



FISH HABITAT PERMIT FH19-II-0058

ISSUED: April 2, 2019
EXPIRES: December 31, 2023

Pebble Limited Partnership
Attention: Tim Havey
3201 C Street, Suite 604
Anchorage, AK 99503

RE: Water Withdrawal
Unnamed Tributaries and Ponds - South Fork Koktuli River Watershed
Sections 20-22, 28, and 30 T 3 S, R 35 W, SM
Sections 25, 34 and 36, T 3 S, 36 W, SM
Section 3, T 4 S, 36 W, SM
Locations: 59.9048 N, 155.3231 W
59.8721 N, 155.4556 W
59.8658 N, 155.4553 W
59.8968 N, 155.2782 W
59.8997 N, 155.2836 W
59.8951 N, 155.3049 W
59.8929 N, 155.2990 W
59.8821 N, 155.2921 W
59.8851 N, 155.2997 W
59.8863 N, 155.3651 W
59.8818 N, 155.3792 W

Dear Mr. Havey:

Pursuant to the Fishway Act at AS 16.05.841, the Alaska Department of Fish and Game (ADF&G) Division of Habitat has reviewed your proposal to withdraw water from the unnamed tributaries and ponds in the South Fork Koktuli River watershed (see Figure 2B – SFK Watershed Resident Fish).

Project Description

Water will be withdrawn at a maximum rate of 25 gallons per minute. The water pumped from the South Fork Koktuli River tributaries and ponds will be used for exploratory drilling operations.

Pebble Limited Partnership (PLP) has provided the ADF&G, Division of Habitat, with the specifications of the fish screens being used to conduct water withdrawals for this project. The screens consist of a 24-inch long, 4-inch diameter outer screen with a 1-millimeter by 12-millimeter slot size and either an 18-inch or 24-inch long, 2.5-inch diameter inner distribution sleeve. At a withdrawal rate of 25 gallons per minute, these screens exceed the Division of Habitats' most restrictive screening criteria of a screen mesh size not to exceed 1.0 millimeter and maximum water velocity at the screen surface of 0.1 feet per second. These fish screens have been certified by ADF&G as being protective of all life states of fish present in these waterbodies.

When conducting activities under this permit, PLP will adhere to the State-approved Pebble Project Water Withdrawal Plan (enclosed). No activities associated with the water withdrawals will occur in any stream or lake, except for the placement of the screened pump intake enclosure. No surface disturbing activities will occur within 100 feet of any stream or lake.

Fishway Act

The unnamed tributaries and ponds are likely to support rainbow trout, Dolly Varden, Arctic grayling, and sculpin species. The South Fork Kaktuli River has been specified downstream of your project area as being important for the spawning, rearing, and migration of anadromous fish.

In accordance with AS 16.05.841, your project is approved subject to the project description and permit terms, and the following stipulation.

1. PLP shall inspect the intake screen for damage (torn screen, crushed screen, screen separated from intake ends, etc.) before and after each use. Any damage observed must be repaired prior to use of the intake structure. The structure must always conform to the original design specifications while in use.

Permit Terms

This letter constitutes a permit issued under the authority of AS 16.05.841 and must be retained on site during project activities. Please be advised that this determination applies only to activities regulated by the Division of Habitat; other agencies also may have jurisdiction under their respective authorities. This determination does not relieve you of your responsibility to secure other permits; state, federal, or local. You are still required to comply with all other applicable laws.

You are responsible for the actions of contractors, agents, or other persons who perform work to accomplish the approved project. For any activity that significantly deviates from the approved plan, you shall notify the Division of Habitat and obtain written approval in the form of a permit amendment before beginning the activity. Any action that increases the project's overall scope or that negates, alters, or minimizes the intent or effectiveness of any provision contained in this permit will be deemed a significant deviation from the approved plan. The final determination as to the significance of any deviation and the need for a permit amendment is the responsibility of the Division of Habitat. Therefore, we recommend you consult the Division of Habitat immediately before considering any deviation from the approved plan.

You shall give an authorized representative of the state free and unobstructed access to the permit site, at safe and reasonable times, for the purpose of inspecting or monitoring compliance

with any provision of this permit. You shall furnish whatever assistance and information the authorized representative reasonably requires for monitoring and inspection purposes.

In addition to the penalties provided by law, this permit may be terminated or revoked for failure to comply with its provisions or failure to comply with applicable statutes and regulations. You shall mitigate any adverse effect upon fish or wildlife, their habitats, or any restriction or interference with public use that the commissioner determines was a direct result of your failure to comply with this permit or any applicable law.

You shall indemnify, save harmless, and defend the department, its agents, and its employees from any and all claims, actions, or liabilities for injuries or damages sustained by any person or property arising directly or indirectly from permitted activities or your performance under this permit. However, this provision has no effect if, and only if, the sole proximate cause of the injury is the department's negligence.

Please direct questions about this permit to Habitat Biologist Josh Brekken at (907) 267-2113 or josh.brekken@alaska.gov.

Sincerely,
Doug Vincent-Lang
Commissioner

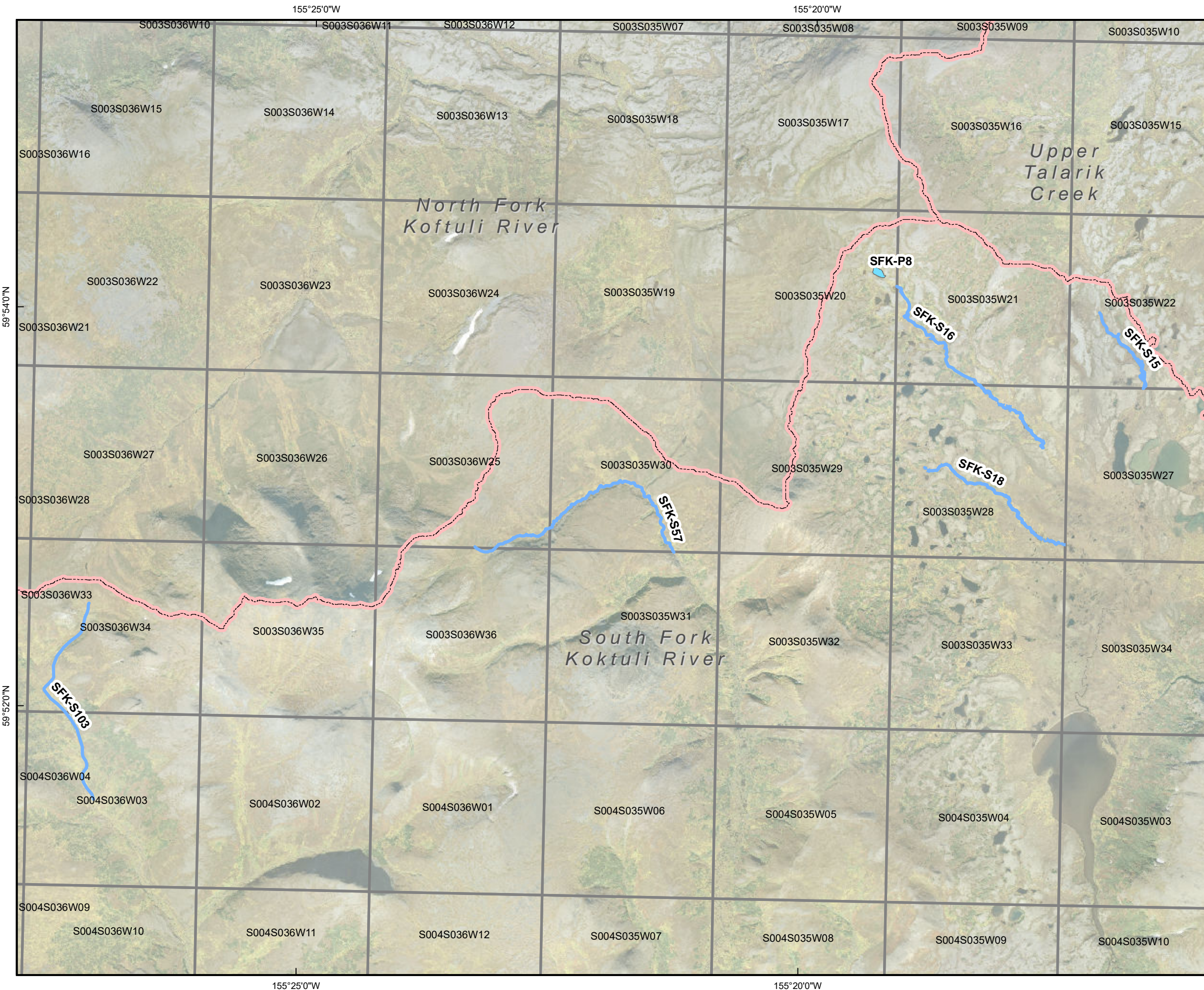


By Ron Benkert
Southcentral Regional Supervisor





Enclosures: Figure 2B – SFK Watershed Resident Fish
Pebble Project Water Withdrawal Plan

Email cc:

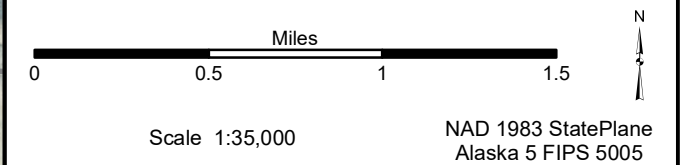
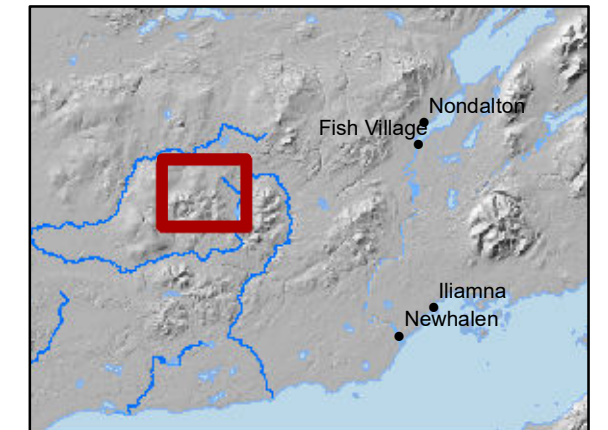
A. Ott, ADF&G
J. Dye, ADF&G
T. Sands, ADF&G
C. Larson, ADNR
M. Walton, ADNR
J. March, ADNR
H. Chalup, ADNR
K. Moselle, ADNR
USACE, Regulatory
AWT, Dillingham
N. Hill, L&PB



Authorized Water Sources*

-  Streams: Resident Fish
-  Ponds: Resident Fish
-  HUC10 Watershed
-  Sections

*Water source authorizations from ADNR are pending as of 3/1/2019 but expected prior to start of 2019 field season.



Source(s):
Anadromous Waters Catalog, ADNR. Feb 2019

Figure:
2B

**South Fork Koftuli Watershed
Resident Fish**

File: ADFG_2019FH_SFK_RES

Date: 3/6/2019

Revision:

Author: TH/PLP

Pebble Project Water Withdrawal Plan Revision 1

July 13, 2010

Background

The State of Alaska has the responsibility to ensure its lands and waters are used in a manner to provide the maximum benefit to Alaskans while protecting Alaska's lands and waters from abusive uses. The Department of Natural Resources (ADNR) has the responsibility under AS 46.15 to ensure water use, whether through providing water rights or Temporary Water Use Permits (TWUPs), is consistent with the common good of the people and other natural resources. For the Pebble Limited Partnership's (PLP) drilling program, which requires the use of water, PLP must apply for and receive permission from the ADNR Water Resources Section for TWUPs that identify specific sources of water that may be used, the amount of water that may be used each day, and the total amount of water that may be used each year.

In addition to receiving the necessary TWUPs, under AS 16.05 PLP must also receive Fish Habitat Permits from the Alaska Department of Fish and Game (ADFG) Habitat Division when fish may be present. These Fish Habitat Permits do not authorize water withdrawals. Rather, they stipulate conditions under which water may be withdrawn from a permitted water source (as identified in a TWUP) that may support fish populations. These conditions include screened water intakes of a specific mesh size to prevent removal of fish from the waterbody, and specific water velocities to prevent entrainment of fish against the water intake structure.

Purpose

The purpose of this plan is to ensure all water sources used in PLP's field exploration program that require an authorization have been permitted by the ADNR Water Resources Section and the ADFG Habitat Division.

The plan consists of four parts – procedures for:

- I. Obtaining Temporary Water Use Permits and Fish Habitat Permits
- II. Taking Water
- III. Reporting
- IV. Coordination and Training of Field Staff for Adherence to TWUP and Fish Habitat Permit Stipulations.

In practice, this plan will be modified on a regular basis to address changing conditions and to improve efficiency as experience dictates.

I. Obtaining Temporary Water Use Permits and Fish Habitat Permits

Under 11 AAC 93.220 PLP will submit to ADNR's Water Resources Section one or more completed application(s) for temporary use of water listing the previously drilled artesian holes and lakes, ponds, or stream segments from which it plans to take water.

And, under AS 16.05, PLP will submit to ADF&G's Habitat Division one or more completed application(s) for Fish Habitat Permits for protection of fish resources that may be present in the waters associated with the TWUPs applied for above.

In addition to the standard application form(s), PLP also will submit:

1. The following information for each prospective water source in tabular format similar to that shown below.

Example Table. Requested Water Sources.

Water Source		Township Range Section ²	Drill Hole, Pond or Lake Coordinates ³		Upstream Coordinates		Downstream Coordinates	
Type	Number		Latitude	Longitude	Latitude	Longitude	Latitude	Longitude
Drill hole	SFK-D6352 ¹	T38N,R34W, SE1/4 NW1/4 Sec.23	59.917 N	155.255 W	----	----	----	----
Lake	NFK-L6	T38N,R35W, NW1/4 NE1/4 Sec.34	59.899 N	155.267 W	----	----	----	----
Pond	SFK-P12	T38N,R35W, NE1/4 SE1/4 Sec.17	59.905 N	155.242 W	----	----	----	----
Stream	UTC-S10	T38N,R65W, NE1/4 NW1/4 Sec.6	----	----	59.920 N	155.255 W	59.879 N	155.227 W

¹ P – Pond D - Drill hole L – Lake S - Stream

² To ¼ ¼ section

³ Decimal degrees using WGS 1984

2. An orthophoto map figure, with both township/range/section and latitude/longitude grids, showing the location of each already drilled artesian hole and lake, pond, or stream segment for which a TWUP is requested.

II. Taking Water

This second part of the plan is based on the water sources themselves having been approved as described above in Part I, and the appropriate TWUPs and Fish Habitat Permits having been issued.

Pre-Water Take Actions

1. Once planned drill hole locations are identified, the Site Data Manager or designee will determine on a GIS base whether a permitted water source is reasonably proximate and note the tentative GIS latitude/longitude map coordinates of that location.

2. The Site Field Operations Coordinator & Surveyor will check that the GIS map coordinates for a planned drill hole, and the planned water take location, are manageable and achievable in the field by going to each planned drill hole and associated water take location.
3. At the preferred water take location, the Site Field Operations Coordinator & Surveyor will:
 - a. Erect a clearly visible rebar/stake/pipe (ID Post), clearly labeled with the water take point number, such that the drill crew will know where the water intake structure is to be placed.
 - b. Record the latitude/longitude coordinates using a hand-held GPS unit.
4. The Site Field Operations Coordinator & Surveyor will report to the Manager of Technical Operations in Iliamna to confirm the drill hole and water take locations meet permit requirements.

Water Take Actions

1. A copy of the relevant TWUP and Fish Habitat Permit for each water take location will be kept in PLP's Iliamna office when conducting the permitted water take activity.
2. Water will be taken only from a source that is marked by rebar/stake/pipe, clearly labeled with the water take point number signifying the location is an approved water take source.
3. No activities will occur in the stream, pond, or lake except for placement, adjustment, inspection and removal of the hose and screened pump intake enclosure.
4. There shall be no wheeled, tracked, excavating or other machinery or equipment (excepting the non-motorized screened intake structure) operated below the ordinary high water line.
5. Waterbodies shall not be altered to facilitate water appropriation or disturbed in any way. If banks, shores, or beds are inadvertently disturbed, excavated, compacted, or filled, they shall be immediately stabilized to prevent erosion and sedimentation of the waterbody which could occur both during and after operations. Any disturbed areas shall be recountoured and revegetated.
6. Adequate flow must remain to support indigenous aquatic life and the water course must not be blocked to the passage of fish.
7. Gas fueled pumps and related equipment will not be fueled or serviced within 100 ft of a water body unless the pumps are situated within a catch basin designed to contain any spills.
8. The suction hose at the water extraction site must be clean and free from contamination at all times, and should be in water of sufficient depth so that stream sediments are not disturbed during the extraction process.

9. Each water take point in a water source containing fish at that location must be surrounded by a screened intake enclosure that meets the screen specifications contained in that source's Fish Habitat Permit.
10. Before and after each use, and prior to deployment:
 - a. The screened pump intake enclosure must be inspected for damage (torn, crushed, separated from intake ends, etc.).
 - b. Any damage to the screened pump intake enclosure must be repaired prior to use.
 - c. The screened pump intake enclosure must always conform, as a minimum, to the original design specifications while in use.
11. Unless the permit specifically states otherwise, water may be withdrawn at a rate of up to 25 gallons per minute (gpm).
12. The water will be used for exploration operations.
13. If any activity would significantly deviate from this Water Withdrawal Plan, the ADNR Water Resources and Mining Sections and ADFG Habitat Division must be notified and written approval received from the Water Section before beginning the activity.
14. Photo documentation of the installed water intake equipment will be made as follows:
 - a. Close up of the installed water intake equipment
 - b. Wider view of water intake equipment relative to the water source and surrounding area.
15. If during the drilling of a drill hole the original water source must be moved, PLP will provide notice, as described in Section III, for a changed, permitted water source before continuing to drill.

Post-Water Take Actions

1. Water intake equipment will be removed from the water source.
2. Photo documentation of the site after removal of the water intake equipment as follows:
 - a. Close up of the location of the removed water intake equipment
 - b. Wider view of water take location relative to the water source and surrounding area.

III. Reporting

With respect to the specific water take locations it proposes to use in support of its exploration drilling program, PLP will provide ADNR and ADFG with written and photographic information concerning the:

- Location of planned water take points
- Location of actual water take points
- Confirmation water take has been completed

At least 30 days before the drilling season commences, PLP will submit by email to the ADNR Water Resources and Mining Sections and ADFG Habitat Division information identifying the planned approximate drill hole locations and the associated permitted water source(s). Subject to the number of drill holes per Work Block contained in the Plan of Operations authorized under a Miscellaneous Land Use Permit from ADNR, if a planned drill hole location for which the pre-season notice was given is to be changed by 1200 feet or more or if a new drill hole location is planned that was not identified in the pre-season 30-day notice, then at least 5 business days before drilling at that location PLP must submit by email to the ADNR Water Resources and Mining Sections and ADFG Habitat Division notice of such change, which notice must include information identifying the approximate drill hole location and the associated permitted water source(s) as described in paragraphs 1 and 2, below.

Notice of any change to a drill hole location for which 30-day notice has been given as provided above, which change is greater than 600 feet and less than 1200 feet, or any change to the identified permitted water source(s) for any drill hole location, must be submitted by email to the ADNR Water Resources and Mining Sections and ADFG Habitat Division at least 1 business day prior to drilling and contain the information as described in paragraphs 1 and 2, below.

Beginning on the first of the month after the pre-season notice above is provided, and continuing on the first of each month thereafter for the duration of the drilling season, PLP will submit to the ADNR Water Resources and Mining Sections and ADFG Habitat Division reports containing the information required in paragraphs 1 and 2, below.

NOTE: The information provided in the example drill hole table and the example water take locations table may be combined into a single table. All tables will be dated with the date of submission.

1. Drill Hole Locations

- a. **Drill Hole Table** -- The information in this table, on a monthly basis, will cumulatively display information about all completed, active and planned drill holes, respectively, during the course of the annual drilling program. Note that planned drill holes have a pre-drill number (EX...) until drilling begins, at which time they take the next chronological drill hole number (09....).

Information in the three rows in the drill hole table below represent, respectively, a:

- Completed drill hole
- Active drill hole
- Planned drill hole

Example Table. Completed, Active and Planned Drill Holes

Drill Hole			Date Drilling		Township Range Section ²	Coordinates ³	
Pre-Drill #	Number	Status ¹	Began	Ended		Latitude	Longitude
EX09-D	09487	C	6/4/09	6/23/09	T38N,R35W, NE1/4 SW1/4 Sec.17	59.879 N	155.227 W
EX09-E	09488	A	6/06/09	N/A ⁴	T38N,R35W, NW1/4 SE1/4 Sec.34	59.899 N	155.267 W
EX09-F ⁵	N/A	P	N/A	N/A	T38N,R34W, SW1/4 NE1/4 Sec.32	59.920 N	155.255 W

¹ C = Completed, A = Active, P = Planned

² To ¼ ¼ section

³ Decimal degrees using WGS 1984

⁴ Not applicable as of reporting date

⁵ Planned locations for drill holes with a pre-drill number are based on GIS mapping only and have not been field located yet.

- b. **Drill Hole Orthophoto Map Figure** -- This map figure, on a monthly basis, will cumulatively display locations of all completed, active and planned drill holes during the course of the annual drilling program.

2. Water Take Points

- a. **Water Take Table** -- The information in this table, on a monthly basis, will cumulatively display information about all completed, active and planned water take points, respectively, during the course of the annual drilling program. Note that planned water take points have a pre-drill number (EX...-W [water]) until drilling begins, at which time they take the next chronological drill hole number (09...-W).

Information in the three rows in the water take location table below represent, respectively, a:

- Completed water take point
 - Active water take point
 - Planned water take point
- b. **Water Take Point Orthophoto Map Figure** -- This map figure, on a monthly basis, will cumulatively display locations of all completed, active and planned water take points, respectively, during the course of the annual drilling program.

- c. **Water Take Point Site Photos** -- These photos will document installation and removal of water intake equipment following:
 - i. Installation:
 - 1. Close up of the installed water intake equipment
 - 2. Wider view of water intake equipment relative to the water source and surrounding area
 - ii. Removal
 - 1. Close up of the location from which the water intake equipment was removed
 - 2. Wider view of water take location relative to the water source and surrounding area

Example Table. Completed, Active and Planned Water Take Locations

Water Take Point			Date Intake Equipment/Operation				TWUP #	Fish Habitat Permit Number	Water Source Number	Township Range Section ²	Coordinates ³	
Pre-Drill #	Number	Status ¹	Installed	Began	Ended	Removed					Latitude	Longitude
EX09-D-W	09487-W	C	6/3/09	6/4/09	6/23/09	6/24/09	A2010-123	FH-09-II-0106	SFK-D6352 ⁴	T38N,R35W, NE1/4 SW1/4 Sec.17	59.879 N	155.227 W
EX09-E-W	09488-W	A	6/6/09	6/6/09	N/A ⁵	N/A	A2010-125	FH-09-II-0107	NFK-L6	T38N,R35W, NW1/4 SE1/4 Sec.34	59.899 N	155.267 W
EX09-F-W ⁶	N/A	P	N/A	N/A	N/A	N/A	A2010-125	FH-09-II-0108	UTC-S10	T38N,R34W, SW1/4 NE1/4 Sec.32	59.920 N	155.255 W

¹ C = Completed, A = Active, P = Planned

² To ¼ ¼ section

³ Decimal degrees using WGS 1984

⁴ P – Pond D - Drill hole L – Lake S - Stream

⁵ Not applicable as of reporting date

⁶ Planned locations for water take locations with a pre-drill number are based on GIS mapping only and have not been field located yet.

IV. Coordination and Training of Field Staff for Adherence to TWUP and Fish Habitat Permit Stipulations

Prior to the commencement of drilling operations, the Site Field Operations Coordinator & Surveyor will be informed by the Manager of Technical Operations of all stipulations and guidelines necessary to stay in compliance with the drilling, temporary water use permits, and Fish Habitat Permits required for drilling.

A training program will be developed and supervised by the Site Environmental Compliance Officer. The program will cover all stipulations found in both the TWUPs and Fish Habitat Permits, and procedures and timelines for application and submission of water use information as found in Plan Parts II and III above. The training will be provided at site to all field personnel involved in drilling activities in a formal training atmosphere prior to entering the field.

This training program will be developed as a PowerPoint presentation and will cover regulatory authorities of both ADNR and ADFG as they relate to water use, as well as the environmental rationale for each stipulation developed under these authorities. The training program will also cover the reporting requirements and timelines for activities conducted under these authorities, and identify those individuals responsible for reporting.