Oregon
Kate Brown, Governor

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MEMORANDUM

TO: Water Resources Commission

FROM: Thomas M. Byler, Director TMB for

SUBJECT: Agenda Item B, February 25, 2016
Water Resources Commission Meeting

Reservations Rulemakings: Preview of Division 79 Draft Rules and Adoption of Division 509 Rules to Extend Burnt River Reservations

I. Introduction

A reservation of water for future economic development sets aside a quantity of water for storage to meet future needs. The Burnt River Reservations in Oregon Administrative Rules (OAR) 690, Division 509, Powder Basin Program Rules, are set to expire March 8, 2016, unless extended by further rulemaking of the Commission. OAR 690, Division 79, outlines procedures for considering extensions of reservations; however, these rules need to be updated. At the November meeting, the Commission adopted temporary Division 79 rules in order to consider the requests to extend the Burnt River Reservations, while the Department worked on permanent rules for future extension requests.

During this agenda item, staff will provide an update on the permanent Division 79 rulemaking and ask the Water Resources Commission to adopt modified Division 509 rules that propose to extend the Burnt River Reservations for another 20 years, to March 8, 2036.

II. Background

Previous reservation requests resulted in the adoption of reservations in five basin plans: Grande Ronde, Hood River, Malheur, Owyhee, and Powder River. Many of these reservations are scheduled to sunset within the next 12 months, without further action by the Commission. The South Fork Burnt River, North Fork Burnt River, and Burnt River Subbasin reservations in the Powder River Basin are the first that are set to expire; these reservations will automatically sunset on March 8, 2016, unless extended in rule by the Commission.

On September 15, 2015, the Department received applications from the Oregon Department of Agriculture to extend the three Burnt River reservations (see Attachment 1). This is the first time the Commission has considered a request to extend a reservation.

As discussed in detail in the November 2015 staff report, the existing permanent Division 79 rules, which outline procedures to establish and extend reservations, have not been updated since the statutes governing reservations were amended in 1995 and 1997 and are inconsistent with these subsequent statutory changes.

As a result, the Department launched three rule-makings to address the pending reservation requests and the potential for future extension requests.

The first was a temporary rulemaking to amend the Division 79 rules to establish the process for considering and processing the Burnt River reservation extension requests. The Commission adopted temporary the Division 79 rules in November 2015 to address immediate need to consider the Burnt River requests, while permanent rules were developed.

The second rulemaking proposes to amend the OAR 690, Division 509, Powder Basin Program Rules, in order to extend the Burnt River Reservations specifically. This is the action before the Commission during this agenda item.

The third rulemaking will propose to amend the Division 79 rules through a permanent rulemaking process, so that future extensions can be considered. This will establish the procedures for processing future requests for extensions. A decision on the permanent Division 79 rules is not before the Commission at this meeting; however, staff will provide an overview of the process thus far.

The Department convened the same Rules Advisory Committee for all three rulemakings. Representatives included: Oregon Farm Bureau, Burnt River Irrigation District, Oregon Department of Agriculture, WaterWatch of Oregon, Oregon Department of Fish and Wildlife, Oregon Water Resources Congress, Oregon Cattlemen's Association, League of Oregon Cities, Special Districts Association of Oregon, and Association of Oregon Counties. The Rules Advisory Committee provided input on the rules, but was not asked to achieve consensus.

III. Comparison Between Division 79 Temporary Rules and Draft Division 79 Permanent Rules

During the November 2015 meeting, Commission members expressed an interest in ensuring that the Burnt River Reservations would be treated similarly to future extension requests. The temporary rules were used as the foundation for the Rules Advisory Committee to develop the permanent rules. As discussed below, the temporary Division 79 rules are similar to the public hearing draft of the proposed Division 79 permanent rules (see Attachment 2). The Commission will consider adoption of the permanent Division 79 rules in April, after the public comment period closes and staff have reviewed all comments to determine whether changes are needed.

A summary of similarities and differences between the rules include the following:

1. The permanent rules would apply to all requests for extensions, whereas the temporary rules apply only to the Burnt River Reservation requests.
2. Both rules allow for time extensions of up to 20 years, with the extended reservation retaining the priority date of the original reservation.

3. Both rules have the same notice, hearing, and public comment requirements, as well as the same information that the Commission can consider.
4. The permanent rules allow the Commission to extend the reservation unless it determines that the reservations are no longer consistent with ORS 536.310 and rules of the Commission. The rules also specify that the Commission may modify or condition the reservations to ensure that they remain consistent with ORS 536.310. While these provisions are not explicitly included in the temporary Division 79 rules, the provisions still apply to review of the Burnt River Reservations because the Commission is prohibited from adopting rules that are inconsistent with ORS 536.310 (see ORS 536.320(3)) and is directed to consider ORS 536.310 in basin program rulemaking.
5. The permanent rules also adjust information requirements for the application to extend the reservation, streamlining the extension process, and obtaining information that is useful to the Commission in decision-making. These changes are based on feedback the staff has received from the Commission, the Rules Advisory Committee, applicants, and staff members.

IV. Proposed Division 509 Rules

Modifications to OAR 690, Division 509 would extend reservations of water for future economic development for the South Fork Burnt River, North Fork Burnt River, and Burnt River Subbasins of the Powder River Basin for an additional 20 years and change reporting requirements. In addition, the rules include corrections to clarify that the uses for the reservations are classified uses and address inconsistencies in terminology.

The Department held public hearings on the draft rules in Baker City on January 25, 2016, with Commissioner Bruce Corn as the hearings officer, and in Salem on January 26, 2016, with Commissioner Bob Baumgartner as the hearings officer. The Department accepted public comments from January 1, 2015 through February 4, 2016. The Department also provided notice to the Oregon Department of Environmental Quality, Oregon Department of Fish and Wildlife, Oregon Parks and Recreation Department, and Business Oregon, as required by the Division 79 temporary rules.

Attachment 3 provides an overview of and response to public comments received regarding the proposed Division 509 rules. Attachment 4 provides the full text of the written public comments, while Attachment 5 provides a summary of the oral comments received at the public hearing.

An evaluation of the extension requests is provided in the next section below. No changes were made to the rules after the public comment period closed. Therefore, the final proposed rules are the same as the hearing draft included in Attachment 6.

V. Review of Burnt River Reservations under ORS 536.310

In September 2015, the Oregon Department of Agriculture submitted applications for the extension of reservations in the Burnt River Subbasin, North Fork Burnt River, and South Fork Burnt River. See Attachment 1 for copies of these applications. As in the original three applications for reservations, the Department of Agriculture argued the need for reservations in

these subbasins. Specifically, it noted the primary purpose of these reservations were to: (1) increase reliability of receiving the full duty of irrigators' water rights; (2) supplement existing water rights for irrigation of lands within the basin; (3) mitigate impacts of and increase resilience to prolonged dry and drought conditions; (4) adapt to changing patterns in hydrology and climate, including effects of increasing temperatures on crop water consumption; and (5) provide water to irrigate additional lands in the basin. The secondary purposes of these reservations, according to the applications are for: (1) aquatic life water use; (2) recreation; and (3) wildlife water use.

The Department reviewed all three applications. All three applications were complete, addressing the information requirements in OAR 690-079-0060.

These waters were set aside in 1996 using the reservation process. Because only one acre-foot of water has been allocated during these reservations, the Department confirms that water is still available in these subbasins to service these reservations.

In conducting a basin program rulemaking, ORS 536.310 requires the Commission to take into consideration 536.220 and the declarations of policy in ORS 536.310. ORS 536.220 directs the Department to "encourage, promote and secure maximum beneficial use and control" of water resources, and that the Departments' basin programs for development of additional supplies "shall give proper and adequate consideration to the multiple aspects of the beneficial use of such water resources."

The policies in ORS 536.310 include: (1) protecting existing rights; (2) "integration and coordination of uses of water" and "augmentation of existing supplies for all beneficial purposes be achieved for the maximum economic development" for the state; (3) adequate supplies for human consumption; (4) "multiple-purpose impoundment structures are to be preferred over single-purpose structures" and the construction of impoundments should consider the importance of the fishery resource; (5) "competitive exploitation of water resources of this state for single-purpose uses is to be discouraged"; and (8) "watershed development policies shall be favored, whenever possible, for the preservation of balanced multiple uses".

The policies in ORS 536.310 (6), (7), (9), (10), (11), (12), (13) are not relevant to the reservations discussion.

In evaluating the requests to extend, the Department considered comments from staff, the Rules Advisory Committee, and the public. The Department finds the reservations continue to be consistent with ORS 536.220 and ORS 536.310, as they:

- Provide a mechanism for supporting water resources development in the basin to ensure the maximum economic development for the state.
- Demonstrate the state's preference for multipurpose reservoirs by reserving significantly more water for multipurpose reservoirs, while allowing a small amount for single-purpose reservoirs in recognition of local needs and the need to balance the different uses in the basin.
- Retain requirements to consult with the Oregon Department of Fish and Wildlife prior to applying to use the water in order to help protect the fishery resource.

- Allow for multiple-purpose uses, which may include water to benefit instream values such as fisheries, pollution abatement, and recreation.
- Benefit existing water rights by increasing the likelihood that irrigators' will receive their full-duty, while also potentially increasing the amount of land that can be irrigated in the basin.

VI. Conclusion

The Department appreciates the efforts of stakeholders to assist in these rulemaking efforts. The Department will continue work to bring forward permanent Division 79 rules for consideration by the Commission in April; in the meantime, the Department proposes that the Commission consider taking action on the requests to extend the Burnt River Reservations before they expire on March 8.

VII. Alternatives

The Commission may consider the following alternatives:

1. Adopt the proposed rules in Attachment 6.
2. Adopt the proposed rules as modified by the Commission.
3. Not adopt the rules and provide the Department with further direction.

VIII. Director's Recommendations

The Director recommends Alternative #1 to adopt the proposed rules.

Attachments:

Attachment 1 – Three Applications for Reservation Extension
Attachment 2 – Division 79 Draft Permanent Rules and Existing Temporary Rules for Comparison Purposes – No Action Requested Today
Attachment 3 – Response to Public Comments Received for Division 509 Rules
Attachment 4 – Public Comments Received for Division 509 Rules
Attachment 5 – Summary of Oral Comments from Public Hearing
Attachment 6 – Proposed Final Rules for Division 509 – No Change from Hearing Draft

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Request for an Extension of Reservation of Water for Economic Development
for the North Fork Burnt River Reservation

DATE: September 15, 2015

(1) Agency Name and Address:

Oregon Department of Agriculture
635 Capitol Street NE
Salem, OR 97301

Contact: Margaret Matter, Water Resources Specialist
Phone: (503) 986-4561
Email: mmatter@oda.state.or.us

(2) Purpose of the reservation:

Six thousand five hundred (6,500) acre-feet of unappropriated water are reserved for the North Fork Burnt River Subbasin Reservation to store in multipurpose reservoirs to be constructed in the future on the North Fork Burnt River and tributaries upstream of Unity Reservoir.

The main purpose of the reservation is for irrigation [OAR 690-300 (26)] including:
(a) To increase reliability of receiving the full duty of irrigators' water rights;
(b) Supplement existing water rights for irrigation of lands within the basin;
(c) Mitigate impacts of and increase resilience to prolonged dry and drought conditions;
(d) Adaptation to changing patterns in hydrology and climate, including effects of increasing temperatures on crop water consumption; and
(e) Provide water to irrigate additional lands in the basin.

Secondary purposes of the Burnt River reservation include:

- Aquatic life water use;
- Recreation, for example fishing, swimming and other activities;
- Wildlife water use [OAR 690-300 (3), (43) and (62)].

More reliable sources of irrigation supplies will contribute to:

- Value added agriculture, strengthening economies from local to state scales;
- Protection and development of prime agricultural land; and
- Retaining prime agricultural lands in local ownership.

Maintaining local ownership, even within Oregon, contributes more to the benefit of the state.

Development of the North Fork Burnt River Reservation

The intent for establishing reservations centered around balancing appropriations of water for instream needs with reserves of water for *future* economic development in other sectors, including agriculture. Even though the reservations intended for *future economic development*, increasingly, farmers need access to water from the reservations to remain competitive and profitable by:

- Increasing water supply reliability;
- Adapting to changing climate and hydrologic conditions;
- Mitigating effects of prolonged dry and drought conditions in order to remain competitive and sustain profitable operations; as well as to
- Raising higher value crops; and
- Providing water for increased production on additional arable soils.

Historically, water storage reservoirs have been instrumental in compensating for differences in timing between available water and when the water is needed for agriculture, human health and hygiene, and other purposes. Elaborate systems for administering, storing, distributing and managing water supplies developed around what were considered representative or sufficiently long periods of data record that would, in theory, capture the range of hydrologic variability in a system. Yet greater variability observed in timing, quantity and intensity of seasonal hydrographs compared to historic records contributes to reduced water supply reliability that adversely impacts agriculture more so than other water use sectors.

A major factor influencing reduced reliability is differences between actual water availability (e.g., timing and quantity) and historic estimates of availability. For example:

(a) Differences in timing of defined irrigation seasons compared to when water may actually be available and when crops begin to need additional water;
(b) Timing and quantity of water allocations, as determined from historical data and methods, do not correspond with actual water availability; and
(c) Flow timing and quantity for prescribed hydrographs as well as instream flow determinations are increasingly misaligned with actual streamflow and climate conditions.

Terms of the reservations of unappropriated water were set for 20 years with the possibility of extending the terms for up to an additional 20 years. The provisions were thoughtful and foresighted because the rate at which reservations of water might be accessed in an administrative basin may depend on issues including:

- Crops that may be raised in an area;
- Size of irrigation districts;
- Economic and sociopolitical support for water projects;
- Climate;
- Awareness that reservations exist; and
- Demand for agricultural products and population growth.

Changing variability in climate and hydrology highlight the critical need for additional multipurpose reservoirs to store water when it is available and can be accessed, so that stored water can be used for beneficial use later in the year.

Since the reservations were approved, important changes have occurred in Oregon that support and improve the likelihood of completing water storage projects, for instance:

- New public and private programs for planning and technical assistance as well as funding for water resources projects;
- Completion of biological opinions and conservation plans for anadromous fish;
- Recent severe to extreme drought following more than a decade of prevailing dry conditions have highlighted the need for additional capacity to store water for multiple purposes; and
- Increased capacity at ODA to inform or remind agricultural communities about their reservations of unappropriated water, and provide assistance to water users on water resources needs.

Effects of Changes in Climate and Hydrology on Agricultural

ODA is developing a model to estimate current and future agricultural demands that would support requests to extend the terms of the reservations of unappropriated water. However, redetermination of the appropriate procedure to follow in applying to extend the reservation terms resulted in a significant advance in the application deadline date for the Burnt River reservations from the end of 2015 to September 15, 2015. Thus, in lieu of analytical results, ODA drew from the peer- reviewed literature to estimate effects of increasing temperatures over the 21st Century on crop water demand. Similarly, the original application to reserve water in the Burnt River, agency reports and other related documents were reviewed for economic studies.

The agricultural water demand model, being developed by ODA, distinguishes total crop water demand, which includes effective precipitation, from the irrigation demand portion. It is useful to understand, however, since summer rainfall in semi-arid to arid regions, like Eastern Oregon, accounts for such a small fraction of crop water demand (i.e., evapotranspiration) during most of the growing season, it is accepted practice to use evapotranspiration as an approximation for irrigation demand (Clint Schock; personal communications, May 2015). In addition, even though summer precipitation may already be low in semi-arid to arid regions, climate models predict that summer precipitation will decrease an average of 14% by the 2080s (OCCRI 2010).

Agriculture is an inherently climate sensitive business, and as the climate warms, water availability, quality and cost will be key limiting factors for agricultural in determining how much crop water demand may be met with available supplies (OCCRI 2010). Increasing temperatures will drive crop water to demand to increase over the century. Predictions of temperature increases over the 21st Century are

influenced by: (1) the climate model used in prediction; and (2) the climate scenario simulated. The climate scenarios represent different levels of change in global concentrations of greenhouse gases concentrations at least through 2100. OCCRI climate simulations (2010) predict mean annual temperature in Oregon will increase 3-10 degrees Fahrenheit (deg F) by 2100, depending on whether the scenario involves stabilizing greenhouse gas emissions (i.e., 3 deg F increase), or a scenario of continued increases in greenhouse gas concentrations (i.e., 10 deg F increase).

Predicted temperature increases for Oregon are very similar to predicted increases in global mean temperature. Although policies have been implemented to reduce greenhouse gas emissions in different countries, recent warming projections show that global mean annual temperature is on track for increases at the upper end of the predicted temperature range; an approximate 10 deg F increase by 2100 (England et al. 2015).

In general, the relationship between temperature and crop water demand, or evapotranspiration (ET) is, for each one deg F increase in temperature, ET increases 5%, all other factors remaining equal (Wagoner and Revelle 1990; OCCRI 2010). Accordingly, crop water demand may increase by the end of the 21st Century 15% under the stabilized greenhouse gas emissions scenario, and 50% under the increasing greenhouse gas concentrations scenario, all other factors remaining equal.

Yet, climate models show that not all other factors will remain equal. Global climate model projections consistently show regional warming will be highest in summer, yet summer precipitation will decrease on average 14% by the 2080s (OCCRI 2010). ET is influenced more by maximum daily temperature during the growing season (e.g., June, July and August) than by mean annual temperature, which is typically lower than maximum daily summertime temperature.

Relatively high uncertainty is associated with climate model predictions on daily scales, however, recent OCCRI (Kathie Dello; personal communications, September 2015) updates in predicted changes in average monthly temperatures (deg F) show that for warmer months during the growing season, predicted increases are:

- June 4 - 8
- July 5 – 9
- August 6 – 10
- September 6 - 10

Based on the magnitude of predicted temperatures, it is reasonable to expect increases in ET in excess of 15%-50% by 2100.

ODA is especially concerned about potential effects of temperature and precipitation changes on agriculture in the second half of the 21st Century, because greater warmer is predicted to occur in the latter half of the Century (IPCC 2013). It is vitally important that agriculture has sufficient reliable water supplies to mitigate

effects of more intense drought. Research shows that internal climate variability will alternately enhance and mask effects of climate change (Melillo et. al. 2014; IPCC 2014). The extended dry and drought period in the Western U.S. since 2000 has been characterized by record setting high temperatures on daily, monthly and annual scales, as well as record durations of high daytime temperatures (NOAA 2015; https://www.ncdc.noaa.gov/sotc/national/201508). Although contributions of climate change to recent drought conditions in Oregon have not been investigated, Williams and others (2015) used a unique suite of datasets and methods to quantify effects of anthropogenic climate change on the drought in California. Their results show climate change contributed 8-27% to the drought in 2012-2014 and 5-18% for 2014. Conditions in the second half of the 21st Century are predicted to be warmer and drier than the warm, dry conditions experienced 2000 (IPCC 2013).

(3) Amount of water proposed to be reserved and evidence of water availability:

Six thousand five hundred (6,500) acre-feet of unappropriated water of the North Fork Burnt River and tributaries upstream of Unity Reservoir are reserved for storage in multipurpose reservoirs to be constructed in the future (OAR 690-509-0120).

OWRD conducted a water availability analysis in 1992 for the application to reserve 6,500 acre-feet of water in the North Fork Burnt River and tributaries for future economic development in agriculture, and the reservation was approved.

(4) Sources of water to supply the reservation:

The sources of water to supply the reservation are natural or direct flows of the North Fork Burnt River and tributaries. The water availability analysis conducted by OWRD showed that tributary streams have water available to store in March, April and May.

(5) If the reservation is to be provided by existing storage, agreement to the proposed reservation by the party in charge of disposition of the stored water or evidence of authorization or allocation consistent with the proposed reservation:

No reservation of existing storage is proposed.

(6) If the proposal is to reserve water to be stored in a new facility, evidence that sites for the storage facility can be developed and that water is available for storage.

In preparation for the original request to reserve unappropriated water in the North Fork Burnt River basin, ODA reviewed data on potential multipurpose reservoir sites from several sources including, OWRD, U.S. Bureau of Reclamation, Natural Resources Conservation Service (NRCS), Corps of Engineers, Soil and Water Conservation Districts and inventories provided by irrigation districts and consultants.

The Ricco Reservoir site on the North Fork Burnt River was identified as a potential site to store the 6,500 acre-feet of the reservation for multiple purposes. The list of potential reservoirs sites was not intended to limit where reservations of water may be stored. Other sites may be determined more feasible during the term of the reservations. In addition, definition of "multipurpose reservoir" is not limited to conventional instream or off-channel reservoirs.

Other options for water storage include groundwater recharge; aquifer storage and recovery; reregulation reservoirs; existing or constructed wetlands; and actual or constructed "beaver dams" to serve as detention structures to promote infiltration into subsurface soil layers and percolation to groundwater. Several options may serve to reconnect surface and subsurface hydrology, thereby increasing reliability of surface flows in areas where surface and groundwater are connected, and are options being considered in the North Fork Burnt River Basin. These options are:

- Often less expensive than conventional dams and reservoirs;
- May be implemented more quickly; and
- Often have water quality improvement benefits.

They may also be components of comprehensive near- and long-term planning, for example groundwater recharge and an off-stream multipurpose storage facility are near- and long-term priorities, but groundwater recharge may be implemented while permits and funding mechanisms are secured and other arrangements are made for construction of the multipurpose storage facility. Water law already provides for change in beneficial use of water that supports near- and long-term water use planning.

Water Supply Studies and Related Activities

(a) The U.S. Bureau of Reclamation conducted an appraisal study on potential storage sites in the Powder River Basin, and summarized results in the report, Eastern Oregon Water Storage Appraisal Study for Burnt River, Powder River, and Pine Creek Basins (2011).

(b) U.S. Bureau of Reclamation conducted a literature review of potential storage opportunities in the Powder Basin, and summarized the results in 2008 in, Literature Review of the Powder Basin, Oregon Stream Systems, Water Storage, and Stream Health as They Pertain to the Basin and Water Science.

(c) The Baker County Commissioners established the Powder Basin Water and Stream Health (WASH) Steering Committee to identify opportunities for storage projects that would provide both instream (e.g., fish, water quality, and recreation) and out-of-stream (e.g., irrigation and municipal supply) benefits. The WASH committee secured funding in 2007 from the U.S. Bureau of Reclamation Snake River Area Office (Boise, Idaho) to conduct the Ecologically Adaptive Water Management Program for the Powder River, Burnt River, and Pine Creek Subbasins (2011), an appraisal level study.

(d) In 2014 and 2015, ODA met with water users in the Burnt River Basin to talk about the reservations in the basin, and how they may be used to help meet water supply needs in the Burnt River Basin. More than 20 potential water projects were identified during a meeting in August 2015, including:

- New surface and subsurface storage facilities;
- Enlarging existing dam/reservoir facilities;
- Applying water to high meadows to enhance aquifer recharge; and
- Construction of "beaver dams" to slow flows to promote infiltration and enhance recharge to subsurface soils and groundwater.

Water users in the Powder River Basin, including in the North Fork Burnt River valley, are interested and enthusiastic about the reservations of unappropriated water in the basin, and are working with the Baker County Soil and Water Conservation Districts (SWCDs) and ODA to organize and build on the new momentum in the agricultural community to get projects funded and operational.

(7) Approximate season(s) of use:

The approximate season of use for irrigation will be during irrigation season; and potentially year round for all other proposed uses.

(8) Approximate location(s) of use:

The proposed uses will be in the North Fork Burnt River Basin in Baker County. Irrigation may occur as supplemental to supply existing water rights, or to fulfill the duties of existing water rights. The water may also be used for irrigating arable land that is currently not irrigated to increase production or raise higher value crops.

The NRCS Soil Survey Geographic database (SSURGO) shows that some soils in the North Fork Burnt River valley, for instance in the valley above Unity Reservoir, have potential to improve with irrigation and become Class 1 or 2 soils, or the best soils for raising crops. As agricultural land development occurs in the Burnt River Basin, so may water demands for related services and purposes, such as food processing.

(9) Evidence that the proposal is compatible with overall basin program goals and policies:

The North Face Burnt River reservation is compatible with the existing basin program goals and policies. For example, to summarize Classifications in OAR 690-509-0000, maximizing economic development, attaining the highest and best uses of waters of the Powder Basin, and achieving an integrated and coordinated program for the benefit of the state as a whole *will be furthered* through using Powder Basin water *only* for purposes including livestock, irrigation, recreation, wildlife, and fish life uses.

In addition, the proposed storage and use of water in a reservoir are consistent with the definition of, "multipurpose reservoir," provided in the Powder Basin Plan [OAR 690-509-0100 (2)]. Thus, multipurpose storage and appropriation of water in the North Fork Burnt River Basin are allowed by the Powder Basin Program.

(10) Identification of affected local governments and copies of letters notifying each local government of the intent to file a reservation request accompanied by a description of the reservation proposal:

The following list of affected local governments were notified by letter on October 9, 2015 via the U.S. Postal Service mail and email, where possible, on October 8, 2015 of the Oregon Department of Agriculture's intent to file applications to request extensions of the terms of the three reservations. The notification letters to affected local governments also described the reservation proposals.

Affected Local Government	Address
Baker County	1995 3rd Street; Baker City, OR 97814
City of Sumpter	P.O. Box 68, 240 N Mill Street; Sumpter, OR 97877
City of Unity	1995 3rd Street; Baker City, OR 97814
Baker County Soil and Water Conservation Districts	3990 Midway Drive; Baker City, OR 97814
Oregon Water Resources Congress	795 Winter Street NE; Salem, OR 97301
City of Baker City	P.O. Box 650, 1655 First Street, Baker City, OR 97814
City of Greenhorn	1995 3rd Street; Baker City, OR 97814
City of Haines	P.O. Box 208, 819 Front Street, Haines, OR 97833
City of Halfway	P.O. Box 738; Halfway, OR 97834-0738
City of Huntington, OR	P.O. Box 369, 50 E Adams; Huntington, OR 97907
City of Richland	P.O Box 266, 89 Main Street; Richland, OR 97870

(11) Intended types of use(s) of the reserved water:

The primary purpose of the reservation is for irrigation [OAR 690-300 (26)], for example to:

- Increase reliability of receiving the full duty to which farmers are entitled by their water right;
- Supplemental irrigation;
- Raise higher value crops when possible;
- To put into production other irrigable land in the valley that has not previously been irrigated;
- Mitigate impacts of and increase resilience to prolonged dry and drought conditions; and

- Adapt to changing patterns in hydrology and climate, including effects of increasing temperatures on crop water consumption.

Secondary reservation water uses include:

- Aquatic life;
- Recreation (e.g., fishing and swimming);
- Wildlife water use, and potentially
- Groundwater recharge [OAR 690-300 (3), (43), (62) and (4)].

Reservations of unappropriated water may also be used to meet community needs that support irrigated agriculture, such as food processing.

(12) Expected duration of the reservation prior to application for use of the water:

It is expected that landowners in the North Fork Burnt River Basin will apply to ODA as soon as practicable to use reservations for multiple purposes, and that interest and organization will continue and grow to identify viable projects and move them forward for feasibility studies, further planning and funding.

Landowners recognize that more than 15 years of prevailing warm, dry conditions followed by 3-4 years of severe to extreme drought have reduced reliability of surface flows. With flexibility in water law and in the definitions of "multipurpose" and "reservoir," available water could be put to beneficial use in subsurface and groundwater recharge or other uses in the near-term while feasibility studies are conducted on longer-term alternatives; funding partners are identified, and other steps are taken to secure funding for project construction.

(13) Economic benefits provided:

In general, more steady and reliable irrigation water supplies will improve profits for farmers and ranchers, which in turn will enhance local and regional economies. The 2010 Baker County Natural Resources Plan indicates that agriculture is an integral component of natural resource base and a major component of the economic base of Baker County (the County). The County's Assessor records show that the 6,688 farms in the County produced an estimated $61,540,000 gross farm income in 2010.

The Burnt River Soil and Water Conservation District' (SWCD) in cooperation with USDA Soil Conservation Service, now the NRCS, conducted a reconnaissance survey in 1970 of the proposed Ricco dam and reservoir project, and summarized the results in the report, Irrigation and Flood Control Dam Project on the North Fork Burnt River [Burnt River SWCD 1970]. The proposed multipurpose project would be used for irrigation, recreation, and aquatic life uses [OAR 690-300 (26), (43) and (3)] as well as flood control and perhaps enhancing subsurface soil moisture and groundwater recharge. The report only analyzed surface features, thus a site feasibility study is necessary, and it would provide more specific economic analyses.

Potential economic benefits may be extrapolated from estimates for the proposed Hardman Reservoir on the South Fork Burnt River since the North Fork and South Fork are both subbasins within the Burnt River system, and both proposed projects involve similar uses of water and project purposes. Oregon State University (OSU) Extension Service estimated in 1991 the economic benefits of irrigating an additional 885 acres on hay production in the Burnt River Basin. The 1991 estimates were updated to values in 2015 dollars, compared to actual 2015 market values, and summarized in Table 1 (Sources: Dave Manuel, http://www.davemanuel.com/inflation-calculator.php; USDA Agricultural Market Service (AMS), Sept 4, 2015, http://www.ams.usda.gov/mnreports/ko_ls753.txt). OSU Extension Service assumed for the economic assessment the same ratio of alfalfa and meadow hay in use at the time was also used when irrigation water would be applied to the additional 885 acres.

The NRCS Soil Survey Geographic database (SSURGO) indicates that land along North Fork Burnt River above Unity Reservoir also has potential to improve with irrigation and become Class 1 or 2 soils, or the best soils for raising crops. Even though the amount of additional acreage in North Fork Burnt River valley that could potentially improve with irrigation may be less than that for the South Fork, Table 1 indicates that even 65% of the increased acreage for alfalfa would have positive economic impacts in excess of $100,000.

Table 1. Economic Benefits of Irrigation of 885 Additional Acres in the South Fork Burnt River to Extrapolate to the North Fork Burnt River Basin

	Update of Price (2015 $/Ton, T)	**Actual 2015 Market Value (2015 $/T)**	**Production (per Acre, Ac, or Animal Unit Month, AUM)**	**Acres**	**Production (T)**	**Value (2015 $)**
Alfalfa (T)	146.73	140-200	3.5 T/Ac	313	1095	160,669
Meadow Hay (T)	114.44	30-225	2 T/Ac	572	1144	130,919
Aftermath Grazing (AUM)	17.61	Not Available	1 AUM/Ac	885	885 AUM	15,576
Total						307,164

Other economic benefits include:

- As agricultural land development occurs in the North Fork Burnt River Basin, related services and businesses, such as food processing, may follow;
- Increased security in irrigation water supplies also contributes to:
  - Retaining local ownership of agricultural lands, so more dollars are retained and circulated in local and regional economies;
  - Supporting employment on agricultural lands and in the community;
  - Increasing land values due to improvements made; and
- Expanded recreational opportunities in conjunction with new or enlarged multipurpose reservoirs.

Recreation sites developed by the U.S. Forest Service, Baker County or another entity may include swimming, watercraft, fishing, picnicking, horseback riding, camping (e.g., tent and RV), hunting and ATV excursions, and potential revenues may reach into the hundreds of thousands of dollars annually.

Benefits of Increased Reliability of Water Supplies

Increased multipurpose water storage that mitigates adverse effects on water availability as a consequence of prolonged warm/dry periods, increasing drought intensity, and climate variability and change would contribute substantively to robust, resilient agricultural economies.

Increasing temperature trends are expected to intensify future drought conditions and increase crop water demand in general but especially during droughts. [See (2)].

To get a sense of the magnitude of impact of increasing temperatures on crop water demand in the North Fork Burnt River Basin, consider the two reservoirs, Pilcher and Wolf Creek, located in the basin, with capacities of approximately 5,910 acre-feet and 12,000 acre-feet, respectively. Total storage of the two reservoirs is 17,910 acre-feet. Assuming the reservoirs fill and all water stored in the two reservoirs is used each year, temperature changes anticipated during the second half of the 21st Century would require an additional 8,955 acre-feet to meet increased crop water demand due to higher temperatures. The additional demand exceeds 6,500 acre-feet, the volume of the North Fork Burnt River reservation. Nonetheless, the additional available water from the reservation would help in adapting to effects of climate variability and change, and mitigating adverse effects of drought.

(14) Water sources alternatives:

Alternatives for new water supplies are limited in the North Fork Burnt River Basin. Live flows are not available, and groundwater is not a viable source for irrigation in the basin due to low porosity of aquifer material, and aquifers are deep underground. In addition, based on OWRD's Water Rights Information System, many existing wells have potential for substantial interference with surface water supplies.

Landowners may also realize that stored water supplies alone may be insufficient to meet future crop water use that will increase with temperatures [see (13)]. Water conservation, changes in tillage practices, and raising different crop types or more drought tolerant varieties are among options to consider in developing the long-range comprehensive water resources management strategy for farmers in the North Fork Burnt River Basin. Future solutions to profitable agriculture may involve a suite of components to create flexible, robust farm and ranch operations.

The size of irrigation districts and the range of crops that may be grown in a region influence cash-on-hand, ability to repay, and access to funds for projects. Irrigation

districts in the Burnt River Basin are often relatively small, and consequently unable to assume large debt for projects. Alfalfa and meadow hay are the main crops that can be raised for a profit in the North Fork Burnt River Basin. Expansion of agricultural production is more likely to result from increased demand for alfalfa or meadow hay, which may develop more slowly than other agricultural products. So it is understandable why farmers in the North Fork Burnt River Basin have not yet developed the demand for water as quickly as in areas where a larger variety of higher value crops may be raised. It is also not reasonable to expect that conservation would meet future water demands in North Fork Burnt River Basin, especially in light of potential temperature increases over the century.

Despite economic challenges, irrigation districts, ditch companies and individual farmers have been meetings with ODA, the Baker County Soil and Water Conservation Districts and other entities to create local organizational structure, build momentum, and partner with agencies and other groups to get the technical and funding resources to bring vital projects to fruition to address long-term water resources issues. The 20-year extensions of reservation terms would provide agricultural water users with certainty and time to advance and complete vital multipurpose water resources projects.

(15) Evidence that the proposal does not conflict with Scenic Waterway flow requirements:

No scenic waterway designations exist on and no nominations for scenic waterway designation have been made for the North Fork Burnt River system. River reaches were nominated for three rivers for the 2014 Scenic Waterway Assessment; the Chetco, Mollala and Grande Ronde rivers. No nominations were made for the Burnt River Basin.

(16) Evidence that the proposed reservation and water use(s) will promote the beneficial use of water without waste:

The main beneficial use of the reservation is for irrigation [OAR 690-300 (26)], and secondary uses of the Burnt River reservation include water for: (a) Aquatic life; (b) Recreation; (c) Wildlife; and potentially some (d) Groundwater recharge [OAR 690-300 (3), (43), (62) and (4)].

Additional water storage is an important component of a comprehensive water manage strategy that may include improved conservation that will provide irrigators greater certainty in times of extended dry conditions and drought, and support adaptation to changing climate and hydrologic conditions.

(17) Potential adverse impacts on water resources:

Based on the 2008 Literature Review of the Powder Basin, Oregon Steam Systems, Water Storage, and Stream Health as they Pertain to the Basin and Water Science compiled by the U.S. Bureau of Reclamation, potential water resource impacts of the

proposed reservoir sites on the South Fork Burnt River and the North Fork Burnt River (i.e., Ricco Reservoir site) were identified in, A Fatal Flaw Analysis, by J. Van Staveren, Pacific Habitat Services, Inc., in 1997. The analysis identified potential impacts to wetlands as the main water resource impact, that may need to be mitigated.

Feasibility level assessments will identify any new and clarify existing issues. Plus the process of applying for access to the reservation of unappropriated water requires consultation with agencies to resolve potential issues.

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Request for an Extension of Reservation of Water for Economic Development
for the Burnt River Subbasin Reservation

DATE: September 15, 2015

(1) Agency Name and Address:

Oregon Department of Agriculture
635 Capitol Street NE
Salem, OR 97301

Contact: Margaret Matter, Water Resources Specialist
Phone: (503) 986-4561
Email: mmatter@oda.state.or.us

(2) Purpose of the reservation:

Two thousand (2,000) acre-feet of unappropriated water are reserved for the Burnt River Subbasin Reservation to store in reservoirs to be constructed in the basins of the Burnt River and tributaries (OAR 690-509-0130).

The main purpose of the reservation is for irrigation [OAR 690-300 (26)] including:
(a) To increase reliability of receiving the full duty of irrigators' water rights;
(b) Supplement existing water rights for irrigation of lands within the basin;
(c) Mitigate impacts of and increase resilience to prolonged dry and drought conditions;
(d) Adaptation to changing patterns in hydrology and climate, including effects of increasing temperatures on crop water consumption; and
(e) Provide water to irrigate additional lands in the basin.

Secondary purposes of the Burnt River reservation include:

- Aquatic life water use;
- Recreation, for example fishing, swimming and other activities;
- Wildlife water use [OAR 690-300 (3), (43) and (62)].

More reliable sources of irrigation supplies will contribute to:

- Value added agriculture, strengthening economies from local to state scales;
- Protection and development of prime agricultural land; and
- Retaining prime agricultural lands in local ownership.

Maintaining local ownership, even within Oregon, contributes more to the benefit of the state.

Development of the Burnt River Reservation

The reservations of unappropriated water for agriculture were intended for *future economic development.* Yet increasingly, farmers need access to water from the reservations to remain competitive and profitable by:

- Increasing water supply reliability;
- Adapting to changing climate and hydrologic conditions;
- Mitigating effects of prolonged dry and drought conditions in order to remain competitive and sustain profitable operations; as well as to
- Raising higher value crops; and
- Providing water for increased production on additional arable soils.

Historically, water storage reservoirs have been instrumental in compensating for differences in timing between available water and when the water is needed for agriculture, human health and hygiene, and other purposes. Elaborate systems for administering, storing, distributing and managing water supplies developed around what were considered representative or sufficiently long periods of data record that would, in theory, capture the range of hydrologic variability in a system. Yet greater variability observed in timing, quantity and intensity of seasonal hydrographs compared to historic records contributes to reduced water supply reliability that adversely impacts agriculture more so than other water use sectors.

A major factor reducing reliability is differences between actual water availability (e.g., timing and quantity) and historic estimates of availability. For example:

(a) Differences in timing of defined irrigation seasons compared to when water may actually be available and when crops begin to need additional water;
(b) Timing and quantity of water allocations, as determined from historical data and methods, do not correspond with actual water availability; and
(c) Flow timing and quantity for prescribed hydrographs as well as instream flow determinations are increasingly misaligned with actual streamflow and climate conditions.

Changing variability in climate and hydrology highlight the critical need for additional multipurpose reservoirs to store water when it is available and can be accessed, so that it can be used for beneficial use later in the year.

Since the reservations were approved, important changes have occurred in Oregon that support and improve the likelihood of completing water storage projects, for instance:

- New public and private programs for planning and technical assistance as well as funding for water resources projects;
- Completion of biological opinions and conservation plans for anadromous fish;
- Recent severe to extreme drought following more than a decade of prevailing dry conditions have highlighted the need for additional capacity to store water for multiple purposes; and

- Increased capacity at ODA to inform or remind agricultural communities about their reservations of unappropriated water, and provide assistance to water users on water resources needs.

The 20-year extensions of reservation terms would provide agricultural water users with certainty and time to advance and complete vital multipurpose water resources projects.

Effects of Changes in Climate and Hydrology on Agricultural

ODA is developing a model to estimate current and future agricultural demands that would support requests to extend the terms of the reservations of unappropriated water. However, redetermination of the appropriate procedure to follow in applying to extend the reservation terms resulted in a significant advance in the application deadline date for the Burnt River reservations from the end of 2015 to September 15, 2015. Thus, in lieu of analytical results, ODA drew from the peer- reviewed literature to estimate effects of increasing temperatures over the 21st Century on crop water demand. Similarly, the original application to reserve water in the Burnt River, agency reports and other related documents were reviewed for economic studies.

The agricultural water demand model, being developed by ODA, distinguishes total crop water demand, which includes effective precipitation, from the irrigation demand portion. It is useful to understand, however, since summer rainfall in semi-arid to arid regions, like Eastern Oregon, accounts for such a small fraction of crop water demand (i.e., evapotranspiration) during most of the growing season, it is accepted practice to use evapotranspiration as an approximation for irrigation demand (Clint Schock; personal communications, May 2015). In addition, even though summer precipitation may already be low in semi-arid to arid regions, climate models predict that summer precipitation will decrease an average of 14% by the 2080s (OCCRI 2010).

Agriculture is an inherently climate sensitive business, and as the climate warms, water availability, quality and cost will be key limiting factors for agricultural in determining how much crop water demand may be met with available supplies (OCCRI 2010). Increasing temperatures will drive crop water to demand to increase over the century. Predictions of temperature increases over the 21st Century are influenced by: (1) the climate model used in prediction; and (2) the climate scenario simulated. The climate scenarios represent different levels of change in global concentrations of greenhouse gases concentrations at least through 2100. OCCRI climate simulations (2010) predict mean annual temperature in Oregon will increase 3-10 degrees Fahrenheit (deg F) by 2100, depending on whether the scenario involves stabilizing greenhouse gas emissions (i.e., 3 deg F increase), or a scenario of continued increases in greenhouse gas concentrations (i.e., 10 deg F increase).

Predicted temperature increases for Oregon are very similar to predicted increases in global mean temperature. Although policies have been implemented to reduce greenhouse gas emissions in different countries, recent warming projections show that global mean annual temperature is on track for increases at the upper end of the predicted temperature range; an approximate 10 deg F increase by 2100 (England et al. 2015).

In general, the relationship between temperature and crop water demand, or evapotranspiration (ET) is, for each one deg F increase in temperature, ET increases 5%, all other factors remaining equal (Wagoner and Revelle 1990; OCCRI 2010). Accordingly, crop water demand may increase by the end of the 21st Century 15% under the stabilized greenhouse gas emissions scenario, and 50% under the increasing greenhouse gas concentrations scenario, all other factors remaining equal.

Yet, climate models show that not all other factors will remain equal. Global climate model projections consistently show regional warming will be highest in summer, yet summer precipitation will decrease on average 14% by the 2080s (OCCRI 2010). ET is influenced more by maximum daily temperature during the growing season (e.g., June, July and August) than by mean annual temperature, which is typically lower than maximum daily summertime temperature.

Relatively high uncertainty is associated with climate model predictions on daily scales, however, recent OCCRI (Kathie Dello; personal communications, September 2015) updates in predicted changes in average monthly temperatures (deg F) show that for warmer months during the growing season, predicted increases are:

- June 4 - 8
- July 5 – 9
- August 6 – 10
- September 6 - 10

Based on the magnitude of predicted temperatures, it is reasonable to expect increases in ET in excess of 15%-50% by 2100.

ODA is especially concerned about potential effects of temperature and precipitation changes on agriculture in the second half of the 21st Century, because greater warmer is predicted to occur in the latter half of the Century (IPCC 2013). It is vitally important that agriculture has sufficient reliable water supplies to mitigate effects of more intense drought. Research shows that internal climate variability will alternately enhance and mask effects of climate change (Melillo et. al. 2014; IPCC 2014). The extended dry and drought period in the Western U.S. since 2000 has been characterized by record setting high temperatures on daily, monthly and annual scales, as well as record durations of high daytime temperatures (NOAA 2015; https://www.ncdc.noaa.gov/sotc/national/201508). Although contributions of climate change to recent drought conditions in Oregon have not been investigated, Williams and others (2015) used a unique suite of datasets and methods to quantify effects of anthropogenic climate change on the drought in

California. Their results show climate change contributed 8-27% to the drought in 2012-2014 and 5-18% for 2014. Conditions in the second half of the 21st Century are predicted to be warmer and drier than the warm, dry conditions experienced 2000 (IPCC 2013).

(3) Amount of water proposed to be reserved and evidence of water availability:

The Oregon Water Resources Department (OWRD) conducted a water availability analysis when ODA first requested that unappropriated water of the Burnt River be reserved for agriculture. OWRD determined that two thousand (2,000) acre-feet of unappropriated water of the Burnt River and tributaries were available to be reserved for storage in a multipurpose reservoir to be constructed in the future (OAR 690-509-0130). The Water Resources Commission approved the request for the reservation

(4) Sources of water to supply the reservation:

The sources of water to supply the reservation are the natural or direct flows of the Burnt River and tributaries. The water availability analysis showed that tributary streams have some available water during October through June.

(5) If the reservation is to be provided by existing storage, agreement to the proposed reservation by the party in charge of disposition of the stored water or evidence of authorization or allocation consistent with the proposed reservation:

No reservation of existing storage is proposed.

(6) If the proposal is to reserve water to be stored in a new facility, evidence that sites for the storage facility can be developed and that water is available for storage.

Water availability

The Oregon Water Resources Department (OWRD) conducted a water availability analysis when ODA first requested the reservation on the Burnt River [see (3)]. OWRD determined that two thousand hundred (2,000) acre-feet of unappropriated water of the Burnt River and tributaries were available to be reserved for storage, and the Water Resources Commission approved the reservation.

Potential Storage Sites

In preparation for the original application to reserve unappropriated water in the Burnt River and tributaries, ODA reviewed data on potential reservoir sites from several sources including, OWRD, U.S. Bureau of Reclamation, Soil Conservation Service, Corps of Engineers, Soil and Water Conservation Districts and inventories provided by irrigation districts in the Burnt River basin and consultants.

A list of potential reservoirs sites was developed, but was not intended to limit where reservations of water may be stored. Other sites may be determined more feasible during the term of the reservations. The Dark Canyon Reservoir site on the Burnt River was identified as a potential site to store 12,000 acre-feet.

Water Supply Development Reports and Related Activities

(a) The U.S. Bureau of Reclamation conducted an appraisal study on potential storage sites in the Powder River Basin, and summarized results in the report, Eastern Oregon Water Storage Appraisal Study for Burnt River, Powder River, and Pine Creek Basins (2011).

(b) U.S. Bureau of Reclamation conducted a literature review of potential storage opportunities in the Powder Basin, and summarized the results in 2008 in, Literature Review of the Powder Basin, Oregon Stream Systems, Water Storage, and Stream Health as They Pertain to the Basin and Water Science.

(c) The Baker County Commissioners established the Powder Basin Water and Stream Health (WASH) Steering Committee to identify opportunities for storage projects that would provide both instream (e.g., fish, water quality, and recreation) and out-of-stream (e.g., irrigation and municipal supply) benefits. The WASH committee secured funding in 2007 from the U.S. Bureau of Reclamation Snake River Area Office (Boise, Idaho) to conduct the Ecologically Adaptive Water Management Program for the Powder River, Burnt River, and Pine Creek Subbasins (2011), an appraisal level study.

(d) In 2014 and 2015, ODA met with water users in the Burnt River Basin to talk about the reservations in the basin, and how they may be used to help meet water supply needs in the Burnt River Basin, when the water is available. More than 20 potential water projects were identified during a meeting in Baker City in August 2015, including new surface and subsurface storage facilities; enlarging existing dam/reservoir facilities; applying water to high meadows to enhance aquifer recharge; and construction of "beaver dams" to slow flows and allow more recharge to subsurface soils and groundwater. Water users and others in the community express substantial interest and demonstrate momentum and organization to continue to work toward ultimately securing project funding and realizing operational facilities.

Since the reservations were requested in the early 1990's, changes in Oregon have improved chances of securing funding water storage projects, for example:

- New public and private programs for planning, technical assistance and funding of water resources projects;
- Biological opinions and conservation plans completed for anadromous fish;
- Severe to extreme drought following more than a decade of prevailing dry conditions, and effects of climate change have highlighted the need for additional storage to help manage more intense droughts and floods;

- Increased capacity at ODA to inform or remind agricultural communities about their reservations of unappropriated water, created high interest in and support for extending terms of the reservations.

The 20-year extensions of reservation terms would provide agricultural water users time to advance and complete vital multipurpose water resources projects.

(7) Approximate season(s) of use:

The approximate seasons of proposed use are the irrigation season, and year round for all other proposed uses.

(8) Approximate location(s) of use:

The proposed uses will occur in the Burnt River basin in Baker County. Irrigation may occur as supplemental to supply existing water rights, or to fulfill the duty of existing water rights. The water may also be used irrigate new arable lands not currently irrigated.

Other potential uses of water from the reservation may be in response to expansion of existing public and private water delivery systems. As agricultural land development occurs in the Burnt River Basin, so will water demands of related services and purposes, for example, food processing.

(9) Evidence that the proposal is compatible with overall basin program goals and policies:

The Burnt River reservation is compatible with the existing basin program goals and policies. For example, to summarize Classifications in OAR 690-509-0000, maximizing economic development, attaining the highest and best uses of waters of the Powder Basin, and achieving an integrated and coordinated program for the benefit of the state as a whole *will be furthered* through using Powder Basin water *only* for purposes including livestock, irrigation, recreation, wildlife, and fish life uses.

(10) Identification of affected local governments and copies of letters notifying each local government of the intent to file a reservation request accompanied by a description of the reservation proposal:

The following list of affected local governments were notified by letter on October 9, 2015 via the U.S. Postal Service mail and email, where possible, on October 8, 2015 of the Oregon Department of Agriculture's intent to file applications to request extensions of the terms of the three reservations. The notification letters to affected local governments also described the reservation proposals.

Affected Local Government	Address
Baker County	1995 3rd Street; Baker City, OR 97814
City of Sumpter	P.O. Box 68, 240 N Mill Street; Sumpter, OR 97877
City of Unity	1995 3rd Street; Baker City, OR 97814
Baker County Soil and Water Conservation Districts	3990 Midway Drive; Baker City, OR 97814
Oregon Water Resources Congress	795 Winter Street NE; Salem, OR 97301
City of Baker City	P.O. Box 650, 1655 First Street, Baker City, OR 97814
City of Greenhorn	1995 3rd Street; Baker City, OR 97814
City of Haines	P.O. Box 208, 819 Front Street, Haines, OR 97833
City of Halfway	P.O. Box 738; Halfway, OR 97834-0738
City of Huntington, OR	P.O. Box 369, 50 E Adams; Huntington, OR 97907
City of Richland	P.O Box 266, 89 Main Street; Richland, OR 97870

(11) Intended types of use(s) of the reserved water:

The main purpose of the reservation is for irrigation [OAR 690-300 (26)] including:
(a) To increase reliability of receiving the full duty of irrigators' water rights;
(b) Supplement existing water rights for irrigation of lands within the basin;
(c) Mitigate impacts of and increase resilience to prolonged dry and drought conditions;
(d) Adaptation to changing patterns in hydrology and climate, including effects of increasing temperatures on crop water consumption; and
(e) Provide water to irrigate additional lands in the basin.

Secondary purposes of the Burnt River reservation include:

- Aquatic life water use;
- Recreation, for example fishing, swimming and other activities;
- Wildlife water use [OAR 690-300 (3), (43) and (62)].

(12) Expected duration of the reservation prior to application for use of the water:

It is expected that landowners will apply to ODA to access the Burnt River reservation as soon as practicable. As mentioned in (6), important changes in Oregon have occurred since the reservations were granted in the early 1990's that improved the likelihood of realizing new or enlarging water storage projects. The 20-year extension of the reservation term would provide agricultural water users with certainty and time to advance and complete vital multipurpose water resources projects.

(13) Economic benefits provided:

In general, more steady and reliable irrigation water supplies will improve profits for farmers and ranchers, which in turn, enhance local and regional economies. The 2010 Baker County Natural Resources Plan indicates that agriculture is an integral component of natural resource base and a major component of the economic base of Baker County (the County). The County's Assessor records show that the 6,688 farms in the County produced an estimated $61,540,000 gross farm income in 2010.

The U.S. Bureau of Reclamation estimated in the Dark Canyon Division, Burnt River Project, Oregon Wrap Up Report of July 1971 that there were approximately 885 acres in the Burnt River Basin that could be irrigated but currently were not. Oregon State University (OSU) Extension Service estimated in economic impacts in 1991 dollars of added irrigation water supplies on hay production in the Burnt River Basin. The 1991 OSU Extension Service estimates were updated to values in 2015 dollars, compared to actual 2015 market values, and summarized in tables 1 (Sources: Dave Manuel, http://www.davemanuel.com/inflation-calculator.php; USDA Agricultural Market Service (AMS), Sept 4, 2015, http://www.ams.usda.gov/mnreports/ko_ls753.txt). In the original OSU Extension economic assessment, it was assumed that the same ratio of alfalfa and meadow hay was used when irrigation water was applied to the 885 acres of irrigable land that were currently not irrigated.

In addition, greater security in irrigation water supplies also contributes to:

(1) Retaining local ownership of agricultural lands, and that translates to dollars retained and circulated more in local and regional economies; and
(2) Supporting employment and job creation on agricultural lands and in the community.

Table 1. Economic Impact of Irrigation of 885 Additional Acres

	Update of Price (2015 $)	**Actual 2015 Market Value (2015 $/Ton, T)**	**Production (per Acre, Ac, or Animal Unit Month, AUM)**	**Acres**	**Production (Tons, T)**	**Value (2015 $)**
Alfalfa (T)	146.73	140-200	3.5 T/Ac	313	1095	160,669
Meadow Hay (T)	114.44	30-225	2 T/Ac	572	1144	130,919
Aftermath Grazing (AUM)	17.61	Not Available	1 AUM/Ac	885	885 AUM	15,576
Total						307,164

Estimated annual economic benefits of increased agricultural production are substantial for the small basin. In addition, it is expected that land values would increase due to many improvements made.

Estimated economic benefits of increased agricultural production alone total nearly a million dollars annually for the Burnt River Basin. Additional economic benefits would accrue from recreation facilities that the U.S. Forest Service, county or other entity might develop. The proposed facilities would link with and expand existing recreational opportunities in the area, such as fishing, hunting, picnicking; horseback riding; swimming; RV and tent camping and ATV excursions; and involved associated services, retail, and other related businesses. Recreation-related benefits would provide considerable positive economic benefits as well as potential employment opportunities to the small communities in the Burnt River Valley.

Since agriculture is an important component to the economy in Baker County will benefit from enhanced reliability of irrigation water supply that helps build robust agricultural operations that are resilient to adverse effects of prolong dry conditions and drought, and variations in hydrology and.

(14) Water sources alternatives:

Alternatives for new water supplies are limited in the Burnt River Basin. Live flows are not available, and groundwater is not a viable source for irrigation in the basin because the aquifers are of low porosity or are deep underground. In addition, based on OWRD's Water Rights Information System, many existing wells have potential for substantial interference with surface water supplies.
In general, landowners realize that stored water supplies alone may be insufficient to meet future crop water use in a warmer future [see (2)]. Water conservation, changes in tillage practices, and raising different crop types or more drought tolerant varieties are among options to consider in developing a long-range comprehensive water resources management strategy for farmers in the Burnt River Basin. Future solutions for profitable agriculture will likely involve a suite of components to create flexible, robust farm and ranch operations.

The size of irrigation districts and the range of crops that may be grown in a region influence cash-on-hand, ability to repay, and access to funds. Irrigation districts in the Burnt River Basin are often relatively small, and consequently unable to assume large debt for projects. Alfalfa and meadow hay are key crops raised in the Burnt River Basin. Climate and other conditions limit crop options for farmers. Expansion of agricultural production is more likely to result from increased demand for alfalfa or meadow hay, and that evolves more slowly. Given potential future demands for water as a consequence of increasing temperatures, meeting future crop water needs will need to include a suite of alternatives, including increased storage in multipurpose reservoirs and conservation.

Despite drought and economic challenges, irrigation districts, ditch companies and individual farmers have been involved in meetings with ODA, the Baker County Soil and Water Conservation Districts and other entities to create local organizational structure, build momentum, and partner with agencies and other groups to move forward with securing technical and funding resources to bring vital projects to fruition to address long-term water resources issues. The 20-year extensions of

reservation terms would provide agricultural water users with certainty and time to advance and complete vital multipurpose water resources projects.

(15) Evidence that the proposal does not conflict with Scenic Waterway flow requirements:

No scenic waterway designations exist on and no nominations for scenic waterway designation have been made for the Burnt River system. River reaches were nominated for three rivers for the 2014 Scenic Waterway Assessment; the Chetco, Mollala and Grande Ronde rivers. No nominations were made for the Burnt River Basin.

(16) Evidence that the proposed reservation and water use(s) will promote the beneficial use of the water without waste:

The main beneficial use of the reservation is for irrigation [OAR 690-300 (26)], and secondary uses of the Burnt River reservation include water for: (a) Aquatic life; (b) Recreation; (c) Wildlife; and potentially some (d) Groundwater recharge [OAR 690-300 (3), (43), (62) and (4)].

Additional water storage is an important component of a comprehensive water manage strategy that may include improved conservation that will provide irrigators greater certainty in times of extended dry conditions and drought, and support adaptation to changing climate and hydrologic conditions.

(17) Potential adverse impacts on water resources:

No measurable adverse impacts have been identified to water resources by development and use of new storage facilities in the Burnt River Subbasin. The U.S. Bureau of Reclamation did not identify any particular adverse impacts in The Powder Basin Literature Review (2008).

Feasibility level assessments will identify any new and clarify existing issues. Plus, the process of applying for access to the reservation of unappropriated water requires consultation with agencies to resolve potential issues.

References

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Request for an Extension of Reservation of Water for Economic Development
for the South Fork Burnt River Reservation

DATE: September 15, 2015

(1) Agency Name and Address:

Oregon Department of Agriculture
635 Capitol Street NE
Salem, OR 97301

Contact: Margaret Matter, Water Resources Specialist
Phone: (503) 986-4561
Email: mmatter@oda.state.or.us

Request on Behalf of:
Burnt River Irrigation District
HCR 86, Box 151
Hereford, OR 97837

Contact: Wes Morgan, District Manager
Phone: 541-519-4665 (Cell)
Email: morganwc@q.com

(2) Purpose of the reservation:

The Burnt River Irrigation District (BRID, or the District) proposes to store the reserved water from natural flow in a multipurpose storage facility to be constructed and identified as "Hardman Reservoir, " and will apply water for beneficial use in Baker County.

The main purpose of the reservation is for irrigation [OAR 690-300 (26)] including:
(a) To increase reliability of receiving the full duty of the District's water right;
(b) Supplement existing water rights for irrigation of lands within the District;
(c) Mitigate impacts of and increase resilience to prolonged dry and drought conditions;
(d) Adaptation to changing patterns in hydrology and climate, including effects of increasing temperatures on crop water consumption; and
(e) Provide water to irrigate additional lands within the District.

Secondary purposes of the South Fork Burnt River reservation include:

- Aquatic life water use;
- Recreation, for example fishing, swimming and other activities;
- Wildlife water use [OAR 690-300 (3), (43) and (62)].

More reliable sources of irrigation supplies will contribute to:

- Value added agriculture, strengthening economies from local to state scales;
- Protection and development of prime agricultural land; and
- Retaining prime agricultural lands in local ownership.

Maintaining local ownership, even within Oregon, contributes more to the benefit of the state.

Development of the South Fork Burnt River Reservation

The Hardman Reservoir site has long been considered a viable reservoir site to increase agricultural production and economies of the Burnt River Basin though providing water to:

- Increase reliability of irrigation water supplies;
- Raise higher value crops;
- Supplement existing water rights for irrigation;
- Provide water to put additional irrigable land into production.

The reservations of unappropriated water for agriculture were intended for *future economic development*. Yet increasingly, farmers need access to water from the reservations to remain competitive and profitable by:

- Increasing water supply reliability;
- Adapting to changing climate and hydrologic conditions;
- Mitigating effects of prolonged dry and drought conditions in order to remain competitive and sustain profitable operations; as well as to
- Raising higher value crops; and
- Providing water for increased production on additional arable soils.

Historically, water storage reservoirs have been instrumental in compensating for differences in timing between available water and when the water is needed for agriculture, human health and hygiene, and other purposes. Elaborate systems for administering, storing, distributing and managing water supplies developed around what were considered representative or sufficiently long periods of data record that would, in theory, capture the range of hydrologic variability in a system. Yet greater variability observed in timing, quantity and intensity of seasonal hydrographs compared to historic records contributes to reduced water supply reliability that adversely impacts agriculture more so than other water use sectors.

A major factor reducing reliability is differences between actual water availability (e.g., timing and quantity) and historic estimates of availability. For example:

(a) Differences in timing of defined irrigation seasons compared to when water may actually be available and when crops begin to need additional water;
(b) Timing and quantity of water allocations, as determined from historical data and methods, do not correspond with actual water availability; and

(c) Flow timing and quantity for prescribed hydrographs as well as instream flow determinations are increasingly misaligned with actual streamflow and climate conditions.

Changing variability in climate and hydrology highlight the critical need for additional multipurpose reservoirs to store water when it is available and can be accessed, so that it can be used for beneficial use later in the year.

Reduced Reliability in Irrigation Water Supply

Over the past 21 years, reliability of the Burnt River Irrigation District's duty has decreased. Water use recorded in the OWRD Water Use Reporting system between 1994 to 2014, ranged between 1.7 and 2.7 acre-feet and averaged 2.3 acre-feet, or about 50% of their full duty, 4.5 acre-feet. In general, duty is the amount of irrigation water required to raise crops in particular soil conditions to attain the greatest productive values and greatest yield of high-quality crops (Powers and Lewis 1941). Thus, when the actual amount of water provided is less than the duty, the deficit affects:

- Agricultural production costs;
- Amount of acreage that can be irrigated for production;
- Agricultural investments and profits; local and regional economies, and food security.

Occasional reductions in crop production and subsequent decreases in annual income are among the risks in the business of agriculture. But prolonged periods of reduced reliability in water supplies increases uncertainty and adversely affect business viability. For example, if a 50% reduction in irrigation water supply may be equated to a 50% reduction in crop production, it would follow that income may also decrease by 50%. The longer that periods of reduced irrigation water supplies and income persist, the more difficult it becomes to sustain agricultural operations.

Development of the South Fork Burnt River Reservation

The proposed Hardman Reservoir has been considered a feasible site since at least the mid-1960s (USBR 1965), and results of investigations into potential recreational opportunities of the proposed reservoir are summarized in the report, Project Report on the Recreation Aspects of the Proposed Dark Canyon and Hardman Reservoirs Dark Canyon Division Burnt River Project, Oregon (April 1967). The U.S. Department of Interior, in cooperation with BRID, conducted an engineering study in 1971 for the Dark Canyon Division, Burnt River Project, including the proposed Hardman Reservoir site (USBR 1971). Results showed that Hardman reservoir would serve multiple purposes, and benefits equaled or exceeded costs (USBR 1971). At that time, benefit/cost analysis did not include benefits often considered today in estimating benefits and costs of water resources projects, for instance social, cultural and environmental benefits on larger spatial and temporal scales (e.g., local and regional scales, and long-term drought resilience and climate adaptation).

In the early 1990s, BRID worked with ODA to request the reservation of unappropriated water in the South Fork Burnt River to be stored in the proposed multipurpose Hardman Reservoir. A Fatal Flaw Analysis (Van Staveren 1997) was conducted for proposed reservoir sites including Hardman Reservoir on the South Fork Burnt River. The analysis found potential wetland mitigation as the most significant issue associated with the proposed project. BRID will work with the U.S. Forest Service in wetland mitigation actions.

The Baker County Commissioners established the Powder Basin Water and Stream Health (WASH) Steering Committee, with seed money from BRID, to identify opportunities for storage projects that would enhance the County's economy through accrued in-stream and out-of-stream benefits. The WASH committee secured funding in 2007 from the U.S. Bureau of Reclamation Snake River Area Office (Boise, Idaho) to conduct an appraisal level study for the Powder River, Burnt River, and Pine Creek Subbasins (Brown et al. 2011).

Although BRID persisted in conducting necessary technical and feasibility studies for securing funding for the proposed Hardman Reservoir, the 1990s to early 2000s encompassed a period when several anadromous fish species were listed as threatened or endangered, and that lacked political and funding support for water storage projects. Since that time, important changes have occurred in Oregon that support and improve the likelihood of completing water storage projects, for instance:

- New public and private programs for planning and technical assistance as well as funding for water resources projects;
- Completion of biological opinions and conservation plans for anadromous fish;
- Recent severe to extreme drought following more than a decade of prevailing dry conditions have highlighted the need for additional capacity to store water for multiple purposes; and
- Increased capacity at ODA to inform or remind agricultural communities about their reservations of unappropriated water, and provide assistance to water users on water resources needs.

The 20-year extensions of reservation terms would provide agricultural water users with certainty and time to advance and complete vital multipurpose water resources projects.

Effects of Changes in Climate and Hydrology on Agricultural

ODA is developing a model to estimate current and future agricultural demands that would support requests to extend the terms of the reservations of unappropriated water. However, redetermination of the appropriate procedure to follow in applying to extend the reservation terms resulted in a significant advance in the application deadline date for the Burnt River reservations from the end of 2015 to September 15, 2015. Thus, in lieu of analytical results, ODA drew from the peer- reviewed

literature to estimate effects of increasing temperatures over the 21st Century on crop water demand. Similarly, the original application to reserve water in the South Fork Burnt River for BRID, agency reports and other related documents were reviewed for economic studies.

The agricultural water demand model distinguishes total crop water demand, which includes effective precipitation, from the irrigation demand portion. It is useful to understand, however, since summer rainfall in semi-arid to arid regions, like Eastern Oregon, accounts for such a small fraction of crop water demand (i.e., evapotranspiration) during most of the growing season, it is accepted practice to use evapotranspiration as an approximation for irrigation demand (Clint Schock; personal communications, May 2015). In addition, even though summer precipitation may already be low in semi-arid to arid regions, climate models predict that summer precipitation will decrease an average of 14% by the 2080s (OCCRI 2010).

Agriculture is an inherently climate sensitive business, and as the climate warms, water availability, quality and cost will be key limiting factors for agricultural in determining how much crop water demand may be met with available supplies (OCCRI 2010). Increasing temperatures will drive crop water to demand to increase over the century. Predictions of temperature increases over the 21st Century are influenced by: (1) the climate model used in prediction; and (2) the climate scenario simulated. The climate scenarios represent different levels of change in global concentrations of greenhouse gases concentrations over the 21st Century. OCCRI (2010) climate simulations predict mean annual temperature in Oregon will increase 3-10 degrees Fahrenheit (deg F) by 2100, depending on whether the scenario involves stabilizing greenhouse gas emissions (i.e., 3 deg F increase), or a scenario of continued increases in greenhouse gas concentrations (i.e., 10 deg F increase).

Predicted temperature increases for Oregon are very similar to predicted global mean temperature increases. Although policies have been implemented to reduce greenhouse gas emissions in different countries, recent warming projections show that global mean annual temperature is on track for increases at the upper end of the predicted temperature range; an approximate 10 deg F increase by 2100 (England et al. 2015).

In general, the relationship between temperature and crop water demand, or evapotranspiration (ET) is, for each one deg F increase in temperature, ET increases 5%, all other factors remaining equal (Wagoner and Revelle 1990; OCCRI 2010). Accordingly, crop water demand may increase by the end of the 21st Century 15% under the stabilized greenhouse gas emissions scenario, and 50% under the increasing greenhouse gas concentrations scenario, all other factors remaining equal.

Yet, climate models show that not all other factors will remain equal. Global climate model projections consistently show regional warming will be highest in summer, yet summer precipitation will decrease on average 14% by the 2080s (OCCRI 2010). ET is influenced more by maximum daily temperature during the growing season (e.g., June, July and August) than by mean annual temperature, which is typically lower than maximum daily summertime temperature.

Relatively high uncertainty is associated with climate model predictions on daily scales, however, recent OCCRI (Kathie Dello; personal communications, September 2015) updates in predicted changes in average monthly temperatures (deg F) show that for warmer months during the growing season, predicted increases are:

- June 4 - 8
- July 5 – 9
- August 6 – 10
- September 6 - 10

Given the results, it is reasonable to expect increases in ET in excess of 15%-50% by 2100.

ODA is especially concerned about potential effects of temperature and precipitation changes on agriculture in the second half of the 21st Century, because greater warmer is predicted to occur in the latter half of the Century (IPCC 2013). It is vitally important that agriculture has sufficient reliable water supplies to mitigate effects of more intense drought. Research shows that internal climate variability will alternately enhance and mask effects of climate change (Melillo et. al. 2014; IPCC 2014). The extended dry and drought period in the Western U.S. since 2000 has been characterized by record setting high temperatures on daily, monthly and annual scales, as well as record durations of high daytime temperatures (NOAA 2015; https://www.ncdc.noaa.gov/sotc/national/201508). Although contributions of climate change to recent drought conditions in Oregon have not been investigated, Williams and others (2015) used a unique suite of datasets and methods to quantify effects of anthropogenic climate change on the drought in California. Their results show climate change contributed 8-27% to the drought in 2012-2014 and 5-18% for 2014. Conditions in the second half of the 21st Century are predicted to be warmer and drier than the warm, dry conditions experienced 2000 (IPCC 2013).

Effects of increased temperatures in the second half of the Century on crop water use in the Burnt River Basin may be approximated by considering that BRID irrigates about 20,000 acres and if farmers received their full duty, 4.5 acre-feet per, they would use 90,000 acre-feet to irrigate crops in a season. By the 2100, farmers may need at least 15-50% (i.e., 13,500-45,000 acre-feet) more water to raise the same crops on the same irrigated acreage as they do today. That equates to about 0.75- 2.5 times the South Fork Burnt River reservation of 17,800 acre-feet. The proposed Hardman Reservoir would be a critical component in a portfolio of options for BRID to meet future crop water use demands and remain profitable in a warmer future.

(3) Amount of water proposed to be reserved and evidence of water availability:

The Oregon Water Resources Department (OWRD) conducted a water availability analysis when ODA first requested, on behalf of Burnt River Irrigation District (BRID), that unappropriated water of the South Fork Burnt River be reserved for agriculture. OWRD determined that seventeen thousand eight hundred (17,800) acre-feet of unappropriated water of the South Fork Burnt River and tributaries upstream of Unity Reservoir were available to be reserved for storage by the Burnt River Irrigation District in a multipurpose reservoir to be constructed in the future (OAR 690-509-0110). The Water Resources Commission approved the request for the reservation

(4) Sources of water to supply the reservation:

The reservation supply sources are the South Fork Burnt River and tributaries, including Barney Creek and Amelia Creek, upstream of Unity Reservoir.

(5) If the reservation is to be provided by existing storage, agreement to the proposed reservation by the party in charge of disposition of the stored water or evidence of authorization or allocation consistent with the proposed reservation:

The reservation is not to be provided by existing storage.

(6) If the proposal is to reserve water to be stored in a new facility, evidence that sites for the storage facility can be developed and that water is available for storage.

Water availability

The Oregon Water Resources Department (OWRD) conducted a water availability analysis when ODA first requested the reservation on the South Fork Burnt River on behalf of BRID [see (3)]. OWRD determined that seventeen thousand eight hundred (17,800) acre-feet of unappropriated water of the South Fork Burnt River and tributaries upstream of Unity Reservoir were available to be reserved for storage, and the Water Resources Commission approved the reservation.

Approximate Location of the Proposed Reservoir Site

The proposed South Fork Burnt River reservoir site is at Township 13 South, Range 36 East, Section 22, the Southeast corner. This is an approximate legal description as the site is located close to where four sections meet. Tailwater at full pool will back upstream about 0.20 mile from the gaging station on the South Fork Burnt River above Barney Creek (13270800).

Land Ownership of Reservoir Site

Burnt River Irrigation District owns 161 acres of the proposed dam site, or approximately 63% of the land necessary for development. An additional 31 acres

are privately owned. The landowner indicated in earlier discussions that they supported development of the land, and BRID anticipates their continued support. Sixty-five (65) acres of the proposed site are within the Wallowa-Whitman National Forest. The U.S. Forest Service (USFS) estimated in early discussions, that they would withdraw approximately 200 acres of USFS land to protect the proposed project area for development of the reservoir. Upon completion of the reservoir, the amount of land withdrawn may either be reduced to accommodate actual need, or increased to support surrounding recreational opportunities. Details of potential recreation facilities would likely develop once the proposed Hardman Reservoir plans are updated.

The proposed site of Hardman Reservoir is outside any city limits and unconstrained by city or urban growth boundary requirements. Baker County zoned 75% of the land of the proposed reservoir site in an Exclusive Farm Use Zone, and 25% is forest use. A reservoir is consistent with both County zoning and forest resource plans.

(7) Approximate season(s) of use:

Water stored in the proposed multipurpose reservoir will be used for irrigation during the BRID irrigation season, and other releases may be made outside of the irrigation season to augment flow regimes determined necessary to support fish species, and for recreation uses.

(8) Approximate location(s) of use:

Water stored in the reservoir may provide supplemental irrigation for more than 4,475 acres in the irrigation district, and a full supply to irrigate an additional 855 acres within irrigation district boundaries, according to the U.S. Bureau of Reclamation report. Some stored water may also be released for instream benefits.

(9) Evidence that the proposal is compatible with overall basin program goals and policies:

The proposed reservation and Hardman Reservoir project are compatible with the existing basin program goals and policies. For example, to summarize Classifications in OAR 690-509-0000, maximizing economic development, attaining the highest and best uses of waters of the Powder Basin, and achieving an integrated and coordinated program for the benefit of the state as a whole *will be furthered* through using Powder Basin water *only* for purposes including livestock, irrigation, recreation, wildlife, and fish life uses. The Basin Program makes no exceptions for the South Fork Burnt River Basin. In addition, the proposed storage and use of water in Hardman Reservoir are consistent with the definition of, "multipurpose reservoir," provided in the Basin Plan [OAR 690-509-0100 (2)].

(10) Identification of affected local governments and copies of letters notifying each local government of the intent to file a reservation request accompanied by a description of the reservation proposal:

The following list of affected local governments were notified by letter on October 9, 2015 via the U.S. Postal Service mail and email, where possible, on October 8, 2015 of the Oregon Department of Agriculture's intent to file applications to request extensions of the terms of the three reservations. The notification letters to affected local governments also described the reservation proposals.

Affected Local Government	Address
Baker County	1995 3rd Street; Baker City, OR 97814
City of Sumpter	P.O. Box 68, 240 N Mill Street; Sumpter, OR 97877
City of Unity	1995 3rd Street; Baker City, OR 97814
Baker County Soil and Water Conservation Districts	3990 Midway Drive; Baker City, OR 97814
Oregon Water Resources Congress	795 Winter Street NE; Salem, OR 97301
City of Baker City	P.O. Box 650, 1655 First Street, Baker City, OR 97814
City of Greenhorn	1995 3rd Street; Baker City, OR 97814
City of Haines	P.O. Box 208, 819 Front Street, Haines, OR 97833
City of Halfway	P.O. Box 738; Halfway, OR 97834-0738
City of Huntington, OR	P.O. Box 369, 50 E Adams; Huntington, OR 97907
City of Richland	P.O Box 266, 89 Main Street; Richland, OR 97870

(11) Intended types of use(s) of the reserved water:

The reserved water is intended primarily for irrigation [OAR 690-300 (26)] uses that include:

(a) Enhance reliability of the duty entitled by the BRID water right for irrigation;
(b) Supplement the district's existing water right for irrigation of lands within the district; and
(c) Provide water other irrigable lands within the irrigation district that are currently not irrigated.

Secondary uses of the South Fork Burnt River reservation include:

(a) Aquatic life water use;
(b) Recreation, for example fishing, swimming and other activities;
(c) Wildlife water use, and
(d) Groundwater recharge [OAR 690-300 (3), (43), (62) and (4)].

(12) Expected duration of the reservation prior to application for use of the water:

BRID expects to apply to ODA to access the South Fork Burnt River reservation as soon as practicable. As mentioned in (6), important changes in Oregon have occurred since the reservations were granted in the early 1990's that improved the likelihood of realizing new or enlarging water storage projects. The 20-year extension of the reservation term would provide agricultural water users with certainty and time to advance and complete vital multipurpose water resources projects.

(13) Economic benefits provided:

In general, sufficient, reliable water supplies for irrigation improve profits for farmers and ranchers, which in turn, enhance local and regional economies. The 2010 Baker County Natural Resources Plan indicates that agriculture is an integral component of the natural resource base and a major component of the economic base of Baker County (the County). The County's Assessor records show that the 6,688 farms in the County produced an estimated $61,540,000 gross farm income in 2010.

The U.S. Bureau of Reclamation estimated in the Dark Canyon Division, Burnt River Project, Oregon Wrap Up Report of July 1971 that there were approximately 885 acres in the Burnt River Basin that could be irrigated but currently were not. An additional 1,700 acres were identified as "exchange areas" that could receive water from the proposed Hardman project to extend irrigation for a full season. Oregon State University (OSU) Extension Service estimated economic benefits in 1991 dollars of added irrigation water supplies on hay production in the Burnt River Basin. The 1991 OSU Extension Service estimates were adjusted for inflation to values in 2015 dollars; compared to actual 2015 market values, and summarized in tables 1 and 2 (Sources: Dave Manuel, http://www.davemanuel.com/inflation-calculator.php; USDA Agricultural Market Service (AMS), Sept 4, 2015, http://www.ams.usda.gov/mnreports/ko_ls753.txt). It was assumed in the original OSU Extension economic assessment that the same ratio of alfalfa to meadow hay used prior to Hardman Reservoir was also applied to the 885 acres of irrigable land. Market values for Eastern Oregon and the Columbia River Gorge areas were considered, but not market values of exported hay.

In addition economic benefits of increased hay production, greater security in irrigation water supplies also contributes to:

(1) Retaining local ownership of agricultural lands, and that translates to dollars retained and circulated more in local and regional economies;
(2) Supporting employment and job creation on agricultural lands and in the community; and
(3) Recreational business and employment opportunities associated with the proposed Hardman Reservoir.

Table 1. Economic Benefits of Irrigation of 885 Additional Acres

	Update of Price (2015 $)	Actual 2015 Market Value (2015 $/Ton, T)	Production (per Acre, Ac, or Animal Unit Month, AUM)	Acres	Production (Tons, T)	Value (2015 $)
Alfalfa (T)	146.73	140-200	3.5 T/Ac	313	1095	160,669
Meadow Hay (T)	114.44	30-225	2 T/Ac	572	1144	130,919
Aftermath Grazing (AUM)	17.61	Not Available	1 AUM/Ac	885	885 AUM	15,576
Total						307,164

Table 2. Economic Benefits of Full Irrigation of 1,700 "Exchange Area" Acres

	Update of Price (2015 $)	Actual 2015 Market Value (2015 $/Ton, T)	Production (per Acre, Ac, or Animal Unit Month, AUM)	Acres	Production (T, or AUM)	Value (2015 $)
Alfalfa (T)	146.73	140-200	3.5 T/Ac	602	2107	309,160
Meadow Hay (T)	114.44	30-225	2 T/Ac	1098	2196	251,310
Aftermath Grazing (AUM)	17.61	Not Available	1 AUM/Ac	1700	1700	29,937
Total						590,407

Estimated economic benefits of increased agricultural production alone total nearly a million dollars annually for the Burnt River Basin. Additional economic benefits would accrue from recreation facilities that the U.S. Forest Service, county or other entity might develop. The proposed facilities would link with and expand existing recreational opportunities in the area, such as fishing, hunting, picnicking; swimming; RV and tent camping and ATV excursions; and involved associated services, retail, and other related businesses. Recreation-related benefits would provide considerable positive economic benefits as well as potential employment opportunities to the small communities in the Burnt River Valley.

(14) Water sources alternatives:

Alternatives for new water supplies are limited in the South Fork Burnt River Basin. Live flows are not available, and groundwater is not a viable source for irrigation in the basin because the aquifers are of low porosity or are deep underground. In addition, based on OWRD's Water Rights Information System, many existing wells have potential for substantial interference with surface water supplies.

Typically landowners realize that stored water supplies alone may be insufficient to meet future crop water use in a warmer future [see (2)]. Water conservation, changes in tillage practices, and raising different crop types or more drought tolerant varieties are among options to consider in developing a long-range

comprehensive water resources management strategy for farmers in the South Fork Burnt River Basin. Future solutions for profitable agriculture will likely involve a suite of components to create flexible, robust farm and ranch operations.

The size of irrigation districts and the range of crops that may be grown in a region influence cash-on-hand, ability to repay, and access to funds. Irrigation districts in the Burnt River Basin are often relatively small, and consequently unable to assume large debt for projects. Alfalfa and meadow hay are key crops raised in the South Fork Burnt River Basin. Climate and other conditions limit crop options for farmers. Expansion of agricultural production is more likely to result from increased demand for alfalfa or meadow hay, and that evolves more slowly. Given potential future demands for water as a consequence of increasing temperatures, meeting future crop water needs will need to include a suite of alternatives, including increased storage in multipurpose reservoirs and conservation.

Despite drought and economic challenges, irrigation districts, ditch companies and individual farmers have been involved in meetings with ODA, the Baker County Soil and Water Conservation Districts and other entities to create local organizational structure, build momentum, and partner with agencies and other groups to move forward with securing technical and funding resources to bring vital projects to fruition to address long-term water resources issues. The 20-year extensions of reservation terms would provide agricultural water users with certainty and time to advance and complete vital multipurpose water resources projects.

(15) Evidence that the proposal does not conflict with Scenic Waterway flow requirements:

There are no scenic waterway designations in the reach of the South Fork Burnt River system where the project is proposed. The 2014 Scenic Waterway Assessment nominated sections of the Chetco, Mollala and Grande Ronde rivers, but no nominations were made for the Burnt River Basin.

(16) Evidence that the proposed reservation and water use(s) will promote the beneficial use of the water without waste:

The main beneficial use of the reservation is for irrigation [OAR 690-300 (26)], and secondary uses of the South Fork Burnt River reservation include water for: (a) Aquatic life; (b) Recreation; (c) Wildlife; and potentially some (d) Groundwater recharge [OAR 690-300 (3), (43), (62) and (4)].

Additional water storage is an important component of a more comprehensive water manage strategy that may include improved conservation that will provide BRID irrigators greater certainty in times of extended dry conditions and drought, and support adaptation to changing climate and hydrologic conditions.

(17) Potential adverse impacts on water resources:

A Fatal Flaw Analysis, by J. Van Staveren of Pacific Habitat Services, Inc. was conducted in 1997 for the South Fork Burnt River (i.e., proposed Hardman Reservoir) and the North Fork Burnt River. The analysis identified potential impacts to wetlands as an important impact to water resources, potentially requiring mitigating to meet requirements of Oregon Department of State Lands and Army Corps of Engineers.

During the application process to access the reservation of unappropriated water, BRID will consult with agencies to resolve issues and mitigate potential impacts.

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DIVISION 79

RESERVATIONS OF WATER FOR FUTURE

ECONOMIC DEVELOPMENT

690-079-0010

Purpose

(1) This Division establishes the procedure for state agencies to request reservations of water for future economic development pursuant to ORS 537.356.

(2) These rules shall apply to all reservation requests received by the Department after June 30, 1989. Notwithstanding the provisions of OAR 690-079-0040 to 690-079-0150, any reservation for which a request is received by the Department prior to June 5, 1992, and which is approved under these rules, shall receive a priority date of June 5, 1992, provided information that conforms to the provision of OAR 690-079-0060 are received by the Department prior to January 1, 1995. For purposes of this rule, the request for a reservation of water in the Willamette Basin for municipal purposes and the request for a reservation of water in the Willamette Basin for agricultural purposes, both of which were referenced in the Commission's Willamette Basin Plan as adopted on January 31, 1992, shall be considered requests received by the Department prior to June 5, 1992.

(3) This Division also establishes ~~temporary~~ procedures to consider applications to extend reservations **established in basin program rules** as provided in OAR 690-079-0160. ~~Except as provided in OAR 690-079-0160,~~ OAR 690-079-002~~1~~0 to 0150 do not apply to requests for extensions of reservations ~~received by the Department in September 2015~~, which were originally established **in basin program rules** pursuant to ORS 537.249 **or ORS 537.356.**

690-079-0160

Extension of Reservations ~~Requests Received in September 2015~~

(1) This section ~~was adopted by temporary rulemaking to~~ establish**es** a process ~~to consider pending applications submitted in September 2015~~ to **consider** extend**ing** reservations **established in basin program rules pursuant to ORS 537.249 or 537.356**~~established under ORS 537.249 that are set to expire in March 2016~~ **that are set to expire unless extended in rule by the Water Resources Commission.**

(2) Notwithstanding OAR 690-079-0020 to 690-079-0150, ~~and except as specifically stated in this section,~~ applications to extend reservations ~~established in OAR Chapter 690, Division 509 that were received by the Department in September 2015,~~ **established in basin program rules** shall be processed according to the provisions in this section.

(3) Prior to termination of the approved term of reservation, the applicant may apply for a time extension of up to 20 years from the expiration date established in rule. An approved time extension shall retain the priority date of the original reservation.

(4) An application for an extension shall contain the information required in OAR 690-079-0**1**~~06~~**7**0.

~~(5) If the applicant for an extension of a reservation made the election in ORS 537.249(2) to establish the reservation by rule, then an extension of a reservation must also occur by a rulemaking that amends the applicable basin program plan.~~

~~(6)~~ **(5)** The Department shall provide notification, accept public comment, and hold hearings as provided in ORS 183.335, ORS 536.300(3), and OAR 690, Division 1. Notice shall also be provided to Oregon Department of Environmental Quality, Oregon Department of Fish and Wildlife, Oregon Parks and Recreation Department, and Business Oregon. The public comment period shall be no less than 30 days.

~~(7)~~ **(6)** In considering an application to extend a reservation, the Commission shall review information in the application, comments received, and information and recommendations provided by the Department. **The Commission may extend the reservation up to 20 years unless the Commission determines the reservation is no longer consistent with ORS 536.310 or with rules of the Commission. The Commission may modify the reservation or include conditions as necessary for the reservation to remain consistent with ORS 536.310 and the purpose of reserving water for future economic development.**

690-079-0170 Information Requirements

Requests to extend reservations of water for future economic development shall include the following information:

(1) Requestor name and address;

(2) Description of the existing reservation and applicable rule reference;

(3) Discussion of the continued current and future need for the reservation;

(4) Description of actions taken to advance development of the reservation;

(5) Discussion of challenges to developing the reservation;

(6) Description of actions that will need to be undertaken in the future in order to develop the reservation;

(7) Information on how the proposal is compatible with overall basin program goals and policies;

(8) Identification of affected local governments

(9) Copies of letters notifying each local government of the intent to file an extension request that includes a description of the reservation and statement that an opportunity to provide comment will be provided at a future date;

(10) Description of expected economic benefits;

(11) Information on whether the reservation exists above or within a Scenic Waterway;

(12) Statement that explains how the reservation and proposed water use(s) will promote the beneficial use of the water without waste.

Summary of and Response to Public Comments Received for Division 509 Rules

The majority of verbal and written comments received regarding Division 509 rules were supportive of adoption of the proposed rules without modification.

The full text of written comments is included in Attachment 4 of this report, and came from: Mike Corley; Wes Morgan on behalf of the Burnt River Irrigation District Board of Directors and Patrons; Mary Ann Nash, Jerome Rosa, and April Snell on behalf of Oregon Farm Bureau, Oregon Cattlemen's Association, and Oregon Water Resources Congress, respectively; Kimberley Priestley on behalf of WaterWatch of Oregon; and Ken Taylor. Oral comments from Lynn Shumway, Burnt River Irrigation District; Mark Bennet, Baker County; Wes Morgan, Burnt River Irrigation District; Curtis Martin, resident of North Powder and President of Powder Valley Water Irrigation District; Jay Chamberlin, Owhyee Irrigation District; Drew Martin; Will Vaughan, Burnt River Soil and Water Conservation District; Jay Browne, North Powder Water Control District, are included in Attachment X.

Comments from WaterWatch of Oregon expressed concern. Key points are noted below, along with the Department's response.

WaterWatch of Oregon: *Reservations for future economic development are limited to "multipurpose" reservoirs, thus the reservation of 2,000 acre feet of water in the Burnt River Subbasin Reservation for "storage" (OAR 690-509-0130) is invalid. The governing statutes are crystal clear; reservations for future economic development are limited to multi-purpose storage projects. See ORS 537.358, ORS 537.356 and ORS 537.249. Given the clear language of the statutes, it is unclear why and/or how a reservation for storage (not multipurpose storage) was folded into the Burnt River Reservation rules. The Commission had (and has) the authority to classify 2,000 af of stored water for the single use of irrigation, however there is no authority for the Commission to grant a "reservation" which carries a 1992 priority date for a single use. This section should be struck.*

Department Response: The existing statutes that specify reservations shall be established for multipurpose reservoirs were not enacted until 1997. Under the original legislation, and the corresponding 1995 legislation, there is no requirement that the reservations be for multipurpose reservoirs. As reported in the March 8, 1996 staff report, "Although the main reason for reservations is to provide stored water for uses related to agricultural production , the contemplated uses also encompass water quality, fish and wildlife, and additional supply for municipal and industrial uses. Because of water availability constraints, new uses will be dependent on stored water during the low-flow season. In light of water availability and expected demand, 2,000 acre-feet is proposed to be reserved subbasinwide for storage to provide for an array of small uses that cannot be supplied from multipurpose projects as defined by the rules."

WaterWatch of Oregon: *A long term extension of the Burnt River Reservation, absent adoption of permanent rules to guide extensions, is premature. At the November Commission meeting, Commissioners discussed the possibility of extending the Burnt River Reservation for a time period shorter than the requested 20 years so that this extension request would be evaluated*

under criteria consistent with upcoming permanent rules governing extensions. We would urge the Commission, if they are inclined to extend the reservation, to take that route. The temporary rules that were adopted at the November WRC meetings do not include an important public interest sideboard that is found in the draft Division 79 rules that are currently out for public comment. Without that language, the Commission is arguably precluded evaluating the Burnt River request in the same manner that future extension requests will follow.

Department Response: The Department has provided the Commission with a copy of the public hearing draft of the proposed Division 79 rules in Attachment 2. The changes from the temporary Division 79 rules to the public hearing draft of the permanent Division 79 rules are generally: (1) make modifications that change the applicability of the rules from extending the Burnt River Reservations only to applicability for all pending extensions for reservations set in rule; (2) modify the information requirements on the applications to reduce redundancy and request information more relevant to an extension; (3) add in, for clarity, that the Commission will consider ORS 536.310 in reviewing an extension. The addition of the reference to ORS 536.310 does not create a different standard between the temporary Division 79 rules and the permanent Division 79 rules (if adopted), because this requirement merely restates requirements in statute (i.e., the Commission is required to consider the policies in ORS 536.310 in conducting Basin Program rulemaking). In addition, the Commission is expressly prohibited pursuant to ORS 536.320(3) from adopting any "rule or regulation in conflict" with ORS 536.310. Therefore, the Department has reviewed consistency with ORS 536.310 for the Burnt River reservations and will do so for any future reservations.

WaterWatch of Oregon: *The Burnt River Irrigation District has stalled adoption of new instream water rights on the Burnt River and North Fork Burnt River for over two decades. Until those instream water rights are resolved, WaterWatch objects to the extension of the reservation. Throughout the RAC, consumptive water users posited that the legislature adopted the reservation statutes as a counter balance to the Instream Water Right Act. While that might appear to be a sound interpretation in the abstract, in this particular basin, where most if not all instream water right applications have been protested, extending the reservation can hardly be characterized as a quid pro quo. It is the policy of the state of Oregon to establish instream water rights on every stream, river and lake which can provide significant public benefits. OAR 690-410-030(1). The state's attempt to achieve this has been stalled in the Powder River Basin. We believe that extending the reservation absent resolution of the instream water right protests is short sighted and will do nothing to help expedite resolution, and in fact could have the opposite effect. At the very least, we would urge the Commission limit the extension for a short period, with a longer term extension pending resolution of the protested instream water rights applications.*

Department Response: The Department disagrees that the approval of the reservation extensions should be withheld as a tool to facilitate settlement of the protested instream water rights. While the statutory authorization of Instream Water Rights was established alongside Reservations, the implementation of these provisions has been separate.

WaterWatch of Oregon: *WaterWatch believes that non-compliance with the governing rules is a fatal flaw in extending the reservation. We raised the issue with the Rules Advisory Committee,*

but there was no agreement on this point. However, we believe this fact worthy of Commission consideration, as non-compliance goes directly against the intent of the 1996 Commissioners that adopted the rules in the first instance.

The Department of Agriculture failed to provide progress reports to the WRD as required by rule. Inclusion of progress reports was a much discussed topic in the adoption of the original rules, the result being that the 1996 Commissioners deliberately included [the following] language in the rules to ensure periodic review of the reservation throughout its original 20 year life. [ed note: see attached comments in full.]

Department Response. The Department disagrees that non-compliance is a fatal flaw in extending the reservation. As stated in the 1996 staff report, "during a five-year review of the reservation, the Commission shall assess whether progress is being made on the reservation and whether it is in the public interest to continue the reservation." This makes it clear that the purpose of the progress reports is to assess at that time, whether the reservation needs to be modified. The requirement was not met to provide these progress reports, likely due to staff changes and cuts at the Department of Agriculture and the Water Resources Department, but there is nothing in the rules that imply this is a fatal flaw for an extension. The Commission is considering now whether to extend the reservations and may consider these factors in its decision.

Rule Coordinator
Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1271
diana.m.enright@wrd.state.or.us

Diana;

I support fully the extension of Powder Basin Program as amended in draft form and published for public comment. I am particularly interested in the South Fork Burnt River Reservation of seventeen thousand eight hundred acre-feet of unappropriated water of the South Fork Burnt River and tributaries upstream of Unity reservoir. I also support the reservations extensions of the Powder River Basin.

As land use evolves over the next few generations, the existence and availability of resources, and particularly of water in arid Eastern Oregon, might help shape the economy and provide increased options for the future. While I am not a strong supporter of instream containment for ecological reasons, I am an advocate for smaller out of stream and localized containment facilities. I also support ground water restoration research and development. As such I would encourage some requirement on the part of local resource management entities to invest in such activities as a condition of any reservation. I, too, would invest in such the economic future of our region and am willing to support such an option on a volunteer basis.

Thank you for the opportunity for input.

Mike R. Corley, MPA
Public Sector Administrator (retired)
Burnt River Rancher

cc. Wes Morgan, Manager
Burnt River irrigation District
morganwc@q.com

Not Just Another Dam Project

Burnt River Irr. District

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January 3, 2016

Rule Coordinator
Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1271
rule-coordinator@wrd.state.or.us
Re: Comments on Temporary Division 079 Rulemaking – February 25-26 Commission Meeting

Chair Roberts, Director Byler, and Members of the Commission,

Thank you for the opportunity to personally comment, in Baker City, on the proposed temporary rule changes to Division 079 designed to facilitate the extension of water reservations in the Burnt River Subbasin. Commissioner Corn, and Jason Spriet, Eastern Region Manager, facilitated the meeting which went very well.

The Burnt River Irrigation District Board of Directors and patrons have been very involved in the process of establishing the temporary rules. Lynn Shumway and I spent numerous hours on the phone participating in the Rules Advisory Committee, and I also attended the November Commission meeting. At the public testimony in Baker City we had overwhelming support from everyone in attendance. Not everyone felt comfortable testifying, but in visiting with those that didn't testify, they were all there to show their support.

I, and the patrons of the district, would like to reiterate that the Burnt River Irrigation District has made every effort to pursue exercising these Reservations by developing storage projects on both the North and South Forks of the Burnt River and other locations in the Basin, unfortunately, financial and regulatory restrictions and constraints have made it difficult to move forward with development of these water reservations. The Irrigation District has gone as far as purchasing the land for the South Fork project, and has put forth considerable effort, time, and money towards the feasibility and development of a project. The irrigated lands on both the South and North Forks are severely short on receiving the full amount of righted water, and unable to adequately irrigate crop and pasture lands. This shortage severely restricts the landowner's ability to provide economic stability to themselves and the economic stability of Baker County.

Thank you again for the opportunity to voice my support, and for others to do the same. Your understanding and considerations in this matter is vital to the economy of the little town of Unity, patrons of the Burnt River Irrigation District, Baker County, and the state of Oregon. As we move forward into the future these reservations will no doubt become more and more important!

Sincerely,
Burnt River Irrigation District Board of Directors and Patrons

By Wesley Morgan (Manager)

February 4, 2016

Diana Enright
Oregon Water Resources Department
725 Summer Street NE, Suite A
Salem, Oregon 97301-1271
diana.m.enright@wrd.state.or.us

Re: Comments on Division 509 Rulemaking – Powder River Basin Plan

Chair Roberts, Director Byler, and Members of the Commission,

Thank you for the opportunity to comment on the changes to the Division 509 rules to extend the water reservations in the Burnt River Subbasin. This letter is submitted jointly on behalf of the Oregon Farm Bureau (OFB), the Oregon Cattlemen's Association (OCA), the Baker County Farm Bureau, the Oregon Water Resources Congress (OWRC), and the Burnt River Irrigation District (BRID) to express strong support the extensions of the water reservations in the Power River Basin, and to urge the Water Resources Commission (Commission) to adopt the Division 509 rules.

Introduction to Agricultural Organization

By way of background, OFB is a voluntary, grassroots, nonprofit organization representing Oregon's farmers and ranchers in the public and policymaking arenas. As Oregon's largest general farm organization, its primary goal is to promote educational improvement, economic opportunity, and social advancement for its members and the farming, ranching, and natural resources industry as a whole. Today, OFB represents over 7,000 member families professionally engaged in the industry and has a total membership of over 60,000 Oregon families. Baker County Farm Bureau is the voice of farmers and ranchers in Baker County.

With more than 1700 members statewide, the OCA is the voice of the cattle industry in Oregon. Its mission is to advance the economic, political and social interest of the Oregon cattle industry.

OWRC is a nonprofit association representing irrigation districts and other agricultural water suppliers across Oregon, delivering water to 1/3 of all irrigated land in the state.

The BRID delivers water to irrigators in the Burnt River area, and is directly affected by the reservations proposed for extension under the temporary rules. The Burnt River extensions were the first established in Oregon and BRID remains strongly committed to the need to reserve and protect water for future storage projects.

The availability of water for future economic needs, including agriculture, has long been at the forefront of our members' thoughts. With long-term projections of drought, the need to ensure a reliable water supply to help feed our growing nation and growing world has never been more critical. With a total value of over $4.5 billion in annual farm gate sales, Oregon agriculture is the state's second largest industry sector. Oregon agriculture is also among the nation's most diverse sectors, with over 220 different commercial commodities grown in the state. About 80% of Oregon's agricultural production leaves the state, and about 40% is exported internationally. Roughly 12% of all jobs in Oregon are directly or indirectly connected to farming and ranching. Agriculture represents a vital part of Oregon's economy, and it is critically important that we ensure long-term availability of water so Oregon's second largest industry sector can continue producing food and fiber.

Background on Burnt River Water Reservations

In 1987, the Oregon legislature authorized the Commission to reserve water for future economic development. The creation of water reservations was part of the same legislation allowing for the establishment of instream water rights. *See* ORS 537.356-537.358. Reservations of water for economic development were intended to be a corollary to instream water rights, and were designed to ensure that water was reserved for future growth when permanent instream water rights were created. The statute allows for any local government, local watershed council, or state agency to request that the Commission reserve unappropriated water for multipurpose storage for future economic development. In this case, the reservations for the South Fork Burnt River, North Fork Burnt River, and Mainstem Burnt River ("Burnt River Reservations") were created by the Oregon Department of Agriculture at the request of the Burnt River Irrigation District.

In recent years, the availability of water for future economic development has been a great concern to the agricultural community, and one which has occupied the thoughts of many, particularly in Eastern Oregon. Since the Burnt River Reservations were created in the early 1990s, the Burnt River Irrigation District has been working diligently to develop the reserved water. The applications provide great detail on the efforts undertaken to develop this water and the longstanding need for the development of additional water supply in the area. The accounts from our members in the Powder River Basin echo the need outlined in the application, and evidence the continuing need for this reserved water in the basin. We are hopeful that Oregon's recent investment water supply development projects will help make development of new water supply a possibility in this state. However, there are still significant economic and environmental hurdles to water supply development that necessitate planning for water supply projects on a multi-year timeframe.

The Commission Should Adopt the Division 509 Rules to Extend the Burnt River Reservation

We urge the Commission to adopt the Division 509 rules and extend the Burnt River Reservation. The applications submitted by the Oregon Department of Agriculture provide great detail on the extensive efforts undertaken to develop the reservations, the continued need for the reservation, and the importance of the reservation to the local community. Since the reservation

was created, the BRID has diligent worked to identify potential reservoir sites, secure property for the development of their project, and work through the funding and environmental hurdles associated with the development (which are considerable). They have worked hard to ensure that the reserved water will be developed and available for future use, benefiting the local economic base and providing benefits to the local community, fish and wildlife, and other local values. The local community needs this water for future economic development. In the last twenty years, local farmers and ranchers have seen reductions in the amount of water available for irrigation, while their need for reliable irrigation sources has only increased. With projected increases in temperatures in the next several years, combined with increased demand on water resources, the need for additional water for farming and ranching will only continue to grow. We urge you to to adopted the Division 509 rules and extend the water reservations.

Thank you again for the opportunity to comment on the Division 509 rules.

Sincerely,

Mary Anne Nash
Oregon Farm Bureau Federation
maryanne@oregonfb.org
(541) 740-4062

Jerome Rosa
Oregon Cattlemen's Association
jerome.rosa@orcattle.com
(503) 361-8941

April Snell
Oregon Water Resources Congress
aprils@owrc.org
(503) 363-0121

Wesley R. Morgan
Manager, Burnt River Irrigation District
morganwc@q.com
(541) 519-4665

From: Ken
To: ENRIGHT Diana M
Subject: Brunt River Reservations
Date: Thursday, January 28, 2016 12:06:01 PM

---

i Ken taylor do aggree with the new amendments
to the South Fork and North Fork reservations, would be a very good impact to our area, anytime
now or in the future, Burnt River Water User.
sencerly
Ken Taylor

WATERWATCH
PROTECTING NATURAL FLOWS IN OREGON RIVERS

February 4, 2016

Oregon Water Resources Department, attention: Rules Coordinator
Oregon Water Resources Commission
725 Summer Street NE, Suite A
Salem, Or 97301

Re: Comments, Extension Burnt River Reservations for Future Economic Development, Division 509 rules

Dear Rules Coordinator and WRC Commissioners[1],

Thank you for the opportunity to comment on the proposed twenty year extension of the Burnt River Reservation for Future Economic Development.

WaterWatch opposes the proposed twenty year extension upon the following grounds:

(1) The Department of Agriculture failed to provide progress reports to the WRD as required by rule. Inclusion of progress reports was a much discussed topic in the adoption of the original rules, the result being that the 1996 Commissioners deliberately included the following language in the rules to ensure periodic review of the reservation throughout its original 20 year life:

> **OAR 690-5090100(9) Progress Reports:**
>
> (a) If the Department has not received applications for multipurpose reservoir permits for the full quantity of reserved water under OAR 690-509-0110 through 0130 by March 8, 2001, the Department of Agriculture shall provide the Commission with a progress report on the development of the reservations. After the first report is provided, future progress reports may be submitted on the same schedule as the progress reports due for the reservations under OAR 690-509-0140 through 0160.
>
> (b) If the Department has not received applications for multipurpose reservoir permits for the full quantity of reserved water under OAR 690-509-0140 through 0160 by May 26, 2005, the Department of Agriculture shall provide the Commission with a progress report on development of the reservations.

[1] We are addressing comments to the Commission as well, as the public is precluded from providing verbal comment to the Commission at the upcoming Commission meeting (except as to changes to the draft hearing language).

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Field Office: 142 W DUTTON RD EAGLE POINT, OR TEL: 541-826-4399
www.waterwatch.org

(c) Progress reports shall include information on the continued need for the reservations and the quantities of water reserved. The Department of Agriculture shall continue to provide progress reports at five year intervals, except as otherwise provided under subsection 9(a), while these rules are in effect unless the Department receives applications for multipurpose reservoir permits for the full quantity of reserved water.

In adopting this language, the 1996 staff report to the Commission noted:

> During the five year review of the reservation, the Commission shall assess whether progress is being made on the reservation and whether it is in the public interest to continue the reservation.

The staff report further noted:

> The reports will provide information about the continued need for the reservations, the quantities allocated to each type of use, and a description of why the reservations continue to be in the public interest.

See Addendum to Agenda Item D, March 8, 1996 WRC Meeting, Request for adoption of Burnt River Reservations and Other Powder Basin Plan Amendments (OAR Chapter 690, Division 509), at page 3, excerpt attached.

WaterWatch believes that non-compliance with the governing rules is a fatal flaw in extending the reservation. We raised the issue with the Rules Advisory Committee[2], but there was no agreement on this point. However, we believe this fact worthy of Commission consideration, as non-compliance goes directly against the intent of the 1996 Commissioners that adopted the rules in the first instance.

(2) The Burnt River Irrigation District has stalled adoption of new instream water rights on the Burnt River and North Fork Burnt River for over two decades. Until those instream water rights are resolved, WaterWatch objects to the extension of the reservation.

Throughout the RAC, consumptive water users posited that the legislature adopted the reservation statutes as a counter balance to the Instream Water Right Act. While that might appear to be a sound interpretation in the abstract, in this particular basin, where most if not all instream water right applications have been protested[3], extending the reservation can hardly be characterized as a quid pro quo. It is the policy of the state of Oregon to establish instream water rights on every stream, river and lake which can provide significant public benefits. OAR 690-410-030(1). The state's attempt to achieve this has been stalled in the Powder River Basin. We believe that extending the reservation absent resolution of the instream water right protests is short sighted and will do nothing to help expedite resolution, and in fact could have the opposite effect. At the very least, we would urge the Commission limit the extension for a short period, with a longer term extension pending resolution of the protested instream water rights applications

[2] Please note the make-up of the RAC.

[3] See attached chart of protested instream water rights, most of which ODFW applied for in the early/mid 1990's

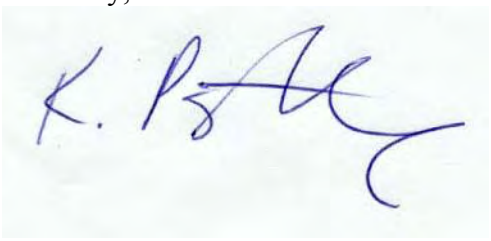
(3) Reservations for future economic development are limited to "multipurpose" reservoirs, thus the reservation of 2,000 af of water in the Burnt River Subbasin Reservation for "storage" (OAR 690-509-0130) is invalid. The governing statutes are crystal clear; reservations for future economic development are limited to multi-purpose storage projects. *See* ORS 537.358, ORS 537.356 and ORS 537.249. Given the clear language of the statutes, it is unclear why and/or how a reservation for storage (not multipurpose storage) was folded into the Burnt River Reservation rules. The Commission had (and has) the authority to classify 2,000 af of stored water for the single use of irrigation, however there is no authority for the Commission to grant a "reservation" which carries a 1992 priority date for a single use. This section should be struck.

(4) A long term extension of the Burnt River Reservation, absent adoption of permanent rules to guide extensions, is premature. At the November Commission meeting, Commissioners discussed the possibility of extending the Burnt River Reservation for a time period shorter than the requested 20 years so that this extension request would be evaluated under criteria consistent with upcoming permanent rules governing extensions. We would urge the Commission, if they are inclined to extend the reservation, to take that route. The temporary rules that were adopted at the November WRC meetings do not include an important public interest sideboard that is found in the draft Division 79 rules that are currently out for public comment. Without that language, the Commission is arguably precluded evaluating the Burnt River request in the same manner that future extension requests will follow.

Conclusion: WaterWatch has significant concerns with the proposed extension of this reservation and would urge the Commission to reject the reservation, or at the very least extend for a only a short period pending adoption of the permanent Division 79 rules and resolution of the protested instream water rights.

Thank you for your consideration of our comments.

Sincerely,



Kimberley Priestley
Sr. Policy Analyst

precluding other future water use applications, the priority date will help protect the reserved water from incremental diminishment.

3. State Agency Roles

An issue discussed in the original staff report was the role of the requesting state agency in determining whether a use of reserved water is consistent with the purposes of the reservation. The reliance on the requesting state agency for an evaluation of the consistency of an application with a reservation is contemplated under the Division 79 reservation rules. Staff are discussing with the Department of Agriculture opportunities for participation by other agencies in the assessment of consistency with the purposes of the reservations and the development of criteria to provide for the broad range of uses. Since those discussions are continuing, staff and the Department of Agriculture will elaborate on them during consideration of this agenda item.

Other state agencies must be involved in the preparation and evaluation of applications to store reserved water. The Department of Fish and Wildlife recommends that a series of studies be conducted prior to the issuance of permits to store reserved water. Similarly, the Department of Environmental Quality notes proposed projects will need to address water quality standards. Assessing the environmental affects of planned reservoirs is consistent with the assertion of supporters that reserving water will aid in determining the feasibility of a project. Therefore, staff have modified the proposed rules to require applicants to consult with the Departments of Fish and Wildlife and Environmental Quality about necessary studies (See OAR 690-509-110[2] and 690-509-120[2]). The rules also require applicants to include in a water use application information which addresses the environmental concerns identified through consultation with agencies.

4. Term of Reservations and Periodic Review

Comments suggest the criteria for the periodic review of reservations is inadequate, and time extensions should be limited to one term if at all. Without rulemaking action by the Commission, the term of reservation automatically expires at the end of 20 years. During a five-year review of the reservation, the Commission shall assess whether progress is being made on the reservation and whether it is in the public interest to continue the reservation (See OAR 690-509-100[6]).

The new rule language is intended to provide guidance to the Department of Agriculture in preparing the five-year progress reports. The reports will provide information on the continued need for the reservations, the quantities of water allocated to each type of use, and a description of why the reservations continue to be in the public interest.

App	Location	Protestant	Standing
72191	POWDER R	Baker Valley Irrigation District	
72181	L EAGLE CR	Brooks Ditch Co.	
72168	BURNT R	Burnt River Irrigation District	WATERWATCH OF OREGON
72169	BURNT R	Burnt River Irrigation District	WATERWATCH OF OREGON
72186	N FK BURNT R	Burnt River Irrigation District	
72179	LAKE FK CR	Fish Lake Improvement	
72180	LAKE FK CR	Fish Lake Improvement	
70863	PINE CR	Pine Valley Irrigation District	
70864	PINE CR	Pine Valley Irrigation District	
70870	E PINE CR	Pine Valley Irrigation District	
72170	CLEAR CR	Pine Valley Irrigation District	
72187	N POWDER R	Powder Valley Irrigation District	
72163	WOLF CR	Powder Valley Water Co	
72188	N POWDER R	Powder Valley Water Co	
72194	ROCK CR	Powder Valley Water Co	

Baker City Public Hearing

Division 509

January 25, 2016

Lynn Shumway: I am Lynn Shumway from Burnt River Irrigation District and I appreciate this opportunity to give testimony in regard to the Reservation Rules that have been amended. Our manager, Wes Morgan has spent a number of hours on the phone in this process, being a part of the rules, reviewing the rules and going through some of these changes. Burnt River was the original reservation, and we helped write the original rules for the reservations and have put a lot of effort into trying to get the dam built if we had reservations for the primary one, the South Fork. The rules that we have been working on - we have been satisfied with what we amended them to – and we hope that we can keep them as they have been amended, and not to change the structure or the purpose of the reservation. We think it is important to be able extend them for the 20-year period. After working these past 20 years and not having made near the progress we had hoped to. Twenty years can go by in a hurry when you are trying to get through all the studies and everything that is required to try and move things forward. So I appreciate this opportunity to make comments on this and my recommendation is to keep the rules as they have been amended because I think they are pretty consistent with the original plan was. Thank you very much.

Mark Bennett: Mr. Chairman, we certainly appreciate – Baker County appreciates – this opportunity to address the Commission. [*sentence unclear*]. I'm the Executive Board Member of Eastern Oregon County Association. The County looks at this as not only an Ag issue but really an Economic Development issue. Ninety-three million dollars of Baker County's income comes from agriculture, and water is the key to that element. I would like to share with you an Eastern Oregon small town story which comes from the heart of the Burnt River. In 1989, the City of Unity had 250 residents: 150 students, 13 teachers, eight support staff. There were two logging companies, three trucking companies, and 71 U.S. Forest Service employees. The city employee not only served as clerk, public works person, but also city councilman. Fast forward to 2015, with the change in the utilization of resources in the Burnt River, the City of Unity now has 71 residents, 30 students, which includes 15 exchange students, five teachers, four support staff, two small businesses, some U.S. Forest Service staff, with no permanent staff. There is no City Council, and is administrated by the County, with a significant debt for the water and sewer system. The reality of agriculture cannot be understated in Baker County. It cannot really be understated. As I just pointed out in the Burnt River area, which Unity is the largest City within the Burnt River system. Without this, and many other projects in Baker County, we face severe challenges as our groundwater becomes more and more limited in opportunities, and especially in the Burnt River system. As analyzed by Bureau of Reclamation and DOGAMI, has little if any groundwater opportunities. The County once again, wants to come along side Burnt River Irrigation District and urge the Commission to move forward on this reservation opportunity, because primary economic development opportunities afforded here. Regionally looking at Baker County, Malheur County, and Harney County, the region suffers from the loss of students who graduate from school. They complete higher learning or look for the opportunity to find meaningful employment, and as a result leave the area. The communities are then left without leadership and most importantly with youth. As the Christian Science Monitor reported last week, that 21% of the West is below the poverty

level, primarily focusing on Malheur, and Harney. This actually was focused on Harney County as an outgrowth of those actions there, but it extends to Harney, Crook, Lake, Baker, and Malheur counties. We need every opportunity possible to utilize our natural resources, and one of our natural resources that is really renewable is the water. That will expand and strengthen our agricultural base, so with that, I do thank you once again for coming to Baker City, and thank you for this opportunity. You have my information if you need to contact me. And once again, Baker County does support this project request.

Wes Morgan: I am Wes Morgan, manager of Burnt River Irrigation District. Commissioner Corn and Jason, thank you again for this opportunity and to pass this message along: how important this is to the people of Burnt River. I would like to go on record representing Burnt River Irrigation District, and the patrons of the District in support of the extension of these reservations and the changes in the rules. To forgo these reservations and take them to fruition someday, we hope. As was stated before, where we have done quite a bit of work as a rules advisory committee, and worked on these rules. I believe that they are what needs to be done. The importance of these reservations, cannot be understated to Burnt River, Baker County, and others with these reservations that will be coming in the future. We need these reservations to supply irrigation water. Economic development in the area has very much relied upon water and agriculture. So as I said, I would like to go on record in support of the rules and the reservations, representing Burnt River Irrigation District and the patrons of the District. Thank you.

Curtis Martin: I am Curtis Martin, I am a resident of North Powder, Oregon, and also president of the Powder Valley Water Irrigation District. And just briefly, want to voice my support along with Mark Bennett, County Commissioner, and Wes Morgan, Burnt River Irrigation District. The rules that are allowing us to re-up and renew the water reservations that are in the Harney County Basin, is most definitely needed, and I just wanted to be here and show support for that effort and we would be hard pressed to find that anybody in our area would be opposed to that reservation.

Jay Chamberlin (Owyhee Irrigation District): Thank you Mr. Chairman. I appreciate this opportunity to support this effort. I think the Burnt River folks are setting a, kind of a, effort in the stage for these rules and I think it will be important for many of us in the state of Oregon. We are very supportive of their activities, and their functions in this process that will hopefully help secure our agricultural base here in the state of Oregon, and also is very instrumental when the rest of us, whose reservations are also due this year. We are very supportive of all those in this process. And I appreciate this opportunity to present my support in that. Also, as we struggle with reduced water allotments, many of our projects throughout the state because of natural causes – the drought. We certainly need to look into the future and protect any potential water development and projects for storage or other sources to secure up for agricultural activities. Thank you.

Drew Martin: Yes. Our family farm, thank you Commissioner Corn, and Mr. Spriet, as the other people said, I really appreciate being able to express how important these reservations are. So I wanted to come forward and support the comments of Commissioner Bennett, Mr. Morgan, and my father Curtis Martin, who spoke earlier. As you guys have heard, I don't think there is, I think it is impossible to overstate the importance of the water storage project in this valley. Certainly, from my experience there is nothing more significant to my small farming operation than the water storage projects for the North Powder Valley Control District patrons. I think that moving forward is certainly one of the most significant things, and beneficial things that could happen to our area to increase the amount of storage and the opportunities that come with more stored water. So I would just like to support the comments made earlier, and support these activities of water reservations, and thank you for the time spent.

Will Vaughan (Burnt River Soil and Water Conservation District): I just wanted to voice my support on behalf of the Soil and Water District. I think this is pretty important for the future economy in our part of the country. Like these guys said, it is really important for agriculture in our area, and agriculture is pretty much our main driver. So, like I said, pretty important to us.

Jay Browne (North Powder Water Control District): I am on the Water Control District Board in North Powder, also in support of the reservations. I think it's a win-win for everything: farming, just a win-win for communities, economic growth and everything. So we would like to see it go forward.

DIVISION 509 POWDER BASIN PROGRAM

RED = Change to Existing Rule
STRIKETHROUGH = Delete
UNDERLINE = New Text

690-509-0000

Classifications

(1) The maximum economic development of this state, the attainment of the highest and best use of the waters of the Powder Basin, and attainment of an integrated and coordinated program for the benefit of the state as a whole will be furthered through utilization of the aforementioned waters only for domestic, livestock, municipal, irrigation, power development, industrial, mining, recreation, wildlife, and fish life uses, and the waters of the Powder Basin are hereby so classified with the following exceptions:

(a) That 65,000 acre-feet annually of unappropriated water of Eagle Creek and its tributaries at or above stream mile 21 be classified for domestic, livestock, municipal, irrigation, recreation, wildlife, and fish life purposes.

(b) That 265,000 acre-feet annually of natural flows of Snake River water at or near stream mile 9 of Powder River (arm of Brownlee Reservoir) lying within Section 25, Township 9 South, Range 45 East, Willamette Meridian, be classified for domestic, livestock, municipal, irrigation and industrial purposes.

(c) That 87,000 acre-feet annually of natural flows of Snake River water at or near stream mile 327 of Snake River lying within Section 8, Township 14 South, Range 45 East, Willamette Meridian, be classified for domestic, livestock, municipal, irrigation, and industrial purposes.

(d) The maximum economic development of this state, the attainment of the highest and best use of the unappropriated waters of the natural lakes of the Powder Basin, and the attainment of an integrated and coordinated program for the benefit of the state as a whole will be furthered through utilization of the aforementioned waters only for domestic, livestock, irrigation of lawn or noncommercial garden not to exceed one-half acre in area, power development not to exceed 7-1/2 theoretical horsepower, recreation, wildlife, and fish life uses, and the waters of the natural lakes of the Powder Basin are hereby so classified.

(e) ~~Stored water may be used for any beneficial purpose subject to the reservation of water under OAR 690-509-0110 through 0160.~~ Water that is stored subject to the reservation of water under OAR 690-509-0110 through 0160 may be used for any beneficial purpose, and any beneficial use of the water stored shall be a classified use.

(2) Application for the use of these specified waters of the Powder Basin shall not be accepted by any state agency for any other use and the granting of applications for such other use is declared to be prejudicial to the public interest and the granting of applications for such other uses would be contrary to the integrated and coordinated program for the use and control of the water resources of the state.

(3) Structures or works for the utilization of the waters in accordance with the aforementioned classifications are also declared to be prejudicial to the public interest unless planned, constructed, and operated in conformity with applicable provisions of ORS 536.310 and any such structures or works are further declared to be prejudicial to the public interest which do not give cognizance to the multiple-purpose concept.

(4) Notwithstanding a determination water is unavailable for appropriation, permits for domestic and livestock purposes from the Burnt River and tributaries may be issued to water-use applicants:

(a) In amounts not to exceed a cumulative total of 2.5 cubic feet per second of live-flow, and

(b) Provided water-use applicants cannot acquire access to a viable source of water supplied by a community water system, irrigation district, or other water supply organization.

(5) Applications filed prior to March 8, 1996, shall be processed under the classification in effect at the time of the application.

Stat. Auth.: ORS 536
Stats. Implemented: ORS 536.220 & ORS 536.310
Hist.: WRB 43, f. 7-10-70; WRD 1-1981, f. & cert. ef. 4-20-81; Administrative Renumbering 9-1993, Renumbered from 690-080-0090; WRD 4-1996, f. & cert. ef. 3-15-96; WRD 3-2000, f. & cert. ef. 5-26-00

690-509-0010

Out-of-Basin Appropriations

To support present and proposed Powder Basin resource developments no out-of-basin or out-of-state appropriations of water shall be made or granted by any state agency or public corporation of the state for the waters of Pine Creek, Eagle Creek, Powder River and Burnt River or their tributaries.

Stat. Auth.: ORS 536 & ORS 537

Stats. Implemented:
Hist.: WRB 43, f. 7-10-70; WRD 1-1981, f. & cert. ef. 4-20-81; Administrative Renumbering 9-1993, Renumbered from 690-080-0090

690-509-0030

Water Quality

Rights to use of water for industrial or mining purposes granted by any state agency shall be issued only on condition that any effluents or return flows from such uses shall not interfere with other beneficial uses of water.

Stat. Auth.: ORS 536 & ORS 537

Stats. Implemented:
Hist.: WRB 43, f. 7-10-70; WRD 1-1981, f. & cert. ef. 4-20-81; Administrative Renumbering 9-1993, Renumbered from 690-080-0090

690-509-0100

Reservation Applications and Process

(1) Reservations of water for economic development are established pursuant to ORS 537.249 and 537.356 to ensure sufficient water will be available in the future to meet expected needs. Economic development includes, but is not limited to, the production of goods and services and management of natural resources which contribute economic benefits through both instream and out-of-stream uses of water.

(2) "Multipurpose reservoir," as used in OAR 690-509-0110 through 0160, means a reservoir storing water to serve multiple potential beneficial uses of stored water such as, but not limited to, irrigation, power developmentgeneration, municipal water supply, recreation, pollution abatement, and flow augmentation for instream purposes.

(3) Reservations of water for future economic development in OAR 690-509-0110 through 0160 allocate and reserve surface water for storage in multipurpose reservoirs for the period of the reservation.

(4) Permits to store reserved water shall receive the priority date of the reservation.

(5) In addition to the requirements of ORS Chapter 537 and OAR Chapter 690, Division 310, an application for a permit to store water reserved under 690-509-0110 through 0160 shall include:

(a) An assessment of the effect of the proposed reservoir on fish and wildlife developed after consultation with the Oregon Department of Fish and Wildlife;

(b) An assessment of the effect of the proposed reservoir on water quality developed after consultation with the Oregon Department of Environmental Quality;

(c) An analysis of water supply alternatives to the proposed reservoir, such as off-stream storage, water right transfers and implementation of conservation measures; and

(d) An analysis summarizing and describing how the proposed project will enhance instream values, including but not limited to instream flows.

(6) For the purposes of review of water right permit applications to store reserved water under OAR Chapter 690, Divisions 310, the reserved quantities of water listed in OAR 690-509-0110 through 0160 are available for appropriation. However, the determination that water is available under OAR 690-509-0110 through 0160 shall not substitute for consideration during the public interest review of site-specific information as required under ORS Chapter 537, OAR Chapter 690 or any other applicable statutes or rules. Because the finding that water is available in OAR 690-509-0110 through 0160 is a water availability determination for a sub-basin, analysis of water availability at the specific location shall be conducted at the time of permit application review.

(7) In addition to any other findings required for issuance of a reservoir permit under ORS Chapter 537 or applicable rules~~OAR 690, Division 310~~, and prior to issuance for a proposed project storing water reserved under 690-509-0110 through 0160, the Department shall also find:

(a) The proposed reservoir is consistent with the purpose and intent of the reservation following consultation with the Department of Agriculture;

(b) The proposed reservoir will enhance instream values, including but not limited to instream flows; and

(c) Whether minimum bypass flows are required.

(8) The Department shall determine, and impose as a condition, an appropriate storage season, and shall include other conditions to insure no ~~harm~~ injury to senior water rights and to protect instream values.

(9) Progress Reports:

(a) ~~If~~ Until the Department has ~~not~~ received applications for ~~multipurpose~~ reservoir permits for the full quantity of reserved water under OAR 690-509-0110 through 0130, ~~by March 8, 2001, the Department of Agriculture shall provide the Commission with a progress report on the development of the reservations. After the first report is provided, future progress reports may be submitted on the same schedule as the progress reports due for the reservations under OAR 690-509-0140 through 0160.~~the Department shall biennially report to the Water Resources Commission on the amount of water available under the reservation, and the quantity allocated under the reservation. The Department or Commission may require periodic reports from the Oregon Department of Agriculture on continued interest in the reservation, efforts undertaken to develop the reservation, and any challenges to developing the reservation.

(b) If the Department has not received applications for multipurpose reservoir permits for the full quantity of reserved water under OAR 690-509-0140 through 0160 by May 26, 2005, the Department of Agriculture shall provide the Commission with a progress report on development of the reservations. ~~(c)~~ Progress reports shall include information on the continued need for the reservations and the quantities of water reserved. The Department of Agriculture shall continue to provide progress reports at five year intervals, ~~except as otherwise provided under subsection 9(a),~~ while these rules are in effect unless the Department receives applications for multipurpose reservoir permits for the full quantity of reserved water.

(10) Effective date of rules:

(a) OAR 690-509-0110 through 0130 shall be effective until March 8, ~~2016~~ 2036 unless the effective date has been extended by further rulemaking of the Water Resources Commission.

(b) OAR 690-509-0140 through 0160 shall be effective until May 26, 2020, unless the effective date has been extended by further rulemaking of the Water Resources Commission.

(c) The expiration of these reservation rules shall not affect pending applications that have been received and deemed complete and not defective by the Water Resources Department pursuant to ORS 537.150(2), prior to the expiration date of the rules.

Stat. Authority: ORS Ch. 536 and 537
Stats. Implemented: ORS 536.310, 537.249, 537.356 & 537.358
Hist.: WRD 4-1996, f. & cert. ef. 3-15-96; WRD 3-2000, f. & cert. ef. 5-26-00

690-509-0110

South Fork Burnt River Reservation

Seventeen thousand eight hundred (17,800) acre-feet of unappropriated water of the South Fork Burnt River and tributaries upstream of Unity reservoir are [is] reserved for storage by the Burnt River Irrigation District in multipurpose reservoirs to be constructed in the future. The priority date of the reservation is June 5, 1992. In accordance with ORS 537.249, a reservoir permit authorizing the storing of the water reserved under this rule shall be granted precedence over instream water rights in the Burnt River subbasin.

Stat. Auth.: ORS 537
Stats. Implemented: ORS 537.249 & ORS 537.356
Hist.: WRD 4-1996, f. & cert. ef. 3-15-96; WRD 3-2000, f. & cert. ef. 5-26-00

690-509-0120

North Fork Burnt River Reservation

Six thousand five hundred (6,500) acre-feet of unappropriated water of the North Fork Burnt River and tributaries upstream of Unity Reservoir are reserved for storage in multipurpose reservoirs to be constructed in the future. The priority date of the reservation is November 6, 1992.

Stat. Auth.: ORS 537
Stats. Implemented: ORS 537.249 & ORS 537.356
Hist.: WRD 4-1996, f. & cert. ef. 3-15-96; WRD 3-2000, f. & cert. ef. 5-26-00

690-509-0130

Burnt River Subbasin Reservation

Two thousand (2,000) acre-feet of unappropriated water are reserved for storage in reservoirs to be constructed on the Burnt River and tributaries. The priority date of the reservation is November 6, 1992.

Stat. Auth.: ORS 537
Stats. Implemented: ORS 537.249 & ORS 537.356
Hist.: WRD 4-1996, f. & cert. ef. 3-15-96; WRD 3-2000, f. & cert. ef. 5-26-00

690-509-0140

Pine Creek Subbasin Reservation

Ten thousand (10,000) acre-feet of unappropriated water of Pine Creek and tributaries above Long Branch, tributary to the Snake River, are reserved for multi purpose reservoirs to be constructed in the future. The priority date of the reservation is November 6, 1992.

Stat. Auth.: ORS 536.025, ORS 536.027 & ORS 536.300
Stats. Implemented: ORS 536.310, ORS 537.249 & ORS 537.356
Hist.: WRD 3-2000, f. & cert.ef. 5-26-00

690-509-0150

Eagle Creek Subbasin Reservation

Four thousand three hundred (4,300) acre feet of unappropriated water of Eagle Creek and tributaries upstream of gage 13288200 at Skull Creek are reserved for multi purpose reservoirs to be constructed in the future. The priority date of the reservation is November 6, 1992.

Stat. Auth.: ORS 536.025, ORS 536.027 & ORS 536.300
Stats. Implemented: ORS 536.310, ORS 537.249 & ORS 537.356
Hist.: WRD 3-2000, f. & cert.ef. 5-26-00

690-509-0160

Powder River Subbasin Reservation

Unappropriated water is reserved for multi purpose reservoirs to be constructed in the future. The priority date of the reservation is November 6, 1992. The quantity and source of reserved water is as follows:

(1) Three thousand nine hundred and ninety (3,990) acre feet of Goose Creek and tributaries upstream of the mouth, tributary to the Powder River east of Keating.

(2) Twenty seven thousand (27,000) acre feet of the Powder River and tributaries upstream of Thief Valley Dam and below the confluence of Blue Canyon Creek

(3) Two thousand nine hundred (2,900) acre feet of water of the Powder River and tributaries below the confluence of Blue Canyon Creek, including Blue Canyon Creek.

Stat. Auth.: ORS 536.025, ORS 536.027 & ORS 536.300
Stats. Implemented: ORS 536.310, ORS 537.249 & ORS 537.356
Hist.: WRD 3-2000, f. & cert.ef. 5-26-00