

Henry's Fork Watershed Conference November 10, 2015

Participants began registering at 8 a.m. at the Marriott SpringHill in Rexburg.

Introductions and Community Building

Brandon Hoffner, HFF executive director, addressed the 27 participants seated in the traditional circle, noting that the two minute of silence are “a time to remember there was controversy” in the early days of the Watershed Council, and “it is good to take time to organize our thoughts and decide how we’re going to conduct ourselves today.” Participants introduced themselves, and the floor was opened for comment.

Mike Beus announced Roland Springer has been promoted to Snake River area manager and is moving to Boise. Jerry Gregg is retiring.

Brandon Hoffner gave an update on the Harriman Canal project that was reviewed and endorsed by the council in October. Engineers from Rocky Mountain Environmental, Forsgren and Quadrant, and Jim Hardy of Idaho Fish and Game’s fish screen shop in Salmon looked at the canal on-site, checked the headgates, and are responding to the RFP. Each of the firms has a different field of expertise, and they may collaborate to get it done.

Rob Van Kirk said he gained more insight on just how advanced Idaho water management is. He was invited to Helena recently to speak about aquifer recharge to Montana’s equivalent of our Department of Water Resources. Montana is just now developing its first state water plan, which Idaho did in 1971. Then on Friday in San Francisco, faculty members from Stanford University asked how California might implement its brand new groundwater measurement law. “We are 40 to 50 years ahead of most other western states,” Rob said.

Idaho Department of Fish and Game

Jon Flinders

Henry's Fork: Status of the Fishery

Jon reviewed the history of the HF fishery, starting with the facts that winter flow regimes were improved in 1972 and that IDFG stocked rainbow trout (30,000 catchables per year) throughout the river through the late 1970s. The Harriman Ranch/Last Chance reaches gained international reputation in the late 1970s, when IDFG implemented special wild trout regulations—some of the first in the state. Jon then described the fisheries trends in each of the major reaches of the river.

Upstream of Island Park Reservoir, trout populations are primarily dependent on the adfluvial life history, in which fish spend most of the year in the reservoir and migrate upstream seasonally to spawn. Downstream of Island Park Dam, in the Box Canyon, the population back in the 1970s was maintained in part by stocking and in part by downstream migration of trout from the reservoir. Following construction of the Island Park hydroelectric plant, downstream migration was greatly limited, and the population became much more supported by wild reproduction. The bottleneck in the wild trout population is survival of juvenile fish through the winter, which is directly related to winter flow. Year-to-year variability in the population thus reflects variability in winter flows out of Island Park Dam. The population averages around 3,000 fish per mile.

In the Last Chance, Harriman, and Pinehaven reaches, sampling of fish is very challenging, so there isn’t good population data from these reaches. Generally, however, these reaches support larger but fewer fish, particularly seasonally when macrophytes provide fish habitat. Downstream at Riverside, the upper

portion of the canyon reach, trout abundance increases substantially to 6,000 to 8,000 fish per mile, but average size is smaller (8 inches), reflecting the importance of that reach as a rearing area for young fish. Downstream in the Stone Bridge (Warm River to Ashton) reach, brown trout appear and comprise 15% to 25% of trout numbers of 2,000 fish per mile. Despite allowance of harvest in that reach, angler harvest is only about 2% of the population.

Trout abundance is somewhat lower downstream of Ashton Dam, but the average size of fish increases. Brown trout comprise a larger fraction of the population there, a trend that continues downstream of Chester. At St. Anthony, about 80% of the trout are brown trout. Trout abundance averages around 1,000 fish per mile in all reaches downstream of Ashton Dam. Management challenges in the lower Henry's Fork include sedimentation and river flows. Similar to the Stone Bridge reach, angler harvest in the reaches downstream of Ashton Dam is small—generally less than 3% of the population. Throughout the Henry's Fork downstream of Stone Bridge, brown trout proportion has been steadily increasing through time, perhaps reflecting warmer temperatures associated with climate change.

Throughout the Henry's Fork as a whole, management challenges include water management and use, increased angling pressure, social user-group conflicts, bird predation, and habitat degradation in certain reaches.

Wildlife Diversity

Rob Cavallaro, Idaho Fish and Game

Rob started by introducing the Terrestrial Wildlife Habitat and Population Initiative and noting the new manager is Curtis Hendricks. He then highlighted the 2012 statewide wetland prioritization plan. Sites are ranked by richness, rarity, condition, and viability. Four areas in the HF ranked high: Henry's Lake, Henry's Lake Flat, lower Henry's Fork, and Teton Basin.

Yellow-billed cuckoo were listed as Threatened under ESA in 2013. One of the proposed critical habitat areas is the riparian corridor along the lower Henry's Fork and lower Teton River, along with areas along the South Fork Snake River, Snake River upstream of American Falls Reservoir, and the Big Wood River downstream of Stanton Crossing (Highway 20). Yellow-billed cuckoo inhabit cottonwood riparian forests, which are generally in decline throughout the western U.S. due to a variety of factors, including flow alteration and land uses.

Some of the best remaining cuckoo habitat remaining in the western U.S. is found in the upper Snake River basin. About 5,000 acres of suitable cuckoo habitat are found along the lower Henry's Fork and the South Fork Snake River. IDFG's approach to preserving cottonwood forests along the lower Henry's Fork, South Fork, and upper Snake River is to expand the Snake River Area of Critical Environmental Concern (ACEC). IDFG also recommends continuing efforts to include wildlife conservation in water management, particularly maintaining the springtime freshet, which is critical to long-term maintenance of cottonwood forests, and implementing cottonwood regeneration by empowering private landowners through incentives.

The third issue Rob presented is management of white-faced ibis. Eastern Idaho is a primary breeding location for ibis, particularly at Market Lake and Mud Lake. Ibis feed on invertebrates, primarily in shallow wetlands and flood-irrigated agricultural lands. There are about 160,000 breeding pairs around the West, and Market Lake is the single largest breeding area in the West. In a comprehensive foraging survey, about 75% of all observations of ibis foraging in eastern Idaho occurred on flood-irrigated fields. Only 12% of observations occurred in natural wetlands. The remaining observations occurred in various types of irrigated agricultural lands, particularly where water pooled on the surface. Breeding ibis in

eastern Idaho are strongly tied to flood-irrigated fields. The Regional Conservation Partnership Program, funded by the 2014 Farm Bill, contains a component to maintain and enhance flood irrigation along the lower Henry's Fork, in the Mud and Market lakes area, and along Camas Creek (near Fairfield).

Rob then presented information on the east Idaho amphibian breeding survey, which was funded primarily by U.S. Fish and Wildlife service. The survey covered the Salmon, upper Snake, and Southeast regions of IDFG. The survey targeted areas where northern leopard frog and western toad have been observed since 2000. Almost all leopard frogs observed were found in the Henry's Fork watershed. Columbia spotted frogs were also found in the Henry's Fork watershed. Boreal chorus frogs were generally ubiquitous throughout the survey area. None of the species were found west of I-15. The survey also included sampling for diseases; final results of that analysis are still forthcoming. The final report on this survey will be completed in 2016. Rob commented on the importance of the Henry's Fork for frogs, birds, fish, and cottonwoods.

Next, Rob presented information on IDFG management of white pelicans. Pelican numbers have increased dramatically since 2001 with more than 5,000 breeding pairs in Idaho and 850 in the HF watershed. The primary breeding areas in eastern Idaho are Minidoka National Wildlife Refuge, Blackfoot Reservoir, and Island Park Reservoir. Pelican breeding was first detected on Island Park Reservoir in 2012. Pelicans have been present in Idaho for thousands of years, and there are multiple records of their occurrence from early European settlers. Pelican numbers declined substantially during the mid-20th Century due effects of DDT. Pelicans feed primarily on nongame fish, but they will feed on game species when available, consuming 5 pounds of fish per day per bird. Pelicans are highly mobile and adaptable, and the birds in southeast Idaho are part of a large metapopulation that occupies the entire western U.S. Over the past 50 years, pelican breeding has shifted from the southern half of the western U.S. to the northern half, including Idaho. Currently, about 16% of the western U.S. metapopulation breeds in Idaho. Despite increases in the Idaho breeding numbers, fledging success has been steadily declining rangewide since the 1960s. IDFG will complete a pelican management plan in the winter of 2015-2016, including recommendations to contain the IP breeding colony.

Sand Creek WMA

Eric Anderson, IDFG

Eric Anderson, who manages the Sand Creek Wildlife Management Area, provided a brief update on sage grouse management, including experimental treatments to restore sagebrush steppe habitat in the Sand Creek area. More than 30 sage hens along the Red Road were fitted with transmitters this spring to enable tracking of the population.

Management of wetlands is mimicked at the WMA with manmade wetlands. A breeding pair of trumpeter swans has been recorded at the Chester wetlands.

Grizzly Bear Update and U.S. Beaver Co-Op

Steve Schmidt, IDFG Regional Supervisor

Steve Schmidt provided an update on grizzly bear management. The latest population survey estimated 714 grizzly bears in the Greater Yellowstone Ecosystem (GYE), but due to sampling techniques used, the actual population may be well over 1,000. In the late 1970s, the GYE population bottomed out at 100-200 individuals but grew rapidly, at a rate of around 2% during the 1980s. Current growth rate is essentially zero, indicating that carrying capacity has been reached. This indicates that recovery is complete within the GYE. "We have a recovered population well past the metrics to delist," Schmidt said. As a result,

grizzly bears are expanding their range beyond the GYE, out as far as I-15, Wind River, and Chester. According to Steve, all of the ESA recovery objectives have been achieved for the GYE population. The U.S. Fish and Wildlife Service has initiated the process to de-list the GYE population, but that process may take a year or more and will be controversial. As long as grizzly bears remain listed under ESA, USFWS retains management authority, but once bears are delisted, IDFG will have more management authority but will have to coordinate with Montana and Wyoming because bears are managed by population, not by state.

Steve also described IDFG's beaver translocation project. Following large declines in beaver populations during the 19th Century, IDFG promoted reintroduction of beaver into former habitats throughout the mid-20th Century. More recently, beaver have caused problems for landowners, and IDFG allowed and even participated in beaver removal. Most recently, IDFG and partners have realized the benefits of beavers to watershed function, particularly in the face of climate change. Beaver dams store water high in the watershed, maintaining higher stream flows later in the summer. Current management promotes reintroduction and maintenance of beavers on both private and public lands.

The U.S. Beaver Cop-Op was started a few months ago recognizing that beavers are great eco-engineers and a great asset when dealing with climate change and declining stream flows. The four goals of the Co-Op are:

1. Better understand beaver populations in the watershed. Where are they?
2. Determine the status of their habitat.
3. Selectively relocate beaver to select sites to improve downstream storage. They can help us store water in the upper watershed for slow release during the summer rather than all at once.
4. Provide information and support landowners. IDFG did trap and move some beaver this summer.

Caribou-Targhee National Forest

**Liz Davy, Ashton and Island Park District Ranger
(also on behalf of new Forest Supervisor Garth Smelser)**

The C-T National Forest (now containing 3.2 million acres) is constantly planning and updating the existing Forest Plan, although there is no effort to create a new Forest Plan right now. The forest is amending but not revising its lynx, old growth, and sage grouse amendments. In the Island Park area, CTNF has improved the Buffalo River Road, Reclamation Road, and Warm River Bridge, primarily to improve watershed conditions and limit erosion. The CTNF is a partner in the beaver cooperative Steve Schmidt presented earlier. Beaver were relocated to Toms Creek to reactivate an historic channel. A road was flooded, but plans are in place to harden the road crossing.

In 2015, CTNF began exploring options for restoring Big Bend Creek, in cooperation with Harriman State Park and the Henry's Fork Foundation. Liz mentioned phosphate mining, which occurs on about 18,000 acres of the CTNF (primarily in the Soda Springs area), in addition to BLM lands. She also mentioned proposed and active gold and travertine mines and other small mining activities on the forest.

Vegetation management is another component of CTNF activities, including thinning, timber sales, fuels reduction, aspen enhancement, and restoration of whitebark pine and sagebrush ecosystems, and mountain shrubs. The forest is not dealing with pine bark beetles as in the 1980s. "We are not a target of the beetle," Liz said, noting the fires of 1988 burned most of the mature timber favored by the beetles.

Current forest products include firewood, post and poles, biomass, native seed, and traditional board timber, although total production is very small compared with previous decades. Fuels reduction projects

are occurring in urban-wildland interface areas in Island Park (via the IP Sustainable Fire Community), Teton Canyon, and Rainey Creek. Prescribed burns are planned in the Dubois district, and roadside fuels reduction will continue by clearing trees from the highway right of way. Grazing is still a large use of the CTNF, which has the largest area of grazing allotments of any forest in the Intermountain Region. Allotments exist on 2.3 million acres across the CTNF. The forest issues 254 permits for cattle and 36 for sheep. Grazing permit holders “are some of the most environmentally conscious people I work with,” Liz said.

Important wildlife management issues on the CTNF include enhancing swan habitat, living with grizzly bears, and reducing wildlife mortality on U.S. Highway 20. The forest is working with ITD on a long-term project to develop wildlife crossings on U.S. 20. CTNF has a policy of managing wildfires for resource benefit, including actively managing natural fires. Over half of the USFS budget nationwide is used for fire suppression. The CTNF maintains permanent fire suppression personnel and equipment, which are available for fire-fighting across the West as needed. Steps to reduce wildfire risk are fuels reduction, education/awareness, farming partnership, promoting landscape-scale projects, and developing escape plans. The Partridge Fire near Mesa Falls this summer burned 595 acres, and the forest had more than 100 personnel on site. “We don’t just walk away and let it burn” Liz said. The Forest has two helicopters, eight engines and a 20-person fire crew. About 7,000-9,000 acres per year on the CTNF are treated each year to minimize spread of invasive plant species.

Recreation is by far the largest use of the CTNF, particularly on the Ashton-Island Park Ranger District. The CTNF has the largest network of groomed snowmobile trails in the country. In addition to long-standing motorized recreation, the forest has recently been experiencing increased non-motorized recreational use, particularly bicycling (mountain bikes and on-snow fat bikes) , hiking, wildlife viewing, and fishing. The forest has three permitted ski areas, and issues special use permits for organized activities. Special projects on the CTNF, funded primarily through external sources, include sagebrush restoration, watershed improvements, and watershed improvements. The latter has been funded by the Land and Water Conservation Fund in the past, but the current federal budget has not contained specific information on how that fund will be maintained or applied in the future.

Liz concluded by mentioning seasonal employment and youth education programs, collaborative groups in which the CTNF is involved, and partnership/volunteer programs. CTNF recently received an award from the Regional Forester for its extensive partnerships. The forest has 200 permanent employees and about 200 seasonals plus the YCC for high school students.

Sheryl Hill asked why employee housing was built in St. Anthony instead of Ashton. The answer was that CTNF already had existing land and buildings in St. Anthony at the old dispatch office near the St. Anthony airport.

Ken Watts asked about spruce budworm; it has been an issue over the past few years but the infestation is now waning and usually doesn’t kill the trees, just defoliate them.

Amy Verbeten asked about Teton Canyon fuels reduction project: planning process is currently underway, either in scoping or public review of scoping document. Check with Teton Basin Ranger District for details.

Fall River Rural Electric Cooperative

Dave Peterson, FRREC

FRREC is a publicly owned cooperative governed by nine directors, with 1,200 meters across a geographic area that ranges from Hebgen Lake to Ririe, Teton Basin to Parker, and includes three hydroelectric projects and a fourth that is leased out.

Dave started by describing the Island Park hydroelectric plant. Average production from 1995 to 2014 was 19,744,918 kwhs/year, enough to supply 1,614 residential homes each year. This production offsets 21,000 tons of CO₂ emissions from coal (or about 12,000 tons from natural gas). The Island Park Federal Energy Regulatory Commission license requires the plant to maintain dissolved oxygen concentration of 7 mg/L, which is maintained by injection of oxygen into the water in an aeration basin at the plant outflow. The aeration basin was refurbished in 2010.

Dave next described the Buffalo River hydroelectric plant. Average generation at the Buffalo River, 2008 to 2012, was 1,897,658 kwhs/year, up from about 1,660,053 kwhs/year prior to that time, enough to power 155 residential homes. However, leakage through the dam has recently decreased ability to retain water behind the dam. About 40,000 rainbow trout have passed through the fish ladder on the Buffalo River Dam since it was rebuilt in 2005.

Lastly, Dave described the Chester hydroelectric project. Estimated annual production at the plant was about 12,763,200 kwhs/year, although that production has not yet been realized. The Chester hydroelectric plant features a fish ladder, as well as screens on the Crosscut and Last Chance canals on either side of the dam. The Chester facility also includes boat ramps upstream and downstream of the dam, handicapped-accessible restrooms, and a handicapped-accessible fishing platform.

Fall River owns a hydroelectric project on the Teton River that is leased out. Dave said Fall River “is getting it back.”

Ruth Shea, Trumpeter Swan Society, noted that Fall River Electric was involved in a wildlife management issue on Texas Slough. Fall River partnered with local landowners and others who raised \$114,000 in six weeks and buried a power line. “Swans are there, and no power lines,” she said.

Brandon Hoffner asked if FRREC is required to have CO₂ offsets? Answer: No. FRREC generates about 10% of power it sells. The rest comes from BPA, which is primarily hydroelectric.

Question about Felt Dam: how much generation capacity there? Answer: Around 30,000,000 kwhs/year.

Dale Swensen asked if running the aeration basin at IP Dam is cost-effective. Cost is about \$23,000/month to fully run the aeration basin. Brandon noted the aeration basin hasn't been operating recently, and resulting dissolved oxygen levels of around 4 mg/L have been too low for trout, particularly for spawning.

Idaho DEQ

Troy Saffle, IDEQ

In the 1990s, the Henry's Fork Watershed Council was designated as the Watershed Advisory Group (WAG) for the Henry's Fork for the purposes of reviewing and implementing Total Maximum Daily Loads (TMDLs). IDEQ has since established a separate WAG for the upper Teton basin. TMDLs are now reviewed on a five-year scheduled In the current five-year review of the Teton Basin, the WAG made editorial suggestions, identified additional projects that should be recognized, added updated information from City of Driggs NPDES permit, and recommended beginning the comment period after the November HFWC meeting. Two new criteria have been added to the TDML: e coli and temperature. The

next steps in approving the Teton TMDL are to collect public comment, revise the document based on those comments, and submit the revised document to EPA, tentatively in early 2016.

The second project Troy presented was the collaborative project with the Henry's Fork Foundation to monitor water quality in Island Park Reservoir and downstream of Island Park Reservoir. Melissa Muradian of HFF presented some results of that monitoring to the Watershed Council in October.

IDEQ has a seat on the state invasive species council and as such is a partner in invasive species control. Quagga and zebra mussels are species of primary concern in Idaho. IDEQ collects samples in lakes and reservoirs using the latest technology and does most of the analysis in-house. To date, Idaho remains free of quagga and zebra mussels. Boat inspection stations are key to maintaining mussel-free status.

Lastly, Troy updated the Council on IDEQ's response to harmful cyanobacteria (blue-green algae—BGA) blooms. Cyanobacteria blooms can be unsightly and appear as foam, scum, or mats. Excess nutrients, sunlight, and water stagnation are causes of cyanobacteria blooms. In Idaho, animal deaths associated with cyanobacteria blooms occurred in the 1980s at Black Lake and in the 1990 at Cascade Reservoir. Water bodies that may be particularly susceptible to cyanobacteria blooms include Henry's Lake, Island Park Reservoir, Salmon Falls Reservoir, and American Falls Reservoir. Cyanobacteria toxins can affect humans, birds, and other animals. IDEQ is responsible for identifying and quantifying harmful cyanobacteria blooms but cannot issue health warnings; Department of Health and Welfare has the authority to issue warnings. Harmful cyanobacteria blooms occurred in Henry's Lake in late summer of 2015. Sampling conducted on August 12, 2015, found concentrations ranging from 5.8 to 55.3 parts per billion; concentrations in excess of 20 parts per billion triggered health warnings. Maximum toxin concentrations, in excess of 100 ppb, were observed on August 26. Once the weather cooled in early September, toxin concentrations decreased substantially, and the health advisories were lifted. DEQ logged 105 phone calls, mostly about fish and dog safety. Health risks come from some species that produce toxins that can cause gastrointestinal and other symptoms.

Cathy Koon asked if the bacteria are present at all times in the water. Troy said all water, all the time.

Water District 1

Lyle Swank, Watermaster

Carryover of water in any of the upper Snake Reservoirs helps water users and resources throughout the system. In the fall of 2014, Upper Snake reservoir carryover was more than 40% of capacity, whereas in 2013, carryover was around 14% of capacity. Carryover in 2015 was about halfway between. Ririe Reservoir was constructed over the period 1973-1976, in response to flooding in February 1962. Active capacity is 90,500 acre-feet; the top 10,000 acre-feet is devoted solely to flood control, which is the primary function of the reservoir. The remaining active storage is used for flood control and irrigation storage.

In addition to the active storage, a permanent conservation pool is reserved on the bottom of the reservoir. Ririe Reservoir has a low-elevation watershed, so it is fairly difficult to fill. However, the flood control rules require 50,000 acre-feet of space to be present between October 31 and March 1. By March 15, the requirement reduces back to 10,000 acre-feet, unless the runoff forecast is high. Current operations make it difficult to refill the reservoir in the spring, often due to water released for flood control the previous October. Lyle illustrated this with data from a number of dry years, including years in the early 1990s and early 2000s. Water released in October is most often lost from the upper Snake River system entirely. This release does not benefit any uses, including irrigation, fisheries, recreation, or power. In wet years,

such as those in the early 1980s, mid-1990s, and most recently 2011, the reservoir refills to 80,000 acre-feet, but the 10,000 acre-foot flood control space in the top of the reservoir has never been used.

Water District 1 has recommended operational procedures to maximize winter storage and minimize the probability of losing fall releases out of the system. The Ririe Reservoir operational procedures agreement allows the flood-control rules to be revised based on additional hydrologic data. When the reservoir was designed, there was no continuous stream gaging upstream of the reservoir, whereas now there is a 38-year record of stream flow upstream. In 2010, USBR released a flood-frequency study of Ririe Reservoir based on modern data and found the return interval of the flood for which the reservoir was designed is around 500,000 years, much longer than originally estimated in the 1960s. The operations agreement also allows revision of the flood-control rules if regulation techniques are improved and when irrigation space allocations are finalized.

Downstream canal capacity and operations have been improved, there is a plan in place to remove snow and ice from the floodway channel on short notice if needed, and Ririe space has now been fully allocated to irrigation storage. In particular, this water is critical to fulfilling obligations of the 1990 Fort Hall Water Right Agreement. In addition, since Ririe Reservoir was built, demands for water have increased throughout the upper Snake Basin.

In summary, all of the studies and current information indicate that flood control procedures at Ririe can be changed to allow higher physical winter carryover in Ririe Reservoir. However, formal agreements still need to be completed to allow substantial changes in Ririe operations.

Dale Swensen asked if the October release is more valuable as aquifer recharge. Lyle said he would rather see the fall releases used for recharge than flow out of the system at Milner.

Update on Water Rights Management

James Cefalo, IDWR

This information was prepared by Mat Weaver, deputy director of IDWR, as an update on the pending settlement between groundwater and surface water users. James started by describing the difference between the administrative “ESPA Area of Common Ground Water Supply,” the current ESPAM 2.1 model domain, and the physical boundary of the upper Snake River basin. He referred to the complexity of water issues in Idaho as demonstrated by what he called the political map of the aquifer vs. the physical boundaries and the modeling boundaries as identified by different agencies. He then described the temporal trajectory of water storage in the ESPA as it responded to changes in irrigation practices. Storage in the ESPA has declined due to increase in groundwater diversions, climatic factors, increase in surface-water use efficiency, and overall decreases in surface-water diversions.

Aquifer storage increased about 17 million acre feet from 1912 to 1952 and then decreased 11 million acre feet from 1952 to 2013. Since 2002, a number of senior surface-water users have filed water-delivery calls to IDWR, requesting that junior groundwater pumpers be curtailed to restore river reach gains that provide surface water to the senior users. These calls include those of Rangen and the Surface Water Coalition, and most have remained in the legal system for many years. Thus far, groundwater users have generally avoided curtailment by mitigating loss of surface water through exchanges and leases. The IDWR director has required mitigation during years of low surface-water supply but not during years of high supply.

IDWR has recently changed the method it uses to determine injury to the senior users, and increased the determination of injury and the amount of water required for mitigation or curtailment. The 2015 curtailment could have involved groundwater rights back to 1957 priority.

To avoid current and future curtailment, groundwater users and surface water users have developed a settlement agreement, which includes some short-term actions, such as providing 110,000 acre-foot of storage water for 2015 irrigation year. More important are the long-term provisions:

- Consumptive use reduction of groundwater by 240,000 acre-feet (120,000 acres out of production)
- Annual storage delivery of 50,000 acre-feet
- Reduce irrigation season-of-use to April 1 through October 31 (same as surface-water season).
- Mandatory flow meter measurement devices by 2018
- Support state-sponsored recharge program
- Additional support for NRCS conservation programs, new conversion projects, enforcement, etc.

The agreement includes benchmarks on groundwater levels, including a 2026 goal of returning levels to 1991-2001 average, based on 19 monitoring wells that have periods of record back to the 1940s. Outside of the goals of the formal agreement, implementation of the agreement will help increase reach gains above American Falls Reservoir, increase discharge at Thousand Springs, and help avoid violation of the Swan Falls Agreement minimum flows at the Murphy gage.

However, technical details of implementation are proving to be challenging, particularly allocation of demand reduction fairly among all of the groundwater users.

Cefalo identified a number of implementation issues:

- The State is committed to 250,000 acre-feet of recharge of the Upper Snake River system, but substantial infrastructure needs to be constructed before that objective can be met.
- Groundwater districts have different established baseline use so what is the starting point? The data is inconsistent.
- Who administers the terms of settlement?
- How do you allocate the cost to water users at the current rate of \$20 per acre foot? The cost could reach into the millions.

Amy Verbeten asked when the “blue areas” of the map (the tributary basins) will be included in the effort. James said there is some movement now to alter the political boundaries into the physical boundaries, which are now designated as tributaries or sub-basins.

Ken Watts asked who will monitor the flow meters. James said that hasn’t been determined.

Invasive Species

Bryce Fowler, Fremont County

Highway Inspection stations for invasive species operated by Fremont County in 2015: 5,199 total inspections on U.S. Highway 20, and 2,374 on State Highway 87. Total across the state in 2015 was 63,229 boats inspected, 283 of which had invasive species on them.

The two most critical species are zebra and quagga mussels, which came to the U.S. from Eurasia on ships. They were initially introduced in the Great Lakes and have spread from there. Neither of these

species has been found in Idaho. These species are highly efficient filter feeders, filtering an average of 1.5 liters per day, with major negative effects on native food webs. They have high reproductive potential and spread rapidly once introduced to new water bodies. Currently, there is no known way to eradicate them once they are present.

On to invasive plants of concern, flowering rush has become a big problem in canals in the Magic Valley. The only known way to remove it is to dig individual plants up by the roots. It is present in Gem Lake and other water bodies in the Idaho Falls area. Curley leaf pondweed is another invasive plant of concern; this is present in Island Park Reservoir and is being treated chemically when the reservoir is drawn down and shorelines are exposed. Terrestrial noxious weeds of concern include rush skeleton weed, purple star thistle, and Iberian star thistle.

Weed control efforts are coordinated through Cooperative Weed Management Areas (CWMAs), which obtain grant funding and facilitate cooperative projects across landowner and jurisdictional boundaries.

“Everyone has weeds; everyone needs help with them,” Bryce said.

The next meeting of the weed management committee is Dec. 9 at the Fremont County Annex in St. Anthony.

Community Building and Wrap-Up

Dale Swensen called for the traditional minute of silence to end the meeting for the 18 participants remaining.

During community building, Cathy Koon said she has learned that the state of Idaho has a block on mass emails like the ones she sends out to notify people about watershed council meetings. In particular, she has trouble getting emails to Fish and Game, DEQ, Water Resources, and ITD. The only way to get past the block is to have the state agencies’ IT departments allow HFF as a sender. Troy Saffle offered to take it on and get an answer.

Amy Verbeten praised the council and presenters. “I learn something every time,” she said.

Paul Faulkner said he appreciates “you NGOs more and more. As our funds get cut, you really help us.” He said he learn a lot from the various groups here. “All that cooperation increases the effectiveness of all our efforts,” he said.

Dale Swensen said, “Just thinking about all these presentations and the thousands of hours that go into making all this happen boggles the mind. . . . The Watershed is a going place to be.” He said that as issues come up, all of the professionals and the non-professionals who get involved and get the work done are appreciated. Mike Beus said he appreciates that stating one’s opinion or an agency position is OK. His first HFWC meeting was the first State of the Watershed and presenters weren’t sure what side to come down on.

The meeting was adjourned at 3:30 p.m. No date has been set for the next meeting.

Notes and copies of the presentations will be posted online on the Watershed Council’s webpage.