

Diamond Creek Recreation Area

Multi-Resource Management Plan

Prepared by:



Approved Plan
May 2013



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Introduction

The Diamond Creek Recreation Area (DCRA) encompasses two parcels of land totaling 273 acres northwest of Homer, Alaska. Located within the Diamond Creek watershed, DCRA offers varied landforms and ecosystems—including Diamond Creek and its floodplain, diverse scenery, ecologically significant features like “tree islands” and wetlands, and numerous opportunities for viewing wildlife (including moose, black and brown bears, eagles, spruce grouse, and many others, including the occasional wolf).

The DCRA lies directly west of the Homer Demonstration Forest (HDF) (see map below). Because many DCRA activities and projects will be coordinated with those occurring in the HDF, the management structure of the HDF is briefly outlined in the box at right. The 360-acre, state-owned HDF was established in 1986 after a collaborative effort spearheaded by Homer Soil and Water. The HDF is managed for education, research, forestry demonstrations, recreation, and environmental quality. North of the DCRA lies a 77-acre parcel protected by a conservation easement. Across the Sterling Highway to the west is the 220-ac state-owned Diamond Gulch recreational parcel, which provides non-motorized access along Diamond Creek to Cook Inlet (see www.evostc.state.ak.us/Universal/Documents/Habitat/CI_KENAI

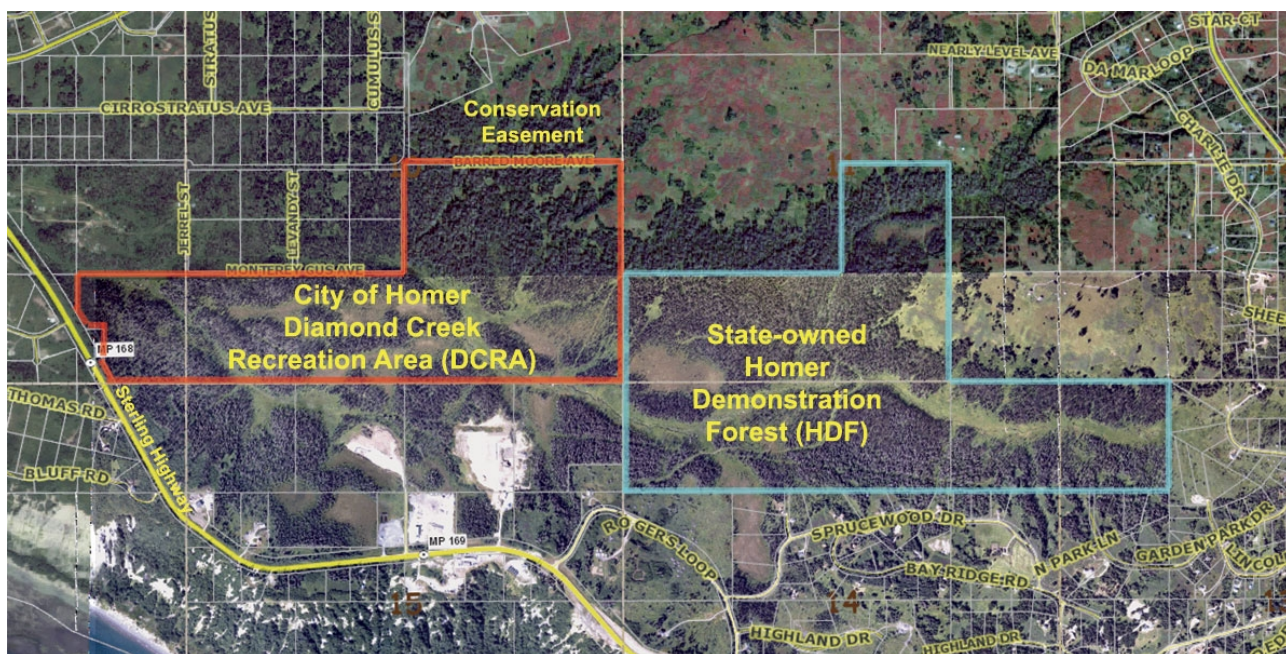
Management of the Homer Demonstration Forest

HDF management responsibility is laid out in an Interagency Land Management Assignment (ILMA ADL 218963), which transfers responsibility for the HDF from the Department of Natural Resources (DNR) Division of Mining, Land and Water Management to DNR's Division of Forestry (DOF). The ILMA, which was renewed for a second 25-year term in 2011, ensures that the HDF is managed for “...developing, operating, and maintaining a demonstration forest for educational purposes,” along with recreational and other uses compatible with that purpose. The plan for the HDF was developed by the HDF Steering Committee, led by Homer Soil and Water. The committee includes representatives from DOF, the Kachemak Nordic Ski Club, the University of Alaska, Cook Inletkeeper, Homer High School, and other groups and individuals with interests in the Demonstration Forest.

[SMPARCELS.pdf](#)). DCRA provides a critical link joining these parcels, complementing in essential ways the watershed functions they provide and the public uses they support.

History of the Diamond Creek Recreation Area

The DCRA is an outgrowth of the “Diamond Creek Project” initiated by Kachemak Heritage Land Trust



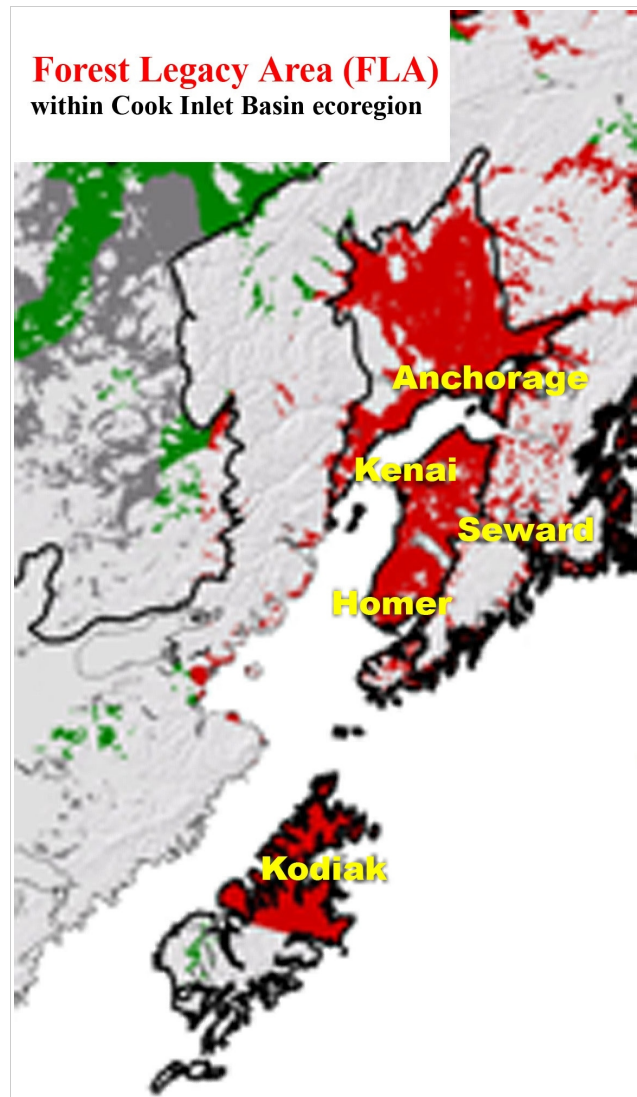
in 2000. This effort focused on protecting forestlands, wildlife habitats, recreational opportunities, and watershed functions in lands within the Diamond Creek watershed. Over the next few years, a coalition of interested groups and individuals joined a community-wide effort led by KHLT to purchase lands in the Diamond Creek watershed threatened with conversion to other uses.

Among lands considered for purchase were two parcels west of the HDF and owned by the University of Alaska (UAA). These encompass forestlands and extensive wetland areas and support ski trails connected to the HDF trail system, which is used by hundreds of skiers each year—including members of school ski teams. The UAA parcels were identified as suitable candidates for acquisition through the Forest Legacy Program.

The USDA Forest Legacy Program (FLP) provides state, regional, and other governments with help in identifying and protecting environmentally important forestlands likely to be converted to non-forest uses. As stated in its Implementation Guidelines (http://www.fs.fed.us/spf/coop/library/flp_guidelines.pdf), the FLP ... *seeks to promote forestland protection and other conservation opportunities. Such purposes shall include the protection of important scenic, cultural, fish, wildlife and recreational resources, riparian areas and other ecological values. Traditional forest uses, including timber management, as well as hunting, fishing, hiking, and similar recreational uses are consistent with purposes of the FLP. Both purchased and donated lands and interests in lands through the use of conservation easements and fee-simple purchase are used to acquire forested land meeting Forest Legacy purposes from willing sellers or donors.*

Each state receives funding and administers its own program in accordance with a statewide Assessment of Need that identifies Forest Legacy Areas (FLAs), see **map at right** for Cook Inlet FLAs. Up to 75% of the costs related to acquiring land or easements can be covered by the FLP, with the remaining 25% provided by match.

The Diamond Creek Project took a significant step forward in 2004 when DNR Division of Parks and Outdoor Recreation (DPOR)—partnering with KHLT—was awarded a match grant from FLP to use towards purchase of FLA lands within the Diamond Creek watershed. KHLT completed purchase of the two UAA parcels in July 2007 using FLP funds and match provided by numerous entities, including The Conservation Fund, Pacific Coast Joint Venture, the Rasmuson Foundation, Kachemak Bay Conservation Society, Kachemak Bay Rotary Club, Kachemak Nordic Ski Club, and many individual donors.



KHLT immediately transferred title of the UAA land to the City of Homer. The city accepted title through an ordinance and a resolution:

ORDINANCE 07-03 of the City Council accepting ownership of property conveyed by the University of Alaska, consisting of two parcels identified by the Kenai Peninsula Borough parcel numbers 173-022-01 and 173-032-29 and designating the use as public purpose for park.

RESOLUTION 10-48: A Resolution of the City Council of Homer, Alaska, approving a conservation easement between the City, as Grantor, and the State of Alaska, for the City-owned land commonly referred to as the Diamond Creek Property.

Resolution 10-48 approved an attached conservation easement, which the city granted to the state Department of Natural Resources (DNR). (The easement is recorded with the state recorder's office, Homer Recording District, document 2010-003220-0.)

The conservation easement outlines both the purposes for acquiring the property and for granting the conservation easement. As stated in the easement, the purposes for acquiring the property “...include protecting environmentally important forest areas that are threatened by conversion to non-forest uses and for promoting forest land protection and other conservation opportunities as well as the protection of important scenic, cultural, fish, wildlife, and recreational resources, riparian areas and other ecological values.” The easement also specifies that the property “...must be used and maintained in accordance with the requirements of the Forest Legacy Program... and in the event the Property is not so used and maintained the Forest Service may require the State to restore the Property.”

The purpose of the conservation easement itself is “...to assure that the Property will be used, maintained, and disposed of in accordance with the requirements of the Forest Legacy Program and other applicable federal laws and regulations and the Grant Agreement... It is further the purpose of the Easement to provide for reimbursement to the State by the City in the event that the Property is not used, maintained and disposed of in accordance with the requirements of the Forest Legacy Program...”

The city retained ownership of the property, including all responsibilities, costs, and liabilities related to its operation and maintenance.

Management of the Diamond Creek Recreation Area

As is clear from the documents referenced above, management responsibility for the DCRA rests with the City of Homer. However, because FLP funds were used in purchasing the land, and a related conservation easement was granted to the state, a plan for the DCRA was needed that would satisfy both FLP and DNR requirements. Homer Soil and Water, in cooperation with the city, arranged for funding from the Natural Resources Conservation Service to conduct a resource inventory and develop an appropriate management plan for the DCRA. (The city is a “cooperator” with Homer Soil and Water.) Because of its role in developing the HDF management plan, as well as in coordinating and conducting various management activities outlined in that plan, Homer Soil and Water understood the value of developing a plan for the DCRA that would be fully integrated with that of the HDF.

This plan is being submitted to the City of Homer for its review and adoption. It is expected that the city will solicit public review of this draft plan before its adoption (as well as later community involvement and support in implementing recommendations). The city is responsible for coordinating approval of this plan with DNR in accordance with conditions of the conservation easement granted by the city to the state—outlined above.

Forest Legacy Program guidelines for the DCRA management plan

APPENDIX F of the FLP Implementation Guidelines cited above provides a *Sample Content of a Forest Stewardship [or Multi-Resource Management] Plan*. Homer Soil and Water referenced this material during development of this DCRA Multi-Resource Management Plan. FLP guidelines specify that plans must:

- be prepared, or verified as meeting the minimum standards of a forest stewardship plan, by a professional resource manager.
- identify and describe actions to protect, manage, maintain and enhance relevant resources listed in the law (soil, water, range, aesthetic quality, recreation, timber, water, and fish and wildlife) in a manner compatible with landowner objectives.
- be approved by the State Forester or a representative of the State Forester.
- involve landowners in plan development by setting clear objectives; landowners should clearly understand the completed plan.

The DCRA plan should also:

- promote the purposes for which the land was acquired, that is: protecting environmentally important forest areas, as well as important scenic, cultural, fish, wildlife, and recreational resources, riparian areas, and other ecological values.
- accommodating a broad array of compatible uses and activities.

Compatibility between management goals for DCRA

and HDF lands is important because the value of the DCRA to the community in part derives from its relationship to HDF environmental processes and recreational resources (as well as its connections to Diamond Gulch property across the Sterling Highway).

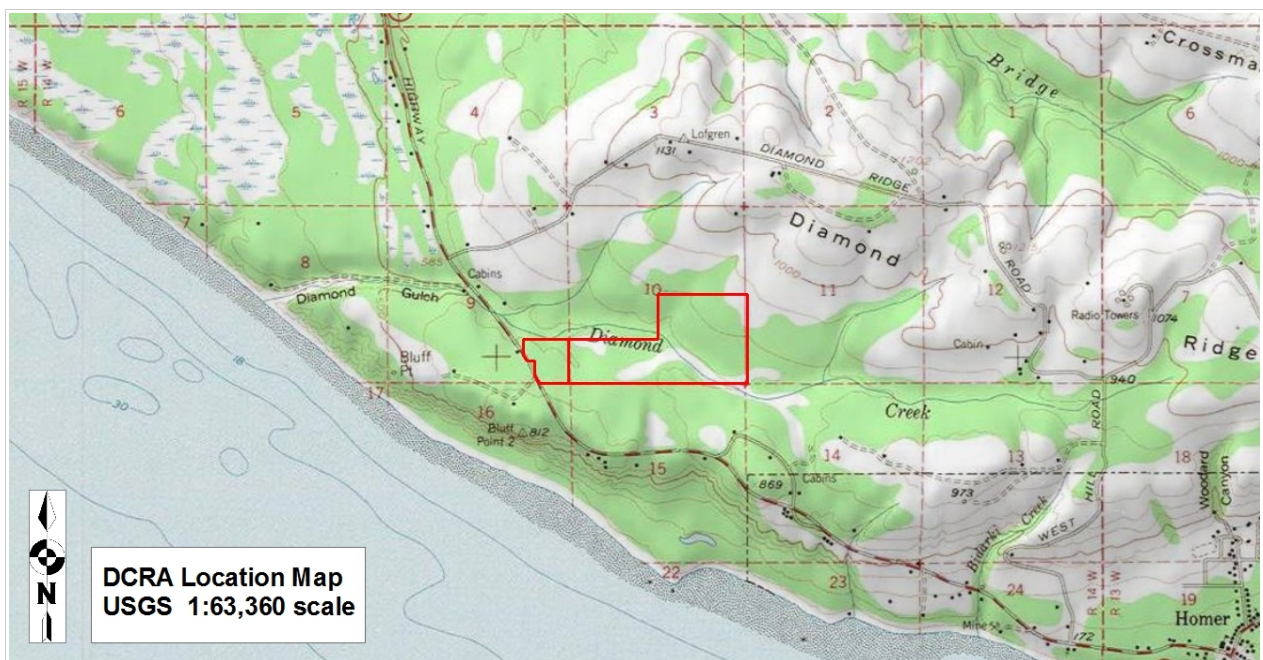
During development of this plan, input was solicited from the Homer Demonstration Forest Steering Committee. Equally important, input was obtained from the State of Alaska, Division of Forestry, and from the Homer Parks and Recreation Advisory Commission.

This document describes the DCRA area and its resources. It also identifies objectives that can guide future decisions related to how the DCRA is used and managed and suggests opportunities for enhancing community benefits from this area.

Site Description

Location and access

The DCRA is located ¼ mile north of the northwest boundary of Homer city limits, in the area known locally as Baycrest Hill. It is composed of a 33-acre parcel on the west and a 240-acre parcel on the east (see map below). The western parcel includes Sterling Highway frontage at several locations on either side of Milepost 168.



The legal description for DCRA lands is:

SE ¼ EXCLUDING THE W ½ SW ¼ SE ¼ SE ¼
SEC09 T06S, R14W – S.M. and

SE ¼ & S ½ SW ¼ SEC10 T06S, R14W – S.M.

The larger (eastern) parcel's southern boundary corresponds to the entire section line on the southern border of Section 10, Range 14 West, Township 6 South, Seward Meridian.

The Kenai Peninsula Borough has assigned Assessor's Parcel Number 17303229 to the western parcel (within Section 9) and APN 17302201 to the eastern parcel (located in Section 10).

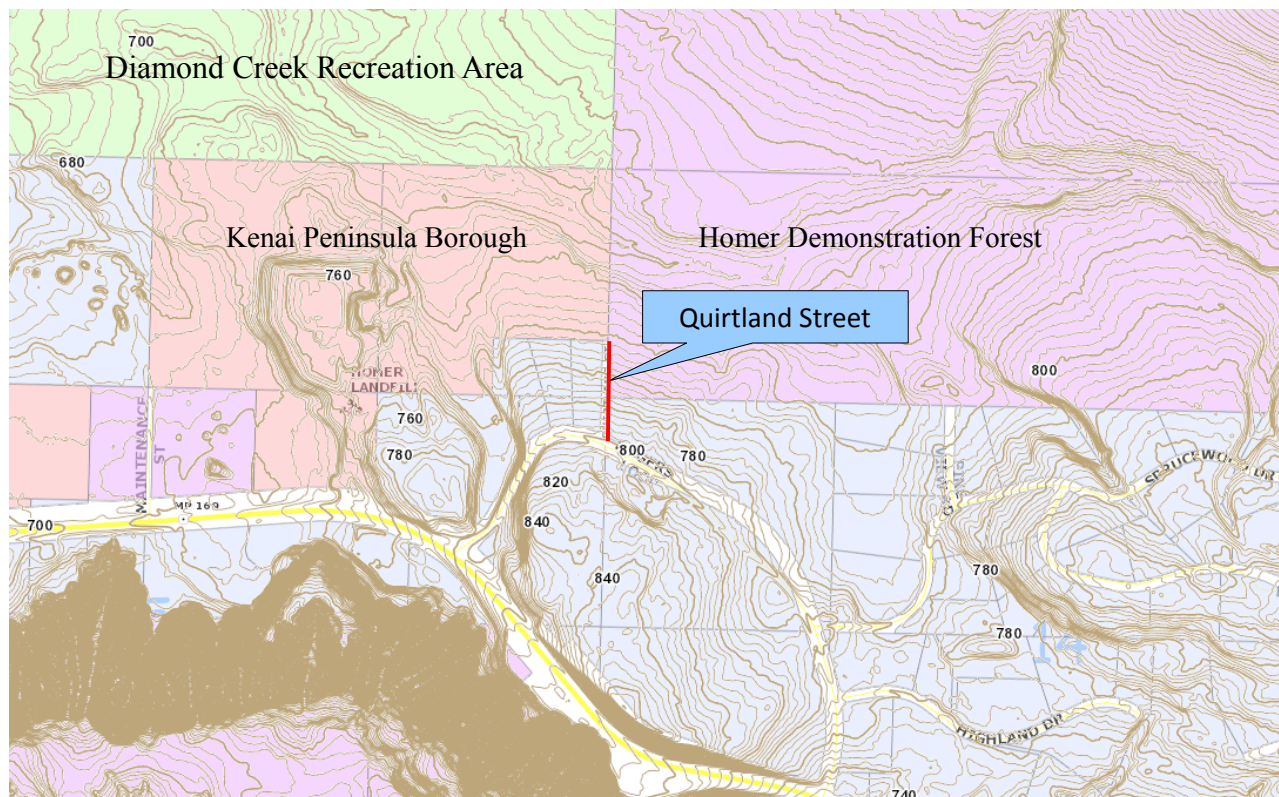
All points within the DCRA are less than 2 miles from Kachemak Bay.

Located near the top of Baycrest Hill, Rogers Loop Road—an old loop of the Sterling Highway—is a road from which the DCRA is frequently accessed. Access off Rogers Loop Road is via a platted but unimproved road about 540 ft long called Quirtland Street and then via a section line between a borough-owned parcel in Section 15 (salmon-colored in the

map below) and Section 14 (the HDF, shown in light purple-color below; blue indicates privately owned land, and green indicates city-owned land).

The Rogers Loop trailhead provides the most popular access to trails within the HDF; it receives moderate-to-heavy use during the winter months (after snow accumulation permits cross country skiing) and light-to-moderate use the rest of the year. Parking at this trailhead is limited to a widened road shoulder with a capacity of 15-20 cars. This is often inadequate during heavy winter use, when overflow parking spills out along the edge of Rogers Loop. The Kachemak Nordic Ski Club (KNSC), in its 2009 Baycrest Trails Strategic Plan, identified expansion of the Rogers Loop parking area as a goal. Signage and nearby restrooms are maintained by the HDF Steering Committee and KHLT, largely with volunteer labor. KNSC grooms cross country ski trails and packs snowshoe trails in the DCRA and HDF.

Further east and off the Sterling Highway, a second trailhead is provided from land managed by the Alaska Department of Transportation (DOT) (the light purple parcel below transected by Maintenance Street). Access from the DOT trailhead involves



crossing borough-owned parcels (again, salmon-colored parcels). KNSC holds a temporary winter-use agreement with the borough for use of ski trails in this area, and while occasional summer use occurs, there are no formal agreements in place regulating non-winter access. Public ownership and ample parking make the DOT trailhead particularly attractive as a year-round access point, although access across wetlands would require careful planning, design, and installation to prevent trail deterioration and wetland damage. Currently, public access via the DOT trailhead is less common than from Rogers Loop, especially during summer and fall when ground conditions are wet. KNSC owns a storage shed at this location and provides trail signage at the site.

Possible access improvements into the DCRA include the expansion of the parking area at the Rogers Loop trailhead (mentioned above), development and expansion of year-round trails through the property, and construction of a new trailhead on the western boundary of the DCRA where it fronts the Sterling Highway.

A new trailhead on the eastern side of the Sterling Highway, on the western edge of the DCRA, offers a unique opportunity to create a highly attractive recreational linkage between the DCRA and the Diamond Gulch trail. As mentioned earlier, the Diamond Gulch trail runs from the west side of the Sterling Highway, along Diamond Creek, and down to Cook Inlet. Many recreationalists time their hike down the Diamond Gulch trail so as to reach the beach as the tide is receding. This allows them to hike south along the coast while the tide is out, with their destination being Bishop's Beach in downtown Homer, a hike along the beach of about 7 miles. Linking the Diamond Gulch trail to the DCRA would provide recreationalists with an extended journey encompassing a greater variety of sights and experiences, combining the rolling terrain, varied plant communities, and wetland habitats of the DCRA with the steep coastal bluffs and tidelands of the Diamond Gulch to Bishop's Beach trail. Diamond Creek already passes under the Sterling Highway through a culvert, and when the Baycrest Hill stretch

of the highway is improved, an enlarged culvert could be installed to permit pedestrian (and wildlife) travel under the Sterling Highway along the creek.

While each of these access improvements poses unique challenges (a more detailed discussion is found under Goals and Objectives), they also present ways to enhance social, economic, and recreational opportunities in the Homer community by improving access to and throughout an extensive system of scenic landscapes and open space.

Motorized recreation conflicts with the forest stewardship goals of the DCRA, and motorized vehicles should be limited to construction and maintenance activities. Motorized vehicle use can damage wetlands, cause erosion, disturb wildlife, and render-groomed ski trails unusable.

Climate

The Homer area experiences a maritime climate—with relatively warm temperatures and high precipitation (see the table below). With the Kenai Mountains to the east and north, Homer is shielded from many storms moving out of the Gulf of Alaska. Proximity to the warm waters of the Pacific helps to moderate temperatures and reduce variations between highs and lows characteristic of areas further inland. Summers are generally cool and moist, and winters are comparatively mild compared to other areas of Southcentral Alaska. The following table shows climatic data recorded at the Homer Airport weather station from 9/01/1932 to 8/22/2012:

	Avg. max. temp. °F	Avg. min. temp. °F	Avg. total precip. (inches)	Avg. total snow (inches)	Avg. snow depth (inches)
Jan	29.1	16.5	2.22	9.6	4
Feb	32.3	18.9	1.81	11.3	5
Mar	35.5	21.3	1.52	9.2	5
Apr	43.1	28.9	1.20	2.9	2
May	50.7	35.7	0.97	0.3	0
Jun	57.1	42.1	0.96	0.0	0
Jul	60.8	46.3	1.56	0.0	0
Aug	60.5	46.0	2.47	0.0	0
Sep	54.9	40.2	3.03	0.0	0
Oct	44.5	31.3	3.13	2.1	0
Nov	35.0	22.8	2.74	7.4	1
Dec	30.1	18.1	2.83	12.1	4
Annual	44.5	30.7	24.45	54.9	2

Given the DCRA's average elevation of more than 600 feet above sea level, data from the weather station (situated about 63 feet above sea level) should be adjusted to reflect higher snowfall and cooler average temperatures. Snow depth and snow water equivalent have been measured at a snow survey site in the Homer Demonstration Forest for over 30 years.

Geology

(See Map 2, Contours)

Glacial processes are primarily responsible for the landscape of the Kenai Lowlands, with glacial deposits overlaying Tertiary bedrock from the Beluga Formation of the Kenai Group. When the glaciers covering the region retreated approximately 17,000 years ago, glaciated landforms were created as moraines, glacial lakebeds and drainageways, and other deposits were left behind. Numerous glacial events occurred within larger glacial periods, the most recent of which is the Wisconsin period. While earlier periods covered the entire Kenai Peninsula, the latest periods did not cover higher elevations. During the Wisconsin period, several major glaciations formed many of the landforms now visible within the region, including kettle ponds and relict glacial lakebeds. One of the Wisconsin period glaciations, known as the Naptowne, is further divided into separate, smaller glacial advances. Of these, the Moosehorn advance was the most influential in shaping the Diamond Creek watershed. Geological evidence suggests that Diamond Creek was once an ice marginal drainageway between moraines, flowing north to the Anchor River. Upon retreat of the Moosehorn glacier, Diamond Creek cut westward through the moraine to empty directly into Cook Inlet (Berg, E.E.-2006).

Soils

(See Map Group 3, NRCS Soil Survey, and Map 4, Soil Drainage)

The Western Kenai Peninsula soil survey was published online in 2005 by the Natural Resources Conservation Service (NRCS) and can be downloaded at: http://soildatamart.nrcs.usda.gov/Manuscripts/AK652/0/WesternKenai_manu.pdf. The survey indicates that the dominant soil types within the DCRA are Spenard peat and Starichkof peat, both categorized as very poorly-drained soils with high acidity (low pH). Properties, features, limitations, and suitabilities of all soils in the survey area are provided in the online manuscript cited

above, as well as from NRCS offices. Appendix ** provides a soil survey report generated for the DCRA area using Web Soil Survey (<http://websoilsurvey.nrcs.usda.gov/app/HomePage.htm>). This report lists acreages of all soil types in the DCRA along with their selected properties and interpretations.

Hydrologic Features and Wetlands

(See Map 5, Wetlands)

The Diamond Creek watershed covers an area totaling 5.35 square miles, with Diamond Creek itself extending over 5 miles from its headwaters to its outlet in Cook Inlet. The DCRA's eastern half is bisected from southeast to northwest by Diamond Creek, and the stream also meanders inside the northern border of its western parcel.

Diamond Creek is an underfit stream, meaning that its current flow regime is insufficient to have created the valley within which the creek now flows. The stream valley was created by much larger flows fed by melting glaciers.

Ten types of wetland ecosystems (plus Wetland-Upland complexes and Disturbed wetland areas) have been identified and mapped in the Kenai Lowlands by the Kenai Watershed Forum (see <http://www.kenaiwetlands.net/>). The riparian corridor created by Diamond Creek is one of four wetland ecosystem types found in the DCR, the other three being Drainageways (these are “relict” drainageways created by glacial meltwater), Kettles, and Discharge Slopes (see Map 5).

Riparian wetlands occur along streams and rivers, and are fed by groundwater, surface runoff, precipitation, and snowmelt. (Many riparian corridors on the Kenai Peninsula are also fed by glacial meltwater.) The Diamond Creek riparian corridor encompasses broad fringe wetlands, with bluejoint grass (*Calamagrostis canadensis*) and Barclay's willow (*Salix barclayi*) meadows. Spruce forests generally cover adjacent slopes.

Discharge slopes are the most abundant wetland ecosystem within the DCRA, occurring over mineral

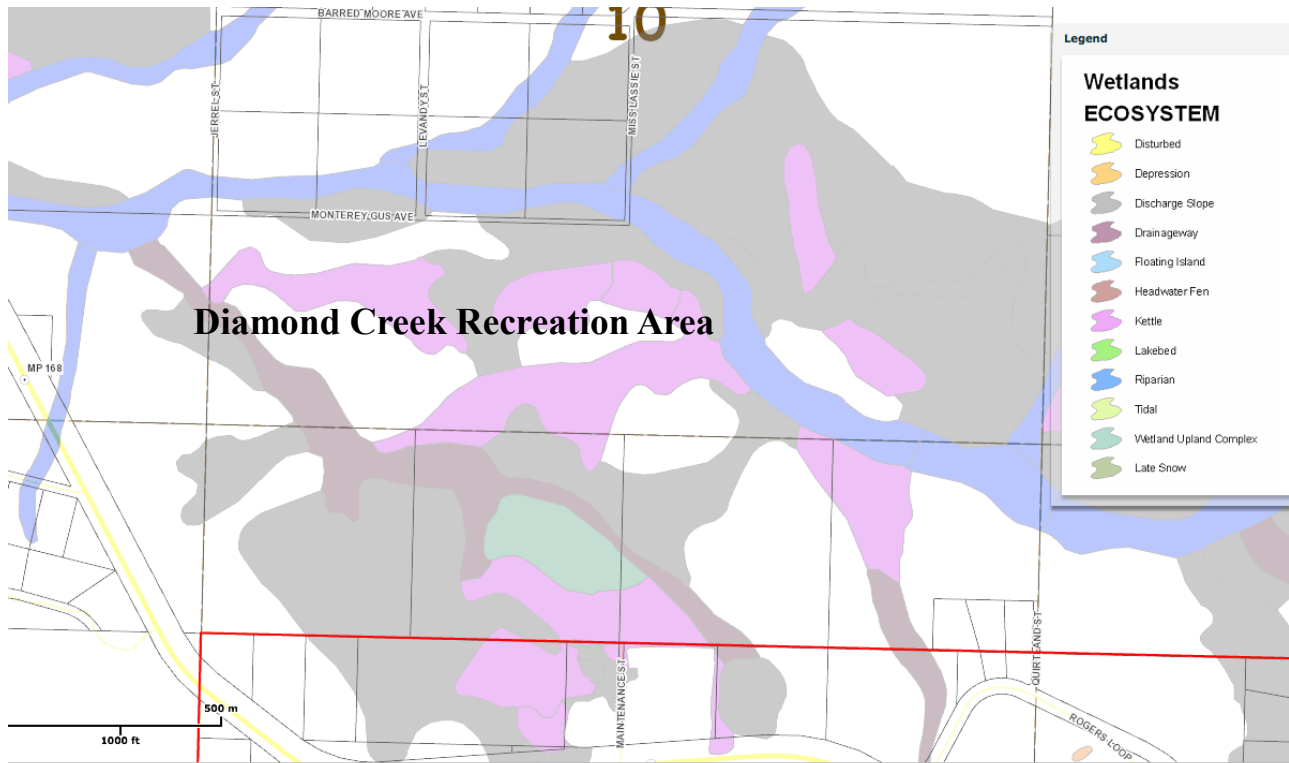
soils in areas of transition from wetlands to uplands and at slope breaks on terraces. These wetlands occupy locations where upslope groundwater is discharged, or where water tables are perched near the surface. Discharge slopes on the lower Peninsula usually feature forested hillsides of Lutz spruce (*Picea x lutzii*), especially at toe-slope transitional areas. The eastern half of the DCRA encompasses large areas mapped as discharge slopes.

Kettle wetlands are found in depressions resulting from blocks of ice being left behind by retreating glaciers. Meltwater streams flowing on top of ice deposit sediments which become broad outwash plains of glacial till. Ice blocks buried within the outwash then melted, leaving depressions known as “kettle holes” in the surrounding sediments. “Kettle and kame” topography refers to a landscape of mounds and basins formed by retreating glaciers. Kames are formed when glacial streams carry sediments into cracks or depressions on surface ice. As the glacier retreats, the buildup of sediments is eventually released, and deposited as hills or ridges. Kettles are usually described as peatlands that form over flat silty plains between kames. Unlike similar “ice-block” wetland formations, kettles are linked to Cook Inlet by a stream or wetland connection. The water table can vary between stable (open water or bogs) and highly variable (up-slope), with grasses and shrubs typically showing dominance. The central portion of the DCRA displays a kettle and kame landscape, with extensive peatlands surrounded by forested ridges.

Relict glacial drainageway wetlands occupy areas where glacial meltwater accumulated and flowed outward. They sometimes support modern, underfit streams that flow through previous glacial deposits. Relict glacial drainageways are differentiated between their hydrologic components and the surrounding landscape. Five types have been identified for the Kenai Lowlands, all generally classified as peatlands with a stable, high water table. The DCRA contains a Type 3 stream fringe drainageway, identified as hummocky or shrubby, and possessing a slightly more variable water table than other glacial drainageways. Plant species found in

this area include: thinleaf alder (*Alnus incana* ssp. *tenuifolia*), dwarf birch (*Betula nana*), sweetgale (*Myrica gale*), water horsetail (*Equisetum fluviatile*), water sedge (*Carex aquatilis*), and bluejoint grass (*Calamagrostis canadensis*). In this case, the relict glacial drainageway sits upon a layer of Starichkof soil between spruce forest uplands.

growth stands of spruce. Consequently, much of the DCRA upland is covered with deadfall. Adequate regeneration is occurring, however, and while varying widely within the immediate area, a good portion (over 50%) of the DCRA has shown moderate to high levels of forest productivity. Stands are uneven aged. Extensive monitoring of the forest within the HDF



Severe flooding occurred in 2002 significantly impacting Diamond Creek and destroying habitats that had supported a population of resident Dolly Varden (*Salvelinus malma* Walbaum). The floods also had a disastrous impact on local beaver populations, destroying the dams that protect them from predation and provide access to food sources.

since the beetle outbreak has shown high regeneration rates as well, although bluejoint grass (*Calamagrostis canadensis*) appears to be increasing in areas where the forest canopy has been opened up by die off and blowdown of trees. Increased bluejoint cover limits survival of small tree seedlings, and can also substantially increase spring wildfire hazard.

Flora and Fauna

(See Map Group 6, Forest Productivity and Map 7, Spruce Bark Beetle Infestation)

Ridges and hillsides in the DCRA support Lutz spruce (*Picea x lutzii*), with black spruce (*Picea mariana*) in forested wetland areas. An extensive spruce bark beetle infestation occurred in the late 1980s and early 1990s, killing many of the old-

The following shrub and groundcover species are common in the area. For detailed descriptions of plant communities associated with each mapped wetland, see http://www.kenaiwetlands.net/plant_community_classification_i.htm.

Shrubs:

alder, *Alnus* spp.
bog blueberry, *Vaccinium uliginosum*
cloudberry, *Rubus chamaemorus*
crowberry, *Empetrum nigrum*

five leaf bramble, *Rubus pedatus*
lowbush cranberry, *Vaccinium vitis-idaea*
northern black currant, *Ribes hudsonianum*
rusty menziesia, *Menziesia ferruginea*
Steven's spirea, *Spiraea beauverdiana*
willow, *Salix spp.*

Forbs, ferns, clubmosses, and grasses:

bluejoint grass, *Calamagrostis canadensis*
elderberry, *Sambucus racemosa*
fireweed, *Epilobium angustifolium*
geranium, *Geranium spp.*
horsetail, *Equisetum*
Labrador tea, *Ledum palustre*
oak fern, *Gymnocarpium dryopteris*
one-sided wintergreen, *Pyrola asarifolia*
shield fern, *Dryopteris dilatata*
Sitka burnet, *Sanguisorba stipulata*
tall Jacob's-ladder, *Polemonium acutiflorum*
watermelon berry, *Stretopus amplexifolius*

Wildlife sightings are a frequent occurrence in the DCRA, which contains critical moose wintering habitat, and also provides a migration corridor for many species. Bears, wolves, lynx, ermines, and other carnivores prey upon the ample number of hares and rodents in the vicinity. The area also hosts a tremendous variety of birds, including eagles, hawks, harriers, grouse, cranes, ducks, owls, woodpeckers, thrushes, corvids, owls, wrens, and finches.

Unofficial sightings of trout fingerlings within Diamond Creek have been reported in recent years, but as previously discussed, no beavers have been observed in the area since the 2002 flood events.

Cultural Resources

The Baycrest ski trails are an extremely valuable resource for the Homer community, providing approximately 35 kilometers of interconnected pathways for skiers and snowshoers to enjoy. The ski trails are also utilized by local schools for practices and events, and often draw visitors from around the region. KNSC, a volunteer organization, has developed and maintained the trails for over three decades. Some of the maintained trails are adjoined to private neighborhood trails, creating an extensive network of recreational access. Continual efforts by

KNSC to improve and expand the Baycrest ski trail system have helped to ensure permanent public access within these surrounding private lands. Trails in the Baycrest area are also frequented by summer-time hiking, mountain-bike, and equestrian enthusiasts.

Goals and Objectives

The Forest Legacy Program requires that lands acquired with FLP funds be used for “recreation, conservation, and forestry uses.” With the adoption of Homer City Council Resolution 07-03, the City designated the Diamond Creek Recreation Area for “public purpose as park land in perpetuity.” In addition, the City of Homer Comprehensive Plan (COH-2009) states that the City will “...strive to identify, acquire, dispose of, or exchange lands to satisfy public recreation needs, acquire land, plan and construct facilities, and identify, protect and preserve scenic and natural areas, such as greenbelts, for recreation enjoyment.”

The conservation easement granted by the City to the Department of Natural Resources ensures that the land's natural resources will be protected and sustainably managed. The State is authorized to take action should any portion of the DCRA be used in ways that do not comply with the Forest Legacy Program. These designations and requirements provide the basis for the general management goals and specific objectives outlined in this section.

Conservation

As described earlier, the DCRA encompasses forested hillsides, riparian zones, and wetlands. Use and management of these resources will be conducted in accordance with FLP and City of Homer guidance. The objectives listed below are consistent with this guidance.

Conservation Objective 1:

Preserve and protect forested areas within the DCRA.

Strategies

Monitor forest health, in partnership with the Kenai Peninsula Borough and the DNR, Division of Forestry. Include the DCRA within any local wildfire risk assessments.

Where appropriate, route non-motorized public access through forested areas so as to promote strategic firebreaks (motorized vehicles are restricted except for maintenance and grooming unless approved by the City).

Conservation Objective 2:

Preserve and protect wetlands and riparian zones within the DCRA.

Strategies:

Plan new routes for public access through the DCRA in a manner and location that minimizes impact(s) to wetlands.

Seek funding for bridge upgrades and maintenance at trail-stream crossings, and for proper trail-hardening through wet areas.

Regulate and minimize non-winter motorized travel through the DCRA except for city-approved management activities.

Conservation Objective 3:

Preserve the natural scenic qualities of the DCRA.

Strategies:

Design and install signage so as not to detract from local scenery with sign height, color, material, or placement.

Provide maps of the area near trailheads, so they are not necessary along public-access routes. Use as few trail markers as necessary.

Encourage users to pack out trash.

Prohibit overnight camping.

Identify and maintain functional landscape and ecological linkages between the DCRA, the HDF, and surrounding lands that have been protected through conservation easements or other mechanisms.

Ensure that the DCRA remains a viable wildlife corridor by protecting important habitat features and avoiding obstructions to wildlife movement.

Recreation

Recreational development within the DCRA should be focused primarily on summer use at this time, since winter access is already well-established. However, certain recreational objectives detailed here will benefit users on a year-round basis. Care should be exercised during all phases of recreational development to protect the environmental attributes of the DCRA, as well as the interests of surrounding landowners.

Recreational Objective 1:

Improve controlled, non-motorized recreational access to the DCRA.

Strategies:

Support efforts to enlarge the parking area at the Rogers Loop trailhead.

Work with the Kenai Peninsula Borough's Land Management Division to formalize year-round access from the DOT trailhead to the DCRA.

Provide a parking area and trailhead facilities at the western border of the DCRA.

Develop a preliminary plan with the AK-DOT, and seek funding, for a non-motorized route across the Sterling Highway near MP 168, in order to extend the recreational corridor to the Diamond Creek State Recreation Site on the south side of the Sterling Highway. (A pedestrian underpass at this location associated with an improved road-stream crossing should be investigated.)

Recreational Objective 2:

Construct summer-use trails within the DCRA.

Strategies:

Develop a summer trail system through and connecting upland areas (“forest islands”) within the DCRA, including a route paralleling Diamond Creek (Map 1). Extend DCRA trails to the Sterling Highway and current HDF trails as shown on Map 1.

Develop summer access from the Sterling Highway-DOT trailhead to the DCRA, with trail-hardening through wet areas.

Plan and develop multi-use “loops” or trails, to include bicycling and equestrian users, where soils and slopes are suitable.

Education

Educational Objective 1:

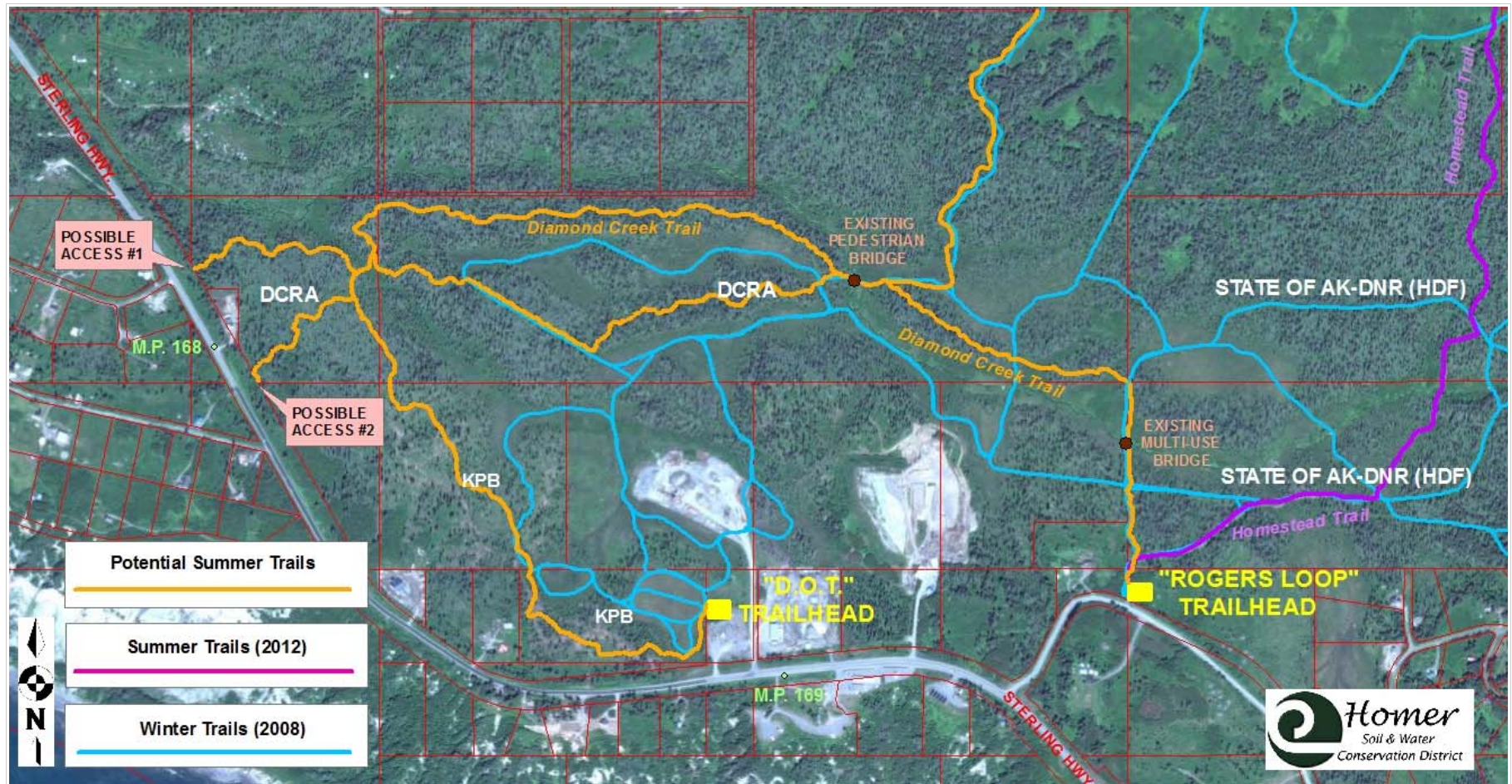
Encourage area schools, local organizations, and area visitors to use the DCRA in sustainable ways that promote education.

Strategies:

Identify areas for observing scenery and wildlife and provide minimal-disturbance facilities (such as widened trail segments, lookouts, benches, or informational signage) to enhance visitor experiences.

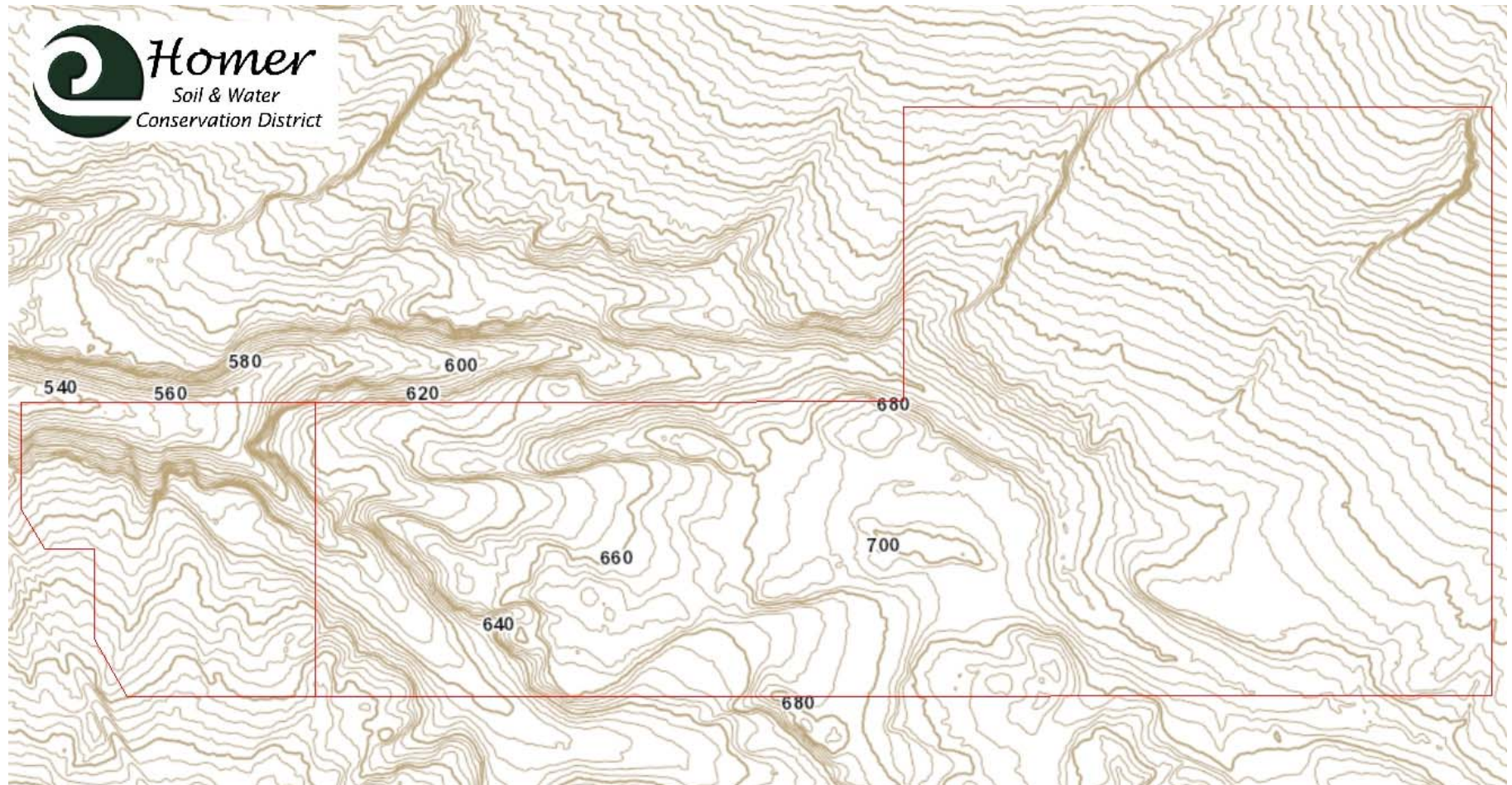
Help to organize and promote educational events on significant dates, or during appropriate community events, to enhance public knowledge of forest and wetland ecology.

Map 1 - Diamond Creek Recreation Area Access and Development

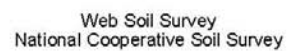


Map 2 – Diamond Creek Recreation Area Contours

4-ft. Contours Data Courtesy of KPB-GIS



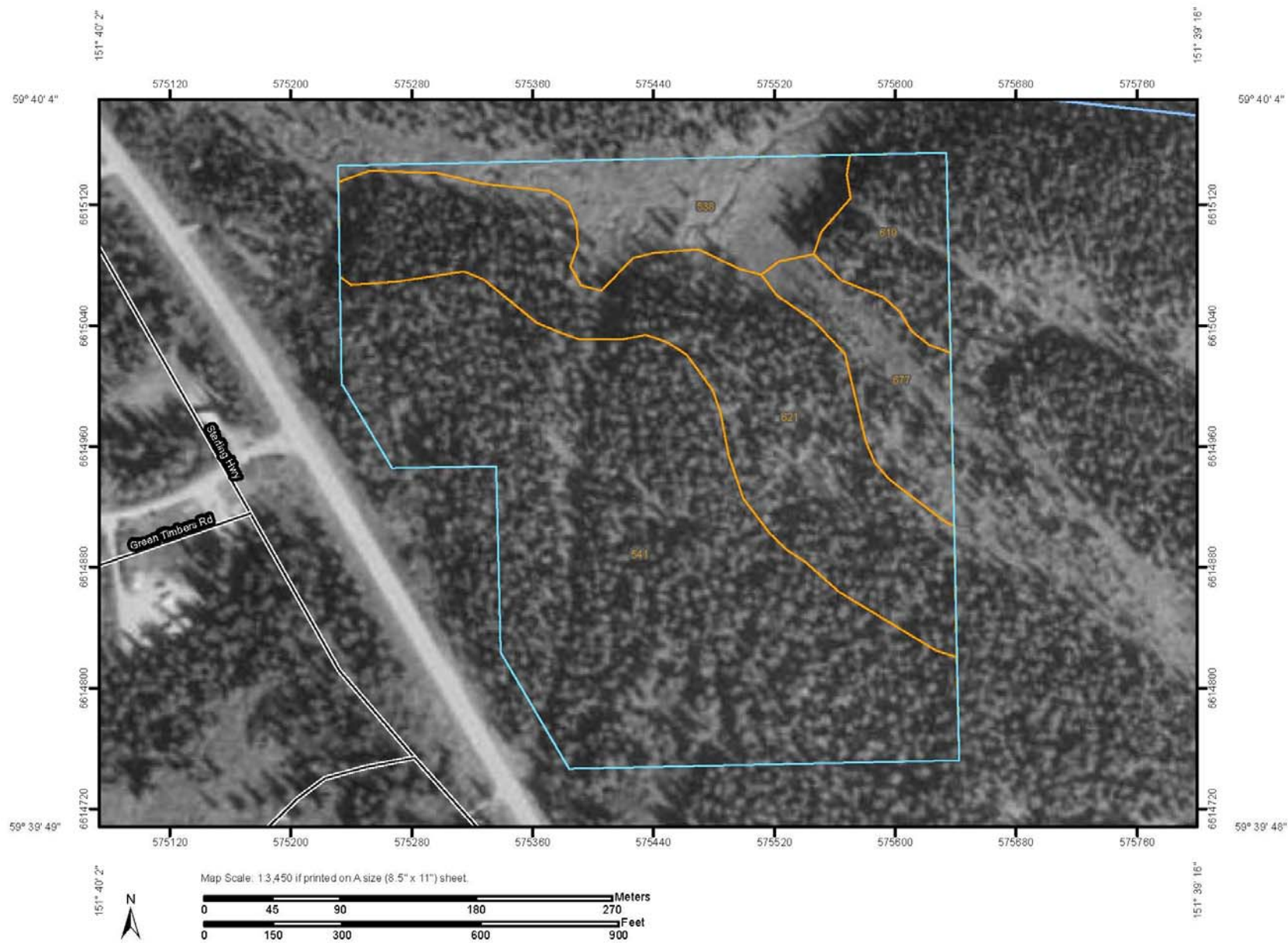
Soil Map—Western Kenai Peninsula Area, Alaska



Map Unit Legend

Western Kenai Peninsula Area, Alaska (AK652)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
538	Coal Creek silt loam, 8 to 15 percent slopes	17.1	7.1%
541	Cohoe silt loam, 8 to 15 percent slopes	0.9	0.4%
573	Kachemak silt loam, 4 to 8 percent slopes	3.7	1.5%
583	Kachemak silt loam, forested, 4 to 8 percent slopes	33.9	14.1%
618	Mutnala silt loam, 4 to 8 percent slopes	30.5	12.7%
619	Mutnala silt loam, 8 to 15 percent slopes	20.8	8.7%
621	Mutnala silt loam, 25 to 45 percent slopes	3.5	1.5%
674	Spenard peat, 4 to 8 percent slopes	77.2	32.1%
677	Starichkof peat, 0 to 4 percent slopes	52.6	21.9%
Totals for Area of Interest		240.2	100.0%

Soil Map—Western Kenai Peninsula Area, Alaska

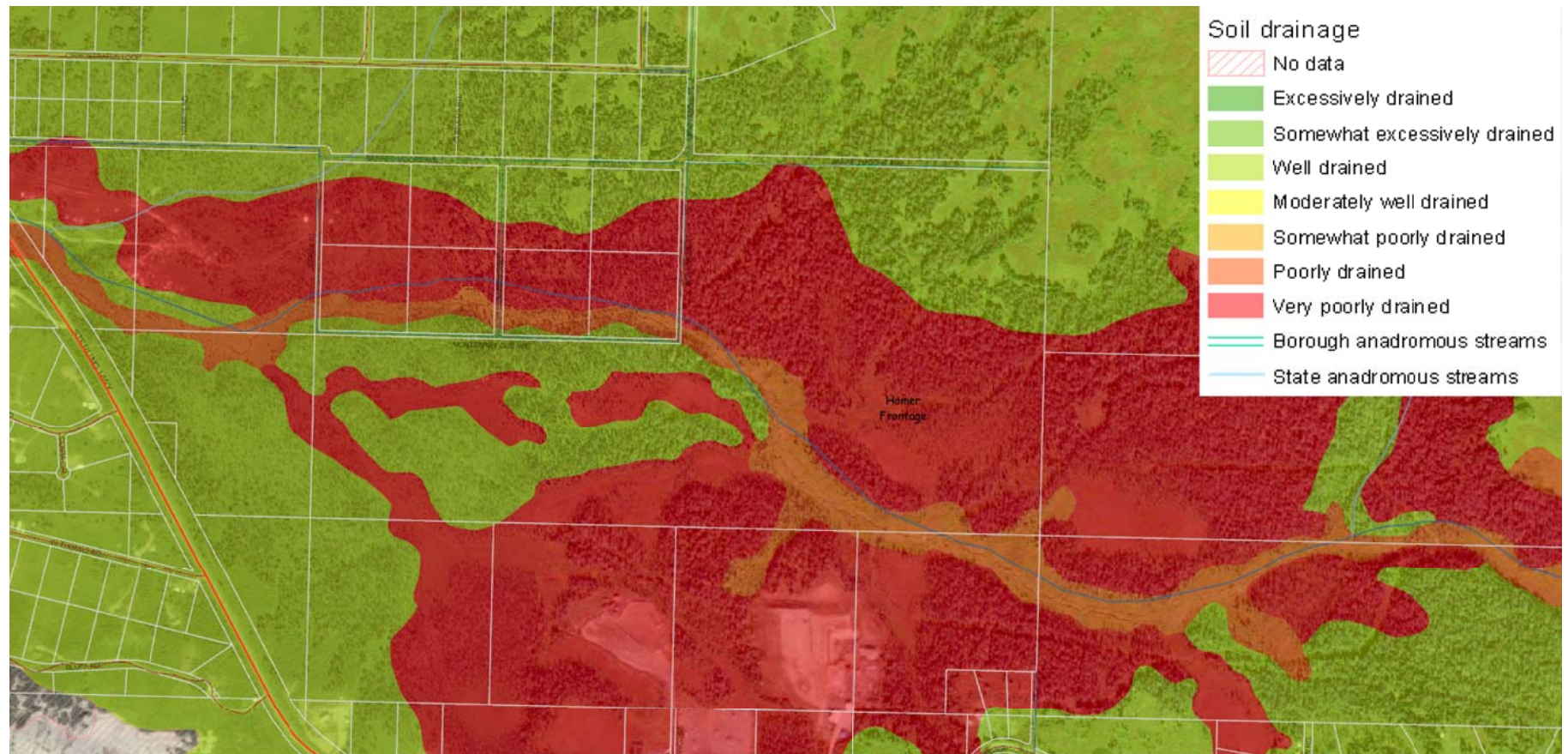


Map Unit Legend

Western Kenai Peninsula Area, Alaska (AK652)			
Map Unit Symbol	Map Unit Name	Acres in AOI	Percent of AOI
538	Coal Creek silt loam, 8 to 15 percent slopes	3.5	10.0%
541	Cohoe silt loam, 8 to 15 percent slopes	17.5	51.0%
619	Mutnala silt loam, 8 to 15 percent slopes	1.9	5.6%
621	Mutnala silt loam, 25 to 45 percent slopes	9.2	26.7%
677	Starichkof peat, 0 to 4 percent slopes	2.3	6.7%
Totals for Area of Interest		34.4	100.0%

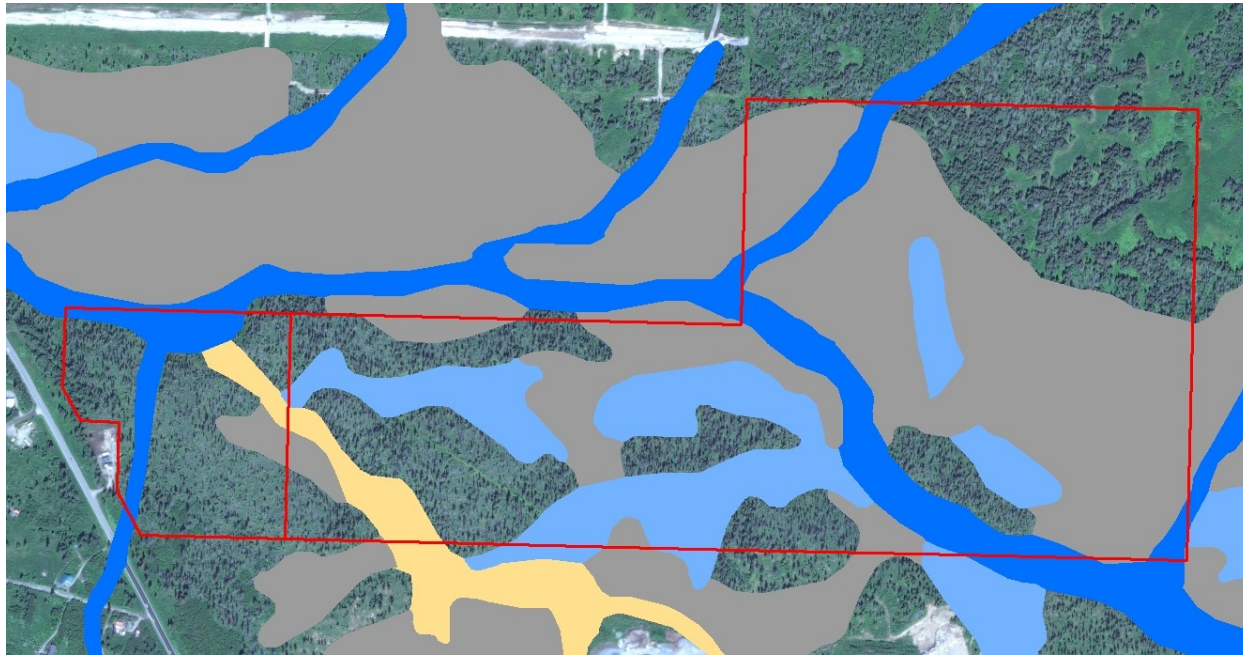
Map 4 – Diamond Creek Recreation Area Soil Drainage

Map and Legend Courtesy of Kenai Watershed Forum



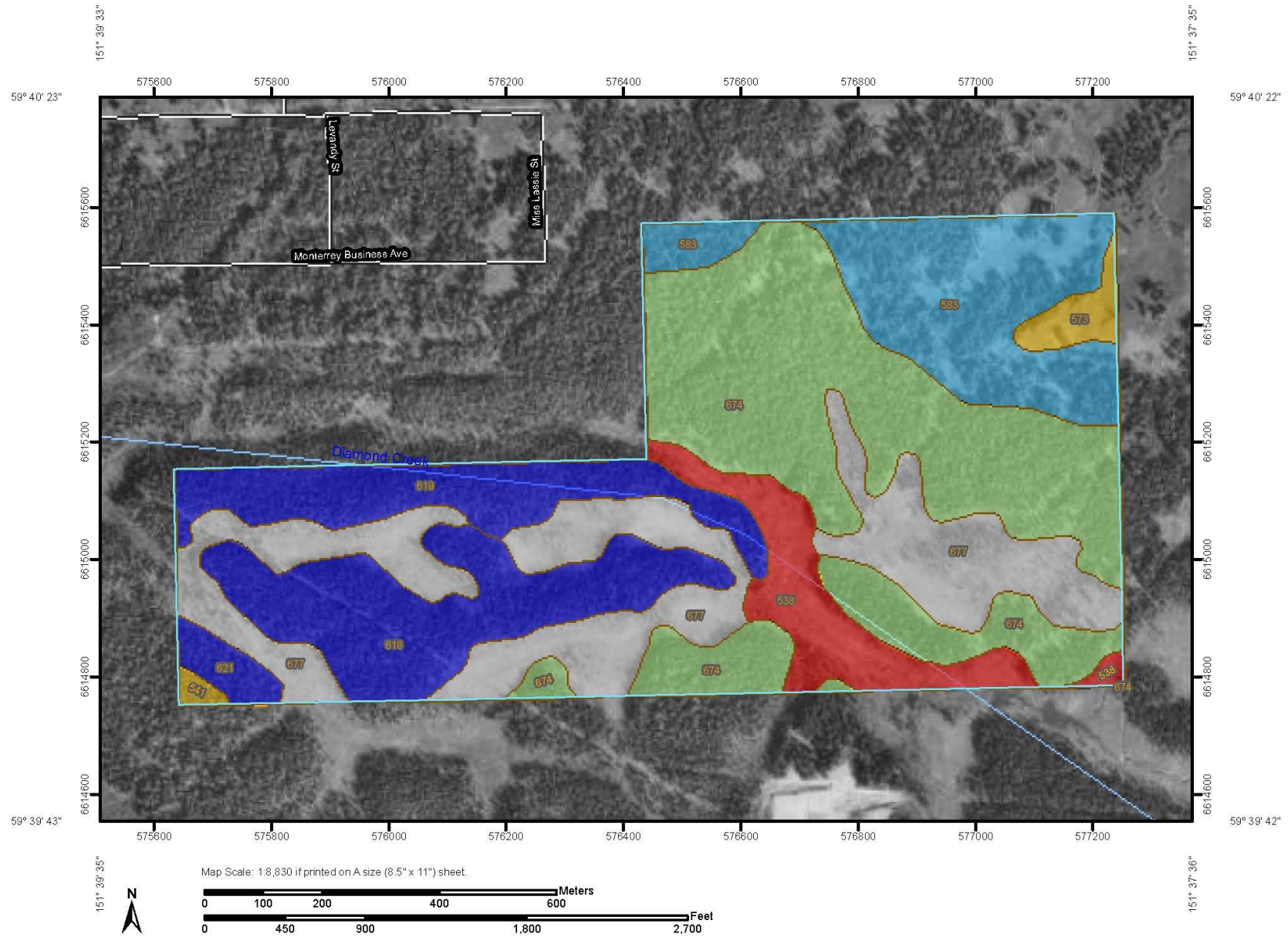
Map 5 - Diamond Creek Recreation Area Wetlands

Legend and Wetlands Data Courtesy of Kenai Watershed Forum



Map Group 6 - Diamond Creek Recreation Area Forest Productivity

Forest Productivity (Cubic Feet per Acre per Year): white spruce (Farr 1967 (440))—Western Kenai Peninsula Area, Alaska



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Soil Ratings

 ≤ 8

 $> 8 \text{ AND } \leq 11$

 $> 11 \text{ AND } \leq 12$

 $> 12 \text{ AND } \leq 13$

 $> 13 \text{ AND } \leq 14$

 Not rated or not available

Political Features

 Cities

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

MAP INFORMATION

Map Scale: 1:8,830 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

Enlargement of maps beyond the scale of mapping can cause misunderstanding of the detail of mapping and accuracy of soil line placement. The maps do not show the small areas of contrasting soils that could have been shown at a more detailed scale.

Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 5N NAD83

This product is generated from the USDA-NRCS certified data as of the version date(s) listed below.

Soil Survey Area: Western Kenai Peninsula Area, Alaska
Survey Area Data: Version 11, Feb 3, 2011

Date(s) aerial images were photographed: 9/2/1996

The orthophoto or other base map on which the soil lines were compiled and digitized probably differs from the background imagery displayed on these maps. As a result, some minor shifting of map unit boundaries may be evident.



Forest Productivity (Cubic Feet per Acre per Year): white spruce (Farr 1967 (440))

Forest Productivity (Cubic Feet per Acre per Year): white spruce (Farr 1967 (440))— Summary by Map Unit — Western Kenai Peninsula Area, Alaska (AK652)				
Map unit symbol	Map unit name	Rating	Acres in AOI	Percent of AOI
538	Coal Creek silt loam, 8 to 15 percent slopes	8.00	17.1	7.1%
541	Cohoe silt loam, 8 to 15 percent slopes	11.00	0.9	0.4%
573	Kachemak silt loam, 4 to 8 percent slopes	11.00	3.7	1.5%
583	Kachemak silt loam, forested, 4 to 8 percent slopes	13.00	33.9	14.1%
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621	Mutnala silt loam, 25 to 45 percent slopes	14.00	3.5	1.5%
674	Spenard peat, 4 to 8 percent slopes	12.00	77.2	32.1%
677	Starichkof peat, 0 to 4 percent slopes		52.6	21.9%
Totals for Area of Interest			240.2	100.0%

Description

Forest productivity is the volume of wood fiber that is the yield likely to be produced by the most important tree species. This number, expressed as cubic feet per acre per year and calculated at the age of culmination of the mean annual increment (CMAI), indicates the amount of fiber produced in a fully stocked, even-aged, unmanaged stand.

This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this attribute, only the representative value is used.

Rating Options

Tree: white spruce

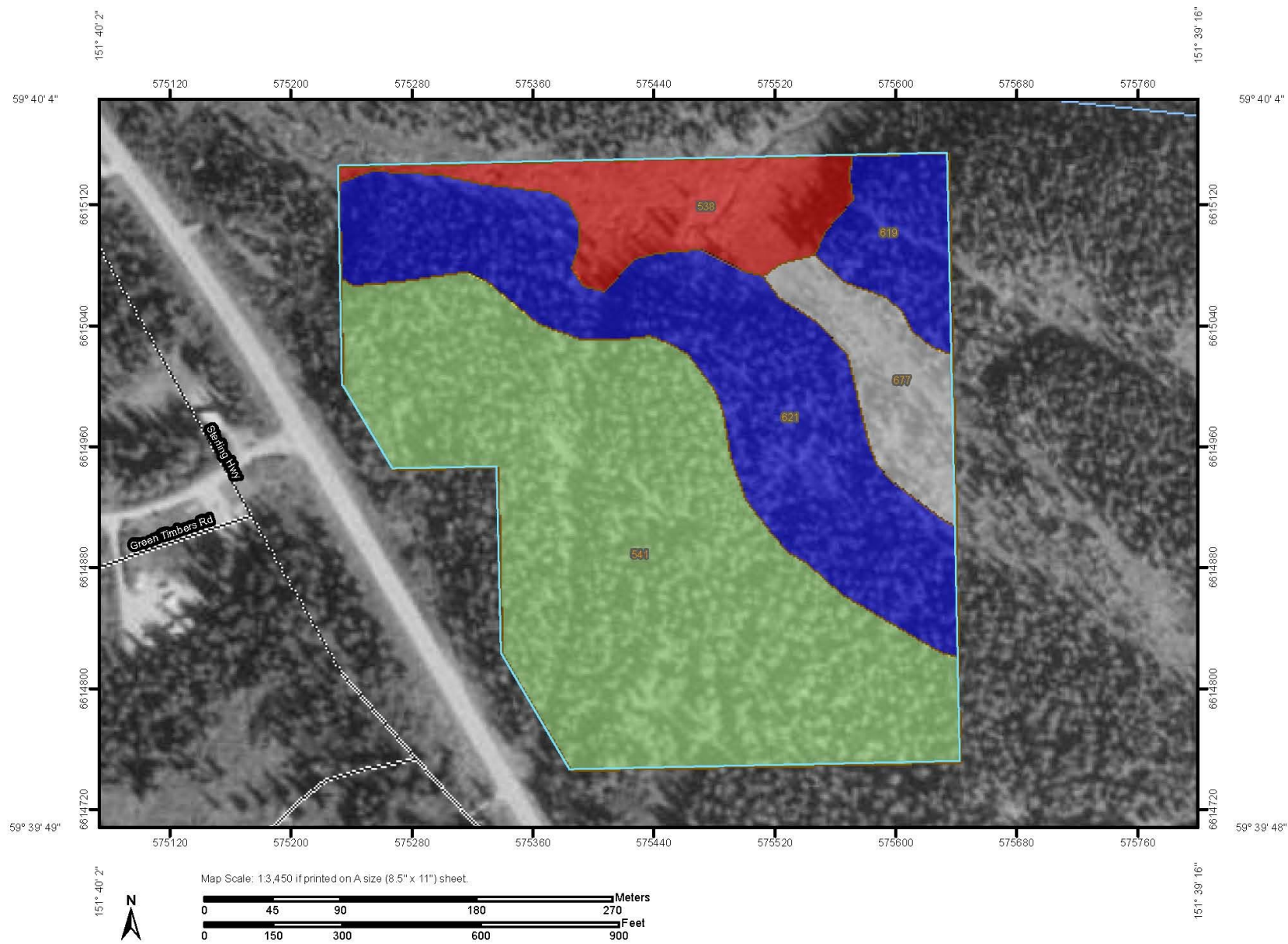
Site Index Base: Farr 1967 (440)

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Forest Productivity (Cubic Feet per Acre per Year): white spruce (Farr 1967 (440))—Western Kenai Peninsula Area, Alaska



MAP LEGEND

Area of Interest (AOI)

 Area of Interest (AOI)

Soils

 Soil Map Units

Soil Ratings

 ≤ 8

 $> 8 \text{ AND } \leq 11$

 $> 11 \text{ AND } \leq 14$

 Not rated or not available

Political Features

 Cities

Water Features

 Streams and Canals

Transportation

 Rails

 Interstate Highways

 US Routes

 Major Roads

 Local Roads

MAP INFORMATION

Map Scale: 1:3,450 if printed on A size (8.5" x 11") sheet.

The soil surveys that comprise your AOI were mapped at 1:25,000.

Warning: Soil Map may not be valid at this scale.

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Please rely on the bar scale on each map sheet for accurate map measurements.

Source of Map: Natural Resources Conservation Service
Web Soil Survey URL: <http://websoilsurvey.nrcs.usda.gov>
Coordinate System: UTM Zone 5N NAD83

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Soil Survey Area: Western Kenai Peninsula Area, Alaska
Survey Area Data: Version 11, Feb 3, 2011

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Forest Productivity (Cubic Feet per Acre per Year): white spruce (Farr 1967 (440))

Forest Productivity (Cubic Feet per Acre per Year): white spruce (Farr 1967 (440))— Summary by Map Unit — Western Kenai Peninsula Area, Alaska (AK652)				
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This attribute is actually recorded as three separate values in the database. A low value and a high value indicate the range of this attribute for the soil component. A "representative" value indicates the expected value of this attribute for the component. For this attribute, only the representative value is used.

Rating Options

Tree: white spruce

Site Index Base: Farr 1967 (440)

Aggregation Method: Dominant Component

Component Percent Cutoff: None Specified

Tie-break Rule: Higher

Interpret Nulls as Zero: No

Map 7 – Spruce Bark Beetle Infestation

Legend and Map Courtesy of Kenai Watershed Forum

