



MASTER PLAN

Gabbert Butte Nature Park

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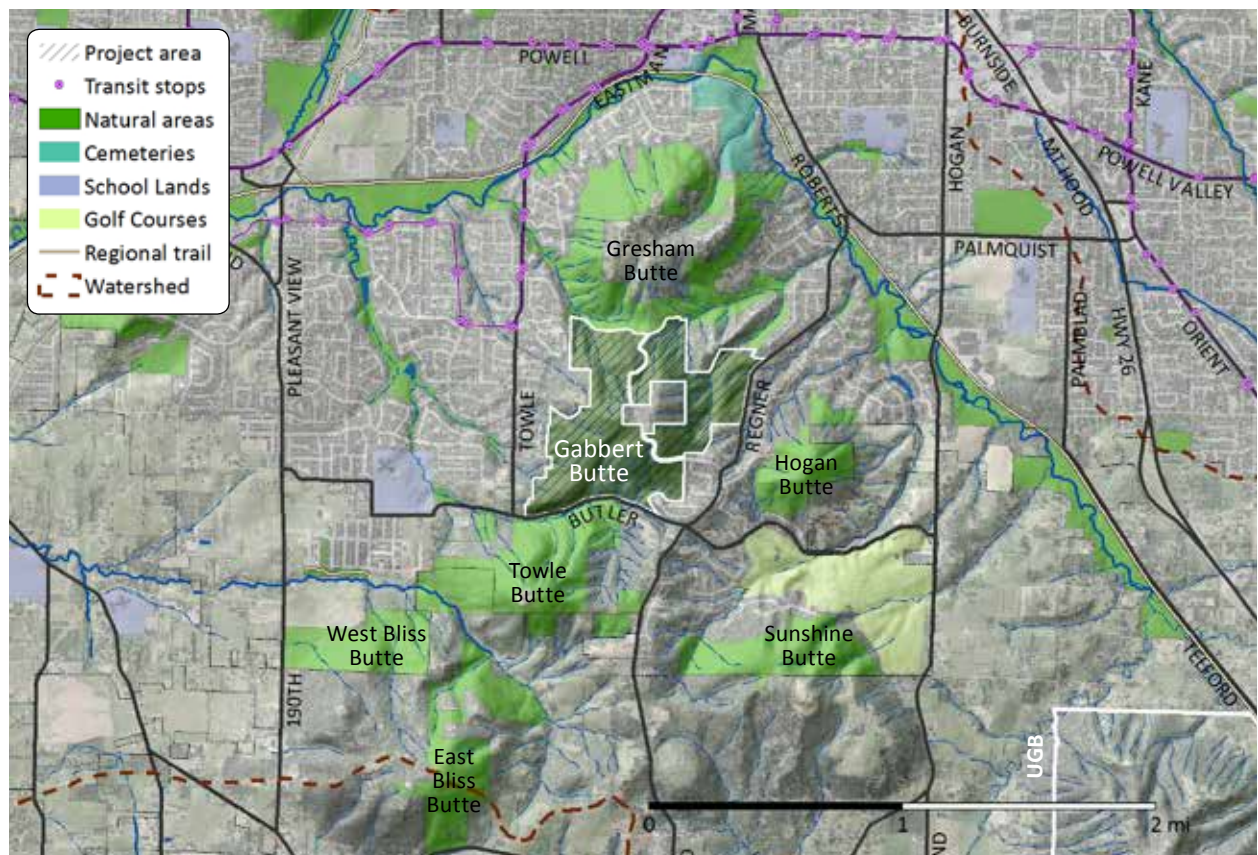
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1. Introduction and plan overview

The East Buttes natural areas form large patches of upland forest from Gresham to Happy Valley. The natural areas span two counties and bridge the Johnson Creek and Clackamas River watersheds. They protect headwaters of streams that feed these rivers, including a significant part of Johnson Creek's watershed. These buttes are a highly valued resource for the region.

Thanks to voters, the City of Gresham and Metro have been able to preserve this land from development, protect habitat and water quality, and now plan for future public access to the site. Metro and the City partnered to create this master plan for welcoming visitors to Gabbert Butte.

Gresham's buttes provide scenic views and important wildlife habitat, and are treasured natural landmarks. Gabbert Butte is one of six buttes within Gresham city limits. At over 200 acres, the site is surrounded by residential neighborhoods to the east and west, and natural areas to the north and south. Big leaf maple, Douglas-fir trees and songbirds greet visitors to the site. Native wildflowers abound in spring. Gabbert Butte offers an opportunity to access nature in the Gresham area, where people can connect with nature in a place that supports clean water and healthy wildlife habitat.





Where in the region is Gabbert Butte?

East Buttes

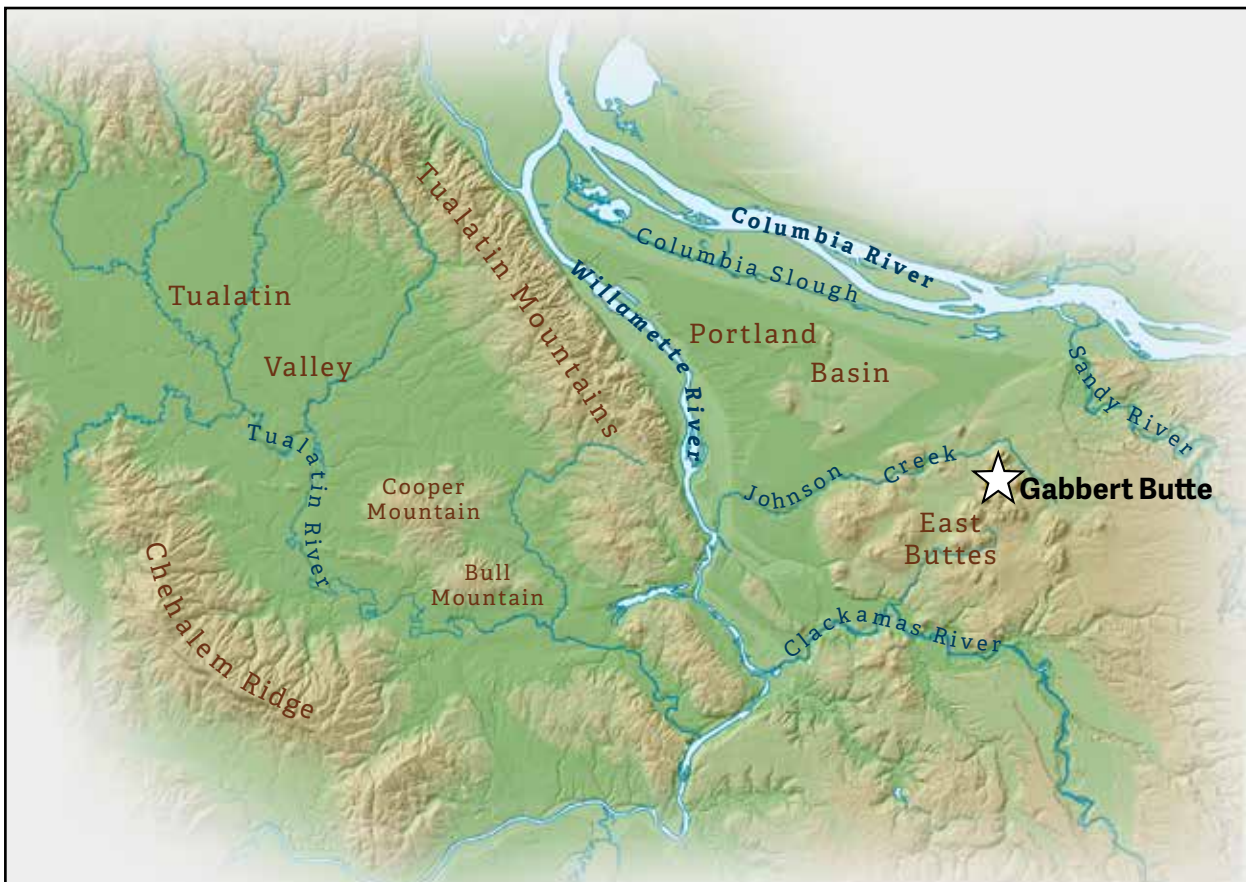
Gabbert Butte is one of many ancient volcanic lava domes in the eastern part of the region, known as the East Buttes. Most of these buttes, including Gabbert, are clustered between Johnson Creek and the Clackamas River. Although a few, like Mount Tabor, exist to the northwest of this main group.



For people in east Multnomah County and Clackamas County, the East Buttes create a sense of place, a backdrop of Pacific Northwest forests in urban and suburban neighborhoods. They offer opportunities to be in nature, to walk, run or bike ride, or find respite and renewal. The East Buttes bring the essence and quality of experience found in the Cascades right into the metropolitan area. People can experience northwest conifer forests at Mount Tabor, oak woodlands at Mount Talbert, or distant views from Hogan Butte.



Natural areas in the East Buttes protect important forest habitat. The buttes serve as a stopover for migrating birds, who need places to rest and refuel on their long journeys. For wildlife, the buttes provide a home, places to hunt and forage, and connections to streams, rivers and larger habitat areas.



These natural areas are important for the long-term health and diversity of species facing habitat loss and the effects of climate change, and for the health, well being, and resilience of people living in dense urban areas nearby.

Johnson Creek Watershed

Water flowing from upland springs or from rainfall on Gabbert Butte flows into tributaries of Johnson Creek, one of many rivers and streams which create a sense of place for people living in the Metro region. Streams like Johnson Creek, the Clackamas, Sandy and Tualatin Rivers, each flow through different kinds of landscapes, and offer a variety of experiences, both unique and quintessential to the region.

Johnson Creek is the region's most urban stream. It flows directly into the Willamette River and is critical for salmon habitat. Investments in Johnson Creek habitat recovery have spanned decades, with a particular focus on salmon and lamprey recovery.

The natural area forests in the East Buttes are critical to this effort. They shade upland streams that feed Johnson Creek and keep water cool and clean for salmon, other wildlife and people living downstream.



Gabbert Butte landscape

A visitor to Gabbert Butte might hear woodpeckers or song birds, and see dripping mosses or native flowers in spring. From the Saddle Trail north of Gabbert Butte, a walk over the butte leads through mossy maples, spring wildflowers and shady cedars. From Gabbert Butte it is a short walk east through residential neighborhoods to Gresham's recently opened Hogan Butte Nature Park. Hogan Butte boasts spectacular mountain views in contrast to Gabbert Butte's more intimate experience; one that envelopes visitors in a peaceful forest setting with moss-covered trees, mushrooms sprouting from decaying logs, and water seeping slowly from forest springs, starting the journey toward the Willamette River.



Project vision

The Gabbert Butte master plan was developed through a partnership between the City of Gresham and Metro and by working with the community in an intentional way through Connect with Nature workshops and community conversations. The plan envisions activities such as viewing wildflowers, listening to birds, or picnicking near the entry area, strolling with family on a nature trail, or exploring more challenging trails through the forest. The plan provides a framework for offering these visitor experiences in a way that pays attention to, and protects the natural resources in the East Buttes, while highlighting Gabbert Butte's forested character.

The plan lays the groundwork for a nature park that:

- Welcomes people of all cultures, communities, and abilities from throughout the region with a variety of opportunities to enjoy nature
- Continues to protect water quality and wildlife habitat for future generations of plants, animals and Oregonians
- Enhances neighborhood identity and is woven into the fabric of the neighborhood
- Provides welcoming, safe, and meaningful experiences of nature that celebrates the unique qualities of Gabbert Butte
- Metro can care for and sustainably operate on behalf of the public for years to come

Project purpose

Why a master plan is needed

A master plan is critical to guide increased public access to the site and to proactively protect water quality and wildlife habitat. Because the natural area is surrounded by residential neighborhoods, there are existing pressures on the landscape to accommodate public access. Land managers have been continually challenged by illegal trails being created by people who want to access the natural area. A plan is needed to understand the trail network comprehensively, address these growing needs, and ensure that trails are well built and long-lasting, and minimize and habitat disturbance.

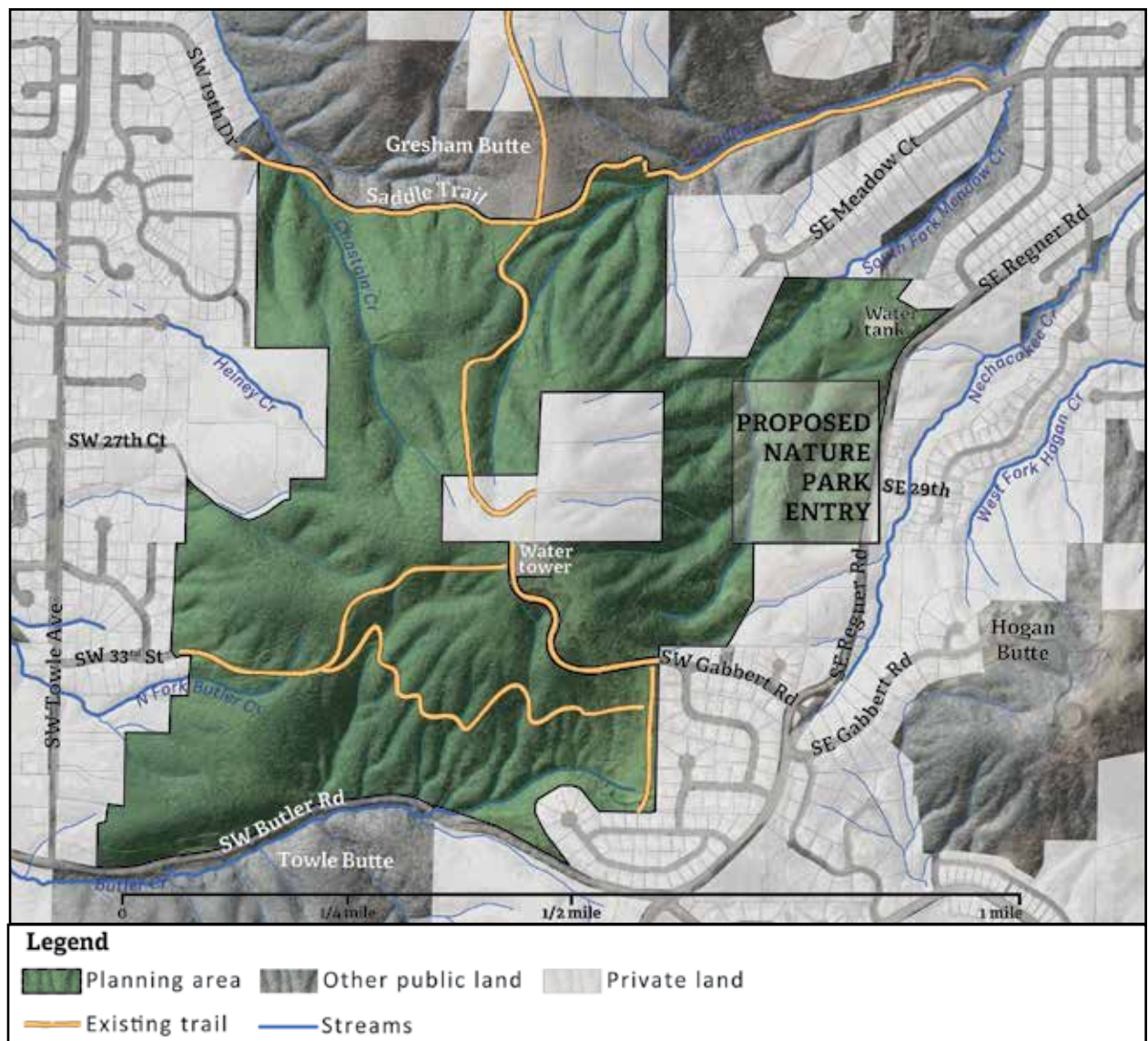
The plan builds on previous efforts by the City and Metro and looks at Gabbert Butte as part of a broader system of open space, trails and neighborhoods. It aims to provide a regional resource, enhance neighborhood identity and celebrate the landscape of Gabbert Butte.

What is included?

The plan includes a new trailhead, parking lot and entry area to welcome visitors. It identifies future nature park activities, amenities and program opportunities, and infrastructure needed to support them.

The plan recommends improvements to existing trails including reducing trail grades, improving drainage patterns, and facilitating shared use trails to ensure a positive experience for all trail users.

The plan proposes new trails to increase the variety of experiences and improve connectivity between the proposed entry area, existing trails on Gabbert Butte, and the Saddle Trail.





Connect with nature meeting

A new way to plan - Connect with Nature

This master plan was developed in collaboration with Connect with Nature, a region-wide initiative intended to help Metro and our partners learn how to plan and design parks and natural areas so they serve the needs of communities of color, and welcome all people.

Community outreach efforts intentionally sought out engagement from people who are often not at the table during park planning, who may feel unwelcome or think that their ideas and input won't be valued, and supported them in leading nature park planning conversations. The initiative sought to identify and remove barriers that can exclude people from being able to participate in civic dialogue. This master plan reflects the diversity of ideas we heard through this initiative, and lessons learned are being implemented throughout work in Metro's Parks and Nature department, and have been included in the Parks and Nature Racial Equity Diversity, and Inclusion Action Plan.

Gresham Metro partnership

Thanks to voters, the City of Gresham and Metro have collectively protected over 1,000 acres of open space in the East Buttes. Gresham led the way within natural area acquisition with the region's first open space bond measure in 1990, and Metro has protected habitat and water quality at a regional scale since 1995. In Gresham's East Buttes this has resulted in connected public open spaces with a patchwork of ownership and management.

At Gabbert Butte, the City and Metro are working together to develop a holistic plan for Gabbert Butte. The project builds on previous planning and restoration work, and bring together the history and expertise of both agencies. While the project is funded and led by Metro, City staff provide critical support in public engagement and, expertise about the landscape's natural resources and the local community.

2. Cultural context

Homelands of Indigenous communities

The Portland metro area, including the area comprising the City of Gresham, is the ancestral and current homeland of Indigenous communities who have lived in relationship with this land since time immemorial. Among these communities are Multnomah, Clackamas, Kalapuya, Tualatin, North Molalla and Chinook people.

The banks of the Columbia and Willamette Rivers include many Indigenous village sites. The entire landscape surrounding these rivers, including Johnson Creek and the East Buttes, is woven into Indigenous life and culture. This landscape has always been a place where many groups of Indigenous peoples have gathered and lived.

The development of a nature park at Gabbert Butte acknowledges the ancestral lands of Indigenous communities. The future nature park should provide respectful and appropriate access for Indigenous people.

Colonization

Genocide occurred across North America with the arrival of white people. In Oregon some of the impacts of settlers include forceful removal of people from homelands, the creation of reservations and diseases spread by trappers and traders were widespread. Colonization changed the ways that land was stewarded. For example, wetlands were drained and prairies plowed to accommodate farming and grazing livestock, streams were dammed, channelized and rerouted for irrigation. In places like the Gabbert Butte, trees were clear cut, and fire suppression became widespread.

Through this site, there is an opportunity to bring people together to learn about, celebrate and connect with the land and each other.

Demographics

Gresham is now Oregon's fourth largest city and the Portland metro region's second largest city. Gresham's diverse population includes longtime residents, young professionals, families, and new immigrant communities. The city has experienced rapid growth over the last 20 years – from a rural, farming community to a burgeoning urban area – and provides a high quality of life for its residents and business community.



View of Hogan Butte

Voter investments in the East Buttes

Gresham open space bond

Gresham has a long history of public support for protecting its diverse natural features. The earliest Gabbert Butte preservation and park planning dates back to the 1990 City of Gresham Open Space Bond Measure, where Gresham voters approved \$10.3 million in general-obligation bonds to purchase park sites, wetlands, buttes, greenways and stream corridors for preservation.

Through this bond measure the City was able to purchase and protect land on Gresham Butte, Gabbert Butte, Hogan Butte, and along Butler Creek.

Natural area bonds and levy

This 1990 City open space bond measure set the stage for future investments through the Metro-led Regional Natural Areas Bond Measures in 1995 and 2006. Those bond measures protect large patches of upland habitat in the East Buttes. Forests along headwater streams protect water flowing into Johnson Creek for fish and wildlife that rely on cool, clean water. For people in east Multnomah County and Clackamas County, the voter-protected lands contribute to a sense of place, a backdrop of Pacific Northwest forests, places of respite and opportunities to benefit from nearby nature.

The region's voters passed an operating levy in 2013 (renewed in 2016), which enables continued investments in taking care of and inviting the public to enjoy Metro-managed parks and natural areas throughout the region; and also supports local communities through partnerships and grants.

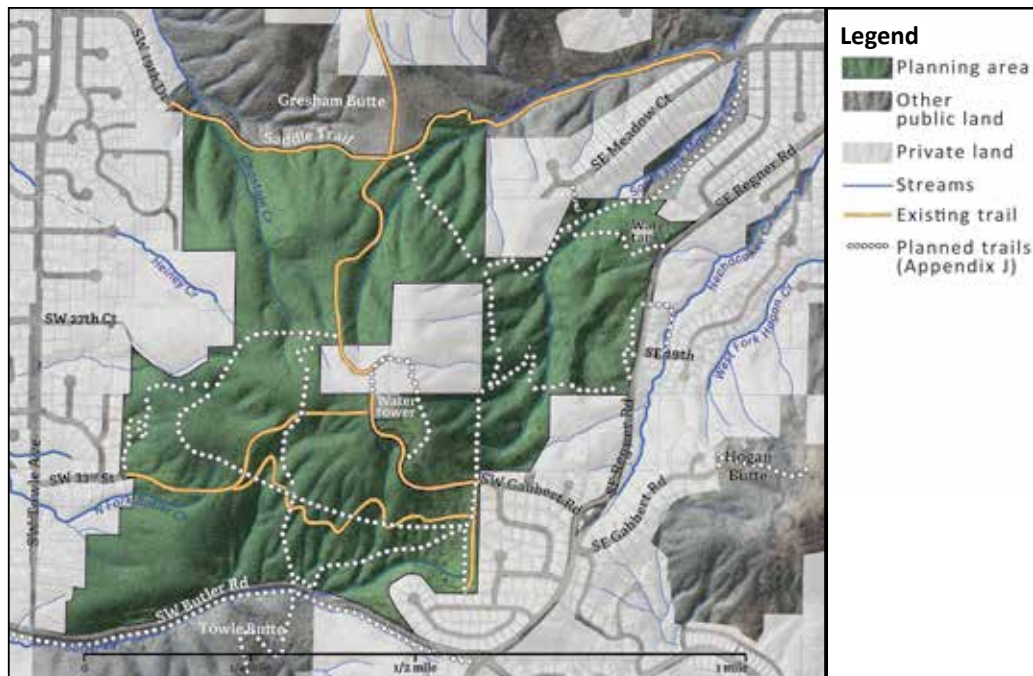
Planning for parks, trails and open space

This master plan builds on previous efforts by the City and Metro to plan for Gabbert Butte and the surrounding areas.

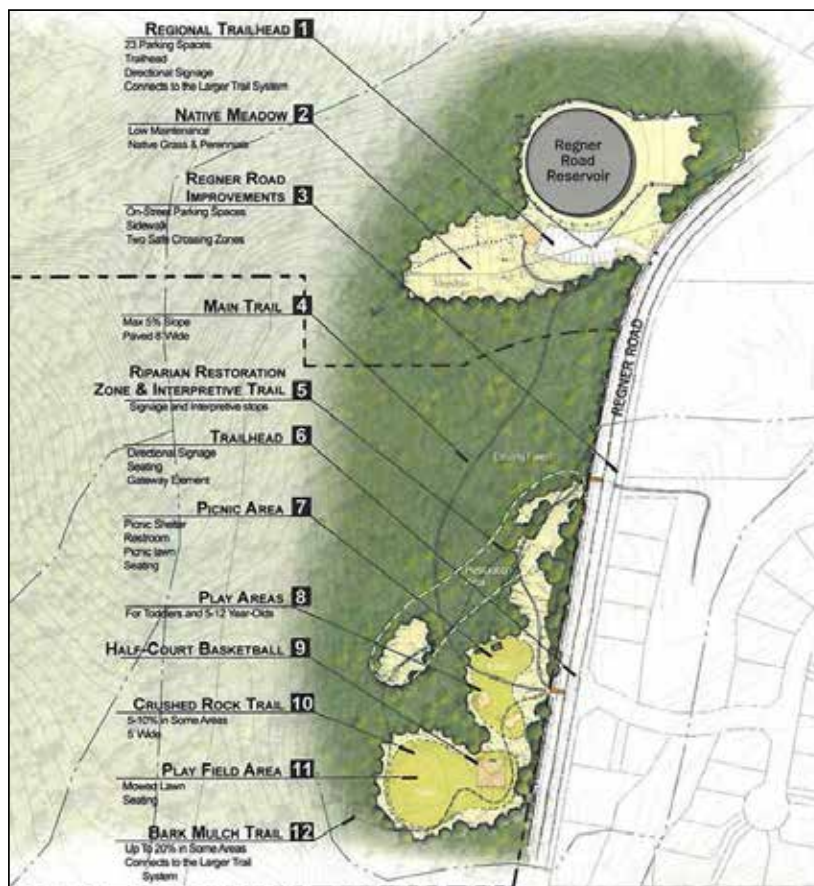
Gresham Parks, Trails & Natural Areas Master Plan (2009)

The Gresham Parks, Trails and Natural Areas Master Plan put forth a vision to develop a sustainable, high-quality park system. Walking and biking trails were identified as a top need, and the top two priorities for spending tax dollars included: developing walking/biking trails, and upgrading neighborhood parks.

In 2015, Gresham's Paths and Trails Master Map was developed and included as "Appendix J" of the Parks, Trails and Natural Areas Master Plan. The plan includes conceptual trail connections throughout the buttes in Gresham, and this project is the next step to making some of those trail connections a reality.



Hogan Butte Nature Park & Regner Road Neighborhood Park Master Plan Report (2008)



This plan, adopted by Gresham City Council in 2008, primarily focuses on planning for nature park development on nearby Hogan Butte, but it also includes a plan for Regner Road Neighborhood Park (formerly referred to as South Central Neighborhood Park). The plan identified a park on the southeast part of the Regner Road site, in the general area where new parking and entrance to Gabbert Butte are proposed.

Gabbert Hill Natural Area Land Management Plan (2010)

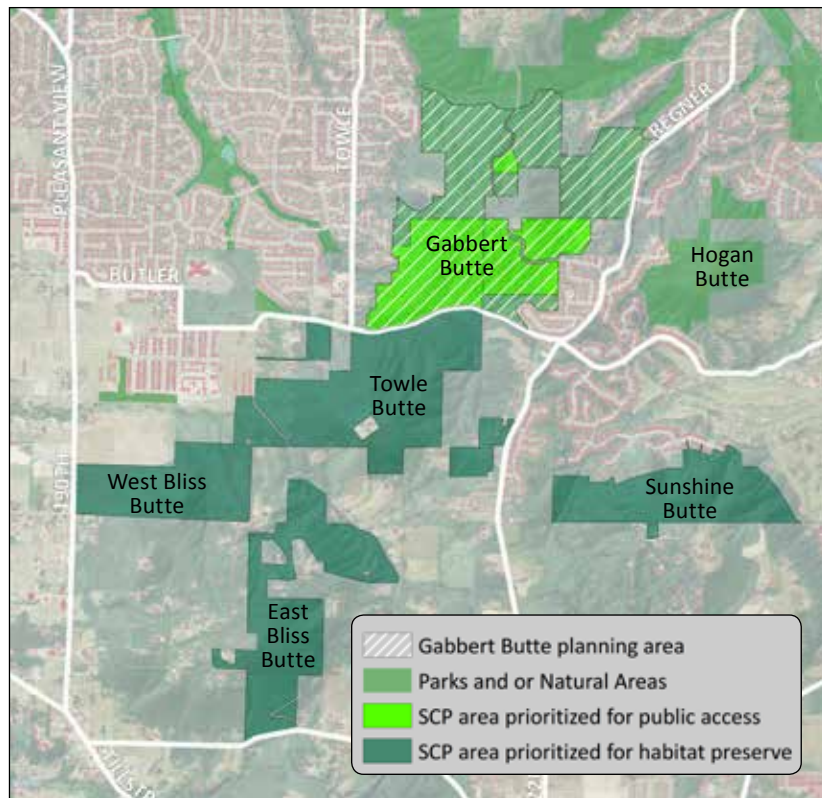
Gabbert Hill Natural Area Land Management Plan (2010) was prepared by the City of Gresham Department of Environmental Services in November of 2010. The focus of this document is to protect and restore the property's natural resources and enhance habitat that is desirable for native species while allowing low-impact, passive recreational activities.

The Gabbert Hill Interim Access Plan (2012)

Gabbert Butte (identified as Darby Ridge in this plan) was used for hiking by neighbors prior to Metro's purchase. An Interim Access Plan was developed to clarify and agree on appropriate access for the near-term as well as develop a strategy for trail location, maintenance and wayfinding signs until a master plan could be completed. This plan highlighted the need for a more comprehensive master plan for Gabbert Butte.

The East Buttes Site Conservation Plan (2014)

The East Buttes Site Conservation Plan (SCP) was prepared by Metro staff in March of 2014 for the Metro-managed property throughout the East Buttes. The SCP developed recommendations for habitat management and identified conservation targets for the area. The East Buttes SCP identifies that public access should be limited to all natural areas south of Butler Road. These areas are classified by Metro as "habitat preserves". Three nearby buttes are classified as "habitat preserves" - East and West Bliss Buttes, as well as Towle Butte, which is directly to the south. The SCP identified Gabbert Butte as a priority for public access.

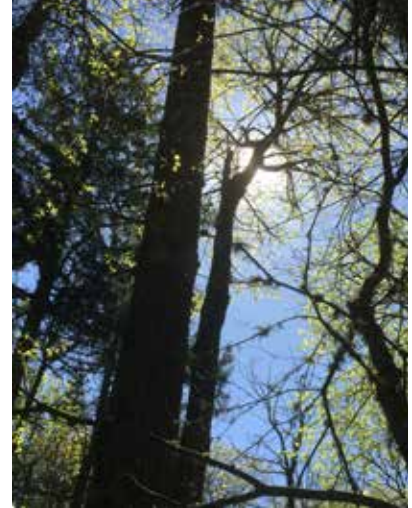


3. Landscape context

East Buttes habitat conservation

Upland forest

The East Buttes are covered with upland forests, containing a mix of coniferous and deciduous trees. Though this type of forest is common in the Pacific Northwest, the growth of cities has fragmented and reduced the amount of upland forest habitat in the urban area. The lands protected in the East Buttes are very important for wildlife because they preserve core areas of forest within a developing area. Contiguous areas of 30 or more acres are generally considered a minimum “large” patch size, a threshold where sensitive wildlife are able to live.



Wetlands and intermittent drainage corridors

There are multiple springs, associated wetlands and headwater streams throughout the East Buttes, including several that begin on Gabbert Butte. Despite the diminutive size of many of these resources, the mosaic of these features across the buttes provides important habitat for multiple species, including frogs and salamanders that can be found from high on the buttes to their base, along the Springwater Trail. Abundant bird life is associated with riparian vegetation that surround these resources.



Habitat for migrating birds and resident wildlife

The East Buttes are important to migrating birds, who need places to stop, eat, and rest along their journey. For wildlife in the area, the protected areas of the East Buttes provide a home with places to hunt and forage. They also provide connections to streams, rivers and larger habitat areas.

Biodiversity connectivity

From a wildlife corridor perspective, the East Buttes natural areas help connect the resources of the Clackamas River and Johnson Creek watersheds. This is important for the long-term health and diversity of species as they try to adapt to habitat loss due to urban development and climate change.



Butler Creek downstream of Gabbert Butte

Water quality

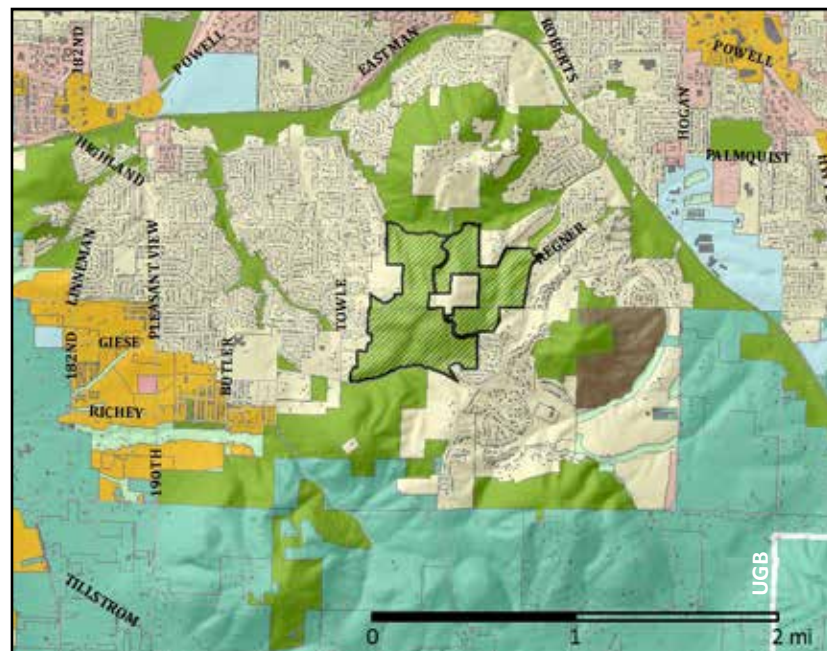
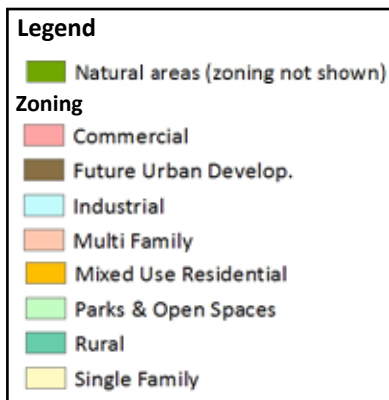
Dozens of headwater streams begin in the East Buttes natural areas and provide crucial cool, clean water to Johnson Creek, a critical habitat stream which is a focus of local, regional, and state efforts to improve water quality. The East Buttes natural areas protect the Butler and Kelley Creek headwaters that flow into Johnson Creek. Upper Butler and Kelley Creeks' robust invertebrate communities reflect this presence of high-quality habitat.

The future Gabbert Butte Nature Park can provide an educational focal point for low impact development strategies that can be used in the development of the park.

Surrounding land uses

Gabbert Butte is surrounded by single-family/low density residential neighborhoods to the east and west and natural areas to the north and south. The land north of the Nature Park includes the Gresham Butte natural area owned by the City of Gresham. Across Butler Road to the south of Gabbert Butte is Towle Butte natural area, which is managed by Metro. Hogan Butte Nature Park, owned by City of Gresham, is east of the Gabbert Butte.

Gabbert Butte is near the edge of the urban development, and new residential development in the Pleasant Valley Planning District to the south west of the site is currently being developed and areas to the south of the site in the Damascus/Happy Valley area are also expected to grow.



Transportation

Streets

The three main streets near Gabbert Butte have posted speed limits of 35 mph. SE Regner and SW Butler Roads abut the property, and additional neighborhood streets extend off of SE Regner Road and SW Towle Avenue toward Gabbert Butte.

Sidewalks

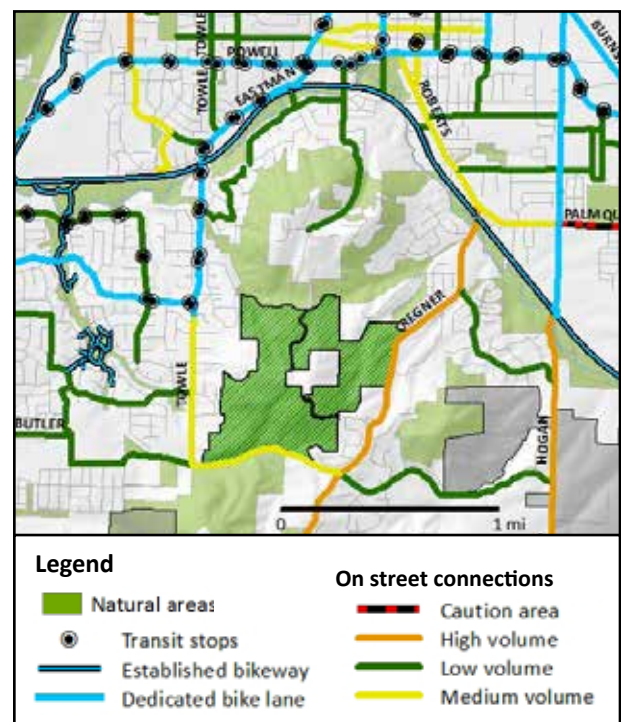
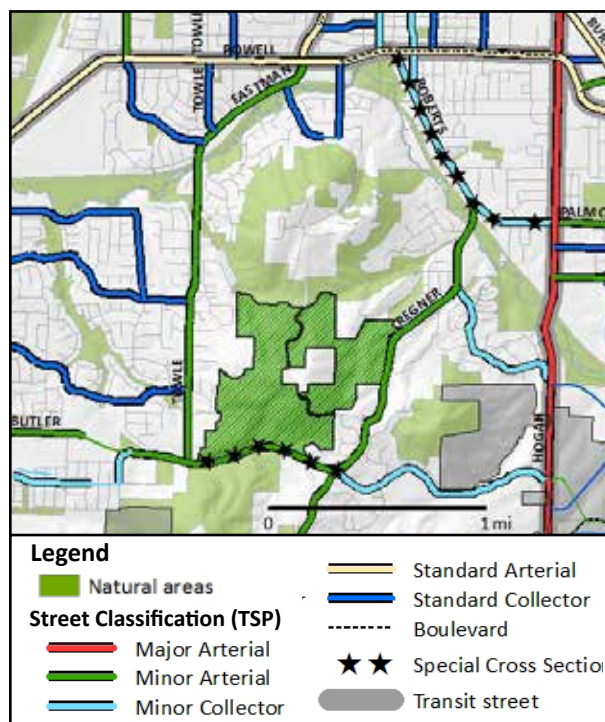
Sidewalks near Gabbert Butte are intermittent and typically only exist along relatively recently developed residential streets or parcels, such as along the east side of Southeast Regner Road at SE 29th Street. There is no sidewalk on the west side of SE Regner Road adjacent to the project area nor on Southwest Butler Road adjacent to Gabbert Butte.

Bike Routes

None of the main streets near Gabbert Butte currently have bike lanes so bicyclists share the roadway with other vehicles. Bikes are allowed on trails in nearby Gresham Butte natural area and on the Butler Creek Greenway Trail. These trails are support bike and pedestrian access to Gabbert Butte.

Transit

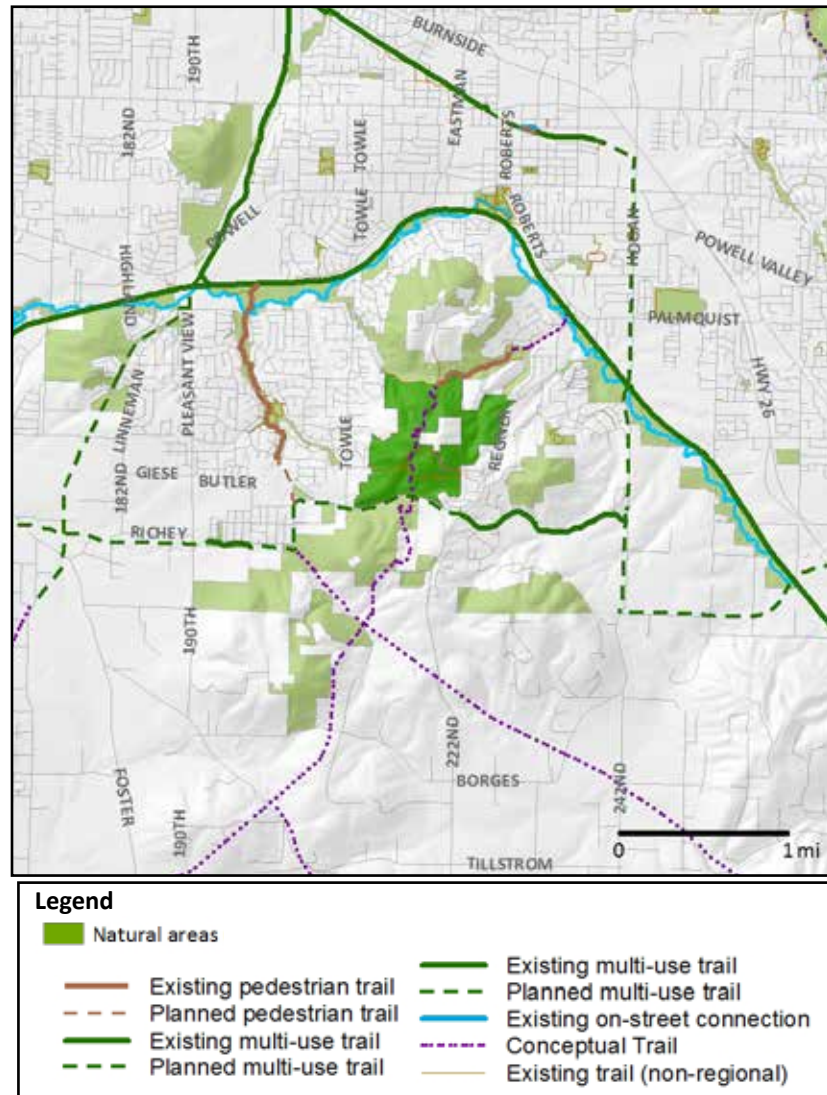
TriMET bus route 87 extends southwest of downtown Gresham along SW Towle Avenue to SW Binford Lake Parkway. The existing neighborhood trailhead off of SW 33rd Avenue is about 0.6 miles from the nearest bus stop. The Eastside Transportation Vision Plan calls for this route to be extended south to SE Butler Road which will decrease the walk to under 1,000 feet. The nearest bus stop to the proposed nature park day use area is at E Powell Boulevard and SE Hood Avenue, about 1.7 miles away.



Trails

The closest regional trail to Gabbert Butte is the Springwater Trail, approximately one mile north of the butte. The Springwater Trail corridor provides connections to trails throughout Gresham and contributes to an interconnected system of parks and recreation facilities.

Located north of the Gabbert Butte, the Gresham Butte Saddle Trail runs east-west connecting Southwest 19th Drive to Southeast Meadow Court. A trail from Southwest Blaine Avenue on Gresham Butte connects to the Saddle Trail from the north. The City of Gresham Trail Master Plan shows a number of conceptual trails through Gabbert Butte. Trails on Gabbert Butte have the potential to contribute to connectivity between the Springwater Trail and proposed regional trails to the south. A conceptual future regional trail alignment (Butler Buttes Trail) is envisioned connecting to the Saddle Trail via Gabbert Butte.



4. Existing conditions

Geology

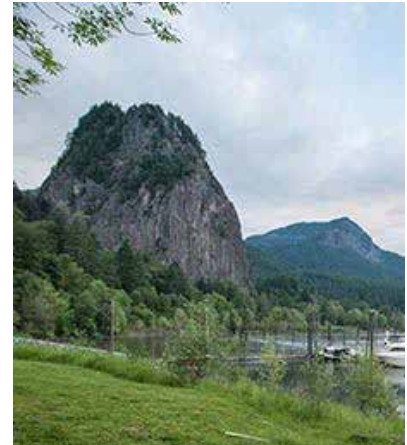
Boring Lava Domes

Gabbert Butte is part of the Boring Lava Field, which contains more than 80 small volcanic vents and lava flows throughout the greater Portland/Vancouver metro area. These vents are randomly dispersed, typically in clusters of three to six. The East Buttes are remnants of volcanic eruptions caused by the Juan de Fuca Plate sliding under the North American Plate. Most of these small volcanoes erupted just once. The viscous magma didn't flow far from its source and created the buttes.

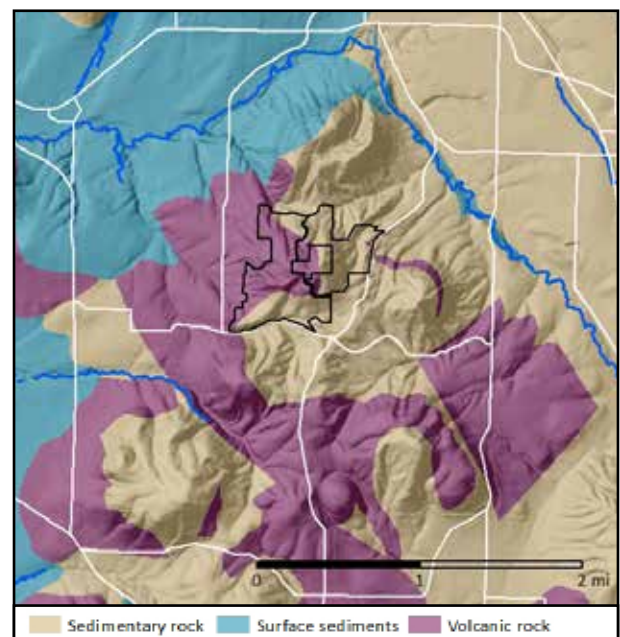
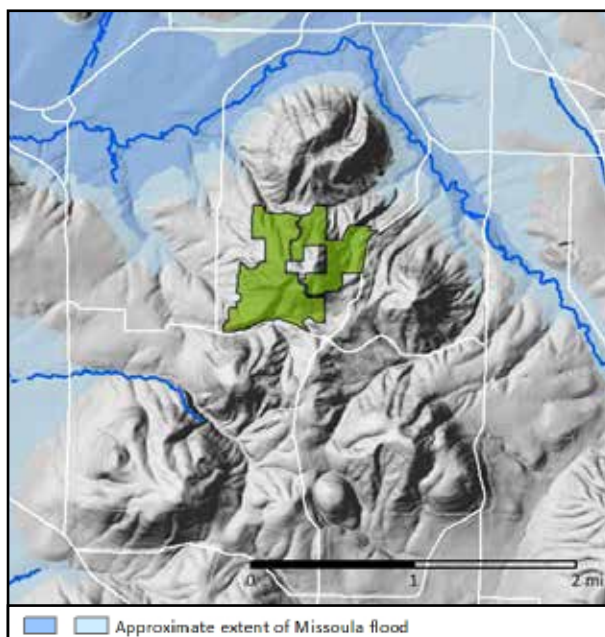
These eruptions began about 2.5 million years ago, northeast of Molalla, moved toward the northeast, creating Mount Scott and Larch Mountain about 1.6 million years ago. Between 1.3 and 1 million years ago, the active field was widespread. The existing lava domes are extinct, but some believe that the Boring Lava Field is not. The likelihood of an eruption is very low.

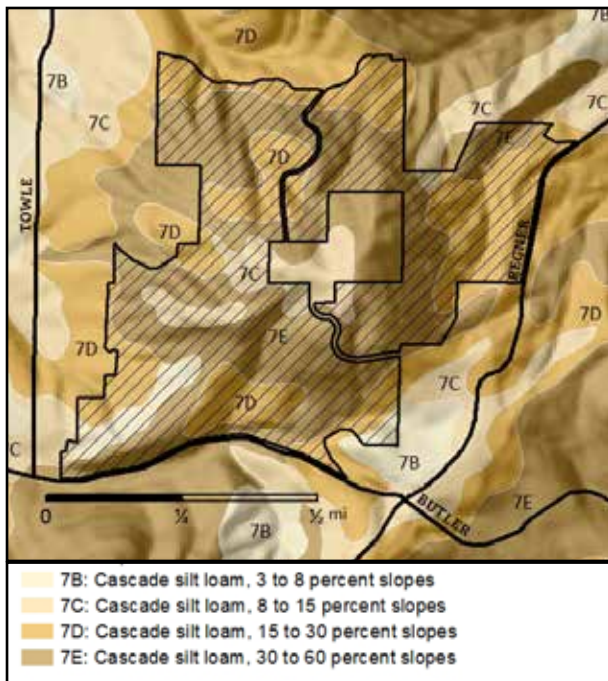
The valleys surrounding the buttes were flooded when giant ice dams gave way and emptied glacial Lake Missoula. These floods, now called Missoula or Bretz floods, occurred repeatedly about 15,000 years ago. Water scoured through the Columbia Gorge and spread out throughout the Willamette Valley. Rich farmland resulted from soils deposited by the floods.

The extent of volcanic rock shown below (right) in pink suggests that the top and west side of Gabbert Butte were covered by volcanic flow, while the north, east, and south slopes are sedimentary rock.



The youngest volcano, Beacon Rock, erupted about 57,000 years ago. About 15,000 years ago the Missoula Floods scoured away the cinder cone, leaving just its central plug.





Soils

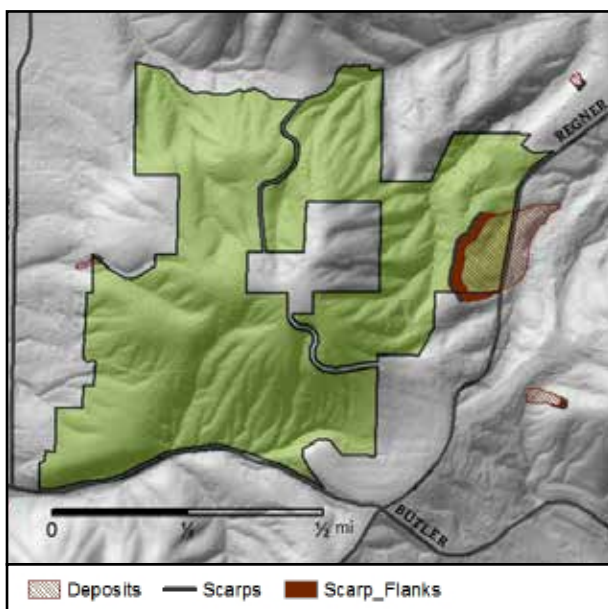
Soils on the site are classified as Cascade silt loam. Cascade Silt Loam soil is classified by USDA Natural Resources Conservation Service (NRCS) as a somewhat poorly drained soil with slight to moderate erosion hazard. The soil is formed from silty materials with slow permeability. Cascade Silt Loam has a perched water table in winter and early spring. In the summer, excavation of this soil can be difficult due to a high restrictive subsurface soil layer, known as fragipan, which restricts water flow and root penetration about 20 to 30 inches below the soil surface. A seasonal water table is perched on top of the fragipan, which supports wetland hydrology.

Topography

The site topography ranges in elevation from 494 feet above sea level in the lowest valley to 994 feet at the top of Gabbert Butte, with a total of 500 feet of elevation change. The topography is generally steep, with large portions of the site ranging from 30 – 60% slope. Part of the site along Southeast Regner Road, is more gradually sloped, as are smaller areas along Southwest Butler Road.

Landslide mapping

A prehistoric landslide is mapped by DOGAMI on part of the site. It is identified as prehistoric, indicating that there has been no evidence of landslide movement for greater than 150 years. The design of the nature park was informed by a geotechnical study and use of DOGAMI's recent landslide risk mapping for east Multnomah County (IMS-57), and this information will be considered through the design of the nature park. A geotechnical evaluation was conducted and indicated that the landslide body does not show indications of movement, that the site is suitable for the proposed project, and the risk of adverse effects on the project due to instability of the deep-seated landslide is low. Some shallow instability was observed within the south headscarp slope, likely a result of past human activity. The report recommends that a geotechnical engineer should be consulted for any development on the headscarp slope.



Hydrology and water quality

Water from precipitation and springs on the butte forms a network of perennial and ephemeral streams that flow into tributaries of Johnson Creek. There is year round subsurface flow associated with these drainages.

Some water persists in shallow depressions, supporting forested wetlands. These forested wetlands provide high value habitat for amphibians and other wildlife on the butte.

The Gabbert Butte forest shades the headwater streams. The springs, streams, subsurface flows and wetlands all contribute to maintaining water quality in downstream Johnson Creek – by keeping water cool and clean.





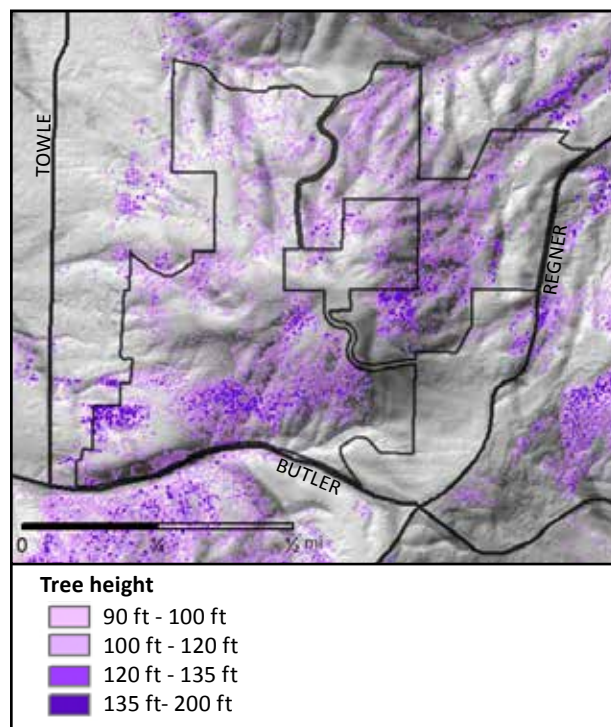
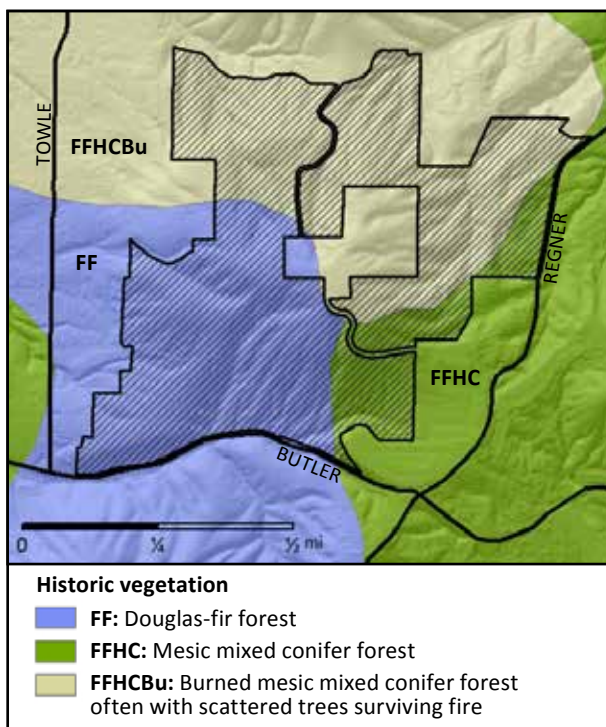
Vegetation

According to Government Land Office mapping c. 1850, the southwestern slopes of the butte consisted of a Douglas-fir forest with bigleaf maple, red alder, Oregon ash, and grand fir. The north and east side consisted of a moderately moist mixed conifer forest with Douglas-fir, Western hemlock, Western redcedar, and grand fir and yew. The north and northwest facing slopes were was mapped as burned with scattered surviving trees.

The current vegetation on Gabbert Butte is primarily a mixed coniferous and deciduous forest with a diverse understory of native plants. Based on historic photos it appears that most of the butte was logged at least once. It is unknown if planting occurred after logging, and the forest developed extensive areas of bigleaf maple and red alder. Tall, large diameter Douglas-fir and Western redcedar occur in small stands scattered among the hardwood trees. These can be seen in the map of tree height.

Both bigleaf maple and red alder are experiencing high levels of decline including top-die back and mortality. Red alder in particular appear to be experiencing accelerated death. While they are nearing the end of their natural lifespan, the increase in mortality is likely exacerbated by recent unusually hot and dry summers. Metro is conducting a forest health assessment to identify opportunities to improve and protect forest conditions.

There are several small areas composed almost entirely of shrubs or grasses or where the understory is dominated by non-native blackberry. Perimeter areas of the site, near existing trailheads, and where tree canopy is reduced, have higher concentrations of non-native and invasive plants.



Wildlife

The wildlife of Gabbert Butte is mostly typical of wildlife found in forested habitats of Western Oregon. Common species such as black-tailed deer and coyote occur on the butte, bobcats have been sighted and less common species such as black bear and cougar have been reported traveling through the area. Gabbert Butte is important for birds, including year-round residents and neotropical migrants. Migrating birds use the butte for stopovers and resting places, while for year round birds, it is an important source of food and shelter. It is common to hear woodpeckers and song birds at Gabbert Butte.

The closed canopy forest on Gabbert Butte will become increasingly important for wildlife habitat as development continues in the area. There is relatively good connectivity between the forest on Gabbert Butte and nearby forests in the East Buttes. In addition, stream corridors from Gabbert Butte connect to Johnson Creek toward the Ambleside Natural Area to the east, and along Kelley and Butler Creeks to the west. This connectivity of forests and along streams contributes to a diversity of wildlife on the butte.

Native frogs make their home on Gabbert Butte; species include Northern red-legged and Pacific chorus frogs. Several species of native salamander are commonly found. In addition, Oregon slender salamanders were recently discovered on the butte. They were previously thought to not occur west of the Cascades.

Avoiding impacts to forested wetland resources on Gabbert Butte is a high priority as they provide important breeding habitat for many of these amphibians. Protecting intact water resource features will be important as the design of the nature park is developed. There is other breeding habitat in the area, but what is unique here is that there are no barriers between forested wetland resources and the intact upland forests on the butte, and that the wetland is relatively unimpacted by people, pets, lights, noise, and general disturbance.



Conservation goals

The City of Gresham and Metro both own and manage land within the project area. A Site Conservation Plan, which identifies conservation targets for a site, is developed for all natural areas that Metro manages. The East Buttes Site Conservation Plan identifies wildlife habitat connectivity, mature mixed conifer forest, and water quality as a priorities for managing natural resources in the East Buttes.

Metro worked with the City to extend the findings and recommendations in the Site Conservation Plan to the entire area included in this Master Plan. The following describe long term conservations targets for Gabbert Butte.

Forest health and connectivity

Upland and riparian forests on Gabbert Butte are considered to be in moderately good condition primarily due to previous weed control efforts. Continued reduction of weed load across the sites is a high priority. Recruitment of young conifers to advance forest development is desired throughout the site, and the forest heath assessment will recommend strategies for replacing the declining alder canopy with successional trees.

Maintaining minimum forest patch sizes of 30 acres is desired for species diversity and to maintain habitat areas for more sensitive species.

Riparian and aquatic resource protection

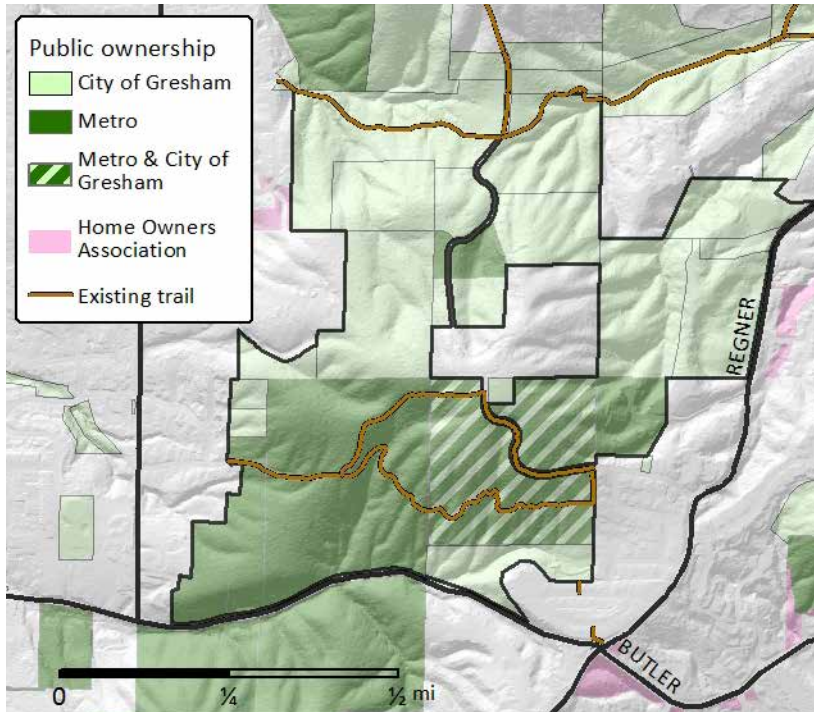
The site's aquatic resources include ephemeral and perennial streams and forested wetlands. Headwater streams are important for water quality and aquatic habitat downstream. Wetland resources are limited on the butte and are currently providing important amphibian breeding habitat.

These resources, especially wetlands that support amphibian breeding should be protected from public access and associated risks like introduction of invasive plants and animals. Any development near aquatic resources should prioritize protecting these resources, by maximizing buffers, maintaining vegetation cover, protecting them from sedimentation, and avoiding disturbance to their hydrology.

Current access and use

There are approximately one and half miles of trails on Gabbert Butte that were formalized as part of the Gabbert Hill Interim Access Plan in 2010 to address development of social trails. Illegal trail building is an ongoing management challenge on the butte.

Detailed descriptions of existing trails are included chapter 5.



Existing trails are accessed by two neighborhood trailheads, one at SW Gabbert Road and one at SW 33rd Street. The trailhead at SW Gabbert Road is at a gated gravel reservoir maintenance road. At SW 33rd Street, the existing sidewalk on the north side of SW 33rd transitions to an unpaved trail into the site. There are Metro natural area signs, but no amenities at either trailhead.

A public access easement at SW 37th Terrace, is currently used by neighbors, and by the City to maintain stormwater infrastructure. The City also periodically accesses stormwater infrastructure to the south of SW Gabbert Road. Access to the Gresham Butte Saddle Trail is provided off of SE Meadow Court. From SE Meadow Court, there is also a City-owned access lot that connects to the natural area, but no trail connection exists.

In addition, from the Gresham Butte Saddle Trail, people access existing trails on the south side of Gabbert Butte via a trail along Gresham right-of-way to the top of the butte. Although this route is used commonly, connecting to the water tower maintenance road requires passing through several hundred feet of private property at the top of the butte. Private property has “no trespassing” signs at the end of the south right-of-way, but not at the north right-of-way.



Regner water reservoir

Infrastructure

Regner water reservoir

On the northeast side of the site, there is an existing fenced drinking water reservoir that is accessed from SE Regner Road via an existing driveway. The areas within the fence and around the tank are paved. Beyond the fence is a maintained lawn that extends uphill from the tank. There is an opportunity to convert this lawn area to shrub habitat. Along with driveway access, the reservoir has utility connections to SE Regner Road.

Gabbert water reservoir

At the top of the butte there is a second Gabbert water reservoir. The approximately 1-acre taxlot containing the water tower is entirely fenced and maintained with a mown lawn. There are three underground water supply lines that connect to the water tower: one that follows the gravel access road, another following the existing trail connection to SW 33rd Street, and the third heading north towards the Saddle Trail junction. Any amenities and restoration activities at Gabbert Butte should consider these utility corridors.



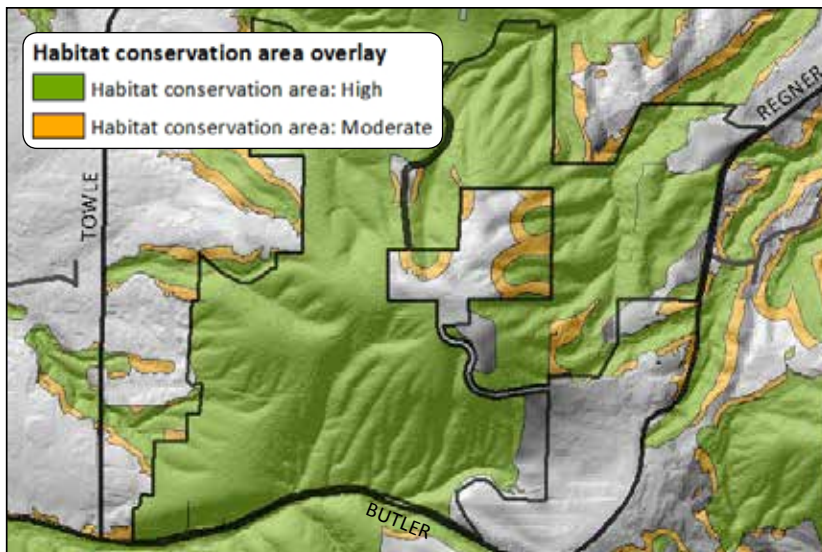
Gabbert water reservoir

Utilities

Additionally, utilities (water, sewer, power, and communications) are available within the road right-of-way in areas where residential development has occurred including SE Regner Road, SW Towle Avenue and adjacent neighborhoods.

Zoning

The site is zoned low density residential (7 units per acre). Much of the site is covered by the Habitat Conservation Area overlay and the entire site is covered by the Hillside Physical Constraint overlay. Site development will need to address these City of Gresham code requirements.



5. Alternatives analysis

Three entry area design alternatives were developed and evaluated. Several additional parking lot locations were evaluated to support the alternatives development. A variety of trail alignments were explored to meet trail connectivity goals. This chapter describes design objectives for the nature park entry area and trail network, and key decisions.

Driveway and parking lot suitability

Several locations were considered for parking lot and nature park entry suitability prior to development of design alternatives. These locations were evaluated for the ability to accommodate parking for approximately twenty cars. Potential impacts on wildlife habitat, forested wetlands, local traffic impacts, driveway sight distance constraints, existing topography and land cover, and cost of development were considered for each location. The feasibility of accommodating parking within existing topography and vegetation without extensive tree removal, or earthwork was reviewed.

SW 33rd and SW Gabbert Rd

Two existing trailhead locations, the ends of SW Gabbert Road and SW 33rd Street, were evaluated and considered unsuitable as possible parking lot locations.

Both locations are on neighborhood streets that dead-end into the natural area in residential neighborhoods. The roadways have sidewalks but have highly-constrained right-of-way due to the adjacent homes and steep slopes. The land within the natural area at these locations is also steep.

These locations were considered unsuitable for the main entrance because they would require considerable grading, tree removal, and construction cost, and could create an undesirable increase in traffic volumes on these residential streets.

Southwest Butler Road

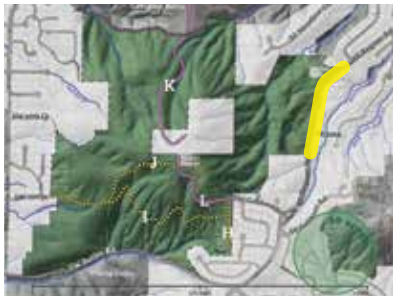
Southwest Butler Road, parallel to the southern boundary of the site, was not considered for providing driveway access, a parking lot, or nature park main entrance due to intact habitat, steep topography, numerous drainages, and mature forest on the site's Butler Road frontage.



SW 33rd and SW Gabbert Roads



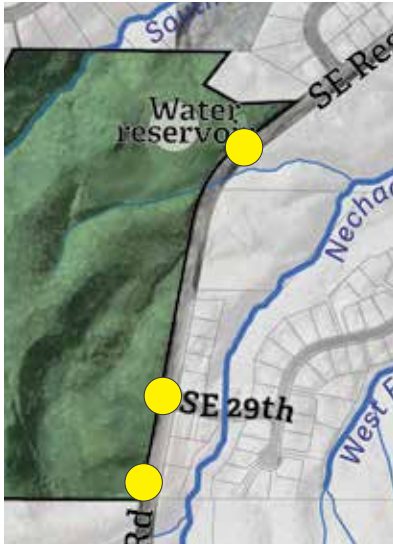
Southwest Butler Road



Southeast Regner Road

Southeast Regner Road runs parallel to the eastern site boundary. There are a number of intersections and driveways along this stretch of road. Southeast Regner Road descends steeply as it approaches the site from the south. Travel speeds can exceed posted limits especially in the northbound direction.

Three potential access locations were considered along Southeast Regner Road.



Potential parking locations along Southeast Regner Road

Regner water reservoir driveway

The existing water tank driveway was evaluated as a potential driveway and parking lot location.

Sight distance evaluation indicated that with some vegetation clearing on the east side of the SE Regner Road right-of-way, adequate site distances could be achieved.

When feasibility of locating a parking lot adjacent to the water tank was evaluated, it was determined that significant earthwork and substantial retaining walls would be required to accommodate a parking lot in this location. The location offers limited opportunity for providing visitor amenities. In addition, the water tank and associated fencing would not be a very welcoming park entry experience.

This access point had several advantages, including being further away from forested wetland resources, having an existing driveway and access road, and an area largely cleared of vegetation. The steep topography around the reservoir, however limits opportunities for development. In order to accommodate a parking area the design would require significant earthwork resulting in the need for extensive, tall retaining walls. Despite some advantages, this location was considered unsuitable for parking lot and entry area development due to significant earthwork, and limited opportunity to create a welcoming experience.

New driveway at SE 29th Street

SE 29th Street intersects with SE Regner Road from the east, south of the water tank maintenance area. SE 29th is a residential street with sidewalks and serves the Deer Glenn Neighborhood. This location was preferred by traffic engineers due to creating a four way intersection at SE 29th and SE Regner Road. This location was considered suitable for a driveway and included in two of the entry design alternatives.

New driveway south of SE 29th Street intersection

South of the SE 29th Street intersection with SE Regner Road, there is an existing, abandoned logging road. Although this location was less preferred by transportation engineers, it has cost advantages and potentially less disturbance area because it would use an access that had previously been graded and disturbed the site landscape.. This location was considered suitable for further evaluation and included in one of the entry design alternatives.

Parking lot alternatives

Three parking lot configurations, which used Southeast Regner Road driveway locations at or south of Southeast 29th Street, were reviewed through the alternatives review process. The potential driveway locations at or near Southeast 29th Street are close to forested wetland resources and would likely have higher impacts to them than a parking lot near the reservoir. This tradeoff was weighed against the higher cost and poorer visitor experience of developing a park entry at the reservoir driveway, and the project team believes that impacts to wetland resources can be limited through careful design. The alternative parking lot locations take advantage of existing clearing areas that are largely outside of the Habitat Conservation Area (HCA). The parking lot designs that were evaluated were each designed to accommodate approximately twenty cars, based on similar nature parks at Hogan Butte and Scouters Mountain.

Design 1

The first alternative configuration placed the parking lot in the lower clearing, closest to SE Regner Road, and farthest away from wetlands. This design introduces the smallest impervious surface footprint. By concentrating the parking and driveway configuration near SE Regner Road, Design 1 allows the second clearing to be developed as a place for visitors to picnic, gather, celebrate and play away from the parking lot. This parking lot configuration was preferred by stakeholders and the public and was refined and included in the recommended plan.

Design 2

The second alternative evaluated a driveway location across from SE 29th Street, with the parking lot located to the southeast, further away from SE Regner Road. This longer driveway would provide an experience of transition into the natural area before arriving in the parking lot. Disadvantages of this configuration are that the longer driveway would have more development impact, create more impervious area, and cost more to construct. In addition, locating the parking lot in the second clearing area would occupy a space that could otherwise provide for nature park amenities.

Design 3

The third alternative proposed a driveway south of the existing intersection with SE 29th Street. Advantages of this configuration are that the driveway and parking lot would require less excavation and grading to construct. Using an abandoned former logging road would allow the driveway and parking lot to fit with the existing contour of the land. Disadvantages are similar to alternative 2, the parking area and driveway would cause more impact to the site, and take up space that could otherwise be used for visitor amenities. In addition, this driveway would be located near to the historic scarp slope, and would likely require geotechnical stabilization.



Design 1



Design 3



Design 3

Trail network analysis

There are about one and a half miles of existing trails on Gabbert Butte. The area is surrounded by residential neighborhoods and natural areas, and this project aims to improve trail connectivity. Considerations for trail and connectivity include providing a variety of experience types for people while minimizing habitat fragmentation and impacts to streams, and wetlands.

Neighborhood trailheads

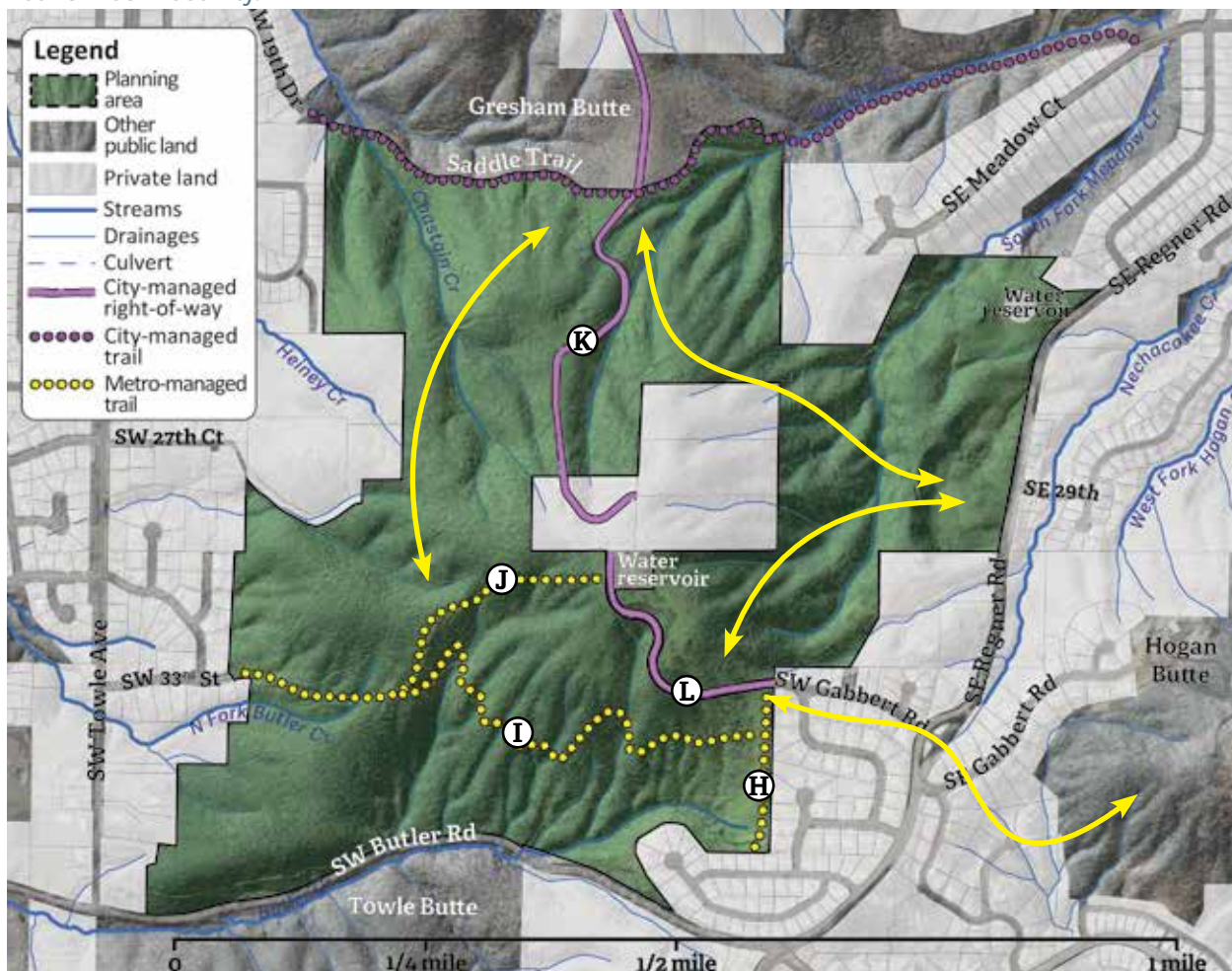
Existing access to Gabbert Butte Natural Area is provided by trailheads at SW Gabbert Road, SW 37th Terrace, SW 33rd Street. Metro natural area rules and regulations signs exist at the SW 33rd and SW Gabbert Road trailheads, but SW 37th is unmarked.

Existing trails

Ⓜ Fence line trail (Trail H)

Trail H is a social trail that developed as a result of people walking through a mow strip buffer along an adjacent fence. The passes through a wet area where trail users have improvised

Trail network analysis: yellow arrows below show desired trail network connectivity.



sections of boardwalk. The trail grade is steep in places, and can be slippery in wet conditions. The trail experience could be improved by moving trail away from the fence line, and realigning to improve drainage and accommodate a gentler grade. This would also increase privacy for adjacent residents.

① *Contour trail (Trail I)*

Trail I, a natural soil surface trail, has a gentle grade that generally follows the contour of the slope through mature Douglas-fir, western redcedar, and bigleaf maple forest. While the trail is well-sited and in relatively good condition, some places along the trail would benefit from re-grading the trail tread to improve drainage. The trail also crosses several drainages, and these crossing locations should be evaluated.

② *Water line trail (Trail J)*

Trail J follows an existing utility and maintenance access corridor. The trail grade is very steep, and runs generally perpendicular to the slope, which causes erosion from water flowing down the trail. The trail is slippery and difficult to walk in wet conditions. People walking around muddy spots, or walking on top of nearby vegetation for better traction, has caused the trail to widen. The trail should be realigned to improve visitor experience and reduce erosion and landscape degradation.

③ *City right-of-way to water tower (Trail L)*

Trail L follows a gravel road on existing City right-of-way (owned, managed and maintained by the City) and used regularly to access the water tower at the top of the Butte. The trail surface is well maintained and has a consistent grade that averages 11.5 to 12%.

④ *City right-of-way to Saddle Trail (Trail K)*

An existing trail within a public right-of-way extends approximately 1,750 feet south from the Saddle Trail junction, and ends at privately-owned parcel at the top of the butte.

Trail network connectivity

There is an opportunity at Gabbert Butte to connect trails on nearby parcels, and create a network that provides a comfortable user experience with a variety of settings, terrain, and challenge. Upgrades to the trail network have the opportunity to provide the following connections:

- Connect existing trails on Gabbert Butte to the Saddle Trail in a way that keeps people on public land.
- Connect existing trails on Gabbert Butte to new entry area at SE Regner Road.
- Identify potential connections between Hogan Butte and Gabbert Butte.
- Provide trail connectivity to surrounding neighborhoods.

Connecting to the Saddle Trail

Currently the only way to connect between the trails on Gabbert Butte and the Saddle Trail is to walk on private property. To achieve a trail entirely on public land, several alignments were considered to the west and east of the water tower.

Connection to Hogan Butte Nature Park

Hogan Butte Nature Park is located a quarter mile east of Gabbert Butte. Hogan Butte Nature Park is accessed from SE Gabbert Road, which ends at Hogan Butte. Hogan Butte Nature Park amenities include a half-mile, paved, ADA-accessible interpretive loop trail, views of Cascade Mountain Range peaks, picnic shelters and tables, a restroom, secure bike parking, and a 20-space, ADA-accessible parking lot. There is an opportunity to highlight a safe route between the two nature parks.



6. Community engagement

Outreach

Connect with Nature

Connect with Nature brings a new model of planning and community engagement to Metro and the region. This model aims to involve people of color in the earliest stages of planning. Through a series of community workshops, Connect with Nature focused Gabbert Butte planning and design on people of color first, creating space for people of color to lead the conversation.

Workshop participants shared stories about their values and experiences with nature, parks, and the outdoors, and developed ideas for how Gabbert Butte Nature Park could serve the needs of their families and communities. In addition to focusing on planning for Gabbert Butte, Connect with Nature also broadly explored how to make parks and natural areas more welcoming and relevant for participants' communities throughout the region.

Local community leaders received stipends to learn about planning parks, recruit members of their communities for workshops, and help facilitate discussions. Design workshops captured input and solutions to include in the plan. The work of Connect with Nature is demonstrated in this master plan as well as in the Connect with Nature report.





Gabbert Butte Stakeholder Advisory Committee

The Gabbert Butte Stakeholder Advisory Committee (GBSAC) met approximately six times during the process to discuss project materials at each milestone. The committee's role was to provide feedback and insight about their constituents' ideas and preferences. The GBSAC included representatives of local neighborhood associations, trail user groups, and natural resource experts from local conservation organizations. Connect with Nature community leaders whose communities have geographic proximity or a particular interest in Gabbert Butte also participated on the GBSAC.



Natural resource charrettes

Over the course of the project, the project team hosted two natural resource charrettes. Conservation organizations and individuals with background or expertise in the East Buttes natural areas or similar habitat types were invited to participate. The first charrette focused on identifying natural resources of special interest and developing a greater understanding of site conditions to help guide site planning. The second charrette focused on fine-tuning the preferred alternative.

Open houses

Metro and City staff applied traditional methods of connecting with the broad community, including three open houses, social media outreach, mailings and email for individuals who signed up to receive updates on Gabbert Butte.

Stakeholder meetings and public presentations

Staff met with and provided site tours for a variety of stakeholders including neighbors, Connect with Nature partners and participants, members of The Confederated Tribes of Grand Ronde and others. Staff engaged with FACT-Oregon, an organization of families whose children experience disability, and got feedback on proposed designs from a parent group. Staff also provided public presentations for Gresham Butte Neighborhood, Coalition of Gresham Neighborhoods, and Deer Glenn Homeowners Association.

Summary of community feedback

The summary below includes community feedback heard at four Connect with Nature workshops, three public open houses, four online surveys, Stakeholder Advisory Committee meetings, two natural resource charrettes, on site tours, at multiple neighborhood meetings and numerous conversations with stakeholders and neighbors. Key themes are highlighted below.

General feedback

There is a lot of excitement about new opportunities to access Gabbert Butte, both from nearby neighbors and people from across the region. There is also support and enthusiasm about improved trail connectivity on the butte and opportunities to experience more trail segments.

In addition to the overall support of the project, there was some concern expressed from neighbors about increased parking conflicts in the neighborhood and making sure the parking lot is adequately sized, anxiety about trails shared with hikers and off-road cyclists, and some frustration that dog owners will not be able to walk their dogs on most trails. There is also some concern that the nature park improvements could have a negative impact on local wetland resources. There was an expressed interest that Metro make sure that the rules and regulations are clear and enforced.

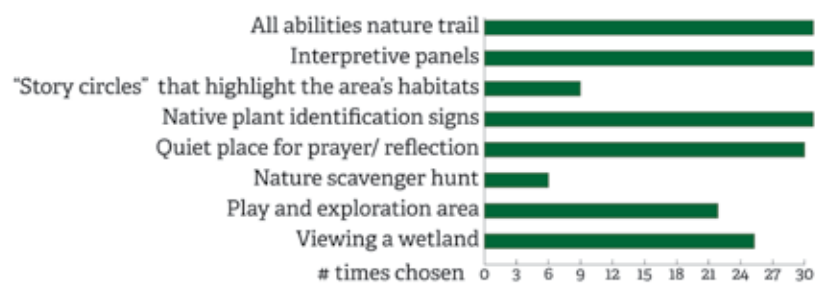
Despite having some concerns most people felt that the proposed plan is consistent with the project values and goals, shared their excitement for a new park to enjoy, and appreciated being able to participate in the planning process.

Feeling safe in parks and natural areas

People shared that generally places that are clean, well maintained, and cared for make people feel safer when visiting parks and natural areas. In particular, proactively and compassionately dealing with illegal activity like camping is very important to people. In addition clear, multi-lingual information about the site, wayfinding and safety information at each park entrance helps people feel comfortable and know what to expect when visiting. People are interested in seeing interpretive information about the site, and information acknowledging original inhabitants and first foods. Resting places, places for kids to play, comfortable, beautiful and graffiti-free places to be with family were also mentioned. Welcome signs in many languages also contribute to a sense of welcome and belonging.

Nature experiences

People shared that resting, relaxing and enjoying nature, exploring and discovering, running, mountain biking and hiking, being with family, picnicking, dog walking, star gazing, bird watching and photography are important nature-based activities. People shared that signs identifying native plants, quiet places for prayer, reflection, and wildlife viewing, and information about natural history of the site would contribute to feeling connected with nature at the site. Places to picnic, celebrate, tell stories, and learn about nature, and have access to an all-abilities nature loop were also reported as important for experiencing nature. People shared a desire and appreciation for the ability to access nature close to home.



Trail experience

In feedback we received about trail preferences, people overwhelmingly preferred loop trails and had a slight preference for a loop entirely within the natural area compared with a loop that includes a section on a neighborhood street. Loop trails were discussed at the natural resource charrette, and while it was acknowledged that people prefer loop trails, it was also stressed



Design 1



Design 2



Design 3

that people also enjoy out and back trails, and if there are significant impacts on resources this should be considered alongside peoples' preference for loops. People shared excitement about multi-use trails, and new opportunities for cycling, as well as concerns about user conflicts between cyclist and hikers. People expressed a desire for at least one hiking-only trail, if possible.

Wetland protection

Concerns were shared about potential risks to wetland resources near the entry area, including invasive plant introduction, release of unwanted aquatic pets, and potential changes to hydrology. Participants of the natural resource charrettes specifically requested that improvements be kept at least 100 feet away from the larger wetland. In response to these concerns, proposed trails around the wetland and associated views were removed from the recommendation and additional planting to screen views and deter off trail exploration was added.

Feedback about designs

Three design alternatives were developed and shared with the public to elicit feedback and preferences. The overall layout of Entry Design 1, with the parking nearest SE Regner Road, was most preferred because it minimizes the area developed for cars. Design 1 was also preferred because the picnic area and amenities are separated from the parking lot and provide the opportunity to get away from cars and into nature without going on a long hike. People did not prefer the designs with picnic facilities near the parking lot. Concerns were shared about a trail around the wetland or too close to the wetland, and proximity of proposed parking having negative impacts on the wetland.

While the overall layout of Entry Design 1 was most preferred, people also liked elements from Entry Designs 2 and 3 including wetland viewing, an accessible loop trail, short loop around the meadow in the picnic area, and native plant identification. When asked about features to include at the top of the butte, a preference for a place to rest, and orienting peoples attention away from the water reservoir were preferred. The idea of a sign or compass to orient people to cardinal directions or in the direction of nearby buttes even though they can't be seen, also received positive feedback. Picnic facilities were desired with several smaller to medium picnic shelters preferred over a single large shelter.

The master plan incorporates elements and preferences from all three of the alternatives in the recommended entry area and trail plans. In response to concerns about trail development near wetland resources, the recommended alignment of the nature trail was moved. Recommended trails do not go around or offer views of the wetland, and stay on the far side of the ridge to the west.

7. Master plan recommendations

A new parking lot is recommended at the intersection of SE 29th Street and SE Regner Roads. Recommended visitor amenities include a trailhead, restrooms, picnic facilities, un-programmed grassy meadow, and a story circle. The recommended trail network provides connectivity between the entry area, existing trails on Gabbert Butte and nearby neighborhoods. The recommended trail network provides access to a number of distinct experiences on the butte and offers a range of trail types, including an accessible trail (max 5% slope) and natural soil surface trails.

Parking lot and driveway location

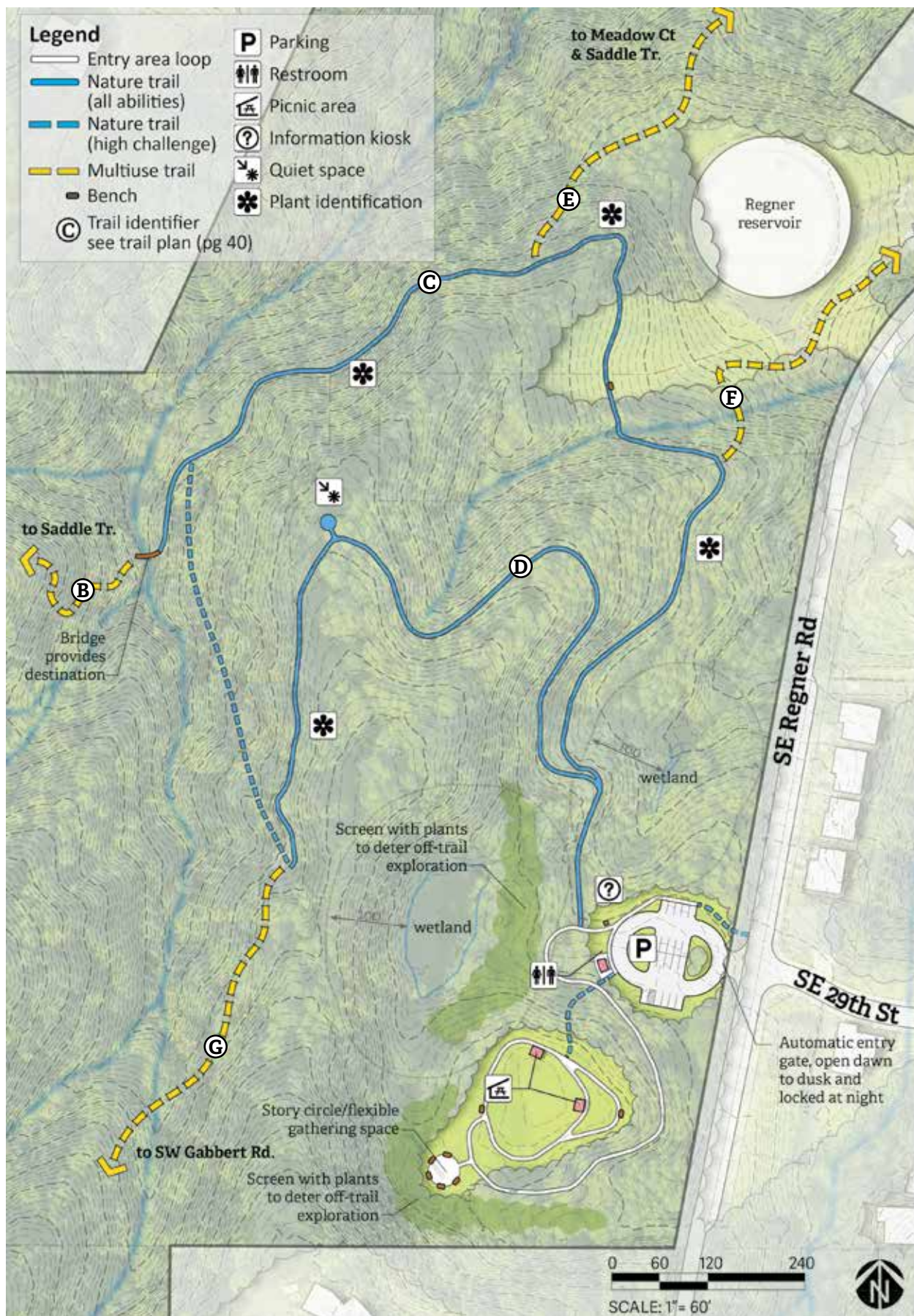
A new parking lot is recommended directly across from SE 29th Ave, with a driveway connecting to SE Regner Road at the SE 29th Street intersection. Construction of the entry area will likely require some degree of right-of-way improvements along SE Regner Road.

The parking lot design is conceptual and based on coarse topographic information. The design will be refined during the design and engineering phase of the project, and the following considerations should be included at that time:

- The parking lot and entry area trails should minimize footprint to the extent possible, and keep paved areas and other spaces for people as far from the wetland as possible, using 100 foot minimum distance as a design criteria.
- The parking lot should accommodate approximately 20 to 30 cars.
- Parking circulation should provide adequate width and turning radii to accommodate maintenance and emergency response vehicles.
- The driveway should be long enough to accommodate a maintenance vehicle with a trailer stopped at a closed gate.
- On site stormwater management should be included in parking lot design.
- Explore a one-way loop to minimize drive-aisle width and maximize potential number of parking spaces.

Restrooms

A two-stall gender inclusive restroom is recommended that automatically locks at night near the parking lot. The restroom should be connected to the city municipal sewer system and have running water. The restroom design should be based on Metro furnishing standards currently being developed.



Day use area

A day use area is recommended near the parking lot and entry area. Amenities should include picnic facilities, an un-programmed grassy meadow area, a short loop path with benches, and a flexible gathering space.

Day use area access trail

A path between the parking lot and day use area should be paved and meet Architectural Barriers Act accessibility guidelines, while also maximizing distance from wetlands, with a goal of providing a 100' minimum distance between the larger wetland and any new development. A more direct connection from the parking lot should also be provided. Native plants should screen views from the parking lot and Southeast Regner Road so visitors are immersed in nature after a short walk. The access trail is an opportunity for interpretive or plant identification signs.

Wetland protection

Views of wetland resources should be fully screened from all paths and trails. Access areas and adjacent native plantings should be designed to discourage off trail exploration in this area. A short rock wall on the west and uphill side of the trail could also be designed to further encourage people to stay on the path.

Picnic area

Two small picnic shelters, with additional picnic tables are recommended. Shelters and table access should connect to the paved path. Picnic facilities should conform to Parks and Nature standards, and have access to a potable water. East winds from the Columbia Gorge are a concern for fire risk in this area and alternatives to barbecue or fire pits should be explored to provide a way to cook or heat up food. Fire safety is a priority and City fire officials should be engaged in the design of these facilities.

Day use area loop

The recommended design includes an accessible trail linking picnic facilities, and circling a grassy open area. In addition to being a place for un-programmed play and exploration, this grassy meadow offers a place where the City could develop more formal play features in the future. The path creates a boundary for an area, which will be visible from the picnic shelters and tables. It is recommended that the grassy meadow be planted with native grasses and wildflowers, and maintained by mowing seasonally, a few times a year. It is not recommended this area be maintained as a lawn.

Story circle

A flexible space for gathering, celebrating or story telling is recommended near the paved entry area loop trail. The story circle can be used as a place to pause, rest, contemplate or gather with a small group to share stories, or learn about nature. Design of the story circle should accommodate a group or family, yet be comfortable for one or two people as well.

Places for prayer or meditation

Additional locations for prayer, meditation, reflection, or resting are recommended along the accessible nature trail, and near the picnic area. Places where people can stop to pray should balance a sense of privacy with not being so isolated that they feel unsafe.

Trailheads, kiosks, and wayfinding signs

Trailhead at parking lot

The main trailhead at the parking lot should include a large kiosk with a wayfinding map, rules and regulations and information about the Nature Park. The kiosk should acknowledge Indigenous communities, the original inhabitants of the area, and include safety information. Information should use international symbols and provide information in multiple languages to the extent possible.

Neighborhood trailheads

Neighborhood trailheads are recommended at five locations (SW Gabbert Road, SW 37th Terrace, SW 33rd Street, SE Meadow Court, and SE Regner Road at the water tank). Each trailhead should include a trailhead kiosk with a multilingual trail map, safety and rule information. Neighborhood trailheads should not be promoted as primary trail access location due to limited parking on some residential streets.

Wayfinding signs

Wayfinding signs should be installed at all trail intersections.

Trails

The recommended trail network provides a variety of trails, and the ability to experience different features of Gabbert Butte. The proposed trail network includes an approximately three-mile loop that provides trail connections between the parking lot, Saddle Trail, and existing trails on Gabbert Butte. It passes through upland riparian and fir forests and crosses several headwater drainages and streams.

The trail network should be designed using best practices to maintain good drainage, minimize erosion and protect aquatic resources, maintain visibility, maintain visibility, control the speed of cyclists, and provide passing areas and resting places. Directional signs should be included at all intersections.

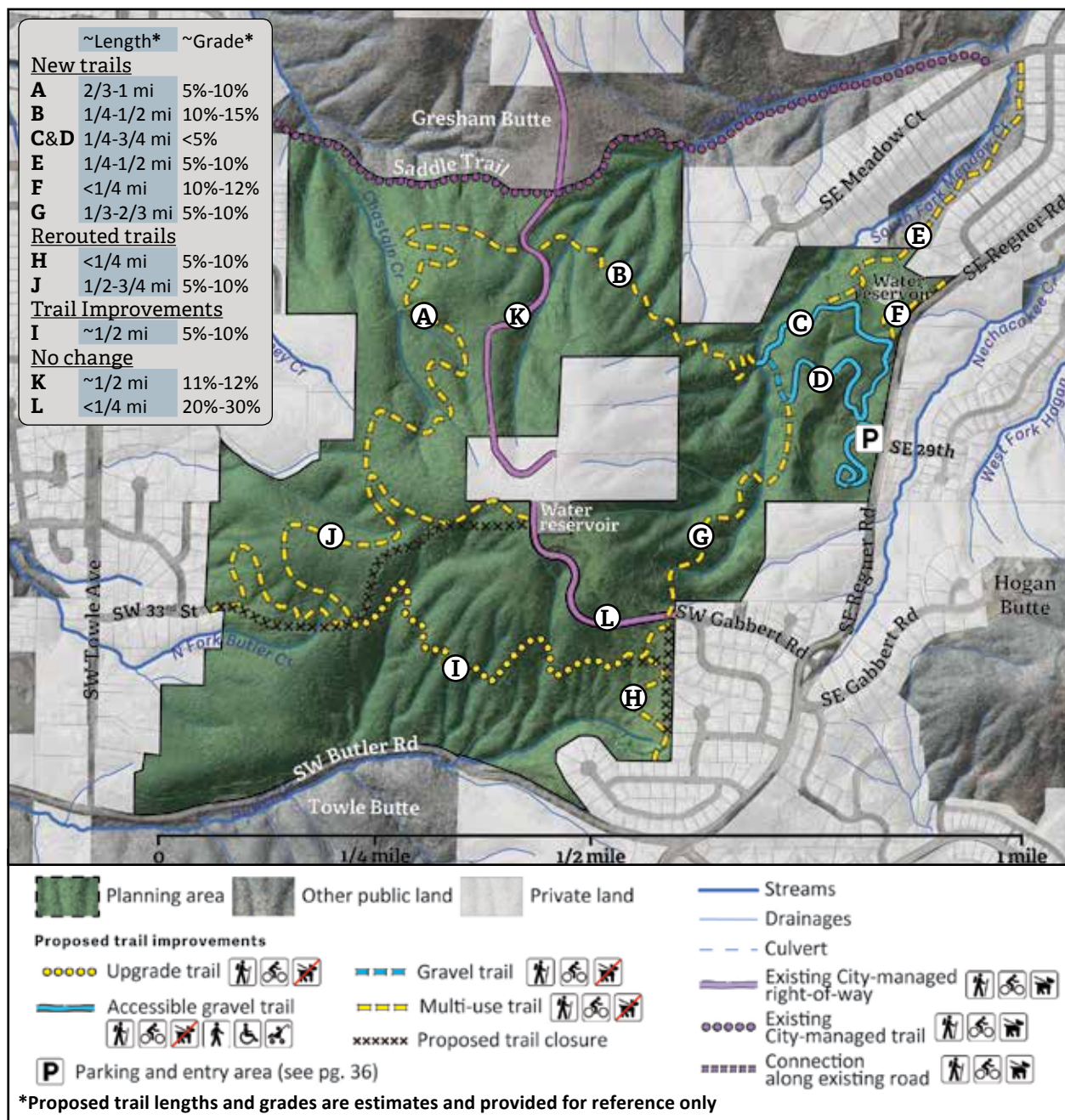
Proposed trails are conceptual alignments and should be adjusted based on more detailed information, and modified based on site conditions at the time of construction.

Decommission social trails throughout the site

To support habitat protection on the site, any existing trails that are not included in the master plan, as well as new trails that develop over time, should be removed and restored with native plant cover.

Top of Gabbert Butte

Benches should be included at the top of Gabbert Butte to provide a place to rest. Seating should be focused on nature and away from the water reservoir. Consider a sign or compass to orient people to cardinal directions or in the direction of nearby buttes.



© ④ Accessible Nature Trail

A half-mile long nature trail loop is recommended from the entry area. Interpretive information should be included along the trail. The trail should provide universally accessible access to the butte's forest to benefit people with limited mobility, wheel chairs or strollers, and families preferring a gentle walk. At a minimum, the trail should provide a route that meets Architectural Barriers Act (ABA) guidelines, to a destination like a bridge over South Fork Meadow Creek, or a viewpoint overlook.

To complete the loop, a relatively short (~400 ft) steeper section of trail could make use of an

existing road grade, minimizing cost and natural resource impacts as compared to a route with a switchback. More detailed topographical survey is needed to determine whether a route following existing road cut could be designed to meet ABA guidelines. This option should be explored in detail during the design and engineering phase with the goal of making the entire loop fully accessible.

Regardless of the feasible trail grade, the entire loop should have consistent firm and stable surfacing and information should be provided about challenge levels and trail grades that can be expected along the trail.

Ⓐ West connection to Saddle Trail

A new gentle to moderate grade trail is recommended on the northwest side of the butte to connect existing trails on Gabbert Butte to the Saddle Trail. The trail should connect to the north right-of-way trail near its junction with the Saddle Trail. A connection immediately north of the private parcel was considered, but because the right-of-way trail is very steep, providing an alternate route is recommended. To minimize confusion at the Saddle Trail junction, the trail should connect to the south of the Saddle Trail junction.

Ⓑ East connection to Saddle Trail

A new moderate grade trail is recommended to connect the proposed parking lot to the Saddle Trail on the northeast side of the butte. This trail should connect from the accessible nature trail (C) to the north right-of-way trail south of the Saddle Trail junction. This trail will require several stream crossings. The steep slopes and stream crossings in this area will likely require the evaluation by a geotechnical engineer when developing the trail alignment and design.

Ⓒ South Fork Meadow Creek trail

A new moderate grade trail is recommended on the south side of South Fork Meadow Creek. This trail would pass behind existing residences and provide a different and longer loop experience and additional access from SE Meadow Court.

Ⓓ Connection to SE Regner Road sidewalk

A trail is recommended to connect the proposed entry area to the existing Southeast Regner Road sidewalk.

Ⓔ Connection to existing trails on Gabbert Butte

A new gentle to moderate grade trail is recommended to connect the proposed parking lot to the existing trail network on the south side of Gabbert Butte. This trail will require a stream crossing.

Ⓗ Reroute fence line trail (Trail H)

It is recommended that Trail H be moved away from the property line and meandered in order to reduce trail grade to between 5% and 10%, and improve trail tread condition and drainage. Realignment this trail also improves the trail experience and privacy for adjacent neighbors. The southern section of this trail crosses a wet area and it is likely that boardwalk will be needed. Existing trail tread should be decommissioned in a way that provides for future maintenance access.

Ⓐ Improvements to contour trail (Trail I)

Maintain the existing trail alignment and identify segments of this trail to upgrade in order to reduce erosion and improve drainage while protecting amphibian habitat and maintaining an average 5% slope. Drainage crossings should be evaluated.

Ⓙ Reroute water line trail (Trail J)

Re-route this trail to lengthen the trail, reduce slopes to an average of 5% to 10%, improve trail experience, and reduce erosion and trail widening. Existing trail tread should be decommissioned with low growing native vegetation that does not impede future maintenance access. Due to topography near the trailhead, and concerns from adjacent residents, the re-routed section of trail should begin at least 100 feet from the trailhead at Southwest 33rd Street so that the new trail maintains an adequate distance from adjacent property, and minimizes views of homes. Because the existing trail has a steep grade, the existing trail should be redesigned to also reduce cycling speed in the section of existing trail that will remain.

On-street connection to Hogan Butte

From SW Gabbert Road a route to Hogan Butte Nature Park should be marked. Crossing SE Regner Road at SW 36th Street, makes use of existing sidewalk on SE Regner Road between SW 36th and SE Gabbert Road. A pedestrian crossing and sidewalks along SE Regner between SE and SW Gabbert Roads should be considered when the planned intersection improvements at SE Gabbert and Regner Roads are completed.

Habitat protection and restoration

The plan supports the Site Conservation Plan for the East Buttes by providing meaningful access to over 150 acres of forested nature park north of Butler Road, while minimizing access and habitat fragmentation on over 400 acres of protected natural area south of Butler Road. The following recommendations support habitat protection and restoration. Where possible, it is recommended that restoration planting occur in advance of the parking lot and entry area construction in order to allow plants time to become established prior to the new nature park opening.

Forest health assessment

Metro is in the process of conducting a forest health assessment for the project area. Metro and the City will coordinate to incorporate recommendations into the design and engineering phase of the project and future management of the site.

Invasive plant identification and removal

In general, the forest understory on Gabbert Butte is relatively healthy with a diversity of mature native plants. There are some areas along existing trails and areas with little tree canopy where weeds are common, particularly near existing trailheads, and along the maintenance road to the top of the butte. During design and engineering, Metro's Site Stewardship Plan will be updated to include the entire project area. General site restoration will include invasive species survey, blackberry cutting and spraying, holly and weedy tree treatment, ivy and other invasive plant removal and revegetation. Work will also include hazard tree removal along trail alignments and survey of property line encroachments, restoration planting.

Wetland resources

It is recommended that prior to entry area construction, invasive plants growing around the wetland are evaluated and removed as appropriate. This work should occur as soon as possible, with the goal of establishing dense native protective plantings to keep people, invasive pet releases, and illegal pet traffic out of wetlands. A buffer of protective planting should be established around the wetland as soon as possible, so that when construction of entry area occurs the wetland buffer planting will provide a visual and physical barrier to decrease desire for access to the wetland, and reduce risks from access.

Amphibian habitat

Downed wood and a thick layer of forest duff are important for amphibian habitat. In areas where trees and understory plants have been established more recently, downed and standing dead wood should be included to enhance amphibian habitat.

Parking lot stormwater management

Parking lot stormwater management could offer an opportunity to display sustainable stormwater management practices like pervious pavement and bioswales, or to use the stormwater generated by the parking lot to create a stormwater facility that could provide an amphibian breeding area. Care should be taken that this does not attract amphibians to a place that doesn't hold water long enough to support breeding. The opportunity to design the stormwater management area to provide a wetland experience that blends into the site should be explored during design development.

Existing stormwater treatment area near SW 37th Terrace

There is an existing stormwater treatment area in the southeast corner of the site off of SW 37th Terrace. The area that the trail goes through remains wet during much of the year. There is an opportunity to create a boardwalk at this location, and potentially enhance breeding habitat in this swale by making the depression deeper. It is thought that amphibians do attempt to breed in this area, but that the ponds dry out too early in the season for breeding to be successful. This is an opportunity to enhance the area's natural resource value and provide interpretive information for visitors.

Interpretive themes

In addition to the themes associated with the site's habitat, several other themes emerged as opportunities to share stories and experiences that help visitors understand and connect with the site.

Acknowledging Indigenous people

Interpretive signs should acknowledge that this land is the ancestral homelands of Indigenous people, and that Gabbert Butte Nature Park, and the broader landscape we inhabit in the East Buttes are part of the homelands of Indigenous people including the Multnomah, Clackamas, Tualatin, northern Molalla and Chinook who have lived here in relationship with this land since time immemorial.

Plant identification

Plant identification information is recommended along the accessible nature trails. When people were asked about things that make them feel connected to nature, one of the things that ranked very highly was plant identification on site. We heard from people who have moved here from other places, that northwest plants can remind them of plants they knew back home, and that learning about local plants can nurture connection with the land. People shared interest in learning about the ecological role that plants play, as well as medicinal, edible and traditional uses of plants.

Water

Small streams, often dry in the summer, and located geographically far from the main river, make up most of the stream miles that capture and carry waters downstream. Often called headwater streams, their health directly impacts the water quality in Johnson Creek and other larger streams. When they originate in cool, forested slopes such as Gabbert Butte, they deliver clean, cold water to our salmon streams in the lower watersheds. Protecting these drainages on Gabbert Butte is a priority of the site design and as visitors pass over them they provide opportunities to help the community connect the importance of forested slopes shading small springs and streams to health water quality downstream.

Amphibians

Amphibians need forests! That might seem odd to many visitors, but several of our common amphibians need both water and forests to thrive. Gabbert Butte offers the opportunity to tell the story of amphibians living in and among forested wetlands and forested slopes.

Art

As part of the Parks and Nature Percent for Art program, a percent of the construction budget is to be dedicated to public art at this site. Opportunities include: working with local community partners, to highlight local artists, working with Indigenous community members or engaging Gresham High School's art students to contribute to and participate in the art development. Art could be integrated with the interpretive themes identified in the recommendations.

Several ideas for art originated during community engagement and should be explored further with the community during design and engineering. One idea is locating art on bridges to highlight the theme and importance of water to the site, people and wildlife. Another idea is to integrate stories and storytelling into art. For example sharing stories from a variety of traditions about a theme that is important to this site, such as water, frogs or salamanders, a plant or tree, or mushrooms. These types of themes are relevant to most places and cultures around the world, and could serve as a shared connection between Gabbert Butte, far-away places and many different cultures.

8. Implementation

Phasing

The access improvements identified in the master plan will be implemented through a phased approach.

Entry area

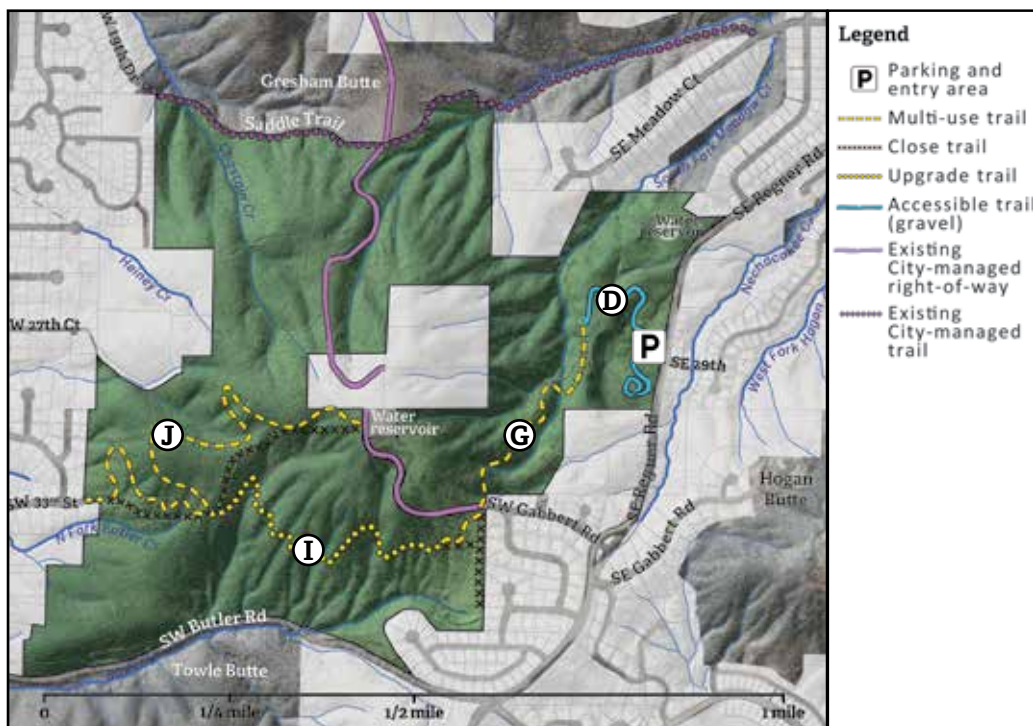
For the entry area, the first phase will focus on enabling safe, code-compliant public access to Gabbert Butte. Examples of things likely to be included in Phase 1 development include: parking, restrooms, automatic gates and security elements, multi-lingual signs, accessible nature trail and potentially some picnic facilities. When additional funding becomes available, features such as additional site interpretation, remaining picnic facilities, gathering areas, and other amenities can be added.

Trails

For trails, the first phase of construction will focus on connecting existing trails to the proposed parking area as well as improving and realigning existing trails to address safety concerns and long term trail sustainability, as shown in the plan below. As additional resources become available, Trails A, C and F are high priority connections to complete. New information should be incorporated into trail prioritization as resources become available.

Permitting

The site is within the City of Gresham, and will need to meet development requirements and obtain development permits from the City.



Phase 1 development

Anticipated range of construction cost

A conceptual level cost range estimate was prepared based on elements shown in the draft master plan for the park entry area and trails. The estimate is based on the diagrammatic plans and assumptions have been made for materials, finishes, and construction methods. The construction estimate is based on 2019 unit costs for each specific work item.

	Cost range	
	low	high
Staging/Erosion Control	\$21,821	\$25,457
Demolition	\$45,826	\$53,463
Salvage And Recycling	\$2,250	\$2,625
Earthwork	\$68,825	\$80,296
Parking Lot Paving	\$86,400	\$100,800
Entry Area Paving and Rock Walls	\$54,992	\$64,157
Masonry & Rock Walls, Fences And Gates	\$10,080	\$11,760
Planting, restoration and mitigation	\$130,206	\$151,908
Structures (restroom, picnic shelter)	\$193,500	\$225,750
Site Furnishings - Entry And Day Use Area	\$82,575	\$96,338
Entry Area Signs	\$27,900	\$32,550
Utilities	\$172,620	\$201,390
ROW/Street Frontage Improvements	\$270,000	\$315,000
Trail C: Accessible nature trail (gravel, 5' wide)	\$70,666	\$82,443
Trail D: Accessible nature trail (gravel, 5' wide)	\$167,562	\$195,489
Trail A: (west side connection) soft surface	\$62,640	\$73,080
Trail B: (east side connection) soft surface	\$180,094	\$210,109
Trail E: (Meadow Creek Trail) soft surface	\$15,682	\$18,295
Trail F: (Regner connection) soft surface	\$11,880	\$13,860
Trail G: (Entry area to Gabbert Rd) soft surface	\$120,780	\$140,910
Trail H: fenceline trail) soft surface	\$71,280	\$83,160
Trail J: (realign water line trail) soft surface	\$44,640	\$52,080
Trail I: (Salamander trail) soft surface trail repair	\$11,628	\$13,566
Trail decommission	\$3,564	\$4,158
Trail signs and furnishings	\$29,430	\$34,335
Direct construction costs	\$1,956,839	\$2,282,979
3.5% inflation for 3 years	\$212,743	\$248,200
Contingency + contractor overhead (40%)	\$867,833	\$1,012,472
Subtotal	\$3,037,415	\$3,543,651
Soft Costs (30%)	\$911,224	\$1,063,095
Total Costs	\$3,948,640	\$4,606,747

9. Operation and maintenance

Management responsibility

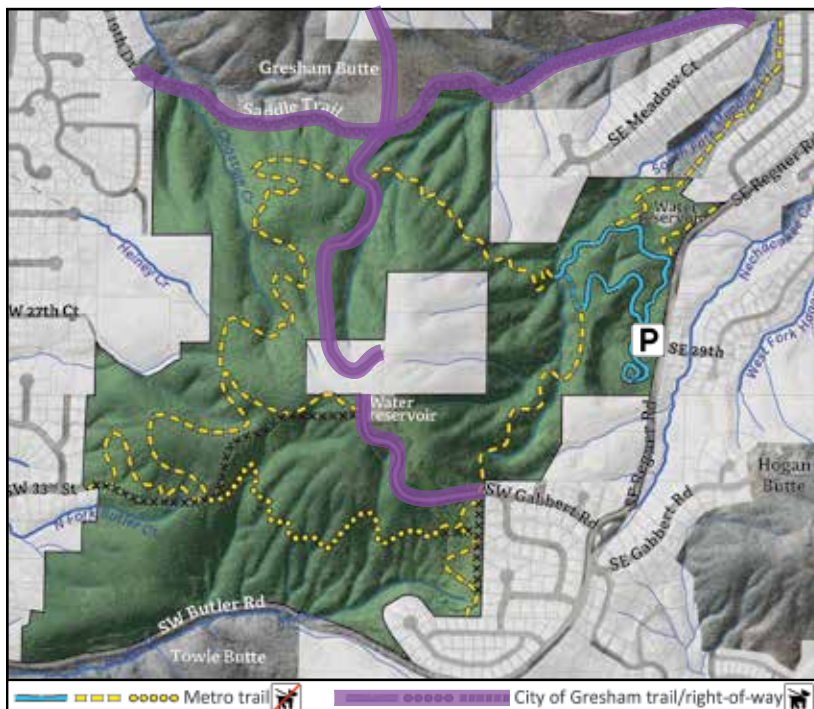
The City of Gresham and Metro both currently manage land within the project area. Once the site has been developed and is opened as a nature park, Metro will be responsible for operating, managing and maintaining developed nature park amenities. Metro will also be responsible for management of the land and natural resources on Gabbert Butte, with continued coordination with City staff.

Park regulations

All rules and regulations at Gabbert Butte will be consistent with Metro's Title X, which provides rules and regulations governing the use of Metro's Parks, Cemeteries and Natural Areas by members of the public. Metro's rangers educate the public and enforce rules and regulations.

Pet policy

Metro's Title X pet policy will be enforced consistent with all other Metro-managed natural areas. There are two sections of City of Gresham right of way that intersect the site. These rights-of-way are managed and maintained by the City, and therefore Metro's pet policy does not apply in these rights-of-way. For Gabbert, this means that on the map shown below, people will be allowed to walk their dogs, on leash, on the trails highlighted in purple. In all other area within the master plan boundary, Metro's pet policy will apply and be enforced.



There are two sections of City managed and maintained right-of-way that intersect the site. Metro's pet policy is not enforced in these rights-of-way. This map highlights in purple where people will be allowed to walk their dogs, on leash. In all other areas within the nature park boundary, Metro's pet policy will apply and be enforced.

Signs

For public security and safety, hours of operation and regulatory signs will be installed at each access point. An orientation map of the natural area will be installed at the parking area to assist visitors and emergency and police response teams with way-finding. Regulatory signs will include public use restrictions on pets, fires, camping, motorized vehicles, hunting, smoking, intrusive noise, plant collecting and other uses outlined in Metro's Title X code.

Safety and security

Access Control

Vehicle access will be controlled to prevent after hours use. The vehicle entry to the parking lot will be controlled with an automatic gate, which will lock at dusk and open at dawn. The installation of the access gate will follow Gresham Fire & Emergency Services Fire Access Gate Policy. Automatic locks will be included on restrooms and will also be locked at night. The restroom will have a Knox Box installed in accordance with Gresham Fire & Emergency Services Lockbox Policy. In areas where the site is adjacent to private property boundary markers will be installed to clearly delineate the public/private edge. Trails that are not part of the adopted trail network will be decommissioned. Neighborhood trail access points will be clearly marked with a map and natural area rules and regulations.

Fire and emergency management

Emergency management at the site will be coordinated with the City's emergency response services. Additionally, an Incident Action Plan will be developed in coordination with local agencies, to assist Metro and cooperating agencies responding to a fire or an emergency at the site.

Metro follows the Oregon Department of Forestry Industrial Fire Precaution Levels and restrictions as well as closures deemed necessary by the local fire authority. Metro is committed to working with local emergency response and fire prevention and suppression agencies. This includes maintaining good communication and annually reviewing the Incident Action Plan for the site.

Monitoring and maintenance

Visitor engagement

It is anticipated that a park worker or seasonal staff would perform daily maintenance, while park ranger staff will visit the site several times a week to engage with visitors. Ranger staff will welcome visitors, monitor trail use, and perform enforcement activities.

Park facilities and amenities

Routine maintenance of the park will include: cleaning restrooms, litter pick-up, walking the accessible nature trail, and general monitoring. Seasonal maintenance of the park facilities will include upkeep of the restroom building, benches and picnic tables, signs, and mowing of pasture grass.

Trails

Routine trail maintenance on a year-round basis will improve trail safety, and will prolong the longevity of the trails. The trails should be monitored on a regular schedule to identify trail problems early, and to catch and decommission “social” or “demand” trails. The trails will be walked routinely to remove litter and identify potential areas of erosion and/or trailbed failure.

During the first year following construction of the trails, more frequent inspections should be completed to review the trailbed, drainage features and the potential for erosion. These inspections should occur following the first heavy rainfall events, and especially during the late winter months when the ground is saturated. Ongoing trail maintenance activities will typically include clearing the trailbed and trailside vegetation to keep passages and selected views open, maintaining drainage features, bridge and culvert clearing and upkeep, litter and illegal dumping clean up, sign replacement, and closing “social trails” through the use of natural barriers and vegetation.

Natural area management

After initial site restoration, ongoing natural area management is expected to include, invasive plant control especially near trails, and along the perimeter of the property, monitoring for hazard trees and hazard tree removal, and monitoring for and removing illegal trails, and trail network maintenance.

Adaptive management

Once the project is built, Nature Park and trail use will need to be monitored for appropriate use, and to make sure that they function as intended. The trails and site features should be modified in the future to adapt to new information, new site conditions and better understanding of about how people and wildlife use the site.

Metro staff will proactively monitor for potential issues such as: unauthorized trails, conflicts between different types of user groups and soil erosion. If issues are found, Metro may adjust its approach to managing the site. Possible responses include activities such as: decommissioning unauthorized trails, implementing seasonal trail closures or alternating daily or seasonal trail closures by user type.

Multi-use trails

All trails at Gabbert Butte are recommended to be shared for hiking and off-road cycling use. The use of these trails should be monitored to identify any potential conflict areas.

Annual operation & maintenance cost

Park facilities and amenities

The addition of this nature park to Metro's portfolio is expected to require an additional annual investment of 0.6 FTE of ranger staff time, plus additional budget to cover costs of fuel, materials, utilities and other miscellaneous items.

Natural area management

Ongoing natural area management to support the future nature park is expected to add an additional 0.25 FTE Natural Resource Technician time, and require additional annual budget of about \$25-30,000 based on 2019 costs. This covers the anticipated cost of ongoing invasive plant control, hazard tree monitoring and removal, and consistent removal of social trails and the associated planting and restoration.

10. Partnership opportunities

Metro will operate, manage and take care of the Nature Park once it is established. Metro and the City will continue to partner on design, engineering and construction of the site as well as future maintenance. In addition, the two agencies should consider opportunities to jointly engage with neighbors, community members and the public on long term programming and site base engagement like tours, celebrations, volunteer parties and other efforts. Partnership opportunities for working together through project implementation and once the Nature Park is established include, but are not limited to the following.

Indigenous community

Partnerships with local Indigenous community organizations as well as local Tribes should be explored.

Nature park ambassadors

There is an opportunity to continue working with community organizations and leaders we have built relationships with through Connect with Nature to be liaisons and park ambassadors for their community.

Amphibian monitoring and conservation

A partnership could be centered on this new Nature Park and monitoring amphibian populations as well as improving their habitat. Several species of salamander, as well as Northern red-legged and Pacific chorus frogs could be a focus of potential new partnerships. These could include community volunteers as well as conservation organizations working in this area.

Volunteers

There is an opportunity to engage the neighbors to both be stewards of the site, and to actively participate in planting, restoration and monitoring activities. Throughout public engagement, people expressed a desire to learn about the plants of the area. There is an opportunity, with interest from volunteers to plant native plants and work with the community to maintain a plant demonstration area. This would need to have a champion from the community in order to be successful.