

See the instructions on the reverse.
Please print or type in the unshaded areas.

EPA ID Number (copy from item I of Form 1)

Form Approved.
OMB No. 2040-0086
Approval expires 7-31-88

Form
2B
NPDES



United States Environmental Protection Agency
Application for Permit to Discharge Wastewater
Concentrated animal feeding operations and aquatic animal production facilities
Consolidated Permits Program

I. GENERAL INFORMATION

| A. TYPE OF BUSINESS | B. LEGAL DESCRIPTION OF FACILITY LOCATION | C. FACILITY OPERATION STATUS |
|---|--|--|
| CONCENTRATED ANIMAL FEEDING <input type="checkbox"/> 1. OPERATION (complete items B, C, and Section II) CONCENTRATED QUATIC ANIMAL <input checked="" type="checkbox"/> 2. PRODUCTION FACILITY (complete items B, C, and Section III) | Upper Wenatchee Basin Acclimation Program, Yakama Nation Fisheries, 7051 U.S. Highway 97, Peshastin, WA 98847 | <input checked="" type="checkbox"/> 1. EXISTING FACILITY <input checked="" type="checkbox"/> 2. PROPOSED FACILITY |

II. CONCENTRATED ANIMAL FEEDING OPERATION CHARACTERISTICS

| A. TYPE & NUMBER OF ANIMALS IN OPEN CONFINEMENT & HOUSEHOLD UNDER ROOF | | | B. NO. OF ACRES FOR CONFINEMENT FEEDING |
|--|----------------------------|--------------------------|---|
| 1. TYPE | 2. NO. IN OPEN CONFINEMENT | 3. NO. HOUSED UNDER ROOF | |
| N/A | N/A | N/A | |
| | | | C. If there is open confinement, has a runoff diversion and control system been constructed? <input type="checkbox"/> YES (complete items 1, 2, & 3 below) <input type="checkbox"/> NO (go to Section IV) |

1. What is the design basis for the control system?

| | | | | | | |
|--|--------|--|--------|---|--------|---------------|
| <input type="checkbox"/> a. 10 YEAR 24-HOUR STOMR (specify inches) | INCHES | <input type="checkbox"/> b. 25 YEAR 24-HOUR STOMR (specify inches) | INCHES | <input type="checkbox"/> c. OTHER (specify inches & type) | INCHES | TYPE |
| 2. Report the number of acres of contributing drainage. | | | ACRES | 3. Report the design safety factor. | | SAFETY FACTOR |

III. CONCENTRATED AQUATIC ANIMAL PRODUCTION FACILITY CHARACTERISTICS

| A. For each outfall give the maximum daily flow, maximum 30 day flow, and the long term average flow. | | | | B. Indicate the total number of ponds, raceways, and similar structures in your facility. | | |
|---|--------------------------------|-------------------|----------------------|---|---|-------------------------|
| 1. OUTFALL NO. | 2. FLOW (gallons per day) | | | 1. PONDS | 2. RACEWAYS | 3. OTHER |
| | a. MAXIMUM DAILY | b. MAXIMUM 30 DAY | c. LONG TERM AVERAGE | | | |
| 1 through 10. See Table 2 of the attached technical memorandum for listing of the outfalls and the flows. Trinity site will have two outfalls with the flow shown representing the combined flow | | | | 9 | 0 | Up to 33 circular tanks |
| | | | | C. Provide the name of the receiving water and the source of water used by your facility. | | |
| | | | | 1. RECEIVING WATER See Table 2 of the attached technical memorandum | 2. WATER SOURCE See Table 2 of the attached technical memorandum | |
| D. List the species of fish or aquatic animals held and fed at your facility. For each species, give the total weight produced by your facility per year in pounds of harvestable weight, and also give the maximum weight present at any one time. | | | | | | |
| 1. COLD WATER SPECIES | | | | 2. WARM WATER SPECIES | | |
| a. SPECIES | b. HARVESTABLE WEIGHT (pounds) | | | a. SPECIES | b. HARVESTABLE WEIGHT (pounds) | |
| | (1) TOTAL YEARLY (2) MAXIMUM | | | | (1) TOTAL YEARLY (2) MAXIMUM | |

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DEC - 4 2018

Dept of Ecology
Central Regional Office

| | | | | | |
|---|---|---|---|--|------------|
| coho, spring Chinook and steelhead | See Table 1 of the attached technical memorandum | See Table 1 of the attached technical memorandum | N/A | N/A | N/A |
| E. Report the total pounds of food fed during the calendar month of maximum feeding. | | | 1. MONTH May | 2. POUNDS OF FOOD See Table 1 of the attached technical memorandum | |
| IV. CERTIFICATION | | | | | |
| I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate, and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment. | | | | | |
| A. NAME & OFFICIAL TITLE (print or type) JoDe Goudy (Yakama Nation Tribal Council Chairman) | | | B. PHONE NO. (area code & no.) (509) 865-5121 | | |
| C. SIGNATURE <i>Virgil Lewis</i> | | | C. DATE SIGNED 11-29-2018 | | |

A.1. Facility Information.

Facility Name Upper Wenatchee Basin Acclimation Program

Mailing Address 7051 U.S. Highway 97, Peshastin, WA 98847

Facility Address (not P.O. Box) 7051 U.S. Highway 97, Peshastin, WA 98847

Location See attached tech memo for lat/lon of individual sites
(Latitude/Longitude as decimal degrees (NAD83/WGS84)

Telephone Number (509) 548-9413 x 102

E-mail address kamc@yakamafish-nsn.gov

Contact Person Cory Kamphaus

Title Northern Ceded Area Production Supervisor

UBI Number N/A

A.2. Applicant Information. If the applicant is different from the above, provide the following:

Applicant Name

Mailing Address

Telephone Number ()

E-mail address

Contact Person

Title

Is the applicant the owner or operator (or both) of the treatment works? ☐ owner ☒ operator

Indicate whether correspondence regarding this permit should be directed to the facility or the applicant.

☒ facility ☐ applicant

Can the facility obtain broadband Internet access for WQWebDMR

(<http://www.ecy.wa.gov/programs/wq/permits/paris/webdmr.html>)?

☒ yes ☐ no

A.3. Existing Environmental Permits. Provide the permit number of any existing environmental permits that have been issued to the treatment works (include state-issued permits).

| | | | |
|-------|---------|-------|---------|
| NPDES | <u></u> | PSD | <u></u> |
| UIC | <u></u> | Other | <u></u> |
| RCRA | <u></u> | Other | <u></u> |

**Attachment: Technical Memorandum Providing
Information on Acclimation Sites**



10 N. Mission St
Wenatchee, WA 98801
509.415.3480

MEMORANDUM

8/20/2018

TO: Cory Kamphaus, Yakama Nation Fisheries
FROM: Pradeep Mugunthan, Ph.D., P.E., Four Peaks Environmental Science and Data Solutions
SUBJECT: Supporting Information on Upper Wenatchee River Acclimation Sites for Supplemental NPDES Permit Applications

Background

The Yakama Nation is requesting a National Pollutant Discharge Elimination System (NPDES) individual permit application for the hatchery and acclimation sites proposed as part of the Mid-Columbia Coho Restoration Program (MCCRP). The MCCRP is sponsored by the Yakama Nation and funded by Bonneville Power Administration (BPA), Chelan, Grant and Douglas County Public Utility Districts to help mitigate for impacts of the Federal and Public Utility Districts' Columbia River Power System dams on anadromous fish. The MCCRP includes building a new, small, in-basin adult holding/spawning, incubation and rearing facility (Natapoc Hatchery) on the Upper Wenatchee River; and constructing and improving several acclimation sites in the Wenatchee and Methow watersheds.

Several documents have been developed that provide information on various facets of the project. The key documents are listed below:

1. A detailed environmental impact assessment was completed for the MCCRP to meet National Environmental Policy Act (NEPA) requirements. A final Environmental Impact State (EIS) was completed in March 2012 (BPA 2012).
2. Several Supplemental Analyses (SAs) were completed to account for modifications to some of the acclimation sites originally proposed in the EIS. The original EIS and the SAs are available from BPA¹.
3. Following guidance received from the Washington State Department of Ecology (Ecology), the Yakama Nation submitted a Tier II Anti-Degradation Report for the Upper Wenatchee River Acclimation Sites in December 2017 (Four Peaks, 2017).
4. An Engineering Report in support of the NPDES permit application for Natapoc Hatchery was completed and submitted to Ecology in February 2018 (Four Peaks et al., 2018).

¹ BPA's website for the MCCRP EIS and SAs:

<https://www.bpa.gov/efw/Analysis/NEPADocuments/Pages/Mid-Columbia-Coho-Restoration-Project.aspx>

The Yakama Nation requested an exemption from NPDES permit requirements for the acclimation sites on the basis of the Tier-II Anti-Degradation Evaluation (Four Peaks 2017). Considering that the Wenatchee River has waste load allocations for total phosphorus established in the Wenatchee River Watershed Dissolved Oxygen and pH TMDL study (Carroll and Anderson 2009), Ecology recommended that the MCCRPs sites in the Wenatchee River watershed be brought under a single individual permit. Ecology's recommended permitting pathway is to treat Natapoc Hatchery as the primary discharge, with the acclimation sites treated as secondary discharges. Ecology has requested that the Yakama Nation submit a primary NPDES application for Natapoc Hatchery, and supplemental applications for each of the proposed acclimation sites.

This technical memorandum provides information on the acclimation sites in support of the supplemental NPDES permit applications. The MCCRPs EIS and the SAs provides additional details on the various acclimation sites.

Acclimation Operations

The acclimation sites proposed in the Wenatchee River basin are shown in Figure 1. With the exception of Trinity Acclimation Site, acclimation is proposed to occur from March through June of each year, with feeding ceasing in May. At Trinity Acclimation Site acclimation activity will occur from October through May with minimal feeding during overwinter acclimation. Fish will be brought to the acclimation sites at approximately 22 fish per pound (fpp; at Trinity Acclimation Site fish will brought in at 25 fpp) and released at approximately 15 fpp. The fish production targets proposed at each site during the Natural Production and Implementation Phase (NPIP) of the MCCRPs are shown in Table 1. Fish biomass at Trinity Acclimation Site will not change appreciably from October through February when fish will be kept on a subsistence diet with negligible growth.

Feeding in the acclimation sites is expected to be minimal during March and April and will peak prior to release. Fish feeding will occur at a ratio of 1.3 to 1.5 lb of feed for each pound of biomass raised. The maximum monthly fish feed used at any given site is not anticipated to exceed approximately 4,700 pounds (lb) and the maximum fish biomass raised at any given site (i.e. the amount of biomass gain at the acclimation site from the time fish are brought on site to the time fish are released) will be less than approximately 5,300 lb for the sites proposed (Table 1). Therefore, site-specific maximum monthly feeding rate and overall biomass raised will be less than the upland fin-fish hatching and rearing general permit thresholds of 5,000 lb and 20,000 lb respectively.

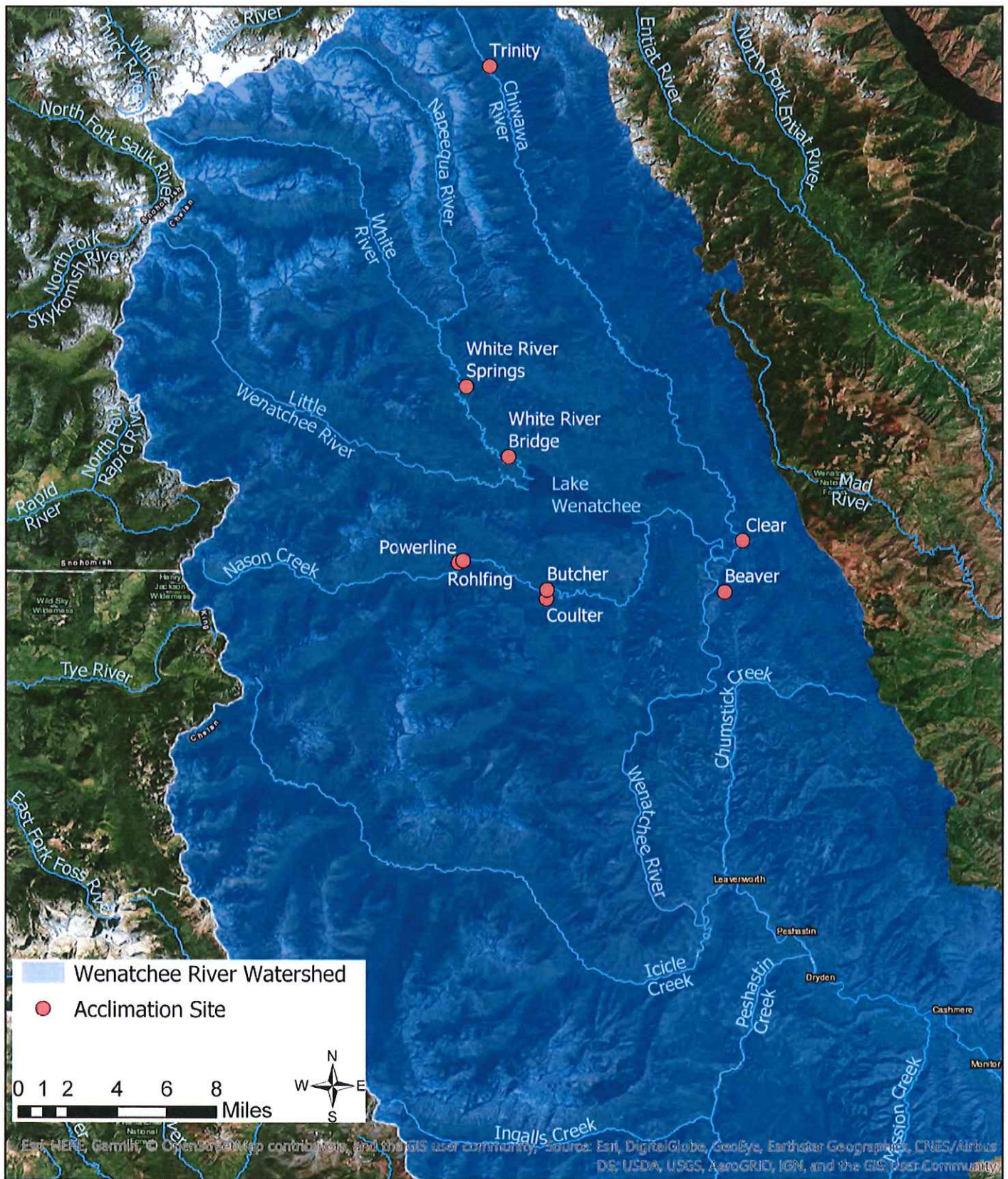


Figure 1. Upper Wenatchee River Acclimation Sites
Mid-Columbia Coho Restoration Program

Table 1. Fish Biomass by Month at the Upper Wenatchee River Acclimation Site

| Acclimation Site | Receiving Stream | Number of Fish | February | | March | | April | | May | | Overall | | |
|------------------------|----------------------------------|----------------|--------------------------------|-----------|--------------------------------|-----------|--------------------------------|-----------|--------------------------------|-----------|---|----------------------|-------------------------------|
| | | | Fish Biomass ¹ (lb) | Feed (lb) | Fish Biomass ¹ (lb) | Feed (lb) | Fish Biomass ¹ (lb) | Feed (lb) | Fish Biomass ¹ (lb) | Feed (lb) | Cumulative Biomass Change ^{1,3} (lb) | Total Fish Feed (lb) | Average Feed to Biomass Ratio |
| Rohlfing | Nason Creek | 105,000 | 0 | 0 | 4,773 | 249 | 6,177 | 1,684 | 7,000 | 988 | 2,227 | 2,921 | 1.3 |
| Butcher/Coulter | Nason Creek | 105,000 | 0 | 0 | 4,773 | 249 | 6,177 | 1,684 | 7,000 | 988 | 2,227 | 2,921 | 1.3 |
| Powerline ⁴ | Nason Creek | 75,000 | 0 | 0 | 4,688 | 2,343 | 6,250 | 4,687 | 9,375 | 0 | 4,688 | 7,030 | 1.5 |
| White River Springs | White River | 50,000 | 0 | 0 | 2,273 | 118 | 2,941 | 802 | 3,334 | 471 | 1,061 | 1,391 | 1.3 |
| White River Bridge | White River | 60,000 | 0 | 0 | 2,727 | 142 | 3,529 | 962 | 4,000 | 565 | 1,273 | 1,669 | 1.3 |
| Trinity ² | Chiwawa River | 150,000 | 6,000 | 1,501 | 6,819 | 983 | 8,823 | 2,405 | 10,001 | 1,413 | 3,182 | 4,800 | 1.5 |
| Clear Creek | Clear Creek/ Chiwawa River | 250,000 | 0 | 0 | 11,364 | 593 | 14,706 | 4,010 | 16,667 | 2,353 | 5,303 | 6,956 | 1.3 |
| Beaver Creek | Beaver Creek/ Wenatchee River | 100,000 | 0 | 0 | 4,546 | 235 | 5,882 | 1,604 | 6,667 | 942 | 2,121 | 2,781 | 1.3 |

Notes:

1. For all sites except Trinity and Powerline, Fish will be brought onsite at 22 fish per pound (fpp) beginning of March and released at the end of May or early June at 15 fpp.
2. At Trinity fish will be brought in October at 25 fpp and will acclimate over winter on subsistence diet without any increase in fish size until February. Feeding will increase from March to produce fish for release in May at 15 fpp. The feed shown for February is cumulative from October of the year prior. Of the 150,000 fish shown at Trinity, 100,000 are coho acclimated as part of the MCCRP, and 50,000 fish are spring Chinook acclimated as part of the Upper Columbia Spring Chinook and Steelhead Acclimation Program.
3. The total biomass raised represents the fish biomass gain from the time fish are brought to the site to the time fish are released.
4. This site will acclimate steelhead trout as part of the Upper Columbia Spring Chinook and Steelhead Acclimation Program. Fish will be brought in at 16 fpp in March and released at 8 fpp in May. There will be no feeding in May.

Acclimation Sites in the Upper Wenatchee River Basin

The following sections discuss the individual Upper Wenatchee River Acclimation sites for which a supplemental NPDES permit application is being submitted. The sites are grouped by receiving stream. Table 2 summarizes location, dimensions and other information pertinent to each site.

Nason Creek Sites

Rohlfing Acclimation Site

This is the most upstream site on Nason Creek. The site is accessible through an unsurfaced U.S. Forest Service road and is approximately 1 mile from U.S. Highway 2. An existing pond on a private vacation property is being used for acclimation presently in the planning phase of the MCCRP. This site will be used during the NPIP as one of the sites on Nason Creek. An unnamed, seasonal stream flows into the pond and serves as the primary water supply to the pond. In addition, a groundwater well on site is capable of providing up to 130 gpm of water to the pond as necessary (the stream flow may be limited in winter). A temporary seine net will be installed during acclimation to prevent premature downstream releases of coho juveniles while allowing for upstream/downstream movement of any ESA fish species that may be present. The net will be removed in the spring to promote volitional outmigration. Fish swim through the downstream section of the unnamed creek to enter Nason Creek (see Figure 2).

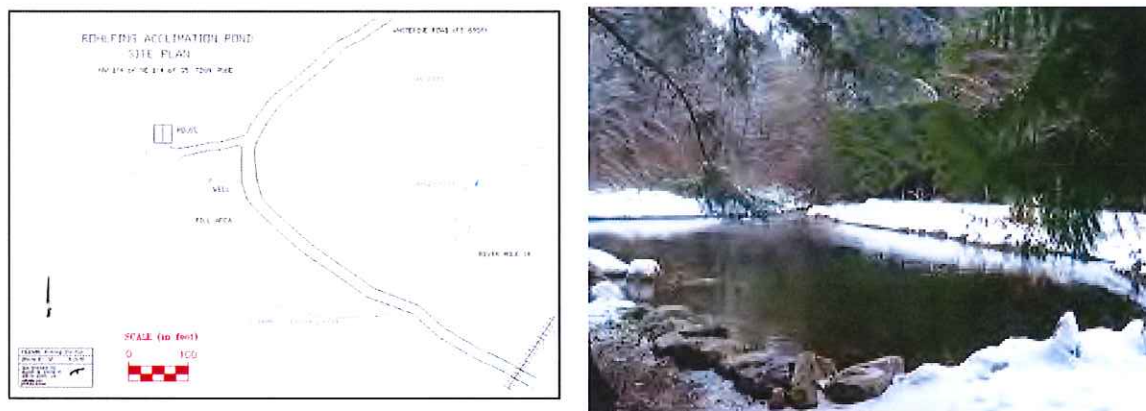


Figure 2. Rohlfing Acclimation Pond Plan and Photograph

Table 2. Acclimation Site Information

| Acclimation Site | Latitude | Longitude | Receiving Stream | Existing Site | Approx. Surface Area (ac) | Approx. Pond Dimensions (ft) | Approx. Depth (ft) | Water Source | Flow (gpm) |
|-----------------------------------|-----------|-------------|----------------------------------|---------------|---------------------------|---|--|-------------------------------|------------|
| Rohlfing ² | 47.785286 | -120.879258 | Nason Creek | Y | 0.17 | 117' x 56' | 7.0' | Surface Water/ Groundwater | 750 |
| Coulter ^{1,2} | 47.764444 | -120.802778 | Nason Creek | Y | 0.41 | 180' x 100' | 5.0' | Surface Water | 750 |
| Butcher ^{1,2} | 47.769506 | -120.802314 | Nason Creek | Y | 0.58 | 270' x 90' | 5.0' | Surface Water | 750 |
| Powerline ⁶ | 47.786433 | -120.875208 | Nason Creek | N | 0.14 | 180' x 35' | 5.0' | Surface Water | 680 |
| White River Bridge ^{3,4} | 47.8467 | -120.835719 | White River | N | 0.07 | 30 tanks, 20' x 5' each | 4.0' | Surface Water | 900 |
| White River Springs | 47.887397 | -120.872497 | White River | N | 0.08 | 200' x 100' | 3.5' | Surface Water | 400 |
| Trinity ⁵ | 48.073611 | -120.851944 | Phelps Creek/ Chiwawa River | N | 0.28 | 60'x90' (existing pond), 3@30'x5' circular tanks, 36'x125' (new pond) | 6' (existing), 4.5' (circulars), 5' (new pond) | Surface Water/ Groundwater | 1800 |
| Clear Creek ² | 47.79789 | -120.63266 | Clear Creek/ Chiwawa River | Y | 1.67 | 300' (dia) | 7.0' | Surface Water | 1050 |
| Beaver Creek ² | 47.768214 | -120.648158 | Beaver Creek/ Wenatchee River | Y | 0.24 | 115' (dia) | 7.0' | Surface Water | 700 |

Notes:

1. During the NPIP phase, only one of Butcher or Coulter Acclimation Site will be used in any given year
2. These are existing or natural ponds or side channels that are being/would be used for acclimation. Additional construction will be minimal or in most cases, unnecessary
3. These sites will use aluminum or concrete tanks
4. Up to 30 aluminum tanks may be constructed. The area shown represents combined area for all 30 tanks.
5. Trinity site would use an existing pond and add a new pond and three circular tanks for acclimation.
6. Powerline site will acclimate steelhead trout as part of the Upper Columbia Spring Chinook and Steelhead Acclimation Program.

Butcher Acclimation Site

Butcher pond is a natural pond formed by a beaver dam that is located on a private property adjacent to Nason Creek and U.S. Highway 2 bridge (see Figure 1 and Figure 3). The site is accessible by road from U.S. Highway 2. The pond is fed by Butcher Creek which is the primary water source for the pond. This site is presently being used for acclimation as part of the planning phase of the MCCRP. A temporary seine net at the beaver dam is installed during acclimation to prevent premature downstream releases of coho juveniles while allowing for upstream/downstream movement of any ESA fish species that may be present. Release is volitional in spring and fish enter Nason Creek directly from the pond outflow. During the NPIP phase of the MCCRP (anticipated from 2022), in any given year only one of Butcher or Coulter Acclimation Site will be used, typically alternating between the years. Presently both sites are used.



Figure 3. Aerial and Site Photographs of Butcher Acclimation Pond

Coulter Acclimation Site

Coulter Pond is a natural pond formed by a Beaver Dam located adjacent to the vacation home (Figure 4). The site is accessible from U.S. Highway 2 through an unsurfaced road. Coulter Creek is the primary surface water source to the pond and continues as outflow from the pond entering a wetland complex which is owned by Yakama Nation. A temporary barrier net at the beaver dam is installed during acclimation to prevent premature downstream releases by coho juveniles. Upon release, fish volitionally migrate down Coulter Creek within the wetland complex before entering Nason Creek. As indicated earlier, during NPIP phase of the MCCRCP, in any given year only one of Butcher or Coulter Acclimation Site will be used, typically alternating between the years.

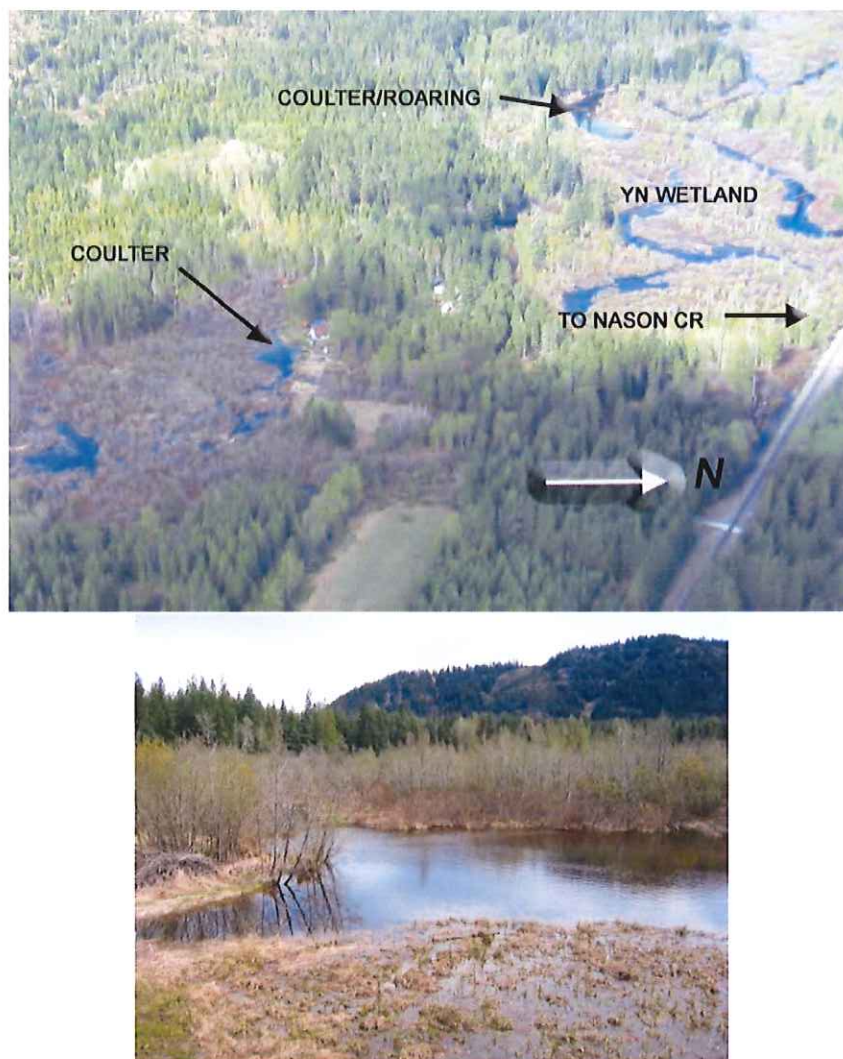


Figure 4. Aerial and Site Photographs of Coulter Acclimation Pond

Powerline Acclimation Site

This site is located very close to Rohlfing Acclimation Site discussed earlier (Figure 5). This site is not part of the MCCRP but will be used for acclimating steelhead trout transferred from the Chiwawa Acclimation Facility under the Upper Columbia Spring Chinook and Steelhead Acclimation Program (UCSCSA). A separate Environmental Assessment (EA) was completed for the UCSCSA (BPA 2017), which provides additional details on the program. The acclimation activity proposed at this site will be very similar to the MCCRP in that fish will be brought on-site in early March and releases would occur from early May to mid-June. A new earthen pond will be constructed on-site. An existing unnamed tributary of Nason Creek that flows through the site will serve as the water source for the pond. A temporary fish screen at the pond outlet will retain fish during acclimation. The screen will be removed for volitional release in early to mid-June.



Note: Image adapted from BPA 2017

Figure 5. Proposed Layout of Powerline Acclimation Site

White River

White River Springs Acclimation Site

The White River Springs site is located in a flat area through which springs from Dirty Face Mountain drain into the White River. The site can be accessed from the paved, White River Road. Acclimation activity would occur near the mouth of Dirty Face Creek on lands managed by Washington Department of Fish and Wildlife. A temporary fish migration barrier would be placed near the mouth of Dirty Face Creek to prevent migration of juveniles into the White River (Figure 6). The barrier would be removed during release.

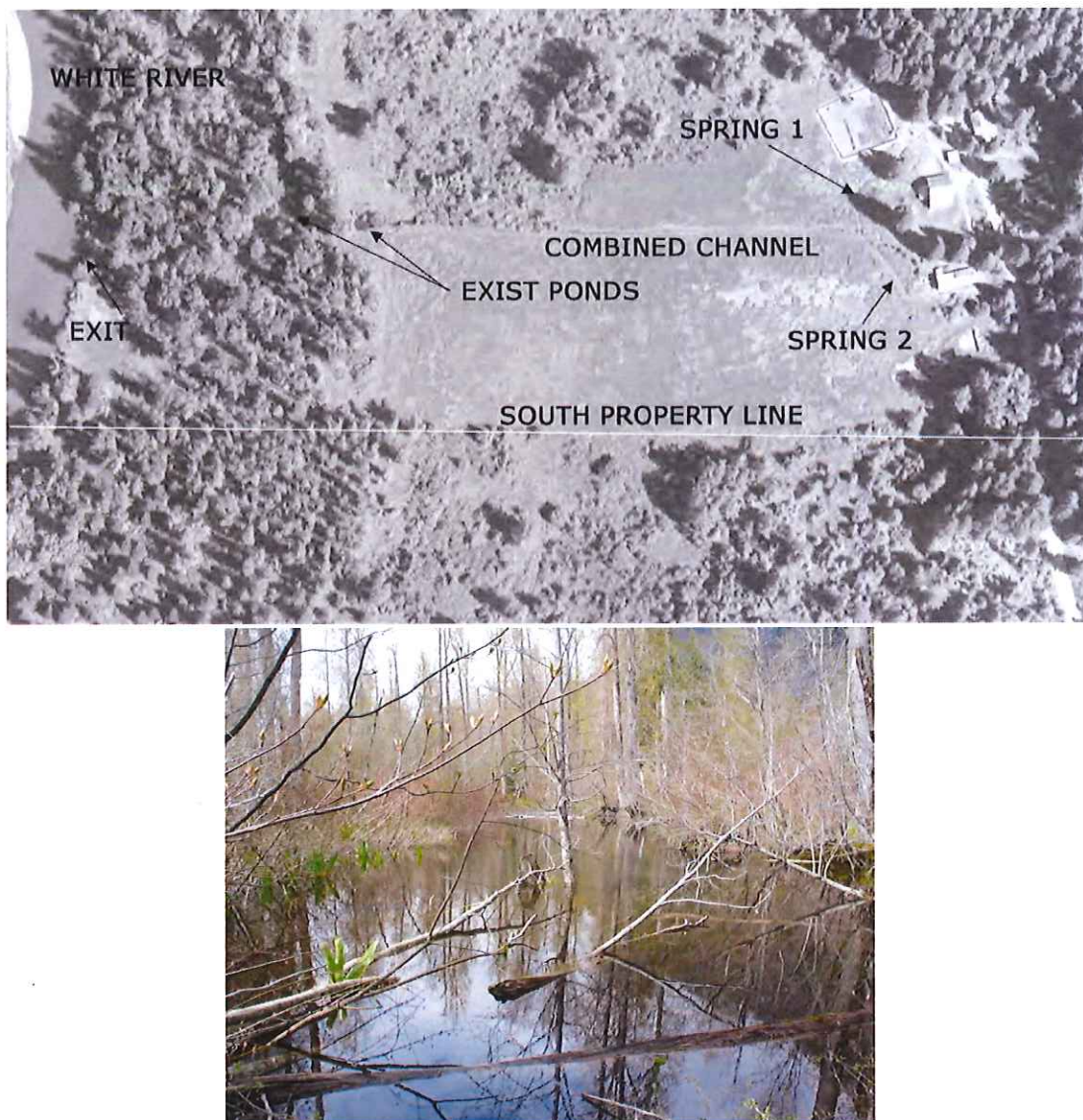


Figure 6. White River Springs Acclimation Site Aerial and Site Photographs

White River Bridge Acclimation Site

This is furthest downstream of the White River sites (Figure 7). Grant County Public Utility District owns the land and the water rights. The water rights would be transferred to the Yakama Nation during acclimation. Acclimation will occur in temporary tanks from March through May for Coho pre-smolts that have been trucked to the site. Following acclimation, smolts will be released into the White River.

The use of temporary tanks will require annual staging and demobilization activities. Prior to acclimation each year, a river water pump system and steel rearing tanks would be placed along the shoreline of the White River, above the ordinary high-water mark (OHWM). Depending on the number of coho acclimated, up to 30 aluminum tanks, (tank dimensions 4 feet wide by 5 feet deep and 20 feet long) would be used. The tanks would be situated adjacent to the White River on temporary wooden platforms. Water would be pumped into the tanks and returned to the river 20 feet downstream of the pump intake. Flexible plastic hose would run across the surface of the ground from the pumps to the tanks, and rigid PVC pipe would run across the surface of the ground from the tanks back to the river. The discharge pipes would extend into a deep-water pool to prevent bank erosion. A portable, self-contained, diesel-powered generator would be stationed on site in the case of line power failure. A spill-containment receptacle would be deployed under the generator for the duration of its presence on site. Tank water-level indicators with alarms would be used to monitor water levels. After acclimation the pump system and tanks would be removed.



Figure 7. Aerial Photograph of White River Bridge Site

Chiwawa River

Trinity Acclimation Site

The Trinity Acclimation Site is the most upstream of the two acclimation sites proposed on the Chiwawa River and is located adjacent to Phelps Creek near its confluence with the Chiwawa River (Figure 8). The site can be accessed from Chiwawa River Road. This section of Chiwawa River Road is only seasonally maintained, so overwinter access to the site is limited. The land is owned by Trinity Conservancy and has an existing constructed pond, a wooded area, and a developed area with a hydroelectric plant that supplies power to several nearby households. The hydroelectric plant gets water through a pipe from Phelps Creek and currently discharges the water through an outlet pipe into the Chiwawa River. As part of the Federal Energy Regulatory Commission (FERC) re-licensing process, Trinity Conservancy is required to redirect the discharge water by constructing a new outlet pipe south into Phelps Creek and by developing an open-channel habitat area where the pipe enters Phelps Creek (Figure 10). The Yakama Nation proposes to build the coho acclimation facilities in tandem with the FERC-mandated alterations, sourcing water from the plant's outlet pipe and discharging to the new open channel habitat area.

Acclimation would occur in the existing pond and in new constructed facilities. The new facilities would include a 36-foot by 125-foot acclimation pond and three 30-foot-diameter circular tanks. The location of acclimation infrastructure is provided in Figure 9. Since the water used for acclimation comes from the existing hydro-operations, the project would not increase the amount of surface-water use or change surface-water flow paths, except for the short diversion through Tank 3. Backup water supply of up to 1.5 cfs will be provided through a groundwater well installed at the site.

Up to 100,000 Coho would overwinter in the tanks from fall to late February/early March, and then acclimate in the ponds from March through spring. Up to 50,000 Spring Chinook will be acclimated in the existing pond at the site. Spring Chinook are presently being acclimated at the Chiwawa Acclimation Facility, which is further downstream on the Chiwawa River, as part of the Upper Columbia Spring Chinook and Steelhead Acclimation Program. The proposed change to move Spring Chinook to the Trinity Acclimation Site would result in the acclimation-related nutrient loads being discharged further upstream thereby providing a greater opportunity for assimilation within the Chiwawa River.

The smolts of both species would leave volitionally from the new pond into Phelps Creek, migrating into Chiwawa River.



Figure 8. Trinity Acclimation Site (adapted from BPA's Trinity Acclimation Site Supplemental Assessment)

Clear Creek Acclimation Site

This acclimation site is proposed on the lower reach of Clear Creek, in the larger of three existing ponds on Thousand Trails site, a private campground (Figure 9). Clear Creek flows in and out of these series of ponds before draining into the Chiwawa River. A temporary seine net would enclose a part of the pond where acclimation is proposed. It would be positioned to allow free access to the inlet, outlet, and to a part of the pond habitat. The net would be removed at release and fish would leave voluntarily into Clear Creek.

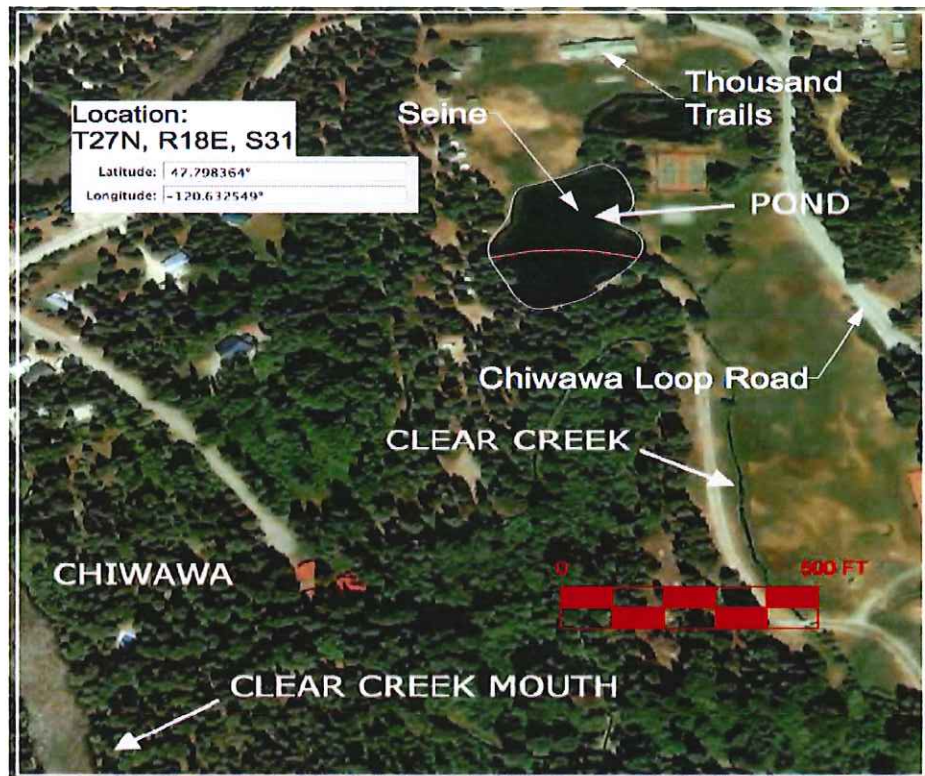


Figure 9. Clear Creek Acclimation Site Aerial and Pond Photographs

Beaver Creek Acclimation Site

Beaver Acclimation Site is located on a private property (Figure 10). The site is accessible through an unpaved road from the lodge. Water from Beaver Creek has been diverted to create a pond on site. Coho acclimation has been conducted on this site in the past. For the proposed acclimation, an existing screened outlet structure that was used in the past to confine the fish during acclimation, will continue to be used to keep fish in the pond. The structure will be removed for volitional fish release at the end of the acclimation.



Figure 10. Beaver Creek Acclimation Site Aerial and Acclimation Pond Photographs

Anti-degradation Evaluation

As indicated in the Background section of this memo, an anti-degradation evaluation was completed for the Upper Wenatchee River acclimation sites (Four Peaks 2017). The evaluation assessed the impacts of the proposed sites, particularly with regard to DO and pH in the Wenatchee River. The analysis was based on an extensive dataset collected during the EIS, and, subsequently in 2017, from data collected at surface water sources of the Upper Wenatchee River acclimation sites. In addition, the anti-degradation analysis also employed mechanistic modeling based on the QUAL-2K model that was used for developing the original total phosphorus waste load allocations in the Wenatchee River DO and pH TMDL (Carroll and Anderson, 2009), adapted for conditions in spring. Based on a worst-case scenario of maximum total phosphorus loads from acclimation activity, the evaluation concluded that changes in DO and pH both locally in the receiving stream and on a cumulative basis in the Wenatchee River downstream, considering all proposed sites in conjunction with allocated loads in the TMDL for point and non-point sources in the watershed, would be less than the thresholds for measurable change stipulated in the Washington State Water Quality Standards.

Best Management Practices

The Yakama Nation is committed to employing commonly accepted aquaculture best management practices to minimize any downstream water quality impacts. Maintaining high water quality within the ponds and in the receiving streams is necessary for the success of the MCCRP since the fish are ultimately expected to use these same streams for spawning and rearing habitat. Some of the measures that will be employed for minimizing water quality impacts from acclimation are discussed below.

1. Fish Feed – To the extent feasible, low-phosphorus fish feed will be used.
2. Feeding Methods – Feeding at all acclimation sites will be manual. Feeding will closely follow fish metabolism and needs (i.e., if feed consumption is low due to lower temperature of water, then feeding will be lowered, or ceased as necessary). This will minimize unconsumed fish feed in the ponds which is a major source of suspended solids and nutrients at aquaculture sites.
3. Fish Wastes – Management of fish wastes depends on the acclimation site.
 - a. At sites that use an artificial rearing tank (such as White River Bridge and Trinity), the tanks will be dried at the end of each acclimation season and the settled feed and fish wastes will be removed and disposed off as solid wastes (to a landfill), or if suitable sent to a composting facility.
 - b. For sites that would employ constructed ponds/channels with artificial or augmented flows (Trinity and Two Rivers acclimation sites), the water supply will be ceased upon fish release and the ponds/channels will be allowed to go dry

- until the next acclimation season – if the sediment build up is significant enough to affect capacity, sediments from the ponds will be excavated and disposed as solids wastes (to landfill) or composted (if suitable).
- c. For sites with natural ponds (Nason Creek, White River Springs, Beaver Creek and Clear Creek acclimation sites), fish wastes (and any unconsumed feed) that have settled in the ponds over the acclimation season will undergo dilution from sediments that are brought in naturally during snowmelt runoff and settle in the pond. Any sediments that are resuspended during high flow events will be transported downstream as part of the natural sediment cycle for the ponds. Sediment accumulation in the ponds are not anticipated to be substantial since most ponds are relatively large and acclimation-related sediment loading is likely small compared to the natural sediment cycle. However, to the extent the capacity of the ponds decline, sediment removal may be achieved through dredging (if ponds do not dry up) or excavation (if the ponds dry up). In such a scenario, the removed sediments will be disposed off at a landfill or reused as compost if determined to be suitable.
 4. Fish Confinement and Release - Fish nets/screens used at the acclimation ponds will be typically large enough to permit free flow of suspended sediments. This would avoid sediment buildup behind the screens. During release fish will be allowed to leave the acclimation sites volitionally during spring runoff. This will minimize any resuspension of sediments beyond those that occur naturally. For White River Bridge site fish will be removed from the tanks and released separately, without any direct outflows from the tanks to the receiving stream at any time.

SEPA Compliance

Okanogan County is the lead agency for the Washington State Environmental Policy Act (SEPA) review for the project. As discussed previously, all acclimation activity proposed in the MCCRCP went through a NEPA environmental assessment process. The County reviewed the MCCRCP EIA (BPA 2012) and the subsequent SAs discussed earlier and has accepted that towards meeting the SEPA requirements for the project. For the UCSCSA, the EA was accepted as meeting the requirements for SEPA review by Washington State Department of Fish and Wildlife (WDFW).

References

BPA (Bonneville Power Administration), 2012. Mid-Columbia Coho Restoration Program, Final Environmental Impact Statement, DOE/EIS-0425, Prepared by Bonneville Power Administration, Okanogan County, and the Confederated Tribes and Bands of the Yakama Nation, March 2012. Available from:

[http://efw.bpa.gov/environmental_services/Document_Library/Mid-Columbia Coho Restoration Project/](http://efw.bpa.gov/environmental_services/Document_Library/Mid-Columbia_Coho_Restoration_Project/).

BPA, 2017. Upper Columbia Spring Chinook and Steelhead Acclimation Program, Final Environmental Assessment, DOE/EA-1998, Prepared by Bonneville Power Administration, July 2017. Available from:

<https://www.bpa.gov/efw/Analysis/NEPADocuments/Pages/Chinook-Steelhead-Acclimation.aspx>

Carroll, J. and R. Anderson, 2009. Wenatchee River Watershed Dissolved Oxygen and pH Total Maximum Daily Load, Water Quality Improvement Report, Washington Department of Ecology Publication No. 08-10-062. Available at:

<https://fortress.wa.gov/ecy/publications/summarypages/0810062.html>.

Four Peaks Environmental Science and Data Solutions (Four Peaks), 2017. Tier II Anti-degradation Evaluation for Acclimation Sites Proposed in the Upper Wenatchee River Basin, prepared for Yakama Nation Fisheries, Peshastin, Washington. December.

Four Peaks, Conservation Fund and Tetra Tech, 2018. Natapoc Hatchery NPDES Permit Engineering Report, prepared for Yakama Nation Fisheries, Peshastin, Washington. February.

II. Supplemental Applications for Acclimation Sites

1. Rohlfing Acclimation Site Permit Application



For Office Use Only

Date received: _____

Application/Permit No.: _____

**Request for Coverage under
National Pollutant Discharge Elimination Systems (NPDES)**

Acclimation Supplement to: Upland Hatchery and Fish Farm Permit Application

☒ **Individual**

All information must be answered completely and accurately. If a question does not apply, answer with "not applicable" or "NA".

Section A: General Information

1. Name of acclimation site: Rohlfing Acclimation Site

2. Acclimation Site Address (address to receive official correspondence concerning this site):
Street: 7051 U.S. Highway 97
City, State, Zip: Peshastin, WA 98847
County: Chelan

3. Operator information (an on-site contact):
Name: Greg Wolfe
Title: Yakama Nation Fisheries - Mid-Columbia Coho Restoration Program
Phone: (509) 548-9413 x 105
E-mail: wolg@yakamafish-nsn.gov

4. Alternate contact:
Name: Cory Kamphaus
Title: Northern Ceded Production Manager
Phone: (509) 548-9413 x 102
E-mail: kamc@yakamafish-nsn.gov

I **certify** under penalty of law that I have personally examined and am familiar with the information submitted in this application and attainments. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

| | |
|--------------------------------|-------------------------|
| JoDe Goudy | Chairman, Yakama Nation |
| Printed name of person signing | Title |
| | 8/20/15 |
| Applicant signature | Date signed |

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CENTRAL REGIONAL OFFICE

NOTE: Federal regulations require this application to be signed as follows:

(A) Corporation: By a principal officer of at least the level of vice president.

(B) Partnership or Sole Proprietorship: By a general partner or the proprietor, respectively.

(C) Municipality, State, Federal, or other public facility: By either a principal executive officer or ranking elected official.

Section B: Specific Acclimation-Site Information

1. Record the precise coordinates of the entrance to the acclimation site. Use either latitude/longitude (method NAD27 or NAD83) **or** UTM zone. You do not have to list both.

| | Degrees | Minutes | Seconds | UTM Zone | Easting | Northing |
|-----------|---------|---------|---------|----------|---------|----------|
| Latitude | 47 ° | 47 | 7 N | | | |
| Longitude | 120 ° | 53 | 45.3 W | | | |

For assistance with latitude and longitude refer to any of the following websites:

- www.topozone.com
- <http://cfpub1.epa.gov/npdes/stormwater/latlong.cfm>
- http://www.epa.gov/tri/report/siting_tool/index.htm

2. Give directions to the acclimation site from the nearest town or city. (Include a map if the address is not posted at site. If the site has an official address, list it here as well as directions).

1. From Leavenworth, WA take U.S. Highway 2 West for approximately 21.5 miles
2. Turn Left onto Whitepine Creek Road and proceed for approximately 1 mile
3. The site is located at 20622 White Pine Road

3. Attach a sketch, aerial photograph, or map of the existing or proposed facilities, with the following clearly marked. (Include scale.)

- a. Approximate overall dimensions of the facility;
- b. All water sources and water flow rates;
- c. All discharge points and receiving waters;
- d. All water flow paths;
- e. Sludge disposal areas (if any).

4. Is this a proposed facility: ☒ No ☐ Yes If yes, construction date: _____

5. Date(s) facility remodeled, expanded, upgraded, or acquired from another entity: 2017 (pond was dredged to remove fill material)

6. Included in Engineering Report. ☒ No ☐ Yes

7. Included in completed SEPA? ☐ No ☒ Yes

8. Does this acclimation site currently have a wastewater discharge permit? ☒ No ☐ Yes
If yes, Permit Number: _____

| 9. Indicate the number of each type of the following associated with this site. | | |
|---|---|-----------------|
| Type of rearing facility | Construction materials (specify type of liner: earthen, clay, gravel, synthetic, concrete, etc.) | Number of units |
| Circular pond: | | |
| Acclimation pond: | Existing earthen pond | 1 |
| Acclimation site: | | |
| Adult holding basin or raceway: | | |
| Other (describe): | | |

10. List the most current dates for the following:

| | | |
|---------------------------|-------|---------------|
| Spill Plan | Date: | Not Completed |
| Pollution Prevention Plan | Date: | Not Completed |
| Solid Waste Plan | Date: | Not Completed |

Section C: Influent and Effluent Information

1. Specify discharge location and name (if applicable):

- ☒ Stream Unnamed Creek that is a tributary of Nason Creek
- ☐ Wetland _____
- ☐ Other (describe) _____

2. For existing acclimation sites currently in use, analyze a representative grab sample for the acclimation site effluent.

| Parameter | Sampling date | Sampling time |
|------------------------------|---------------|---------------|
| Effluent | 5/9/2010 | |
| Last feeding before sampling | Unknown | |

| Parameter | Effluent Outfall |
|---|------------------|
| Flow | 2.45 million gpd |
| pH (standard pH units) | 6.44 |
| Total suspended solids | mg/L |
| Settleable solids | mg/L |
| Total phosphorous | < 0.001 mg/L |
| Dissolved oxygen | 10.81 mg/L |
| Temperature, (indicate °C or °F) | 6.61 °C |
| Ammonia, NO ₂ -NO ₃ | mg/L |

Section D: Water and Wastewater Treatment Systems

Chapters 90.48 and 90.54 RCW require that all discharges discharging to waters of the state use all known, available, and reasonable methods to prevent and control pollution.

Is there a mechanism to block discharge of floating material? ☒ No ☐ Yes

1. Acclimation Pond Cleaning

| |
|--|
| How many times per permit term is this site to be cleaned? Pond will be cleaned as needed if retention capacity is reduced |
| Methods of cleaning: The unnamed tributary is seasonal, with no flow in summer. The pond goes dry in summer and sediments will be excavated as necessary if pond capacity reduces. |
| What is done with the removed solids? Disposed off to a composting site (if suitable) or to landfill |
| Are the acclimation ponds/tanks cleaned before fish release? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes |
| Does this facility have a permit from the local Health District for solids disposal? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, describe: |

2. What is the frequency and volumes of disinfectants and anesthetics discharged?

| |
|-----------|
| None used |
|-----------|

3. Provide the following information for this facility for fish acclimation.

| |
|---|
| Surface Water Source: Unnamed Tributary of Nason Creek |
| Approximate/Anticipated rate (cfs): 1.7 cfs |
| Approximate/Anticipated Million Gallons/Day (MGD) flow-through: 1.1 |

| |
|---|
| Anticipated months of use: March through June |
| Approximate/Anticipated release date: Early May to mid-June |
| Release Method (volitionally, trucked, etc): Volitionally |
| If Trucked, anticipated percentages and where to: |

4. How are flows estimated or to be measured?

A stage-discharge relationship will be established for the unnamed tributary, and flows will be estimated based on water levels in the pond inflow or outflow

Section E: Production Information

unnamed
Tributary
to
Nason
creek

1. Fill in the following table for the highest production expected in maximum amount of fish on hand and the maximum amount of year of maximum production. For **new facilities**, provide information anticipated production within the next five years:

| Month | Fish (pounds) | Food (pounds) | Month | (pounds) | Food (pounds) |
|----------|------------------|------------------|-----------|----------|------------------|
| January | | | July | | |
| February | | | August | | |
| March | | | September | | |
| April | | | October | | |
| May | | | November | | |
| June | | | December | | |

2. For existing sites, what year is this data from? N/A
3. Describe feed storage: A limited amount of feed (no more than 150 lbs at a time) will be stored in a tote onsite
4. Do you anticipate a production expansion from the initial application at this site?
☒ No ☐ Yes If yes, explain (estimated amount or type of increase, time, etc.):

5. Are there plans for fish spawning at this site? ☒ No ☐ Yes

6. If yes, describe wastes generated as a result of on-site spawning, (For example, blood, anesthetics, disinfectants, carcasses), and how the wastes are/will be handled:

NA

7. Method of feeding: Check all that apply and estimate the percent of food fed using that method.

☒ Hand 100 % ☐ Automatic (timed) _____ % ☐ Automatic (demand) _____ %

Section F: Chemical Use Information

Note all antibiotics, drugs, disease control chemicals and disinfectants used or anticipated to be used at this site on the table on the next page. If a chemical is used but not listed on the table, note it in the space provided or on an attachment. For products to be stored on site, circle the Y and describe the chemical storage and safety practices to prevent accidental discharge to a surface water.

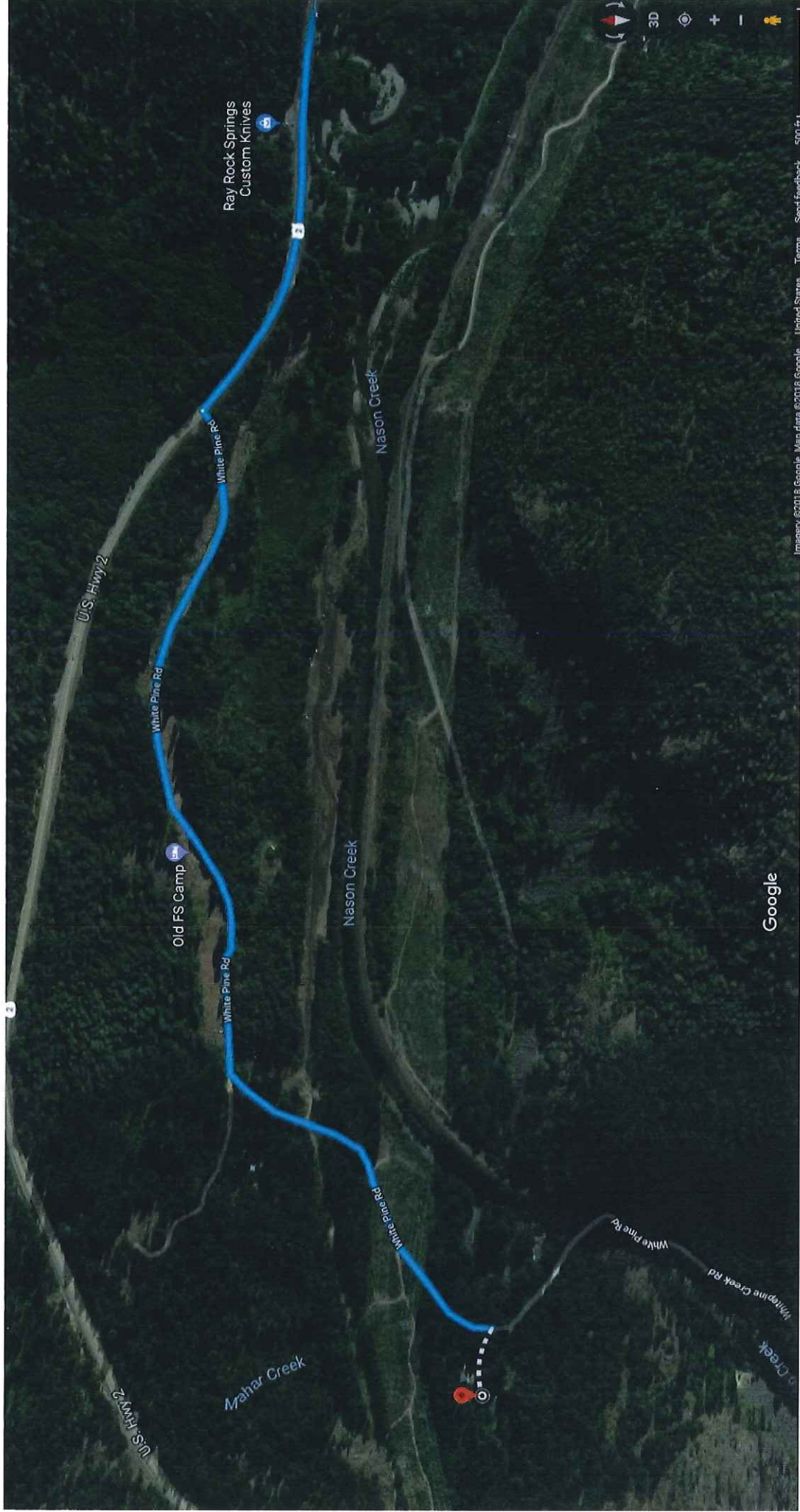
| Used Y/N | Internal Disease Control | Used Y/N | External Disease Control |
|---------------------|--|---------------------|------------------------------------|
| | Albuterol | | Acetic Acid |
| | Amoxicillin | | Buffered Iodophor |
| | Azythromycin | | Chloramine-T |
| | Benzocaine | | Citric Acid |
| | Calcein | | Copper Sulfate |
| | Cephalexin | | Diquat |
| | Chlortetracycline | | Formalin |
| | Clindamycin | | Hydrogen Peroxide |
| | Erythromycin | | Potassium Permanganate |
| | Flavobacterium Columnare B vaccine | | Sodium Chloride (Salt) |
| | Florfenicol | | |
| | Fumagillin | Used Y/N | Disinfectants/Other |
| | GnRH=gonadotropin releasing hormone | | 2, 4-D |
| | Isoeugenol (Aqui-S) | | Aquashade |
| | Lincomycin | | Carbon Dioxide (gas) |
| | Magnesium sulfate (Epsom Salts) | | Chlorhexidine (Nolvase) |
| | Nyastin | | Chlorine |
| | Oxytetracycline | | Glyphosate |
| | Penicillin | | Imazapyr |
| | Renogen – BKD vaccine | | Iodophor |
| | Sulfadimethoxine plus oretoprim (Romet 30) | | Lime Type-S |
| | Sulfamethoxazole (Albon) | | Liquid Live Micro Organisms |
| | Trimethoprim-sulfadiazine | | Ozone (gas) |
| | Tylosin | | Quaternary Ammonium |
| | Vibrio vaccine | | Sodium Thiosulfate |
| | | | Tricane methane sulfonate (MS-222) |
| | | | Tricopyr |

Describe chemical storage:

No chemicals will be used in the acclimation ponds. No chemicals will be stored on site.

[end of supplemental application for acclimation site]

Attachment - Rohlfing Acclimation Site Vicinity Map



Google

2. Butcher Acclimation Site Permit Application



For Office Use Only

Date received: _____

Application/Permit No.: _____

**Request for Coverage under
National Pollutant Discharge Elimination Systems (NPDES)**

Acclimation Supplement to: Upland Hatchery and Fish Farm Permit Application

☒ **Individual**

All information must be answered completely and accurately. If a question does not apply, answer with "not applicable" or "NA".

Section A: General Information

1. Name of acclimation site: Butcher Acclimation Site

2. Acclimation Site Address (address to receive official correspondence concerning this site):

Street: 7051 U.S. Highway 97

City, State, Zip: Peshastin, WA 98847

County: Chelan

3. Operator information (an on-site contact):

Name: Greg Wolfe

Title: Yakama Nation Fisheries - Mid-Columbia Coho Restoration Program

Phone: (509) 548-2206

E-mail: wolg@yakamafish-nsn.gov

4. Alternate contact:

Name: Cory Kamphaus

Title: Northern Ceded Production Manager

Phone: (509) 548-9413 x 102

E-mail: kamc@yakamafish-nsn.gov

I **certify** under penalty of law that I have personally examined and am familiar with the information submitted in this application and attainments. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

| | |
|--------------------------------|-------------------------|
| JoDe Goudy | Chairman, Yakama Nation |
| Printed name of person signing | Title |
| | 8/20/18 |
| Applicant signature | Date signed |

RECEIVED

AUG 21 2018

DEPARTMENT OF ECOLOGY
CENTRAL REGIONAL OFFICE

NOTE: Federal regulations require this application to be signed as follows:

(A) Corporation: By a principal officer of at least the level of vice president.

(B) Partnership or Sole Proprietorship: By a general partner or the proprietor, respectively.

(C) Municipality, State, Federal, or other public facility: By either a principal executive officer or ranking elected official.

Section B: Specific Acclimation-Site Information

1. Record the precise coordinates of the entrance to the acclimation site. Use either latitude/longitude (method NAD27 or NAD83) **or** UTM zone. You do not have to list both.

| | Degrees | Minutes | Seconds | | UTM Zone | Easting | Northing |
|-----------|---------|---------|---------|---|----------|---------|----------|
| Latitude | 47 ° | 46 | 10.2 | N | | | |
| Longitude | 120 ° | 48 | 8.3 | W | | | |

For assistance with latitude and longitude refer to any of the following websites:

- www.topozone.com
- <http://cfpub1.epa.gov/npdes/stormwater/latlong.cfm>
- http://www.epa.gov/tri/report/siting_tool/index.htm

2. Give directions to the acclimation site from the nearest town or city. (Include a map if the address is not posted at site. If the site has an official address, list it here as well as directions).

1. From Leavenworth, WA take U.S. Highway 2 West for approximately 18.5 miles
2. Just past U.S. Highway 2 Rest Area turn right towards Nason Ridge Road
3. Turn right on to Nason Ridge Road and proceed 0.2 miles East - the site is located on the right

3. Attach a sketch, aerial photograph, or map of the existing or proposed facilities, with the following clearly marked. (Include scale.)

- a. Approximate overall dimensions of the facility;
- b. All water sources and water flow rates;
- c. All discharge points and receiving waters;
- d. All water flow paths;
- e. Sludge disposal areas (if any).

4. Is this a proposed facility: ☒ No ☐ Yes If yes, construction date: _____

5. Date(s) facility remodeled, expanded, upgraded, or acquired from another entity: _____

6. Included in Engineering Report. ☒ No ☐ Yes

7. Included in completed SEPA? ☐ No ☒ Yes

8. Does this acclimation site currently have a wastewater discharge permit? ☒ No ☐ Yes
If yes, Permit Number: _____

| 9. Indicate the number of each type of the following associated with this site. | | |
|---|---|-----------------|
| Type of rearing facility | Construction materials (specify type of liner: earthen, clay, gravel, synthetic, concrete, etc.) | Number of units |
| Circular pond: | | |
| Acclimation pond: | Existing earthen pond | 1 |
| Acclimation site: | | |
| Adult holding basin or raceway: | | |
| Other (describe): | | |

10. List the most current dates for the following:

| | | |
|---------------------------|-------|---------------|
| Spill Plan | Date: | Not Completed |
| Pollution Prevention Plan | Date: | Not Completed |
| Solid Waste Plan | Date: | Not Completed |

| |
|---|
| Section C: Influent and Effluent Information |
|---|

1. Specify discharge location and name (if applicable):

- ☒ Stream Nason Creek
- ☐ Wetland _____
- ☐ Other (describe) _____

2. For existing acclimation sites currently in use, analyze a representative grab sample for the acclimation site effluent.

| Parameter | Sampling date | Sampling time |
|------------------------------|---------------|---------------|
| Effluent | 5/9/2010 | |
| Last feeding before sampling | Unknown | |

| Parameter | Effluent Outfall |
|---|------------------|
| Flow | 2.52 million gpd |
| pH (standard pH units) | 6.76 |
| Total suspended solids | mg/L |
| Settleable solids | mg/L |
| Total phosphorous | < 0.001 mg/L |
| Dissolved oxygen | 11.32 mg/L |
| Temperature, (indicate °C or °F) | 10.23°C |
| Ammonia, NO ₂ -NO ₃ | mg/L |

Section D: Water and Wastewater Treatment Systems

Chapters 90.48 and 90.54 RCW require that all discharges discharging to waters of the state use all known, available, and reasonable methods to prevent and control pollution.

Is there a mechanism to block discharge of floating material? ☒ No ☐ Yes

1. Acclimation Pond Cleaning

| |
|---|
| How many times per permit term is this site to be cleaned? Pond will be cleaned as needed if retention capacity is reduced |
| Methods of cleaning: When necessary sediments will be hydraulically dredged, dewatered and composted/land applied if found suitable. |
| What is done with the removed solids? Composted/land applied (if suitable) or sent to landfill |
| Are the acclimation ponds/tanks cleaned before fish release? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes |
| Does this facility have a permit from the local Health District for solids disposal? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, describe: |

2. What is the frequency and volumes of disinfectants and anesthetics discharged?

| |
|-----------|
| None used |
|-----------|

3. Provide the following information for this facility for fish acclimation.

| |
|---|
| Surface Water Source: Butcher Creek |
| Approximate/Anticipated rate (cfs): 1.7 cfs |
| Approximate/Anticipated Million Gallons/Day (MGD) flow-through: 1.1 |

| |
|---|
| Anticipated months of use: March through June |
| Approximate/Anticipated release date: Early May to mid-June |
| Release Method (volitionally, trucked, etc): Volitionally |
| If Trucked, anticipated percentages and where to: |

4. How are flows estimated or to be measured?

A stage-discharge relationship will be established for the Butcher Creek, and flows will be estimated based on water levels in the pond inflow or outflow

Section E: Production Information

Butcher Creek to
Nason Creek

1. Fill in the following table for the highest production expected, maximum amount of fish on hand and the maximum amount of food per year of maximum production. For **new facilities**, provide information on anticipated production within the next five years:

| Month | Fish (pounds) | Food (pounds) | Month | (pounds) | (pounds) |
|----------|------------------|------------------|-----------|----------|----------|
| January | | | July | | |
| February | | | August | | |
| March | | | September | | |
| April | | | October | | |
| May | | | November | | |
| June | | | December | | |

2. For existing sites, what year is this data from? N/A

3. Describe feed storage: A limited amount of feed (no more than 150 lbs at a time) will be stored in a tote onsite

4. Do you anticipate a production expansion from the initial application at this site?

☒ No ☐ Yes If yes, explain (estimated amount or type of increase, time, etc.):

5. Are there plans for fish spawning at this site? ☒ No ☐ Yes

6. If yes, describe wastes generated as a result of on-site spawning, (For example, blood, anesthetics, disinfectants, carcasses), and how the wastes are/will be handled:

NA

7. Method of feeding: Check all that apply and estimate the percent of food fed using that method.

☒ Hand 100 % ☐ Automatic (timed) _____ % ☐ Automatic (demand) _____ %

Section F: Chemical Use Information

Note all antibiotics, drugs, disease control chemicals and disinfectants used or anticipated to be used at this site on the table on the next page. If a chemical is used but not listed on the table, note it in the space provided or on an attachment. For products to be stored on site, circle the Y and describe the chemical storage and safety practices to prevent accidental discharge to a surface water.

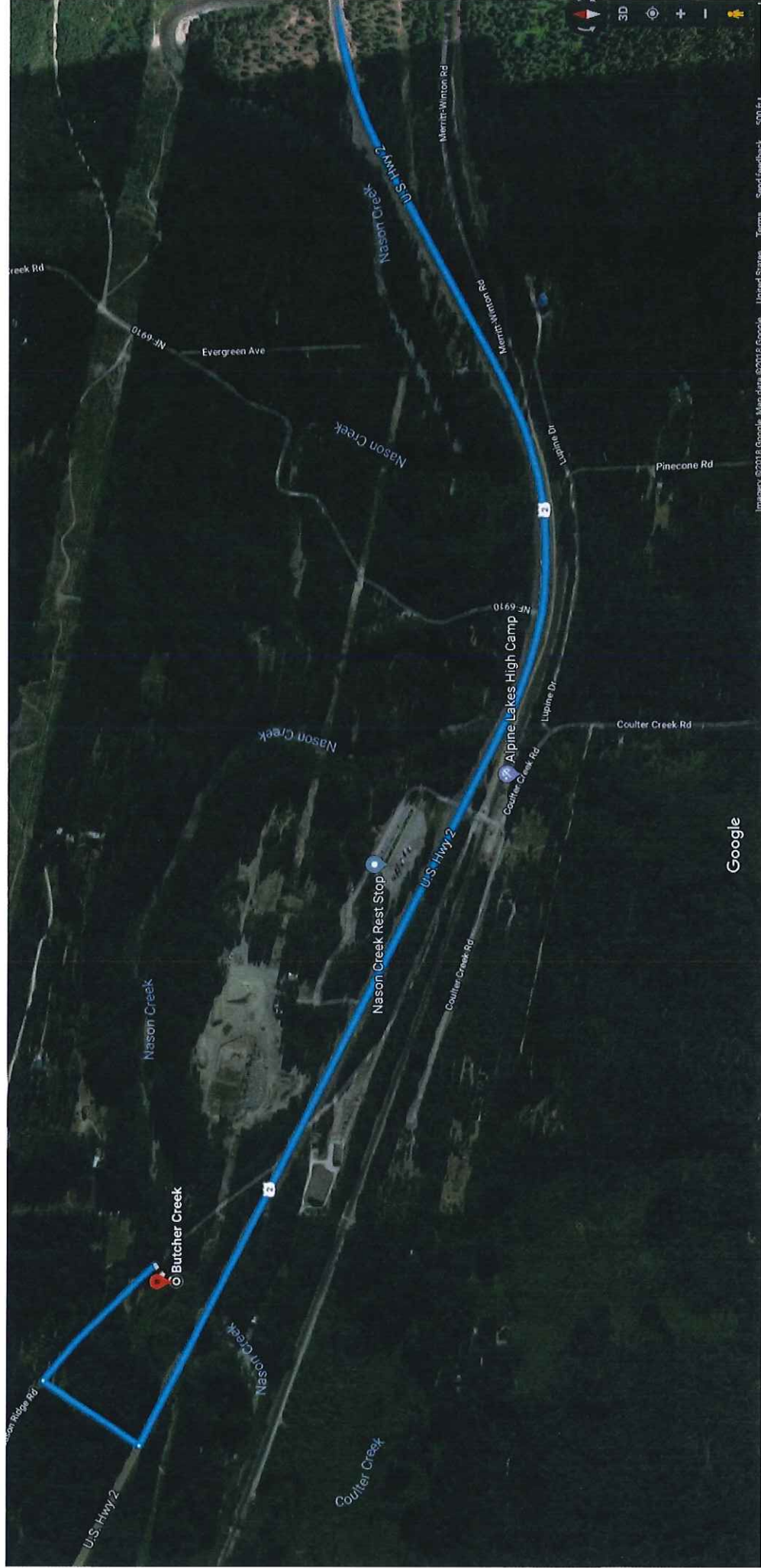
| Used Y/N | Internal Disease Control |
|-------------|--|
| | Albuterol |
| | Amoxicillin |
| | Azythromycin |
| | Benzocaine |
| | Calcein |
| | Cephalexin |
| | Chlortetracycline |
| | Clindamycin |
| | Erythromycin |
| | Flavobacterium Columnare B vaccine |
| | Florfenicol |
| | Fumagillin |
| | GnRH=gonadotropin releasing hormone |
| | Isoeugenol (Aqui-S) |
| | Lincomycin |
| | Magnesium sulfate (Epsom Salts) |
| | Nyastin |
| | Oxytetracycline |
| | Penicillin |
| | Renogen – BKD vaccine |
| | Sulfadimethoxine plus oretoprim (Romet 30) |
| | Sulfamethoxazole (Albon) |
| | Trimethoprim-sulfadiazine |
| | Tylosin |
| | Vibrio vaccine |
| | |
| | |

| Used Y/N | External Disease Control |
|-------------|------------------------------------|
| | Acetic Acid |
| | Buffered Iodophor |
| | Chloramine-T |
| | Citric Acid |
| | Copper Sulfate |
| | Diquat |
| | Formalin |
| | Hydrogen Peroxide |
| | Potassium Permanganate |
| | Sodium Chloride (Salt) |
| | |
| Used Y/N | Disinfectants/Other |
| | 2, 4-D |
| | Aquashade |
| | Carbon Dioxide (gas) |
| | Chlorhexidine (Nolvasan) |
| | Chlorine |
| | Glyphosate |
| | Imazapyr |
| | Iodophor |
| | Lime Type-S |
| | Liquid Live Micro Organisms |
| | Ozone (gas) |
| | Quaternary Ammonium |
| | Sodium Thiosulfate |
| | Tricane methane sulfonate (MS-222) |
| | Tricopvr |

Describe chemical storage:

No chemicals will be used in the acclimation ponds. No chemicals will be stored on site.

[end of supplemental application for acclimation site]



Google

3.Coulter Acclimation Site Permit Application



For Office Use Only

Date received: _____

Application/Permit No.: _____

**Request for Coverage under
National Pollutant Discharge Elimination Systems (NPDES)
Acclimation Supplement to: Upland Hatchery and Fish Farm Permit Application
☒ Individual**

All information must be answered completely and accurately. If a question does not apply, answer with "not applicable" or "NA".

Section A: General Information


1. Name of acclimation site: Coulter Acclimation Site

2. Acclimation Site Address (address to receive official correspondence concerning this site):
Street: 7051 U.S. Highway 97
City, State, Zip: Peshastin, WA 98847
County: Chelan

3. Operator information (an on-site contact):
Name: Greg Wolfe
Title: Yakama Nation Fisheries - Mid-Columbia Coho Restoration Program
Phone: (509) 548-2206
E-mail: wolg@yakamafish-nsn.gov

4. Alternate contact:
Name: Cory Kamphaus
Title: Northern Ceded Production Manager
Phone: (509) 548-9413 x 102
E-mail: kamc@yakamafish-nsn.gov

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and attainments. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

| | |
|---|-------------------------|
| JoDe Goudy | Chairman, Yakama Nation |
| Printed name of person signing | Title |
|  | 8/20/18 |
| Applicant signature | Date signed |

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AUG 21 2018
DEPARTMENT OF ECOLOGY
CENTRAL REGIONAL OFFICE

NOTE: Federal regulations require this application to be signed as follows:

(A) Corporation: By a principal officer of at least the level of vice president.

(B) Partnership or Sole Proprietorship: By a general partner or the proprietor, respectively.

(C) Municipality, State, Federal, or other public facility: By either a principal executive officer or ranking elected official.

Section B: Specific Acclimation-Site Information

1. Record the precise coordinates of the entrance to the acclimation site. Use either latitude/longitude (method NAD27 or NAD83) **or** UTM zone. You do not have to list both.

| | Degrees | Minutes | Seconds | | UTM Zone | Easting | Northing |
|-----------|---------|---------|---------|---|----------|---------|----------|
| Latitude | 47 ° | 45 | 52 | N | | | |
| Longitude | 120 ° | 48 | 10 | W | | | |

For assistance with latitude and longitude refer to any of the following websites:

- www.topozone.com
- <http://cfpub1.epa.gov/npdes/stormwater/latlong.cfm>
- http://www.epa.gov/tri/report/siting_tool/index.htm

2. Give directions to the acclimation site from the nearest town or city. (Include a map if the address is not posted at site. If the site has an official address, list it here as well as directions).

1. From Leavenworth, WA take U.S. Highway 2 West for approximately 18.4 miles
2. Just past U.S. Highway 2 Rest Area turn left towards Dardenelles Road (unmarked road past the building on the left)
3. Proceed 0.2 miles going past the railroad tracks - the entrance to the site will be located on the left.

3. Attach a sketch, aerial photograph, or map of the existing or proposed facilities, with the following clearly marked. (Include scale.)

- a. Approximate overall dimensions of the facility;
- b. All water sources and water flow rates;
- c. All discharge points and receiving waters;
- d. All water flow paths;
- e. Sludge disposal areas (if any).

4. Is this a proposed facility: ☒ No ☐ Yes If yes, construction date: _____ Facility use began in 2010.
5. Date(s) facility remodeled, expanded, upgraded, or acquired from another entity: No significant changes to site since start
6. Included in Engineering Report. ☒ No ☐ Yes
7. Included in completed SEPA? ☐ No ☒ Yes
8. Does this acclimation site currently have a wastewater discharge permit? ☒ No ☐ Yes
If yes, Permit Number: _____

| 9. Indicate the number of each type of the following associated with this site. | | |
|---|---|-----------------|
| Type of rearing facility | Construction materials (specify type of liner: earthen, clay, gravel, synthetic, concrete, etc.) | Number of units |
| Circular pond: | | |
| Acclimation pond: | Existing earthen pond | 1 |
| Acclimation site: | | |
| Adult holding basin or raceway: | | |
| Other (describe): | | |

10. List the most current dates for the following:

| | | |
|---------------------------|-------|---------------|
| Spill Plan | Date: | Not Completed |
| Pollution Prevention Plan | Date: | Not Completed |
| Solid Waste Plan | Date: | Not Completed |

| |
|---|
| Section C: Influent and Effluent Information |
|---|

1. Specify discharge location and name (if applicable):

- ☐ Stream _____
- ☒ Wetland Yakama Nation owned portion of wetland, which ultimately drains to Nason Creek
- ☐ Other (describe) _____

2. For existing acclimation sites currently in use, analyze a representative grab sample for the acclimation site effluent.

| Parameter | Sampling date | Sampling time |
|------------------------------|---------------|---------------|
| Effluent | | |
| Last feeding before sampling | | |

| Parameter | Effluent Outfall |
|---|------------------|
| Flow | gpd |
| pH (standard pH units) | |
| Total suspended solids | mg/L |
| Settleable solids | mg/L |
| Total phosphorous | mg/L |
| Dissolved oxygen | mg/L |
| Temperature, (indicate °C or °F) | |
| Ammonia, NO ₂ -NO ₃ | mg/L |

Section D: Water and Wastewater Treatment Systems

Chapters 90.48 and 90.54 RCW require that all discharges discharging to waters of the state use all known, available, and reasonable methods to prevent and control pollution.

Is there a mechanism to block discharge of floating material? ☒ No ☐ Yes

1. Acclimation Pond Cleaning

| |
|---|
| How many times per permit term is this site to be cleaned? |
| Cleaning is not possible since acclimation operations are limited to a small portion of a large wetland complex. |
| Methods of cleaning: Not Applicable |
| What is done with the removed solids? Not Applicable |
| Are the acclimation ponds/tanks cleaned before fish release? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes |
| Does this facility have a permit from the local Health District for solids disposal? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, describe: |

2. What is the frequency and volumes of disinfectants and anesthetics discharged?

None used

3. Provide the following information for this facility for fish acclimation.

| |
|---|
| Surface Water Source: Coulter Creek |
| Approximate/Anticipated rate (cfs): 1.7 cfs |
| Approximate/Anticipated Million Gallons/Day (MGD) flow-through: 1.1 |

| |
|---|
| Anticipated months of use: March through June |
| Approximate/Anticipated release date: Early May to mid-June |
| Release Method (volitionally, trucked, etc): Volitionally |
| If Trucked, anticipated percentages and where to: |

4. How are flows estimated or to be measured?

A stage-discharge relationship will be established for Coulter Creek, and flows will be estimated based on water levels in the pond inflow

Section E: Production Information

1. Fill in the following table for the highest production expected in maximum amount of fish on hand and the maximum amount of year of maximum production. For **new facilities**, provide information anticipated production within the next five years:

Coulter Creek
(wetlands)
to Nason
creek

| Month | Fish (pounds) | Food (pounds) | Month | (pounds) | (pounds) |
|----------|------------------|------------------|-----------|----------|----------|
| January | | | July | | |
| February | | | August | | |
| March | | | September | | |
| April | | | October | | |
| May | | | November | | |
| June | | | December | | |

2. For existing sites, what year is this data from? N/A

3. Describe feed storage: Food will be stored off-site and brought in for hand feeding

4. Do you anticipate a production expansion from the initial application at this site?

☒ No ☐ Yes If yes, explain (estimated amount or type of increase, time, etc.):

5. Are there plans for fish spawning at this site? ☒ No ☐ Yes

6. If yes, describe wastes generated as a result of on-site spawning, (For example, blood, anesthetics, disinfectants, carcasses), and how the wastes are/will be handled:

NA

7. Method of feeding: Check all that apply and estimate the percent of food fed using that method.

☒ Hand 100 % ☐ Automatic (timed) _____ % ☐ Automatic (demand) _____ %

Section F: Chemical Use Information

Note all antibiotics, drugs, disease control chemicals and disinfectants used or anticipated to be used at this site on the table on the next page. If a chemical is used but not listed on the table, note it in the space provided or on an attachment. For products to be stored on site, circle the Y and describe the chemical storage and safety practices to prevent accidental discharge to a surface water.

| Used Y/N | Internal Disease Control |
|-------------|--|
| | Albuterol |
| | Amoxicillin |
| | Azythromycin |
| | Benzocaine |
| | Calcein |
| | Cephalexin |
| | Chlortetracycline |
| | Clindamycin |
| | Erythromycin |
| | Flavobacterium Columnare B vaccine |
| | Florfenicol |
| | Fumagillin |
| | GnRH=gonadotropin releasing hormone |
| | Isoeugenol (Aqui-S) |
| | Lincomycin |
| | Magnesium sulfate (Epsom Salts) |
| | Nyastin |
| | Oxytetracycline |
| | Penicillin |
| | Renogen – BKD vaccine |
| | Sulfadimethoxine plus oretoprim (Romet 30) |
| | Sulfamethoxazole (Albon) |
| | Trimethoprim-sulfadiazine |
| | Tylosin |
| | Vibrio vaccine |
| | |
| | |

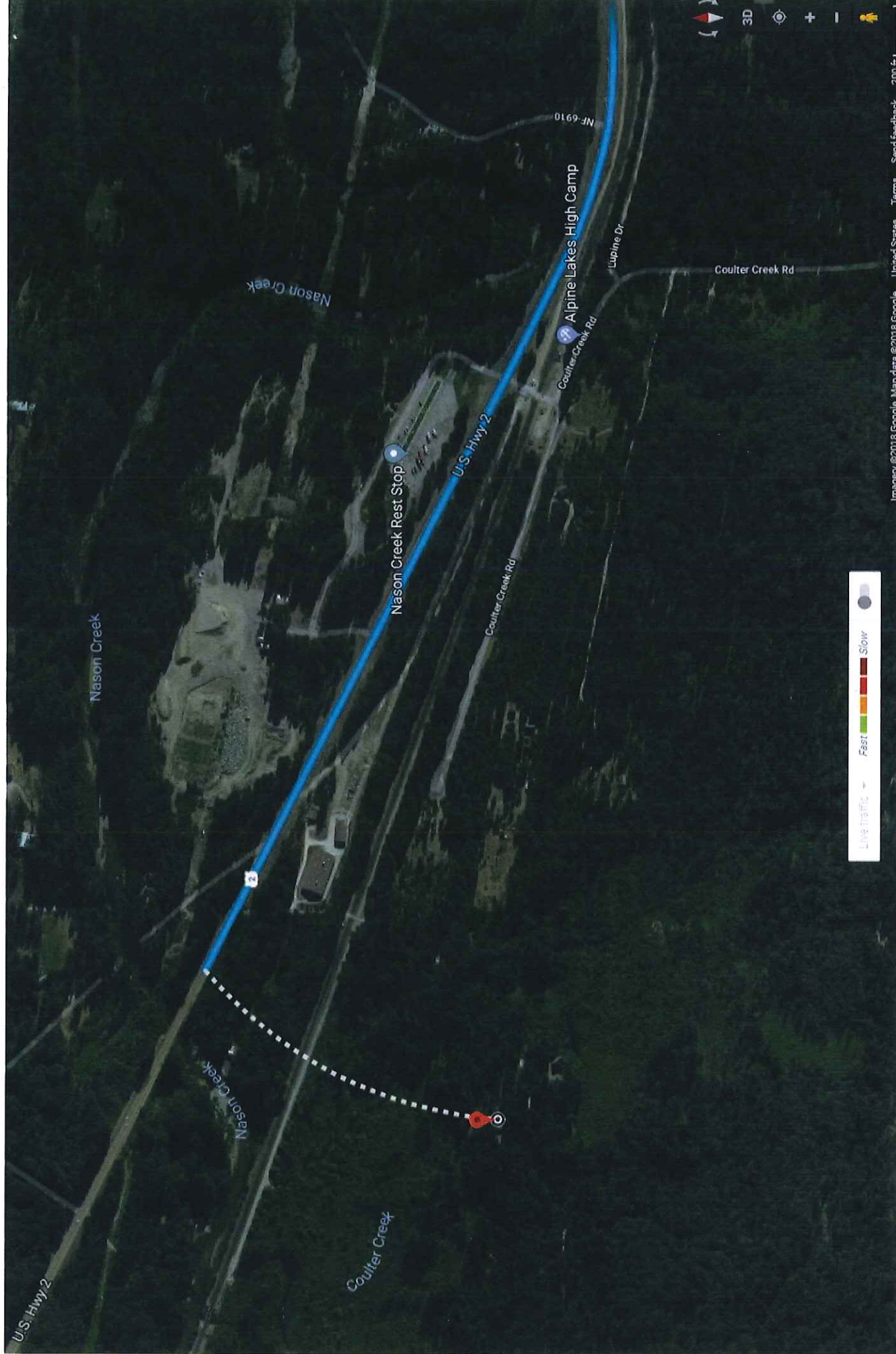
| Used Y/N | External Disease Control |
|-------------|------------------------------------|
| | Acetic Acid |
| | Buffered Iodophor |
| | Chloramine-T |
| | Citric Acid |
| | Copper Sulfate |
| | Diquat |
| | Formalin |
| | Hydrogen Peroxide |
| | Potassium Permanganate |
| | Sodium Chloride (Salt) |
| | |
| Used Y/N | Disinfectants/Other |
| | 2, 4-D |
| | Aquashade |
| | Carbon Dioxide (gas) |
| | Chlorhexidine (Nolvasan) |
| | Chlorine |
| | Glyphosate |
| | Imazapyr |
| | Iodophor |
| | Lime Type-S |
| | Liquid Live Micro Organisms |
| | Ozone (gas) |
| | Quaternary Ammonium |
| | Sodium Thiosulfate |
| | Tricane methane sulfonate (MS-222) |
| | Tricopyr |

Describe chemical storage:

No chemicals will be used in the acclimation ponds. No chemicals will be stored on site.

[end of supplemental application for acclimation site]

Attachment - Coulter Acclimation Site Vicinity Map



4. Powerline Acclimation Site Permit Application



For Office Use Only

Date received: _____

Application/Permit No.: _____

**Request for Coverage under
National Pollutant Discharge Elimination Systems (NPDES)
Acclimation Supplement to: Upland Hatchery and Fish Farm Permit Application
☒ Individual**

All information must be answered completely and accurately. If a question does not apply, answer with "not applicable" or "NA".

Section A: General Information

1. Name of acclimation site: Powerline Acclimation Site

2. Acclimation Site Address (address to receive official correspondence concerning this site):
Street: 7051 U.S. Highway 97
City, State, Zip: Peshastin, WA 98847
County: Chelan

3. Operator information (an on-site contact):
Name: Greg Wolfe
Title: Yakama Nation Fisheries - Mid-Columbia Coho Restoration Program
Phone: (509) 548-2206
E-mail: wolg@yakamafish-nsn.gov

4. Alternate contact:
Name: Cory Kamphaus
Title: Northern Ceded Production Manager
Phone: (509) 548-9413 x 102
E-mail: kamc@yakamafish-nsn.gov

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and attainments. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

| | |
|--------------------------------|-------------------------|
| JoDe Goudy | Chairman, Yakama Nation |
| Printed name of person signing | Title |
| | 8/20/15 |
| Applicant signature | Date signed |

RECEIVED

AUG 21 2015

DEPARTMENT OF ECOLOGY
CENTRAL REGIONAL OFFICE

NOTE: Federal regulations require this application to be signed as follows:

(A) Corporation: By a principal officer of at least the level of vice president.

(B) Partnership or Sole Proprietorship: By a general partner or the proprietor, respectively.

(C) Municipality, State, Federal, or other public facility: By either a principal executive officer or ranking elected official.

Section B: Specific Acclimation-Site Information

1. Record the precise coordinates of the entrance to the acclimation site. Use either latitude/longitude (method NAD27 or NAD83) **or** UTM zone. You do not have to list both.

| | Degrees | Minutes | Seconds | UTM Zone | Easting | Northing |
|-----------|---------|---------|---------|----------|---------|----------|
| Latitude | 47 ° | 47 | 11.2 N | | | |
| Longitude | 120 ° | 52 | 30.8 W | | | |

For assistance with latitude and longitude refer to any of the following websites:

- www.topozone.com
- <http://cfpub1.epa.gov/npdes/stormwater/latlong.cfm>
- http://www.epa.gov/tri/report/siting_tool/index.htm

2. Give directions to the acclimation site from the nearest town or city. (Include a map if the address is not posted at site. If the site has an official address, list it here as well as directions).

1. From Leavenworth, WA take U.S. Highway 2 West for approximately 21.5 miles
2. Turn Left onto Whitepine Creek Road and proceed for approximately 0.8 mile
3. The site is located on the left just past an unnamed tributary of Nason Creek (and below where the BPA Powerline crosses White Pine Road and Nason Creek)

3. Attach a sketch, aerial photograph, or map of the existing or proposed facilities, with the following clearly marked. (Include scale.)

- a. Approximate overall dimensions of the facility;
- b. All water sources and water flow rates;
- c. All discharge points and receiving waters;
- d. All water flow paths;
- e. Sludge disposal areas (if any).

4. Is this a proposed facility: ☐ No ☒ Yes If yes, construction date: _____

5. Date(s) facility remodeled, expanded, upgraded, or acquired from another entity: N/A

6. Included in Engineering Report. ☒ No ☐ Yes

7. Included in completed SEPA? ☐ No ☒ Yes

8. Does this acclimation site currently have a wastewater discharge permit? ☒ No ☐ Yes
If yes, Permit Number: _____

| 9. Indicate the number of each type of the following associated with this site. | | |
|---|---|-----------------|
| Type of rearing facility | Construction materials (specify type of liner: earthen, clay, gravel, synthetic, concrete, etc.) | Number of units |
| Circular pond: | | |
| Acclimation pond: | Proposed earthen pond | 1 |
| Acclimation site: | | |
| Adult holding basin or raceway: | | |
| Other (describe): | | |

10. List the most current dates for the following:

| | | |
|---------------------------|-------|---------------|
| Spill Plan | Date: | Not Completed |
| Pollution Prevention Plan | Date: | Not Completed |
| Solid Waste Plan | Date: | Not Completed |

| |
|---|
| Section C: Influent and Effluent Information |
|---|

1. Specify discharge location and name (if applicable):

- ☒ Stream Unnamed Creek that is a tributary of Nason Creek
- ☐ Wetland
- ☐ Other (describe)

2. For existing acclimation sites currently in use, analyze a representative grab sample for the acclimation site effluent.

| Parameter | Sampling date | Sampling time |
|------------------------------|---------------|---------------|
| Effluent | | |
| Last feeding before sampling | | |

| Parameter | Effluent Outfall |
|---|------------------|
| Flow | gpd |
| pH (standard pH units) | |
| Total suspended solids | mg/L |
| Settleable solids | mg/L |
| Total phosphorous | mg/L |
| Dissolved oxygen | mg/L |
| Temperature, (indicate °C or °F) | |
| Ammonia, NO ₂ -NO ₃ | mg/L |

Section D: Water and Wastewater Treatment Systems

Chapters 90.48 and 90.54 RCW require that all discharges discharging to waters of the state use all known, available, and reasonable methods to prevent and control pollution.

Is there a mechanism to block discharge of floating material? ☒ No ☐ Yes

1. Acclimation Pond Cleaning

| |
|---|
| How many times per permit term is this site to be cleaned? Pond will be cleaned as needed if retention capacity is reduced |
| Methods of cleaning: Flows will be diverted, pond allowed to dry and sediments will be excavated |
| What is done with the removed solids? Disposed off to a composting site (if suitable) or to landfill |
| Are the acclimation ponds/tanks cleaned before fish release? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes |
| Does this facility have a permit from the local Health District for solids disposal? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, describe: |

2. What is the frequency and volumes of disinfectants and anesthetics discharged?

| |
|-----------|
| None used |
|-----------|

3. Provide the following information for this facility for fish acclimation.

| |
|---|
| Surface Water Source: Unnamed Tributary of Nason Creek |
| Approximate/Anticipated rate (cfs): 1.5 cfs |
| Approximate/Anticipated Million Gallons/Day (MGD) flow-through: 1.0 |

| |
|---|
| Anticipated months of use: March through June |
| Approximate/Anticipated release date: Early May to mid-June |
| Release Method (volitionally, trucked, etc): Volitionally |
| If Trucked, anticipated percentages and where to: |

4. How are flows estimated or to be measured?

A stage-discharge relationship will be established for the unnamed tributary, and flows will be estimated based on water levels in the pond inflow or outflow

Section E: Production Information

1. Fill in the following table for the highest production expected in the maximum amount of fish on hand and the maximum amount of food per year of maximum production. For **new facilities**, provide information on anticipated production within the next five years:

| Month | Fish (pounds) | Food (pounds) | Month | (pounds) | (pounds) |
|----------|------------------|------------------|-----------|----------|----------|
| January | | | July | | |
| February | | | August | | |
| March | | | September | | |
| April | | | October | | |
| May | | | November | | |
| June | | | December | | |

Powerline
Unnamed to
Nelson Creek
Steel head

2. For existing sites, what year is this data from? N/A

3. Describe feed storage: Food will be stored off-site and brought in for hand feeding

4. Do you anticipate a production expansion from the initial application at this site?

☒ No ☐ Yes If yes, explain (estimated amount or type of increase, time, etc.):

5. Are there plans for fish spawning at this site? ☒ No ☐ Yes

6. If yes, describe wastes generated as a result of on-site spawning, (For example, blood, anesthetics, disinfectants, carcasses), and how the wastes are/will be handled:

NA

7. Method of feeding: Check all that apply and estimate the percent of food fed using that method.

☒ Hand 100 % ☐ Automatic (timed) _____ % ☐ Automatic (demand) _____ %

Section F: Chemical Use Information

Note all antibiotics, drugs, disease control chemicals and disinfectants used or anticipated to be used at this site on the table on the next page. If a chemical is used but not listed on the table, note it in the space provided or on an attachment. For products to be stored on site, circle the Y and describe the chemical storage and safety practices to prevent accidental discharge to a surface water.

| Used Y/N | Internal Disease Control |
|-------------|--|
| | Albuterol |
| | Amoxicillin |
| | Azythromycin |
| | Benzocaine |
| | Calcein |
| | Cephalexin |
| | Chlortetracycline |
| | Clindamycin |
| | Erythromycin |
| | Flavobacterium Columnare B vaccine |
| | Florfenicol |
| | Fumagillin |
| | GnRH=gonadotropin releasing hormone |
| | Isoeugenol (Aqui-S) |
| | Lincomycin |
| | Magnesium sulfate (Epsom Salts) |
| | Nyastin |
| | Oxytetracycline |
| | Penicillin |
| | Renogen – BKD vaccine |
| | Sulfadimethoxine plus oretoprim (Romet 30) |
| | Sulfamethoxazole (Albon) |
| | Trimethoprim-sulfadiazine |
| | Tylosin |
| | Vibrio vaccine |
| | |
| | |

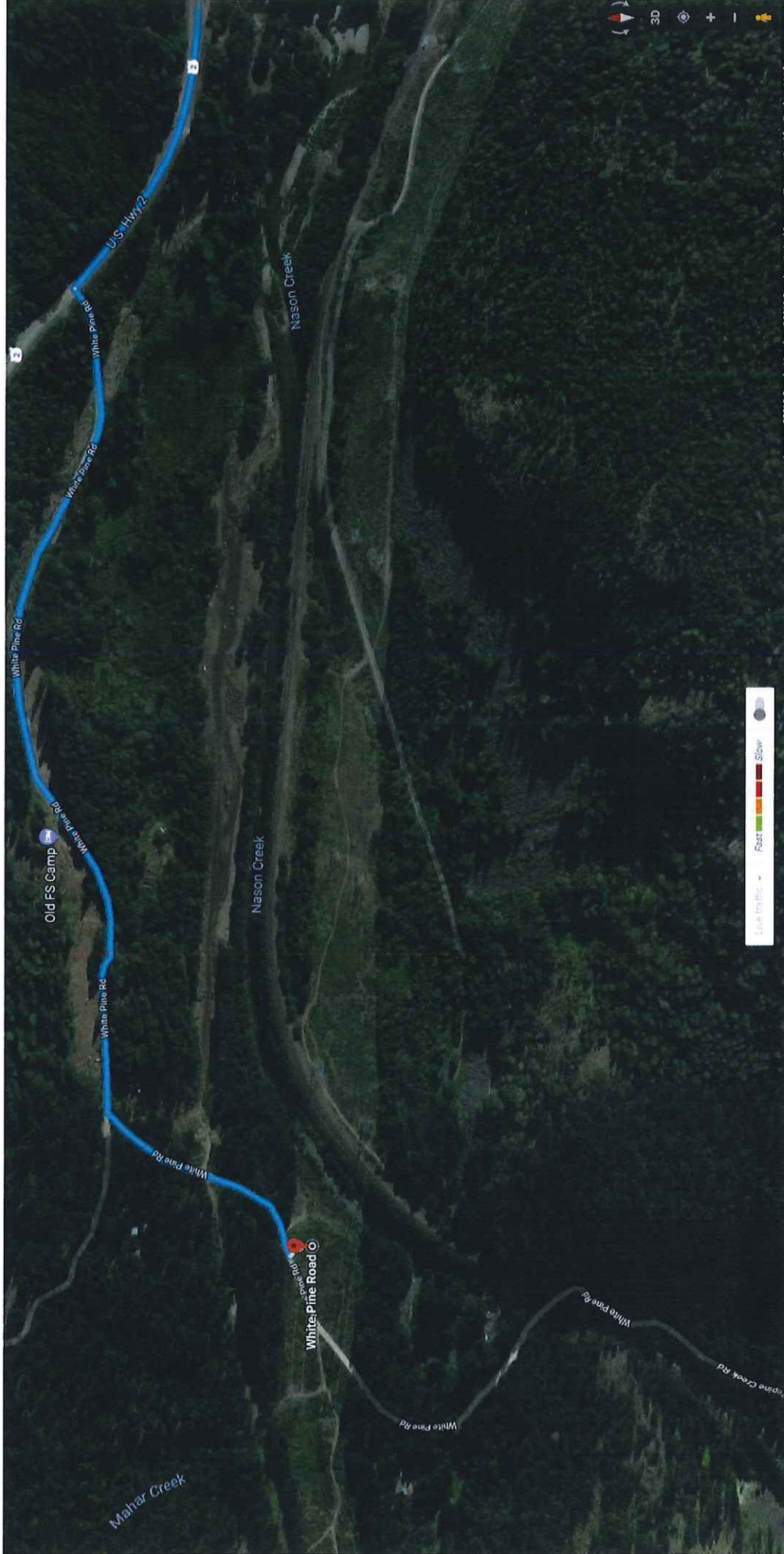
| Used Y/N | External Disease Control |
|-------------|------------------------------------|
| | Acetic Acid |
| | Buffered Iodophor |
| | Chloramine-T |
| | Citric Acid |
| | Copper Sulfate |
| | Diquat |
| | Formalin |
| | Hydrogen Peroxide |
| | Potassium Permanganate |
| | Sodium Chloride (Salt) |
| | |
| Used Y/N | Disinfectants/Other |
| | 2, 4-D |
| | Aquashade |
| | Carbon Dioxide (gas) |
| | Chlorhexidine (Nolvasan) |
| | Chlorine |
| | Glyphosate |
| | Imazapyr |
| | Iodophor |
| | Lime Type-S |
| | Liquid Live Micro Organisms |
| | Ozone (gas) |
| | Quaternary Ammonium |
| | Sodium Thiosulfate |
| | Tricane methane sulfonate (MS-222) |
| | Tricopyr |

Describe chemical storage:

No chemicals will be used in the acclimation ponds. No chemicals will be stored on site.

[end of supplemental application for acclimation site]

Attachment - Powerline Acclimation Site Vicinity Map



5. White River Springs Acclimation Site Permit Application



For Office Use Only

Date received: _____

Application/Permit No.: _____

**Request for Coverage under
National Pollutant Discharge Elimination Systems (NPDES)**

Acclimation Supplement to: Upland Hatchery and Fish Farm Permit Application

☒ **Individual**

All information must be answered completely and accurately. If a question does not apply, answer with "not applicable" or "NA".

Section A: General Information

1. Name of acclimation site: White River Springs Acclimation Site

2. Acclimation Site Address (address to receive official correspondence concerning this site):

Street: 7051 U.S. Highway 97

City, State, Zip: Peshastin, WA 98847

County: Chelan

3. Operator information (an on-site contact):

Name: Greg Wolfe

Title: Yakama Nation Fisheries - Mid-Columbia Coho Restoration Program

Phone: (509) 548-2206

E-mail: wolg@yakamafish-nsn.gov

4. Alternate contact:

Name: Cory Kamphaus

Title: Northern Ceded Production Manager

Phone: (509) 548-9413 x 102

E-mail: kamc@yakamafish-nsn.gov

I **certify** under penalty of law that I have personally examined and am familiar with the information submitted in this application and attainments. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

| | |
|--------------------------------|-------------------------|
| JoDe Goudy | Chairman, Yakama Nation |
| Printed name of person signing | Title |
| | 8/20/18 |
| Applicant signature | Date signed |

RECEIVED

AUG 21 2018

DEPARTMENT OF ECOLOGY
CENTRAL REGIONAL OFFICE

NOTE: Federal regulations require this application to be signed as follows:

(A) Corporation: By a principal officer of at least the level of vice president.

(B) Partnership or Sole Proprietorship: By a general partner or the proprietor, respectively.

(C) Municipality, State, Federal, or other public facility: By either a principal executive officer or ranking elected official.

Section B: Specific Acclimation-Site Information

1. Record the precise coordinates of the entrance to the acclimation site. Use either latitude/longitude (method NAD27 or NAD83) **or** UTM zone. You do not have to list both.

| | Degrees | Minutes | Seconds | | UTM Zone | Easting | Northing |
|-----------|---------|---------|---------|---|----------|---------|----------|
| Latitude | 47 ° | 53 | 14.6 | N | | | |
| Longitude | 120 ° | 52 | 21 | W | | | |

For assistance with latitude and longitude refer to any of the following websites:

- www.topozone.com
- <http://cfpub1.epa.gov/npdes/stormwater/latlong.cfm>
- http://www.epa.gov/tri/report/siting_tool/index.htm

2. Give directions to the acclimation site from the nearest town or city. (Include a map if the address is not posted at site. If the site has an official address, list it here as well as directions).

1. From Leavenworth, WA take U.S. Highway 2 West for 15.1 miles to WA-207
2. Turn right onto WA-207 N/Lake Wenatchee Highway and continue for 10.5 miles
3. Turn right onto County Route 167/White River Road and continue for 3.5 miles
4. The site is located on the left

3. Attach a sketch, aerial photograph, or map of the existing or proposed facilities, with the following clearly marked. (Include scale.)

- a. Approximate overall dimensions of the facility;
- b. All water sources and water flow rates;
- c. All discharge points and receiving waters;
- d. All water flow paths;
- e. Sludge disposal areas (if any).

4. Is this a proposed facility: ☐ No ☒ Yes If yes, construction date: NA (No construction needed)
5. Date(s) facility remodeled, expanded, upgraded, or acquired from another entity: N/A (This site is yet to be constructed)
6. Included in Engineering Report. ☒ No ☐ Yes
7. Included in completed SEPA? ☐ No ☒ Yes
8. Does this acclimation site currently have a wastewater discharge permit? ☒ No ☐ Yes
If yes, Permit Number: _____

| 9. Indicate the number of each type of the following associated with this site. | | |
|---|---|-----------------|
| Type of rearing facility | Construction materials (specify type of liner: earthen, clay, gravel, synthetic, concrete, etc.) | Number of units |
| Circular pond: | | |
| Acclimation pond: | Existing creek | 1 |
| Acclimation site: | | |
| Adult holding basin or raceway: | | |
| Other (describe): | | |

10. List the most current dates for the following:

| | | |
|---------------------------|-------|---------------|
| Spill Plan | Date: | Not Completed |
| Pollution Prevention Plan | Date: | Not Completed |
| Solid Waste Plan | Date: | Not Completed |

| |
|---|
| Section C: Influent and Effluent Information |
|---|

1. Specify discharge location and name (if applicable):

- ☒ Stream Will be discharged to White River
- ☐ Wetland _____
- ☐ Other (describe) _____

2. For existing acclimation sites currently in use, analyze a representative grab sample for the acclimation site effluent.

| Parameter | Sampling date | Sampling time |
|------------------------------|---------------|---------------|
| Effluent | | |
| Last feeding before sampling | | |

| Parameter | Effluent Outfall |
|---|------------------|
| Flow | gpd |
| pH (standard pH units) | |
| Total suspended solids | mg/L |
| Settleable solids | mg/L |
| Total phosphorous | mg/L |
| Dissolved oxygen | mg/L |
| Temperature, (indicate °C or °F) | |
| Ammonia, NO ₂ -NO ₃ | mg/L |

Section D: Water and Wastewater Treatment Systems

Chapters 90.48 and 90.54 RCW require that all discharges discharging to waters of the state use all known, available, and reasonable methods to prevent and control pollution.

Is there a mechanism to block discharge of floating material? ☒ No ☐ Yes

1. Acclimation Pond Cleaning

| |
|---|
| How many times per permit term is this site to be cleaned? This site will not be cleaned due to seine net installed on site that is required for ESA listed fish |
| Methods of cleaning: N/A |
| What is done with the removed solids? N/A |
| Are the acclimation ponds/tanks cleaned before fish release? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes |
| Does this facility have a permit from the local Health District for solids disposal? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, describe: |

2. What is the frequency and volumes of disinfectants and anesthetics discharged?

| |
|-----------|
| None used |
|-----------|

3. Provide the following information for this facility for fish acclimation.

| |
|---|
| Surface Water Source: Dirty Face Creek |
| Approximate/Anticipated rate (cfs): 0.9 cfs |
| Approximate/Anticipated Million Gallons/Day (MGD) flow-through: 0.6 |

| |
|---|
| Anticipated months of use: March through June |
| Approximate/Anticipated release date: Early May to mid-June |
| Release Method (volitionally, trucked, etc): Volitionally |
| If Trucked, anticipated percentages and where to: |

4. How are flows estimated or to be measured?

A stage discharge relationship will be established for Dirty Face Creek and flows will be estimated from weekly water level readings

Section E: Production Information

*Dirty face Creek
to
White River*

1. Fill in the following table for the highest production expected in the maximum amount of fish on hand and the maximum amount of food per year of maximum production. For **new facilities**, provide information anticipated production within the next five years:

| Month | Fish (pounds) | Food (pounds) | Month | (pounds) | (pounds) |
|----------|------------------|------------------|-----------|----------|----------|
| January | | | July | | |
| February | | | August | | |
| March | | | September | | |
| April | | | October | | |
| May | | | November | | |
| June | | | December | | |

2. For existing sites, what year is this data from? N/A

3. Describe feed storage: Food will be stored off-site and brought in for hand feeding

4. Do you anticipate a production expansion from the initial application at this site?

☒ No ☐ Yes If yes, explain (estimated amount or type of increase, time, etc.):

5. Are there plans for fish spawning at this site? ☒ No ☐ Yes

6. If yes, describe wastes generated as a result of on-site spawning, (For example, blood, anesthetics, disinfectants, carcasses), and how the wastes are/will be handled:

NA

7. Method of feeding: Check all that apply and estimate the percent of food fed using that method.

☒ Hand 100 % ☐ Automatic (timed) _____ % ☐ Automatic (demand) _____ %

Section F: Chemical Use Information

Note all antibiotics, drugs, disease control chemicals and disinfectants used or anticipated to be used at this site on the table on the next page. If a chemical is used but not listed on the table, note it in the space provided or on an attachment. For products to be stored on site, circle the Y and describe the chemical storage and safety practices to prevent accidental discharge to a surface water.

| Used Y/N | Internal Disease Control |
|-------------|--|
| | Albuterol |
| | Amoxicillin |
| | Azythromycin |
| | Benzocaine |
| | Calcein |
| | Cephalexin |
| | Chlortetracycline |
| | Clindamycin |
| | Erythromycin |
| | Flavobacterium Columnare B vaccine |
| | Florfenicol |
| | Fumagillin |
| | GnRH=gonadotropin releasing hormone |
| | Isoeugenol (Aqui-S) |
| | Lincomycin |
| | Magnesium sulfate (Epsom Salts) |
| | Nyastin |
| | Oxytetracycline |
| | Penicillin |
| | Renogen – BKD vaccine |
| | Sulfadimethoxine plus oretoprim (Romet 30) |
| | Sulfamethoxazole (Albon) |
| | Trimethoprim-sulfadiazine |
| | Tylosin |
| | Vibrio vaccine |
| | |
| | |

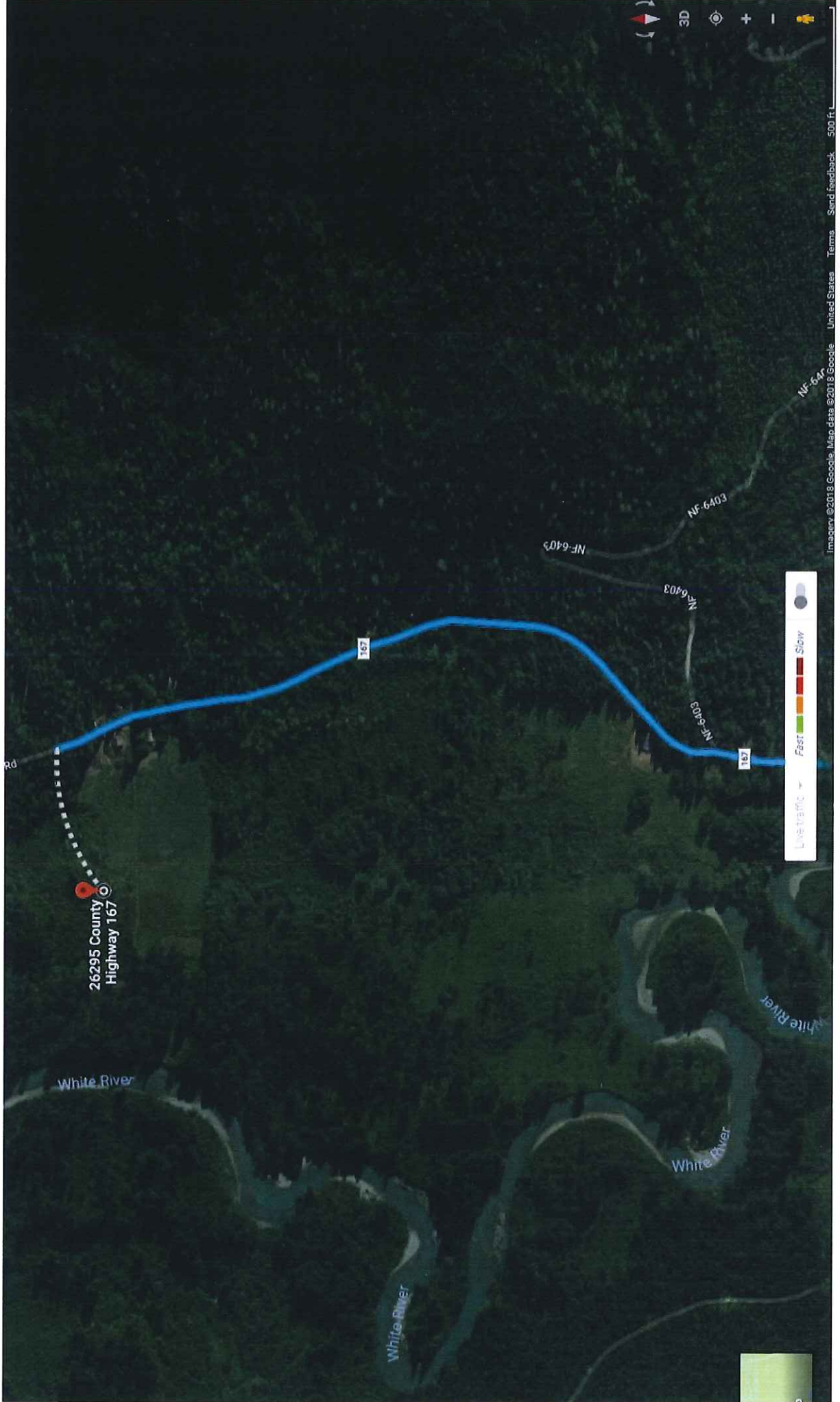
| Used Y/N | External Disease Control |
|-------------|------------------------------------|
| | Acetic Acid |
| | Buffered Iodophor |
| | Chloramine-T |
| | Citric Acid |
| | Copper Sulfate |
| | Diquat |
| | Formalin |
| | Hydrogen Peroxide |
| | Potassium Permanganate |
| | Sodium Chloride (Salt) |
| | |
| Used Y/N | Disinfectants/Other |
| | 2, 4-D |
| | Aquashade |
| | Carbon Dioxide (gas) |
| | Chlorhexidine (Nolvasan) |
| | Chlorine |
| | Glyphosate |
| | Imazapyr |
| | Iodophor |
| | Lime Type-S |
| | Liquid Live Micro Organisms |
| | Ozone (gas) |
| | Quaternary Ammonium |
| | Sodium Thiosulfate |
| | Tricane methane sulfonate (MS-222) |
| | Tricopyr |

Describe chemical storage:

No chemicals will be used in the acclimation ponds. No chemicals will be stored on site.

[end of supplemental application for acclimation site]

Attachment - White River Springs Acclimation Site Vicinity Map



6. White River Bridge Acclimation Site Permit Application



For Office Use Only

Date received: _____

Application/Permit No.: _____

**Request for Coverage under
National Pollutant Discharge Elimination Systems (NPDES)**

Acclimation Supplement to: Upland Hatchery and Fish Farm Permit Application

☒ **Individual**

All information must be answered completely and accurately. If a question does not apply, answer with "not applicable" or "NA".

Section A: General Information

1. Name of acclimation site: White River Bridge Acclimation Site

2. Acclimation Site Address (address to receive official correspondence concerning this site):

Street: 7051 U.S. Highway 97

City, State, Zip: Peshastin, WA 98847

County: Chelan

3. Operator information (an on-site contact):

Name: Greg Wolfe

Title: Yakama Nation Fisheries - Mid-Columbia Coho Restoration Program

Phone: (509) 548-2206

E-mail: wolg@yakamafish-nsn.gov

4. Alternate contact:

Name: Cory Kamphaus

Title: Northern Ceded Production Manager

Phone: (509) 548-9413 x 102

E-mail: kamc@yakamafish-nsn.gov

I **certify** under penalty of law that I have personally examined and am familiar with the information submitted in this application and attainments. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

| | |
|--------------------------------|-------------------------|
| JoDe Goudy | Chairman, Yakama Nation |
| Printed name of person signing | Title |
| | 8/20/18 |
| Applicant signature | Date signed |

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AUG 21 2018
DEPARTMENT OF ECOLOGY
CENTRAL REGIONAL OFFICE

NOTE: Federal regulations require this application to be signed as follows:

(A) Corporation: By a principal officer of at least the level of vice president.

(B) Partnership or Sole Proprietorship: By a general partner or the proprietor, respectively.

(C) Municipality, State, Federal, or other public facility: By either a principal executive officer or ranking elected official.

Section B: Specific Acclimation-Site Information

1. Record the precise coordinates of the entrance to the acclimation site. Use either latitude/longitude (method NAD27 or NAD83) or UTM zone. You do not have to list both.

| | Degrees | Minutes | Seconds | | UTM Zone | Easting | Northing |
|-----------|---------|---------|---------|---|----------|---------|----------|
| Latitude | 47 ° | 50 | 48 | N | | | |
| Longitude | 120 ° | 50 | 8.6 | W | | | |

For assistance with latitude and longitude refer to any of the following websites:

- www.topozone.com
- <http://cfpub1.epa.gov/npdes/stormwater/latlong.cfm>
- http://www.epa.gov/tri/report/siting_tool/index.htm

2. Give directions to the acclimation site from the nearest town or city. (Include a map if the address is not posted at site. If the site has an official address, list it here as well as directions).

1. From Leavenworth, WA take U.S. Highway 2 West for 15.1 miles to WA-207
2. Turn right onto WA-207 N/Lake Wenatchee Highway and continue for 10.5 miles
3. Turn left onto Little Wenatchee River Road and proceed 0.5 miles
4. The site is located on the left just before the bridge

3. Attach a sketch, aerial photograph, or map of the existing or proposed facilities, with the following clearly marked. (Include scale.)

- a. Approximate overall dimensions of the facility;
- b. All water sources and water flow rates;
- c. All discharge points and receiving waters;
- d. All water flow paths;
- e. Sludge disposal areas (if any).

4. Is this a proposed facility: ☐ No ☒ Yes If yes, construction date: To Be Determined (likely after 2018)

5. Date(s) facility remodeled, expanded, upgraded, or acquired from another entity: N/A - construction likely after 2018

6. Included in Engineering Report. ☒ No ☐ Yes

7. Included in completed SEPA? ☐ No ☒ Yes

8. Does this acclimation site currently have a wastewater discharge permit? ☒ No ☐ Yes
If yes, Permit Number: _____

| 9. Indicate the number of each type of the following associated with this site. | | |
|---|---|-----------------|
| Type of rearing facility | Construction materials (specify type of liner: earthen, clay, gravel, synthetic, concrete, etc.) | Number of units |
| Circular pond: | | 30 |
| Acclimation pond: | | |
| Acclimation site: | | |
| Adult holding basin or raceway: | | |
| Other (describe): | | |

10. List the most current dates for the following:

| | | |
|---------------------------|-------|---------------|
| Spill Plan | Date: | Not Completed |
| Pollution Prevention Plan | Date: | Not Completed |
| Solid Waste Plan | Date: | Not Completed |

Section C: Influent and Effluent Information

1. Specify discharge location and name (if applicable):

- ☒ Stream Will be discharged to White River
- ☐ Wetland
- ☐ Other (describe)

2. For existing acclimation sites currently in use, analyze a representative grab sample for the acclimation site effluent.

| Parameter | Sampling date | Sampling time |
|------------------------------|---------------|---------------|
| Effluent | | |
| Last feeding before sampling | | |

| Parameter | Effluent Outfall |
|---|------------------|
| Flow | gpd |
| pH (standard pH units) | |
| Total suspended solids | mg/L |
| Settleable solids | mg/L |
| Total phosphorous | mg/L |
| Dissolved oxygen | mg/L |
| Temperature, (indicate °C or °F) | |
| Ammonia, NO ₂ -NO ₃ | mg/L |

Section D: Water and Wastewater Treatment Systems

Chapters 90.48 and 90.54 RCW require that all discharges discharging to waters of the state use all known, available, and reasonable methods to prevent and control pollution.

Is there a mechanism to block discharge of floating material? ☒ No ☐ Yes

1. Acclimation Pond Cleaning

| |
|---|
| How many times per permit term is this site to be cleaned? Cleaning would occur after each acclimation season |
| Methods of cleaning: The tanks will be dried and the wastes vacuumed |
| What is done with the removed solids? Disposed to a composting site (if suitable) or to landfill |
| Are the acclimation ponds/tanks cleaned before fish release? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes |
| Does this facility have a permit from the local Health District for solids disposal? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, describe: |

2. What is the frequency and volumes of disinfectants and anesthetics discharged?

| |
|-----------|
| None used |
|-----------|

3. Provide the following information for this facility for fish acclimation.

| |
|---|
| Surface Water Source: White River |
| Approximate/Anticipated rate (cfs): 2.0 cfs |
| Approximate/Anticipated Million Gallons/Day (MGD) flow-through: 1.3 |

| |
|---|
| Anticipated months of use: March through June |
| Approximate/Anticipated release date: Early May to mid-June |
| Release Method (volitionally, trucked, etc): Volitionally |
| If Trucked, anticipated percentages and where to: |

4. How are flows estimated or to be measured?

| |
|---|
| Water pumped from White River will be metered |
|---|

Section E: Production Information

1. Fill in the following table for the highest production expected in the next year. Provide the maximum amount of fish on hand and the maximum amount of food fed per year of maximum production. For **new facilities**, provide information for anticipated production within the next five years:

White River to
White River

| Month | Fish (pounds) | Food (pounds) | Month | F (pounds) | (pounds) |
|----------|------------------|------------------|-----------|---------------|----------|
| January | | | July | | |
| February | | | August | | |
| March | | | September | | |
| April | | | October | | |
| May | | | November | | |
| June | | | December | | |

2. For existing sites, what year is this data from? N/A

3. Describe feed storage: Food will be stored off-site and brought in for hand feeding

4. Do you anticipate a production expansion from the initial application at this site?

☒ No ☐ Yes If yes, explain (estimated amount or type of increase, time, etc.):

| |
|--|
| |
|--|

5. Are there plans for fish spawning at this site? ☒ No ☐ Yes

6. If yes, describe wastes generated as a result of on-site spawning, (For example, blood, anesthetics, disinfectants, carcasses), and how the wastes are/will be handled:

| |
|----|
| NA |
|----|

7. Method of feeding: Check all that apply and estimate the percent of food fed using that method.

☒ Hand 100 % ☐ Automatic (timed) _____ % ☐ Automatic (demand) _____ %

Section F: Chemical Use Information

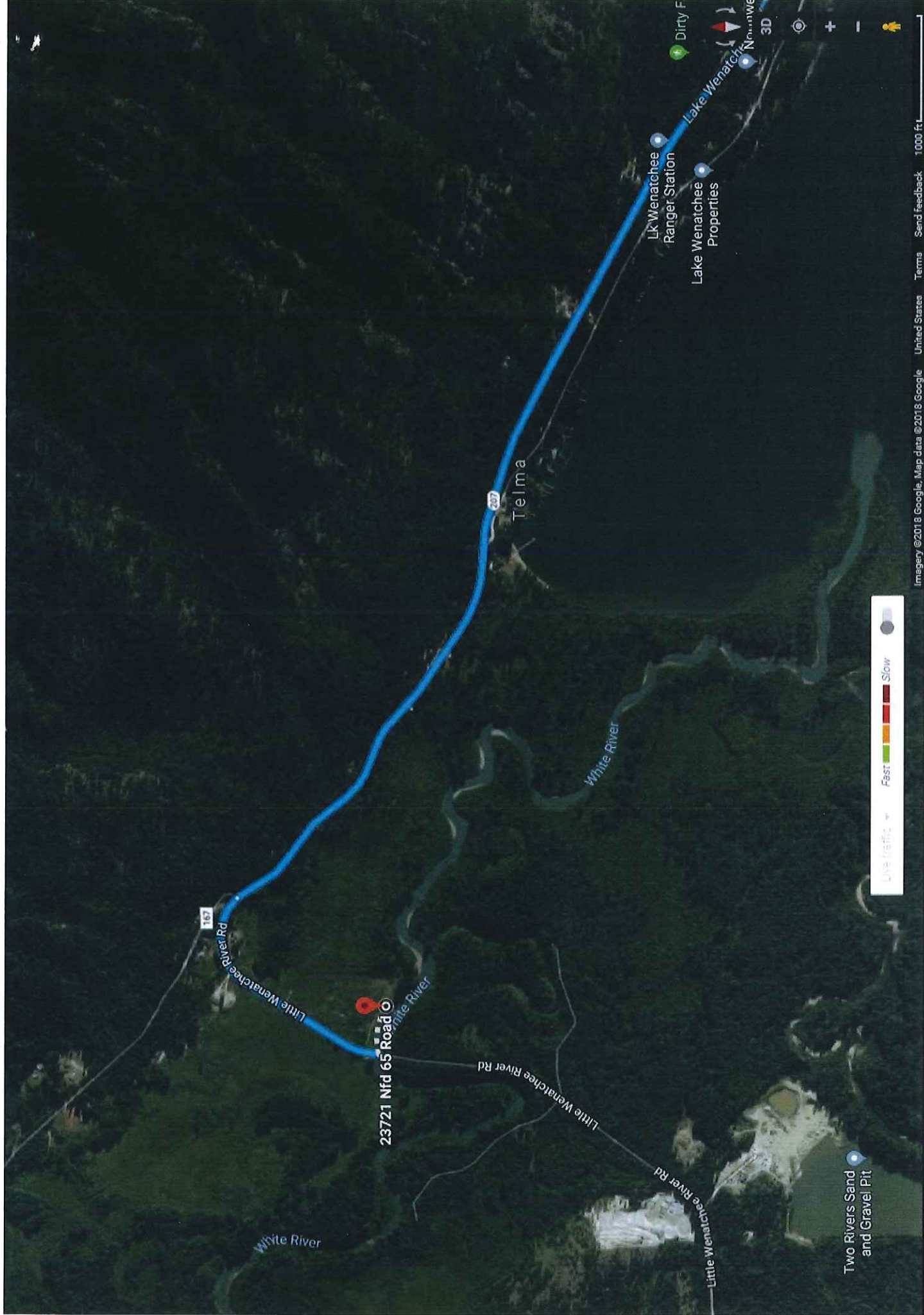
Note all antibiotics, drugs, disease control chemicals and disinfectants used or anticipated to be used at this site on the table on the next page. If a chemical is used but not listed on the table, note it in the space provided or on an attachment. For products to be stored on site, circle the Y and describe the chemical storage and safety practices to prevent accidental discharge to a surface water.

| Used Y/N | Internal Disease Control | Used Y/N | External Disease Control |
|-------------|--|---------------------|------------------------------------|
| | Albuterol | | Acetic Acid |
| | Amoxicillin | | Buffered Iodophor |
| | Azythromycin | | Chloramine-T |
| | Benzocaine | | Citric Acid |
| | Calcein | | Copper Sulfate |
| | Cephalexin | | Diquat |
| | Chlortetracycline | | Formalin |
| | Clindamycin | | Hydrogen Peroxide |
| | Erythromycin | | Potassium Permanganate |
| | Flavobacterium Columnare B vaccine | | Sodium Chloride (Salt) |
| | Florfenicol | | |
| | Fumagillin | Used Y/N | Disinfectants/Other |
| | GnRH=gonadotropin releasing hormone | | 2, 4-D |
| | Isoeugenol (Aqui-S) | | Aquashade |
| | Lincomycin | | Carbon Dioxide (gas) |
| | Magnesium sulfate (Epsom Salts) | | Chlorhexidine (Nolvasan) |
| | Nyastin | | Chlorine |
| | Oxytetracycline | | Glyphosate |
| | Penicillin | | Imazapyr |
| | Renogen – BKD vaccine | | Iodophor |
| | Sulfadimethoxine plus oretoprim (Romet 30) | | Lime Type-S |
| | Sulfamethoxazole (Albon) | | Liquid Live Micro Organisms |
| | Trimethoprim-sulfadiazine | | Ozone (gas) |
| | Tylosin | | Quaternary Ammonium |
| | Vibrio vaccine | | Sodium Thiosulfate |
| | | | Tricane methane sulfonate (MS-222) |
| | | | Tricopyr |

Describe chemical storage:

No chemicals will be used in the acclimation ponds. No chemicals will be stored on site.

Attachment - White River Bridge Acclimation Site Vicinity Map



7.Trinity Acclimation Site Permit Application



For Office Use Only

Date received: _____

Application/Permit No.: _____

**Request for Coverage under
National Pollutant Discharge Elimination Systems (NPDES)**

Acclimation Supplement to: Upland Hatchery and Fish Farm Permit Application

☒ **Individual**

All information must be answered completely and accurately. If a question does not apply, answer with "not applicable" or "NA".

Section A: General Information

1. Name of acclimation site: Trinity Acclimation Site

2. Acclimation Site Address (address to receive official correspondence concerning this site):

Street: 7051 U.S. Highway 97

City, State, Zip: Peshastin, WA 98847

County: Chelan

3. Operator information (an on-site contact):

Name: Greg Wolfe

Title: Yakama Nation Fisheries - Mid-Columbia Coho Restoration Program

Phone: (509) 548-2206

E-mail: wolg@yakamafish-nsn.gov

4. Alternate contact:

Name: Cory Kamphaus

Title: Northern Ceded Production Manager

Phone: (509) 548-9413 x 102

E-mail: kamc@yakamafish-nsn.gov

I **certify** under penalty of law that I have personally examined and am familiar with the information submitted in this application and attainments. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

| | |
|--------------------------------|-------------------------|
| JoDe Coudy | Chairman, Yakama Nation |
| Printed name of person signing | Title |
| | 8/20/18 |
| Applicant signature | Date signed |

RECEIVED

AUG 21 2018

DEPARTMENT OF ECOLOGY
CENTRAL REGIONAL OFFICE

NOTE: Federal regulations require this application to be signed as follows:

(A) Corporation: By a principal officer of at least the level of vice president.

(B) Partnership or Sole Proprietorship: By a general partner or the proprietor, respectively.

(C) Municipality, State, Federal, or other public facility: By either a principal executive officer or ranking elected official.

Section B: Specific Acclimation-Site Information

1. Record the precise coordinates of the entrance to the acclimation site. Use either latitude/longitude (method NAD27 or NAD83) **or** UTM zone. You do not have to list both.

| | Degrees | Minutes | Seconds | | UTM Zone | Easting | Northing |
|-----------|---------|---------|---------|---|----------|---------|----------|
| Latitude | 48 ° | 04 | 25 | N | | | |
| Longitude | 120 ° | 51 | 7 | W | | | |

For assistance with latitude and longitude refer to any of the following websites:

- www.topozone.com
- <http://cfpub1.epa.gov/npdes/stormwater/latlong.cfm>
- http://www.epa.gov/tri/report/siting_tool/index.htm

2. Give directions to the acclimation site from the nearest town or city. (Include a map if the address is not posted at site. If the site has an official address, list it here as well as directions).

1. From Leavenworth, WA take U.S. Highway 2 West for 15.1 miles to WA-207
2. Turn right onto WA-207 N/Lake Wenatchee Highway and continue for 4.3 miles
3. Turn right onto Chiwawa Loop Road and proceed 1.2 miles
4. Turn left onto Chiwawa River Road/NF-6200 and continue for 22.8 miles
5. The site (Trinity Ranch) is located on the left at 22861 Chiwawa River Road

3. Attach a sketch, aerial photograph, or map of the existing or proposed facilities, with the following clearly marked. (Include scale.)

- a. Approximate overall dimensions of the facility;
- b. All water sources and water flow rates;
- c. All discharge points and receiving waters;
- d. All water flow paths;
- e. Sludge disposal areas (if any).

4. Is this a proposed facility: ☐ No ☒ Yes If yes, construction date: Summer 2019

5. Date(s) facility remodeled, expanded, upgraded, or acquired from another entity: N/A - facility yet to be constructed

6. Included in Engineering Report. ☒ No ☐ Yes

7. Included in completed SEPA? ☐ No ☒ Yes

8. Does this acclimation site currently have a wastewater discharge permit? ☒ No ☐ Yes
If yes, Permit Number: _____

| 9. Indicate the number of each type of the following associated with this site. | | |
|---|---|-----------------|
| Type of rearing facility | Construction materials (specify type of liner: earthen, clay, gravel, synthetic, concrete, etc.) | Number of units |
| Circular pond: | | 3 |
| Acclimation pond: | | 2 |
| Acclimation site: | | |
| Adult holding basin or raceway: | | |
| Other (describe): | | |

10. List the most current dates for the following:

| | | |
|---------------------------|-------|---------------|
| Spill Plan | Date: | Not Completed |
| Pollution Prevention Plan | Date: | Not Completed |
| Solid Waste Plan | Date: | Not Completed |

Section C: Influent and Effluent Information

1. Specify discharge location and name (if applicable):

- ☒ Stream Discharged to Phelps Creek, above its confluence with Chiwawa River
- ☐ Wetland _____
- ☐ Other (describe) _____

2. For existing acclimation sites currently in use, analyze a representative grab sample for the acclimation site effluent.

| Parameter | Sampling date | Sampling time |
|------------------------------|---------------|---------------|
| Effluent | | |
| Last feeding before sampling | | |

| Parameter | Effluent Outfall |
|---|------------------|
| Flow | gpd |
| pH (standard pH units) | |
| Total suspended solids | mg/L |
| Settleable solids | mg/L |
| Total phosphorous | mg/L |
| Dissolved oxygen | mg/L |
| Temperature, (indicate °C or °F) | |
| Ammonia, NO ₂ -NO ₃ | mg/L |

Section D: Water and Wastewater Treatment Systems

Chapters 90.48 and 90.54 RCW require that all discharges discharging to waters of the state use all known, available, and reasonable methods to prevent and control pollution.

Is there a mechanism to block discharge of floating material? ☒ No ☐ Yes

1. Acclimation Pond Cleaning

| |
|---|
| How many times per permit term is this site to be cleaned? Cleaning of tanks would occur after each acclimation season; ponds would be cleaned if necessary |
| Methods of cleaning: The tanks will be dried and the wastes vacuumed; the ponds will be dried and excavated if necessary |
| What is done with the removed solids? Disposed to a composting site (if suitable) or to landfill |
| Are the acclimation ponds/tanks cleaned before fish release? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes |
| Does this facility have a permit from the local Health District for solids disposal? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, describe: |

2. What is the frequency and volumes of disinfectants and anesthetics discharged?

None used

3. Provide the following information for this facility for fish acclimation.

| |
|---|
| Surface Water Source: Phelps Creek/groundwater |
| Approximate/Anticipated rate (cfs): 4 cfs |
| Approximate/Anticipated Million Gallons/Day (MGD) flow-through: 2.6 |

| |
|---|
| Anticipated months of use: October through June |
| Approximate/Anticipated release date: Early May to mid-June |
| Release Method (volitionally, trucked, etc): Volitionally |
| If Trucked, anticipated percentages and where to: |

4. How are flows estimated or to be measured?

Flows from the hydropower station onsite, which will serve as the water source for acclimation, is metered

Section E: Production Information

1. Fill in the following table for the highest production expected in the maximum amount of fish on hand and the maximum amount of food year of maximum production. For **new facilities**, provide information anticipated production within the next five years:

*Phelps to Chinook
Phelps to Phelps
Coho &
Chinook*

| Month | Fish (pounds) | Food (pounds) | Month | Fish (pounds) | Food (pounds) |
|----------|---------------|---------------|-----------|---------------|---------------|
| January | | | July | | |
| February | | | August | | |
| March | | | September | | |
| April | | | October | | |
| May | | | November | | |
| June | | | December | | |

2. For existing sites, what year is this data from? N/A

3. Describe feed storage: Food will be stored at the hydropower facility

4. Do you anticipate a production expansion from the initial application at this site?

☒ No ☐ Yes If yes, explain (estimated amount or type of increase, time, etc.):

5. Are there plans for fish spawning at this site? ☒ No ☐ Yes

6. If yes, describe wastes generated as a result of on-site spawning, (For example, blood, anesthetics, disinfectants, carcasses), and how the wastes are/will be handled:

NA

7. Method of feeding: Check all that apply and estimate the percent of food fed using that method.

☒ Hand 100 % ☐ Automatic (timed) _____ % ☐ Automatic (demand) _____ %

Section F: Chemical Use Information

Note all antibiotics, drugs, disease control chemicals and disinfectants used or anticipated to be used at this site on the table on the next page. If a chemical is used but not listed on the table, note it in the space provided or on an attachment. For products to be stored on site, circle the Y and describe the chemical storage and safety practices to prevent accidental discharge to a surface water.

| Used Y/N | Internal Disease Control |
|-------------|--|
| | Albuterol |
| | Amoxicillin |
| | Azythromycin |
| | Benzocaine |
| | Calcein |
| | Cephalexin |
| | Chlortetracycline |
| | Clindamycin |
| | Erythromycin |
| | Flavobacterium Columnare B vaccine |
| | Florfenicol |
| | Fumagillin |
| | GnRH=gonadotropin releasing hormone |
| | Isoeugenol (Aqui-S) |
| | Lincomycin |
| | Magnesium sulfate (Epsom Salts) |
| | Nystatin |
| | Oxytetracycline |
| | Penicillin |
| | Renogen – BKD vaccine |
| | Sulfadimethoxine plus oretoprim (Romet 30) |
| | Sulfamethoxazole (Albon) |
| | Trimethoprim-sulfadiazine |
| | Tylosin |
| | Vibrio vaccine |
| | |

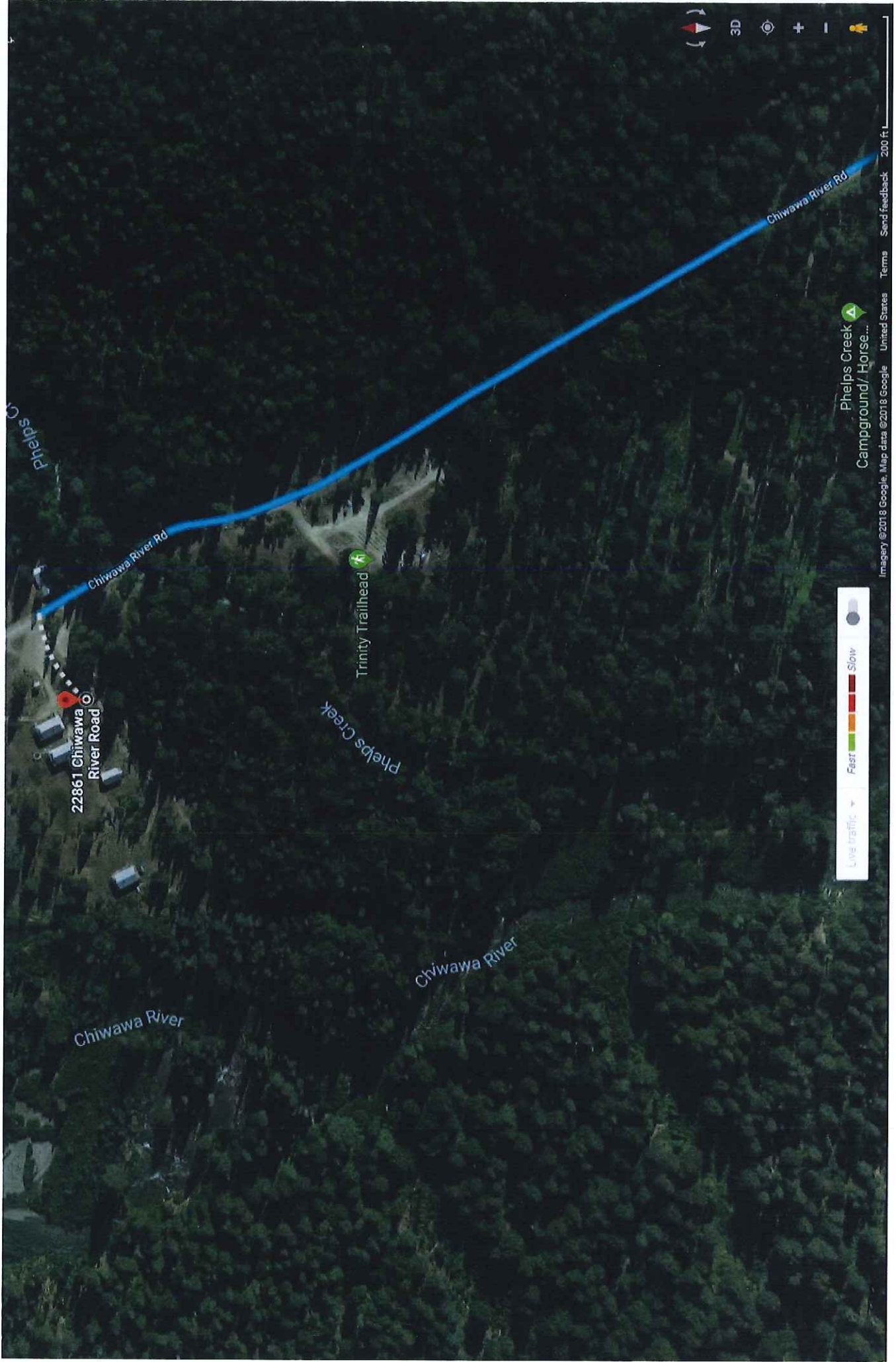
| Used Y/N | External Disease Control |
|-------------|------------------------------------|
| | Acetic Acid |
| | Buffered Iodophor |
| | Chloramine-T |
| | Citric Acid |
| | Copper Sulfate |
| | Diquat |
| | Formalin |
| | Hydrogen Peroxide |
| | Potassium Permanganate |
| | Sodium Chloride (Salt) |
| | |
| Used Y/N | Disinfectants/Other |
| | 2, 4-D |
| | Aquashade |
| | Carbon Dioxide (gas) |
| | Chlorhexidine (Nolvasan) |
| | Chlorine |
| | Glyphosate |
| | Imazapyr |
| | Iodophor |
| | Lime Type-S |
| | Liquid Live Micro Organisms |
| | Ozone (gas) |
| | Quaternary Ammonium |
| | Sodium Thiosulfate |
| | Tricane methane sulfonate (MS-222) |
| | Tricopyr |

Describe chemical storage:

No chemicals will be used in the acclimation ponds. No chemicals will be stored on site.

[end of supplemental application for acclimation site]

Attachment - Trinity Acclimation Site Vicinity Map



8. Clear Creek Acclimation Site Permit Application



For Office Use Only

Date received:

Application/Permit No.:

**Request for Coverage under
National Pollutant Discharge Elimination Systems (NPDES)**

Acclimation Supplement to: Upland Hatchery and Fish Farm Permit Application

☒ **Individual**

All information must be answered completely and accurately. If a question does not apply, answer with "not applicable" or "NA".

Section A: General Information

1. Name of acclimation site: Clear Acclimation Site

2. Acclimation Site Address (address to receive official correspondence concerning this site):
Street: 7051 U.S. Highway 97
City, State, Zip: Peshastin, WA 98847
County: Chelan

3. Operator information (an on-site contact):
Name: Greg Wolfe
Title: Yakama Nation Fisheries - Mid-Columbia Coho Restoration Program
Phone: (509) 548-2206
E-mail: wolg@yakamafish-nsn.gov

4. Alternate contact:
Name: Cory Kamphaus
Title: Northern Ceded Production Manager
Phone: (509) 548-9413 x 102
E-mail: kamc@yakamafish-nsn.gov

I **certify** under penalty of law that I have personally examined and am familiar with the information submitted in this application and attainments. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

| | |
|--------------------------------|-------------------------|
| JoDe Goudy | Chairman, Yakama Nation |
| Printed name of person signing | Title |
| | 8/20/18 |
| Applicant signature | Date signed |

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AUG 21 2018

DEPARTMENT OF ECOLOGY
CENTRAL REGIONAL OFFICE

NOTE: Federal regulations require this application to be signed as follows:

(A) Corporation: By a principal officer of at least the level of vice president.

(B) Partnership or Sole Proprietorship: By a general partner or the proprietor, respectively.

(C) Municipality, State, Federal, or other public facility: By either a principal executive officer or ranking elected official.

Section B: Specific Acclimation-Site Information

1. Record the precise coordinates of the entrance to the acclimation site. Use either latitude/longitude (method NAD27 or NAD83) **or** UTM zone. You do not have to list both.

| | Degrees | Minutes | Seconds | | UTM Zone | Easting | Northing |
|-----------|---------|---------|---------|---|----------|---------|----------|
| Latitude | 47 ° | 47 | 52.4 | N | | | |
| Longitude | 120 ° | 37 | 57.6 | W | | | |

For assistance with latitude and longitude refer to any of the following websites:

- www.topozone.com
- <http://cfpub1.epa.gov/npdes/stormwater/latlong.cfm>
- http://www.epa.gov/tri/report/siting_tool/index.htm

2. Give directions to the acclimation site from the nearest town or city. (Include a map if the address is not posted at site. If the site has an official address, list it here as well as directions).

1. From Leavenworth, WA take Chumstick Highway and continue North for 14 miles
2. Continue straight onto Chiwawa Loop Road/County Hwy 22 for another 3.4 miles
3. Arrive at 20752 County Hwy 22 (Clear Creek Lodge at Thousand Trails) on the left

3. Attach a sketch, aerial photograph, or map of the existing or proposed facilities, with the following clearly marked. (Include scale.)

- a. Approximate overall dimensions of the facility;
- b. All water sources and water flow rates;
- c. All discharge points and receiving waters;
- d. All water flow paths;
- e. Sludge disposal areas (if any).

4. Is this a proposed facility: ☐ No ☒ Yes If yes, construction date: NA/no construction

5. Date(s) facility remodeled, expanded, upgraded, or acquired from another entity: N/A - No construction

6. Included in Engineering Report. ☒ No ☐ Yes

7. Included in completed SEPA? ☐ No ☒ Yes

8. Does this acclimation site currently have a wastewater discharge permit? ☒ No ☐ Yes
If yes, Permit Number: _____

| 9. Indicate the number of each type of the following associated with this site. | | |
|---|---|-----------------|
| Type of rearing facility | Construction materials (specify type of liner: earthen, clay, gravel, synthetic, concrete, etc.) | Number of units |
| Circular pond: | | |
| Acclimation pond: | | 1 |
| Acclimation site: | | |
| Adult holding basin or raceway: | | |
| Other (describe): | | |

10. List the most current dates for the following:

| | | |
|---------------------------|-------|---------------|
| Spill Plan | Date: | Not Completed |
| Pollution Prevention Plan | Date: | Not Completed |
| Solid Waste Plan | Date: | Not Completed |

Section C: Influent and Effluent Information

1. Specify discharge location and name (if applicable):

- ☒ Stream Discharged to Clear Creek, above its confluence with Chiwawa River
- ☐ Wetland _____
- ☐ Other (describe) _____

2. For existing acclimation sites currently in use, analyze a representative grab sample for the acclimation site effluent.

| Parameter | Sampling date | Sampling time |
|------------------------------|---------------|---------------|
| Effluent | | |
| Last feeding before sampling | | |

| Parameter | Effluent Outfall |
|---|------------------|
| Flow | gpd |
| pH (standard pH units) | |
| Total suspended solids | mg/L |
| Settleable solids | mg/L |
| Total phosphorous | mg/L |
| Dissolved oxygen | mg/L |
| Temperature, (indicate °C or °F) | |
| Ammonia, NO ₂ -NO ₃ | mg/L |

Section D: Water and Wastewater Treatment Systems

Chapters 90.48 and 90.54 RCW require that all discharges discharging to waters of the state use all known, available, and reasonable methods to prevent and control pollution.

Is there a mechanism to block discharge of floating material? ☒ No ☐ Yes

1. Acclimation Pond Cleaning

| |
|---|
| How many times per permit term is this site to be cleaned? Site conditions prevent cleaning. So there will be no cleaning at this site. |
| Methods of cleaning: N/A |
| What is done with the removed solids? N/A |
| Are the acclimation ponds/tanks cleaned before fish release? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes |
| Does this facility have a permit from the local Health District for solids disposal? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, describe: |

2. What is the frequency and volumes of disinfectants and anesthetics discharged?

None used

3. Provide the following information for this facility for fish acclimation.

| |
|---|
| Surface Water Source: Clear Creek |
| Approximate/Anticipated rate (cfs): 2.3 cfs |
| Approximate/Anticipated Million Gallons/Day (MGD) flow-through: 1.5 |

| |
|---|
| Anticipated months of use: March through June |
| Approximate/Anticipated release date: Early May to mid-June |
| Release Method (volitionally, trucked, etc): Volitionally |
| If Trucked, anticipated percentages and where to: |

4. How are flows estimated or to be measured?

A stage-discharge relationship would be developed for the inflows to the pond and flows estimated based on weekly measured water levels in Clear Creek

Section E: Production Information

Clear Creek
to
Chiwaukee

1. Fill in the following table for the highest production expected in the maximum amount of fish on hand and the maximum amount of year of maximum production. For **new facilities**, provide information anticipated production within the next five years:

| Month | Fish (pounds) | Food (pounds) | Month | (pounds) | (pounds) |
|----------|------------------|------------------|-----------|----------|----------|
| January | | | July | | |
| February | | | August | | |
| March | | | September | | |
| April | | | October | | |
| May | | | November | | |
| June | | | December | | |

2. For existing sites, what year is this data from? N/A

3. Describe feed storage: Food will be stored off-site and brought in for hand feeding

4. Do you anticipate a production expansion from the initial application at this site?

☒ No ☐ Yes If yes, explain (estimated amount or type of increase, time, etc.):

5. Are there plans for fish spawning at this site? ☒ No ☐ Yes

6. If yes, describe wastes generated as a result of on-site spawning, (For example, blood, anesthetics, disinfectants, carcasses), and how the wastes are/will be handled:

NA

7. Method of feeding: Check all that apply and estimate the percent of food fed using that method.

☒ Hand 100 % ☐ Automatic (timed) _____ % ☐ Automatic (demand) _____ %

Section F: Chemical Use Information

Note all antibiotics, drugs, disease control chemicals and disinfectants used or anticipated to be used at this site on the table on the next page. If a chemical is used but not listed on the table, note it in the space provided or on an attachment. For products to be stored on site, circle the Y and describe the chemical storage and safety practices to prevent accidental discharge to a surface water.

| Used Y/N | Internal Disease Control | Used Y/N | External Disease Control |
|-------------|--|-------------|--------------------------|
| | Albuterol | | Acetic Acid |
| | Amoxicillin | | Buffered Iodophor |
| | Azythromycin | | Chloramine-T |
| | Benzocaine | | Citric Acid |
| | Calcein | | Copper Sulfate |
| | Cephalexin | | Diquat |
| | Chlortetracycline | | Formalin |
| | Clindamycin | | Hydrogen Peroxide |
| | Erythromycin | | Potassium Permanganate |
| | Flavobacterium Columnare B vaccine | | Sodium Chloride (Salt) |
| | Florfenicol | | |
| | Fumagillin | | |
| | GnRH=gonadotropin releasing hormone | | |
| | Isoeugenol (Aqui-S) | | |
| | Lincomycin | | |
| | Magnesium sulfate (Epsom Salts) | | |
| | Nyastin | | |
| | Oxytetracycline | | |
| | Penicillin | | |
| | Renogen – BKD vaccine | | |
| | Sulfadimethoxine plus oretoprim (Romet 30) | | |
| | Sulfamethoxazole (Albon) | | |
| | Trimethoprim-sulfadiazine | | |
| | Tylosin | | |
| | Vibrio vaccine | | |
| | | | |
| | | | |

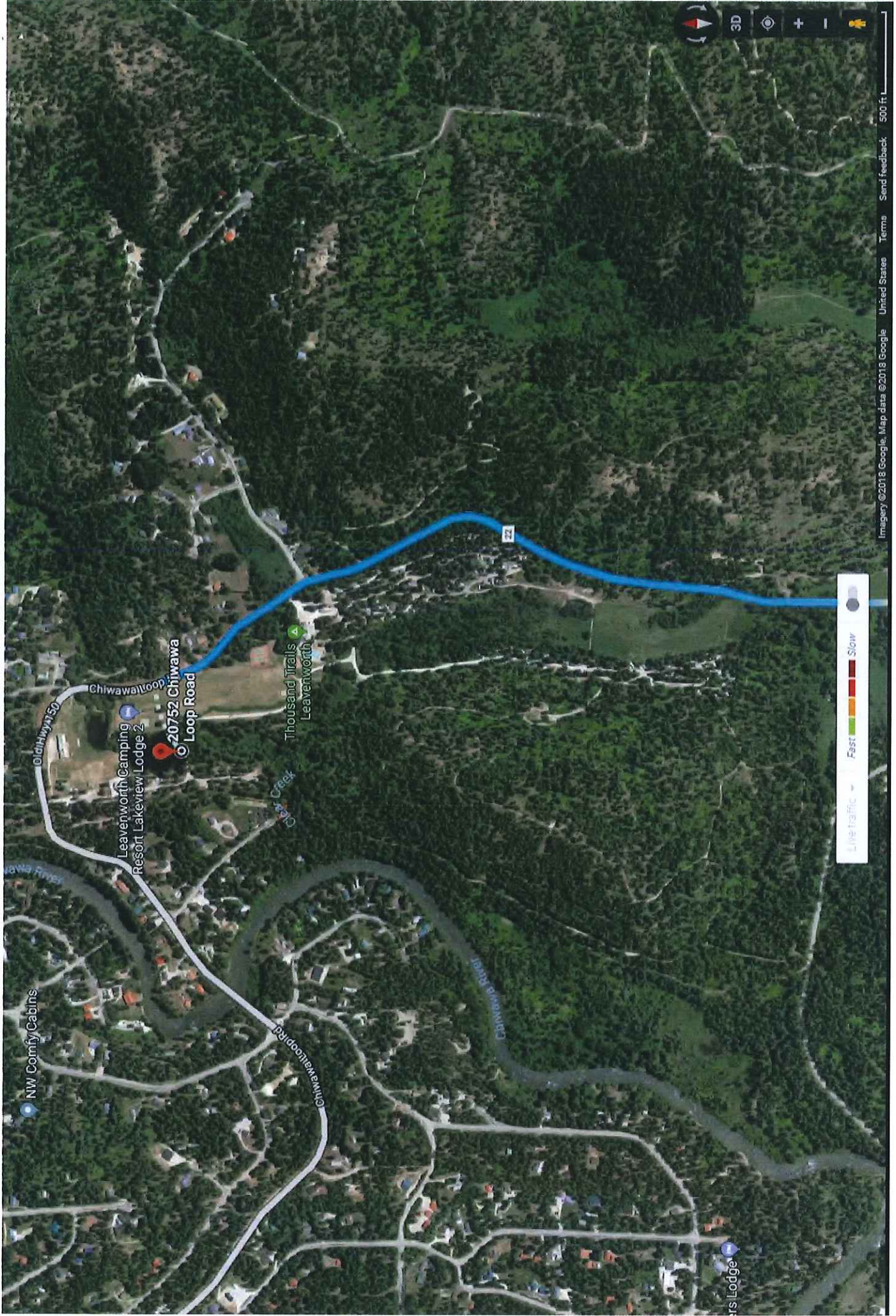
| Used Y/N | Disinfectants/Other |
|-------------|------------------------------------|
| | 2, 4-D |
| | Aquashade |
| | Carbon Dioxide (gas) |
| | Chlorhexidine (Nolvasan) |
| | Chlorine |
| | Glyphosate |
| | Imazapyr |
| | Iodophor |
| | Lime Type-S |
| | Liquid Live Micro Organisms |
| | Ozone (gas) |
| | Quaternary Ammonium |
| | Sodium Thiosulfate |
| | Tricane methane sulfonate (MS-222) |
| | Tricopyr |

Describe chemical storage:

No chemicals will be used in the acclimation ponds. No chemicals will be stored on site.

[end of supplemental application for acclimation site]

Attachment - Clear Creek Acclimation Site Vicinity Map



9. Beaver Creek Acclimation Site Permit Application



For Office Use Only

Date received:

Application/Permit No.:

**Request for Coverage under
National Pollutant Discharge Elimination Systems (NPDES)
Acclimation Supplement to: Upland Hatchery and Fish Farm Permit Application
☒ Individual**

All information must be answered completely and accurately. If a question does not apply, answer with "not applicable" or "NA".

Section A: General Information

1. Name of acclimation site: Beaver Acclimation Site

2. Acclimation Site Address (address to receive official correspondence concerning this site):

Street: 7051 U.S. Highway 97
City, State, Zip: Peshastin, WA 98847
County: Chelan

3. Operator information (an on-site contact):

Name: Greg Wolfe
Title: Yakama Nation Fisheries - Mid-Columbia Coho Restoration Program
Phone: (509) 548-2206
E-mail: wolg@yakamafish-nsn.gov

4. Alternate contact:

Name: Cory Kamphaus
Title: Northern Ceded Production Manager
Phone: (509) 548-9413 x 102
E-mail: kamc@yakamafish-nsn.gov

I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and attainments. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

| | |
|--------------------------------|-------------------------|
| JoDe Goudy | Chairman, Yakama Nation |
| Printed name of person signing | Title |
| | 8/20/18 |
| Applicant signature | Date signed |

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AUG 21 2018

DEPARTMENT OF ECOLOGY
CENTRAL REGIONAL OFFICE



For Office Use Only

Date received: _____

Application/Permit No.: _____

**Request for Coverage under
National Pollutant Discharge Elimination Systems (NPDES)
Acclimation Supplement to: Upland Hatchery and Fish Farm Permit Application
☒ Individual**

All information must be answered completely and accurately. If a question does not apply, answer with "not applicable" or "NA".

Section A: General Information

1. Name of acclimation site: Beaver Acclimation Site

2. Acclimation Site Address (address to receive official correspondence concerning this site):
Street: 7051 U.S. Highway 97
City, State, Zip: Peshastin, WA 98847
County: Chelan

3. Operator information (an on-site contact):
Name: Greg Wolfe
Title: Yakama Nation Fisheries - Mid-Columbia Coho Restoration Program
Phone: (509) 548-2206
E-mail: wolg@yakamafish-nsn.gov

4. Alternate contact:
Name: Cory Kamphaus
Title: Northern Ceded Production Manager
Phone: (509) 548-9413 x 102
E-mail: kamc@yakamafish-nsn.gov

I **certify** under penalty of law that I have personally examined and am familiar with the information submitted in this application and attainments. Based on my inquiry of those individuals immediately responsible for obtaining the information, I believe that the information is true, accurate and complete. I am aware there are significant penalties for submitting false information, including the possibility of fine and imprisonment.

| | |
|--------------------------------|-------------|
| | |
| Printed name of person signing | Title |
| | |
| Applicant signature | Date signed |

NOTE: Federal regulations require this application to be signed as follows:

(A) Corporation: By a principal officer of at least the level of vice president.

(B) Partnership or Sole Proprietorship: By a general partner or the proprietor, respectively.

(C) Municipality, State, Federal, or other public facility: By either a principal executive officer or ranking elected official.

Section B: Specific Acclimation-Site Information

1. Record the precise coordinates of the entrance to the acclimation site. Use either latitude/longitude (method NAD27 or NAD83) **or** UTM zone. You do not have to list both.

| | Degrees | Minutes | Seconds | | UTM Zone | Easting | Northing |
|-----------|---------|---------|---------|---|----------|---------|----------|
| Latitude | 47 ° | 46 | 5.6 | N | | | |
| Longitude | 120 ° | 38 | 53.4 | W | | | |

For assistance with latitude and longitude refer to any of the following websites:

- www.topozone.com
- <http://cfpub1.epa.gov/npdes/stormwater/latlong.cfm>
- http://www.epa.gov/tri/report/siting_tool/index.htm

2. Give directions to the acclimation site from the nearest town or city. (Include a map if the address is not posted at site. If the site has an official address, list it here as well as directions).

1. From Leavenworth, WA take Chumstick Highway and continue North for 14 miles
2. Continue straight onto Chiwawa Loop Road/County Hwy 22 for another 0.2 mile
3. Arrive at 19115 Chiwawa Loop Road/County Hwy 22 (Mountain Springs Lodge) on the right

3. Attach a sketch, aerial photograph, or map of the existing or proposed facilities, with the following clearly marked. (Include scale.)

- a. Approximate overall dimensions of the facility;
- b. All water sources and water flow rates;
- c. All discharge points and receiving waters;
- d. All water flow paths;
- e. Sludge disposal areas (if any).

4. Is this a proposed facility: ☐ No ☒ Yes If yes, construction date: NA/no construction

5. Date(s) facility remodeled, expanded, upgraded, or acquired from another entity: 2015 (roughened channels and inlet modification)

6. Included in Engineering Report. ☒ No ☐ Yes

7. Included in completed SEPA? ☐ No ☒ Yes

8. Does this acclimation site currently have a wastewater discharge permit? ☒ No ☐ Yes

If yes, Permit Number: _____

| 9. Indicate the number of each type of the following associated with this site. | | |
|---|---|-----------------|
| Type of rearing facility | Construction materials (specify type of liner: earthen, clay, gravel, synthetic, concrete, etc.) | Number of units |
| Circular pond: | | |
| Acclimation pond: | | 1 |
| Acclimation site: | | |
| Adult holding basin or raceway: | | |
| Other (describe): | | |

10. List the most current dates for the following:

| | | |
|---------------------------|-------|---------------|
| Spill Plan | Date: | Not Completed |
| Pollution Prevention Plan | Date: | Not Completed |
| Solid Waste Plan | Date: | Not Completed |

Section C: Influent and Effluent Information

1. Specify discharge location and name (if applicable):

- ☒ Stream Discharged to Beaver Creek, above its confluence with Wenatchee River
- ☐ Wetland _____
- ☐ Other (describe) _____

2. For existing acclimation sites currently in use, analyze a representative grab sample for the acclimation site effluent.

| Parameter | Sampling date | Sampling time |
|------------------------------|---------------|---------------|
| Effluent | | |
| Last feeding before sampling | | |

| Parameter | Effluent Outfall |
|---|------------------|
| Flow | gpd |
| pH (standard pH units) | |
| Total suspended solids | mg/L |
| Settleable solids | mg/L |
| Total phosphorous | mg/L |
| Dissolved oxygen | mg/L |
| Temperature, (indicate °C or °F) | |
| Ammonia, NO ₂ -NO ₃ | mg/L |

Section D: Water and Wastewater Treatment Systems

Chapters 90.48 and 90.54 RCW require that all discharges discharging to waters of the state use all known, available, and reasonable methods to prevent and control pollution.

Is there a mechanism to block discharge of floating material? ☒ No ☐ Yes

1. Acclimation Pond Cleaning

| |
|---|
| How many times per permit term is this site to be cleaned? Pond would be cleaned if necessary |
| Methods of cleaning: Flow will be diverted, the pond will be dried and excavated if necessary |
| What is done with the removed solids? Disposed to a composting site (if suitable) or to landfill |
| Are the acclimation ponds/tanks cleaned before fish release? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes |
| Does this facility have a permit from the local Health District for solids disposal? <input checked="" type="checkbox"/> No <input type="checkbox"/> Yes If yes, describe: |

2. What is the frequency and volumes of disinfectants and anesthetics discharged?

| |
|-----------|
| None used |
|-----------|

3. Provide the following information for this facility for fish acclimation.

| |
|---|
| Surface Water Source: Beaver Creek |
| Approximate/Anticipated rate (cfs): 1.6 cfs |
| Approximate/Anticipated Million Gallons/Day (MGD) flow-through: 1.0 |

| |
|---|
| Anticipated months of use: March through June |
| Approximate/Anticipated release date: Early May to mid-June |
| Release Method (volitionally, trucked, etc): Volitionally |
| If Trucked, anticipated percentages and where to: |

4. How are flows estimated or to be measured?

A stage-discharge relationship would be developed for the inflows to the pond and flows estimated based on weekly measured water levels in Beaver Creek

Section E: Production Information

*Beaver to
watch*

1. Fill in the following table for the highest production expected in the maximum amount of fish on hand and the maximum amount of food year of maximum production. For **new facilities**, provide information anticipated production within the next five years:

| Month | Fish (pounds) | Food (pounds) | Month | (pounds) | (pounds) |
|----------|------------------|------------------|-----------|----------|----------|
| January | | | July | | |
| February | | | August | | |
| March | | | September | | |
| April | | | October | | |
| May | | | November | | |
| June | | | December | | |

2. For existing sites, what year is this data from? N/A

3. Describe feed storage: Food will be stored off-site and brought in for hand feeding

4. Do you anticipate a production expansion from the initial application at this site?
☒ No ☐ Yes If yes, explain (estimated amount or type of increase, time, etc.):

5. Are there plans for fish spawning at this site? ☒ No ☐ Yes

6. If yes, describe wastes generated as a result of on-site spawning, (For example, blood, anesthetics, disinfectants, carcasses), and how the wastes are/will be handled:

NA

7. Method of feeding: Check all that apply and estimate the percent of food fed using that method.

☒ Hand 100 % ☐ Automatic (timed) _____ % ☐ Automatic (demand) _____ %

Section F: Chemical Use Information

Note all antibiotics, drugs, disease control chemicals and disinfectants used or anticipated to be used at this site on the table on the next page. If a chemical is used but not listed on the table, note it in the space provided or on an attachment. For products to be stored on site, circle the Y and describe the chemical storage and safety practices to prevent accidental discharge to a surface water.

| Used Y/N | Internal Disease Control |
|-------------|--|
| | Albuterol |
| | Amoxicillin |
| | Azythromycin |
| | Benzocaine |
| | Calcein |
| | Cephalexin |
| | Chlortetracycline |
| | Clindamycin |
| | Erythromycin |
| | Flavobacterium Columnare B vaccine |
| | Florfenicol |
| | Fumagillin |
| | GnRH=gonadotropin releasing hormone |
| | Isoeugenol (Aqui-S) |
| | Lincomycin |
| | Magnesium sulfate (Epsom Salts) |
| | Nyastin |
| | Oxytetracycline |
| | Penicillin |
| | Renogen – BKD vaccine |
| | Sulfadimethoxine plus oretoprim (Romet 30) |
| | Sulfamethoxazole (Albon) |
| | Trimethoprim-sulfadiazine |
| | Tylosin |
| | Vibrio vaccine |
| | |
| | |

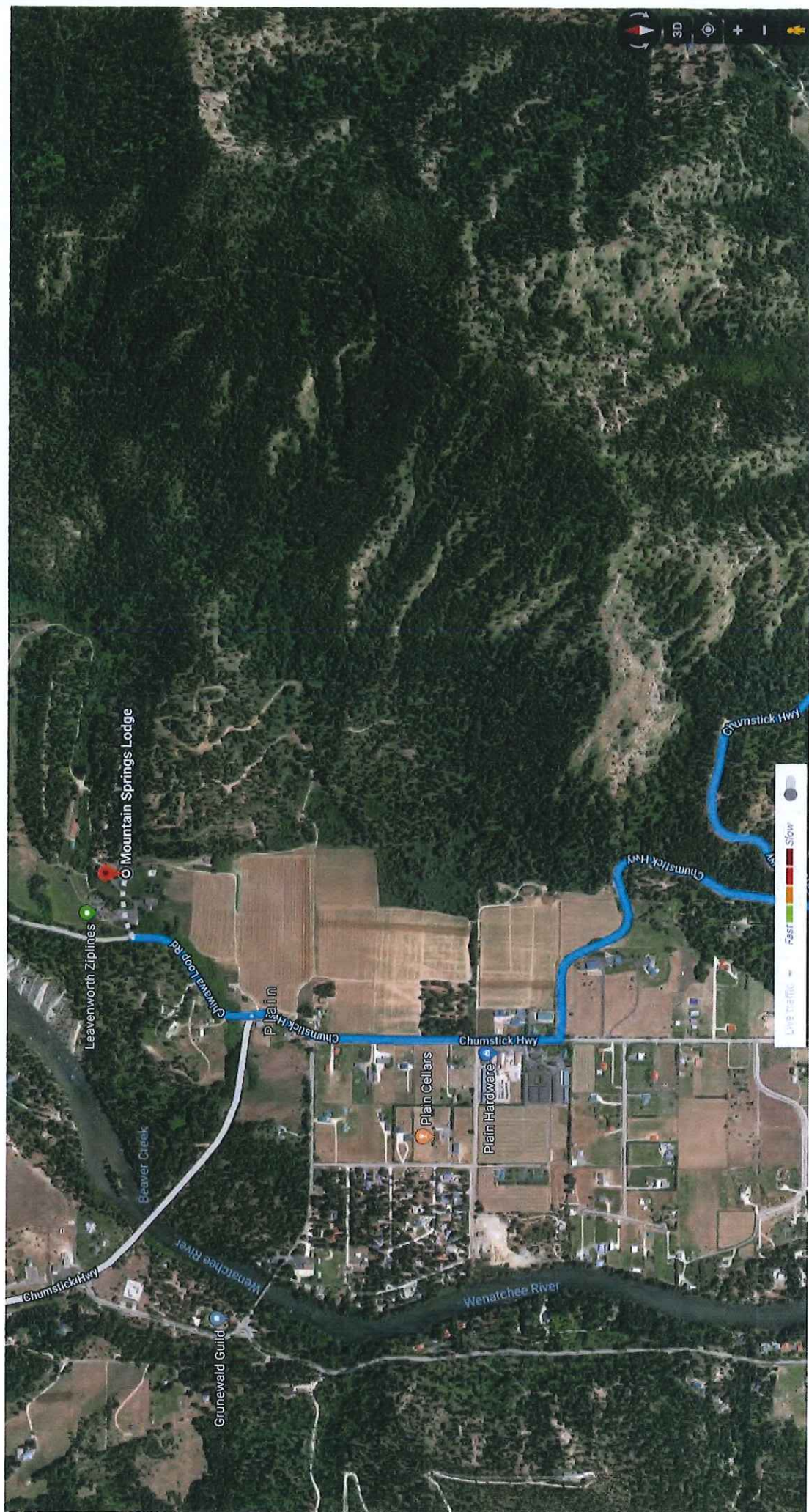
| Used Y/N | External Disease Control |
|-------------|------------------------------------|
| | Acetic Acid |
| | Buffered Iodophor |
| | Chloramine-T |
| | Citric Acid |
| | Copper Sulfate |
| | Diquat |
| | Formalin |
| | Hydrogen Peroxide |
| | Potassium Permanganate |
| | Sodium Chloride (Salt) |
| | |
| Used Y/N | Disinfectants/Other |
| | 2, 4-D |
| | Aquashade |
| | Carbon Dioxide (gas) |
| | Chlorhexidine (Nolvasan) |
| | Chlorine |
| | Glyphosate |
| | Imazapyr |
| | Iodophor |
| | Lime Type-S |
| | Liquid Live Micro Organisms |
| | Ozone (gas) |
| | Quaternary Ammonium |
| | Sodium Thiosulfate |
| | Tricane methane sulfonate (MS-222) |
| | Tricopyr |

Describe chemical storage:

No chemicals will be used in the acclimation ponds. No chemicals will be stored on site.

[end of supplemental application for acclimation site]

Attachment - Beaver Creek Acclimation Site Vicinity Map



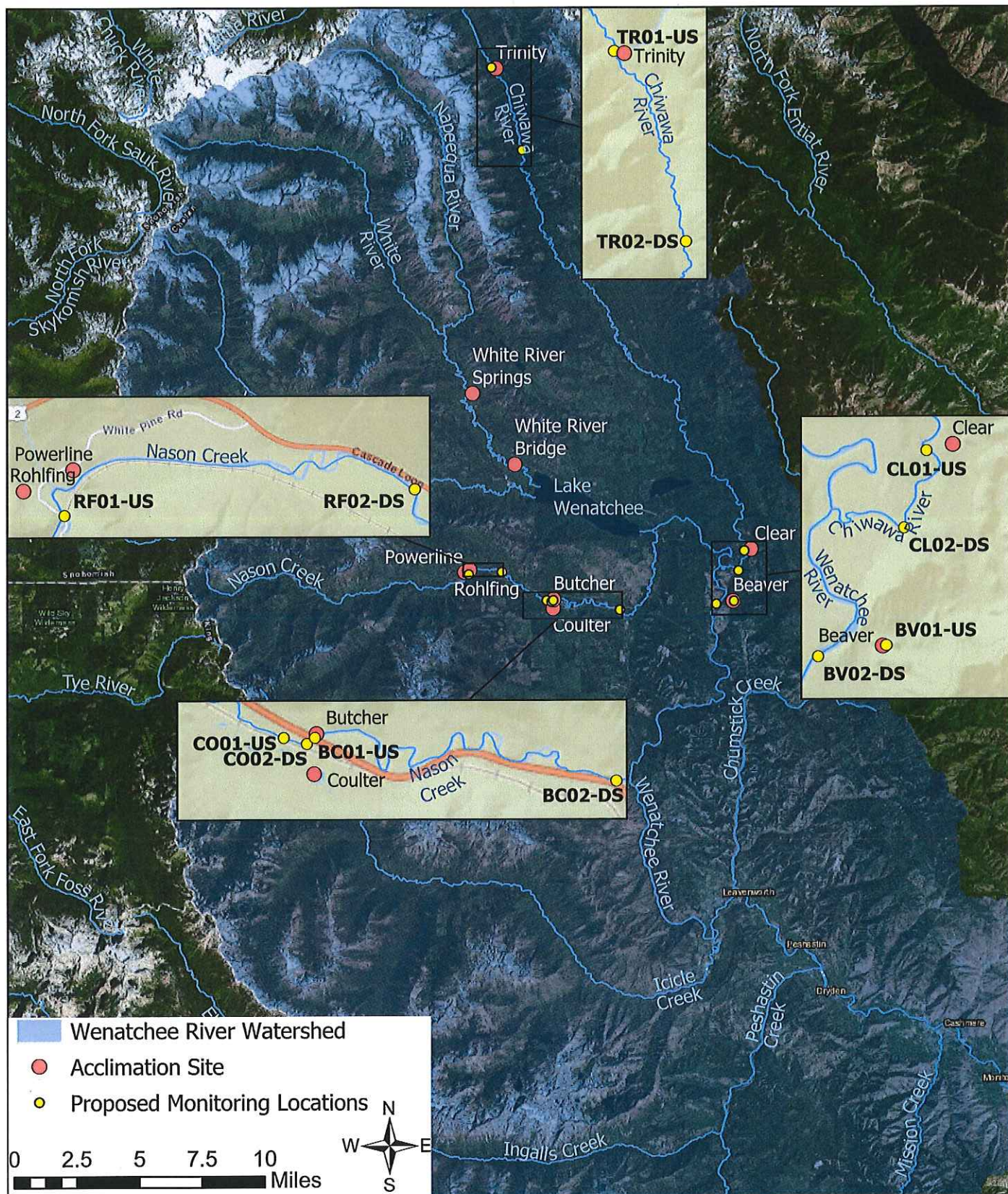
Proposed Monitoring Locations for Acclimation Sites in the Upper Wenatchee River Basin

| Location ID | Latitude | Longitude | Stream | Acclimation Site(s) | Location Relative to Acclimation Site Discharge |
|-------------|-----------|-------------|---------------|---------------------|---|
| TR01-US | 48.074189 | -120.855753 | Chiwawa River | Trinity | Upstream |
| TR02-DS | 48.026967 | -120.828956 | Chiwawa River | Trinity | Downstream |
| CL01-US | 47.796989 | -120.638511 | Chiwawa River | Clear Creek | Upstream |
| CL02-DS | 47.785636 | -120.643469 | Chiwawa River | Clear Creek | Downstream |
| RF01-US | 47.783967 | -120.875917 | Nason Creek | Rohlfing, Powerline | Upstream |
| RF02-DS | 47.785328 | -120.847364 | Nason Creek | Rohlfing, Powerline | Downstream |
| CO01-US | 47.769006 | -120.808514 | Nason Creek | Coulter | Upstream |
| CO02-DS | 47.768253 | -120.804164 | Nason Creek | Coulter | Downstream |
| BC01-US | 47.769014 | -120.802636 | Nason Creek | Butcher | Upstream |
| BC02-DS | 47.763508 | -120.745250 | Nason Creek | Butcher | Downstream |
| BV01-US | 47.768300 | -120.647428 | Beaver Creek | Beaver | Upstream |
| BV02-DS | 47.766667 | -120.662556 | Beaver Creek | Beaver | Downstream |

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CENTRAL REGIONAL OFFICE



**Proposed Monitoring Locations and Acclimation Sites
Upper Wenatchee River Acclimation Program**

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DEPARTMENT OF ECOLOGY
CENTRAL REGIONAL OFFICE



FOUR PEAKS
ENVIRONMENTAL
Science & Data Solutions

10. Technical Memorandum Providing Information on Acclimation Sites



10 N. Mission St
Wenatchee, WA 98801
509.415.3480

MEMORANDUM

8/20/2018

TO: Cory Kamphaus, Yakama Nation Fisheries
FROM: Pradeep Mugunthan, Ph.D., P.E., Four Peaks Environmental Science and Data Solutions
SUBJECT: Supporting Information on Upper Wenatchee River Acclimation Sites for Supplemental NPDES Permit Applications

Background

The Yakama Nation is requesting a National Pollutant Discharge Elimination System (NPDES) individual permit application for the hatchery and acclimation sites proposed as part of the Mid-Columbia Coho Restoration Program (MCCRP). The MCCRP is sponsored by the Yakama Nation and funded by Bonneville Power Administration (BPA), Chelan, Grant and Douglas County Public Utility Districts to help mitigate for impacts of the Federal and Public Utility Districts' Columbia River Power System dams on anadromous fish. The MCCRP includes building a new, small, in-basin adult holding/spawning, incubation and rearing facility (Natapoc Hatchery) on the Upper Wenatchee River; and constructing and improving several acclimation sites in the Wenatchee and Methow watersheds.

Several documents have been developed that provide information on various facets of the project. The key documents are listed below:

1. A detailed environmental impact assessment was completed for the MCCRP to meet National Environmental Policy Act (NEPA) requirements. A final Environmental Impact State (EIS) was completed in March 2012 (BPA 2012).
2. Several Supplemental Analyses (SAs) were completed to account for modifications to some of the acclimation sites originally proposed in the EIS. The original EIS and the SAs are available from BPA¹.
3. Following guidance received from the Washington State Department of Ecology (Ecology), the Yakama Nation submitted a Tier II Anti-Degradation Report for the Upper Wenatchee River Acclimation Sites in December 2017 (Four Peaks, 2017).
4. An Engineering Report in support of the NPDES permit application for Natapoc Hatchery was completed and submitted to Ecology in February 2018 (Four Peaks et al., 2018).

¹ BPA's website for the MCCRP EIS and SAs:

<https://www.bpa.gov/efw/Analysis/NEPADocuments/Pages/Mid-Columbia-Coho-Restoration-Project.aspx>

The Yakama Nation requested an exemption from NPDES permit requirements for the acclimation sites on the basis of the Tier-II Anti-Degradation Evaluation (Four Peaks 2017). Considering that the Wenatchee River has waste load allocations for total phosphorus established in the Wenatchee River Watershed Dissolved Oxygen and pH TMDL study (Carroll and Anderson 2009), Ecology recommended that the MCCRPs sites in the Wenatchee River watershed be brought under a single individual permit. Ecology's recommended permitting pathway is to treat Natapoc Hatchery as the primary discharge, with the acclimation sites treated as secondary discharges. Ecology has requested that the Yakama Nation submit a primary NPDES application for Natapoc Hatchery, and supplemental applications for each of the proposed acclimation sites.

This technical memorandum provides information on the acclimation sites in support of the supplemental NPDES permit applications. The MCCRPs EIS and the SAs provides additional details on the various acclimation sites.

Acclimation Operations

The acclimation sites proposed in the Wenatchee River basin are shown in Figure 1. With the exception of Trinity Acclimation Site, acclimation is proposed to occur from March through June of each year, with feeding ceasing in May. At Trinity Acclimation Site acclimation activity will occur from October through May with minimal feeding during overwinter acclimation. Fish will be brought to the acclimation sites at approximately 22 fish per pound (fpp; at Trinity Acclimation Site fish will be brought in at 25 fpp) and released at approximately 15 fpp. The fish production targets proposed at each site during the Natural Production and Implementation Phase (NPIP) of the MCCRPs are shown in Table 1. Fish biomass at Trinity Acclimation Site will not change appreciably from October through February when fish will be kept on a subsistence diet with negligible growth.

Feeding in the acclimation sites is expected to be minimal during March and April and will peak prior to release. Fish feeding will occur at a ratio of 1.3 to 1.5 lb of feed for each pound of biomass raised. The maximum monthly fish feed used at any given site is not anticipated to exceed approximately 4,700 pounds (lb) and the maximum fish biomass raised at any given site (i.e. the amount of biomass gain at the acclimation site from the time fish are brought on site to the time fish are released) will be less than approximately 5,300 lb for the sites proposed (Table 1). Therefore, site-specific maximum monthly feeding rate and overall biomass raised will be less than the upland fin-fish hatching and rearing general permit thresholds of 5,000 lb and 20,000 lb respectively.

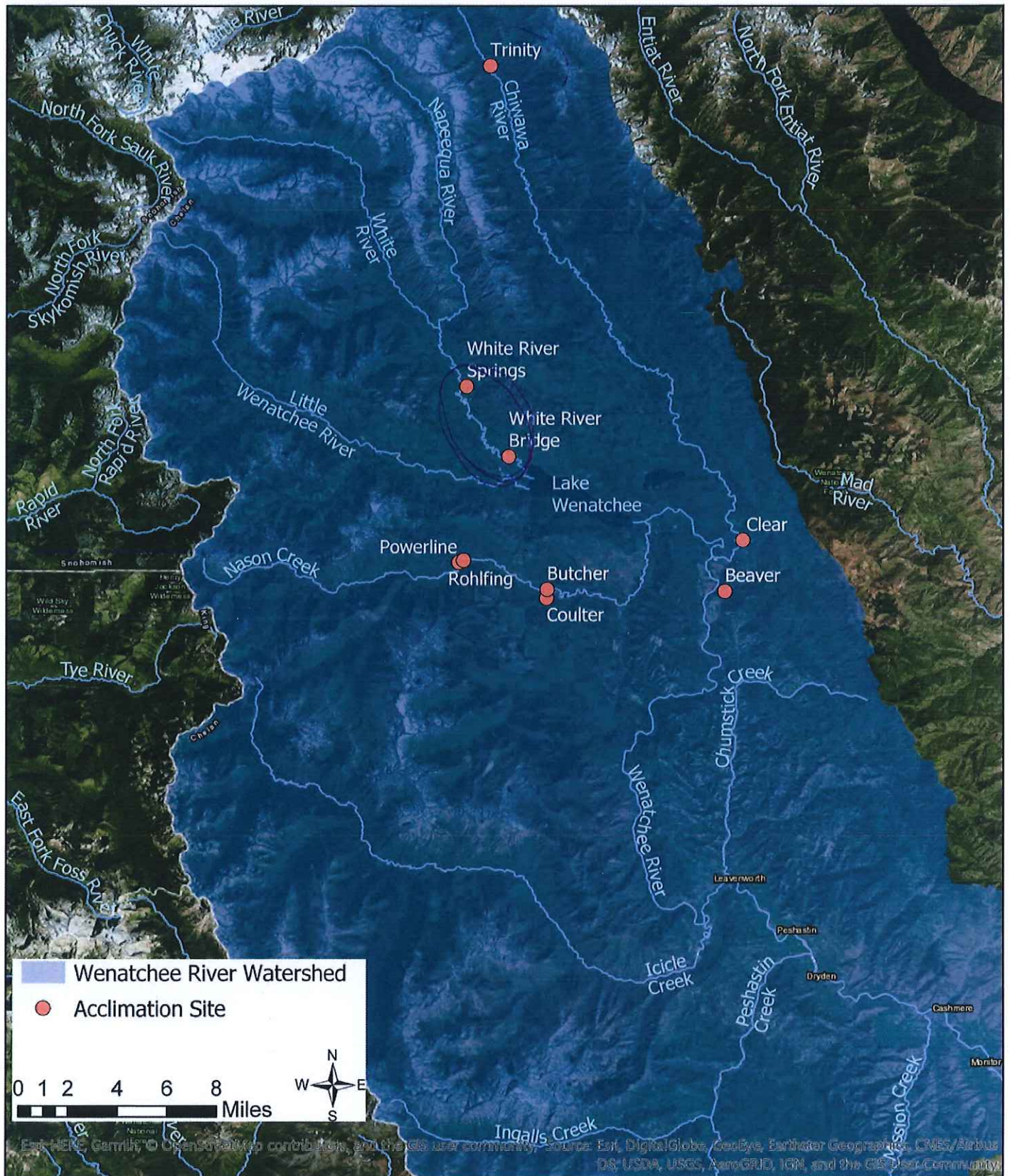


Figure 1. Upper Wenatchee River Acclimation Sites
Mid-Columbia Coho Restoration Program

Table 1. Fish Biomass by Month at the Upper Wenatchee River Acclimation Site

| Acclimation Site | Receiving Stream | Number of Fish | February | | March | | April | | May | | Overall | | |
|------------------------|------------------------------|----------------|--------------------------------|-----------|--------------------------------|-----------|--------------------------------|-----------|--------------------------------|-----------|---|----------------------|-------------------------------|
| | | | Fish Biomass ¹ (lb) | Feed (lb) | Fish Biomass ¹ (lb) | Feed (lb) | Fish Biomass ¹ (lb) | Feed (lb) | Fish Biomass ¹ (lb) | Feed (lb) | Cumulative Biomass Change ^{1,3} (lb) | Total Fish Feed (lb) | Average Feed to Biomass Ratio |
| Rohlfing | Nason Creek | 105,000 | 0 | 0 | 4,773 | 249 | 6,177 | 1,684 | 7,000 | 988 | 2,227 | 2,921 | 1.3 |
| Butcher/Coulter | Nason Creek | 105,000 | 0 | 0 | 4,773 | 249 | 6,177 | 1,684 | 7,000 | 988 | 2,227 | 2,921 | 1.3 |
| Powerline ⁴ | Nason Creek | 75,000 | 0 | 0 | 4,688 | 2,343 | 6,250 | 4,687 | 9,375 | 0 | 4,688 | 7,030 | 1.5 |
| White River Springs | White River | 50,000 | 0 | 0 | 2,273 | 118 | 2,941 | 802 | 3,334 | 471 | 1,061 | 1,391 | 1.3 |
| White River Bridge | White River | 60,000 | 0 | 0 | 2,727 | 142 | 3,529 | 962 | 4,000 | 565 | 1,273 | 1,669 | 1.3 |
| Trinity ² | Chiwawa River | 150,000 | 6,000 | 1,501 | 6,819 | 983 | 8,823 | 2,405 | 10,001 | 1,413 | 3,182 | 4,800 | 1.5 |
| Clear Creek | Clear Creek/Chiwawa River | 250,000 | 0 | 0 | 11,364 | 593 | 14,706 | 4,010 | 16,667 | 2,353 | 5,303 | 6,956 | 1.3 |
| Beaver Creek | Beaver Creek/Wenatchee River | 100,000 | 0 | 0 | 4,546 | 235 | 5,882 | 1,604 | 6,667 | 942 | 2,121 | 2,781 | 1.3 |

Notes:

1. For all sites except Trinity and Powerline, Fish will be brought onsite at 22 fish per pound (fpp) beginning of March and released at the end of May or early June at 15 fpp.
2. At Trinity fish will be brought in October at 25 fpp and will acclimate over winter on subsistence diet without any increase in fish size until February. Feeding will increase from March to produce fish for release in May at 15 fpp. The feed shown for February is cumulative from October of the year prior. Of the 150,000 fish shown at Trinity, 100,000 are coho acclimated as part of the MCCR, and 50,000 fish are spring Chinook acclimated as part of the Upper Columbia Spring Chinook and Steelhead Acclimation Program.
3. The total biomass raised represents the fish biomass gain from the time fish are brought to the site to the time fish are released.
4. This site will acclimate steelhead trout as part of the Upper Columbia Spring Chinook and Steelhead Acclimation Program. Fish will be brought in at 16 fpp in March and released at 8 fpp in May. There will be no feeding in May.

Acclimation Sites in the Upper Wenatchee River Basin

The following sections discuss the individual Upper Wenatchee River Acclimation sites for which a supplemental NPDES permit application is being submitted. The sites are grouped by receiving stream. Table 2 summarizes location, dimensions and other information pertinent to each site.

Nason Creek Sites

Rohlfing Acclimation Site

This is the most upstream site on Nason Creek. The site is accessible through an unsurfaced U.S. Forest Service road and is approximately 1 mile from U.S. Highway 2. An existing pond on a private vacation property is being used for acclimation presently in the planning phase of the MCCR. This site will be used during the NPIP as one of the sites on Nason Creek. An unnamed, seasonal stream flows into the pond and serves as the primary water supply to the pond. In addition, a groundwater well on site is capable of providing up to 130 gpm of water to the pond as necessary (the stream flow may be limited in winter). A temporary seine net will be installed during acclimation to prevent premature downstream releases of coho juveniles while allowing for upstream/downstream movement of any ESA fish species that may be present. The net will be removed in the spring to promote volitional outmigration. Fish swim through the downstream section of the unnamed creek to enter Nason Creek (see Figure 2).

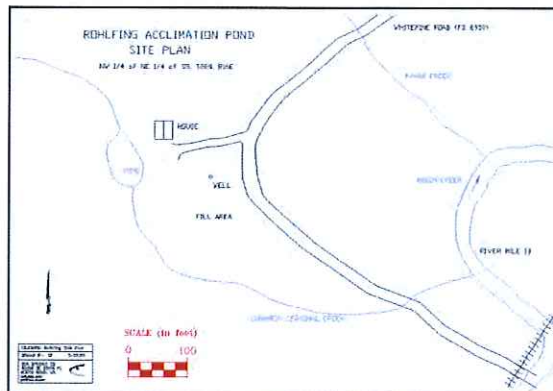


Figure 2. Rohlfing Acclimation Pond Plan and Photograph

Table 2. Acclimation Site Information

| Acclimation Site | Latitude | Longitude | Receiving Stream | Existing Site | Approx. Surface Area (ac) | Approx. Pond Dimensions (ft) | Approx. Depth (ft) | Water Source | Flow (gpm) |
|-----------------------------------|-----------|-------------|----------------------------------|---------------|---------------------------|---|--|-------------------------------|------------|
| Rohlfing ² | 47.785286 | -120.879258 | Nason Creek | Y | 0.17 | 117' x 56' | 7.0' | Surface Water/ Groundwater | 750 |
| Coulter ^{1,2} | 47.764444 | -120.802778 | Nason Creek | Y | 0.41 | 180' x 100' | 5.0' | Surface Water | 750 |
| Butcher ^{1,2} | 47.769506 | -120.802314 | Nason Creek | Y | 0.58 | 270' x 90' | 5.0' | Surface Water | 750 |
| Powerline ⁶ | 47.786433 | -120.875208 | Nason Creek | N | 0.14 | 180' x 35' | 5.0' | Surface Water | 680 |
| White River Bridge ^{3,4} | 47.8467 | -120.835719 | White River | N | 0.07 | 30 tanks, 20' x 5' each | 4.0' | Surface Water | 900 |
| White River Springs | 47.887397 | -120.872497 | White River | N | 0.08 | 200' x 100' | 3.5' | Surface Water | 400 |
| Trinity ⁵ | 48.073611 | -120.851944 | Phelps Creek/ Chiwawa River | N | 0.28 | 60'x90' (existing pond), 3@30'x5' circular tanks, 36'x125' (new pond) | 6' (existing), 4.5' (circulars), 5' (new pond) | Surface Water/ Groundwater | 1800 |
| Clear Creek ² | 47.79789 | -120.63266 | Clear Creek/ Chiwawa River | Y | 1.67 | 300' (dia) | 7.0' | Surface Water | 1050 |
| Beaver Creek ² | 47.768214 | -120.648158 | Beaver Creek/ Wenatchee River | Y | 0.24 | 115' (dia) | 7.0' | Surface Water | 700 |

Notes:

1. During the NPPI phase, only one of Butcher or Coulter Acclimation Site will be used in any given year
2. These are existing or natural ponds or side channels that are being/would be used for acclimation. Additional construction will be minimal or in most cases, unnecessary
3. These sites will use aluminum or concrete tanks
4. Up to 30 aluminum tanks may be constructed. The area shown represents combined area for all 30 tanks.
5. Trinity site would use an existing pond and add a new pond and three circular tanks for acclimation.
6. Powerline site will acclimate steelhead trout as part of the Upper Columbia Spring Chinook and Steelhead Acclimation Program.

Butcher Acclimation Site

Butcher pond is a natural pond formed by a beaver dam that is located on a private property adjacent to Nason Creek and U.S. Highway 2 bridge (see Figure 1 and Figure 3). The site is accessible by road from U.S. Highway 2. The pond is fed by Butcher Creek which is the primary water source for the pond. This site is presently being used for acclimation as part of the planning phase of the MCCRCP. A temporary seine net at the beaver dam is installed during acclimation to prevent premature downstream releases of coho juveniles while allowing for upstream/downstream movement of any ESA fish species that may be present. Release is volitional in spring and fish enter Nason Creek directly from the pond outflow. During the NPIP phase of the MCCRCP (anticipated from 2022), in any given year only one of Butcher or Coulter Acclimation Site will be used, typically alternating between the years. Presently both sites are used.

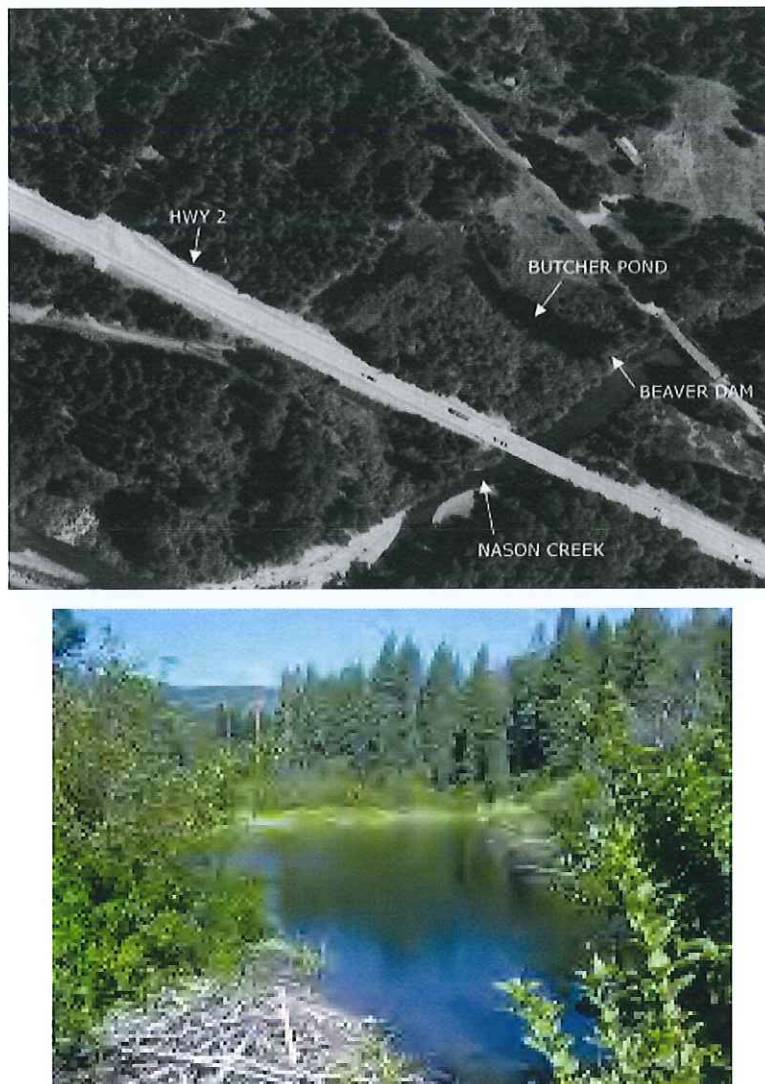


Figure 3. Aerial and Site Photographs of Butcher Acclimation Pond

Coulter Acclimation Site

Coulter Pond is a natural pond formed by a Beaver Dam located adjacent to the vacation home (Figure 4). The site is accessible from U.S. Highway 2 through an unsurfaced road. Coulter Creek is the primary surface water source to the pond and continues as outflow from the pond entering a wetland complex which is owned by Yakama Nation. A temporary barrier net at the beaver dam is installed during acclimation to prevent premature downstream releases by coho juveniles. Upon release, fish volitionally migrate down Coulter Creek within the wetland complex before entering Nason Creek. As indicated earlier, during NPIP phase of the MCCRCP, in any given year only one of Butcher or Coulter Acclimation Site will be used, typically alternating between the years.

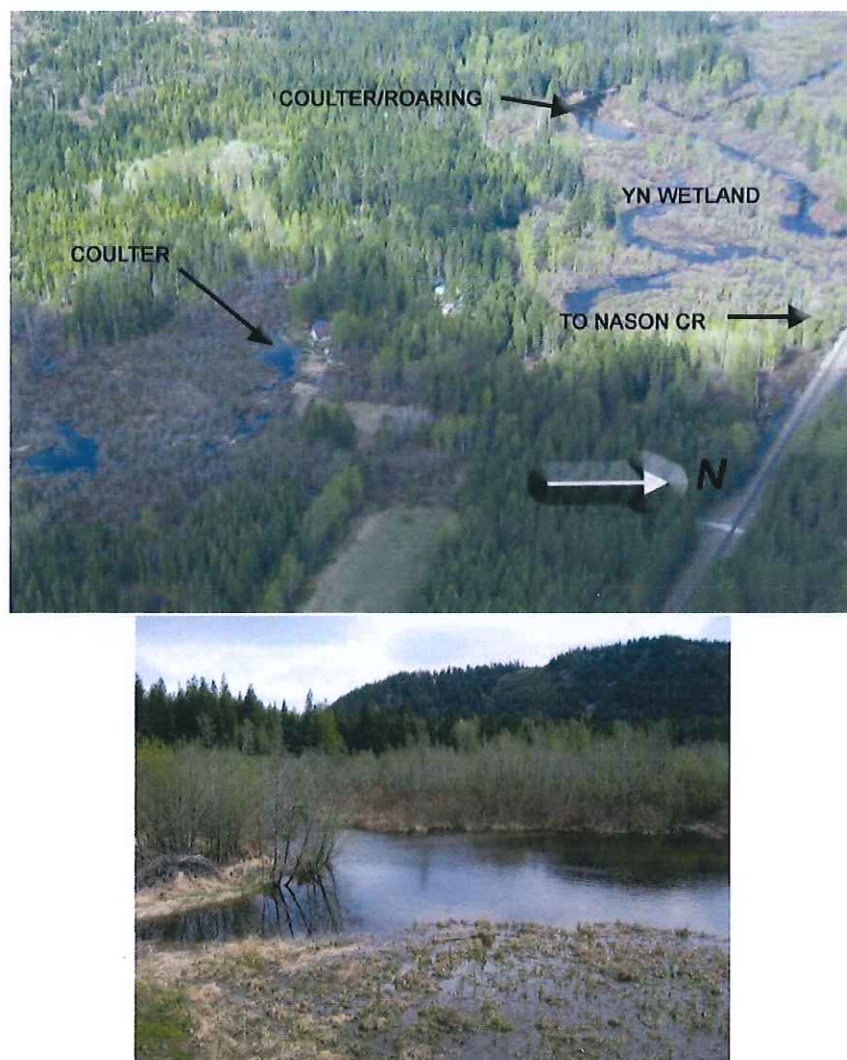


Figure 4. Aerial and Site Photographs of Coulter Acclimation Pond

Powerline Acclimation Site

This site is located very close to Rohlfing Acclimation Site discussed earlier (Figure 5). This site is not part of the MCCRP but will be used for acclimating steelhead trout transferred from the Chiwawa Acclimation Facility under the Upper Columbia Spring Chinook and Steelhead Acclimation Program (UCSCSA). A separate Environmental Assessment (EA) was completed for the UCSCSA (BPA 2017), which provides additional details on the program. The acclimation activity proposed at this site will be very similar to the MCCRP in that fish will be brought on-site in early March and releases would occur from early May to mid-June. A new earthen pond will be constructed on-site. An existing unnamed tributary of Nason Creek that flows through the site will serve as the water source for the pond. A temporary fish screen at the pond outlet will retain fish during acclimation. The screen will be removed for volitional release in early to mid-June.



Note: Image adapted from BPA 2017

Figure 5. Proposed Layout of Powerline Acclimation Site

White River

White River Springs Acclimation Site

The White River Springs site is located in a flat area through which springs from Dirty Face Mountain drain into the White River. The site can be accessed from the paved, White River Road. Acclimation activity would occur near the mouth of Dirty Face Creek on lands managed by Washington Department of Fish and Wildlife. A temporary fish migration barrier would be placed near the mouth of Dirty Face Creek to prevent migration of juveniles into the White River (Figure 6). The barrier would be removed during release.



Figure 6. White River Springs Acclimation Site Aerial and Site Photographs

White River Bridge Acclimation Site

This is furthest downstream of the White River sites (Figure 7). Grant County Public Utility District owns the land and the water rights. The water rights would be transferred to the Yakama Nation during acclimation. Acclimation will occur in temporary tanks from March through May for Coho pre-smolts that have been trucked to the site. Following acclimation, smolts will be released into the White River.

The use of temporary tanks will require annual staging and demobilization activities. Prior to acclimation each year, a river water pump system and steel rearing tanks would be placed along the shoreline of the White River, above the ordinary high-water mark (OHWM). Depending on the number of coho acclimated, up to 30 aluminum tanks, (tank dimensions 4 feet wide by 5 feet deep and 20 feet long) would be used. The tanks would be situated adjacent to the White River on temporary wooden platforms. Water would be pumped into the tanks and returned to the river 20 feet downstream of the pump intake. Flexible plastic hose would run across the surface of the ground from the pumps to the tanks, and rigid PVC pipe would run across the surface of the ground from the tanks back to the river. The discharge pipes would extend into a deep-water pool to prevent bank erosion. A portable, self-contained, diesel-powered generator would be stationed on site in the case of line power failure. A spill-containment receptacle would be deployed under the generator for the duration of its presence on site. Tank water-level indicators with alarms would be used to monitor water levels. After acclimation the pump system and tanks would be removed.



Figure 7. Aerial Photograph of White River Bridge Site

Chiwawa River

Trinity Acclimation Site

The Trinity Acclimation Site is the most upstream of the two acclimation sites proposed on the Chiwawa River and is located adjacent to Phelps Creek near its confluence with the Chiwawa River (Figure 8). The site can be accessed from Chiwawa River Road. This section of Chiwawa River Road is only seasonally maintained, so overwinter access to the site is limited. The land is owned by Trinity Conservancy and has an existing constructed pond, a wooded area, and a developed area with a hydroelectric plant that supplies power to several nearby households. The hydroelectric plant gets water through a pipe from Phelps Creek and currently discharges the water through an outlet pipe into the Chiwawa River. As part of the Federal Energy Regulatory Commission (FERC) re-licensing process, Trinity Conservancy is required to redirect the discharge water by constructing a new outlet pipe south into Phelps Creek and by developing an open-channel habitat area where the pipe enters Phelps Creek (Figure 10). The Yakama Nation proposes to build the coho acclimation facilities in tandem with the FERC-mandated alterations, sourcing water from the plant's outlet pipe and discharging to the new open channel habitat area.

Acclimation would occur in the existing pond and in new constructed facilities. The new facilities would include a 36-foot by 125-foot acclimation pond and three 30-foot-diameter circular tanks. The location of acclimation infrastructure is provided in Figure 9. Since the water used for acclimation comes from the existing hydro-operations, the project would not increase the amount of surface-water use or change surface-water flow paths, except for the short diversion through Tank 3. Backup water supply of up to 1.5 cfs will be provided through a groundwater well installed at the site.

Up to 100,000 Coho would overwinter in the tanks from fall to late February/early March, and then acclimate in the ponds from March through spring. Up to 50,000 Spring Chinook will be acclimated in the existing pond at the site. Spring Chinook are presently being acclimated at the Chiwawa Acclimation Facility, which is further downstream on the Chiwawa River, as part of the Upper Columbia Spring Chinook and Steelhead Acclimation Program. The proposed change to move Spring Chinook to the Trinity Acclimation Site would result in the acclimation-related nutrient loads being discharged further upstream thereby providing a greater opportunity for assimilation within the Chiwawa River.

The smolts of both species would leave volitionally from the new pond into Phelps Creek, migrating into Chiwawa River.

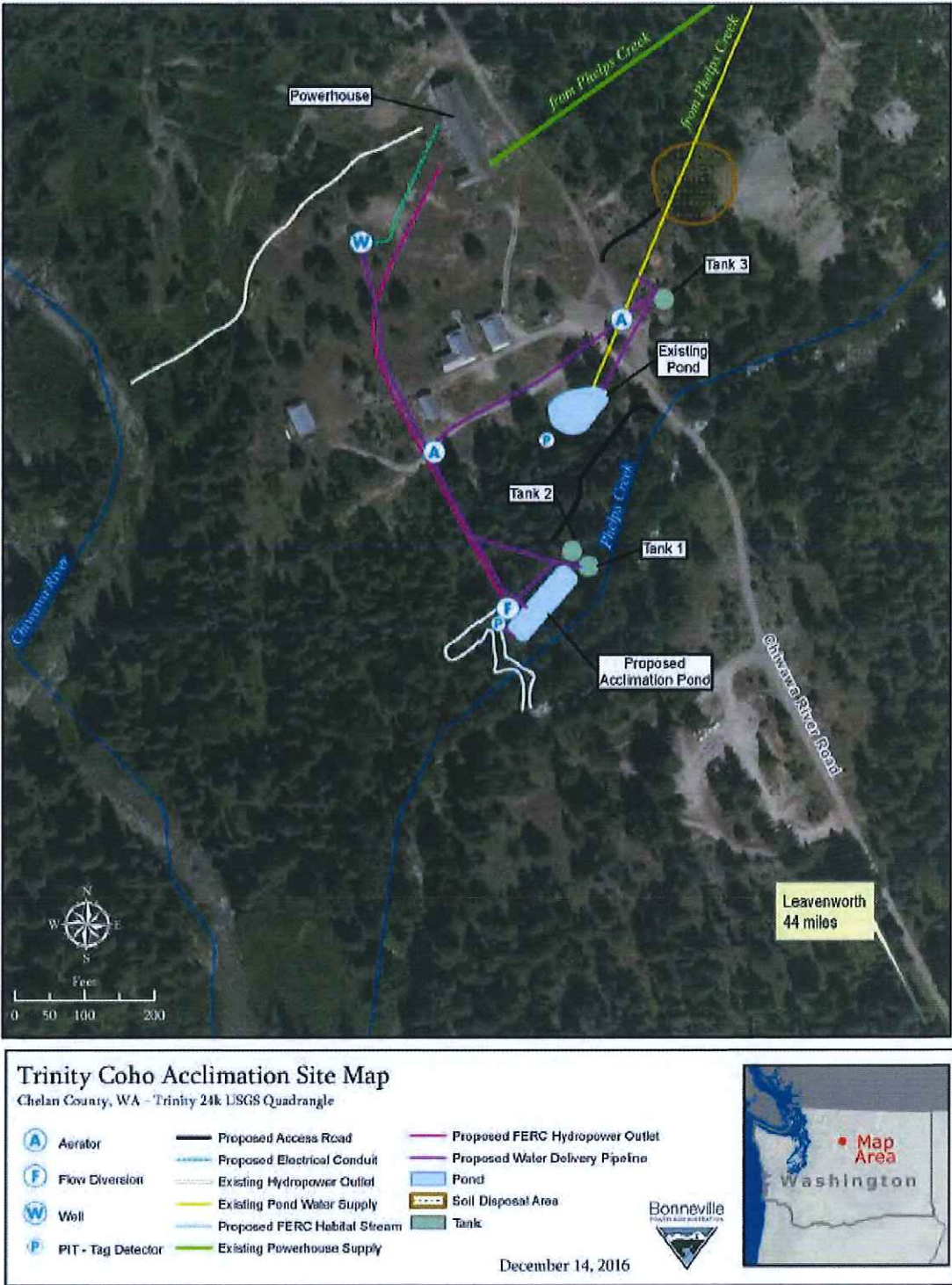


Figure 8. Trinity Acclimation Site (adapted from BPA's Trinity Acclimation Site Supplemental Assessment)

Clear Creek Acclimation Site

This acclimation site is proposed on the lower reach of Clear Creek, in the larger of three existing ponds on Thousand Trails site, a private campground (Figure 9). Clear Creek flows in and out of these series of ponds before draining into the Chiwawa River. A temporary seine net would enclose a part of the pond where acclimation is proposed. It would be positioned to allow free access to the inlet, outlet, and to a part of the pond habitat. The net would be removed at release and fish would leave voluntarily into Clear Creek.



Figure 9. Clear Creek Acclimation Site Aerial and Pond Photographs

Beaver Creek Acclimation Site

Beaver Acclimation Site is located on a private property (Figure 10). The site is accessible through an unpaved road from the lodge. Water from Beaver Creek has been diverted to create a pond on site. Coho acclimation has been conducted on this site in the past. For the proposed acclimation, an existing screened outlet structure that was used in the past to confine the fish during acclimation, will continue to be used to keep fish in the pond. The structure will be removed for volitional fish release at the end of the acclimation.



Figure 10. Beaver Creek Acclimation Site Aerial and Acclimation Pond Photographs

Anti-degradation Evaluation

As indicated in the Background section of this memo, an anti-degradation evaluation was completed for the Upper Wenatchee River acclimation sites (Four Peaks 2017). The evaluation assessed the impacts of the proposed sites, particularly with regard to DO and pH in the Wenatchee River. The analysis was based on an extensive dataset collected during the EIS, and, subsequently in 2017, from data collected at surface water sources of the Upper Wenatchee River acclimation sites. In addition, the anti-degradation analysis also employed mechanistic modeling based on the QUAL-2K model that was used for developing the original total phosphorus waste load allocations in the Wenatchee River DO and pH TMDL (Carroll and Anderson, 2009), adapted for conditions in spring. Based on a worst-case scenario of maximum total phosphorus loads from acclimation activity, the evaluation concluded that changes in DO and pH both locally in the receiving stream and on a cumulative basis in the Wenatchee River downstream, considering all proposed sites in conjunction with allocated loads in the TMDL for point and non-point sources in the watershed, would be less than the thresholds for measurable change stipulated in the Washington State Water Quality Standards.

Best Management Practices

The Yakama Nation is committed to employing commonly accepted aquaculture best management practices to minimize any downstream water quality impacts. Maintaining high water quality within the ponds and in the receiving streams is necessary for the success of the MCCRP since the fish are ultimately expected to use these same streams for spawning and rearing habitat. Some of the measures that will be employed for minimizing water quality impacts from acclimation are discussed below.

1. Fish Feed – To the extent feasible, low-phosphorus fish feed will be used.
2. Feeding Methods – Feeding at all acclimation sites will be manual. Feeding will closely follow fish metabolism and needs (i.e., if feed consumption is low due to lower temperature of water, then feeding will be lowered, or ceased as necessary). This will minimize unconsumed fish feed in the ponds which is a major source of suspended solids and nutrients at aquaculture sites.
3. Fish Wastes – Management of fish wastes depends on the acclimation site.
 - a. At sites that use an artificial rearing tank (such as White River Bridge and Trinity), the tanks will be dried at the end of each acclimation season and the settled feed and fish wastes will be removed and disposed off as solid wastes (to a landfill), or if suitable sent to a composting facility.
 - b. For sites that would employ constructed ponds/channels with artificial or augmented flows (Trinity and Two Rivers acclimation sites), the water supply will be ceased upon fish release and the ponds/channels will be allowed to go dry

- until the next acclimation season – if the sediment build up is significant enough to affect capacity, sediments from the ponds will be excavated and disposed as solids wastes (to landfill) or composted (if suitable).
- c. For sites with natural ponds (Nason Creek, White River Springs, Beaver Creek and Clear Creek acclimation sites), fish wastes (and any unconsumed feed) that have settled in the ponds over the acclimation season will undergo dilution from sediments that are brought in naturally during snowmelt runoff and settle in the pond. Any sediments that are resuspended during high flow events will be transported downstream as part of the natural sediment cycle for the ponds. Sediment accumulation in the ponds are not anticipated to be substantial since most ponds are relatively large and acclimation-related sediment loading is likely small compared to the natural sediment cycle. However, to the extent the capacity of the ponds decline, sediment removal may be achieved through dredging (if ponds do not dry up) or excavation (if the ponds dry up). In such a scenario, the removed sediments will be disposed off at a landfill or reused as compost if determined to be suitable.
 4. Fish Confinement and Release - Fish nets/screens used at the acclimation ponds will be typically large enough to permit free flow of suspended sediments. This would avoid sediment buildup behind the screens. During release fish will be allowed to leave the acclimation sites volitionally during spring runoff. This will minimize any resuspension of sediments beyond those that occur naturally. For White River Bridge site fish will be removed from the tanks and released separately, without any direct outflows from the tanks to the receiving stream at any time.

SEPA Compliance

Okanogan County is the lead agency for the Washington State Environmental Policy Act (SEPA) review for the project. As discussed previously, all acclimation activity proposed in the MCCRCP went through a NEPA environmental assessment process. The County reviewed the MCCRCP EIA (BPA 2012) and the subsequent SAs discussed earlier and has accepted that towards meeting the SEPA requirements for the project. For the UCSCSA, the EA was accepted as meeting the requirements for SEPA review by Washington State Department of Fish and Wildlife (WDFW).

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