimentation pond, clarifier, or other device used for the treatment of process wastewater; and the areas that drain to the treatment device.

E.E.3 Sector-Specific Benchmarks.

Table E.E-1 identifies benchmarks that apply to the specific subsectors of Sector E. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table E.E-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Cutoff Concentration
Clay Product Manufacturers (SIC 3251-3259, 3261-3269)	Total Aluminum	0.75 mg/L
Concrete and Gypsum Manufacturers (SIC 3271-3275)	Total Iron	1.0 mg/L

E.E.4 Effluent Limitations Based on Effluent Limitations Guidelines

Table E.E-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these limits is to be determined based on discharges from these industrial activities independent of commingling with any other wastestreams that may be covered under this permit.

Table E.E-2[1]

Industrial Activity	Parameter	Effluent Limit
Discharges from material storage piles at cement manufacturing facilities	Total Suspended Solids (TSS)	50 mg/L, daily maximum
	pH	6.0 - 9.0 s.u.

[1]Monitor annually.

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart F – Sector F – Primary Metal

E.F.1 Additional Technology-Based Effluent Limits

E.F.1.1 Good Housekeeping Measures. As part of your good housekeeping program, include a cleaning and maintenance program for all impervious areas of the facility where particulate matter, dust, or debris may accumulate, especially areas where material loading and unloading, storage, handling, and processing occur; and, where practicable, the paving of areas where vehicle traffic or material storage occur but where vegetative or other stabilization methods are not practicable (institute a sweeping program in these areas too). For unstabilized areas where sweeping is not practicable, consider using stormwater management devices such as sediment traps, vegetative buffer strips, filter fabric fence, sediment filtering boom, gravel outlet protection, or other equivalent measures that effectively trap or remove sediment.

E.F.2 Additional SWPCP Requirements.

E.F.2.1 Drainage Area Site Map. Identify in the SWPCP where any of the following activities may be exposed to precipitation or surface runoff: storage or disposal of wastes such as spent solvents and baths, sand, slag and dross; liquid storage tanks and drums; processing areas including pollution control equipment (e.g., baghouses); and storage areas of raw material such as coal, coke, scrap, sand, fluxes, refractories, or metal in any form. In addition, indicate where an accumulation of significant amounts of particulate matter could occur from such sources as furnace or oven emissions, losses from coal and coke handling operations, etc., and could result in a discharge of pollutants to waters of the United States.

E.F.2.2 Inventory of Exposed Material. Include in the inventory of materials handled at the site that potentially may be exposed to precipitation or runoff, areas where deposition of particulate matter from process air emissions or losses during material-handling activities are possible

E.F.3 Additional Inspection Requirements. As part of conducting your monthly inspections address all potential sources of pollutants, including (if applicable) air pollution control equipment (e.g., baghouses, electrostatic precipitators, scrubbers, and cyclones), for any signs of degradation (e.g., leaks, corrosion, or improper operation) that could limit their efficiency and lead to excessive emissions. Consider monitoring air flow at inlets and outlets (or use equivalent measures) to check for leaks (e.g., particulate deposition) or blockage in ducts. Also inspect all process and material handling equipment (e.g., conveyors, cranes, and vehicles) for leaks, drips, or the potential loss of material; and material storage areas (e.g., piles, bins, or hoppers for storing coke, coal, scrap, or slag, as well as chemicals stored in tanks and drums) for signs of material losses due to wind or stormwater runoff.

E.F.4 Sector-Specific Benchmarks.

Table E.F-1 identifies benchmarks that apply to the specific subsectors of Sector F. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.F-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Cutoff Concentration
Steel Works, Blast Furnaces, and Rolling and Finishing Mills (SIC 3312-3317)	Total Aluminum	0.75 mg/L
Iron and Steel Foundries (SIC 3321-3325)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart G – Sector G – Metal Mining.

E.G.1 Definitions.

The following definitions are not intended to supersede the definitions of active and inactive mining facilities established by 40 CFR 122.26(b)(14)(iii).

E.G.1.1 Mining operation - Consists of the active and temporarily inactive phases, and the reclamation phase, but excludes the exploration and construction phases.

E.G.1.2 Exploration phase - Entails exploration and land disturbance activities to determine the viability of a site. The exploration phase is not considered part of "mining operations."

E.G.1.3 Construction phase - Includes the building of site access roads and removal of overburden and waste rock to expose mineable minerals. The construction phase is not considered part of "mining operations."

E.G.1.4 Active phase - Activities including the extraction, removal or recovery of metal ore. For surface mines, this definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun. This definition is derived from the definition of "active mining area" found at 40 CFR 440.132(a). The active phase is considered part of "mining operations."

E.G.1.5 Reclamation phase - Activities undertaken, in compliance with applicable mined land reclamation requirements, following the cessation of the "active phase", intended to return the land to an appropriate post-mining land use in order to meet applicable Federal and State reclamation requirements. The reclamation phase is considered part of "mining operations."

E.G.1.6 Active metal mining facility - A place where work or other activity related to the extraction, removal, or recovery of metal ore is being conducted. For surface mines, this definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun. This definition is derived from the definition of "active mining area" found at 40 CFR 440.132(a).

E.G.1.7 Inactive metal mining facility - A site or portion of a site where metal mining and/or milling occurred in the past but is not an active facility as defined above, and where the inactive portion is not covered by an active mining permit issued by the applicable State or Federal agency. An inactive metal mining facility has an identifiable owner / operator. Sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials and sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim are not considered either active or inactive mining facilities and do not require an NPDES industrial stormwater permit.

E.G.1.8 Temporarily inactive metal mining facility - A site or portion of a site where metal mining and/or milling occurred in the past but currently are not being actively undertaken, and the facility is covered by an active mining permit issued by the applicable State or Federal agency.

E.G.1.9 Final Stabilization - A site or portion of a site is "finally stabilized" when it has implemented all applicable Federal and State reclamation requirements.

E.G.2 Technology-Based Effluent Limits for Clearing, Grading, and Excavation Activities.

Clearing, grading, and excavation activities being conducted as part of the exploration and construction phase of mining activities are covered under this permit.

E.G.2.1 Management Practices for Clearing, Grading, and Excavation Activities.

E.G.2.1.1 Selecting and installing control measures. For all areas affected by clearing, grading, and excavation activities, you must select, design, install, and implement control measures that meet applicable effluent limits in Schedule A of the permit.

E.G.2.1.2 Good Housekeeping. Litter, debris, and chemicals must be prevented from becoming a pollutant source in stormwater discharges.

E.G.2.1.3 Retention and Detention of Stormwater Runoff. For drainage locations serving more than one acre, sediment basins and/or temporary sediment traps should be used. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries (and for side slope boundaries as necessary based on individual site conditions) of the development area unless a sediment basin providing storage for a calculated volume of runoff from a 2-year, 24-hour storm or 3,600 cubic feet of storage per acre drained is provided. You are required to remove sediment from sediment traps or sedimentation ponds when design capacity has been reduced by 50 percent. Due to high sediment discharges from some Sector G facilities, permittees may need to implement a combination of structural BMP approaches to sufficiently decrease discharge of sediment from their facilities.

E.G.2.2 Inspection of Clearing, Grading, and Excavation Activities.

E.G.2.2.1 Inspection Frequency. Inspections must be conducted either at least once every 7 calendar days, or at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater. Inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized, if runoff is unlikely due to winter (e.g., site is covered with snow or ice) or frozen conditions, or construction is occurring during seasonal dry periods in arid areas and semi-arid areas.

E.G.2.2.2 Location of Inspections. Inspections must include all areas of the site disturbed by clearing, grading, and/or excavation activities and areas used for storage of materials that are exposed to precipitation. Sedimentation and erosion control measures must be observed to ensure proper operation. Discharge locations must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to surface waters of the state, where accessible. Where discharge locations are inaccessible, nearby downstream locations must be inspected to the extent that such inspections are practicable. Locations where vehicles enter or exit the site must be inspected for evidence of significant off-site sediment tracking.

E.G.2.2.3 Inspection Reports. For each inspection required above, you must complete an inspection report. At a minimum, the inspection report must include the information required in Schedule B.7 of the permit.

E.G.2.3 Requirements for Cessation of Clearing, Grading, and Excavation Activities.

E.G.2.3.1 Inspections and Maintenance. Inspections and maintenance of control measures, including BMPs, associated with clearing, grading, and excavation activities being conducted as part of the exploration and construction phase of a mining operation must continue until final stabilization has been achieved on all portions of the disturbed area, or until the commencement of the active mining phase for those areas that have been temporarily stabilized as a precursor to mining.

E.G.2.3.2 Temporary Stabilization of Disturbed Areas. Stabilization measures should be initiated immediately in portions of the site where clearing, grading and/or excavation activities have temporarily ceased, but in no case more than 14 days after the clearing, grading and/or excavation activities in that portion of the site have temporarily ceased. In arid, semiarid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after mining, exploration, and/or construction activity has temporarily ceased, temporary vegetative stabilization measures must be initiated as soon as practicable. Until temporary vegetative stabilization is achieved, interim measures such as erosion control blankets with an appropriate seed base and tackifiers must be employed. In areas of the site, where exploration and/or construction has permanently ceased prior to active mining, temporary stabilization measures must be implemented to minimize mobilization of sediment or other pollutants until such time as the active mining phase commences.

E.G.2.3.3 Final Stabilization of Disturbed Areas. Stabilization measures should be initiated immediately in portions of the site where exploration and/or construction activities have permanently ceased, but in no case more than 14 days after the exploration and/or construction activity in that portion of the site has permanently ceased. In arid, semiarid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after mining, exploration, and/or construction activity has permanently ceased, final vegetative stabilization measures must be initiated as soon as possible. Until final stabilization is achieved temporary stabilization measures, such as erosion control blankets with an appropriate seed base and tackifiers, must be used.

E.G.3 Additional Technology-Based Effluent Limits.

E.G.3.1 Stormwater Controls. Apart from the control measures you implement to meet your effluent limits, consider implementing the following control measures at your site. The potential pollutants identified in Schedule E.G.4.3 shall determine the priority and appropriateness of the control measures selected.

E.G.3.1.1 Stormwater Diversions: Consider diverting stormwater away from potential pollutant sources. Following are some options: interceptor or diversion controls (e.g., dikes, swales, curbs, or berms); pipe slope drains; subsurface drains; conveyance systems (e.g., channels or gutters, open-top box culverts, and waterbars; rolling dips and road sloping; roadway surface water deflector and culverts); or their equivalents.

E.G.3.1.2 Capping: When capping is necessary to minimize pollutant discharges in stormwater, identify the source being capped and the material used to construct the cap.

E.G.3.1.3 Treatment: If treatment of stormwater (e.g., chemical or physical systems, oil and water separators, artificial wetlands) is necessary to protect water quality, describe the type and location of treatment used. Passive and/or active treatment of stormwater runoff is encouraged where practicable. Treated runoff may be discharged as a stormwater source regulated under this permit provided the discharge is not combined with discharges subject to effluent limitation guidelines for the Ore Mining and Dressing Point Source Category (40 CFR Part 440).

E.G.3.2 Certification of Discharge Testing. Test or evaluate all outfalls covered under this permit for the presence of specific mining-related non-stormwater discharges such as seeps or adit discharges, or discharges subject to effluent limitations guidelines (e.g., 40 CFR Part 440), such as mine drainage or process water. Alternatively (if applicable), you may keep a certification with your SWPCP consistent with Schedule E.G.4.5.

E.G.4 Additional SWPCP Requirements.

E.G.4.1 Nature of Industrial Activities. Briefly document in your SWPCP the mining and associated activities that can potentially affect the stormwater discharges covered by this permit, including a general description of the location of the site relative to major transportation routes and communities**.**

E.G.4.2 Site Map. Document in your SWPCP the locations of the following (as appropriate): mining or milling site boundaries; access and haul roads; outline of the drainage areas of each stormwater outfall within the facility with indications of the types of discharges from the drainage areas; location(s) of all permitted discharges covered under an individual NPDES permit, outdoor equipment storage, fueling, and maintenance areas; materials handling areas; outdoor manufacturing, outdoor storage, and material disposal areas; outdoor chemicals and explosives storage areas; overburden, materials, soils, or waste storage areas; location of mine drainage (where water leaves mine) or other process water; tailings piles and ponds (including proposed ones); heap leach pads; off-site points of discharge for mine drainage and process water; surface waters; boundary of tributary areas that are subject to effluent limitations guidelines; and location(s) of reclaimed areas.

E.G.4.3 Potential Pollutant Sources. For each area of the mine or mill site where stormwater discharges associated with industrial activities occur, identify the types of pollutants (e.g., heavy metals, sediment) likely to be present in significant amounts. Consider these factors: the mineralogy of the ore and waste rock (e.g., acid forming); toxicity and quantity of chemicals used, produced, or discharged; the likelihood of contact with stormwater; vegetation of site (if any); and history of significant leaks or spills of toxic or hazardous pollutants. Also include a summary of any existing ore or waste rock or overburden characterization data and test results for potential generation of acid rock. If any new data is acquired due to changes in ore type being mined, update your SWPCP with this information.

E.G.4.4 Documentation of Control Measures. Document all control measures that you implement consistent with Schedule E.G.3.1. If control measures are implemented or planned but are not listed in Schedule E.G.3.1 (e.g., substituting a less toxic chemical for a more toxic one), include descriptions of them in your SWPCP.

E.G.4.5 Certification of Permit Coverage for Commingled Non-Stormwater Discharges: If you are able, consistent with Schedule E.G.3.2 above, to certify that a particular discharge composed of commingled stormwater and non-stormwater is covered under a separate NPDES permit, and

that permit subjects the non-stormwater portion to effluent limitations prior to any commingling, retain such certification with your SWPCP. This certification must identify the non-stormwater discharges, the applicable NPDES permit(s), the effluent limitations placed on the non-stormwater discharge by the permit(s), and the points at which the limitations are applied.

E.G.5 Additional Inspection Requirements.

Except for areas of the site subject to clearing, grading, and/or excavation activities conducted as part of the exploration and construction phase, which are subject to Schedule E.G.2.2.1, inspect sites at least monthly unless adverse weather conditions make the site inaccessible. Sites which discharge to waters which are impaired for sediment or nitrogen must be inspected monthly.

E.G.6 Monitoring and Reporting Requirements.

E.G.6.1 Benchmark Monitoring for Active Copper Ore Mining and Dressing Facilities. Active copper ore mining and dressing facilities, must sample and analyze stormwater discharges for the pollutants listed in Table E.G-1.

Table E.G-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Active Copper Ore Mining and Dressing Facilities (SIC 1021)	Nitrate plus Nitrite Nitrogen	0.68 mg/L
	Chemical Oxygen Demand (COD)	120 mg/L

E.G.6.2 Benchmark Monitoring Requirements for Discharges From Waste Rock and Overburden Piles at Active Metal Mining Facilities. For discharges from waste rock and overburden piles, perform benchmark monitoring once in the first year for the parameters listed in Table E.G-2, and twice annually in all subsequent years of coverage under this permit for any parameters for which the benchmark has been exceeded. You are also required to conduct analytic monitoring for the parameters listed in Table E.G-3 in accordance with the requirements in Schedule E.G.4.3. DEQ may also notify you that you must perform additional monitoring to accurately characterize the quality and quantity of pollutants discharged from your waste rock and overburden piles.

Table E.G-2.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Cutoff Concentration
Iron Ores; Copper Ores; Lead and Zinc Ores; Gold and Silver Ores; Ferroalloy Ores, Except Vanadium; and Miscellaneous Metal Ores (SIC Codes 1011, 1021, 1031, 1041, 1044, 1061, 1081, 1094, 1099)	Turbidity	50 NTU
	Hardness (as $CaCO_3$; calc. from Ca, Mg)[1]	no benchmark value
	Total Antimony	0.64 mg/L
	Total Arsenic	0.15 mg/ L

Table E.G-2.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Cutoff Concentration
Note: when analyzing hardness for a suite of metals, it is more cost effective to add analysis of calcium and magnesium, and have hardness calculated than to require hardness analysis separately.	Total Beryllium	0.13 mg/L
	Total Cadmium	0.001 mg/L
	Total Iron	1.0 mg/L
	Total Mercury	0.0014 mg/L
	Total Nickel	0.5 mg/L
	Total Selenium	0.005 mg/L
	Total Silver	0.0005 mg/L

E.G.6.3 Additional Analytic Monitoring Requirements for Discharges From Waste Rock and Overburden Piles at Active Metal Mining Facilities. In addition to the monitoring required in Schedule E.G.6.2 for discharges from waste rock and overburden piles, you must also conduct monitoring for additional parameters based on the type of ore you mine at your site. Where a parameter in Table E.G-3 is the same as a pollutant you are required to monitor for in Table E.G-2 (i.e., for all of the metals, you must use the corresponding benchmark in Table E.G-2 and you may use any monitoring results conducted for Schedule E.G.6.2 to satisfy the monitoring requirement for that parameter for Schedule E.G.6.3. For radium and uranium, which do not have corresponding benchmarks in Table E.G-2, there are no applicable benchmarks.)

Table E.G-3. Additional Monitoring Requirements for Discharges from Waste Rock and Overburden Piles

Supplemental Requirements			
Type of Ore Mined	Pollutants of Concern		
	Total Suspended Solids (TSS)	pH	Metals, Total
Tungsten Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H)
Nickel Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H)
Aluminum Ore	X	X	Iron
Mercury Ore	X	X	Nickel (H)
Iron Ore	X	X	Iron (Dissolved)
Platinum Ore			Cadmium (H), Copper (H), Mercury, Lead (H), Zinc (H)
Titanium Ore	X	X	Iron, Nickel (H), Zinc (H)
Vanadium Ore	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Zinc (H)
Molybdenum	X	X	Arsenic, Cadmium (H), Copper (H), Lead (H), Mercury, Zinc (H)
Uranium, Radium, and Vanadium Ore	X	X	Chemical Oxygen Demand, Arsenic, Radium (Dissolved and Total), Uranium, Zinc (H)

Note: An "X" indicated for TSS and/or pH means that you are required to monitor for those parameters. (H) indicates that hardness must also be measured when this pollutant is measured.

E.G.6.4 Inactive and Unstaffed Sites –As a Sector G facility, if you are seeking to exercise a monitoring or inspection waiver, you are conditionally exempt from the requirement to certify that "there are no industrial materials or activities exposed to stormwater" in Schedule B.4 of the permit. This exemption is conditioned on the following:

- If circumstances change and your facility becomes active and/or staffed, this exception no longer applies and you must immediately begin complying with the monitoring and inspection requirements; and
- DEQ retains the authority to revoke this exemption and/or the monitoring waiver where it is determined that the discharge causes, has a reasonable potential to cause, or contributes to an instream excursion above an applicable water quality standard, including designated uses.

Table E.G-4. Applicability of the Permit to Stormwater Runoff From Active Mining and Dressing Sites, Temporarily Inactive Sites, and Sites Undergoing Reclamation

Discharge/Source of Discharge	Note/Comment
Piles	
Waste rock/overburden	If composed entirely of stormwater and not combining with mine drainage. See note below.
Topsoil	--
Roads constructed of waste rock or spent ore	
Onsite haul roads	If composed entirely of stormwater and not combining with mine drainage. See note below.
Offsite haul and access roads	--
Roads not constructed of waste rock or spent ore	
Onsite haul roads	Except if mine drainage is used for dust control
Offsite haul and access roads	--
Milling/concentrating	
Runoff from tailings dams and dikes when constructed of waste rock/tailings	Except if process fluids are present and only if composed entirely of stormwater and not combining with mine drainage. See Note below.
Runoff from tailings dams/dikes when not constructed of waste rock and tailings	Except if process fluids are present
Concentration building	If stormwater only and no contact with piles
Mill site	If stormwater only and no contact with piles
Ancillary areas	
Office and administrative building and housing	If mixed with stormwater from the industrial area
Chemical storage area	--
Docking facility	Except if excessive contact with waste product that would otherwise constitute mine drainage
Explosive storage	--
Fuel storage (oil tanks/coal piles)	--
Vehicle and equipment maintenance area/building	--
Parking areas	But coverage unnecessary if only employee and visitor-type parking
Power plant	
Truck wash area	Except when excessive contact with waste product that would otherwise constitute mine drainage

Table E.G-4. Applicability of the Permit to Stormwater Runoff From Active Mining and Dressing Sites, Temporarily Inactive Sites, and Sites Undergoing Reclamation

Reclamation-related areas	
Any disturbed area (unreclaimed)	Only if not in active mining area
Reclaimed areas released from reclamation requirements prior to Dec. 17, 1990	--
Partially/inadequately reclaimed areas or areas not released from reclamation requirements	--

Note: Stormwater runoff from these sources are subject to the NPDES program for stormwater unless mixed with discharges subject to 40 CFR Part 440 that are regulated by another permit prior to mixing. Non-stormwater discharges from these sources are subject to NPDES permitting and may be subject to the effluent limitation guidelines under 40 CFR Part 440. Discharges from overburden/waste rock and overburden/waste rock-related areas are not subject to 40 CFR Part 440 unless: (1) it drains naturally (or is intentionally diverted) to a point source; and (2) combines with "mine drainage" that is otherwise regulated under the Part 440 regulations. For such sources, coverage under this permit would be available if the discharge composed entirely of stormwater does not combine with other sources of mine drainage that are not subject to 40 CFR Part 440, as well as meeting other eligibility criteria contained in the permit.

E.G.7. Termination of Permit Coverage

E.G.7.1 Termination of Permit Coverage for Sites Reclaimed After December 17, 1990. A site or a portion of a site that has been released from applicable state or federal reclamation requirements after December 17, 1990, is no longer required to maintain coverage under this permit. If the site or portion of a site reclaimed after December 17, 1990, was not subject to reclamation requirements, the site or portion of the site is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed as defined in Schedule E.G.7.2.

E.G.7.2 Termination of Permit Coverage for Sites Reclaimed Before December 17, 1990. A site or portion of a site that was released from applicable state or federal reclamation requirements before December 17, 1990, or that was otherwise reclaimed before December 17, 1990, is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed. A site or portion of a site is considered to have been reclaimed if: (1) stormwater runoff that comes into contact with raw materials, intermediate byproducts, finished products, and waste products does not have the potential to cause or contribute to violations of state water quality standards, (2) soil disturbing activities related to mining at the sites or portion of the site have been completed, (3) the site or portion of the site has been stabilized to minimize soil erosion, and (4) as appropriate depending on location, size, and the potential to contribute pollutants to stormwater discharges, the site or portion of the site has been revegetated, will be amenable to natural revegetation, or will be left in a condition consistent with the post-mining land use.

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart H – Sector H – Coal Mines and Coal Mining-Related Facilities.

E.H.1 Definitions

The following definitions are not intended to supersede the definitions of active and inactive mining facilities established by 40 CFR 122.26(b)(14)(iii).

E.H.1.1 Mining operation - Consists of the active and temporarily inactive phases, and the reclamation phase, but excludes the exploration and construction phases.

E.H.1.2 Exploration phase - Entails exploration and land disturbance activities to determine the financial viability of a site. The exploration phase is not considered part of "mining operations."

E.H.1.3 Construction phase - Includes the building of site access roads and removal of overburden and waste rock to expose mineable coal. The construction phase is not considered part of "mining operations."

E.H.1.4 Active phase - Activities including the extraction, removal or recovery of coal. For surface mines, this definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun. This definition is derived from the definition of "active mining area" found at 40 CFR 434.11(b). The active phase is considered part of "mining operations."

E.H.1.5 Reclamation phase - Activities undertaken, in compliance with applicable mined land reclamation requirements, following the cessation of the "active phase", intended to return the land to an appropriate post-mining land use. The reclamation phase is considered part of "mining operations."

E.H.1.6 Active coal mining facility - A place where work or other activity related to the extraction, removal, or recovery of coal is being conducted. For surface mines, this definition does not include any land where grading has returned the earth to a desired contour and reclamation has begun. This definition is derived from the definition of "active mining area" found at 40 CFR 434.11(b).

E.H.1.7 Inactive coal mining facility - A site or portion of a site where coal mining and/or milling occurred in the past but is not an active facility as defined above, and where the inactive portion is not covered by an active mining permit issued by the applicable State or Federal agency. An inactive coal mining facility has an identifiable owner / operator. Sites where mining claims are being maintained prior to disturbances associated with the extraction, beneficiation, or processing of mined materials and sites where minimal activities are undertaken for the sole purpose of maintaining a mining claim are not considered either active or inactive mining facilities and do not require an NPDES industrial stormwater permit.

E.H.1.8 Temporarily inactive coal mining facility - A site or portion of a site where coal mining and/or milling occurred in the past but currently are not being actively undertaken, and the facility is covered by an active mining permit issued by the applicable State or Federal agency.

E.H.1.9 Final Stabilization - A site or portion of a site is "finally stabilized" when it has implemented all applicable Federal and State reclamation requirements.

E.H.2 Technology-Based Effluent Limits for Clearing, Grading, and Excavation Activities.

Clearing, grading, and excavation activities being conducted as part of the exploration and construction phase of mining activities are covered under this permit.

E.H.2.1 Management Practices for Clearing, Grading, and Excavation Activities.

E.H.2.1.1 Selecting and installing control measures. For all areas affected by clearing, grading, and excavation activities, you must select, design, install, and implement control measures that meet applicable Part 2 effluent limits.

E.H.2.1.2 Good Housekeeping. Litter, debris, and chemicals must be prevented from becoming a pollutant source in stormwater discharges.

E.H.2.1.3 Retention and Detention of Stormwater Runoff. For drainage locations serving more than one acre, sediment basins and/or temporary sediment traps should be used. At a minimum, silt fences, vegetative buffer strips, or equivalent sediment controls are required for all down slope boundaries (and side slope boundaries as necessary based on individual site conditions) of the development area unless a sediment basin providing storage for a calculated volume of runoff from a 2-year, 24-hour storm or 3,600 cubic feet of storage per acre drained is provided. You are required to remove sediment from sediment traps or sedimentation ponds when design capacity has been reduced by 50 percent. Due to high sediment discharges from some Sector H facilities, permittees may need to implement a combination of structural BMP approaches to sufficiently decrease discharge of sediment from their facilities.

E.H.2.2 Inspection of Clearing, Grading, and Excavation Activities.

E.H.2.2.1 Inspection Frequency. Inspections must be conducted either at least once every 7 calendar days, or at least once every 14 calendar days and within 24 hours of the end of a storm event of 0.5 inches or greater. Inspection frequency may be reduced to at least once every month if the entire site is temporarily stabilized, if runoff is unlikely due to winter (e.g., site is covered with snow or ice) or frozen conditions, or construction is occurring during seasonal dry periods in arid areas and semi-arid areas.

E.H.2.2.2 Location of Inspections. Inspections must include all areas of the site disturbed by clearing, grading, and/or excavation activities and areas used for storage of materials that are exposed to precipitation. Sedimentation and erosion control measures must be observed to ensure proper operation. Discharge locations must be inspected to ascertain whether erosion control measures are effective in preventing significant impacts to waters of the United States, where accessible. Where discharge locations are inaccessible, nearby downstream locations must be inspected to the extent that such inspections are practicable. Locations where vehicles enter or exit the site must be inspected for evidence of significant off-site sediment tracking.

E.H.2.3 Requirements for Cessation of Clearing, Grading, and Excavation Activities.

E.H.2.3.1 Inspections and Maintenance. Inspections and maintenance of control measures, including BMPs, associated with clearing, grading, and/or excavation activities being conducted as part of the exploration and construction phase of a mining operation

must continue until final stabilization has been achieved on all portions of the disturbed area.

E.H.2.3.2 Temporary Stabilization of Disturbed Areas. Stabilization measures should be initiated immediately in portions of the site where clearing, grading and/or excavation activities have temporarily ceased, but in no case more than 14 days after the clearing, grading and/or excavation activities in that portion of the site have temporarily ceased. In arid, semiarid, and drought-stricken areas, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after mining, exploration, and/or construction activity has temporarily ceased, temporary vegetative stabilization measures must be initiated as soon as practicable. Until temporary vegetative stabilization is achieved, interim measures such as erosion control blankets with an appropriate seed base and tackifiers must be employed. In areas of the site, where exploration and/or construction has permanently ceased prior to active mining, temporary stabilization measures must be implemented to minimize mobilization of sediment or other pollutants until such time as the active mining phase commences.

E.H.2.3.3 Final Stabilization of Disturbed Areas. Stabilization measures should be initiated immediately in portions of the site where exploration and/or construction activities have permanently ceased, but in no case more than 14 days after the exploration and/or construction activity in that portion of the site has permanently ceased. In arid, semiarid, and drought-stricken areas, or in areas subject to snow or freezing conditions, or in areas subject to snow or freezing conditions, where initiating perennial vegetative stabilization measures is not possible within 14 days after mining, exploration, and/or construction activity has permanently ceased, temporary vegetative stabilization measures must be initiated as soon as possible. Until final stabilization is achieved temporary stabilization measures, such as erosion control blankets with an appropriate seed base and tackifiers, must be used.

E.H.3 Additional Technology-Based Effluent Limits.

E.H.3.1 Good Housekeeping Measures. As part of your good housekeeping program, consider using sweepers and covered storage, watering haul roads to minimize dust generation, and conserving vegetation (where possible) to minimize erosion.

E.H.3.2 Preventive Maintenance. Perform inspections or other equivalent measures of storage tanks and pressure lines of fuels, lubricants, hydraulic fluid, and slurry to prevent leaks due to deterioration or faulty connections.

E.H.4 Additional SWPCP Requirements.

E.H.4.1 Other Applicable Regulations. Most active coal mining-related areas (SIC Codes 1221-1241) are subject to sediment and erosion control regulations of the U.S. Office of Surface Mining (OSM) that enforces the Surface Mining Control and Reclamation Act (SMCRA). OSM has granted authority to most coal-producing states to implement SMCRA through State SMCRA regulations. All SMCRA requirements regarding control of stormwater-related pollutant discharges must be addressed and then documented with the SWPCP (directly or by reference).

E.H.4.2 Site Map. Document in your SWPCP where any of the following may be exposed to precipitation or surface runoff: haul and access roads; railroad spurs, sliding, and internal

hauling lines; conveyor belts, chutes, and aerial tramways; equipment storage and maintenance yards; coal handling buildings and structures; and inactive mines and related areas; acidic spoil, refuse, or unreclaimed disturbed areas; and liquid storage tanks containing pollutants such as caustics, hydraulic fluids, and lubricants.

E.H.4.3 Potential Pollutant Sources. Document in your SWPCP the following sources and activities that have potential pollutants associated with them: truck traffic on haul roads and resulting generation of sediment subject to runoff and dust generation; fuel or other liquid storage; pressure lines containing slurry, hydraulic fluid, or other potential harmful liquids; and loading or temporary storage of acidic refuse or spoil.

E.H.5 Additional Inspection Requirements.

E.H.5.1 Inspections of Active Mining-Related Areas. Except for areas of the site subject to clearing, grading, and/or excavation activities conducted as part of the exploration and construction phase, which are subject to Schedule E.H.2.2.1, perform monthly inspections of active mining areas covered by this permit, corresponding with the inspections as performed by SMCRA inspectors, of all mining-related areas required by SMCRA. Also maintain the records of the SMCRA authority representative.

E.H.5.2 Sediment and Erosion Control. Meet SMCRA inspection requirements for sediment and erosion control measures for areas subject to SMCRA authority.

E.H.5.3 Site Inspections. Your inspection program must include inspections for pollutants entering the drainage system from activities located on or near coal mining-related areas. Among the areas to be inspected are haul and access roads; railroad spurs, sliding, and internal hauling lines; conveyor belts, chutes, and aerial tramways; equipment storage and maintenance yards; coal handling buildings and structures; and inactive mines and related areas.

E.H.6 Sector-Specific Benchmarks.

Table E.H-1 identifies benchmarks that apply to the specific subsectors of Sector H. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.H-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Coal Mines and Related Areas (SIC 1221-1241)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L

E.H.6.1 Inactive and Unstaffed Sites –If you are seeking to exercise a monitoring or inspection waiver for inactive and unstaffed sites (including temporarily inactive sites), you are conditionally exempt from the requirement to certify that "there are no industrial materials or activities exposed to stormwater" in Schedule B.4 of the permit.

E.H.6.1.1 If circumstances change and your facility becomes active and/or staffed, this exception no longer applies and you must immediately begin complying with the monitoring and inspection; and

E.H.6.1.2 DEQ retains the authority to revoke this exemption and/or the monitoring waiver where it is determined that the discharge causes, has a reasonable potential to cause or contribute to an instream excursion above an applicable water quality standard, including designated uses.

E.H.7 Termination of Permit Coverage

E.H.7.1 Termination of Permit Coverage for Sites Reclaimed After December 17, 1990. A site or a portion of a site that has been released from applicable state or federal reclamation requirements after December 17, 1990, is no longer required to maintain coverage under this permit. If the site or portion of a site reclaimed after December 17, 1990, was not subject to reclamation requirements, the site or portion of the site is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed.

E.H.7.2 Termination of Permit Coverage for Sites Reclaimed Before December 17, 1990. A site or portion of a site that was released from applicable state or federal reclamation requirements before December 17, 1990, or that was otherwise reclaimed before December 17, 1990, is no longer required to maintain coverage under this permit if the site or portion of the site has been reclaimed. A site or portion of a site is considered to have been reclaimed if: (1) stormwater runoff that comes into contact with raw materials, intermediate byproducts, finished products, and waste products does not have the potential to cause or contribute to violations of state water quality standards, (2) soil disturbing activities related to mining at the sites or portion of the site have been completed, (3) the site or portion of the site has been stabilized to minimize soil erosion, and (4) as appropriate depending on location, size, and the potential to contribute pollutants to stormwater discharges, the site or portion of the site has been revegetated, will be amenable to natural revegetation, or will be left in a condition consistent with the post-mining land use.

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart I – Sector I – Oil and Gas Extraction.

E.I.1 Additional Technology-Based Effluent Limits.

E.I.1.1 Vegetative Controls. Implement vegetative practices designed to preserve existing vegetation, where attainable, and revegetate open areas as soon as practicable after grade drilling. Consider the following (or equivalent measures): temporary or permanent seeding, mulching, sod stabilization, vegetative buffer strips, and tree protection practices. Begin implementing appropriate vegetative practices on all disturbed areas within 14 days following the last activity in that area.

E.I.2 Additional SWPCP Requirements.

E.I.2.1 Drainage Area Site Map. Document in your SWPCP where any of the following may be exposed to precipitation or surface runoff: Reportable Quantity (RQ) releases; locations used for the treatment, storage, or disposal of wastes; processing areas and storage areas; chemical mixing areas; construction and drilling areas; all areas subject to the effluent guidelines requirements for "No Discharge" in accordance with 40 CFR 435.32; and the structural controls to achieve compliance with the "No Discharge" requirements.

E.I.2.2 Potential Pollutant Sources. Also document in your SWPCP the following sources and activities that have potential pollutants associated with them: chemical, cement, mud, or gel mixing activities; drilling or mining activities; and equipment cleaning and rehabilitation activities. In addition, include information about the reportable quantity (RQ) release that triggered the permit application requirements: the nature of the release (e.g., spill of oil from a drum storage area), amount of oil or hazardous substance released, amount of substance recovered, date of the release, cause of the release (e.g., poor handling techniques and lack of containment in the area), areas affected by the release (i.e., land and water), procedure to clean up release, actions or procedures implemented to prevent or improve response to a release, and remaining potential contamination of stormwater from release (taking into account human health risks, the control of drinking water intakes, and the designated uses of the receiving water).

E.I.2.3 Erosion and Sedimentation Control. Unless covered by the NPDES Construction Stormwater 1200-C General Permit, the additional documentation requirements for sediment and erosion controls for well drillings and sand/shale mining areas include the following:

E.I.2.3.1 Site Description. Also include a description in your SWPCP of the nature of the exploration activity, estimates of the total area of site and area disturbed due to exploration activity, an estimate of runoff coefficient of the site, a site drainage map, including approximate slopes, and the names of all receiving waters.

E.I.2.3.2 Vegetative Controls. Document vegetative practices used in the SWPCP.

E.I.3 Additional Inspection Requirements.

All erosion and sedimentation control measures must be inspected every 7 days.

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart K – Sector K – Hazardous Waste Treatment, Storage, or Disposal Facilities.

E.K.1 Definitions.

K.1.1 *Contaminated stormwater* - stormwater that comes into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined in E.K.1.4. Some specific areas of a landfill that may produce contaminated stormwater include (but are not limited to) the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment, or machinery that has been in direct contact with the waste; and waste dumping areas.

K.1.2 *Drained free liquids* - aqueous wastes drained from waste containers (e.g., drums) prior to landfilling.

K.1.3 *Landfill* - an area of land or an excavation in which wastes are placed for permanent disposal, but that is not a land application or land treatment unit, surface impoundment, underground injection well, waste pile, salt dome formation, salt bed formation, underground mine, or cave as these terms are defined in 40 CFR 257.2, 258.2, and 260.10.

K1.4 *Landfill wastewater* - as defined in 40 CFR Part 445 (Landfills Point Source Category), all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated stormwater, contaminated groundwater, and wastewater from recovery pumping wells. Landfill wastewater includes, but is not limited to, leachate, gas collection condensate, drained free liquids, laboratory derived wastewater, contaminated stormwater, and contact washwater from washing truck, equipment, and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

K.1.5 *Leachate* - liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

K.1.6 *Non-contaminated stormwater* - stormwater that does not come into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater as defined in E.K.1.4. Non-contaminated stormwater includes stormwater that flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.

E.K.2 Sector-Specific Benchmarks.

Table E.K-1 identifies benchmarks that apply to the specific subsectors of Sector K. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table E.K-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
ALL - Industrial Activity Code "HZ" Benchmarks only applicable to discharges not subject to effluent limitations in 40 CFR Part 445 Subpart A.	Ammonia	2.14 mg/L
	Total Magnesium	0.064 mg/L
	Chemical Oxygen Demand (COD)	120 mg/L
	Total Arsenic	0.15 mg/L
	Total Cadmium	0.001 mg/L
	Total Cyanide	0.022 mg/ L
	Total Nickel	0.5 mg/L
	Total Mercury	0.0014 mg/ L
	Total Selenium	0.005 mg/L
	Total Silver	0.0005 mg/L

E.K.3 Effluent Limitations Based on Effluent Limitations Guidelines

Table E.K-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other wastestreams that may be covered under this permit.

Table E.K-2[1]		
Industrial Activity	**Parameter**	**Effluent Limit**
Discharges from hazardous waste landfills subject to effluent limitations in 40 CFR Part 445 Subpart A.	Biochemical Oxygen Demand (BOD_5)	220 mg/L, daily maximum
		56 mg/L, monthly avg. maximum
	Total Suspended Solids (TSS)	88 mg/L, daily maximum
		27 mg/L, monthly avg. maximum
	Ammonia	10 mg/L, daily maximum
		4.9 mg/L, monthly avg. maximum
	Alpha Terpineol	0.042 mg/L, daily maximum
		0.019 mg/L, monthly avg. maximum
	Aniline	0.024 mg/L, daily maximum
		0.015 mg/L, monthly avg. maximum
	Benzoic Acid	0.119 mg/L, daily maximum
		0.073 mg/L, monthly avg. maximum
	Naphthalene	0.059 mg/L, daily maximum
		0.022 mg/L, monthly avg. maximum
	p-Cresol	0.024 mg/L, daily maximum
		0.015 mg/L, monthly avg. maximum
	Phenol	0.048 mg/L, daily maximum
		0.029 mg/L, monthly avg. maximum
	Pyridine	0.072 mg/L, daily maximum
		0.025 mg/L, monthly avg. maximum

Table E.K-2[1]		
Industrial Activity	**Parameter**	**Effluent Limit**
	Total Arsenic	1.1 mg/L, daily maximum
		0.54 mg/L, monthly avg. maximum
	Total Chromium	1.1 mg/L, daily maximum
		0.46 mg/L, monthly avg. maximum
	Total Zinc	0.535 mg/L, daily maximum
		0.296 mg/L, monthly avg. maximum
	pH	Within the range of 6-9 standard pH units (s.u.)

[1] Monitor annually. As set forth at 40 CFR Part 445 Subpart A, these numeric limitations apply to contaminated stormwater discharges from hazardous waste landfills subject to the provisions of RCRA Subtitle C at 40 CFR Parts 264 (Subpart N) and 265 (Subpart N) except for any of the following facilities:

(a) landfills operated in conjunction with other industrial or commercial operations when the landfill receives only wastes generated by the industrial or commercial operation directly associated with the landfill;

(b) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes generated by the industrial or commercial operation directly associated with the landfill and also receives other wastes, provided that the other wastes received for disposal are generated by a facility that is subject to the same provisions in 40 CFR Subchapter N as the industrial or commercial operation or that the other wastes received are of similar nature to the wastes generated by the industrial or commercial operation;

(c) landfills operated in conjunction with Centralized Waste Treatment (CWT) facilities subject to 40 CFR Part 437, so long as the CWT facility commingles the landfill wastewater with other non-landfill wastewater for discharge. A landfill directly associated with a CWT facility is subject to this part if the CWT facility discharges landfill wastewater separately from other CWT wastewater or commingles the wastewater from its landfill only with wastewater from other landfills; or

(d) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes from public service activities, so long as the company owning the landfill does not receive a fee or other remuneration for the disposal service.

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart L – Sector L – Landfills, Land Application Sites, and Open Dumps.

E.L.1 Definitions.

E.L.1.1 Contaminated stormwater - stormwater that comes into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater. Some areas of a landfill that may produce contaminated stormwater include (but are not limited to) the open face of an active landfill with exposed waste (no cover added); the areas around wastewater treatment operations; trucks, equipment, or machinery that has been in direct contact with the waste; and waste dumping areas.

E.L.1.2 Drained free liquids - aqueous wastes drained from waste containers (e.g., drums) prior to landfilling.

E.L.1.3 Landfill wastewater - as defined in 40 CFR Part 445 (Landfills Point Source Category) all wastewater associated with, or produced by, landfilling activities except for sanitary wastewater, non-contaminated stormwater, contaminated groundwater, and wastewater from recovery pumping wells. Landfill process wastewater includes, but is not limited to, leachate; gas collection condensate; drained free liquids; laboratory-derived wastewater; contaminated stormwater; and contact washwater from washing truck, equipment, and railcar exteriors and surface areas that have come in direct contact with solid waste at the landfill facility.

E.L.1.4 Leachate - liquid that has passed through or emerged from solid waste and contains soluble, suspended, or miscible materials removed from such waste.

E.L.1.5 Non-contaminated stormwater - stormwater that does not come into direct contact with landfill wastes, the waste handling and treatment areas, or landfill wastewater. Non-contaminated stormwater includes stormwater that flows off the cap, cover, intermediate cover, daily cover, and/or final cover of the landfill.

E.L.2 Additional Technology-Based Effluent Limits.

E.L.2.1 Preventive Maintenance Program. As part of your preventive maintenance program, maintain the following: all elements of leachate collection and treatment systems, to prevent commingling of leachate with stormwater; the integrity and effectiveness of any intermediate or final cover (including repairing the cover as necessary), to minimize the effects of settlement, sinking, and erosion.

E.L.2.2 Erosion and Sedimentation Control. Provide temporary stabilization (e.g., temporary seeding, mulching, and placing geotextiles on the inactive portions of stockpiles) for the following: materials stockpiled for daily, intermediate, and final cover; inactive areas of the landfill or open dump; landfills or open dump areas that have gotten final covers but where vegetation has yet to establish itself; and land application sites where waste application has been completed but final vegetation has not yet been established.

E.L.2.3 Unauthorized Discharge Test Certification. The discharge test and certification must also be conducted for the presence of leachate and vehicle washwater.

E.L.3 Additional SWPCP Requirements.

E.L.3.1 Drainage Area Site Map. Document in your SWPCP where any of the following may be exposed to precipitation or surface runoff: active and closed landfill cells or trenches, active and closed land application areas, locations where open dumping is occurring or has occurred, locations of any known leachate springs or other areas where uncontrolled leachate may commingle with runoff, and leachate collection and handling systems.

E.L.3.2 Summary of Potential Pollutant Sources. Document in your SWPCP the following sources and activities that have potential pollutants associated with them: fertilizer, herbicide, and pesticide application; earth and soil moving; waste hauling and loading or unloading; outdoor storage of significant materials, including daily, interim, and final cover material stockpiles as well as temporary waste storage areas; exposure of active and inactive landfill and land application areas; uncontrolled leachate flows; and failure or leaks from leachate collection and treatment systems.

E.L.4 Additional Inspection Requirements.

E.L.4.1 Inspections of Active Sites. Except in arid and semi-arid climates, inspect operating landfills, open dumps, and land application sites at least once every 7 days. Focus on areas of landfills that have not yet been finally stabilized; active land application areas, areas used for storage of material and wastes that are exposed to precipitation, stabilization, and structural control measures; leachate collection and treatment systems; and locations where equipment and waste trucks enter and exit the site. Ensure that sediment and erosion control measures are operating properly. For stabilized sites and areas where land application has been completed, or where the climate is arid or semi-arid, conduct inspections at least once every month.

E.L.4.2 Inspections of Inactive Sites. Inspect inactive landfills, open dumps, and land application sites at least monthly. Qualified personnel must inspect landfill (or open dump) stabilization and structural erosion control measures, leachate collection and treatment systems, and all closed land application areas.

E.L.5 Additional Post-Authorization Documentation Requirements.

E.L.5.1 Recordkeeping and Internal Reporting. Keep records with your SWPCP of the types of wastes disposed of in each cell or trench of a landfill or open dump. For land application sites, track the types and quantities of wastes applied in specific areas.

E.L.6 Sector-Specific Benchmarks

Table E.L-1 identifies benchmarks that apply to the specific subsectors of Sector L. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table E.L-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration[1]
All Landfill, Land Application Sites and Open Dumps, except Municipal Solid Waste Landfill (MSWLF) Areas Closed in Accordance with 40 CFR 258.60 (Industrial Activity Code "LF")	Total Iron	1.0 mg/L

[1]Benchmark monitoring required only for discharges not subject to effluent limitations in 40 CFR Part 445 Subpart B (see Table L-2 below).

E.L.7. Effluent Limitations Based on Effluent Limitations Guidelines

Table E.L-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other wastestreams that may be covered under this permit.

Table E.L-2[1]

Industrial Activity	Parameter	Effluent Limit
Discharges from non-hazardous waste landfills subject to effluent limitations in 40 CFR Part 445 Subpart B.	Biochemical Oxygen Demand (BOD_5)	140 mg/L, daily maximum
		37 mg/L, monthly avg. maximum
	Total Suspended Solids (TSS)	88 mg/L, daily maximum
		27 mg/L, monthly avg. maximum
	Ammonia	10 mg/L, daily maximum
		4.9 mg/L, monthly avg. maximum
	Alpha Terpineol	0.033 mg/L, daily maximum
		0.016 mg/L monthly avg. maximum
	Benzoic Acid	0.12 mg/L, daily maximum
		0.071 mg/L, monthly avg. maximum
	p-Cresol	0.025 mg/L, daily maximum
		0.014 mg/L, monthly avg. maximum
	Phenol	0.026 mg/L, daily maximum
		0.015 mg/L, monthly avg. maximum
	Total Zinc	0.20 mg/L, daily maximum
		0.11 mg/L, monthly avg. maximum
	pH	Within the range of 6-9 standard pH units (s.u.)

[1] Monitor annually. As set forth at 40 CFR Part 445 Subpart B, these numeric limitations apply to contaminated stormwater discharges from MSWLFs that have not been closed in accordance with 40 CFR 258.60, and to contaminated stormwater discharges from those landfills that are subject to the provisions of 40 CFR Part 257 except for discharges from any of the following facilities:
(a) landfills operated in conjunction with other industrial or commercial operations, when the landfill receives only wastes generated by the industrial or commercial operation directly associated with the landfill;
(b) landfills operated in conjunction with other industrial or commercial operations, when the landfill receives wastes generated by the industrial or commercial operation directly associated with the landfill and also receives other wastes, provided that the other wastes received for disposal are generated by a facility that is subject to the same provisions in 40 CFR Subchapter N as the industrial or commercial operation, or that the other wastes received are of similar nature to the wastes generated by the industrial or commercial operation;
(c) landfills operated in conjunction with CWT facilities subject to 40 CFR Part 437, so long as the CWT facility commingles the landfill wastewater with other non-landfill wastewater for discharge. A landfill directly associated with a CWT facility is subject to this part if the CWT facility discharges landfill wastewater separately from other CWT wastewater or commingles the wastewater from its landfill only with wastewater from other landfills; or
(d) landfills operated in conjunction with other industrial or commercial operations when the landfill receives wastes from public service activities, so long as the company owning the landfill does not receive a fee or other remuneration for the disposal service.

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart M – Sector M – Automobile Salvage Yards.

E.M.1 Additional Technology-Based Effluent Limits.

E.M.1.1 Spill and Leak Prevention Procedures. Drain vehicles intended to be dismantled of all fluids upon arrival at the site (or as soon thereafter as feasible), or employ some other equivalent means to prevent spills and leaks.

E.M.1.2 Employee Training. If applicable to your facility, address the following areas (at a minimum) in your employee training program: proper handling (collection, storage, and disposal) of oil, used mineral spirits, anti-freeze, mercury switches, and solvents.

E.M.1.3 Management of Runoff. Consider the following management practices: berms or drainage ditches on the property line (to help prevent run-on from neighboring properties); berms for uncovered outdoor storage of oily parts, engine blocks, and above-ground liquid storage; installation of detention ponds; and installation of filtering devices and oil and water separators.

E.M.2 Additional SWPCP Requirements.

E.M.2.1 Drainage Area Site Map. Identify locations used for dismantling, storage, and maintenance of used motor vehicle parts. Also identify where any of the following may be exposed to precipitation or surface runoff: dismantling areas, parts (e.g., engine blocks, tires, hub caps, batteries, hoods, mufflers) storage areas, and liquid storage tanks and drums for fuel and other fluids.

E.M.2.2 Potential Pollutant Sources. Assess the potential for the following to contribute pollutants to stormwater discharges: vehicle storage areas, dismantling areas, parts storage areas (e.g., engine blocks, tires, hub caps, batteries, hoods, mufflers), and fueling stations.

E.M.3 Additional Inspection Requirements. Immediately (or as soon thereafter as feasible) inspect vehicles arriving at the site for leaks. Inspect monthly for signs of leakage all equipment containing oily parts, hydraulic fluids, any other types of fluids, or mercury switches. Also, inspect monthly for signs of leakage all vessels and areas where hazardous materials and general automotive fluids are stored, including, but not limited to, mercury switches, brake fluid, transmission fluid, radiator water, and antifreeze.

E.M.4 Sector-Specific Benchmarks.

Table E.M-1 identifies benchmarks that apply to the specific subsectors of Sector M. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.M-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Automobile Salvage Yards (SIC 5015)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart N – Sector N – Scrap Recycling and Waste Recycling Facilities.

E.N.1 Additional Technology-Based Effluent Limits.

E.N.1.1 Scrap and Waste Recycling Facilities (Non-Source Separated, Nonliquid Recyclable Materials). Requirements for facilities that receive, process, and do wholesale distribution of nonliquid recyclable wastes (e.g., ferrous and nonferrous metals, plastics, glass, cardboard, and paper). These facilities may receive both nonrecyclable and recyclable materials. This section is not intended for those facilities that accept recyclables only from primarily non-industrial and residential sources.

E.N.1.1.1 Inbound Recyclable and Waste Material Control Program. Minimize the chance of accepting materials that could be significant sources of pollutants by conducting inspections of inbound recyclables and waste materials. Following are some control measure options: (a) provide information and education to suppliers of scrap and recyclable waste materials on draining and properly disposing of residual fluids (e.g., from vehicles and equipment engines, radiators and transmissions, oil filled transformers, and individual containers or drums) and removal of mercury switches from vehicles before delivery to your facility; (b) establish procedures to minimize the potential of any residual fluids from coming into contact with precipitation or runoff; (c) establish procedures for accepting scrap lead-acid batteries (additional requirements for the handling, storage, and disposal or recycling of batteries are contained in the scrap lead-acid battery program provisions in Schedule E.N.3.1.6); (d) provide training targeted for those personnel engaged in the inspection and acceptance of inbound recyclable materials; and (e) establish procedures to ensure that liquid wastes, including used oil, are stored in materially compatible and non-leaking containers and are disposed of or recycled in accordance with the Resource Conservation and Recovery Act (RCRA).

E.N.1.1.2 Scrap and Waste Material Stockpiles and Storage (Outdoor). Minimize contact of stormwater runoff with stockpiled materials, processed materials, and nonrecyclable wastes. Following are some control measure options: (a) permanent or semi-permanent covers; (b) sediment traps, vegetated swales and strips, catch basin filters, and sand filters to facilitate settling or filtering of pollutants; (c) dikes, berms, containment trenches, culverts, and surface grading to divert runoff from storage areas; (d) silt fencing; and (e) oil and water separators, sumps, and dry absorbents for areas where potential sources of residual fluids are stockpiled (e.g., automobile engine storage areas).

E.N.1.1.3 Stockpiling of Turnings Exposed to Cutting Fluids (Outdoor Storage). Minimize contact of surface runoff with residual cutting fluids by: (a) storing all turnings exposed to cutting fluids under some form of permanent or semi-permanent cover, or (b) establishing dedicated containment areas for all turnings that have been exposed to cutting fluids. Any containment areas must be constructed of concrete, asphalt, or other equivalent types of impermeable material and include a barrier (e.g., berms, curbing, elevated pads) to prevent contact with stormwater run-on. Stormwater runoff from these areas can be discharged, provided that any runoff is first collected and treated by an oil and water separator or its equivalent. You must regularly

maintain the oil and water separator (or its equivalent) and properly dispose of or recycle collected residual fluids.

E.N.1.1.4 Scrap and Waste Material Stockpiles and Storage (Covered or Indoor Storage). Minimize contact of residual liquids and particulate matter from materials stored indoors or under cover with surface runoff. Following are some control measure options: (a) good housekeeping measures, including the use of dry absorbents or wet vacuuming to contain, dispose of, or recycle residual liquids originating from recyclable containers, or mercury spill kits for spills from storage of mercury switches; (b) not allowing washwater from tipping floors or other processing areas to discharge to the storm sewer system; and (c) disconnecting or sealing off all floor drains connected to the storm sewer system.

E.N.1.1.5 Scrap and Recyclable Waste Processing Areas. Minimize surface runoff from coming in contact with scrap processing equipment. Pay attention to operations that generate visible amounts of particulate residue (e.g., shredding) to minimize the contact of accumulated particulate matter and residual fluids with runoff (i.e., through good housekeeping, preventive maintenance, etc.). Following are some control measure options: (a) regularly inspect equipment for spills or leaks and malfunctioning, worn, or corroded parts or equipment; (b) establish a preventive maintenance program for processing equipment; (c) use dry-absorbents or other cleanup practices to collect and dispose of or recycle spilled or leaking fluids or use mercury spill kits for spills from storage of mercury switches; (d) on unattended hydraulic reservoirs over 150 gallons in capacity, install protection devices such as low-level alarms or equivalent devices, or secondary containment that can hold the entire volume of the reservoir; (e) containment or diversion structures such as dikes, berms, culverts, trenches, elevated concrete pads, and grading to minimize contact of stormwater runoff with outdoor processing equipment or stored materials; (f) oil and water separators or sumps; (g) permanent or semi-permanent covers in processing areas where there are residual fluids and grease; (h) retention or detention ponds or basins; sediment traps, and vegetated swales or strips (for pollutant settling and filtration); (i) catch basin filters or sand filters.

E.N.1.1.6 Scrap Lead-Acid Battery Program. Properly handle, store, and dispose of scrap lead-acid batteries. Following are some control measure options (a) segregate scrap lead-acid batteries from other scrap materials; (b) properly handle, store, and dispose of cracked or broken batteries; (c) collect and dispose of leaking lead-acid battery fluid; (d) minimize or eliminate (if possible) exposure of scrap lead-acid batteries to precipitation or runoff; and (e) provide employee training for the management of scrap batteries.

E.N.1.1.7 Spill Prevention and Response Procedures. (See also Schedule A.1.h) Install alarms and/or pump shutoff systems on outdoor equipment with hydraulic reservoirs exceeding 150 gallons in the event of a line break. Alternatively, a secondary containment system capable of holding the entire contents of the reservoir plus room for precipitation can be used. Use a mercury spill kit for any release of mercury from switches, anti-lock brake systems, and switch storage areas.

E.N.1.1.8 Supplier Notification Program. As appropriate, notify major suppliers which scrap materials will not be accepted at the facility or will be accepted only under certain conditions.

E.N.1.2 Waste Recycling Facilities (Liquid Recyclable Materials).

E.N.1.2.1 Waste Material Storage (Indoor). Minimize or eliminate contact between residual liquids from waste materials stored indoors and from surface runoff. The plan may refer to applicable portions of other existing plans, such as Spill Prevention, Control, and Countermeasure (SPCC) plans required under 40 CFR Part 112. Following are some control measure options (a) procedures for material handling (including labeling and marking); (b) clean up spills and leaks with dry absorbent materials, a wet vacuum system; (c) appropriate containment structures (trenching, curbing, gutters, etc.); and (d) a drainage system, including appurtenances (e.g., pumps or ejectors, manually operated valves), to handle discharges from diked or bermed areas. Drainage should be discharged to an appropriate treatment facility or sanitary sewer system, or otherwise disposed of properly. These discharges may require coverage under a separate NPDES wastewater permit or industrial user permit under the pretreatment program.

E.N.1.2.2 Waste Material Storage (Outdoor). Minimize contact between stored residual liquids and precipitation or runoff. The plan may refer to applicable portions of other existing plans, such as SPCC plans required under 40 CFR Part 112. Discharges of precipitation from containment areas containing used oil must also be in accordance with applicable sections of 40 CFR Part 112. Following are some control measure options (a) appropriate containment structures (e.g., dikes, berms, curbing, pits) to store the volume of the largest tank, with sufficient extra capacity for precipitation; (b) drainage control and other diversionary structures; (c) corrosion protection and/or leak detection systems for storage tanks; and (d) dry-absorbent materials or a wet vacuum system to collect spills.

E.N.1.2.3 Trucks and Rail Car Waste Transfer Areas. Minimize pollutants in discharges from truck and rail car loading and unloading areas. Include measures to clean up minor spills and leaks resulting from the transfer of liquid wastes. Following are two control measure options: (a) containment and diversionary structures to minimize contact with precipitation or runoff, and (b) dry clean-up methods, wet vacuuming, roof coverings, or runoff controls.

E.N.1.3 Recycling Facilities (Source-Separated Materials). The following identifies considerations forfacilities that receive only source-separated recyclables, primarily from non-industrial and residential sources.

E.N.1.3.1 Inbound Recyclable Material Control. Minimize the chance of accepting nonrecyclables (e.g., hazardous materials) that could be a significant source of pollutants by conducting inspections of inbound materials. Following are some control measure options: (a) providing information and education measures to inform suppliers of recyclables about acceptable and non-acceptable materials, (b) training drivers responsible for pickup of recycled material, (c) clearly marking public drop-off containers regarding which materials can be accepted, (d) rejecting nonrecyclable

wastes or household hazardous wastes at the source, and (e) establishing procedures for handling and disposal of nonrecyclable material.

E.N.1.3.2 Outdoor Storage. Minimize exposure of recyclables to precipitation and runoff. Use good housekeeping measures to prevent accumulation of particulate matter and fluids, particularly in high traffic areas. Following are some control measure options (a) provide totally enclosed drop-off containers for the public; (b) install a sump and pump with each container pit and treat or discharge collected fluids to a sanitary sewer system; (c) provide dikes and curbs for secondary containment (e.g., around bales of recyclable waste paper); (d) divert surface water runoff away from outside material storage areas; (e) provide covers over containment bins, dumpsters, and roll-off boxes; and (f) store the equivalent of one day's volume of recyclable material indoors.

E.N.1.3.3 Indoor Storage and Material Processing. Minimize the release of pollutants from indoor storage and processing areas. Following are some control measure options (a) schedule routine good housekeeping measures for all storage and processing areas, (b) prohibit tipping floor washwater from draining to the storm sewer system, and (c) provide employee training on pollution prevention practices.

E.N.1.3.4 Vehicle and Equipment Maintenance. Following are some control measure options for areas where vehicle and equipment maintenance occur outdoors (a) prohibit vehicle and equipment washwater from discharging to the storm sewer system, (b) minimize or eliminate outdoor maintenance areas whenever possible, (c) establish spill prevention and clean-up procedures in fueling areas, (d) avoid topping off fuel tanks, (e) divert runoff from fueling areas, (f) store lubricants and hydraulic fluids indoors, and (g) provide employee training on proper handling and storage of hydraulic fluids and lubricants.

E.N.2 Additional SWPCP Requirements.

E.N.2.1 Drainage Area Site Map. Document in your SWPCP the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff: scrap and waste material storage, outdoor scrap and waste processing equipment; and containment areas for turnings exposed to cutting fluids.

E.N.2.2 Maintenance Schedules/Procedures for Collection, Handling, and Disposal or Recycling of Residual Fluids at Scrap and Waste Recycling Facilities. If you are subject to Schedule E.N.1.1.3, your SWPCP must identify any applicable maintenance schedule and the procedures to collect, handle, and dispose of or recycle residual fluids.

E.N.3 Sector-Specific Benchmarks.

Table E.N-1 identifies benchmarks that apply to the specific subsectors of Sector N. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.N-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Scrap Recycling and Waste Recycling Facilities except Source-Separated Recycling (SIC 5093)	Chemical Oxygen Demand (COD)	120 mg/L
	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart O – Sector O – Steam Electric Generating Facilities.

E.O.1 Additional Technology-Based Effluent Limits. The following good housekeeping measures are required in addition to Schedule A.4 of permit:

E.O.1.1 Fugitive Dust Emissions. Minimize fugitive dust emissions from coal handling areas. To minimize the tracking of coal dust offsite, consider procedures such as installing specially designed tires or washing vehicles in a designated area before they leave the site and controlling the wash water.

E.O.1.2 Delivery Vehicles. Minimize contamination of stormwater runoff from delivery vehicles arriving at the plant site. Consider procedures to inspect delivery vehicles arriving at the plant site and ensure overall integrity of the body or container and procedures to deal with leakage or spillage from vehicles or containers.

E.O.1.3 Fuel Oil Unloading Areas. Minimize contamination of precipitation or surface runoff from fuel oil unloading areas. Consider using containment curbs in unloading areas, having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up, and using spill and overflow protection devices (e.g., drip pans, drip diapers, or other containment devices placed beneath fuel oil connectors to contain potential spillage during deliveries or from leaks at the connectors).

E.O.1.4 Chemical Loading and Unloading. Minimize contamination of precipitation or surface runoff from chemical loading and unloading areas. Consider using containment curbs at chemical loading and unloading areas to contain spills, having personnel familiar with spill prevention and response procedures present during deliveries to ensure that any leaks or spills are immediately contained and cleaned up, and loading and unloading in covered areas and storing chemicals indoors.

E.O.1.5 Miscellaneous Loading and Unloading Areas. Minimize contamination of precipitation or surface runoff from loading and unloading areas. Consider covering the loading area; grading, berming, or curbing around the loading area to divert run-on; locating the loading and unloading equipment and vehicles so that leaks are contained in existing containment and flow diversion systems; or equivalent procedures.

E.O.1.6 Liquid Storage Tanks. Minimize contamination of surface runoff from above-ground liquid storage tanks. Consider protective guards around tanks, containment curbs, spill and overflow protection, dry cleanup methods, or equivalent measures.

E.O.1.7 Large Bulk Fuel Storage Tanks. Minimize contamination of surface runoff from large bulk fuel storage tanks. Consider containment berms (or their equivalent). You must also comply with applicable State and Federal laws, including Spill Prevention, Control and Countermeasure (SPCC) Plan requirements.

E.O.1.8 Spill Reduction Measures. Minimize the potential for an oil or chemical spill, or reference the appropriate part of your SPCC plan. Visually inspect as part of your routine facility inspection the structural integrity of all above-ground tanks, pipelines, pumps, and related equipment that may be exposed to stormwater, and make any necessary repairs immediately.

E.O.1.9 Oil-Bearing Equipment in Switchyards. Minimize contamination of surface runoff from oil-bearing equipment in switchyard areas. Consider using level grades and gravel surfaces to retard flows and limit the spread of spills, or collecting runoff in perimeter ditches.

E.O.1.10 Residue-Hauling Vehicles. Inspect all residue-hauling vehicles for proper covering over the load, adequate gate sealing, and overall integrity of the container body. Repair vehicles without load covering or adequate gate sealing, or with leaking containers or beds.

E.O.1.11 Ash Loading Areas. Reduce or control the tracking of ash and residue from ash loading areas. Clear the ash building floor and immediately adjacent roadways of spillage, debris, and excess water before departure of each loaded vehicle.

E.O.1.12 Areas Adjacent to Disposal Ponds or Landfills. Minimize contamination of surface runoff from areas adjacent to disposal ponds or landfills. Reduce ash residue that may be tracked on to access roads traveled by residue handling vehicles, and reduce ash residue on exit roads leading into and out of residue handling areas.

E.O.1.13 Landfills, Scrap yards, Surface Impoundments, Open Dumps, General Refuse Sites. Minimize the potential for contamination of runoff from these areas.

E.O.2 Additional SWPCP Requirements.

E.O.2.1 Drainage Area Site Map. Document in your SWPCP the locations of any of the following activities or sources that may be exposed to precipitation or surface runoff: storage tanks, scrap yards, and general refuse areas; short- and long-term storage of general materials (including but not limited to supplies, construction materials, paint equipment, oils, fuels, used and unused solvents, cleaning materials, paint, water treatment chemicals, fertilizer, and pesticides); landfills and construction sites; and stock pile areas (e.g., coal or limestone piles).

E.O.3 Additional Inspection Requirements.

E.O.3.1 Inspection. Inspect the following areas monthly: coal handling areas, loading or unloading areas, switchyards, fueling areas, bulk storage areas, ash handling areas, areas adjacent to disposal ponds and landfills, maintenance areas, liquid storage tanks, and long term and short term material storage areas.

E.O.4 Sector-Specific Benchmarks

Table E.O-1 identifies benchmarks that apply to the specific subsectors of Sector O. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, which describe your site activities.

Table E.O-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Steam Electric Generating Facilities (Industrial Activity Code "SE")	Total Iron	1.0 mg/L

E.O.5 Effluent Limitations Based on Effluent Limitations Guidelines

Table E.O-2 identifies effluent limits that apply to the industrial activities described below. Compliance with these effluent limits is to be determined based on discharges from these industrial activities independent of commingling with any other wastestreams that may be covered under this permit.

Table E.O-2[1]

Industrial Activity	Parameter	Effluent Limit
Discharges from coal storage piles at Steam Electric Generating Facilities	TSS	50 mg/l[2]
	pH	6.0 min - 9.0 max

[1] Monitor annually.

[2] If your facility is designed, constructed, and operated to treat the volume of coal pile runoff that is associated with a 10-year, 24-hour rainfall event, any untreated overflow of coal pile runoff from the treatment unit is not subject to the 50 mg/L limitation for total suspended solids.

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart P – Sector P – Land Transportation and Warehousing.

E.P.1 Additional Technology-Based Effluent Limits.

E.P.1.1 Good Housekeeping Measures. In addition to the Good Housekeeping requirements in Schedule A.4 of the permit, you must do the following:

E.P.1.1.1 Vehicle and Equipment Storage Areas. Minimize the potential for stormwater exposure to leaky or leak-prone vehicles/equipment awaiting maintenance. Consider the following (or other equivalent measures): use of drip pans under vehicles/equipment, indoor storage of vehicles and equipment, installation of berms or dikes, use of absorbents, roofing or covering storage areas, and cleaning pavement surfaces to remove oil and grease.

E.P.1.1.2 Fueling Areas. Minimize contamination of stormwater runoff from fueling areas. Consider the following (or other equivalent measures): Covering the fueling area; using spill/overflow protection and cleanup equipment; minimizing stormwater run-on/runoff to the fueling area; using dry cleanup methods; and treating and/or recycling collected stormwater runoff.

E.P.1.1.3 Material Storage Areas. Maintain all material storage vessels (e.g., for used oil/oil filters, spent solvents, paint wastes, hydraulic fluids) to prevent contamination of stormwater and plainly label them (e.g., "Used Oil," "Spent Solvents," etc.). Consider the following (or other equivalent measures): storing the materials indoors; installing berms/dikes around the areas; minimizing runoff of stormwater to the areas; using dry cleanup methods; and treating and/or recycling collected stormwater runoff.

E.P.1.1.4 Vehicle and Equipment Cleaning Areas. Minimize contamination of stormwater runoff from all areas used for vehicle/equipment cleaning. Consider the following (or other equivalent measures): performing all cleaning operations indoors; covering the cleaning operation, ensuring that all washwater drains to a proper collection system (i.e., not the stormwater drainage system); treating and/or recycling collected washwater, or other equivalent measures.

E.P.1.1.5 Vehicle and Equipment Maintenance Areas. Minimize contamination of stormwater runoff from all areas used for vehicle/equipment maintenance. Consider the following (or other equivalent measures): performing maintenance activities indoors; using drip pans; keeping an organized inventory of materials used in the shop; draining all parts of fluid prior to disposal; prohibiting wet clean up practices if these practices would result in the discharge of pollutants to stormwater drainage systems; using dry cleanup methods; treating and/or recycling collected stormwater runoff, minimizing run on/runoff of stormwater to maintenance areas.

E.P.1.1.6 Locomotive Sanding (Loading Sand for Traction) Areas. Consider the following (or other equivalent measures): covering sanding areas; minimizing stormwater run on/runoff; or appropriate sediment removal practices to minimize the offsite transport of sanding material by stormwater.

E.P.1.2 Employee Training. Address the following activities, as applicable: used oil and spent solvent management; fueling procedures; general good housekeeping practices; proper painting procedures; and used battery management.

E.P.2 Additional SWPCP Requirements.

E.P.2.1 Drainage Area Site Map. Identify in the SWPCP the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: Fueling stations; vehicle/equipment maintenance or cleaning areas; storage areas for vehicle/equipment with actual or potential fluid leaks; loading/unloading areas; areas where treatment, storage or disposal of wastes occur; liquid storage tanks; processing areas; and storage areas.

E.P.2.2 Potential Pollutant Sources. Assess the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: Onsite waste storage or disposal; dirt/gravel parking areas for vehicles awaiting maintenance; illicit plumbing connections between shop floor drains and the stormwater conveyance system(s); and fueling areas. Describe these activities in the SWPCP.

E.P.3 Additional Inspection Requirements. Inspect all the following areas/activities: storage areas for vehicles/equipment awaiting maintenance, fueling areas, indoor and outdoor vehicle/equipment maintenance areas, material storage areas, vehicle/equipment cleaning areas and loading/unloading areas.

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart Q – Sector Q – Water Transportation.

E.Q.1 Additional Technology-Based Effluent Limits.

E.Q.1.1 Good Housekeeping Measures. You must implement the following good housekeeping measures in addition to requirements in Schedule A.1 of the permit:

E.Q.1.1.1 Pressure Washing Area. Collect or contain the discharges from the pressures washing area so that they are not co-mingled with stormwater discharges authorized by this permit.

E.Q.1.1.2 Blasting and Painting Area. Minimize the potential for spent abrasives, paint chips, and overspray to discharge into receiving waters or the storm sewer systems. Consider containing all blasting and painting activities or use other measures to minimize the discharge of contaminants (e.g., hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris). When necessary, regularly clean stormwater conveyances of deposits of abrasive blasting debris and paint chips.

E.Q.1.1.3 Material Storage Areas. Store and plainly label all containerized materials (e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) in a protected, secure location away from drains. Minimize the contamination of precipitation or surface runoff from the storage areas. Specify which materials are stored indoors, and consider containment or enclosure for those stored outdoors. If abrasive blasting is performed, discuss the storage and disposal of spent abrasive materials generated at the facility. Consider implementing an inventory control plan to limit the presence of potentially hazardous materials onsite.

E.Q.1.1.4 Engine Maintenance and Repair Areas. Minimize the contamination of precipitation or surface runoff from all areas used for engine maintenance and repair. Consider the following (or their equivalents): performing all maintenance activities indoors, maintaining an organized inventory of materials used in the shop, draining all parts of fluid prior to disposal, prohibiting the practice of hosing down the shop floor, using dry cleanup methods, and treating and/or recycling stormwater runoff collected from the maintenance area.

E.Q.1.1.5 Material Handling Area. Minimize the contamination of precipitation or surface runoff from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels). Consider the following (or their equivalents): covering fueling areas, using spill and overflow protection, mixing paints and solvents in a designated area (preferably indoors or under a shed), and minimizing runoff of stormwater to material handling areas.

E.Q.1.1.6 Drydock Activities. Routinely maintain and clean the drydock to minimize pollutants in stormwater runoff. Address the cleaning of accessible areas of the drydock prior to flooding, and final cleanup following removal of the vessel and raising the dock. Include procedures for cleaning up oil, grease, and fuel spills occurring on the drydock. Consider the following (or their equivalents): sweeping rather than hosing off debris and spent blasting material from accessible areas of the drydock prior to

flooding and making absorbent materials and oil containment booms readily available to clean up or contain any spills.

E.Q.1.2 Employee Training. At a minimum, address the following activities (as applicable): used oil management, spent solvent management, disposal of spent abrasives, disposal of vessel wastewaters, spill prevention and control, fueling procedures, general good housekeeping practices, painting and blasting procedures, and used battery management.

E.Q.1.3 Preventive Maintenance. As part of your preventive maintenance program, perform timely inspection and maintenance of stormwater management devices (e.g., cleaning oil and water separators and sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system), as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.

E.Q.2 Additional SWPCP Requirements.

E.Q.2.1 Drainage Area Site Map. Document in your SWPCP where any of the following may be exposed to precipitation or surface runoff: fueling; engine maintenance and repair; vessel maintenance and repair; pressure washing; painting; sanding; blasting; welding; metal fabrication; loading and unloading areas; locations used for the treatment, storage, or disposal of wastes; liquid storage tanks; liquid storage areas (e.g., paint, solvents, resins); and material storage areas (e.g., blasting media, aluminum, steel, scrap iron).

E.Q.2.2 Summary of Potential Pollutant Sources. Document in the SWPCP the following additional sources and activities that have potential pollutants associated with them: outdoor manufacturing or processing activities (e.g., welding, metal fabricating) and significant dust or particulate generating processes (e.g., abrasive blasting, sanding, and painting.)

E.Q.3 Additional Inspection Requirements.

Inspect pressure washing area; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area.

E.Q.4 Sector-Specific Benchmarks.

Table E.Q-1 identifies benchmarks that apply to the specific subsectors of Sector Q. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.Q-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Water Transportation Facilities (SIC 4412-4499)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart R – Sector R – Ship and Boat Building and Repair Yards.

E.R.1 Additional Technology-Based Effluent Limits.

E.R.1.1 Good Housekeeping Measures.

E.R.1.1.1 Pressure Washing Area. If pressure washing is used to remove marine growth from vessels, the discharged water must be permitted as a process wastewater by a separate NPDES permit.

E.R.1.1.2 Blasting and Painting Area. Minimize the potential for spent abrasives, paint chips, and overspray to discharging into the receiving water or the storm sewer systems. Consider containing all blasting and painting activities, or use other measures to prevent the discharge of the contaminants (e.g., hanging plastic barriers or tarpaulins during blasting or painting operations to contain debris). When necessary, regularly clean stormwater conveyances of deposits of abrasive blasting debris and paint chips.

E.R.1.1.3 Material Storage Areas. Store and plainly label all containerized materials (e.g., fuels, paints, solvents, waste oil, antifreeze, batteries) in a protected, secure location away from drains. Minimize the contamination of precipitation or surface runoff from the storage areas. If abrasive blasting is performed, discuss the storage and disposal of spent abrasive materials generated at the facility. Consider implementing an inventory control plan to limit the presence of potentially hazardous materials onsite.

E.R.1.1.4 Engine Maintenance and Repair Areas. Minimize the contamination of precipitation or surface runoff from all areas used for engine maintenance and repair. Consider the following (or their equivalents): performing all maintenance activities indoors, maintaining an organized inventory of materials used in the shop, draining all parts of fluid prior to disposal, prohibiting the practice of hosing down the shop floor, using dry cleanup methods, and treating and/or recycling stormwater runoff collected from the maintenance area.

E.R.1.1.5 Material Handling Area. Minimize the contamination of precipitation or surface runoff from material handling operations and areas (e.g., fueling, paint and solvent mixing, disposal of process wastewater streams from vessels). Consider the following (or their equivalents): covering fueling areas, using spill and overflow protection, mixing paints and solvents in a designated area (preferably indoors or under a shed), and minimizing stormwater run-on to material handling areas.

E.R.1.1.6 Drydock Activities. Routinely maintain and clean the drydock to minimize pollutants in stormwater runoff. Clean accessible areas of the drydock prior to flooding and final cleanup following removal of the vessel and raising the dock. Include procedures for cleaning up oil, grease, or fuel spills occurring on the drydock. Consider the following (or their equivalents): sweeping rather than hosing off debris and spent blasting material from accessible areas of the drydock prior to flooding, and having absorbent materials and oil containment booms readily available to clean up and contain any spills.

E.R.1.2 Employee Training. As part of your employee training program, address, at a minimum, the following activities (as applicable): used oil management, spent solvent management, disposal

of spent abrasives, disposal of vessel wastewaters, spill prevention and control, fueling procedures, general good housekeeping practices, painting and blasting procedures, and used battery management.

E.R.1.3 Preventive Maintenance. As part of your preventive maintenance program, perform timely inspection and maintenance of stormwater management devices (e.g., cleaning oil and water separators and sediment traps to ensure that spent abrasives, paint chips, and solids will be intercepted and retained prior to entering the storm drainage system), as well as inspecting and testing facility equipment and systems to uncover conditions that could cause breakdowns or failures resulting in discharges of pollutants to surface waters.

E.R.2 Additional SWPCP Requirements.

E.R.2.1 Drainage Area Site Map. Document in your SWPCP where any of the following may be exposed to precipitation or surface runoff: fueling; engine maintenance or repair; vessel maintenance or repair; pressure washing; painting; sanding; blasting; welding; metal fabrication; loading and unloading areas; treatment, storage, and waste disposal areas; liquid storage tanks; liquid storage areas (e.g., paint, solvents, resins); and material storage areas (e.g., blasting media, aluminum, steel, scrap iron).

E.R.2.2 Potential Pollutant Sources. Document in your SWPCP the following additional sources and activities that have potential pollutants associated with them (if applicable): outdoor manufacturing or processing activities (e.g., welding, metal fabricating) and significant dust or particulate generating processes (e.g., abrasive blasting, sanding, and painting).

E.R.2.3 Documentation of Good Housekeeping Measures. Document in your SWPCP any good housekeeping measures implemented to meet the effluent limits in Schedule E.R.1.1.

E.R.2.3.1 Blasting and Painting Areas. Document in the SWPCP any standard operating practices relating to blasting and painting (e.g., prohibiting uncontained blasting and painting over open water or prohibiting blasting and painting during windy conditions, which can render containment ineffective).

E.R.2.3.2 Storage Areas. Specify in your SWPCP which materials are stored indoors, and consider containment or enclosure for those stored outdoors.

E.R.3 Additional Inspection Requirements.

Include the following in all monthly inspections: pressure washing area; blasting, sanding, and painting areas; material storage areas; engine maintenance and repair areas; material handling areas; drydock area; and general yard area.

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart S – Sector S – Air Transportation.

E.S.1 Additional Technology-Based Effluent Limits.

E.S.1.1 Good Housekeeping Measures.

E.S.1.1.1 Aircraft, Ground Vehicle and Equipment Maintenance Areas. Minimize the contamination of stormwater runoff from all areas used for aircraft, ground vehicle and equipment maintenance (including the maintenance conducted on the terminal apron and in dedicated hangers). Consider the following practices (or their equivalents): performing maintenance activities indoors; maintaining an organized inventory of material used in the maintenance areas; draining all parts of fluids prior to disposal; prohibiting the practice of hosing down the apron or hanger floor; using dry cleanup methods; and collecting the stormwater runoff from the maintenance area and providing treatment or recycling.

E.S.1.1.2 Aircraft, Ground Vehicle and Equipment Cleaning Areas. Clearly demarcate these areas on the ground using signage or other appropriate means. Minimize the contamination of stormwater runoff from cleaning areas.

E.S.1.1.3 Aircraft, Ground Vehicle and Equipment Storage Areas. Store all aircraft, ground vehicles and equipment awaiting maintenance in designated areas only and minimize the contamination of stormwater runoff from these storage areas. Consider the following control measures, including any BMPs (or their equivalents): storing aircraft and ground vehicles indoors; using drip pans for the collection of fluid leaks; and perimeter drains, dikes or berms surrounding the storage areas.

E.S.1.1.4 Material Storage Areas. Maintain the vessels of stored materials (e.g., used oils, hydraulic fluids, spent solvents, and waste aircraft fuel) in good condition, to prevent or minimize contamination of stormwater. Also plainly label the vessels (e.g., "used oil," "Contaminated Jet A," etc.). Minimize contamination of precipitation/runoff from these areas. Consider the following control measures (or their equivalents): storing materials indoors; storing waste materials in a centralized location; and installing berms/dikes around storage areas.

E.S.1.1.5 Airport Fuel System and Fueling Areas. Minimize the discharge of fuel to the storm sewer/surface waters resulting from fuel servicing activities or other operations conducted in support of the airport fuel system. Consider the following control measures (or their equivalents): implementing spill and overflow practices (e.g., placing absorptive materials beneath aircraft during fueling operations); using only dry cleanup methods; and collecting stormwater runoff.

E.S.1.1.6 Source Reduction. Minimize, and where feasible eliminate, the use of urea and glycol-based deicing chemicals, in order to reduce the aggregate amount of deicing chemicals used and/or lessen the environmental impact. Chemical options to replace ethylene glycol, propylene glycol and urea include: potassium acetate; magnesium acetate; calcium acetate; and anhydrous sodium acetate.

E.S.1.1.6.1 Runway Deicing Operation: Minimize contamination of stormwater runoff from runways as a result of deicing operations. Evaluate whether

over-application of deicing chemicals occurs by analyzing application rates, and adjust as necessary, consistent with considerations of flight safety. Also consider these control measure options (or their equivalents): metered application of chemicals; pre-wetting dry chemical constituents prior to application; installing a runway ice detection system; implementing anti-icing operations as a preventive measure against ice buildup.

E.S.1.1.6.2 Aircraft Deicing Operations. Minimize contamination of stormwater runoff from aircraft deicing operations. Determine whether excessive application of deicing chemicals occurs and adjust as necessary, consistent with considerations of flight safety. This evaluation should be carried out by the personnel most familiar with the particular aircraft and flight operations in question (versus an outside entity such as the airport authority). Consider using alternative deicing/anti-icing agents as well as containment measures for all applied chemicals. Also consider these control measure options (or their equivalents) for reducing deicing fluid use: forced-air deicing systems, computer-controlled fixed-gantry systems, infrared technology, hot water, varying glycol content to air temperature, enclosed-basket deicing trucks, mechanical methods, solar radiation, hangar storage, aircraft covers, and thermal blankets for MD-E0s and DC-9s. Also consider using ice-detection systems and airport traffic flow strategies and departure slot allocation systems.

E.S.1.1.7 Management of Runoff. Where deicing operations occur, implement a program to control or manage contaminated runoff to minimize the amount of pollutants being discharged from the site. Consider these control measure options (or their equivalents): a dedicated deicing facility with a runoff collection/ recovery system; using vacuum/collection trucks; storing contaminated stormwater/deicing fluids in tanks and releasing controlled amounts to a publicly owned treatment works; collecting contaminated runoff in a wet pond for biochemical decomposition (be aware of attracting wildlife that may prove hazardous to flight operations); and directing runoff into vegetative swales or other infiltration measures. Also consider recovering deicing materials when these materials are applied during non-precipitation events (e.g., covering storm sewer inlets, using booms, installing absorptive interceptors in the drains, etc.) to prevent these materials from later becoming a source of stormwater contamination. Used deicing fluid should be recycled whenever possible.

E.S.1.2 Deicing Season. You must determine the seasonal timeframe (e.g., December- February, October - March, etc.) during which deicing activities typically occur at the facility. Implementation of control measures, including any BMPs, facility inspections and monitoring must be conducted with particular emphasis throughout the defined deicing season. If you meet the deicing chemical usage thresholds of 100,000 gallons glycol and/or 100 tons of urea, the deicing season you identified is the timeframe during which you must obtain the four required benchmark monitoring event results for deicing-related parameters, i.e., BOD, COD, ammonia and pH.

E.S.2 Additional SWPCP Requirements.

The airport authority and tenants of the airport are encouraged to work in partnership in the development of the SWPCP. Tenants of the airport facility include air passenger or cargo companies, fixed based operators and other parties who have contracts with the airport authority to conduct business operations on airport property and whose operations result in stormwater discharges associated with industrial activity. An airport tenant may obtain authorization under this permit and develop a SWPCP for discharges from his/her own areas of the airport.

E.S.2.1 Drainage Area Site Map. Document in the SWPCP the following areas of the facility and indicate whether activities occurring there may be exposed to precipitation/surface runoff: aircraft and runway deicing operations; fueling stations; aircraft, ground vehicle and equipment maintenance/cleaning areas; storage areas for aircraft, ground vehicles and equipment awaiting maintenance.

E.S.2.2 Potential Pollutant Sources. In your inventory of exposed materials, describe in your SWPCP the potential for the following activities and facility areas to contribute pollutants to stormwater discharges: aircraft, runway, ground vehicle and equipment maintenance and cleaning; aircraft and runway deicing operations (including apron and centralized aircraft deicing stations, runways, taxiways and ramps). If you use deicing chemicals, you must maintain a record of the types (including the Material Safety Data Sheets [MSDS]) used and the monthly quantities, either as measured or, in the absence of metering, as estimated to the best of your knowledge. This includes all deicing chemicals, not just glycols and urea (e.g., potassium acetate), because large quantities of these other chemicals can still have an adverse impact on receiving waters. Tenants or other fixed-based operations that conduct deicing operations must provide the above information to the airport authority for inclusion with any comprehensive airport SWPCPs.

E.S.2.3 Vehicle and Equipment Washwater Requirements. Attach to or reference in your SWPCP, a copy of the NPDES permit issued for vehicle/equipment washwater or, if an NPDES permit has not been issued, a copy of the pending application. If an industrial user permit is issued under a local pretreatment program, include a copy in your SWPCP. In any case, if you are subject to another permit, describe your control measures for implementing all non-stormwater discharge permit conditions or pretreatment requirements in your SWPCP. If washwater is handled in another manner (e.g., hauled offsite, retained onsite), describe the disposal method and attach all pertinent documentation/information (e.g., frequency, volume, destination, etc.) in your SWPCP.

E.S.2.4 Documentation of Control Measures Used for Management of Runoff: Document in your SWPCP the control measures used for collecting or containing contaminated melt water from collection areas used for disposal of contaminated snow.

E.S.3 Sector-Specific Benchmarks.

Table E.S-1 identifies benchmarks that apply to the specific subsectors of Sector S. These benchmarks apply to both your primary industrial activity and any co-located industrial activities, unless a facility has an Individual NPDES Permit for de-icing activities.

Table E.S-1.

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Where a single permittee, or a combination of permitted facilities, use more than 100,000 gallons of glycol-based deicing chemicals and/or 100 tons or more of urea on an average annual basis, monitor these parameters in outfalls that collect runoff from areas where deicing activities occur (SIC 4512-4581) and when deicing activities are occurring.	Chemical Oxygen Demand (COD)	120 mg/L
	Ammonia	2.14 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart T – Sector T – Treatment Works.

E.T.1 Additional Technology-Based Effluent Limits.

E.T.1.1 Control Measures. In addition to the other control measures, consider the following: routing stormwater to the treatment works; or covering exposed materials (i.e., from the following areas: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; and septage or hauled waste receiving station).

E.T.1.2 Employee Training. At a minimum, training must address the following areas when applicable to a facility: petroleum product management; process chemical management; spill prevention and controls; fueling procedures; general good housekeeping practices; and proper procedures for using fertilizer, herbicides, and pesticides.

E.T.2 Additional SWPCP Requirements.

E.T.2.1 Site Map. Document in your SWPCP where any of the following may be exposed to precipitation or surface runoff: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and storage areas for process chemicals, petroleum products, solvents, fertilizers, herbicides, and pesticides.

E.T.2.2 Potential Pollutant Sources. Document in your SWPCP the following additional sources and activities that have potential pollutants associated with them, as applicable: grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; septage or hauled waste receiving station; and access roads and rail lines.

E.T.3 Additional Inspection Requirements.

Include the following areas in all inspections: access roads and rail lines; grit, screenings, and other solids handling, storage, or disposal areas; sludge drying beds; dried sludge piles; compost piles; and septage or hauled waste receiving station.

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart U – Sector U – Food and Kindred Products.

E.U.1 Additional Technology-Based Limitations.

E.U.1.1 Employee Training. Address pest control in your employee training program.

E.U.2 Additional SWPCP Requirements.

E.U.2.1 Drainage Area Site Map. Document in your SWPCP the locations of the following activities if they are exposed to precipitation or runoff: vents and stacks from cooking, drying, and similar operations; dry product vacuum transfer lines; animal holding pens; spoiled product; and broken product container storage areas.

E.U.2.2 Potential Pollutant Sources. Document in your SWPCP, in addition to food and kindred products processing-related industrial activities, application and storage of pest control chemicals (e.g., rodenticides, insecticides, fungicides) used on plant grounds.

E.U.3 Additional Inspection Requirements.

Inspect on a monthly basis, at a minimum, the following areas where the potential for exposure to stormwater exists: loading and unloading areas for all significant materials; storage areas, including associated containment areas; waste management units; vents and stacks emanating from industrial activities; spoiled product and broken product container holding areas; animal holding pens; staging areas; and air pollution control equipment.

E.U.4 Sector-Specific Benchmarks.

Table E.U-1 identifies benchmarks that apply to the specific subsectors of Sector U. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.U-1.

Subsector (You may be subject to requirements for more than one Sector / Subsector)	Parameter	Benchmark Monitoring Concentration
Fats and Oils Products (SIC 2074-2079)	Chemical Oxygen Demand (COD)	120 mg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart V – Sector V – Textile Mills, Apparel, and Other Fabric Products.

E.V.1 Additional Technology-Based Limitations.

E.V.1.1 Good Housekeeping Measures.

E.V.1.1.1 Material Storage Areas. Plainly label and store all containerized materials (e.g., fuels, petroleum products, solvents, and dyes) in a protected area, away from drains. Minimize contamination of the stormwater runoff from such storage areas. Also consider an inventory control plan to prevent excessive purchasing of potentially hazardous substances. For storing empty chemical drums or containers, ensure that the drums and containers are clean (consider triple-rinsing) and that there is no contact of residuals with precipitation or runoff. Collect and dispose of washwater from these cleanings properly.

E.V.1.1.2 Material Handling Areas. Minimize contamination of stormwater runoff from material handling operations and areas. Consider the following (or their equivalents): use of spill and overflow protection; covering fueling areas; and covering or enclosing areas where the transfer of material may occur. When applicable, address the replacement or repair of leaking connections, valves, transfer lines, and pipes that may carry chemicals, dyes, or wastewater.

E.V.1.1.3 Fueling Areas. Minimize contamination of stormwater runoff from fueling areas. Consider the following (or their equivalents): covering the fueling area, using spill and overflow protection, minimizing run-on of stormwater to the fueling areas, using dry cleanup methods, and treating and/or recycling stormwater runoff collected from the fueling area.

E.V.1.1.4 Above-Ground Storage Tank Area. Minimize contamination of the stormwater runoff from above-ground storage tank areas, including the associated piping and valves. Consider the following (or their equivalents): regular cleanup of these areas; including measures for tanks, piping and valves explicitly in your SPCC program; minimizing runoff of stormwater from adjacent areas; restricting access to the area; inserting filters in adjacent catch basins; providing absorbent booms in unbermed fueling areas; using dry cleanup methods; and permanently sealing drains within critical areas that may discharge to a storm drain.

E.V.1.2 Employee Training. As part of your employee training program, address, at a minimum, the following activities (as applicable): use of reused and recycled waters, solvents management, proper disposal of dyes, proper disposal of petroleum products and spent lubricants, spill prevention and control, fueling procedures, and general good housekeeping practices.

E.V.2 Additional SWPCP Requirements.

E.V.2.1 Potential Pollutant Sources. Document in your SWPCP the following additional sources and activities that have potential pollutants associated with them: industry-specific significant materials and industrial activities (e.g., backwinding, beaming, bleaching, backing bonding, carbonizing, carding, cut and sew operations, desizing, drawing, dyeing locking, fulling, knitting, mercerizing, opening, packing, plying, scouring, slashing, spinning, synthetic-felt

processing, textile waste processing, tufting, turning, weaving, web forming, winging, yarn spinning, and yarn texturing).

E.V.2.2 Description of Good Housekeeping Measures for Material Storage Areas. Document in the SWPCP your containment area or enclosure for materials stored outdoors.

E.V.3 Additional Inspection Requirements.

Inspect, at least monthly, the following activities and areas (at a minimum): transfer and transmission lines, spill prevention, good housekeeping practices, management of process waste products, and all structural and nonstructural management practices.

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart X – Sector X – Printing and Publishing.

E.X.1 Additional Technology-Based Effluent Limits.

E.X.1.1 Good Housekeeping Measures.

E.X.1.1.1 Material Storage Areas. Plainly label and store all containerized materials (e.g., skids, pallets, solvents, bulk inks, hazardous waste, empty drums, portable and mobile containers of plant debris, wood crates, steel racks, and fuel oil) in a protected area, away from drains. Minimize contamination of the stormwater runoff from such storage areas. Also consider an inventory control plan to prevent excessive purchasing of potentially hazardous substances.

E.X.1.1.2 Material Handling Area. Minimize contamination of stormwater runoff from material handling operations and areas (e.g., blanket wash, mixing solvents, loading and unloading materials). Consider the following (or their equivalents): using spill and overflow protection, covering fueling areas, and covering or enclosing areas where the transfer of materials may occur. When applicable, address the replacement or repair of leaking connections, valves, transfer lines, and pipes that may carry chemicals or wastewater.

E.X.1.1.3 Fueling Areas. Minimize contamination of stormwater runoff from fueling areas. Consider the following (or their equivalents): covering the fueling area, using spill and overflow protection, minimizing runoff of stormwater to the fueling areas, using dry cleanup methods, and treating and/or recycling stormwater runoff collected from the fueling area.

E.X.1.1.4 Above Ground Storage Tank Area. Minimize contamination of the stormwater runoff from above-ground storage tank areas, including the associated piping and valves. Consider the following (or their equivalents): regularly cleaning these areas, explicitly addressing tanks, piping and valves in the SPCC program, minimizing stormwater runoff from adjacent areas, restricting access to the area, inserting filters in adjacent catch basins, providing absorbent booms in unbermed fueling areas, using dry cleanup methods, and permanently sealing drains within critical areas that may discharge to a storm drain.

E.X.1.2 Employee Training. As part of your employee training program, address, at a minimum, the following activities (as applicable): spent solvent management, spill prevention and control, used oil management, fueling procedures, and general good housekeeping practices.

E.X.2 Additional SWPCP Requirements.

E.X.2.1 Description of Good Housekeeping Measures for Material Storage Areas. In connection with Schedule E.X.1.1.1, describe in the SWPCP the containment area or enclosure for materials stored outdoors.

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart Y – Sector Y – Rubber, Miscellaneous Plastic Products, and Miscellaneous Manufacturing Industries.

E.Y.1 Additional Technology-Based Effluent Limits.

E.Y.1.1 Controls for Rubber Manufacturers. Minimize the discharge of zinc in your stormwater discharges. Following are some general control measure options to consider: using chemicals purchased in pre-weighed, sealed polyethylene bags; storing in-use materials in sealable containers, ensuring an airspace between the container and the cover to minimize "puffing" losses when the container is opened, and using automatic dispensing and weighing equipment.

E.Y.1.1.1 Zinc Bags. Ensure proper handling and storage of zinc bags at your facility. Following are some control measure options: employee training on the handling and storage of zinc bags, indoor storage of zinc bags, cleanup of zinc spills without washing the zinc into the storm drain, and the use of 2,500-pound sacks of zinc rather than 50- to 100-pound sacks.

E.Y.1.1.2 Dumpsters. Minimize discharges of zinc from dumpsters. Following are some control measure options: covering the dumpster, moving the dumpster indoors, or providing a lining for the dumpster.

E.Y.1.1.3 Dust Collectors and Baghouses. Minimize contributions of zinc to stormwater from dust collectors and baghouses. Replace or repair, as appropriate, improperly operating dust collectors and baghouses.

E.Y.1.1.4 Grinding Operations. Minimize contamination of stormwater as a result of dust generation from rubber grinding operations. One control measure option is to install a dust collection system.

E.Y.1.1.5 Zinc Stearate Coating Operations. Minimize the potential for stormwater contamination from drips and spills of zinc stearate slurry that may be released to the storm drain. One control measure option is to use alternative compounds to zinc stearate.

E.Y.1.2 Controls for Plastic Products Manufacturers. Minimize the discharge of plastic resin pellets in your stormwater discharges. Control measures to be considered for implementation (or their equivalents) include minimizing spills, cleaning up of spills promptly and thoroughly, sweeping thoroughly, pellet capturing, employee education, and disposal precautions.

E.Y.2 Additional SWPCP Requirements.

E.Y.2.1 Potential Pollutant Sources for Rubber Manufacturers. Document in your SWPCP the use of zinc at your facility and the possible pathways through which zinc may be discharged in stormwater runoff.

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart Z – Sector Z – Leather Tanning and Finishing.

E.Z.1 Additional Technology-Based Effluent Limits.

E.Z.1.1 Good Housekeeping Measures.

E.Z.1.1.1 Storage Areas for Raw, Semiprocessed, or Finished Tannery By-products. Minimize contamination of stormwater runoff from pallets and bales of raw, semiprocessed, or finished tannery by-products (e.g., splits, trimmings, shavings). Consider indoor storage or protection with polyethylene wrapping, tarpaulins, roofed storage, etc. Consider placing materials on an impermeable surface and enclosing or putting berms (or equivalent measures) around the area to prevent stormwater run-on and runoff.

E.Z.1.1.2 Material Storage Areas. Label storage containers of all materials (e.g., specific chemicals, hazardous materials, spent solvents, waste materials) minimize contact of such materials with stormwater.

E.Z.1.1.3 Buffing and Shaving Areas. Minimize contamination of stormwater runoff with leather dust from buffing and shaving areas. Consider dust collection enclosures, preventive inspection and maintenance programs, or other appropriate preventive measures.

E.Z.1.1.4 Receiving, Unloading, and Storage Areas. Minimize contamination of stormwater runoff from receiving, unloading, and storage areas. If these areas are exposed, consider the following (or their equivalents): covering all hides and chemical supplies, diverting drainage to the process sewer, or grade berming or curbing the area to prevent stormwater runoff.

E.Z.1.1.5 Outdoor Storage of Contaminated Equipment. Minimize contact of stormwater with contaminated equipment. Consider the following (or their equivalents): covering equipment, diverting drainage to the process sewer, and cleaning thoroughly prior to storage.

E.Z.1.1.6 Waste Management. Minimize contamination of stormwater runoff from waste storage areas. Consider the following (or their equivalents): covering dumpsters, moving waste management activities indoors, covering waste piles with temporary covering material such as tarpaulins or polyethylene, and minimizing stormwater runoff by enclosing the area or building berms around the area.

E.Z.2 Additional SWPCP Requirements.

E.Z.2.1 Drainage Area Site Map. Identify in your SWPCP where any of the following may be exposed to precipitation or surface runoff: processing and storage areas of the beamhouse, tanyard, and re-tan wet finishing and dry finishing operations.

E.Z.2.2 Potential Pollutant Sources. Document in your SWPCP the following sources and activities that have potential pollutants associated with them (as appropriate): temporary or permanent storage of fresh and brine-cured hides; extraneous hide substances and hair; leather dust, scraps, trimmings, and shavings.

Schedule E – Sector-Specific Requirements for Industrial Activity

Subpart AA – Sector AA – Fabricated Metal Products

E.AA.1 Additional Technology-Based Effluent Limits.

E.AA.1.1 Good Housekeeping Measures.

E.AA.1.1.1 Raw Steel Handling Storage. Minimize the generation of and/or recover and properly manage scrap metals, fines, and iron dust. Include measures for containing materials within storage handling areas.

E.AA.1.1.2 Paints and Painting Equipment. Minimize exposure of paint and painting equipment to stormwater.

E.AA.1.2 Spill Prevention and Response Procedures. Ensure that the necessary equipment to implement a cleanup is available to personnel. The following areas should be addressed

E.AA.1.2.1 Metal Fabricating Areas. Maintain clean, dry, orderly conditions in these areas. Consider using dry clean-up techniques.

E.AA.1.2.2 Storage Areas for Raw Metal. Keep these areas free of conditions that could cause, or impede appropriate and timely response to, spills or leakage of materials. Consider the following (or their equivalents): maintaining storage areas so that there is easy access in the event of a spill, and labeling stored materials to aid in identifying spill contents.

E.AA.2.2.3 Metal Working Fluid Storage Areas. Minimize the potential for stormwater contamination from storage areas for metal working fluids.

E.AA.1.2.4 Cleaners and Rinse Water. Control and clean up spills of solvents and other liquid cleaners, control sand buildup and disbursement from sand-blasting operations, and prevent exposure of recyclable wastes. Substitute environmentally benign cleaners when possible.

E.AA.1.2.5 Lubricating Oil and Hydraulic Fluid Operations. Minimize the potential for stormwater contamination from lubricating oil and hydraulic fluid operations. Consider using monitoring equipment or other devices to detect and control leaks and overflows. Consider installing perimeter controls such as dikes, curbs, grass filter strips, or equivalent measures.

E.AA.1.2.6 Chemical Storage Areas. Minimize stormwater contamination and accidental spillage in chemical storage areas. Include a program to inspect containers and identify proper disposal methods.

E.AA.1.3 Spills and Leaks. In your spill prevention and response procedures, pay attention to the following materials (at a minimum): chromium, toluene, pickle liquor, sulfuric acid, zinc and other water priority chemicals, and hazardous chemicals and wastes.

E.AA.2 Additional SWPCP Requirements.

E.AA.2.1 Drainage Area Site Map. Document in your SWPCP where any of the following may be exposed to precipitation or surface runoff: raw metal storage areas; finished metal storage areas;

scrap disposal collection sites; equipment storage areas; retention and detention basins; temporary and permanent diversion dikes or berms; right-of-way or perimeter diversion devices; sediment traps and barriers; processing areas, including outside painting areas; wood preparation; recycling; and raw material storage.

E.AA.2.2 Potential Pollutant Sources. Document in your SWPCP the following additional sources and activities that have potential pollutants associated with them: loading and unloading operations for paints, chemicals, and raw materials; outdoor storage activities for raw materials, paints, empty containers, corn cobs, chemicals, and scrap metals; outdoor manufacturing or processing activities such as grinding, cutting, degreasing, buffing, and brazing; onsite waste disposal practices for spent solvents, sludge, pickling baths, shavings, ingot pieces, and refuse and waste piles.

E.AA.3 Additional Inspection Requirements

E.AA.3.1 Inspections. At a minimum, include the following areas in all inspections: raw metal storage areas, finished product storage areas, material and chemical storage areas, recycling areas, loading and unloading areas, equipment storage areas, paint areas, and vehicle fueling and maintenance areas. Also inspect areas associated with the storage of raw metals, spent solvents and chemicals storage areas, outdoor paint areas, and drainage from roof. Potential pollutants include chromium, zinc, lubricating oil, solvents, aluminum, oil and grease, methyl ethyl ketone, steel, and related materials.

E.AA.4 Sector-Specific Benchmarks.

Table E.AA-1 identifies benchmarks that apply to the specific subsectors of Sector AA. These benchmarks apply to both your primary industrial activity and any co-located industrial activities.

Table E.AA-1

Subsector (You may be subject to requirements for more than one sector/subsector)	Parameter	Benchmark Monitoring Concentration
Fabricated Metal Products, except Coating (SIC 3411-3499; 3911-3915)	Total Aluminum	0.75 mg/L
	Total Iron	1.0 mg/L
	Nitrate plus Nitrite Nitrogen	0.68 mg/L
Fabricated Metal Coating and Engraving (SIC 3479)	Nitrate plus Nitrite Nitrogen	0.68 mg/L

SCHEDULE F
NPDES GENERAL CONDITIONS

SECTION A. STANDARD CONDITIONS

1. Duty to Comply
   The permit registrant must comply with all conditions of this permit. Any permit noncompliance constitutes a violation of Oregon Revised Statutes (ORS) 468B.025, the Clean Water Act and 40 Code of Federal Regulations (CFR) §122.41(a), and is grounds for enforcement action; for permit termination, revocation and/or reissuance, or modification; or for denial of a permit renewal application.

2. Penalties for Water Pollution and Permit Condition Violations
   ORS 468.140 allows the Director to impose civil penalties up to $25,000 per day for violation of a term, condition, or requirement of a permit. ORS 468.943 creates the criminal offense of unlawful water pollution in the second degree, for the criminally negligent violation of ORS chapter 468B or any rule, standard, license, permit or order adopted or issued under ORS chapter 468B. Unlawful water pollution in the second degree is punishable by a fine of up to $25,000 or imprisonment for not more than one year, or both. In addition, OAR 468.946, creates the offense of unlawful water pollution of the first degree, which is a Class B felony.

3. Duty to Mitigate
   The permit registrant must take all reasonable steps to minimize or prevent any discharge or sludge use or disposal in violation of this permit. In addition, upon request of the department, the permit registrant must correct any adverse impact on the environment or human health resulting from noncompliance with this permit, including such accelerated or additional monitoring as necessary to determine the nature and impact of the non-complying discharge.

4. Duty to Reapply
   If the permit registrant wishes to continue an activity regulated by this permit after the expiration date of this permit, the permit registrant must apply for and have the permit registration renewed. The application must be submitted at least 180 days before the expiration date of this permit. The department may grant written permission to submit an application less than 180 days in advance but no later than the permit expiration date.

5. Permit Actions
   This permit may be modified, revoked and reissued, or terminated for cause including, but not limited to, the following:
   a. Violation of any term, condition, or requirement of this permit, a rule, or a statute
   b. Failure to pay fees when they are due
   c. Obtaining this permit by misrepresentation or failure to disclose fully all material facts
   d. A change in any condition that requires either a temporary or permanent reduction or elimination of the authorized discharge
   e. The permit registrant is identified as a Designated Management Agency or allocated a wasteload under a Total Maximum Daily Load (TMDL)
   f. New information or regulations
   g. Modification of compliance schedules
   h. Requirements of permit re-opener conditions
   i. Correction of technical mistakes made in determining permit conditions
   j. Determination that the permitted activity endangers human health or the environment
   k. Other causes as specified in 40 CFR §§122.62, 122.64, and 124.5

   DEQ will give permit registrant notice of the right to a contested case hearing in the event DEQ issues a Notice of Revocation, Suspension or Refusal to Renew the permit.

   The filing of a request by the permit registrant for a permit modification, revocation or reissuance, termination, or a notification of planned changes or anticipated noncompliance, does not stay any permit condition.

6. Toxic Pollutants
   The permit registrant must comply with any applicable effluent standards or prohibitions established under Oregon Administrative Rules (OAR) 340-041-0033 for toxic pollutants within the time provided in the regulations that establish those standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

7. Property Rights
The issuance of this permit does not convey any property rights of any sort, or any exclusive privilege, nor does it authorize any injury to persons of property or invasion of any other private rights, nor any infringement of federal, tribal, state, or local laws or regulations.

8. Permit References
Except for effluent standards or prohibitions established under Section 307(a) of the Clean Water Act and OAR 340-041-0033for toxic pollutants, all rules and statutes referred to in this permit are those in effect on the date this permit is issued.

9. Permit Fees
The permit registrant must pay the fees required by OAR 340-045-0070 to 0075.
The permit registrant must pay annual compliance fees by the last day of the month prior to when the permit was issued. For example, if the permit was issued or last renewed in April, the due date will be March 31st. If the payment of annual fees is 30 days or more past due, the permit registrant must pay 9% interest per annum on the unpaid balance. Interest will accrue until the fees are paid in full. If DEQ does not receive payment of annual fees when they are due, DEQ will refer the account to the Department of Revenue or to a private collection agency for collection.

SECTION B. OPERATION AND MAINTENANCE OF POLLUTION CONTROLS

1. Proper Operation and Maintenance
The permit registrant must at all times properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the permit registrant to achieve compliance with the conditions of this permit. Proper operation and maintenance also includes adequate laboratory controls, and appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems which are installed by a permit registrant only when the operation is necessary to achieve compliance with the conditions of the permit.

2. Duty to Halt or Reduce Activity
For industrial or commercial facilities, upon reduction, loss, or failure of the treatment facility, the permit registrant must, to the extent necessary to maintain compliance with its permit, control production or all discharges or both until the facility is restored or an alternative method of treatment is provided. This requirement applies, for example, when the primary source of power of the treatment facility fails or is reduced or lost. It is not a defense for a permit registrant in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

3. Bypass of Treatment Facilities
   a. Definitions
      (1) "Bypass" means intentional diversion of waste streams from any portion of the treatment facility. The term "bypass" does not include nonuse of singular or multiple units or processes of a treatment works when the nonuse is insignificant to the quality or quantity of the effluent produced by the treatment works. The term "bypass" does not apply if the diversion does not cause effluent limitations to be exceeded, provided the diversion is to allow essential maintenance to assure efficient operation.
      (2) "Severe property damage" means substantial physical damage to property, damage to the treatment facilities or treatment processes which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

   b. Prohibition of bypass.
      (1) Bypass is prohibited unless:
         (a) Bypass was necessary to prevent loss of life, personal injury, or severe property damage;
         (b) There were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime. This condition is not satisfied if adequate backup equipment should have been installed in the exercise of reasonable engineering judgment to prevent a bypass which occurred during normal periods of equipment downtime or preventative maintenance; and
         (c) The permit registrant submitted notices and requests as required under General Condition B.3.c.
      (2) The Director may approve an anticipated bypass, after considering its adverse effects and any alternatives to bypassing, when the Director determines that it will meet the three conditions listed above in General Condition B.3.b.(1).

c. Notice and request for bypass.
   (1) Anticipated bypass. If the permit registrant knows in advance of the need for a bypass, it must submit prior written notice, if possible at least ten days before the date of the bypass.
   (2) Unanticipated bypass. The permit registrant must submit notice of an unanticipated bypass as required in General Condition D.5.

4. Upset
   a. Definition. "Upset" means an exceptional incident in which there is unintentional and temporary noncompliance with technology based permit effluent limitations because of factors beyond the reasonable control of the permit registrant. An upset does not include noncompliance to the extent caused by operation error, improperly designed treatment facilities, inadequate treatment facilities, lack of preventative maintenance, or careless or improper operation.

   b. Effect of an upset. An upset constitutes an affirmative defense to an action brought for noncompliance with such technology based permit effluent limitations if the requirements of General Condition B.4.c are met. No determination made during administrative review of claims that noncompliance was caused by upset, and before an action for noncompliance, is final administrative action subject to judicial review.

   c. Conditions necessary for a demonstration of upset. A permit registrant who wishes to establish the affirmative defense of upset must demonstrate, through properly signed, contemporaneous operating logs, or other relevant evidence that:
      (1) An upset occurred and that the permit registrant can identify the causes(s) of the upset;
      (2) The permitted facility was at the time being properly operated;
      (3) The permit registrant submitted notice of the upset as required in General Condition D.5, hereof (24-hour notice); and
      (4) The permit registrant complied with any remedial measures required under General Condition A.3 hereof.

   d. Burden of proof. In any enforcement proceeding the permit registrant seeking to establish the occurrence of an upset has the burden of proof.

5. Treatment of Single Operational Event
   For purposes of this permit, A Single Operational Event which leads to simultaneous violations of more than one pollutant parameter must be treated as a single violation. A single operational event is an exceptional incident which causes simultaneous, unintentional, unknowing (not the result of a knowing act or omission), temporary noncompliance with more than one Clean Water Act effluent discharge pollutant parameter. A single operational event does not include Clean Water Act violations involving discharge without a NPDES permit or noncompliance to the extent caused by improperly designed or inadequate treatment facilities. Each day of a single operational event is a violation.

6. Overflows from Wastewater Conveyance Systems and Associated Pump Stations
   a. Definitions
      (1) "Overflow" means the diversion and discharge of waste streams from any portion of the wastewater conveyance system including pump stations, through a designed overflow device or structure, other than discharges to the wastewater treatment facility.
      (2) "Severe property damage" means substantial physical damage to property, damage to the conveyance system or pump station which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of an overflow.
      (3) "Uncontrolled overflow" means the diversion of waste streams other than through a designed overflow device or structure, for example to overflowing manholes or overflowing into residences, commercial establishments, or industries that may be connected to a conveyance system.

   b. Prohibition of overflows. Overflows are prohibited unless:
      (1) Overflows were unavoidable to prevent an uncontrolled overflow, loss of life, personal injury, or severe property damage;
      (2) There were no feasible alternatives to the overflows, such as the use of auxiliary pumping or conveyance systems, or maximization of conveyance system storage; and
      (3) The overflows are the result of an upset as defined in General Condition B.4. and meeting all requirements of this condition.

   c. Uncontrolled overflows are prohibited where wastewater is likely to escape or be carried into the waters of the State by any means.

d. Reporting required. Unless otherwise specified in writing by the Department, all overflows and uncontrolled overflows must be reported orally to the Department within 24 hours from the time the permit registrant becomes aware of the overflow. Reporting procedures are described in more detail in General Condition D.5.

7. Public Notification of Effluent Violation or Overflow
If effluent limitations specified in this permit are exceeded or an overflow occurs, upon request by the Department, the permit registrant must take such steps as are necessary to alert the public about the extent and nature of the discharge. Such steps may include, but are not limited to, posting of the river at access points and other places, news releases, and paid announcements on radio and television.

8. Removed Substances
Solids, sludges, filter backwash, or other pollutants removed in the course of treatment or control of wastewaters must be disposed of in such a manner as to prevent any pollutant from such materials from entering public waters, causing nuisance conditions, or creating a public health hazard.

SECTION C. MONITORING AND RECORDS

1. Representative Sampling
Sampling and measurements taken as required herein must be representative of the volume and nature of the monitored discharge. All samples must be taken at the monitoring points specified in this permit and must be taken, unless otherwise specified, before the effluent joins or is diluted by any other waste stream, body of water, or substance. Monitoring points must not be changed without notification to and the approval of the Director.

2. Flow Measurements
Appropriate flow measurement devices and methods consistent with accepted scientific practices must be selected and used to ensure the accuracy and reliability of measurements of the volume of monitored discharges. The devices must be installed, calibrated and maintained to insure that the accuracy of the measurements is consistent with the accepted capability of that type of device. Devices selected must be capable of measuring flows with a maximum deviation of less than ± 10 percent from true discharge rates throughout the range of expected discharge volumes.

3. Monitoring Procedures
Monitoring must be conducted according to test procedures approved under 40 CFR §136, unless other test procedures have been specified in this permit.

4. Penalties of Tampering
The Clean Water Act provides that any person who falsifies, tampers with, or knowingly renders inaccurate, any monitoring device or method required to be maintained under this permit must, upon conviction, be punished by a fine of not more than $10,000 per violation, or by imprisonment for not more than two years, or by both. If a conviction of a person is for a violation committed after a first conviction of such person, punishment is a fine not more than $20,000 per day of violation, or by imprisonment of not more than four years or both.

5. Reporting of Monitoring Results
Monitoring results must be summarized each month on a Discharge Monitoring Report form approved by the Department. The reports must be submitted monthly and are to be mailed, delivered or otherwise transmitted by the 15th day of the following month unless specifically approved otherwise in Schedule B of this permit.

6. Additional Monitoring by the Permit registrant
If the permit registrant monitors any pollutant more frequently than required by this permit, using test procedures approved under 40 CFR §136 or as specified in this permit, the results of this monitoring must be included in the calculation and reporting of the data submitted in the Discharge Monitoring Report. Such increased frequency must also be indicated. For a pollutant parameter that may be sampled more than once per day (e.g., Total Chlorine Residual), only the average daily value must be recorded unless otherwise specified in this permit.

7. Averaging of Measurements
Calculations for all limitations which require averaging of measurements must utilize an arithmetic mean, except for bacteria which must be averaged as specified in this permit.

8. Retention of Records
Except for records of monitoring information required by this permit related to the permit registrant's sewage sludge use and disposal activities, which must be retained for a period of at least five years (or longer as required by 40 CFR §503), the permit registrant must retain records of all monitoring information, including all calibration and maintenance records of all original strip chart recordings for continuous monitoring instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least 3 years from the date of the sample, measurement, report or application. This period may be extended by request of the Director at any time.

9. Records Contents
Records of monitoring information must include:
   a. The date, exact place, time and methods of sampling or measurements;
   b. The individual(s) who performed the sampling or measurements;
   c. The date(s) analyses were performed;
   d. The individual(s) who performed the analyses;
   e. The analytical techniques or methods used; and
   f. The results of such analyses.

10. Inspection and Entry
The permit registrant must allow the Director, or an authorized representative upon the presentation of credentials to:
   a. Enter upon the permit registrant's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this permit;
   b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this permit;
   c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit, and
   d. Sample or monitor at reasonable times, for the purpose of assuring permit compliance or as otherwise authorized by state law, any substances or parameters at any location.

SECTION D. REPORTING REQUIREMENTS

1. Planned Changes
The permit registrant must comply with Oregon Administrative Rules (OAR) 340, Division 052, "Review of Plans and Specifications". Except where exempted under OAR 340-052, no construction, installation, or modification involving disposal systems, treatment works, sewerage systems, or common sewers must be commenced until the plans and specifications are submitted to and approved by the Department. The permit registrant must give notice to the Department as soon as possible of any planned physical alternations or additions to the permitted facility.

2. Anticipated Noncompliance
The permit registrant must give advance notice to the Director of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements.

3. Transfers
This permit may be transferred to a new permit registrant provided the transferee acquires a property interest in the permitted activity and agrees in writing to fully comply with all the terms and conditions of the permit and the rules of the Commission. No permit must be transferred to a third party without prior written approval from the Director. The permit registrant must notify the Department when a transfer of property interest takes place.

4. Compliance Schedule
Reports of compliance or noncompliance with, or any progress reports on interim and final requirements contained in any compliance schedule of this permit must be submitted no later than 14 days following each schedule date. Any reports of noncompliance must include the cause of noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirements.

5. Twenty-Four Hour Reporting
The permit registrant must report any noncompliance which may endanger health or the environment. Any information must be provided orally (by telephone) within 24 hours, unless otherwise specified in this permit, from the time the permit registrant becomes aware of the circumstances. During normal business hours, the Department's Regional office must be called. Outside of normal business hours, the Department must be contacted at 1-800-452-0311 (Oregon Emergency Response System).

A written submission must also be provided within 5 days of the time the permit registrant becomes aware of the circumstances. If the permit registrant is establishing an affirmative defense of upset or bypass to any offense under ORS 468.922 to 468.946, and in which case if the original reporting notice was oral, delivered written notice must be made to the Department or other agency with regulatory jurisdiction within 4 (four) calendar days. The written submission must contain:
a. A description of the noncompliance and its cause;
b. The period of noncompliance, including exact dates and times;
c. The estimated time noncompliance is expected to continue if it has not been corrected;
d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance; and
e. Public notification steps taken, pursuant to General Condition B.7.

The following must be included as information which must be reported within 24 hours under this paragraph:
a. Any unanticipated bypass which exceeds any effluent limitation in this permit.
b. Any upset which exceeds any effluent limitation in this permit.
c. Violation of maximum daily discharge limitation for any of the pollutants listed by the Director in this permit.

The Department may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

6. Other Noncompliance
The permit registrant must report all instances of noncompliance not reported under General Condition D.4 or D.5, at the time monitoring reports are submitted. The reports must contain:
a. A description of the noncompliance and its cause;
b. The period of noncompliance, including exact dates and times;
c. The estimated time noncompliance is expected to continue if it has not been corrected; and
d. Steps taken or planned to reduce, eliminate, and prevent reoccurrence of the noncompliance.

7. Duty to Provide Information
The permit registrant must furnish to the Department, within a reasonable time, any information which the Department may request to determine compliance with this permit. The permit registrant must also furnish to the Department, upon request, copies of records required to be kept by this permit.

Other Information: When the permit registrant becomes aware that it failed to submit any relevant facts in a permit application, or submitted incorrect information in a permit application or any report to the Department, it must promptly submit such facts or information.

8. Signatory Requirements
All applications, reports or information submitted to the Department must be signed and certified in accordance with 40 CFR §122.22.

9. Falsification of Reports
Under ORS 468.953, any person who knowingly makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance, is subject to a Class C felony punishable by a fine not to exceed $100,000 per violation and up to 5 years in prison.

SECTION E. DEFINITIONS

1. BOD means five-day biochemical oxygen demand.
2. TSS means total suspended solids.
3. mg/l means milligrams per liter.
4. kg means kilograms.
5. m^3/d means cubic meters per day.

6. MGD means million gallons per day.
7. Composite sample means a sample formed by collecting and mixing discrete samples taken periodically and based on time or flow.
8. FC means fecal coliform bacteria.
9. Technology based permit effluent limitations means technology-based treatment requirements as defined in 40 CFR §125.3, and concentration and mass load effluent limitations that are based on minimum design criteria specified in OAR 340-041.
10. CBOD means five day carbonaceous biochemical oxygen demand.
11. Grab sample means an individual discrete sample collected over a period of time not to exceed 15 minutes.
12. Quarter means January through March, April through June, July through September, or October through December.
13. Month means calendar month.
14. Week means a calendar week of Sunday through Saturday.
15. Total residual chlorine means combined chlorine forms plus free residual chlorine.
16. The term "bacteria" includes but is not limited to fecal coliform bacteria, total coliform bacteria, and E. coli bacteria.
17. POTW means a publicly owned treatment works.

600 NE Grand Ave.
Portland, OR 97232-2736
www.oregonmetro.gov

Metro | *Making a great place*

November 19, 2014

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Carl Peters
Recology Portland, Inc.
4044 N. Suttle Road
Portland, OR 97217

Re: Non-System License No. N-102-15 issued to Recology Portland, Inc. for the delivery of source-separated food waste to the Recology NW Greenlands Facility

Dear Mr. Peters:

The application that Recology Portland, Inc. submitted to Metro for the renewal of a non-system license for Suttle Road Recovery Facility to deliver source-separated residential yard debris mixed with food waste to the Recology NW Greenlands Facility located in Aumsville has been approved. Attached is a copy of Metro Non-System License No. N-102-15 for your records. I recommend that you review the terms of the license carefully as its provisions become effective on January 1, 2015.

Under Metro Code Section 5.05.100, you have the right to request a contested case hearing regarding the provisions contained in the license. In order to do so, you must make this request in writing and ensure that Metro receives the request within 30 days of the date this letter was mailed. Any such request should be directed to my attention at Metro. You may retain legal counsel to represent you at the hearing. Article IX, Section 14 of the Oregon Constitution, the Metro Charter, ORS Chapter 268, and Metro Code Chapters 2.05 and 5.05 provide Metro's authority and jurisdiction for the hearing.

If you have any questions regarding this matter, please contact me at (503) 797-1836. Thank you.

Sincerely,

Warren Johnson
Solid Waste Compliance Supervisor
WJ:bjl
Attachment
cc: Roy W. Brower, Solid Waste Compliance and Cleanup Manager
Ame LeCocq, Recology Portland, Inc.
M:\rem\regaff\confidential\johnson\Facilities\Recology Suttle Road\NSL\Recology_NSL_N-102-15_CVRLETTER.docx
Queue

600 NORTHEAST GRAND AVENUE | PORTLAND, OREGON 97232 2736
TEL 503 797 1835 | FAX 503 813 7544

METRO

METRO SOLID WASTE FACILITY NON-SYSTEM LICENSE

No. N-102-15

LICENSEE:
Recology Portland, Inc. 4044 N. Suttle Road Portland, OR 97217
CONTACT PERSON:
Carl Peters Phone: (503) 283-2015 E-Mail: cpeters@recology.com
MAILING ADRESS:
4044 N. Suttle Road Portland, OR 97217

ISSUED BY METRO:

Scott Robinson, Deputy Chief Operating Officer

11/17/14
Date

1	NATURE OF WASTE COVERED BY LICENSE
	Source-separated residential yard debris mixed with food waste from municipal curbside collection programs generated within the Metro boundary and received at Suttle Road Recovery Facility in accordance with Metro Solid Waste Facility License No. L-102-11B.

2	CALENDAR YEAR TONNAGE LIMITATION
	Licensee is authorized to deliver to the non-system facility listed in Section 3 of this license up to 16,000 tons per calendar year of the waste described in Section 1 of this license.

3	NON-SYSTEM FACILITY
	Licensee is authorized to deliver the waste described above in Section 1 to the following non-system facility for the purpose of processing and composting: Recology NW Greenlands - Aumsville 8712 Aumsville Highway SE Salem, OR 97317 This license is issued on the condition that the non-system facility listed in this section is authorized to accept the type of waste described in Section 1. If Metro receives notice from the Oregon Department of Environmental Quality or the city of Aumsville that this non-system facility is not authorized to accept such waste, Metro may immediately modify or terminate this license pursuant to Section 10 of this license.

4	TERM OF LICENSE
	The term of this license will commence on January 1, 2015 and expire at midnight on December 31, 2016 unless terminated sooner under Section 10 of this license.

5	COVERED LOADS
	Licensee shall suitably contain and cover, on all sides, all loads of source-separated residential yard debris mixed with food waste that are delivered under authority of this license to prevent spillage of waste while in transit to the non-system facility listed in Section 3.

6	MATERIAL MANAGEMENT
	The Licensee is authorized to deliver the waste described in Section 1 of this license to the non-system facility listed in Section 3 under the following conditions: (a) The non-system facility shall accept all solid waste that is delivered under authority of this license for the sole purpose of processing and composting on-site. The Licensee shall not dispose of any source-separated recyclable material, except as provided in Section 7; and (b) The non-system facility shall receive, manage, process, and compost all solid waste that is delivered under authority of this license in accordance with all applicable local, state and federal laws, rules, regulations, ordinances, orders, and permits.

7	REGIONAL SYSTEM FEE AND EXCISE TAX
	The Licensee shall be subject to the following conditions: (a) Source-separated residential yard debris mixed with food waste that is delivered under authority of this license and is accepted and composted, in accordance with all applicable regulations, at the non-system facility listed in Section 3 is exempt from Regional System Fees and Excise Tax. (b) If the Licensee delivers waste under this license to the non-system facility listed in Section 3 but the material does not meet the facility's acceptance criteria (for example, the material is too contaminated for processing or composting) or the non-system facility fails to process and compost the material as required as a condition of this license, the Licensee shall pay to Metro an amount equal to the Regional System Fee, as provided in Metro Code Title V, for each ton or portion thereof of waste delivered to the non-system facility that is ultimately delivered to a disposal site. (c) If the Licensee delivers waste under this license to the non-system facility listed in Section 3 but the material does not meet the facility's acceptance criteria (for example, the material is too contaminated for processing or composting) or the non-system facility fails to process and compost the material as required as a condition of this license, the Licensee shall pay to Metro an amount equal to the Excise Tax, as provided in Metro Code Title VII, for each ton or portion thereof of waste delivered to the non-system facilities that is ultimately delivered to a disposal site.

8	REPORTING OF ACCIDENTS AND CITATIONS
	Licensee shall report to Metro any significant incidents (such as fires), accidents, and citations involving vehicles transporting the solid waste authorized by this license.

9	RECORD KEEPING AND REPORTING
	(a) The Licensee shall keep and maintain accurate records of the amount of all solid wastes that the Licensee delivers to the non-system facility listed in Section 3 of this license. The Licensee shall keep and maintain complete and accurate records of the following for all transactions with the authorized non-system facilities: i. Ticket or weight slip number from the non-system facility; ii. Material category designating the type of material transferred to the non-system facility; iii. Date the load was transferred to the non-system facility; iv. Time the load was transferred to the non-system facility; v. Net weight of the load; and vi. Fee charged by the non-system facility. (b) No later than the fifteenth (15th) day of each month, beginning with the first month following the commencement date of this license, Licensee shall transmit the records required under Section 9(a) above, that covers the preceding month, to Metro's Finance and Regulatory Services Department in an electronic format prescribed by Metro. (c) Licensee shall make all records from which Section 9(a) above are derived available to Metro (or Metro's designated agent) for its inspection or copying, as long as Metro provides no less than three (3) business days written notice of an intent to inspect or copy documents. Licensee shall, in addition, sign or otherwise provide to Metro any consent or waiver necessary for Metro to obtain information or data from a third party, including the non-system facilities listed above in Section 3.

10	ADDITIONAL LICENSE CONDITIONS
	This non-system license shall be subject to the following conditions: (a) The permissive transfer of solid waste to the non-system facility, listed in Section 3, authorized by this license shall be subordinate to any subsequent

	decision by Metro to direct the solid waste described in this license to any other facility. (b) This license shall be subject to amendment, modification, or termination by Metro's Chief Operating Officer (the "COO") in the event that the COO determines that: i. There has been sufficient change in any circumstances under which Metro issued this license; ii. The provisions of this license are actually or potentially in conflict with any provision in Metro's disposal contract with Waste Management Disposal Services of Oregon, Inc., dba Oregon Waste Systems, Inc; iii. Metro's solid waste system or the public will benefit from, and will be better served by, an order directing that the waste described in Section 1 of this license be transferred to, and disposed of at, a facility other than the facility listed in Section 3; iv. The non-system facility listed in Section 3 fails to manage the waste subject to this license in accordance with the material management requirements described in Section 6; or v. The non-system facility listed in Section 3 generates malodors that are detectable off-site. (c) This license shall, in addition to subsections (b)(i) through (b)(v), above, be subject to amendment, modification, termination, or suspension pursuant to the Metro Code. (d) Licensee shall not transfer or assign any right or interest in this license without prior written notification to, and approval of, Metro. (e) This license shall be subject to modification or termination by the COO upon the execution of a designated facility agreement with a facility listed in Section 3 that authorizes the facility to accept the waste described in Section 1 of this license. (f) This license authorizes delivery of solid waste only to the facility listed in Section 3. Transfer of waste generated from within the Metro boundary to any non-system facility other than that specified in this license is prohibited unless authorized in writing by Metro.

11	COMPLIANCE WITH LAW
	Licensee shall fully comply with all applicable local, regional, state and federal laws, rules, regulations, ordinances, orders, and permits pertaining in any manner to this license, including all applicable Metro Code provisions and administrative procedures adopted pursuant to Metro Code Chapter 5.05 whether or not those provisions have been specifically mentioned or cited

	herein. All conditions imposed on the collection and hauling of the licensee's solid waste by federal, state, regional or local governments or agencies having jurisdiction over solid waste generated by the licensee shall be deemed part of this license as if specifically set forth herein.

12	INDEMNIFICATION
	Licensee shall defend, indemnify and hold harmless Metro, its elected officials, officers, employees, agents and representatives from any and all claims, demands, damages, causes of action, or losses and expenses, or including all attorneys' fees, whether incurred before any litigation is commenced, during any litigation or on appeal, arising out of or related in any way to the issuance or administration of this non-system license or the transport and disposal of the solid waste covered by this license.

WE:bjl
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600 NE Grand Ave.
Portland, OR 97232-2736
www.oregonmetro.gov

Metro | *Making a great place*

July 1, 2013

CERTIFIED MAIL
RETURN RECEIPT REQUESTED

Larry Wilkins
Recology Portland, Inc.
4044 N. Suttle Road
Portland, OR 97217

Re: Non-System License No. N-102(2)-13, Authorizing Delivery of Residential Yard Debris Mixed with Food Waste to Nature's Needs.

Dear Mr. Wilkins:

Recology Portland, Inc.'s application to deliver residential yard debris mixed with food waste to Nature's Needs composting facility located in North Plains, Oregon has been approved. Enclosed is Non-System License No. N-102(2)-13. I recommend that you review the terms of the license carefully as its provisions become effective on July 15, 2013.

Under Metro Code Section 5.05.090, you have the right to request a contested case hearing regarding the provisions contained in the license. In order to do so, you must make this request in writing and ensure that Metro receives the request within 30 days of the date this letter was mailed. Any such request should be directed to my attention at Metro. You may retain legal counsel to represent you at the hearing. Article IX, Section 14 of the Oregon Constitution, the Metro Charter, ORS Chapter 268, and Metro Code Chapters 2.05 and 5.05 provide Metro's authority and jurisdiction for the hearing.

If you have any questions, please call me at 503-797-1666.

Sincerely,

Bill Metzler
Senior Solid Waste Planner
BM:
cc: Roy Brower, Solid Waste Compliance and Cleanup Manager
Warren Johnson, Solid Waste Compliance Supervisor
Bruce Walker, City of Portland
Stephanie Rawson, DEQ
Enclosure
S:\REM\metzlerb\Recology NSL Suttle Road to Natures Needs\NSL Issuance Transmittal Letter 070113.docx

600 NORTHEAST GRAND AVENUE | PORTLAND, OREGON 97232 2736
TEL 503 797 1835 | FAX 503 813 7544

METRO

METRO SOLID WASTE FACILITY NON-SYSTEM LICENSE

No. N-102-13(2)

LICENSEE:
Recology Portland, Inc. 4044 N. Suttle Road Portland, OR 97217
CONTACT PERSON:
Larry Wilkins Phone: (503) 285-8777 E-Mail: lwilkins@recology.com
MAILING ADRESS:
4044 N. Suttle Road Portland, OR 97217

ISSUED BY METRO:

Scott Robinson, Deputy Chief Operating Officer

7/1/13
Date

1	NATURE OF WASTE COVERED BY LICENSE
	Source-separated residential yard debris mixed with food waste from municipal curbside collection programs generated within the Metro boundary and received at Suttle Road Recovery Facility in accordance with Metro Solid Waste Facility License No. L-102-11A.

2	CALENDAR YEAR TONNAGE LIMITATION
	Licensee is authorized to deliver to the non-system facility listed in Section 3 of this license up to 15,000 tons per calendar year of the waste described in Section 1 of this license.

3	NON-SYSTEM FACILITY
	The Licensee hereunder is authorized to deliver the waste described above in Section 1 to the following non-system facility for the purpose of processing and composting: Recology Oregon Compost, Inc.-Nature's Needs Compost Facility 9570 NW 307th Avenue North Plains, OR 97113 This license is issued on the condition that the non-system facility listed in this section is authorized to accept the type of waste described in Section 1. If Metro receives notice from the Oregon Department of Environmental Quality or Washington County that this non-system facility is not authorized to accept such waste, Metro may immediately modify or terminate this license pursuant to Section 10 of this license.

4	TERM OF LICENSE
	The term of this license will commence on July 15, 2013 and expire at midnight on December 31, 2015 unless terminated sooner under Section 10 of this license.

5	COVERED LOADS
	Licensee shall suitably contain and cover, on all sides, all loads of source-separated residential yard debris mixed with food waste that are delivered under

	authority of this license to prevent spillage of waste while in transit to the non-system facility listed in Section 3.

6	**MATERIAL MANAGEMENT**
	The Licensee is authorized to deliver the waste described in Section 1 of this license to the non-system facility listed in Section 3 under the following conditions: (a) The non-system facility shall accept all solid waste that is delivered under authority of this license for the sole purpose of processing and composting on-site. The Licensee shall not dispose of any source-separated recyclable material, except as provided in Section 7; and (b) The non-system facility shall receive, manage, process, and compost all solid waste that is delivered under authority of this license in accordance with all applicable local, state and federal laws, rules, regulations, ordinances, orders, and permits.

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	This non-system license shall be subject to the following conditions: (a) The permissive transfer of solid waste to the non-system facility, listed in

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BM:bjl
S:\REM\metzlerb\Recology NSL Suttle Road to Natures Needs\SRRF Natures Needs NSL N-102(2)-13.docx
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April 15, 2011

Mr. Bill Metzler, Senior Planner
Solid Waste Compliance & Cleanup
600 NE Grand Avenue
Portland, OR 97232

Subject: Closure Plan and Financial Assurance for Recology Oregon Material Recovery, Inc. ("ROMR") specifically for the Suttle Road Recovery Facility

Dear Mr. Metzler:

Attached are copies of the closure plan and financial assurance for the above-referenced facility. These plans have been developed in accordance with the respective Metro Solid Waste Facility license and Metro Code 5.01.060.

Please feel free to call me at 503-226-6161 x230 with any questions.

Sincerely,

Ame LeCocq
Environmental Compliance Manager

Cc: D. Dutra, ROMR
E. Merrill, Recology

Attachments: Closure Plan

Suttle Road Recovery Facility:

The following closure plan and financial assurance is developed per Metro's Solid Waste Facility license #L-036-09 and Metro Code section 5.01.060.

As a waste materials recovery facility, the goals of Recology Oregon Material Recovery ("ROMR") at Suttle Road Recovery Facility, located at 6400 SE 101st Avenue, Building 4, Portland, Oregon, are to: 1) maximize the amount of recyclables recovered from incoming waste materials, 2) minimize the amount of incoming and outbound non-processible waste materials, and 3) limit on site stockpiles of all materials. All recovered materials will be shipped off site for further processing and/or beneficial reuse.

Incoming yard debris and wood waste materials are processed (ground to a specified size) on a regular basis and shipped to market. Metals are staged within a contained area on site or within roll-off container(s) on site and later shipped to market as required. Green waste is reloaded and shipped to a composting facility. Electronic waste is accepted, palletized, wrapped and shipped for recycling. In the event of closure, all material will be cleared and disposed of or shipped to available recycling markets. Capital equipment will be loaded and shipped off-site to other Recology operations.

Food waste reload activies may also occur at the site. Incoming organics (which may consist of source separated commercial food waste, or residential food scraps mixed with yard debris) are loaded into a semi truck and transported to a composting facility. In the event of closure, all material will be loaded and transported offsite. Any leachate generated from the material is collected into a tank, which is pumped and hauled offsite for disposal.

Recology estimates that a total of 50 to 100 tons of non-marketable residuals, and approximately 50 gallons of leachate requiring disposal could be on site. As a worst case, the cost basis for the estimated disposal of 100 tons follows:

Closure Disposal Cost Summary:

$	4,600	Disposal cost
	240	Loading fees
	900	Operator and equipment @ 25 TPD; 4 days
$	**5,740**	**Total Closure Disposal Cost**

Financial Assurance

ROMR proposes the following as an acceptable form of financial assurance to cover the cost of closure of the facility.

Suttle Road Recovery Facility (cont'd):

The estimated cost to implement the closure plan per Metro Regulations at 5.01.060(C)(3) is less than $10,000.

Recology is a $550 million per year corporation, with substantial capital assets in Portland and surrounding communities. We respectfully request Metro's Chief Operating Officer's consideration and concurrence that this parent corporation guarantee is acceptable financial assurance to ensure the timely and environmentally sound disposition of the referenced material for the purposes of this plan. If required, Recology agrees that it will maintain financial assurance in a form acceptable to Metro.