

City of Lake Oswego

# Iron Mountain Park



12.15.15 | Site Analysis Report



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# Site Analysis



## Site History

Iron Mountain has a deep significance to Lake Oswego and the surrounding region due to the discovery of iron in the hills around Sucker Lake (now Oswego Lake) in 1861. This discovery eventually allowed for the region to stop relying on iron shipped around the Horn of South America and created an industry that helped shape the area. The incorporation of the Oregon Iron Company in 1865 and the construction of the first blast furnace in 1867 (at what is now George Rogers Park) necessitated the need for raw materials.

In 1867 operations began at the Prosser Mine on the south face of Iron Mountain. The mine was named after Henry and Mary Prosser on whose Donation Land Claim it was located. Mary Prosser later leased, and then sold, the property to the Oswego Iron Company. During the 27 years that the mines were worked, ownership of the company changed twice. In 1878 it was acquired by the Oswego Iron Company and in 1882 it was sold and reincorporated as the Oregon Iron and Steel Company. Mining ceased in 1894 when mounting debts, compounded by a national economic crisis, forced the furnace to shut down.

The Prosser Mine was a drift mine, meaning ore was extracted by digging horizontal, rather than vertical, tunnels into the mountainside. During the years the mine was worked, four tunnels were driven into the mountain side. Lateral tunnels or “drifts” created a lattice of open areas called “rooms.” The miners left pillars of untouched

rock to support the roof. After all the ore in an area had been mined, the pillars were removed starting at the farthest point from the entrance. This allowed ore in the pillars to be collected, but it was dangerous as the ceiling collapsed. Entrances to these mined-out areas were sealed off. Small rail cars filled with ore were drawn by cable to the entrance and tipped into a bunker. Finally, the ore was sifted into two grades and hauled in rail cars down to the furnace.

The ore road now known as the Iron Mountain Trail is one of the oldest roads in Lake Oswego. It is almost 60 years older than Iron Mountain Boulevard. The road traverses the south face of Iron Mountain from Glen Eagles Road to Fairway Road. It originally ran all the way to the furnace, across the present site of the golf course and down the south side of A Avenue. Before this road was constructed, ore was winched up the mountainside and hauled to the furnace by a roundabout route. The new wagon road across the face of the mountain was built around 1878 by C. W. Burrage, City Surveyor of Portland, who also engineered part of the California and Oregon Railroad. In 1880, Burrage supervised installation of a narrow gauge railroad on the existing wagon road. This made it possible to haul ore to the furnace all year round and in any kind of weather.

Logging on Iron Mountain and other areas helped feed the charcoal pits that fueled the blast furnace. No one is certain, but it appears that the forest on Iron Mountain was cut at least twice between 1850 and today, maybe three times. Logging operations in Oswego continued

long after the iron company went out of business. There was a sawmill on Tryon Creek near Boones Ferry Road that reportedly operated between 1914 and 1916. There were a number of forest fires associated with the logging camps in Tryon Creek in 1914, 1921 and 1922. The Flora Logging Company operated another sawmill in the Foothills area in the 1950s. A 1947 photo shows the south side of Iron Mountain completely denuded of trees.

The natural resources of Iron Mountain Park have been exploited for over 150 years. When the dream of making Oswego the “Pittsburgh of the West” was abandoned, the Oregon Iron & Steel Company became a land holding corporation and went into real estate. To attract new residents, the Ladd Estate Company (the marketing agent for Oregon Iron & Steel) developed recreational amenities like the golf course, which originally extended up the north side of Iron Mountain. In 1928, the company used 1,400 sticks of dynamite to change the course of Springbrook Creek to make way for a polo field at the base of the mountain. A riding arena, clubhouse, and stables were added in 1937. Construction of the Hunt Club facilities dramatically changed the wetland known as Prosser’s Swale or Spring Brook Marsh. The old mine road became a bridle trail for members of the Hunt.

### Previous Planning Efforts

Lake Oswego’s Parks Plan 2025 includes goals of investing in parks and natural area; enhancing stewardship, maintenance and operations; providing recreation opportunities; and filling geographical gaps. The Parks Plan articulates that the ability to experience nature is an essential recreation service. Connecting young people with natural areas was also a key finding of the 2008-2012 Oregon Statewide Comprehensive Outdoor Recreation Plan (SCORP). Developing areas like Iron Mountain Park will help the City address what has become known nationally as “nature deficit disorder”. Providing parking, picnicking, hiking and nature play opportunities with a natural character at this site will continue Lake Oswego’s commitment to providing natural area experiences for its residents.

In 1984, the Iron Mountain Boulevard Park master planning process occurred and planned one parcel (currently where the staging area is) which included habitat viewing, picnicking, trail access, and interpretive opportunities. Additionally in 2014 the Iron Mountain Restoration Plan was completed. It provides a guide for the Friends of Luscher Farm and the City for restoration activities for the park.

The Oswego Iron Heritage Trail connects seven sites linked to the area’s iron industry. These sites are The Prosser Mine at Iron Mountain Park, the Charcoal Pit, the Pipe Foundry, the 1888 Iron Furnace, Worker’s Cottage, the 1866 Iron Furnace, and Oswego Pioneer Cemetery. Interpretive signs at each of the sites provide information about mining and iron making in nineteenth century Oswego. Metro’s regional trail system is planned to expand in this area (Bridgeport to Milwaukie Trail), but the segment along Iron Mountain Blvd. is shown on current planning documents as running along the railroad alignment on the south side of the street. Opportunities may exist to shift the alignment of the trail within the park boundary, which would open up possible additional funding sources and resources for Iron Mountain Park.

ESA Vigil-Agrimis (ESA VA) was contracted by the City of Lake Oswego to delineate wetlands and streams in the lower portions on the east side of Iron Mountain Park in support of planning for future aquatic habitat restoration. Restoration is in the early phases of planning and at the time of this report, no design concepts or alternatives have been developed. Restoration may include culvert upgrades and streambank re-contouring. The design intent is to restore functionality to the stream and meet requirements according to ODSL, USACE and Lake Oswego.

Springbrook Creek is a tributary of Oswego Lake that originates from a residential area west of the site and flows along the extreme southwest edge of the park. Springbrook is a major contributor to Oswego Lake and is in the initial stages of planning for restoration within the Engineering Department. Because of this larger watershed discussion the area associated was not part of the overall project for restoration.





# Site Analysis

## Zoning

Current land use in the park includes open space/passive recreation and wildlife habitat (PNA – Park and Natural Area Zoning). Construction staging for the Lake Oswego Sewer Interceptor Project is currently being provided in the northwest portion of the lower, flatter area of the park. All property surrounding the park is zoned residential. Adjacent land uses include an equestrian center with stables (the Lake Oswego Hunt Club), and single-family residences located west of the Hunt Club and north of the Iron Mountain ridgeline. The park is bordered to the south by Iron Mountain Boulevard. Previous land uses in the study area include farming activity prior to the 1950s, and single-family residences from the 1940s-1950s to 2003-2010. Two of the three houses were removed from the study area between 2003 and 2004 and the remaining house was removed in 2010. Mining operations took place on the ridge from 1867 to 1894

## Topography

The terrain of the lower portions of the park (where the primary park development is planned) is relatively flat with elevations ranging from 122 to 132 feet above mean sea level. The slopes and ridgeline above this area constitute the majority of the park acreage. The overall elevation of Iron Mountain ranges from 300 to 450 feet above mean sea level. The Lake Oswego Hunt Club borders the park to the south and west, and Iron Mountain Boulevard borders the study area to the south and the east. Steep forested slopes continue to the north where the park abuts residential neighborhoods. The Union Pacific Railroad (formerly Burlington Northern) is parallel to and south of Iron Mountain Boulevard.



## Existing Use

Iron Mountain Park was donated to the City in 1963 and currently covers 49 acres of upland, riparian, and wetland habitat. A soft-surface, natural trail system weaves throughout the park. The trail at the top of the hill is a remnant old iron mine rail. There are several other minor trails throughout the park that are either created by resident animals or from human use. Since 1990, the City has used money from an open space bond fund along with other sources to acquire additional parcels for the park (USDOJ 2013, Stee 2015 pers. comm.). The formally recognized group, Friends of Iron Mountain (formerly Friends of Brookside) was started in the early 2000's and provides care and maintenance of the park. Metro and other entities have also worked to acquire land adjacent to the park to increase open space.

For this project ESA will also bring our ecological and biological specialists during the design process. They will inform our design and interpretive interventions to help mitigate the human presence we will be introducing. Additionally, they will help provide a scientific foundation to base any interpretive concepts on, which will provide for a more lasting end product. Planning efforts will be for the entire park, but the majority of the active development will occur in the lower portions of the park on flatter areas adjacent to Iron Mountain Boulevard.

## Flora and Fauna

Five habitat types were observed on-site: wetland, riparian, scrub-shrub, Douglas fir forest, and Oregon white oak forest.

The lower portions of the park consists of an emergent plant communities dominated by bulrush and field horsetail. Dominant shrubs were spiraea and red-osier dogwood. Uplands adjacent to wetland resources consisted of moderate upper canopy cover (55-75 percent cover) of several dominants including Pacific willow, big leaf maple, red alder, Douglas fir, crabapple, and English hawthorn. The shrub and herb strata contained primarily dominant invasive or weedy species, including Himalayan blackberry, English ivy, horsetail, reed canary grass, and herb Robert. Surrounding upland forested areas included the additional species: beaked hazelnut, walnut, and vine maple.

The Douglas fir forest is the largest habitat type on-site with approximately 32 acres covering the steep slopes along Iron Mountain Boulevard. The forest consists



of a relatively even-aged stand of trees dominated by Douglas fir. Sub-dominant mature trees include big-leaf maple, Pacific madrone, and western red cedar. Black cottonwood, Oregon ash, and Pacific willows are located at the base of the slope just east of the wetland. The forest consists of three main vegetation layers: canopy, shrubs/saplings, and groundcover. The forest canopy cover is estimated between 80 to 90 percent, which provides a substantial amount of shade for the understory. The shrub layer is approximately 5 to 15 feet high and is relatively sparse, with an estimated cover of 40 to 50 percent.

The shrub species consist of California hazelnut, vine maple, Indian plum, poison oak, common snowberry, thimbleberry, and serviceberry. The groundcover is dominated by English ivy with an estimated 70 percent cover. Ivy reduces the biodiversity of the forest floor and threatens the long-term health of the forest. Native groundcover species present among the ivy includes fringe cup, sword fern, slender-footed sedge, inside-out flower, and wood strawberry.

The Oregon white oak forest covers approximately 11 acres and is located along the top of the hillside. The main historic trail is a rough dividing line between the oak forest and Douglas fir forest. The oaks are short in stature (20 to 30 feet high) with diameters of 8 to 10 inches. Other trees growing among the oaks include Pacific madrone, big-leaf maple and a few Douglas firs. The dominant shrub species was common snowberry and Poison oak with English ivy as a dominant groundcover species. A small patch of Scot's broom was observed off the trail. Oaks are considered a rare and important habitat in Oregon (ODFW, 2008) because of

the high number of endemic species or species found in association with oaks, such as the acorn woodpecker and the white rock larkspur.

Significant efforts have been undertaken to control invasive species. Invasive species of concern include blackberry, clematis, english ivy, periwinkle, scotch Broom, poison oak, lesser celandine, hydrocotyle, holly, and geranium. Restoration efforts have included volunteer work parties with the Friends of Iron Mountain Park for the past 15 years. The park is also on the invasive species removal program list of sites for treatment.

Wildlife in the wetland includes nutria, great blue heron, and ruby-crowned kinglets. Wildlife observed in the riparian habitat on-site includes several American goldfinches foraging on red alder cones; as well as American robin, Stellar's jay, and spotted towhee. According to information from Parks, rough-skinned newts inhabit the unnamed stream. Newts and chorus frogs are native pondbreeding amphibians, and both species likely breed in the impounded stream sections and/or the permanent wetland. The scrub-shrub area provides edge habitat that is used by several native species. Coyote and black-tailed deer reportedly move through the area early in the morning on a regular basis. Other species observed in the scrub-shrub include downy woodpecker, Stellar's jay, American goldfinches, and Cedar waxwings. Common wildlife species not observed, but expected to occur on-site based on habitat requirements and distribution includes raccoon, garter snakes, opossum, voles, moles and other small rodents. The Douglas fir forest provides extensive foraging and nesting habitat for several common native songbird and woodpecker species including the American robin, Stellar's jay, downy woodpecker, black-capped chickadee, red-breasted nuthatch, and brown creeper. Raptors including the red-tailed hawk, cooper's hawks, great horned owl or western screech owl are expected to use the forest for nesting or roosting. Wildlife species observed in the white oak habitat were similar to those observed in the Douglas fir forest and include red-breasted nuthatch, black-capped chickadee, song sparrow, and black-tailed deer trails. A few raptors, including the American kestrel, turkey vulture, and red-tailed hawk were observed soaring above the oak bluffs.