



Oregon

John A. Kitzhaber, MD, Governor

Water Resources Department

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MEMORANDUM

TO: Water Resources Commission

FROM: Phillip C. Ward, Director

SUBJECT: Agenda Item F, May 29, 2014
Water Resources Commission Meeting

Information Update: Klamath Basin Update

I. Introduction

At the March 2014 Commission meeting, staff provided an update on the 2013 regulation of surface water in the Klamath Basin. The Commission asked for a briefing regarding the Upper Klamath Basin Comprehensive Agreement (Comprehensive Agreement). Staff will provide an overview of the provisions of the Agreement and the Commission will be asked to approve the appointment of a Rules Advisory Committee to conduct a rulemaking consistent with the Comprehensive Agreement.

II. Background

In July 2013, a Klamath Basin Task Force was formed by Senators Wyden and Merkley, Congressmen Walden, and Governor Kitzhaber. The purpose of the Task Force was “to resolve the water, power and other resource management issues in the Klamath River Basin.” The Task Force created three sub-groups to address funding, power and water.

From July 2013 through March 2014, irrigators in the upper basin met with the Klamath Tribes and the United States to resolve water, land and economic issues in the upper basin. An Agreement in Principle was reached in December 2013, which included:

- A Water Use Program designed to permanently increase stream flows into Upper Klamath Lake by at least 30,000 acre-feet through targeted reductions of water use in key reaches of the tributaries to Upper Klamath Lake;
- Compliance with the Water Use Program designed to provide a stable, sustainable basis for the continuation of irrigated agriculture in the Upper Klamath Basin;
- A Riparian Program designed to permanently improve and protect riparian conditions; and
- An Economic Development Program designed to create economic opportunities for the Klamath Tribes and its members, including increased opportunities for the exercise of tribal cultural rights.

The final Upper Basin Comprehensive Settlement Agreement, based on the elements provided in the earlier Agreement in Principle, was ceremonially signed on April 18, 2014 at Collier State Park in the Klamath Basin. This report describes the Water Use Program of the Comprehensive Agreement.

III. Discussion

A. Water Use Program

The Water Use Program describes water use agreements, identifies how Tribal instream flows will be protected, quantifies water right retirements, and provides a regulatory order for groundwater wells. The Water Use Program will be administered by a Joint Management Entity, consisting of the Klamath Tribes, state and federal representatives, and representatives of the Landowner Entity. The Landowner Entity is made up of representatives of each of the major subbasins above the lake that are participating in the program. The Landowner Entity will be responsible for the day-to-day management of the Water Use program and will lead in negotiating agreements with water users willing to reduce water use.

The Water Use Program is designed to permanently increase stream flows into Upper Klamath Lake by 30,000 acre-feet annually through reductions in the net consumptive use of water above the lake. The reductions in consumptive use will be achieved through water right retirements, water right leasing, rotation agreements, conservation and efficiency measures, and other actions. The agreement limits water right retirements to a total of 18,000 acres, and requires that the consumptive use reductions are distributed across the six Water Use Program Regions above the lake (See Attachment 1).

The Water Use Program defines performance standards that are used to determine when water uses will be regulated to protect Tribal instream water rights. Each Water Use Program Region is identified with a net consumptive reduction that will result in a volume of water delivered to the lake. A Water Use Program Ledger will be used to track the volumes of water by region to determine ongoing compliance.

B. Specified Instream Flows

A basic tenant of the Comprehensive Agreement is that if the water users above the lake reduce water consumption by 30,000 acre feet, the Tribes agree to reduce the call threshold to enforce their water rights. Specified Instream Flows have been developed for 13 locations above the lake where minimum flow rates are to be met (each location is at a lower end of a Tribal instream water right). These specified flow rates are generally less than full Tribal instream water right rates; therefore, when a call is made to enforce the specified flow, fewer water users will be regulated off.

These specified flows are not fixed like a water right, but vary monthly based upon current conditions. At the beginning of each month the gaged streamflow will be used to compute the

specified flow at that location for that month. The methodology is designed such that during wet years the specified call threshold will approach or equal the Tribal water rights, while during dry years, the call thresholds are reduced to reflect the drier conditions. The principle is that if water users are diligent about reducing the consumptive use of water, this will result in more water instream and the specified flow targets will be met without having to call for regulation. If regulation is necessary, fewer users will be regulated off to meet the specified flow call. The Tribes reserve the right to call on the full rate of flow under their instream water rights if water users are not diligent in reducing their use to meet the 30,000 acre feet requirement.

IV. Potential Regulation of Groundwater

Stream flows above Klamath Lake are strongly dependent upon contributions of groundwater discharge. In a 2007 report, the U.S. Geological Survey identified greater than 70% of the water that flows into Upper Klamath Lake originates as groundwater (Ground-Water Hydrology of the Upper Klamath Basin, Oregon and California, USGS, SIR 2007-5050). Groundwater development has an impact on surface water flows; therefore, under Oregon's conjunctive-use rules, water wells are subject to regulation to fulfill in senior surface water rights. Regulation of water wells above Klamath Lake to satisfy senior water rights is described in the Comprehensive Agreement.

The timing and magnitude of the impact that groundwater pumping has on surface water, referred to as stream depletion or interference, is dependent on many hydrologic factors. Among the factors that strongly influence stream depletion are the distance the well is from a stream, the construction of the well and the depth of the aquifer, and the amount of water that is pumped from the well. In general, the further a well is from a stream, the longer it takes for pumping to impact the stream. Conversely, the further the well is from a stream, the longer it takes for stream interference to dissipate once pumping has stopped. In the Comprehensive Agreement, the distance to a stream is the distance between the well and the nearest reach of the stream where groundwater has been shown to have measurable contribution to the stream. These are referred to as "gaining reaches" because the streamflow is found to be increasing with the groundwater contribution. (Attachment 2)

The Comprehensive Agreement recognizes these fundamental concepts and, consistent with Oregon water law, further recognizes that any regulation of water wells must benefit the surface water source in an effective and timely manner. That is to say, water wells are not regulated unnecessarily, but must provide a timely benefit to the stream in order to benefit the deficient senior surface water user making a call. The Comprehensive Agreement defines a relationship between the quantity of water needed to fulfill the senior right (or specified flow threshold) that's not being met and the distance from the gaining reach of a stream in which a well may be regulated. There is much detail in the Comprehensive Agreement, but the general concept is:

Where the:

Flow deficit is less than 5% of the senior right → wells out to ¼ mile may be regulated
Flow deficit is between 5 and 10% of the senior right → wells out to ½ mile may be regulated
Flow deficit is greater than 10% of the senior right → wells out to 1 mile may be regulated

For example, if a senior user makes a valid call on a water right or call threshold, of 100 cfs, and the Watermaster determines the flow available to the senior right is 93 cfs, then the shortfall is 7 cfs. This equates to a deficit of 7%, which under the Comprehensive Agreement has the result that wells out to one-half mile from a gaining stream reach may be regulated to satisfy the call.

These regulatory categories are not automatic. Before any well is regulated the Department must make the finding that regulation will be effective and timely. Calls for specified instream flows are calculated on a 30-day basis, which will require the Department to make an assessment whether the call will likely be met within 30 days. A call for water in a short period would result in regulation of wells close to the gaining reach. If the call was expected to be of longer duration, regulation of wells further from the stream could provide an effective and timely benefit.

Regulation of water for a senior right is conducted under the Doctrine of Prior Appropriation, with the most-junior rights regulated first and regulation continuing until the senior right is satisfied. When groundwater rights are regulated concurrent with surface water rights, regulation remains consistent with this doctrine. In the Upper Klamath Basin, groundwater rights are generally junior to surface water rights. When a valid call for water comes to the Watermaster, an assessment will be conducted to determine how much water is necessary and which wells would meet the effective and timely standard.

When regulation begins, junior surface water and groundwater right holders will be notified of the regulation. Because groundwater regulation does not provide the immediate benefit to the stream, and the Watermaster has an obligation to satisfy the senior water right, regulation of surface water users will continue by priority date until the call is satisfied. As groundwater regulation effects are observed on the streamflow and the flow exceeds what the senior right is entitled to, then the senior-most rights that were regulated off will be the first allowed to appropriate water again. This undoing of regulation will continue until the flow is balanced with the rights of the senior user.

V. Groundwater Regulation Rules

The Department's rules that govern wells that cause substantial interference with surface water supplies and the control of such interference are contained in OAR 690-009 (Division 9). That rule provides the authority for the Commission to adopt rules that locally supersede Division 9, providing more specific direction for the local area. Section 3.11.8 of the Comprehensive Agreement (Attachment 3) specifies that within 60 days of the effective date of the Agreement (effective April 18, 2014), the Department will recommend that the Commission adopt local

rules that are consistent with the Agreement and applicable to calls for regulation of wells that affect water rights in the “Off-Project Area.”

It is the Department’s recommendation that local rules be adopted consistent with the language and intent of the Comprehensive Agreement. With the Commission’s consent, the Department will proceed with formation of a rules advisory committee to develop draft rules for the Commission’s consideration.

VI. Alternatives

The Commission may consider the following alternatives:

1. Direct Department staff to convene a rules advisory committee for the purpose of developing local rules governing groundwater regulation that are consistent with the Comprehensive Agreement.
2. Direct staff not to pursue local rules but to rely on the existing OAR 690-009 rules to address regulation of wells to control surface water interference in the Upper Klamath Basin.
3. Request staff return to the Commission at its August meeting for further discussion.

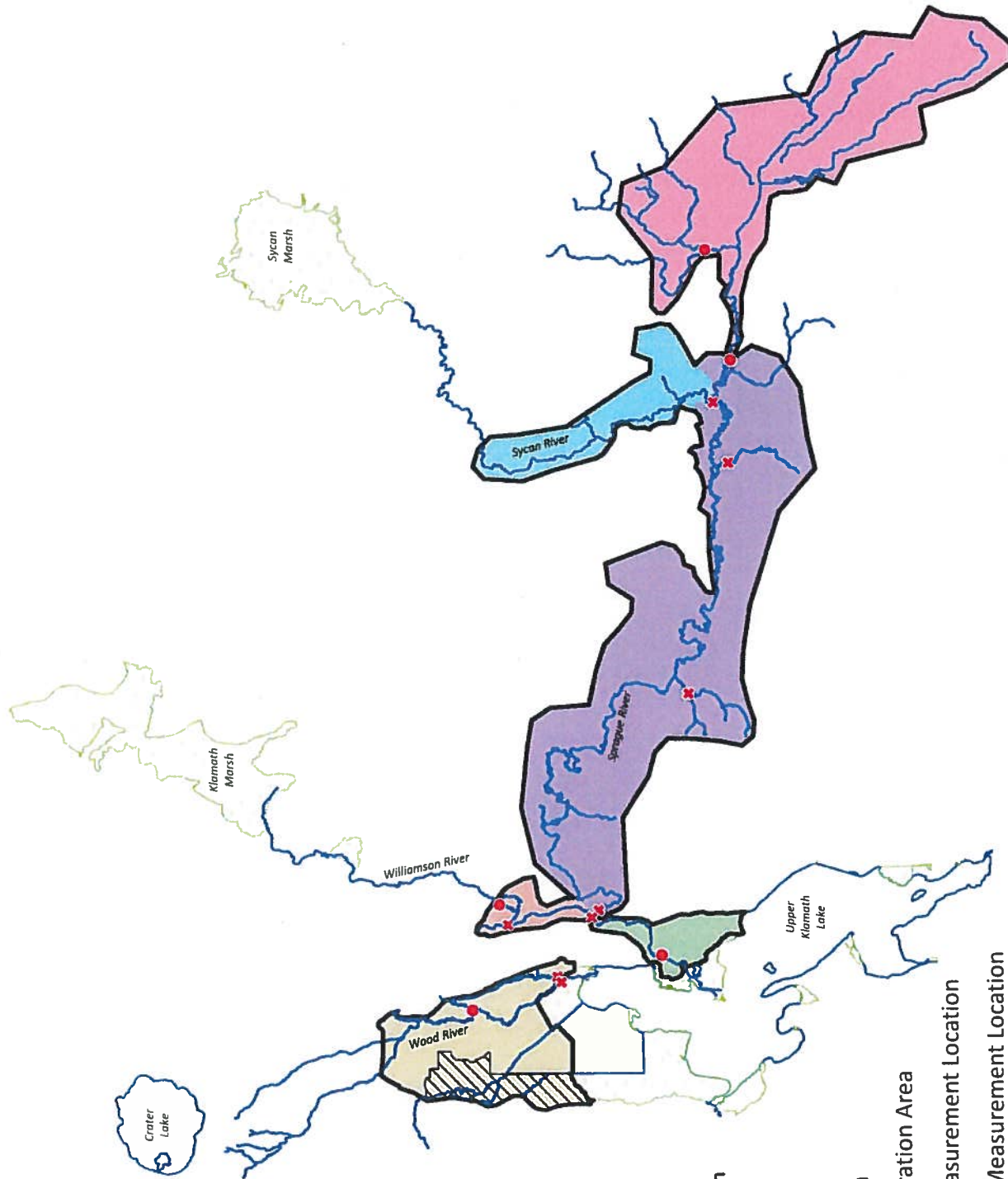
Attachment 1: Water Use Program Regions Map

Attachment 2: Gaining Reaches of the East and West Portions of Sprague River Drainage

Attachment 3: Proposed Upper Klamath Basin Comprehensive Agreement

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WUP Regions

- Lower Sprague
- Lower Williamson
- Middle Williamson
- Sycan
- Upper Sprague
- Wood Valley

- Off-Project Area
- Westside Restoration Area
- ✕ Primary SIF Measurement Location
- Secondary SIF Measurement Location

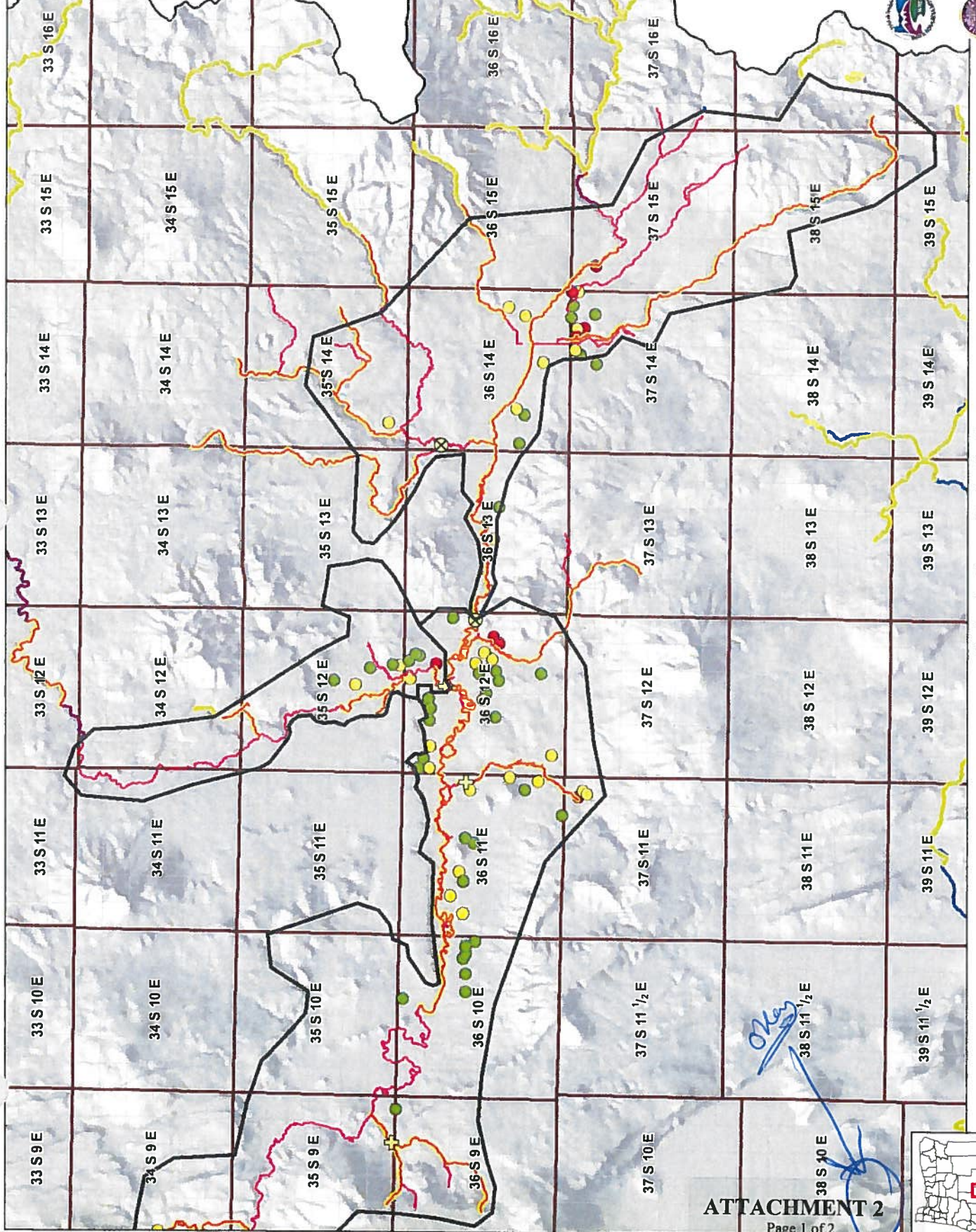
Off-Project Restoration Area = Off-Project Area excluding the Westside Restoration Area

East Portion of Spine River Drainage

Legend

- WMP Regions
- SIF Locations (13Feb14)
 - Primary
 - Secondary
- OPWAS rivers streams
- Gaining Stream Reaches (snapped)
- Gaining Stream Reaches (100K)
- Perennial Streams (24K)
- Wetlands
- Lakes
- Upper Basin Wells
- Distance to gaining reach (ft.)
 - < 1320
 - 1321 - 2640
 - 2641 - 5280

DISCLAIMER
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38 S 10 E

ATTACHMENT 2
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Map prepared 3/4/2014, by the OWPB, GW & IS sections (lv & rh); source file: G:\wp\ground_water\basin\UpperBasin\Map\UtahBasin\Wetlands\GranReaches_13Feb2014.mxd

West Portion of Sprague River Drainage

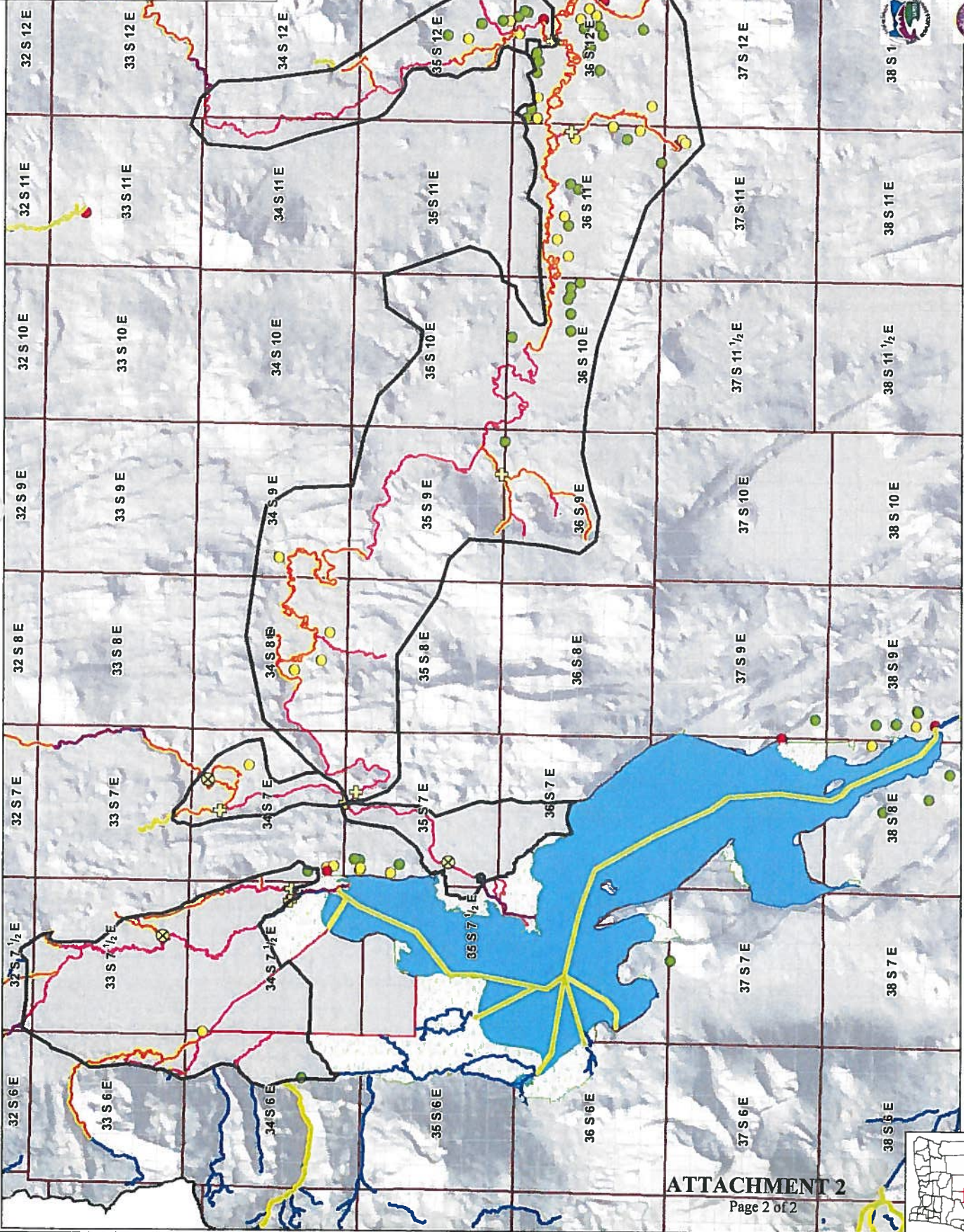
Legend

- W/P Regions
- SIF Locations (13Feb14)
 - Primary
 - Secondary
- OPWAS rivers streams
- Gaining Stream Reaches (Snapped)
- Gaining Stream Reaches (100K)
- Perennial Streams (24K)
- Wetlands
- Lakes

Upper Basin Wells

Distance to gaining reach (ft.)

- < 1320
- 1321 - 2640
- 2641 - 5280



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Map prepared 3/14/2014 by the OWRD. GW & IS sections (New & Old). source file: G:\env\ground_water\Yamhill\UpperBasin\Basin\UpperBasinReaches_141104012.mxd

PROPOSED UPPER KLAMATH BASIN COMPREHENSIVE AGREEMENT
March 4, 2014

3.11.8. The OWRD agrees to propose to the Oregon Water Resources Commission that the Commission adopt, pursuant to OAR 690-009-0030, local rules applicable to groundwater uses with a place of use within the Off-Project Area that are consistent with subsections 3.11.3 through 3.11.7 of this section within 60 days after the Effective Date, and to recommend adoption of such rules. The proposed rules will provide that they apply to calls for regulation that affect water rights in the Off-Project Area, regardless of where the call is made from. If the proposed rule is consistent with this section, the Parties, other than OWRD, agree to support the adoption by the Commission of the proposed rules. In the event that the Commission fails to adopt the proposed rules, the Parties other than OWRD agree that groundwater regulation will be in accordance with OAR Chapter 690 Division 009, as of December 2, 2013, notwithstanding anything in subsections 3.11.3 through 3.11.7 to the contrary.