

**WATER TRANSFER WORKING GROUP PROJECT DESCRIPTION**

<b>APPLICATION NO. or COURT CLAIM NO.</b> G4-33083 and S4-33084		
<b>APPLICANT NAME</b> Yakama Nation Land Enterprises	<b>CONTACT NAME</b> Jason McCormick	<b>TELEPHONE NO.</b> 509.949.7297
<b>WATER RIGHT HOLDER'S NAME (if different)</b> Same.		<b>EMAIL</b> jason@mccormickwater.com

<b>DATE OF APPLICATION</b> 12/06/2012	<b>PRIORITY DATE</b> 12/06/2012
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<b>WATER SOURCE:</b> Groundwater (10 wells) / Surface water (Yakima River)	<b>CROP:</b> n/a
<b>INSTANTANEOUS QUANTITY:</b> Groundwater (1,122 GPM) / Surface water (10.0 cfs)	<b>ANNUAL QUANTITY:</b> Groundwater (1,352.7 acre-feet) / Surface water (2,995 acre-feet)
<b>PERIOD OF USE:</b> Groundwater (year-round) / Surface water (November 01 – March 31)	
<b>PLACE OF USE:</b> Within the N½NE¼ of Section 19, Township 18 N., R. 18 E.W.M., Kittitas County, Washington.	<b>PURPOSE OF USE:</b> Fish Propagation (Coho Salmon Hatchery)
<b>IRRIGATION METHOD:</b> n/a	

<p><b>CONSUMPTIVE USE CALCULATION:</b></p> <p>Applications (G4-33083 and S4-33084) are requesting the appropriation of nonconsumptive use water for the purposes of fish propagation only at the proposed Melvin R. Sampson Coho Facility (MRSCF), Attachment 1. The MRSCF is under design by a design-build contractor, with 50% designs completed in December 2016. MRSCF is designed to utilize partial recirculating aquaculture technology with recirculation (reuse) rates between 75% to 95%, facility design Attachment 2. Water demand for rearing Coho Salmon in the hatchery will be met through a combination of groundwater and surface water sources. A portion of the surface water diversion (4-10 cfs, demand dependent) will augment flows in the New Cascade Canal Fish Bypass (Fish Bypass) under the purpose of fish propagation and provide additional adult Coho spawning habitat on the Sampson Property.</p> <p>Domestic and potable water use note: MRSCF facility designs include three residential units, indoor sanitation water use in the hatchery for up to 50 employees and visitors, and a vehicle washing station. These uses of water will result in consumptive use, and mitigation is being pursued either through Kittitas County or a private water bank. Domestic and potable water effluent will be treated through an on-site septic system (separate of hatchery discharge).</p> <p>Hatchery discharge will be treated in accordance with a future NPDES permit. Discharged water will either be directly returned to the Fish Bypass Channel and to the Yakima River, or through a series of ponds and wetlands feeding into Cabin Creek, Dry Creek, and returning to the Yakima River. Either route is nonconsumptive in nature and in time with surface water and groundwater withdrawals. Treated water will <b>not</b> be applied to spray fields or evaporation ponds.</p> <p>Based on designs, fish propagation in the hatchery facility is nonconsumptive.</p>
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<p><b>NARRATIVE DESCRIPTION OF PROJECT:</b></p> <p>The proposed Melvin R. Sampson Coho Facility (MRSCF) will be constructed at the Sampson Property (formerly Holmes Property) on 191 Klocke Rd, Ellensburg, WA. Water sources for MRSCF consist of up to 10 groundwater wells and a surface water diversion at the New Cascade Canal headgate (CC No. 00891 – McManamy POD). Both water right application Reports of Examinations (ROE) will be prepared by MWS under contract from Yakama Nation as Hillis Priority Processed Front-loaded ROEs.</p>
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Hydrogeologic investigation has been completed for the groundwater application, and a summary technical memorandum will be delivered to Ecology concurrent with the draft ROEs. Results from the hydrogeologic investigation indicate that the target body of groundwater is within the shallow alluvial aquifer system (0-50 feet), that the groundwater gradient generally flows southwesterly across the proposed well field (NE¼NE¼ and NW¼NE¼, Sect. 19, T.18N., R.18E.W.M.), and that water is available to satisfy the 1,122 gpm request from up to 10 wells.

An impairment analysis has been completed for both the surface water and groundwater applications. For the surface water application, there are no SOAC/USBR target flows, or existing water right diversions in the run-of-river bypass reach between the McManamy POD and the anticipated point of return flow at the terminus of the New Cascade Canal Fish Bypass (Fish Bypass) at the Yakima River. For the groundwater application, well logs indicate that there are no shallow alluvial wells either for domestic use or irrigation in the determined groundwater flow path and drawdown areas. It is determined that there will be no impairment to existing water rights or instream flows from either application.

Further, during certain times of year it may be possible that hatchery discharge will be released into a series of ponds and wetlands from the property feeding into Cabin and Dry Creeks before terminating into the Yakima River. Similar to the McManamy POD to Fish Bypass reach, the Fish Bypass to Dry Creek confluence reach contains no SOAC/USBR target flows or existing water right diversions.

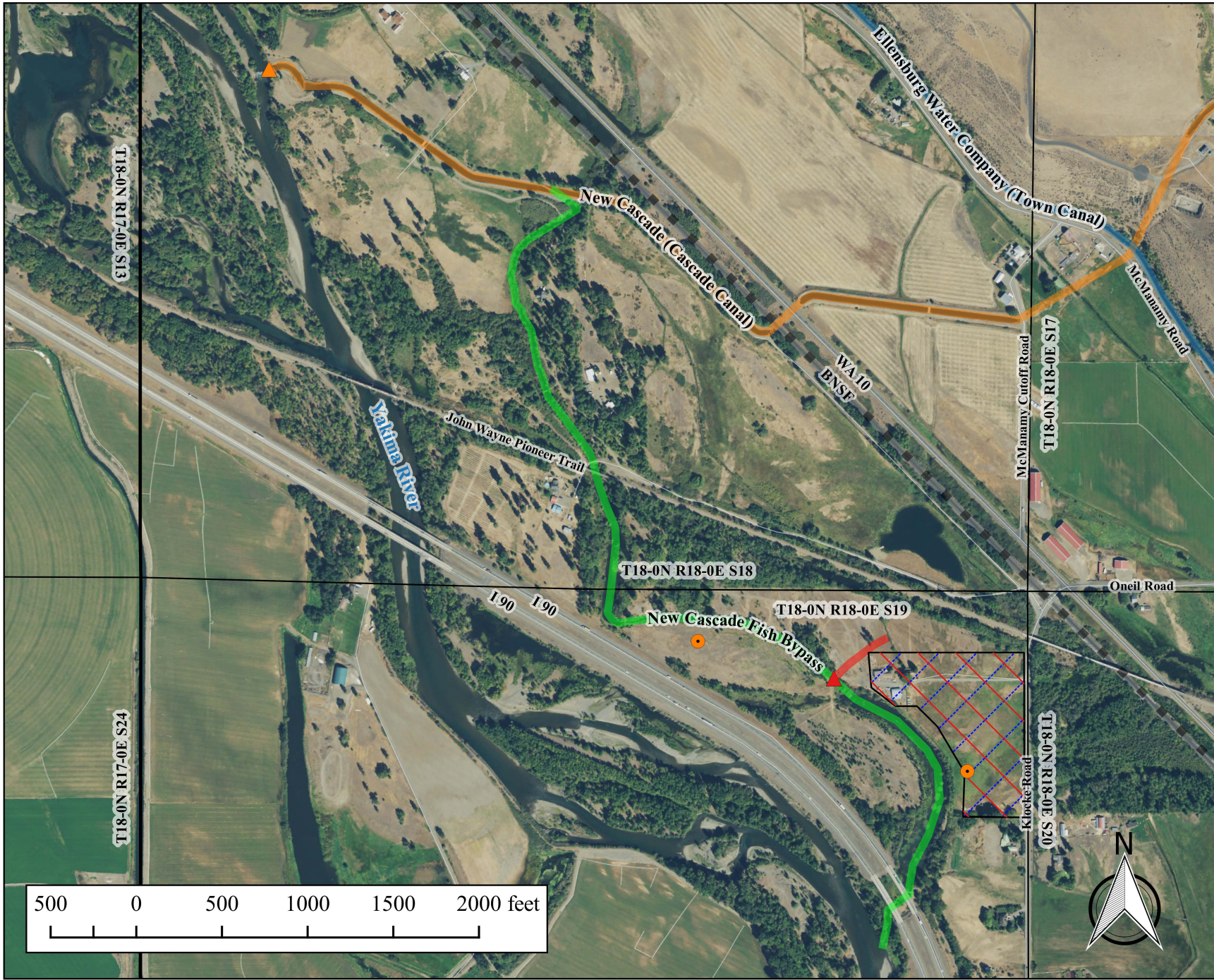
Fish screening facilities (anticipated - rotating drum screen) will be installed at the Gravity Intake Structure on the Fish Bypass Channel, along with a small diversion sill (with fish passage). There will be no fish screening facilities from the McManamy POD diversion to the Gravity Intake Structure, as would occur under normal Cascade Irrigation District (CID) operations. The requested water right (November 01 – March 31) does not overlap with CID's irrigation water right season of use (April 01 – October 15), but does overlap CID's stock water season of use (October 16 – March 31). It is understood that CID normally does not operate beyond October 15<sup>th</sup>.

A removable 18-24 inch coffer dam will be constructed in front of the New Cascade fish screens if CID is not exercising the stock water right from the McManamy point of diversion, and all permitted surface water will enter the Fish Bypass Channel through the screen structure's fish bypass pipe, avoiding winter screen operation and preventing permitted hatchery surface water from entering the canal.

Surface water diversion rates will be monitored remotely via a measuring device in New Cascade Canal, along with groundwater withdrawals from each production well. The surface water headgate and groundwater well production will be regulated via a telemetry system housed in the hatchery facility building. All water sources will be metered and/or measured.

This project has received letters of support from the Bureau of Reclamation, Washington State Department of Fish and Wildlife, and Yakima Basin Joint Board. Letters available upon request.





### Attachment 1: MRSCF Water Right Applications Overview

YN Water Right Applications      **2017-39**

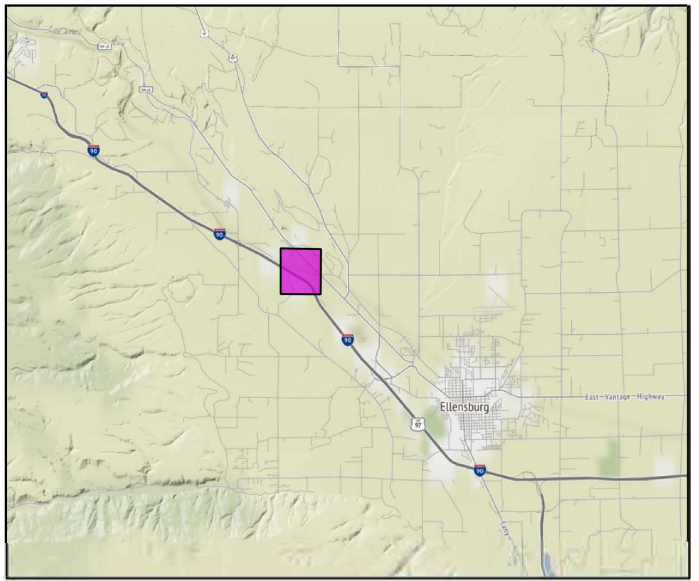
▧ S4-33084  
▧ G4-33083

YN Application Points

- ▲ Point of Diversion
- ▲ Gravity Intake Structure
- Well
- ▭ Township
- ▭ Section

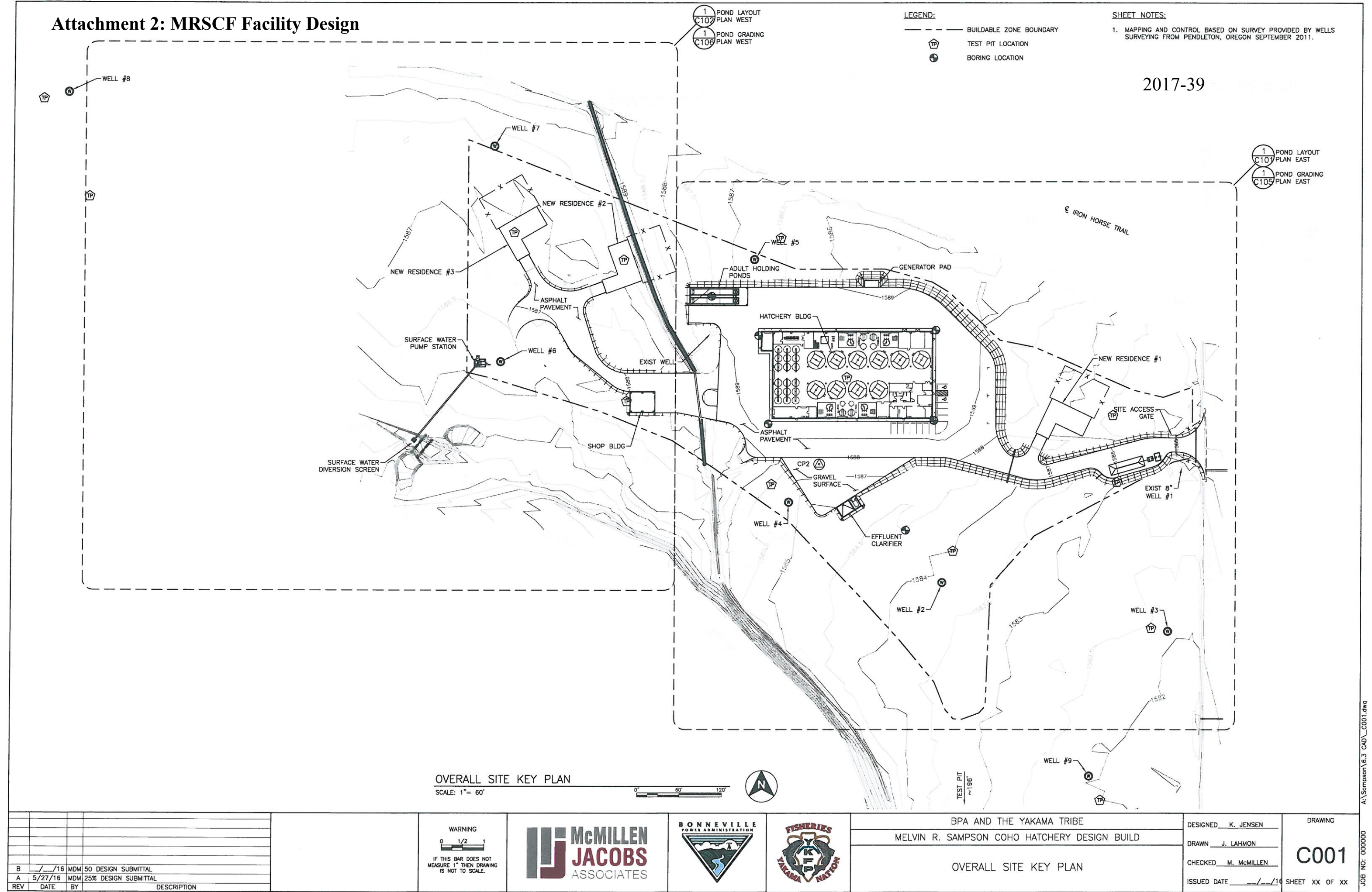
McCormick Water Strategies, LLC  
January 30, 2017

Image source: 2015 NRCS National Agriculture Imagery Program (NAIP) imagery.





Attachment 2: MRSCF Facility Design



REV	DATE	BY	DESCRIPTION
B	5/27/16	MDM	50% DESIGN SUBMITTAL
A	5/27/16	MDM	25% DESIGN SUBMITTAL

WARNING  
0 1/2 1  
IF THIS BAR DOES NOT  
MEASURE 1" THEN DRAWING  
IS NOT TO SCALE.



BPA AND THE YAKAMA TRIBE MELVIN R. SAMPSON COHO HATCHERY DESIGN BUILD OVERALL SITE KEY PLAN
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DESIGNED K. JENSEN DRAWN J. LAHMON CHECKED M. McMILLEN ISSUED DATE 5/27/16
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DRAWING C001 SHEET XX OF XX
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A:\Sampson\6.3 CAD\C001.dwg  
JOB NO: 000000