

ALASKA DEPARTMENT OF NATURAL RESOURCES

Water Resources Section

TO: Mike Walton, Acting Chief

DATE: April 17, 2019

THRU: Kindra Geis, NRS III

FROM: Jenny March, NRS II

FILE NUMBERS: TWUA F2019-021, -022, and -023
Pebble Limited Partnership
APMA A6118

The subject Application for Temporary Use of Water (TWUA) case files have been reviewed for accuracy and conformance with statutes and regulations. The following comments, recommendations, or corrections are presented.

Check for duplicate water use authorization:

There are no existing water rights or active TWUAs for the water sources (i.e. the stream reaches and ponds) requested under the TWUA F2019-021 through TWUA F2019-023 applications.

Agency Notice:

- Agency notice dated: January 29, 2019. Deadline for comments: February 13, 2019.
- Courtesy notice emailed January 29, 2019 to Trustees for Alaska and to Trout Unlimited. Trout Unlimited submitted a comment letter via a 2/11/19 email, which comment letter was reviewed and considered relative to the TWUA F2019-021, -022 and -023 applications.
- ADF&G Habitat: FH19-II-0056 & FH19-II-0057 issued 4-3-19. FH19-II-0058, FH19-II-0060, FH19-II-0062 & FH19-II-0063 issued 4/2/2019. All expire 12/31/2023. These fish habitat permits are for the same water sources requested under the TWUA F2019-021, -022, and -023 applications.
- Alaska Department of Environmental Conservation: No Comment.
- DNR-Mining: MLUP for APMA 6118 was issued 3/29/2019; expires 12/31/2023.

Project Description:

Water will be used in support of exploration drilling activities associated with the APMA A20196118 Pebble Project as described in the '*PEBBLE PROJECT 2019-2023 Narrative of Operations (APMA Block 31)*'. The applicant proposes to withdraw water from a total of 15 surface water sources for exploration drilling activities (11 stream reaches and 4 ponds). An APMA application serves as an application for temporary use of water (but is subject to the 5 water-source per TWUA application limit), and the 15 requested sources of water have been assigned three different TWUA case file numbers: TWUA F2019-021, TWUA F2019-022 and TWUA F2019-023. TWUA F2019-021 application has two different daily quantities of water use requested: up to 72,000 gallons per day (gpd) per source from two (2) water sources; and 36,000 gpd per source from three (3) water sources. The water withdrawal amounts requested for TWUA F2019-022 and -023 (a total of 10 surface water sources) are all 36,000 gpd per source. Maps depicting the proposed water withdrawal locations including stream reaches, ponds, water source identifications, preliminary intake locations (as up to date as applicant was able to provide), and proposed drill sites will be included with any issued TWUA F2019-021, -022, and -023 authorizations.

Daily Duration and Months of Use:

Water use activities will be conducted up to 24 hours per day (or as otherwise limited by the maximum authorized gallons per day (gpd)) from May 1, 2019 through December 31, 2023. However, field seasons are stated to generally run from May through October of each year.

Proposed use of water being evaluated (after any necessary corrections to the water use described in the project application) for authorization:

- Exploration Activities (exploration drilling) for TWUA F2019-021 Water Sources NFK-S43 and NFK-S44: Utilizing up to two simultaneously operating 25-gpm water pumps, a per source maximum withdrawal of 72,000 gpd at a combined maximum pump withdrawal rate of 50 gallons per minute (gpm) (0.112 cubic feet per seconds (cfs)) from water sources NFK-S43 and NFK-S44 for up to 31 days per month.
- Exploration Activities (exploration drilling) for TWUA F2019-021 Water Sources SFK-S15, SFK-S16, and NFK-S45: A per source maximum withdrawal of 36,000 gpd at a maximum pump withdrawal rate of 25 gpm (0.056 cfs) for up to 31 days per month.
- Exploration Activities (exploration drilling) for TWUA F2019-022: A maximum withdrawal of 36,000 gpd per source at a maximum pump withdrawal rate of 25 gpm (0.056 cfs) from water sources SFK-S57, SFK-S18, UTC-S21, UTC-S8, and UTC-S9 for up to 31 days per month.
- Exploration Activities (exploration drilling) for TWUA F2019-023: A maximum withdrawal of 36,000 gpd per source at a maximum pump withdrawal rate of 25 gpm (0.056 cfs) from water sources SFK-S103, NFK-P46, NFK-P21, NFK-P33, and SFK-P08 for up to 31 days per month.

NOTE: No more than three simultaneously operating 25-gpm water supply pumps would be utilized on any combination of the 15 requested water sources under the temporary water use applications TWUA F2019-021, TWUA F2019-022 and TWUA F2019-023.

Effect on fish and game:

No effect on fish and game is anticipated for this project. Fish Habitat Permits FH19-II-0056, FH19-II-0057, FH19-II-0058, FH19-II-0060, FH19-II-0062, and FH19-II-0063 were issued April 2 or April 3, 2019, and all expire December 31, 2023. When a fish habitat permit is required for a project, any ADF&G Habitat approval of the proposed use of water is subject to the project description and any listed stipulation(s) on said fish habitat permit. Any known issued or intended to be issued Fish Habitat Permits are listed above. When ADF&G Habitat issues a fish habitat permit for a proposed use of water, it represents that ADF&G Habitat is satisfied that the proposed water removal equipment to be used and the withdrawal of water will be protective of fish and still leave enough water flow and/or water level in the requested water source to provide for fish, fish habitat, and/or fish passage.

The conditions on an issued TWUA authorization are designed to minimize near-term, long-term and cumulative impacts to the environment. Pursuant to AS 46.15.155(d), both ADF&G-Habitat Division and Alaska Department of Environmental Conservation (ADEC) were notified about these three TWUA applications. If either ADF&G or ADEC had concerns about near-term, long-term, or cumulative impacts to the environment attributable to the withdrawal, transport, use or discharge of the pumped water, they would have commented with those concerns. These case files do not contain any actual proof of likely to be harmful near-term or long-term impacts or documented harmful cumulative impacts to the environment attributable to the requested or previous water withdrawal activities associated with this project.

APMA Block 25E specifies three 25-gpm water pumps being used for exploration drilling activities. APMA Block 21 and footnote [a] of APMA Appendix F note that only two water sources (NFK-S43 and NFK-S44) of the 15 requested water sources may have two simultaneously operating 25-gpm pumps in them. The other 13 requested water sources would only have one operating 25-gpm pump in them at a time. A pump rate of 25-gpm is equivalent to 0.056 cubic feet per second (cfs). Therefore, if all three 25-gpm water source pumps were in operation at the same time, it would equate to a combined withdrawal rate of just 0.167 cfs, and that combined withdrawal rate would be spread over two or three separate sources of water.

Prior Appropriators and Nearby Temporary Water Use:

A search of the Department of Natural Resource's readily available databases was conducted to determine the presence of TWUAs, Reservations of Water, Permits to Appropriate Water and/or Certificates of Appropriation. A broad township scale search for Case Category 8 (water) was conducted within all Sections of Township 3 South, Range 35 West, Seward Meridian; all Sections within Township 3 South, Range 36 West, Seward Meridian; and all Sections within Township 4 South, Range 36 West, Seward Meridian. That search revealed no (0) active TWUAs, four (4) Applications for Water Right in Postponed/Suspended adjudication status (LAS 25871, LAS 25872, LAS 25875, and LAS 25876) submitted by the Pebble Project, and 10 Applications for Reservation of Water (LAS 27134, LAS 27135, LAS 27174 through LAS 27177, and LAS 27179 through LAS 27182) in application status. However, a search of just those sections in which the APMA A6118 requested stream reaches and ponds are located identified only four Applications for Reservation of Water: LAS 27174, LAS 27175, LAS 27176 and LAS 27134.

Application for Water Rights LAS 25871, LAS 25872, LAS 25875, and LAS 25876: These four (4) Application for Water Rights are in Postponed/Suspended status. LAS 25871 has a request for surface withdrawals from an unnamed tributary to North Fork Kaktuli River. Case file LAS 25876 requests surface withdrawals in the Upper Talarik Creek drainage. Case files LAS 25872 and LAS 25875 are for subsurface withdrawals in the North Fork Kaktuli River drainage and the Upper Talarik Creek drainage, respectively. Therefore, due to the Postponed/Suspended adjudication status on each of these four Application for Water Right and considering that they are for the Pebble project, it has been determined that issuing the requested TWUA F2019-021, -022, and -023 authorizations will not unduly impact these 4 Application for Water Rights.

All ten of the above identified Application for Reservation of Water case files were considered in this review. With a focus on stream reaches where there is either an overlapping request for the same reach by a reservation application and a TWUA application, or a reservation requested stream reach is nearest (in the same section) to stream reaches requested in the TWUA F2019-

021, F2019-022 or F2019-023 applications, there are four Applications for Reservation of Water in the area that will be specifically discussed below.

Discussion regarding Applications for Reservation of Water

The TWUA F2019-021, F2019-022 and F2019-023 applications are for streams or ponds that were requested and authorized for water withdrawal for the 2018 field season, therefore the analysis that was done in the 2018 temporary water use authorization decision document relative to the Application for Reservation of Water case files discussed therein is still valid and is incorporated (but updated with the TWUA case file numbers assigned for 2019) as follows:

LAS 27174 Curyong Tribal Council (N.F. Kuktuli River, Reach 1)

A portion of the TWUA F2019-021 requested reach NFK-S43 encompasses the LAS 27174 Reach 1 (which is a tributary to LAS 27176 N.F. Kuktuli Reach 3), and one other TWUA requested reach, NFK-S44, branches off of NFK-S43. The nearest stream gage on LAS 27174 Reach 1 is Pebble Partnership gage station NK119A (July 2004 to October 2013 flow data collected) which is the data collection gage used for the LAS 27174 requested flows for reservation. Of the LAS 27174 requested reservation flows during the likely May 16 through October 15 exploration seasonal period under the TWUA F2019-021 application, the lowest LAS 27174 requested flow occurs in July at 15 cfs. A pump rate of 50 gpm/0.112 cfs (2 pumps running at 25 gpm) would constitute only 0.74 percent reduction in flow from a stream flowing at 15 cfs. The average July flow rate at gage NK119A is 21.64 cfs. By way of comparison, the sustainability boundary approach (Richter et al. 2012), which is a method used to evaluate the risks associated with potential alterations to stream flow, proposes that flow alteration be managed based on daily percentage flow alteration thresholds as follows: A flow alteration below 10% would cause minor impacts on the ecosystem with a relatively high level of ecosystem protection; and a flow alteration of 11 to 20% would cause measurable changes in ecosystem structure and minor impacts on ecosystem functions. (Note that the sustainability boundary approach was incorporated and utilized in both the first and second external review drafts of the EPA's Bristol Bay Watershed Assessment). Therefore, even if the LAS 27174 requested reservation flows are eventually certificated at the LAS 27174 requested flow rates, the TWUA F2019-021 requested maximum 50 gpm (0.112 cfs) pump rate has a negligible and practically undetectable impact on the LAS 27174 Reach 1 and on any further downstream reaches requested on or certificated under other instream flow reservation case files. Under 11 AAC 93.141, applications for reservation of water are to be for the quantity or level of water necessary to achieve the indicated purpose for the reservation application. Therefore, if and when a certificate of reservation is granted on a reservation application, the certificated reservation flows may be for less than the requested flows, which would further lessen the chances of any significant affect (from issuing a temporary water use authorization on a reservation requested reach) on water flows actually necessary to protect the purpose for which a reservation application is submitted.

LAS 27175 and LAS 27176 Curyong Tribal Council (N.F. Kuktuli River, Reach 2 and 3)

The TWUA F2019-021 requested reach NFK-S45 is a tributary to N.F. Kuktuli River Reach 2. The nearest stream gage on LAS 27175 Reach 2 is Pebble Partnership gage station NK100C (July 2004 to October 2013 flow data collected) which is more than 10 river miles upstream of the data collection gage used for the LAS 27175 and LAS 27176 requested flows for reservation (USGS gage/NK100A). Of the LAS 27175 and LAS 27176 requested reservation flows during the likely May 16 through October 15 exploration seasonal period under the TWUA F2019-021

application, the lowest LAS 27175 requested flow occurs in August 16-31 at 29 cfs. A pump rate of 25 gpm (equivalent to 0.056 cfs) would constitute only 0.19 percent reduction in flow from a stream flowing at 29 cfs. The average August flow rate at gage station NK100C is 46.03 cfs. By way of comparison, the sustainability boundary approach (Richter et al. 2012), which is a method used to evaluate the risks associated with potential alterations to stream flow, proposes that flow alteration be managed based on daily percentage flow alteration thresholds as follows: A flow alteration below 10% would cause minor impacts on the ecosystem with a relatively high level of ecosystem protection; and a flow alteration of 11 to 20% would cause measurable changes in ecosystem structure and minor impacts on ecosystem functions. (Note that the sustainability boundary approach was incorporated and utilized in both the first and second external review drafts of the EPA's Bristol Bay Watershed Assessment). Under 11 AAC 93.141, applications for reservation of water are to be for the quantity or level of water necessary to achieve the indicated purpose for the reservation application. Therefore, if and when a certificate of reservation is granted on a reservation application, the certificated reservation flows may be for less than the requested flows, which would further lessen the chances of any significant affect (from issuing a temporary water use authorization on a reservation requested reach) on water flows actually necessary to protect the purpose for which a reservation application is submitted.

LAS 27134 from Trout Unlimited (Upper Talarik Creek, Reach 1)

The TWUA F2019-022 requested stream reach identified as UTC-S21 overlaps the LAS 27134 requested Reach 1. The daily water withdrawal limit requested in the TWUA F2019-022 application for stream reach UTC-S21 and other requested stream reaches in the Upper Talarik Creek watershed is 25-gpm per source. A 25-gpm pump rate is equivalent to just 0.056 cfs. Of the LAS 27134 requested reservation flows during the likely May 16 through October 15 exploration seasonal period under the TWUA F2019-022 application, the lowest LAS 27134 requested flow occurs June 16 through August 31 at 9 cfs. A pump rate of 25 gpm (equivalent to 0.056 cfs) would constitute only 0.62 percent reduction in flow from a stream flowing at 9 cfs. By way of comparison, the sustainability boundary approach (Richter et al. 2012), which is a method used to evaluate the risks associated with potential alterations to stream flow, proposes that flow alteration be managed based on daily percentage flow alteration thresholds as follows: A flow alteration below 10% would cause minor impacts on the ecosystem with a relatively high level of ecosystem protection; and a flow alteration of 11 to 20% would cause measurable changes in ecosystem structure and minor impacts on ecosystem functions. (Note that the sustainability boundary approach was incorporated and utilized in both the first and second external review drafts of the EPA's Bristol Bay Watershed Assessment). Under 11 AAC 93.141, applications for reservation of water are to be for the quantity or level of water necessary to achieve the indicated purpose for the reservation application. Therefore, if and when a certificate of reservation is granted on a reservation application, the certificated reservation flows may be for less than the requested flows, which would further lessen the chances of any significant affect (from issuing a temporary water use authorization on a reservation requested reach) on water flows actually necessary to protect the purpose for which a reservation application is submitted. Therefore, a 25-gpm withdrawal rate authorized under an issued temporary water use authorization would have a practically undetectable impact on stream flow in the LAS 27134 Reach 1 of Upper Talarik Creek and on downstream reservation requested reaches on Upper Talarik Creek.

For any other instream flow reservation application or certificated instream flow reservation on a more distant downstream stream reach (more distant from the TWUA F2019-021, F2019-022 and F2019-023 requested sources than the above discussed Application for Reservation of Water

case files), for the reasons stated above, a pump withdrawal rate of 50 gpm (0.112 cfs) or 25-gpm (0.056 cfs) would have a practically undetectable and negligible effect on said stream reach due to the deminimus 50 gpm (0.112 cfs) or 25-gpm (0.056 cfs) pump rate and the distance from the water withdrawal location.

The water requested under an application for reservation of water is not a vested water right, and the water requested to be reserved is not withdrawn from appropriation until a certificate of reservation is issued (See AS 46.15.145 (d)). If all three pumps (max 25 gpm each) were operating simultaneously from authorized sources that were hydrologically connected to and influenced a stream reach requested under an application for reservation of water, the combined impact on the requested reservation reach would be just 0.168 cfs maximum, which, given the likely geographic dispersal of the pumps in this scenario, the combined impact would be negligible as would the 0.056 cfs withdrawal rate of each separate pump on the source from which it was pumping.

It has been determined that issuing temporary water use authorizations for the TWUA F2019-021 through F2019-023 applications will not unduly impact any prior appropriators (including instream flow reservations) or applications for water rights or instream flow/lake level reservations in the area that require further consideration on account of such use.

No water right or priority is established by a temporary water use authorization. The Department may suspend operations authorized under an issued temporary water use authorization whenever such suspension shall in its judgment be necessary to protect the public interest or that of a prior appropriator. Authorization as to one or more of the requested sources could be amended, modified or revoked as necessary (without revoking the entire temporary water use authorization that the source(s) were authorized under) to supply water to lawful appropriators of record or to protect the public interest, or the entire TWUA authorization could be revoked.

Proposed means of construction:

Adequate. A site plan was included with the application packet.

Effect upon access to navigable or public water:

No foreseeable effects upon access to navigable or public water ways.

It is interpreted that the proposed use of water is in the public interest. These files contain no evidence of a likelihood of harm to the public interest. Furthermore, it is inferred that the applicant has the intent and ability to complete the project.

Recommendation: Issue each requested Temporary Water Use Authorization (TWUA F2019-021, TWUA F2019-022, TWUA F2019-023).

Concurrence Other: _____



Signature

April 29, 2019

Date

Mike Walton, Acting Water Resources Section Chief, DML&W, ADNR
Name/Title

A person affected by this decision may appeal it, in accordance with 11 AAC 02. Any appeal must be received within 20 calendar days after the date of "issuance" of this decision, as defined in 11 AAC 02.040(c) and (d), and may be mailed or delivered to the Commissioner, Department of Natural Resources, 550 W. 7th Avenue, Suite 1400, Anchorage, Alaska, 99501; faxed to 907-269-8918, or sent by electronic mail to dnr.appeals@alaska.gov. This decision takes effect immediately. If no appeal is filed by the appeal deadline, this decision becomes a final administrative order and decision of the department on the 31st calendar day after issuance. An eligible person must first appeal this decision in accordance with 11 AAC 02 before appealing this decision to Superior Court. A copy of 11 AAC 02 may be obtained from any regional information office of the Department of Natural Resources. Under 11 AAC 02.030, appeals and requests for reconsideration filed under 11 AAC 02 must be accompanied by the fee established in 11 AAC 05.160(d)(1)(F), which has been set at \$200 under the provisions of 11 AAC 05.160 (a) and (b).