

Sunflower Basin Region

The Sunflower Basin region encompasses approximately 536,000 acres in the northwestern part of the planning area and includes Chelatna Lake and the majority of the Dutch Hills and Peters Hills area. Its north and west boundaries are formed by Denali National Park and Preserve and Denali State Park. The southwestern boundary follows the Yentna River and Donkey Creek Slough. The eastern border lies between Peters Creek and Peters Hills and Little Peters Hills. The southern part of the region includes Mt. Yenlo. Refer to Figure 3-1 to locate the map of a particular area.

Distribution and Characteristics

With the exception of limited private holdings, the state owns nearly all of the land within the region. There are approximately 486,000 acres of state general domain land and approximately 44,000 acres of LDA affected land. The limited private holdings include areas of previous remote sales (Donkey Creek Slough), and areas related historically to mining that occur near Collinsville and Peters Creek. Most of the region is characterized by generally flat to gently sloping terrain, with hilly to mountainous terrain concentrated at the Peters Hills, Little Peters Hill, Dutch Hills and Mt. Yenlo. Fairly distinctive vegetation patterns exist, reflecting elevation, hydrology, and soil conditions. Within lowland areas, which occupy the more central part of the region, many areas are characterized by wetlands or woody wetlands. In areas adjacent to many of the streams, particularly the Kahiltna River, deciduous and mixed forests are prevalent. Depending on elevation, upland areas can be forested (upland spruce-hardwood forest) or vegetated by brush, alpine tundra, or barren rock.

State land within this region is to be managed as state public domain land under the authority of Title 38 of the Alaska Statutes. Two areas have been designated as “special purpose sites” by the Legislature and these are to be managed consistent with statutory intent. Termed Legislatively Designated Areas, these include the Lake Creek State Recreation River and the Petersville Recreational Mining Area. State Recreation Rivers are to be managed consistent with AS 41.23.500 and with the DNR Susitna Basin Recreation Rivers Management Plan. The Petersville Mining District is to be managed consistent with AS 41.23.600 and the requirements of a management plan that is to be prepared for such areas. (No such plan currently exists.)

Access, Resources, and Uses of State Land

The level of access to this large region varies considerably. Access to the Petersville area is good and is provided by the Petersville Road, an ORV accessible route open primarily in the summer. Access to the remaining areas of the region is limited, reflecting the remote and generally inaccessible location of most state lands.

Regional and local trails provide access. Two major trail systems, one originating about five miles north of Petersville and the other originating at the junction of Petersville Road and Peters Creek, branch off to provide access to placer mines and hunting and recreation areas. These trails receive extensive all-terrain vehicle use for hunting on the east side of the Kahiltna River. Local and regional trails, many of which are RS 2477s, provide access to the remainder of the region, particularly to areas historically important for placer mining. Foot travel is popular. Access is also provided by float or wheeled fixed wing aircraft that use lakes, private airstrips or gravel bars for landing. About 15 airstrips are located along the trail system; some are privately owned and the remainder, publicly owned. Water access is available on the Kahiltna River but is often hampered by local weather conditions. Access west of the Kahiltna River is predominately by air.

Moose are present throughout the region, with concentrations occurring along the drainages, especially the Kahiltna River drainage and adjacent wetlands. Both winter concentration and rutting areas are present within these areas. Elsewhere, moose rutting areas are distributed widely, with concentrations occurring at Mount Yenlo, the Peters Hills, Little Peters Hills, Donkey Hills, and west of Lake Chelatna. The Kahiltna River drainage provides habitat areas for both waterfowl and trumpeter swans. Swan nesting, brood rearing, and molting sites occur within this drainage. This area also supports large concentrations of Tule geese in the summer and fall. The larger streams are anadromous and many of their tributaries, similarly anadromous. Depending on location these streams contain king, silver, pink, or chum migration, rearing, or spawning areas. Lake Creek and Peters Creek are heavily used fishing streams. The area along the Petersville Road and east of the Kahiltna River are used heavily for hunting. Moose, black bear, and brown bear are the most popular big game species.

Significant mineral and moderate coal, oil, and gas resources exist within this region. Placer mining for gold has been and will probably continue to be an important activity in the historic mining areas around Collinsville (Fairview Mountain) and Petersville (Cache and Peters creeks). Mining claims blanket each of these areas. Although additional mineral closures are not recommended in this plan revision, the two existing closure areas are intended to continue: these include the areas of settlement at Donkey Creek Slough and the Lake Creek State Recreation River. These closures do not affect mineral leasing however, and this type of mineral development may occur throughout the region, including portions of the Lake Creek SRR. Lignite and sub-bituminous coal resources, associated with the Cook Inlet Coal Province, occur at locations within the region. The region is open to coal

exploration and leasing except for the areas affected by the State Recreation River LDA. The entire region is open to oil and gas exploration and extraction although certain stipulations, derived from the Susitna Basin Recreation Rivers Plan and designed to protect public recreation and habitat values, apply in Lake Creek State Recreation River.

Forest and agricultural resources also exist within the region; these occur in specific areas adjoining the Kahiltna River and are part of the Division of Forestry's Priority 1 areas, or those areas of highest priority for inclusion in a program of systematic forest management. Soils suitable for agriculture are found at a number of scattered locations in the region, but concentrate either within the Lake Creek SRR or the floodplain of the Kahiltna River. Agriculture use is not permitted within the SRR, but areas adjacent to the Kahiltna River are suitable and available for agricultural use.

Public use of this region varies greatly and generally reflects the presence of access, provided either along trails or overland by all-terrain vehicles. Public recreation is focused on the Lake and Peters Creeks during the summer season for sport fishing of Chinook and silver salmon. Public use of this region is also heavy in spots during the fall. The majority of hunting use occurs along the Petersville Road and the branching trail systems east of the Kahiltna River. Moose, black bear, and brown bear are the most popular big game species.

Management Constraints

Several state and local management plans affect the planning area and were consulted in the development of recommendations for the Sunflower Basin Region.

State plans affecting this region include the 1985 Susitna Area Plan, which is being revised with this update, and the Susitna Basin Recreation Rivers Management Plan (1991). The Susitna Basin Recreation Rivers Management Plan provides guidance on the management of state surface and subsurface resources within state recreation rivers. Although it intended that the SMAP only affect state general domain land, if there is a conflict between the recommendations of this plan as they relate to a State Recreation River, the Management Plan controls.

Local plans include the Borough Comprehensive Development Plan and Coastal Management Plan. Local plans contain both generalized land use recommendations and resource management requirements and were helpful in the formulation of recommendations. There are no local comprehensive plans affecting this region.

Management Summary

State land is to be managed consistent with the plan designations and management recommendations contained in the Resource Allocation Table. Most state land will be managed in a manner similar to that inferred from its designation, which means that most

land will be managed for its mineral, habitat, water resource, or forest resource values. A relatively small amount will also be used for land disposals related to settlement or agriculture. Some areas are co-designated Water Resources and Habitat and will be managed for both their hydraulic and habitat functions.

Most of the mountainous areas near Mount Fairview or within the Peters Hills and Dutch Hills are designated Minerals (approximately 91,000 acres), reflecting their historic mining use as well as mineral potential. Areas designated Minerals will be managed for this activity and, since moose rutting and waterfowl concentration areas exist within portions of these areas, especially the area adjacent to Mount Fairview, for their habitat values as well. Areas with significant habitat values are co-designated Minerals and Habitat (approximately 38,000 acres). The majority of the central, eastern, and southern areas that occupy lowlands are either designated Forestry or Habitat co-designated with Water Resources. Areas designated Forestry (approximately 15,000 acres) will be managed for this resource while those co-designated Habitat/Water Resources will be managed to protect the hydraulic function of extensive wetland areas and the riverine areas that adjoin the region's streams. Areas co-designated Water Resources and Habitat (approximately 214,000 acres) occur where there is a significant presence of waterfowl, trumpeter swan nesting/brood rearing/molting areas, or where moose winter concentration or calving/rutting exist. In these instances, state land is to be managed to protect these resources as well as their hydrologic values. One area, located next to streams or lakes, is designated Settlement (approximately 65,000 acres), and is recommended for disposal during the planning period. Consult the Resource Allocation Table for specific recommendations.

Areas designated Forestry are to be managed for overall forest resource management, which includes timber harvest at specific locations that may be identified in future Five-Year Timber Sales Schedule prepared by DOF. Such areas are to be managed in a comprehensive, holistic fashion such that access is preserved, public recreation allowed to continue, and significant habitats and wetlands protected. Not all of the area designated Forestry contains forest resources. State land in this region is characterized by a mixture of wetlands and forested uplands, and many of these areas provide important habitat and recreation functions. It was determined in the plan preparation process that it would be impracticable to carve out all of the many areas important as wetlands or habitats and that inclusion of large areas of state land with a variety of resource values within a Forestry designation made the most sense since such areas must be managed comprehensively for multiple uses and the Forestry designation is a multiple use designation that encompasses the principles of recreation use and habitat protection. Accordingly, the management intent statement for management units designated Forestry will often include statements concerning the protection of wetlands and habitats, provision of recreation, and maintenance of public access. This management intent is consistent with the Division of Forestry's 'working forest' management concept. All areas designated Forestry are to be retained in state ownership. The management of areas designated Forestry will be guided by the Forest Resources and Practices Act; Susitna Forestry Guidelines, or its successor; and this area plan.

Resource Allocation Table – Sunflower Basin Region⁵

Unit #	Designation(s)/ Acres	Map(s)/ MTRS	Management Intent	Description
B-01	Ha 61,401	Map 3-8 S027N013W; S028N013W; S028N012W; S028N011W	Manage unit to protect its habitat values. Retain in state ownership. Protect trails, easements and RS 2477 routes.	<p>This large unit occupies the far northwestern part of the Sunflower Basin region. It is remote, inaccessible, and generally unfavorable to development and intensive public use. Terrain is typically mountainous except for the generally flat areas associated with the river basin of Sunflower Creek, an area known as the Sunflower Basin. Vegetation characteristically is shrub in areas of lower elevation, including the area of Sunflower Basin, and either barren rock or dwarf shrub at higher elevations.</p> <p>Moose are known to be present in portions of this unit, generally coinciding with the Sunflower Basin. Rutting areas also occur throughout portions of the unit. Several anadromous streams are present.</p> <p>Except for a small area within the eastern part of S028N013W, the unit consists entirely of state-owned land.</p> <p>Several RS 2477 routes cross portions of this parcel; these include RSTs 228 and 1608. Public easements within this unit include ADL 230038 and 230057. A GPS station, LAS 25649, is within this unit.</p>

⁵ See the Resource Allocation Table for Legislative Designated Areas for information on L-01 (State Recreation Rivers) and L-02 (Petersville Recreational Mining Area).

Unit #	Designation(s)/ Acres	Map(s)/ MTRS	Management Intent	Description
B-02	Mi, Ha 38,430	Map 3-8 S027N012W; S026N012W	<p>Manage unit for its mineral resources and habitat values.</p> <p>Mineral development is appropriate within the unit but shall, during the regulatory review process, consider and mitigate the effects of potential operations on waterfowl and trumpeter swan concentrations, moose rutting areas, spring bear concentrations, and anadromous streams in consultation with ADF&G. See Management Guidelines K, L, and M in <i>Fish and Wildlife Habitat</i> section of Chapter 2. Protect anadromous streams with riparian buffers.</p> <p>Protect trails, easements and RS 2477 routes. Coordinate trail location with SCRO and the borough. Consult the borough's Recreational Trails Management Plan.</p>	<p>Focusing on Fairview Mountain, this unit comprises a productive placer gold mining area. Terrain is generally flat to gently sloping except for its western part, which coincides with Fairview Mountain. Vegetation is characteristically shrub in the central and western parts, and a mix of woody wetlands, shrub, and woody wetlands in the eastern part. Trumpeter swans and waterfowl occupy substantial portions of the flatter, wetter parts of the unit and moose rutting areas are present in S026N012W. A number of anadromous stream traverse the unit and brown bears are present during the spring. The Lake Creek State Recreation River abuts the parcel on the northeast.</p> <p>Although little mining has occurred in recent years, this area has been historically important for placer mining, focusing on Mills Creek, Twin Creek, and Pass Creek, and occupies a portion of the Yentna Mining District. Platinum may also be present and can represent a secondary product from some placer mines.</p> <p>A number of local trails as well as RS 2477s traverse the parcel: RST 145, 228, 514, 515, 1608. Public easements within this unit include ADL 230038 and 230057. A GPS station, LAS 25649, is within this unit.</p>
B-03	Ha, Wr 16,572	Map 3-8 S027N011W; S026N011W; S026N010W	<p>Manage unit for its habitat and water resource (wetland) values. Retain in state ownership. Protect trails, easements and RS 2477 routes.</p>	<p>Unit is bounded on the north by Denali National Park and Preserve, by the Lake Creek SRR on the west and on the east by the Kahiltna River.</p> <p>Terrain and vegetation are characterized by a broad band of forested uplands on the east side of the unit and by extensive lowlands on the west, which consist predominately of either wetlands or woody wetlands.</p> <p>Extensive wildlife and habitat resources exist within the unit, including winter concentration and rutting areas for moose, trumpeter swan concentrations, spring brown bear concentrations, and waterfowl (including both trumpeter swan and Tule Geese) nesting and molting sites. Several anadromous streams are present.</p> <p>Local trails and at least one RS 2477 trails exist within the unit (RST 515, 514 and 1608).</p>

Unit #	Designation(s)/ Acres	Map(s)/ MTRS	Management Intent	Description
B-04	Ha, Wr 78,981	Map 3-8 S027N011W; S026N011W; S025N011W; S025N010W; S024N011W; S024N010W; S023N011W; S023N010W	Manage unit for its habitat and water resource (stream and wetland) values. Retain in state ownership. Protect trails, easements and RS 2477 routes.	<p>This large, generally flat unit is situated directly west of the Lake Creek SRR and occupies generally level terrain. In terms of topography and vegetation, two distinct regimes exist. Most of the unit, constituting the northern and central parts, is generally flat and is occupied by wetlands and by numerous streams, which often are lined by deciduous and evergreen vegetation. The southern part, in contrast, is characteristically hilly and is covered by a mix of shrub vegetation at the lower elevations and by shrub at the higher. This latter, hilly area coincides with the area known as Mount Yenlo.</p> <p>Although wetlands and streams constitute the principal resource features within the unit, it is also important for its habitat and wildlife values. Waterfowl (including Tule geese and trumpeter swans) are present in the wetland portion and the southern, hilly part functions as both moose rutting and calving as well as brown bear spring and stream concentration areas. There are numerous anadromous streams.</p> <p>A number of local trails traverse the unit and RST 514 and 515.</p>
B-05	Ha, Wr 50,244	Map 3-8 Various	Manage unit for its habitat and water resource (stream and wetland) values. Retain in state ownership. Protect trails, easements and RS 2477 routes.	<p>Spatially, this unit coincides with the Kahiltna River drainage, an extensive area about 7 miles wide at its greatest east-west extent and 30 miles long in the north-south direction. Most of this area is flat, particularly that area within the area of the river itself and its adjoining floodplain. Somewhat greater relief occurs immediately to the east of the floodplain, in better drained uplands. Wetlands and shrub vegetation predominates within the floodplain and in the forested uplands, primarily deciduous forest.</p> <p>This area provides important habitat for bear, moose and waterfowl, particularly within the areas of floodplain and wetlands. Trumpeter swans and Tule geese are present throughout the unit, with nesting, brood rearing, and molting concentration areas occurring. These same areas serve as a winter concentration and rutting areas for moose and a spring concentration area for brown bear. Waterfowl also heavily use this area, and portions of the unit are important as a fall concentration area. A number of anadromous streams are present.</p> <p>A number of local trails and RS 2477 routes traverse the unit; this includes RSTs 136, 514, 145, 515 and 1608.</p>

Unit #	Designation(s)/ Acres	Map(s)/ MTRS	Management Intent	Description
B-07	Mi	Map 3-8	Manage unit for its mineral values.	<p>This large unit in the northwestern part of the region is associated with state lands having a high mineral potential. This area is part of the Yenlo Placer Mining District and has historically produced placer gold from Peters Creek and a number of tributary streams (Dollar, Cottonwood, Bird, and Mills Creeks). It is believed that this geologic terrane has a lode mining potential as well, but mining of this type has not yet occurred.</p> <p>Terrain is typically moderately sloping except for the river valleys, particularly that valley associated with Peters Creek. There are scattered stands of deciduous vegetation within the Peters Creek valley but elsewhere the vegetation is shrub or dwarf shrub, depending on elevation.</p> <p>Moose are present in this unit, with rutting and winter concentration coinciding with areas of lower elevation. There are anadromous streams in the unit.</p> <p>Local trails and several RS 2477 routes are present (RST 136, 510, 511, 512, 513, 516 and 1608). Portions of this unit are in selection status; review land status prior to any management or disposal action.</p>
	92,151	Various	<p>Protect trails, easements and RS 2477 routes. Coordinate trail location with SCRO and the borough. Consult the MSB Recreational Trails Management Plan.</p> <p>Protect anadromous streams with a riparian buffer, and avoid moose rutting and winter concentration areas. Check land status in the selection areas prior to management or disposal decisions.</p>	
B-08	Ha, Wr	Maps 3-8, 3-9	Manage unit for its habitat and hydrologic (wetland and streams) values. Retain in state ownership. Protect trails, easements and RS 2477 routes. Check land status in the selection areas prior to management or disposal decisions.	<p>Except for hilly terrain in the northern and southern parts of the unit, coinciding with the Peters Hills and Little Peters Hills, respectively, this unit is characterized by generally level terrain. It occupies the area between the Kahiltna River and Peters Creek, generally. The hilly to mountainous terrain is typically covered by shrub while lowland areas are a mixture of wetlands, woody wetlands, and shrub, depending on soil conditions and hydrology. Portions of these wetlands are extensive, probably existing as a hydrologic system.</p> <p>The habitat value and species diversity in this unit is significant. Wetland areas are used by waterfowl (fall concentration) and for molting and nesting by trumpeter swans. Moose are present throughout the unit and large portions of it are important as winter concentration areas and for both calving and rutting. There are numerous anadromous fish streams and brown bear are present during the spring. A mushroom harvest area is located within this unit.</p> <p>Several local trails exist and there are at least three RS 2477s that traverse the unit, including RSTs 136, 514, and 516. Portions of this unit are in selection status; review land status prior to any management or disposal action.</p>
	68,123	Various		

Unit #	Designation(s)/ Acres	Map(s)/ MTRS	Management Intent	Description
B-09	Se 64,747	Map 3-9 Various	<p>Unit is considered appropriate for land disposal during the planning period.</p> <p>Avoid moose winter concentration areas and bear spring concentration areas; provide open space or movement corridors if necessary.</p> <p>A riparian buffer of 300' from OHW is to be maintained on the Yentna River. Protect anadromous streams with riparian buffers. Protect trails, easements and RS 2477 routes.</p>	<p>This unit has been designated for settlement since at least 1985, and has experienced considerable remote lot settlement patterns. This activity has been mostly concentrated adjacent to the more desirable areas, coinciding with both streams and lakes.</p> <p>Terrain within the unit is gently sloping to moderately sloping depending upon location. There are numerous streams and lakes scattered throughout the parcel, only some of which have existing remote lots. Vegetation varies greatly depending on local soil conditions and topography. Extensive areas are well vegetated with either deciduous forest, evergreen forest, or mixed forest. Areas that are poorly drained or have less suitable soils support a mix, depending on location, of shrub, wetland, or woody wetland vegetation.</p> <p>Trumpeter swans and waterfowl are present in the unit but not in significant concentrations. Moose and brown bear are also present and portions of the unit are important for rutting and as a winter concentration area (moose) and as a spring concentration area (bear). Numerous anadromous streams exist.</p> <p>Several local trails exist and there are at least two RS 2477s that traverse the unit (RST 1608 and 228). Multiple easements associated with access are within this unit.</p>

Unit #	Designation(s)/ Acres	Map(s)/ MTRS	Management Intent	Description
B-10	F 15,167	Map 3-9 S023N010W; S024N010W	<p>Manage unit for its forest values. Unit is affected by the Susitna Forestry Guidelines or its successor; all timber sales must meet the requirements of 11 AAC 95. Forest land use plans must, in addition to these requirements, adhere to the requirements of the Forestry section in Chapter 2 <i>Areawide Land Management Policies</i>.</p> <p>Because of the presence of important habitat and species scattered throughout portions of this unit, it is also to be managed for the maintenance of wildlife species, fisheries, and habitats consistent with Management Guideline B in the Fish and Wildlife Habitat section in Chapter 2 and other management guidelines in this section associated with waterfowl concentrations and moose wintering areas. Consult with ADF&G on sensitive habitats and wildlife locations prior to or concurrent with FLUP preparation.</p> <p>Protect anadromous streams and wetlands. Forestry riparian standards apply (AS 41.17.115 and AS 41.17.118) for riparian areas adjacent to anadromous and high value resident fish streams. Consult with ADF&G to determine the location of high value resident fish streams.</p> <p>Protect trails, easements and RS 2477 routes. During FLUP preparation, identify these routes and provide suitable protection or mitigation. Coordinate with the SCRO/DMLW, and with the Matanuska-Susitna Borough on trail identification and routing.</p> <p>Retain land in state ownership. Portions of the unit may be appropriate for inclusion in a state forest.</p>	<p>This unit occupies generally flat terrain just west of the Lake Creek SRR. Vegetation is a mix of wetlands, woody wetlands, shrub, and stringers of deciduous along streams and in areas of better well-drained soils, especially within S023N010W. This unit is part of the DOF Priority 1 forestry area within the planning area. Yenlo Creek, and its tributaries, cross much of this unit; all are considered anadromous.</p> <p>A moose concentration area occurs in portions of the unit, especially within S023N010W. Waterfowl and trumpeter swans are known to be present within the unit.</p>
L-01	Ha, Rd 43,959 within this region	Maps 3-8, 3-9	This unit includes all State Recreation Rivers in this region. See the section, <i>Legislatively Designated Areas</i> for detail on the management of this area.	
L-02	Min 489	Map 3-9	This unit includes the Petersville Recreational Mining Area, an LDA. See the section <i>Legislatively Designated Areas</i> following.	

Total state land within region (9 units and portions of 2 LDAs) – 530,263 acres