Petersville Recreational Mining Area Management Plan

Public Review Draft

September 2014

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Summary of Purpose

The purpose of the Petersville Recreational Mining Area Management Plan (management plan) is to provide guidance to the Department of Natural Resources, Division of Mining, Land and Water (DMLW), for the management of the surface and subsurface estate within the Petersville Recreation Area. The management plan will serve as the basis for DMLW authorization decisions within the area. This management plan is required by Alaska Statute (AS 41.23.630(b)). The statute requires that the plan emphasize the management of mineral activities, public recreation, and other allowable multiple-uses that do not conflict with recreational mineral activity and habitat protection. Because of the multiple use nature of the area and recreational character of mining activities, management of the land should be consistent with regulations pertaining to Generally Allowed Uses (11 AAC 96.020) and the Conditions for Generally Allowed Uses (11 AAC 96.025).

Background

The Petersville Recreational Mining Area (PRMA) was established as a Legislatively Designated Area on May 8, 1997. The PRMA is not a state park. The intent of the legislation was to provide a public recreational mining area, on state owned land, where the public could enjoy gold panning and minimally invasive mining activities without interfering with state and federal mining locations. Although recreational mining would be the primary type of recreation encouraged for the area, the State would continue to permit public recreational activities and allow other multiple-use activities to continue as long as the activities do not detract from recreational mining. The land was closed to new mineral entry (claim staking) per AS 41.23.630(d). The Petersville Recreational Mining Area was designated for "mining" in the Susitna Matanuska Area Plan (2011).

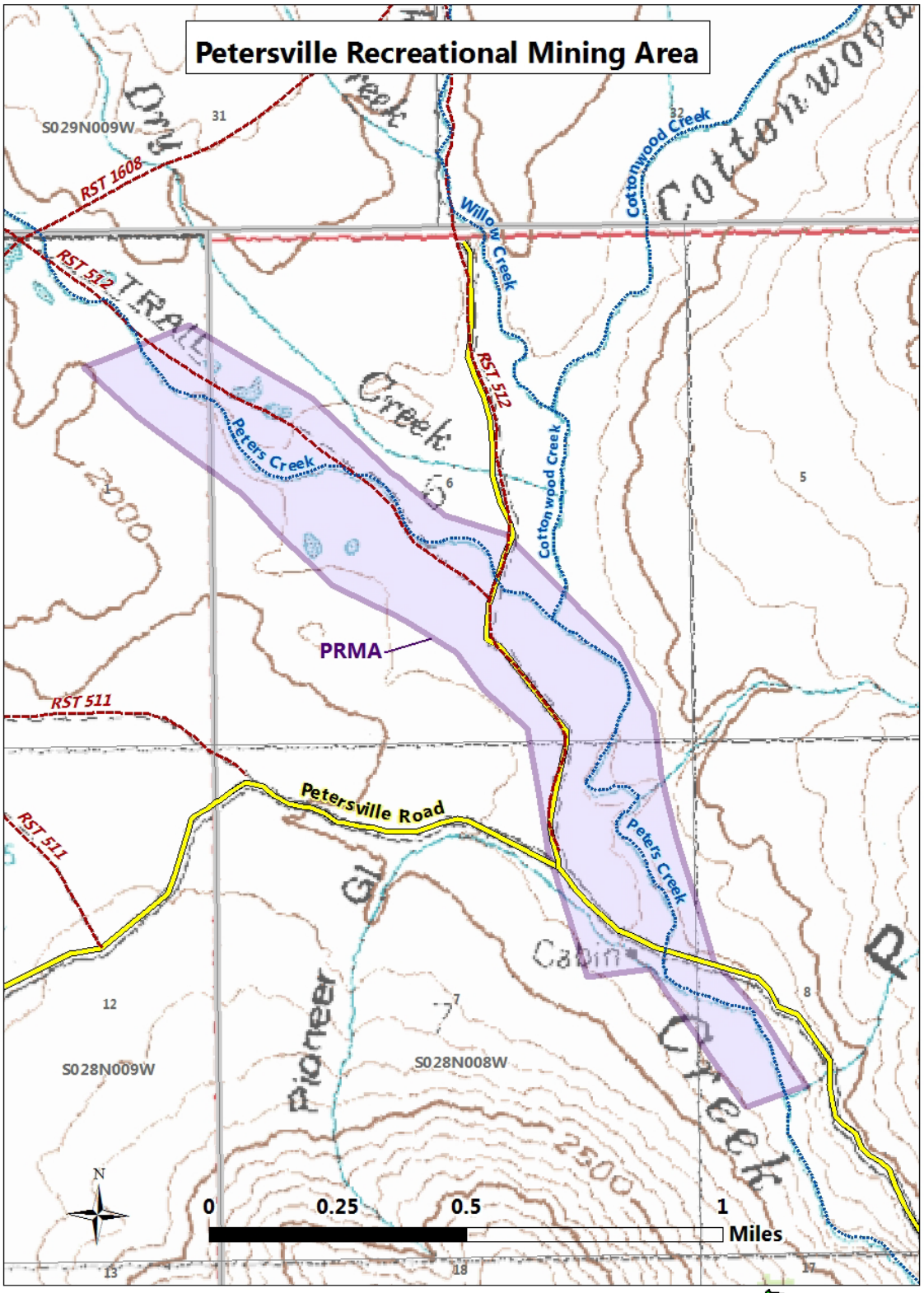
The location of the PRMA was considered appropriate, in part, because of the mining history of the area and its proximity to Denali State Park. Gold discoveries were made in the upper tributaries of Peters Creek in the early 1900s, leading to the development of a freighting trail and the establishment of Petersville. Numerous mining operations were active in the area until they were forced to shut down during W.W. II. Although a resurgence of mining activities occurred in the late 1940s, nearly all mining activity ceased by the mid-1960s, due to increased operating costs and the fixed gold price. With the price rising in the 1970s, some previously idle properties again were brought into production. Currently, commercial mining is not significant in the immediate Petersville area.

Description of the Planning Area

This PRMA is a recreational use corridor that straddles the Peters Creek averaging .25 miles in width and one mile in length. It is located in the Matanuska-Susitna Borough, south of Denali State Park as depicted on the Plan Map on page 2. It is a scenic area with rugged terrain and experiences high water events. There is an abundance of fish and wildlife. A variety of vegetation occurs in the area, including Cottonwood, Black Spruce, Alder, Willow, tundra and upland arboreal forest.

The PRMA is approximately 274 acres in size and is comprised of one unit that includes 17 closed federal mining claims. The PRMA as defined in state legislation in 2014 is depicted on the plan map. The size of the PRMA was reduced via legislation signed by Governor Sean Parnell (HB 135) on June 18, 2014. The original 1997 legislation included two separate areas, consisting of approximately 487 acres of land that included 27 closed federal mining claims. The northern unit was 274 acres in size and contained 17 of the claims. The southern unit was 213 acres in size and contained 10 of the claims, and is located immediately west of Petersville. The state legislature removed the southern unit from the PRMA in 2014 (see HB 135).

Access is provided by the Petersville Road, which is often referred to as "the other road to Denali". The road is rugged and it is closed during the winter. In the past, the State considered developing the Petersville Road and establishing a visitor's center in the southwest area of the Denali Stat Park. Due to the rugged terrain and remoteness of the area, an alternate location was recommended.



Petersville Recreational Mining Area (PRMA)

Creeks and Anadromous Fish Streams

RS 2477 Trails

Roads

Section

Township

Scale: 1:12,000

Alaska
Department of Natural Resources
Division of Mining, Land & Water
Mining Section
Boundaries and Information
Current to September 2014

This map is for graphic representation only and is intended to be used only as a guide.
Coordinate System: NAAD_1983_UTM_Zone_6N

Management Restrictions and Authorities

Regulations specific to the Petersville Recreational Mining Area (PRMA) were not adopted during the development of this management plan. Until regulations are adopted, the PRMA should be managed consistent with existing state laws and regulations pertinent to recreational activities on multiple use state land, specifically, 11 AAC 96.020 for Generally Allowed Uses and 11 AAC 96.025 for Conditions for Generally Allowed Uses. The requirements of other permitting agencies, such as the Alaska Department of Fish and Game, the Alaska Department of Transportation & Public Facilities, and the Alaska Department of Environmental Conservation, must also be adhered to.

Related Statutes and Regulations

Other State laws and regulations and Federal Laws also apply to the management of the Petersville Recreational Mining Area (PRMA) and may include, but are not limited those listed on the following table:

Table 1: Related Alaska Statutes, Regulations and Federal Laws

Alaska Statutes and Regulations			
Title	**Chapter**	**Statute / Regulation**	**Name**
Fish and Game	Fish and Game Code	AS 16.05.871	Fish and Game Code
		AS 16.05.841	Fishway Act
Mining	Reclamation	AS 27.19.020	Reclamation Standard
Public Land	Alaska Land Act	AS 38.05.185	Generally
		AS 38.05.212	Production Royalty
		AS 38.05.300	Classification of Land
Public Resources	Rivers, Lakes and Streams	AS 41.14.870	Protection of Fish and Game
Public Resources	Multiple Use Management of Public Resources	AS 41.23.630	Petersville Recreational Mining Area
Public Resources	Historic Preservation	AS 41.35	Alaska Historic Preservation Act
		AS 41.35.200	Unlawful Acts
Natural Resources	Miscellaneous Land Use	11 AAC 96.020	Generally Allowed Uses
Natural Resources	Miscellaneous Land Use	11 AAC 96.025	Conditions for Generally Allowed Uses
Water, Air, Energy and Environmental Conservation	Environmental Conservation	AS 46.03	Environmental Conservation
Environmental Conservation	Alaska Pollutant Discharge Elimination System Program	18 AAC 83	Alaska Pollutant Discharge Elimination System Program
Federal Law			
Name	**Code Reference**		
Clean Water Act of 1972	33.U.S.C. §1251 et, seq.		

Related State Land Management Documents

There are several State land management documents that include background information about the Petersville Recreational Mining Area and the surrounding area. These documents provide additional guidance about the appropriate activities for the area. Please see the following documents for further information: the Susitna Matanuska Area Plan (August 2011), South Denali Implementation Plan and Environmental Impact Statement (April 2006) and the Petersville Road Corridor Management Plan (August 1998). Please note there may be revisions and amendments to these documents in the future.

Requirements of Other Agencies

Although an activity or piece of equipment may be considered as generally allowable by DNR that does not mean that other state agencies do not require permits and authorizations. Particularly, all suction dredging activities within the state require authorization from the Alaska Department of Environmental Conservation (DEC) and the Alaska Department of Fish and Game (ADF&G). Although suction dredging activities are generally allowed, suction dredging activities are restricted at certain times of the year by those agencies.

The DEC issues authorization through a General Permit (Number AKG375000), entitled "Authorization to Discharge under the Alaska Pollutant Discharge Elimination System for Small-Size Suction Dredge Placer Miners". This permit authorizes suction dredges with an intake diameter less than or equal to 6" as well as highbankers (power sluices).

The commissioner of fish and game is responsible for the management of fish and game resources and the public use of fish and wildlife resources within the PRMA (AS 41.23.630(c)). The Alaska Department of Fish and Game issues authorization for suction dredging activities in the Petersville Recreational Mining Area through a General Permit, entitled "Fish Habitat Permit Small-Scale Mining – Mat-Su Area". The stipulations for ADF&G authorizations are specified in the permit, which include a requirement that suction dredges have an intake of 6"in diameter or less and are powered by an engine 18 horsepower (hp) or less, and power sluices with 18 hp or less.

There is a date range for the allowance of these activities by the Alaska Department of Fish and Game and the allowance varies depending on the water source. Peters Creek is considered anadromous throughout the entirety of the PRMA (effective 2015) because Chinook spawning has been documented within the waterbody throughout the PRMA. Small-scale suction dredging activities are only authorized between May 15th and July 15th along the Peters Creek to protect fish habitat. These activities are not authorized on the Peters Creek from July 15th – October 31st.

The Cottonwood Creek and its tributaries are also considered anadromous, although they contain no documented spawning areas in the outlying system. Small-scale suction dredging activities are authorized between May 1st and October 31st on the Cottonwood Creek and its tributaries.

There is a small segment of an unnamed resident fish stream located within the PRMA, south of the Cottonwood Creek. The unnamed resident fish stream is open to recreational mining year-round.

What This Plan Will and Will Not Do

What This Plan Will Do

The recommendations in this plan restrict development within the PRMA and provide guidance for the management of the resources and uses identified by statute (AS 41.23.630(b)). This plan identifies the state's intent for the management of mineral, recreational, and fish and habitat resources within the Petersville Recreational Mining Area. This information provides both the public and private interests with insight about how the state intends to manage the area in the future.

What This Plan Will Not Do

This plan does not designate or classify state land. The Petersville Recreational Mining Area is included within Unit L-02 of the Susitna Matanuska Area Plan (2011) and designated for "minerals" in that area plan. The Land Classification Order Number is SC-09-002.

This plan does not provide management intent resources that the PRMA is not intended for such as: agriculture, forestry, oil & gas, and settlement. Information pertaining to those resources may be found within the Susitna Matanuska Area Plan (2011).

The plan does not affect or provide management guidance for Native Corporation land, private, municipal, borough, or federal land, including state-selected land.

How This Plan Will Be Used

This plan is intended to be used for the management of state lands and resources within the Petersville Recreational Mining Area by the Alaska Department of Natural Resources (DNR). The plan will be used by the DNR to guide the administration of recreational mining activities, and by the public as a guide to allowed recreational mining activities. The DNR DMLW adjudicators will use this plan when reviewing and making decisions on requests and applications for authorizations for the uses of state land, including mining claims, permits, leases, sales, conveyances, and rights-of-way.

Recommendations

Development

The PRMA is intended to be retained in state ownership and to continue in its natural state. Development within the PRMA is not anticipated and it would be inappropriate except for the maintenance of the Petersville Road or similar types of projects that provide a general public benefit. There are no facilities such as restrooms, parking lots, or campsites recommended in this plan.

Recreational Mining Activities

The PRMA is intended to be used for low impact recreational mining activities, such as gold panning. The area is closed to mineral entry (claim staking) (AS 41.23.630(d)). Mining activities and related equipment that are considered as generally allowable in state regulation 11 AAC 96.020 are allowed within the PRMA by the Department of Natural Resources (DNR) but are subject to the conditions prescribed for generally allowed uses in 11 AAC 96.025.

Mineral activities that are not listed as generally allowable in state regulations are typically more complex in nature than recreational mining to the extent that they require a permit from DNR. Mineral activities that are substantial enough to require a permit through DNR are considered inappropriate within the PRMA. Tables 2 and 3 in this document describe the methods of mining allowed, conditionally allowed and not allowed within the PRMA. Please note, the methods and equipment described in the following tables may be modified in the best interest of the state if necessary (11 AAC 96.020(d)).

Avoidance of Cultural and Historic Resources

Mining activities must be conducted in a manner that avoids cultural and heritage resources. The Alaska State Historic Preservation Act (AS 41.35) establishes the state's basic goal: to preserve, protect, and interpret the historic, prehistoric and archaeological resources of Alaska so that the scientific, historic, and cultural heritage values embodied in these resources may pass undiminished to future generations. Disturbances to cultural or historic sites must be reported to the State of Alaska Office of History and Archaeology (OHA), located within the Department of Natural Resources, Division of Parks and Outdoor Recreation.

Methods of Mining

Below is a brief description of mining methods. Placer mining activities are typically more appropriate within the PRMA due the inclusion of a waterbody and the nature of the terrain. These methods are more likely to yield gold for recreational miners given that many placer mining activities are allowed within the PRMA, whereby most lode or Hard Rock mining activities are not. Gold refining and smelting, using heat or chemicals on site is not allowed regardless of the method of mining.

Placer Mining is the process of recovering and concentrating precious minerals and gems from alluvial deposits. The most common mineral recovered using the placer mining method in the PRMA, is gold. This method of mining is typically associated with existing and ancient waterbodies, including glacial deposits. Placer mining depends largely on gravity and water for washing and separating gold from gravel. Using this mining method, gold is recovered from alluvial and placer deposits by means of a gold pan, rocker, sluice, dredge, and related equipment. Placer mining does not involve rock crushing or the use of chemicals to extract gold. Tailings from placer mines typically consist of unprocessed rocks, sediment and silt that can usually be redistributed.

The Peters Creek becomes an anadromous stream south of the confluence with the Cottonwood Creek. Limited suction dredging activities may be allowable if using a suction dredge with a nozzle intake of 6" in diameter or less and engine with 18 hp or less may be conditionally allowed. Permits are required from the Alaska Department of Fish and Game and the Department of Environmental Conservation prior to beginning any suction dredging activities with a hose or motor of any size.

ADF&G authorizations for small-scale suction dredging activities are issued based on the location within the recreational area as specified in the ADF&G General Permit. Small-scale suction dredging activities are only authorized between May 15th and July 15th in the Peters Creek. Small-scale suction dredging activities are authorized between May 1st and October 31st in the Cottonwood Creek. Recreational mining activities are allowed year-round in the unnamed resident fish stream segment south of Cottonwood Creek.

Methods of placer mining that require the use of hydraulic equipment (i.e. the use of pumped or flowing water to remove overburden or move gravels) and dredges greater than 6" in diameter are not allowed within the PRMA. The use of heavy operating equipment is not allowed.

Table 2: Methods of Placer Mining Allowed, Conditionally Allowed or Not Allowed

Activity	Description	Allowed, Conditionally, Or Not Allowed
Panning	Placing sand and gravel in a gold pan or similar device, shaking and moving it back and forth to separate gold. This activity is also referred to as "classifying".	Allowed
High-banking (Power Sluicing)	Placing sand and gravel into a "high-banker" (mobile sluice box), using hand tools such as shovels or small buckets, and pouring or pumping water into it to separate gold. Utilizing a "high-banker" is conditionally allowed under the following conditions. The device is operated by hand. The sand and gravel must be placed into it by shovels, buckets or similar non-mechanical instruments. A small pump (18 hp or less) may be used if authorized by ADF&G and DEC. The "high-banker" must be removable, not stationary or anchored to the ground. It must be portable in size and not require heavy operating equipment or a motorized vehicle to transport on or off site. It may not be stored on-site and must be removed daily. A permit is required from both ADF&G and DEC before conducting this activity. ADF&G only authorizes this activity between May 15th – July 15th in the portions of the Peters Creek that lie within the PRMA. ADF&G authorizes this activity between May 1st and October 31st in the Cottonwood Creek and its tributaries.	Conditionally Allowed
Rocker box	Placing sand and gravel into a "rocker-box", typically a small sluice box, pouring water over it and rocking the box to separate the gold. Utilizing a "rocker box" is conditionally allowed under the following conditions. The device is operated by hand. The sand and gravel must be placed into it by shovels, buckets or similar non-mechanical instruments. The water used must be hand-poured, not pumped. The "rocker box" must be removable, not stationary or anchored to the ground. It must be portable in size and not require heavy operating equipment or a motorized vehicle to transport on or off site. It may not be stored on-site and must be removed daily. ADF&G and DEC do not require a permit for non-motorized tools such as rocker boxes. If a hand pump is used to feed water into the rocker box, the device is considered a "high banker" and permits will be required and seasonal restrictions will apply.	Conditionally Allowed

Table 2: Methods of Placer Mining Allowed, Conditionally Allowed or Not Allowed (*Continued*)

Activity	Description	Allowed, Conditionally, Or Not Allowed
Sluicing	Placing sand and gravel into a "sluice box" that is set directly in the water, allowing for the stream flow to run over the sand and gravel without feeding additional water. A sluice box may also be free standing and require hand-fed water. Utilizing a "sluice box" is conditionally allowed under the following conditions. The device is operated by hand. The sand and gravel must be placed into it by shovels, buckets or similar non-mechanical instruments. If the water is pumped into the sluice box, not hand poured, the activity is considered to be "High-banking", which is also conditionally allowed. The "sluice box" must be removable, not stationary or anchored to the ground. It must be portable in size and not require heavy operating equipment or a motorized vehicle to transport on or off site. It may not be stored on-site and must be removed daily. ADF&G and DEC do not require a permit for non-motorized tools such as sluice boxes. If a hand pump is used to feed water into the rocker box, the device is considered a "high banker" and permits will be required and seasonal restrictions will apply.	Conditionally Allowed
Suction Dredging	Utilizing a "suction dredge" to vacuum sand and gravel from the streambed for the purpose of separating gold from it. Using a "suction dredge" is conditionally allowed provided the hose or nozzle intake is 6" in diameter or less, powered by an engine of 18 hp or less and pumping no more than 30,000 gallons of water per day, per state regulation (11 AAC 96.020). A permit is required from both ADF&G and DEC before conducting this activity. ADF&G only authorizes this activity between May 15th – July 15th in the portions of the Peters Creek that lie within the PRMA. ADF&G authorizes this activity between May 1st and October 31st in the Cottonwood Creek and its tributaries.	Conditionally Allowed

Lode and Hard Rock Mining is the process of extracting minerals from hard rock. This method of mining is usually more invasive and may entail explosives or drilling mine shafts into a rock face to access the mineral deposit. A lode deposit may be underground, within a gold bearing quartz vein in the bedrock or on a rock wall. Once the rock has been removed it is crushed and chemicals may be used to extract the minerals. These mines may be referred to as "open pits" or "strip mines". Tailings from lode deposits are typically chemically treated and require specialized disposal methods.

Hard Rock mineral prospecting, using light portable field equipment, such as a hand-operated pick, shovel, pan, or earth auger, or a metal detector is allowed. However, lode and Hard Rock mining using any methods that involve explosives, power drills, power augers, or heavy equipment, such as loaders, backhoes, excavators, tractors, trenches, including excavating trenches, are not allowed within the PRMA. Gold refining by the use of chemicals or heat onsite is not allowed.

Table 3: Methods of Lode or Hard Rock Mining Allowed, Conditionally Allowed or Not Allowed

Activity	Description	Allowed, Conditionally Allowed, or Not Allowed
Prospecting (Non-Mechanical)	Using light portable field equipment, such as a metal detector, hand-operated pick, shovel, pan, or earth auger to break rocks, expose rock surfaces or to reach bedrock for the purpose of identifying or removing gold from the rock.	Allowed
Prospecting (Mechanical)	Using mechanical equipment or heavy operated machinery to break rocks, expose rock surface or to reach bedrock for the purpose of identifying or removing gold from the rock.	Not Allowed
Drilling	Using a drill to break rocks, expose rock surfaces or to reach bedrock, or create tunnels through rocks or soil for the purpose of identifying or removing gold from the rock.	Not Allowed
Excavating	Using an excavator, or similar equipment, to break rocks, expose rock surfaces, reach bedrock, or create pits for the purpose of identifying or removing gold from the rock. Excavators may not be used to remove rock away from the PRMA for off-site analysis.	Not Allowed
Pyrotechnics	Using explosives to break rocks, expose rock surfaces, reach bedrock, or create pits for the purpose of identifying or removing gold from the rock.	Not Allowed
Chemicals	Using chemicals to break rocks, expose rock surfaces, reach bedrock, or create pits for the purpose of identifying or removing gold from the rock.	Not Allowed
Processing		
Refining	Converting the gold into pure gold by the use of chemicals.	Not allowed.
Smelting	Utilizing heat for melting small gold pieces together to make larger pieces or miners bars.	Not Allowed

Mining Equipment

The types of mining equipment that may be used within the PRMA include light portable field equipment, such as a hand-operated pick, shovel, pan, and earth augers. Sluice boxes, high-bankers and rocker boxes may be allowed if they are portable and do not require heavy operating equipment to transport. These devices must also be hand operated and must not require the use of pumped water beyond 18 hp or other mechanical hydraulic equipment to operate. All suction dredging, rocker box and high banking activities require authorization from the Alaska Department of Fish and Game and the Department of Environmental Conservation. The equipment that is allowed or conditionally allowed is described in Table 4. Equipment may not be stored on site and must be removed daily.

The types of mining equipment that may not be used within the PRMA include, but may not be limited to: hydraulic equipment such as pumps, sprays, explosives, and heavy equipment, such as crushers, loaders, backhoes, excavators, tractors, and trenchers as described in this plan. No chemicals or heat may be used for mineral extraction or refining. The equipment that is not allowed or conditionally allowed is described in Table 5. Please note, equipment described in the following tables may be modified in the best interest of the state if necessary (11 AAC 96.020(d)).

Table 4: Mining Equipment Allowed or Conditionally Allowed

Equipment	Description	Allowed or Conditionally Allowed
Suction Dredge (Less than 6")	Mechanical device fitted with hose(s) and a water pump that is used to suck gold bearing gravel from the bottom of a waterbody by the use of water pressure. Using a "suction dredge" is conditionally allowed provided the hose or nozzle intake is 6" in diameter or less, powered by an engine of 18 hp or less and pumping no more than 30,000 gallons of water per day. The water intake must be screened with 1/8-inch mesh to prevent the entrapment of fish. A permit is required from both ADF&G and DEC before conducting this activity. ADF&G only authorizes this activity between May 15th – July 15th in the portions of the Peters Creek that lie within the PRMA. ADF&G authorizes this activity between May 1st and October 31st in the Cottonwood Creek and its tributaries.	Conditionally Allowed
Pan	Pan or similar object that is used for gold panning.	Allowed
Metal Detector	Light, portable metal detector for mineral prospecting.	Allowed
Earth Auger	Non-motorized, hand operated boring tool capable of making small holes in the ground or surface rocks.	Allowed
Shovel	Non-motorized, hand operated tool used for digging, lifting and moving rocks and gravel.	Allowed
Pick	Non-motorized, hand operated tool used for the removal or chipping of a rock face over a small surface area.	Allowed
Drill	Non-motorized, hand operated drilling tool capable of making small holes in the ground or surface rocks.	Allowed
Backpack Power Drill	Compact, motorized, hand operated, drilling tool capable of making small holes in the ground or surface rocks.	Allowed
Backpack Power Auger	Compact, motorized, hand operated, boring tool capable of making small holes in the ground or surface rocks.	Allowed

Table 4: Mining Equipment Allowed or Conditionally Allowed (*Continued*)

Equipment	Description	Allowed Or Conditionally Allowed
High-Banker (Power Sluice)	A modified sluice box, that is placed outside of the water, and may be connected to a small pump for water supply. A "high-banker" is conditionally allowed if it is removable, not stationary or anchored to the ground. It must be portable in size and not require heavy operating equipment to transport on or off site. It must be removed daily and may not be stored on site. Pumped water used to operate the device should be provided by a pump with no more than 18 hp. The water intake must be screened with 1/8-inch mesh to prevent the entrapment of fish. A permit is required from both ADF&G and DEC before conducting this activity. ADF&G only authorizes this activity between May 15th – July 15th in the portions of the Peters Creek that lie within the PRMA. ADF&G authorizes this activity between May 1st and October 31st in the Cottonwood Creek and its tributaries.	Conditionally Allowed
Rocker Box or Cradle	A modified sluice box that separates gold from gravel by hand rocking. A "rocker box" is conditionally allowable if it is removable, not stationary or anchored to the ground. It must be portable in size and not require heavy operating equipment or a motorized vehicle to transport on or off site. It must be removed daily and may not be stored on site. Any water used to operate the device should be hand poured or provided within the stream. ADF&G and DEC do not require a permit for non-motorized equipment such as rocker boxes if the water is hand poured or provided within the stream. There are no seasonal restrictions for non-motorized equipment. If the water is provided to the rocker box by a handpump, it is considered a "high banker" and a permit is required from both ADF&G and DEC and seasonal restrictions do apply. (See above).	Conditionally Allowed
Sluice Box	A long trough like box with a riffled surface, set at a slope (typically 1:20), placed in a stream to allow the stream water to flow though and separate the placer gravel from the gold. The device may also be placed next to the water source and hand fed water. A "sluice box" is conditionally allowed if it is removable, not stationary or anchored to the ground. It must be portable in size and not require heavy operating equipment or a motorized vehicle to transport on or off site. It must be removed daily and may not be stored on site. Any water used to operate the device should be hand poured or provided within the stream. ADF&G and DEC do not require a permit for non-motorized equipment such as rocker boxes if the water is hand poured or provided within the stream. There are no seasonal restrictions for non-motorized equipment. If the water is provided to the sluice box by a handpump, it is considered a "high banker" and a permit is required from both ADF&G and DEC and seasonal restrictions do apply. (See above).	Conditionally Allowed

Table 5: Mining Equipment NOT Allowed

Equipment	Description
Explosives	A chemical compound, mixture, or device that is commonly used or intended for the purpose of producing a chemical reaction resulting in a substantially instantaneous release of gas and heat; "**explosive**" includes dynamite, blasting power, nitroglycerin, blasting caps, nitro jelly, and mixtures containing nitrates and petroleum based fuel; explosive does not include salable fireworks as defined by AS 18.72.100(4).
Power Drill	Engine powered drill or similar device capable of drilling holes 300' or greater in depth.
Power Auger	Engine powered auger or similar device capable of boring holes 300' or greater in depth.
Hydraulic Pumps	Any water pump that uses a motor greater than 18 hp.
Hydraulic Sprays	Any device that sprays pressurized water or other fluid.
Suction Dredge (Greater than 6")	Suction dredge fitted with a hose and a water pump with a nozzle greater than 6" in diameter and/or with a motor greater than 18 hp. **Note**: *No suction dredge, of any size, may be used at any time of the year unless a permit has been authorized from both the Alaska Department of Fish and Game and the Department of Environmental Conservation.*
Mechanical Dredge	Mechanical or flotation device fitted with a bucket, shovel, scraper, or similar tool that is not hand portable, for the use of scooping or sucking gold bearing gravel from the bottom of a waterbody.
Back Hoe	A piece of excavating equipment, consisting of a digging bucket on the end of a two-part articulated arm that is typically mounted on a tractor or front loader.
Tractor	A piece of heavy equipment that sits atop two to four wheels, sometimes tracks, that may be used for the purpose of hauling machinery, such as excavating machinery, or ground tillage.
Loader (Front and/or Back)	A piece of heavy equipment on two to four wheels, or tracks, equipped with a large bucket that us used for the purpose of excavating, moving or transporting debris, such as dirt, boulders, or similar materials.
Excavator (Diggers)	A piece of heavy equipment consisting of a boom, stick, bucket (shovel) and cab on a rotating platform, with tracks or wheels that may be cable operated, used for the purpose of excavating, moving or transporting debris, such as dirt, boulders, or similar materials.
Trommel	Mechanical, rotating screened cylinder used to separate materials by size, such as gold and mineral rich soils.
Jig	Machine or device used to separate particles within the ore body based on the relative density, utilizing pulsating water.
Crusher	Machine designed to crush materials, such as large rocks into smaller rocks, gravel or rock dust.
Chemicals	Any chemical agent used to clean, extract or refine gold or other minerals from hard rock or gravel.
Furnace	An oven, powered by any means, used for the purpose of smelting gold or other minerals.

Reclamation

Reclamation must be performed daily and upon completion of seasonal recreational mining activities. Performance of reclamation will mitigate the impact of mineral and recreational activities on habitat and wildlife in the PRMA and maintain the area's natural character for future visitors to the area. Respectful use of the land and reclamation are required by state statute and regulations. The regulation for conditions for generally allowed uses (11 AAC 96.025) indicate that activities occurring on public land must be conducted in a manner that minimizes disturbance to fish and wildlife resources.

The state law for Mining Reclamation (AS 27.19.020) requires that mining activities must be conducted in a manner that prevents unnecessary and undue degradation of land and water resources, and the mining operation shall be reclaimed as contemporaneously as practicable to leave the site in a stable condition. State regulation (11 AAC 97.200) requires that reclamation must be performed upon completion of all mining operations and any surface that does not have a stream flowing over it is left in a stable condition and waterborne soil erosion is expected to return to pre-mining levels within one year after the reclamation is completed.

Below is a list that includes actions derived from state regulation 11 AAC 96.025(4) through (9) and state statute AS 27.19.020 that must be taken upon completion of recreational mining or other recreational activities in the PRMA. Activities include, but are not limited to:

- All personal items, including garbage and foreign debris must be removed.
- Every reasonable effort must be made to prevent, control, and suppress any fire in the operating area; uncontrolled fires must be immediately reported.
- Holes, pits, and excavations must be repaired as soon as possible. They must be marked to ensure public safety and not be large enough to entrap wildlife.
- All equipment that was utilized during the recreational mining activity must be removed and taken off-site by the recreational user.
- Any structure placed on-site, such as tents, campers, or storage containers, must be removed.
- Tailing piles must be returned to the area from which they were taken and distributed.
- Rocks or boulders that were moved must be returned to the location they were moved from.
- No chemicals, including flammable liquids, such as fuel, hydraulic fluid, or hazardous waste may be discarded on land or water within the PRMA.

Please note that mining artifacts that are located on the ground prior to your arrival must be reported to the Office of History and Archaeology and should not be removed.

Fish and Wildlife Habitat

The Petersville Recreational Mining Area (PRMA) is an important habitat area for wildlife. The portions of the Peters Creek that lie within the PRMA are anadromous and contain fish spawning areas. The Peters Creek is considered to be a concentrated use area for fish during a sensitive life cycle stage. ADF&G monitors activities within the PRMA because alteration of the habitat and/or human disturbance could result in a permanent loss of population or sustained yield of the fish species that spawn or rear within the creeks. Five species of anadromous fish are known to utilize Peters Creek and Cottonwood Creek including: Dolly Varden, King, Silver, Chinook, and Coho Salmon. Resident fish species include, but are not limited to Grayling and Rainbow Trout. The Cottonwood Creek does not contain spawning areas.

Numerous mammals and birds are present within and surrounding the PRMA. Large mammals include moose, wolves, and black and brown bears. Small mammals include: lynx, wolverine, red fox, marmot, arctic ground squirrel, northern flying squirrel, porcupine, beaver, and river otters. Birds include: raptors, ptarmigan, trumpeter swans, ducks, geese and owls. Authorization is required from ADF&G prior to conducting any fishing, hunting, or trapping activities in the PRMA.

Authorizations Required to Protect Habitat

The Alaska Department of Fish and Game (ADF&G) is responsible for the management of the fish and game resources within the PRMA (AS 41.23.630(c)). ADF&G issues a general permit to the public authorizing low impact recreational mining activities that are subject to seasonal restrictions in order to minimize adverse effects on fish and wildlife within the PRMA.

An authorization is required from ADF&G and the Department of Environmental Conservation prior to beginning any suction dredging activity, regardless of the diameter of the suction hose. ADF&G authorizations for small-scale suction dredging activities are issued based on the location within the recreational area as specified in the ADF&G General Permit. Small-scale suction dredging activities are only authorized on the Peters Creek between May 15th and July 15th because it is anadromous. Since there are no documented spawning areas in the Cottonwood Creek, small-scale suction dredging activities are authorized for a longer period, between May 1st and October 31st along that waterbody.

Other activities that may alter the riverine hydrologic system such as damming, channelization, or diversion are not allowed in Peters Creek or at any nexus with surrounding water bodies. A permit is also required from ADF&G to operate recreational vehicles in the PRMA if those Off-road or all terrain vehicles are going to be used to cross the creek or to recreate near the water. ADF&G does not authorize the use of ATV's or other wheeled or tracked vehicles for recreation within anadromous waters (AS 41.14.870).

Public Recreation

The Petersville Recreational Mining Area (PRMA) was established to provide an area for the public to conduct recreational mining and recreational activities that do not conflict with recreational mining or cause damage to habitat and wildlife. The area was closed to mineral entry (claim staking) to ensure the land would be available for public use (AS 41.23.630). Because of the multiple use nature of the area, the allowable uses on the land must be consistent with regulations pertaining to Generally Allowed Uses in state regulations (11 AAC 96.020 – 11 AAC 96.025).

There are no campsites, public restrooms or related facilities located in the PRMA and none are recommended in this plan.

Recreational Activities Authorized within the PRMA

Many types of recreational activities are considered generally allowable within the PRMA. However, other state agencies such as ADF&G and DEC may require a permit. Those activities are therefore not authorized until the permit has been obtained from the responsible agency. Please note that commercial recreational operations require a permit from the Department of Natural Resources whether or not the uses are considered to be generally allowable (11 AAC 96.020).

Below is a list of activities that are generally allowable within the PRMA. The Department may determine some generally allowed uses to be inappropriate within the PRMA if those activities interfere with recreational mining activities or result in damage to the vegetation and soils or become a matter of public safety. (See AS 38.04.200 and 11 AAC 96.020(d)). Also, some activities may require authorization from ADF&G.

Generally Allowable Recreational Uses within the PRMA

- Foot Travel: Hiking, backpacking, skiing, climbing or similar activity
- Non-motorized Travel: Bicycling, horse, dogsled or with pack animals
- Recreational-type off-road or all-terrain vehicle use, including snowmobiles and four-wheelers with a curb weight of up to 1,500 pounds if use off the road easement does not cause or contribute to water quality degradation, alteration of drainage systems, significant rutting, ground disturbance, or thermal erosion. (Please note: ORV Use is restricted on nearby park lands.)
- Hunting and fishing.
- Harvesting wild plants, mushrooms, berries, and other plants for personal use.
- Using dead and down wood for a cooking or warming fire, unless the department has closed the area to fires during the fire season.
- Setting up and using a camp for personal, noncommercial recreational purposes for no more than 14 days at one site, using a tent platform or other temporary structure that can readily be dismantled and removed. The entire camp must be moved at least two miles before the end of the 14-day period. The camp must be removed immediately if the department determines that it interferes with public access or other public uses or interests.

Generally Allowable Recreational Uses that Require Authorization from ADF&G

- Hunting and Fishing
- Crossing or entering an anadromous stream with recreational-type off-road or all-terrain vehicles, including snowmobiles and four-wheelers.
- Suction dredging activities.

Access and Road Construction

Access is provided to the Petersville Recreational Mining Area by Petersville Road. Petersville Road leaves the Parks Highway at Trapper Creek, about 115 miles north of Anchorage and 243 miles south of Fairbanks. Many areas along the road have outstanding viewpoints of Mount McKinley. The first 9.4 miles are paved. The next 8.9 miles goes to the site where the Forks Roadhouse once stood (which is the junction of Collinsville Rd. and Petersville Rd.)

The Collinsville Road is only maintained to the Peters Creek bridge and becomes a 4 wheeler trail soon after. Beyond this junction, for the next 14.9 miles the Petersville becomes a primitive road all the way to the Recreational Mining Area. It is recommended that this next section be traveled using a 4-wheel drive vehicle or a vehicle with high clearance.

Petersville Road is closed to thru traffic during the winter months. Additional access is provided to the area by the Willow Creek Trail (RST 512), which ultimately connects with the Youngstown-Home Lake Trail (RST 1608) and leads into the Denali State Park. Public access on these trails should be maintained.

The bridge at Peters Creek (mile 32) has weight restrictions so oversize vehicles must use the ford to reach the upper end of the Recreational Mining Area. This ford and the second ford in the same area have been approved by the Alaska Department of Fish & Game as a vehicle crossing.

DNR will permit construction and realignment of the Petersville Road within the Petersville Recreational Mining Area as is determined necessary by the Department of Transportation and Public Facilities. However, material sites will not be authorized within the boundaries of the PRMA.