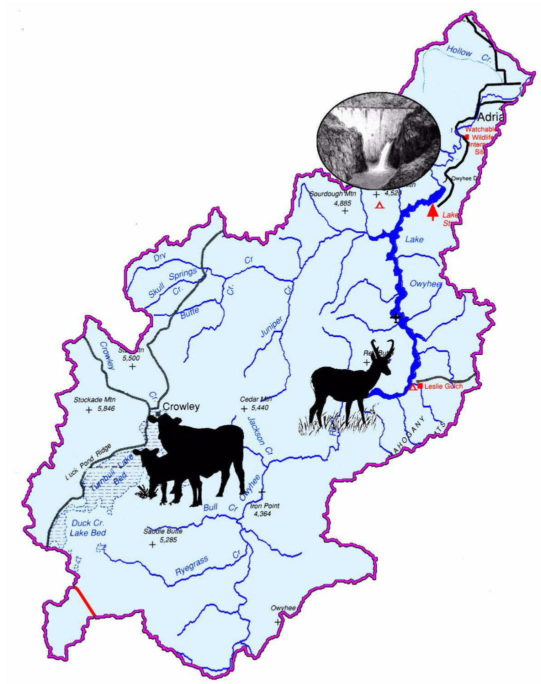

Lower Owyhee Watershed Assessment

III. Identification of Issues

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A. Owyhee Watershed Council

To help focus the assessment, the Owyhee Watershed Council developed a list of local concerns which they wished to see addressed in the lower Owyhee watershed assessment. The primary concern was that the assessment be scientifically based, objective, and historically correct. In order to be useful as a tool by the watershed council they wanted the completed document to be written so that it could be read by an average person. The document would compile available data on the watershed, identify data gaps, and review existing watershed conditions. The assessment findings could be utilized locally as an educational tool about the watershed or as the basis for applying for grants that could be used for real improvements to real problems. The document should focus on real issues.

Ranchers and growers understand that watersheds are complicated and include interaction between humans, other species and their environment. A major concern for them is that the complexity between species interactions, nutrient cycles, and climate can obscure the real relationships between the various elements in the watershed. The assessment of the lower Owyhee subbasin should identify what is known about the subbasin and the gaps in our knowledge about the subbasin.

When assessing the different aspects of the lower Owyhee subbasin, the evaluations of either current or historical conditions need to take into consideration naturally occurring factors such as the climate, the soils, and the geology of the region. Not only should conditions be compared with those that existed at Euro-American contact with Native Americans, but an effort should be made to document recent changes, both improvements and problem areas.

B. Development of issues and concerns to address

One meeting of the Owyhee Watershed Council was used to develop a set of specific issues and concerns of the members of the watershed council. Other issues emerged from a publicly advertised meeting. Members of the advisory board of the Malheur Agricultural Experiment Station of Oregon State University developed a list of issues. Many agency concerns are a matter of public record. Interested individuals expressed their concerns in informal conversations.

The stakeholders who provided input included ranchers with both private land and public grazing allotments and growers with irrigated land in the section of the lower Owyhee subbasin below the dam. Also present at meetings or providing input were recreational users of the Owyhee Reservoir, the Malheur County weeds specialist, the Nyssa mayor, and representatives of the Owyhee Irrigation District, the Nyssa highway district, the Bureau of Land Management (BLM), Oregon State University, the Ontario Chamber of Commerce, and the Bureau of Reclamation (BOR).

C. Specific issues

The general issues identified as areas where information either needs to be synthesized or needs to be identified as "not currently available" fall into several broad categories. Some of these issues were raised repeatedly, some of them emerged out of the discussion at one of the meetings. Some of the concerns stated as fact in the following discussion may only represent the opinion of one of more of the participants at the meeting.

1 Weeds

Noxious weeds and invasive species are spreading in the lower Owyhee subbasin, both on the rangelands and in fields. Medusahead rye is singled out as possibly the biggest threat since neither domestic animals nor wildlife will eat it and it is taking over huge sections of ground. Besides medusahead rye, white top and perennial pepperweed were mentioned as being really out of control on rangeland. Yellow nutsedge is becoming a major problem in irrigated fields. Other species identified as problems and potentially detrimental to the watershed include scotch thistle, yellow star thistle, Canada thistle, bull thistle, hemp dogbane, Japanese knotweed (now near the subbasin), leafy spurge (which may not be in the lower Owyhee hydrologic unit but is above it in the watershed), tamarisk, juniper, rush skeletonweed, halogeton, yellow flag iris, puncture vine, poison hemlock, and knapweed species including Russian knapweed. Cheatgrass is also invasive but now is almost everywhere. Noxious weeds are also seen as a problem on farm ground. Button weed (common mallow) and dodder continue to be problems for alfalfa seed production.

Concerns were expressed about who or what agencies are responsible for weed control and where they are responsible. What are the economic costs of controlling weeds?

Cheatgrass burns easily and it would be desirable to convert the range back to native species. Cheatgrass does grow where other grasses won't.

Among other problems presented by rangeland weeds, some weeds aggravate soil loss. There was a question raised as to whether the BLM would help fund weed research. Good range weed control requires competitive range plants. We need both biological control and competitive range plants. We need more vigorous grasses that are fire resistant and still palatable.

Since most of the land is federally owned and managed by the BLM, cattlemen are concerned with the BLM lack of control of noxious weeds and invasive species which are spreading on BLM land. Would a burning strategy eliminate medusahead rye? Medusahead rye is a particular concern because it seems to replace nearly all other plant species on large tracts of land, breaking food chains for many native animal species.

Tamarisk has the potential to replace riparian vegetation in the lower Owyhee watershed and is poised to do great harm to water availability in the few intermittent streams in BLM's areas of critical environmental concern within the watershed.

What is the effect of the spread of juniper on the availability of water? Is there an effective way to halt juniper invasion other than burning?

2 Identification of phenomena not open to remediation

One concern is that the effects of naturally occurring phenomena be separated from the effects of people. Naturally occurring phenomena are not open to remediation. There are some topics where there has to be a distinction made between the contributions of human use and those of nature or of historical use.

a. Mercury

Outside the Owyhee watershed, the Bretz and Opalite mercury mines operated through the 1940s. Possibly strata similar to that in which they are located is also contributing mercury to the Owyhee. Is there mercury at Cinnabar Mountain and in Slaughter House Gulch which could be washing down into the Owyhee River?

Mercury was used historically near Silver City to purify gold up until about 1920. Although this mercury was added to the environment by people, now that it is there, if it washes downstream there is nothing that the individuals along the river can do to ameliorate the situation. Locally, it is known that in 1909 a big flood washed out cyanide vats at the Delamar mine and killed willows along Jordan Creek. Jordan Creek drains into the lower Owyhee hydrologic unit. What are the current impacts of historic mining practices at the Delamar and other mines? What conditions in the watershed arise from past mining practices?

b. Ephemeral streams

The bottom of a gulch may only carry water infrequently following an unusual weather event. These are really "ephemeral" streams, although they are frequently and incorrectly referred to as "intermittent." Both historical accounts of how often a gulch carries water and a hydrological survey of the functioning of the creeks and streams is necessary to identify which streams have water resources. What identified waterways within the lower Owyhee subbasin are really "perennial" streams, which are "intermittent", and which are "ephemeral"? Which streams have the potential for remediation?

Accurate classifications of the different drainages do not exist.

c. Water temperature and quality

Given the high summer temperatures and low rainfall, individuals expressed concern that an effort be made to identify the conditions which really exist in the streams under natural conditions. What water temperatures can be expected? How do these differ between surface temperature, shallow reaches of streams, and deeper pools. Deep pools and refuges may be the reason fish survive, not the general, natural river conditions. What are the contributions made by hot springs? Possibly areas could be identified where different species of fish would find appropriate habitats.

The water quality issue is a huge problem. The water quality standards are unrealistic and unachievable. Realistic water temperature standards need to be developed and incorporated in DEQ and EPA documents. The water temperature issue is already impacting the ranches and it is going to impact the growers. There is a need for water quality research in the Owyhee basin on what is achievable.

d. River function

What was the actual frequency of droughts prior to the construction of Antelope Reservoir and the Owyhee dam? Were there droughts every year? That is to say, did the Owyhee River drop to very low flows after the spring runoff was finished? There are some indications that it went almost dry every summer.

e. Rare species

There is a concern that groups and public agencies sometimes champion the use of natural resources in the watershed for the benefit of a species that may never have been present in the watershed or for the benefit of a species that has always been less numerous due to the environment only being marginal for that species.

Other species identified by special interest groups or the BLM as threatened or endangered may really exist in greater numbers or in adjoining areas.

What species really are endangered or threatened?

3 Maintenance of water rights

There is a concern that current water rights throughout the lower Owyhee subbasin be protected. Water should be available for permittees. The Owyhee irrigation district wants to maintain facilities and operate as it has historically. The dam was built for irrigation and is designated for irrigation use.

For growers and ranchers below the Owyhee dam, the dam is their bank; it is their capital. There are lots of people who would like to raid the bank and use the water for their own priorities. There is concern that water rights will be taken away to augment the flow for salmon. Drift boaters, fly fishermen, motor boaters, and bait fishermen all have different priorities.

4 Interaction of wild and domestic animal species

Many of the stakeholders in the hydrologic unit are ranchers. Ranchers are concerned about range conditions and the effects of range conditions on stock. There is a feeling that stock water ponds beneficially affect hydrology and wildlife. The impression is that stock ponds and other water developments provide water for wildlife as well as cattle.

Since cattle are one of many species that might affect the watershed, they would like some evaluation of how different species affect the watershed. There is concern that the BLM has allowed the stocking rate for wild horses to exceed BLM's own guidelines. What are the impacts of grazing by wild horses? How do cattle and wild horses interact? The actual relationship between cattle grazing and fish needs to be explored. There is an increase in the elk population on South Mountain. What impact does this have? What are the effects of the lack of cougar control or other predator control?

5 Protection of wildlife and fish

Wildlife and fish populations need to be protected. Fish and wildlife populations are complex due to their dynamic nature and interactions between species. Wildlife populations are affected by public policies that control predators. For example public policies toward predator species and toward hunting affect sage grouse and other wildlife populations.

The actual geographic distribution of species needs to be considered. Redband trout are a part of the ecology of the Owyhee watershed, but they live in restricted river reaches upstream. Were they ever historically present in other areas?

Agricultural and rangeland management practices may benefit wildlife. Pheasants and quail are found around farmland. Stock ponds developed for cattle also provide water for wildlife. Are there other benefits for wildlife?

If there is enough human pressure, it will have adverse effects on the deer, antelope, lizards, and other wildlife. There is an amazing diversity of life even in a small plot of desert land. What areas are being impacted the most by people and possibly affecting the wildlife?

6 Grazing

Different agricultural management practices, including grazing practices, need to be factored into the assessment.

The public needs to be aware of the reasons for the Vale Project and its outcome. What have been the impacts of the Vale project? Why was it initiated?

What are the effects on the watershed of grazing sheep and cattle? What is the relationship of fire to rangeland conditions and grazing?

An archaeologist who has worked in the Owyhee Uplands says that grazing does not affect the archaeological sites in the area.

Is past heavy historical use of the rangeland by horses and sheep responsible for the greater degradation of parts of the rangeland? Historically areas near the Snake and Malheur rivers were subject to greater grazing pressure. Sheep were run on the land for the last fifty years from the rivers to Crowley.

7 Grazing management and riparian vegetation

There were some who expressed the opinion that cattle need to be removed from at least some stretches of perennial and intermittent streams that provide riparian vegetation. Some believe grazing intensity and timing need to be managed. Ranchers would like to cooperate with the BLM in developing water sources away from the riparian stretches and in excluding cattle from some prime riparian areas. What grazing strategies are compatible with healthy riparian vegetation?

What was the actual historic presence of willows and other riparian species. Were there any areas that had trees? What is the appropriate vegetation in riparian areas?

8 Water quality

There was concern expressed that growers in the Owyhee Irrigation District needed to reduce the amount of silt which washes on down into the Snake River and Brownlee Reservoir. Water samples taken between November and March from the Owyhee, Malheur, Snake, Payette, and Boise rivers nine years ago showed none of them met potential water quality standards even at a time when there was no irrigation and no runoff.

Water quality standards need to take into account the natural causes of contamination. Water in the Mitchell Butte drain was basically clean until it reached the slow water in the tulles and stagnated. Good water quality may not coincide with fishing.

We need baseline water quality data. We need to be progressive, proactive, and quantify improvements. The Owyhee Irrigation District is working to establish baseline water quality data. We need to find water quality data from the past if it exists. Baseline data is needed to show improvements in the future. The Oregon Department of Environmental Quality has identified sediment, phosphorous, nitrate and nitrite in the groundwater, E. coli levels, algae and mercury as contaminants of concern.

Does the Owyhee Reservoir affect the forms and availability of mercury or phosphorus?

The stakeholders expressed the desire to fix their own problems with runoff before it is mandated. Sediment ponds and a switch from furrow to sprinkler irrigation were both mentioned as steps that have been and could be taken to reduce silt in runoff.

With a significant conversion to sprinkler irrigation, what effects will it have on surface water quality and groundwater availability?

Very little agricultural ground drains back into the Owyhee River.

Gophers are a real problem and possibly cause more erosion than anything else. A bounty on gophers is needed.

9 Management of infrastructure and vegetation

Existing roads need to be maintained. There is almost no road maintenance on many of the roads on BLM property. Poor road access compromises the ability of the BLM to respond quickly to a fire or effectively reach areas contaminated by invasive weeds.

How are prescribed burns or lack of prescribed burns affecting the watershed? What was the pre-contact and historic fire frequency? Has this changed?

There is concern for the lack of interest and investment by BLM in maintaining range improvements such as the Vale Project.

Are areas that have burnt or that burn being managed in such a fashion that they will be returned to productive rangeland and not become overrun with weeds?

10 Absentee landowners

Absentee owners are purchasing the irrigated land below the dam and there is concern that they do not have the same interest in stewardship of the land and resources. In other parts of Malheur County absentee landowners have purchased rangeland. They have taken the rangeland out of production to use it for private hunting. They see juniper expansion as positive. Land removed from production produces no employment. Juniper expansion may lead to the land drying up and the degradation of the water. Drier land would eliminate water to maintain riparian areas.

11 Recreational use

Recreation is one of the growing uses of the land and its effects on the watershed need to be separated from the effects of ranching or grazing. Problems caused by recreational use need to be addressed in some fashion other than laying the burden on local land owners or allotment holders. We need to identify who is using the area and how they affect it. Hikers and campers use the more scenic canyons. Hunters from across the US come to hunt chukar. What effect do out of state hunters and fishermen have? How do rafters impact the area? What types of damage are inflicted by four wheelers and snow mobilers? The council members are concerned that recreational vehicles place pressure on the landscape and wildlife year-round. The dam has created an artificial recreational fishery in the reservoir and an artificial recreational fishery below the dam on the Owyhee River. Since there are artificial fisheries, the assessment should not focus on them. However, the recreationists are having impacts on the lower Owyhee subbasin.

People unfamiliar with the area also affect the existing infrastructure. Search and rescue efforts cost the local sheriff both time and money. Local road districts and the county have no increasing revenue to provide all the road maintenance needed due to the increasing recreational impacts of road use. In spite of publicity to the contrary, recreational users spend little or no money within the local economy. Roads with particularly high traffic are those into Leslie Gulch, Three Forks, and towards Birch

Creek Ranch. Away from these more intensely managed and improved gravel roads mentioned above, how do deteriorating roads impact the rest of the watershed? Should there be restrictions prohibiting the use of roads when they are wet or during a specific season?

There is also an impact on the paved roads from recreational use both above and below the Owyhee dam. The Nyssa road district has to maintain the road, with only one of its patrons living in the area. Vehicles pulling boat trailers are driven too fast on the road and the amount of traffic has increased. A recent road district study showed 180 round trips per day during the week and 700-800 round trips per day on the weekends. Most of the cars have Idaho plates. There was some question of whether the road could be turned into a toll road.

There is already concern that recreational use of the Owyhee River below the dam is having a negative impact on the environment. Five years ago during the week there were two to three cars on the road, now there are about 50 cars every morning. There are beer cans, bottles, human waste, diapers, and other trash being left along the river corridor. The fly fishermen have tried to run off kids since they disturb the fly fishing. Families that used to use the river are going elsewhere.

Fires can be caused by cars trying to park off the road where the dry cheatgrass contacts the exhaust pipes.

Recreational use with four wheelers can also cause problems. They don't use established roads. They can spread weed seeds, start fires, and destroy native vegetation. They need to be confined to established roads, and the established roads need to be maintained.

As more people use the area, culturally sensitive sites are more affected. What types of archaeological sites might be impacted?

12 Wild and scenic river status below the dam

There are concerns centered around the BLM process for recommending a wild and scenic river status for the Owyhee River below the dam. A BLM representative explained that the recommendations for "protections for the river were based on certain values" and that the initial process was probably initiated because of the SE Oregon management plan. At the time that plan was written, the Owyhee River corridor was under BOR management. It is now under BLM management.

The stakeholders were concerned that the designation would be based on artificial factors since the cold water fishing below the dam is an artificial effect of the way water is stored and then released from the base of the dam. The vegetation below the dam is also not natural since a wild river would scour the channel and flood plain periodically as the flooding in 1952 did. In 1937, Donna Cleaver says there was not a tree on the river. Historically, the fish in this stretch of the Owyhee river were basically hot water fish: bass, crappie, and bluegill. The brown trout below the dam are a recently introduced specie (1990 through 1997).

With the flooding in 2006, the fish below the dam did not seem to have come through very well. What are the impacts of flooding on the fisheries?

Will pressure be put on the Owyhee Irrigation District to manage the flows for the benefit of the artificial fishery rather than for irrigation? Before the dam was built, the river almost dried up during the summer.

There is already a highway in the bottom of the canyon.

To maintain or repair Owyhee Dam, the Bureau of Reclamation and the Owyhee Irrigation District need to have the right to use, and if necessary improve or rebuild, the road along the side of the river to allow heavy transportation.

People hunt the river and the Owyhee Breaks. Would designation of the river as wild and scenic eliminate hunting?

The designation of the river as wild and scenic could have tremendous negative economic effects for the people who have traditionally used it. Ranchers who have grazing rights need to be able to continue using their grazing rights on public land, especially along the lower Owyhee River. Some of this has already been compromised by the transfer of the management of the land below the Owyhee Dam to BLM.

There is a concern that all the private ground along the river remain zoned agricultural and no property rights are taken away.

The desire to keep flows high might compromise irrigation water. Establishing minimum flows along the lower Owyhee River could also impact crossings of the river and have economic consequences for businesses and farmers.

Restrooms and other facilities need to be placed beyond the upper limit of flooding of the river.

13 Transfer of management of the land below the Owyhee Dam to BLM

Already the transfer of the land along the river below the dam from the Bureau of Reclamation to the BLM has been seen as having negative consequences for local residents. One stakeholder with land on both sides of the river had a fence across the river at his property line. When the water was low, the fence prevented the cattle from leaving his land and drifting onto other property. The BLM required him to remove the fence. Now to control his cattle, he will be required to build a fence along each side of the river or stop using his land as he has traditionally used it. It becomes an economic burden since the landowner is not able to use all the land he owns.

Landowners who can't use the water due to agency restrictions, can't use their AUM's. Will the BLM pay to graze off the river corridor with goats instead of being paid for cattle to graze it?

The BLM has restricted the time when cattle can be trailed up and down the river to reach other grazing areas. However, some of the BLM allotment lands are unfenced, allowing cows to get on the river.

There is a rock quarry that the BOR has traditionally used for as a rock source. It has also been used as a rock resource by the BLM, Malheur County, Owyhee Irrigation District, Big Bend irrigation district, the Nyssa road district, Ontario, and others. After the sudden change in management from BOR to BLM, the rock became unavailable, although there is some short term use being allowed to the BOR. There is no other easily accessible source of similar rock material. The rock quarry was supposed to be withheld from the transfer.

There is a value in the preservation of the western culture and heritage in the area, including cattle drives.

There is also concern that Cow Hollow Park has been transferred to the BLM and traditional uses and maintenance may not be maintained.

Tamarisk has a foot hold along the Owyhee River below the dam. Will this invasive weed be eradicated, or will BLM simply ignore it and allow it to compromise the vegetation in the Owyhee River corridor?

14 Channel silting below the dam, minimizing flood potential

The Owyhee River channel below Mitchell Butte has silted up. In 1952 after it flooded and tore out everything, including the bridge to Adrian, the army corps of engineers channelized some of the river bed. After the 1984 flood, there was some clearing of the channel. For the last 15 to 18 years there has been no high water, not enough to flush anything. Before the dam was built, it always flooded, even in dry years and everything was washed away.

Since 1984 lots of the river capacity below the dam has been lost due to encroachment of vegetation along the river. Damage from flood waters backing up into adjoining cropland and houses has become more probable. Land owners were supposed to clean and maintain the channel. Land has changed hands and different owners don't remember floods. New owners need to buy in to the need to keep the channel clean. Permits are needed to do the work necessary to keep the channel open. The Oregon Department of State Lands administers the permit process for anything in the river.

It is hard to avoid flooding on the lower Owyhee River below the dam. The glory hole (spillway) does not work until the Owyhee Reservoir is 80% full, so large amounts of water can not be released before that point. The primary purpose of the reservoir is irrigation.

15 Channel modifications

What past modification were made in the river channel below the Owyhee Dam and why were they made? Was it to preserve farm lands?

16 BOR leases

The BOR leases on the Owyhee Reservoir are all year-to-year leases. This means that people with cabins in Fisherman's Cove and Dry Creek, the only two areas authorized for long term use, have less incentive to make the investments in maintenance than they did with the old, long term leases.

For areas outside of Fisherman's Cove and Dry Creek, the BOR leases can not be renewed at all after the original lessee dies and the structures are being destroyed.

17 Cooperation with the BLM and other agencies

Since most of the land in the lower Owyhee subbasin is BLM land, how can the assessment be used to develop cooperative projects?

It is currently difficult to cooperate on projects with the BLM because the BLM is currently focusing on their GMA planning, waiting until the planning is completed before starting other projects.

There is also concern that the GMA process may cause problems for permittees. In other areas the GMA's have really complicated or tied things up.

18 Responsiveness of state and federal agencies

Comments provided for agency processes are not taken seriously. The agencies make plans or draft regulations internally. After they have solicited comments on these plans, they don't alter the plans to take into account the public input. The public input is "window dressing." Oregon Watershed Enhancement Board and BOR are the exceptions.

There does not seem to be consistency between the management practices of the different agencies like BLM, BOR, and Fish and Wildlife.

19 Economic concerns

The livestock industry is an important contributor to the local economy. The livestock industry should remain an important part of the local economy.

The federal land needs to be multi-use, not designated for one purpose only, such as fishing.

We need to maintain economic profitability and economic sustainability. Farming and ranching need to be affordable.

20 Other concerns

After public agencies burned cabins (at sites previously leased to the public) in the 1970s, they didn't clean up the refuse that didn't burn. There were old bed springs, stove pipes, and other non-burnables left at the sites and they are still there.

The Bureau of Reclamation tore down a very nice store on Cherry Creek that served a real need. A much "junkier" facility with fewer amenities now occupies the spot.

The BLM, which already has large tracts of land, is trying to force the few private land owners with land within the BLM area to sell to the BLM.

21 Use of the assessment

The lower Owyhee subbasin is a very special place to the people who live or work there. There have been many improvements in the management of activities in the subbasin and these need to be highlighted in the assessment. There are also real areas where further improvements are needed or where basic information about the subbasin is lacking. The assessment should provide a basis to assist in applying for grants.

The Owyhee Watershed Council has been positively involved with educating the public about the watershed with activities such as the 5th grade field day and the educational video. The accurate current portrayal of the state of the watershed developed by an assessment can aid the Owyhee Watershed Council's communication with the public.