MINUTES
of the
196th COUNCIL MEETING
Holiday Inn at Buffalo Bill Village
Cody, Wyoming
June 25, 2021

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MEMBERS AND ALTERNATES PRESENT *(*via zoom)*

ALASKA	
ARIZONA	Tom Buschatzke Amanda Long-Rodriquez *Trevor Baggiore* *Ayesha Vohra*
CALIFORNIA	*Jeanine Jones*
COLORADO	*Jeremy Neustifter* *Rebecca Mitchell*
IDAHO	John Simpson
KANSAS	*Kenneth Titus*
MONTANA	*Anna Pakenham Stevenson*
NEBRASKA	Tom Riley Jim Macy
NEVADA	Adam Sullivan Micheline Fairbank Jennifer Carr
NEW MEXICO	*John D'Antonio* *Greg Ridgley*
NORTH DAKOTA	Jen Verleger
OKLAHOMA	Sara Gibson
OREGON	*Tom Byler*
SOUTH DAKOTA	Nakaila Steen

TEXAS	Jon Niermann
UTAH	*Norm Johnson* Todd Stonely
WASHINGTON	*Buck Smith* *Mary Verner*
WYOMING	Chris Brown Jennifer Zygmunt

GUESTS

Peter Colohan, Internet of Water
Erin White, National Park Service
Pat Tyrrell, Tyrrell Resources, LLC
Brent Duncan, USDA NRCS-SSRA
Aislinn McLaughlin, American Rivers
Norm Semanko, Parsons Behle and Latimer
Beth Callaway, Governor Mark Gordon's Office
Greg Johnson, Colorado Water Conservation Board
Amy Steinmetz, Montana Department of Environmental Quality
Kathy Alexander, Texas Commission on Environmental Quality
John-Cody Stalsby, Texas Commission on Environmental Quality
Laura Rennick, Montana Department of Natural Resources and Conservation

WESTFAST

Heather Hofman, USDA/NRCS
Mike Eberle, USDA Forest Service
Travis Yonts, Bureau of Reclamation
Pat Lambert, U.S. Geological Survey
Chris Carlson, USDA Forest Service
Paula Cutillo, Bureau of Land Management
Roger Gorke, Environmental Protection Agency

STAFF

Tony Willardson
Michelle Bushman
Cheryl Redding

Jessica Reimer
Adel Abdallah
James Ryan

WELCOME AND INTRODUCTIONS

WSWC Chair Jennifer Verleger welcomed everyone.

APPROVAL OF MINUTES

The minutes of the meeting held virtually on March 25, 2021, were moved for approval by Jon Niermann, seconded by Chris Brown, and were unanimously approved.

WATER RESOURCES STEWARDSHIP IN YELLOWSTONE NATION PARK

Erin White, Hydrologist, National Park Service, Yellowstone Center for Resources addressed the Full Council. She discussed the water resources stewardship in Yellowstone National Park I imagine some of the water resources challenges we face in Yellowstone are similar to the issues facing the states.

The park was created before Wyoming, Montana, and Idaho became states so as you can imagine, we talk about water rights issues, waters of the states, things of that nature. On March 1, 1872, Yellowstone became the world's first national park set aside recognition of its local features, and for the benefit and enjoyment of the people. Yellowstone is one of the largest intact temperate ecosystems in North America. The gateway communities surrounding Yellowstone are continuing to grow, putting additional pressure on the water resources surrounding the park and the states obviously are very focused on water availability, and drought conditions. Yellowstone is not just managed by one agency. It really provides an opportunity for resource managers and land managers to come together as a community to have conversations about water resources and land management.

The mission of the National Park Service is "... to conserve the scenery and the natural and historic objects and wildlife therein and to provide for the enjoyment of the same in such a manner and by such means as will leave them unimpaired for the enjoyment of future generations."

Yellowstone's water resources do not stop at the boundaries of the park. They touch many watersheds in many states in the West, so we have to work together on water resources concerns in the park. It's important to understand where each agency is coming from. The National Park covers 2.2 million acres in three states: Idaho, Wyoming, and Montana. It serves as the headwaters of the nation. Water exiting Yellowstone reaches Mexico, the Pacific Ocean, as well as the Gulf of California. The water feeds 150 lakes, 278 streams, 45 waterfalls,

thousands of small wetland areas, and over half of the world's hydrothermal features. Our water resources are highly valued not only to us, but also to people across the country.

Our Water Resources Division provides a great deal of support to park staff. I am the park hydrologist. We don't have a huge team to cover 2.2 million acres and so it's really imperative that we work together not only between federal partners, but also with the States to manage these resources. Water resources management is definitely a team sport.

Some of the challenges that we face in Yellowstone. Infrastructure and Civil Works projects include water supply planning and federal highways. There are 450 highway miles in the park. There are two seasons for the roads in the park: winter and road construction! Transboundary issues cover water rights, which are a hot button issue, and Wild and Scenic Rivers designations, which gives us opportunities to work collaboratively with the states. We also are dealing with aquatic invasive species - quagga mussels were detected in the Park this week. There are other aquatic species concerns, particularly the lake trout in Yellowstone Lake.

There's a lot of research underway on climate change in the park. A year ago, we received a request from researchers at Oregon State University and Idaho State University to apply sulfur hexafluoride in Yellowstone National Park. We began reviewing the application. It struck us because sulfur hexafluoride is known as the most potent greenhouse gas and maybe we should ask some more questions. Sulfur hexafluoride is used in the experimental protocol to measure the exchange of oxygen in the atmosphere between the stream and the atmosphere. Sulfur hexafluoride has alternatives, which was not something that was readily apparent to these researchers because they looked at prior methods where this compound has been applied nationwide. The outcome of these conversations is that sulfur hexafluoride is 23,000 times more potent than CO_2 that lasts in the atmosphere between 2,000-3,000 years and there are some significant implications even when applied on a small scale. It doesn't have aquatic affects, but it does affect air quality. We are focusing on mitigation efforts available to us.

When it comes to water quality in Yellowstone, we are not without our challenges related to fuel spills, leaks, just like any other community. We also have 303(d) listings.

Springs have been a source of water supply in Yellowstone for many, many years. Yellowstone is currently collaborating with the EPA Region 8 and USGS on groundwater under the direct influence study to look at alternative methods to the NPAs(?), which are very costly and time consuming.

For the federal highways projects, we have 452 miles of roads intersect 2,500 miles of rivers and streams. It is a park management priority to improve parkway infrastructure. We have $55 million in projects over the next five years in three road corridors and $450 million in new projects on the books in various phases of planning. Project highlights include the Pelican Creek Bridge and Lost Creek Restoration. The Pelican Creek Bridge we highlight as a success story. It was an opportunity to move away from embankment style road design, culverts, isolated culverts to a viaduct. Then the Lost Creek, we have a planning project underway.

There are three active diversions within Yellowstone. The Snake River was designated a Wild and Scenic River under the 2008 Craig Thomas Snake Headwaters Legacy Act. In collaboration with Grand Teton National Park, U.S. Forest Service, and the U.S. Geological Survey, Yellowstone staff collected critical flow data for the Snake River within Yellowstone and Grand Teton National Parks last year.

Water Quality - Class I Outstanding Waters designation. Motor vehicle accident spilled over 3,000 gallons of fuel 100 ft from Yellowstone River with active response engagement by NPS, Wyoming DEQ, and U.S. EPA. In 2018, the State of Montana removed Soda Butte Creek from the 303(d) list of impaired waterways due to water quality improvements. This marks the first delisting of an impaired waterway in the State of Montana following any mine waste remediation effort.

Erin mentioned an exhibit currently on display: What Lies Beneath: Exploring Yellowstone Lake's Mysterious Vents

Questions

Tony Willardson: What have been the effects of the 1988 wildfire on the Park?

Erin White: It's a difficult question to answer. It takes a long-term dataset for comparison and unfortunately there is not much data prior to the fire.

Paula Cutillo: Can you tell us about the Yellowstone controlled groundwater area?

Erin White: Absolutely. There is a groundwater control area that wraps around the northern and northwest boundary of the park in Montana. It was set aside through a Montana water compact. Effectively, it provides a regulatory zone in which the NPS can work with the state to evaluate every well permit or proposed activity that might impact the hydrothermal system of the park. There's a technical oversight committee that was created under the compact, and they meet annually to discuss permit applications and related issues. It's been a really useful tool to give us an opportunity to pause and work together with the state to understand proposals for development and water extraction along park boundaries.

Jennifer Carr: We have a similar program with regard to aquatic invasive species. In Tahoe we have a similar boat inspection program, and I know we're trying to integrate that throughout the West to track boats. I've seen some outreach related to felt-footed to waders and preventing transfer of species from stream to stream. Have you seen anything in that regard?

Erin White: That's an excellent question. We have banned the use of felt-soled waders in the Park to help protect invasive aquatic species.

Tony Willardson: With regard to streamflows and data, what kind of instrumentation is allowed?

Erin White: Most of our rivers and streams are ungaged. We rely on modeling and the 8 streamgages that are in the Park.

THE INTERNET OF WATER

Peter Colohan, Executive Director for the Internet of Water, noted that he has presented to WSWC in the past, but there have been many changes since then.

The Internet of Water is an esoteric concept. It's a philosophy, a philanthropic project led by Duke University, and an emerging federal initiative. It is a collaborative water data project to support critical water policy outcomes and to build a nationwide community of practice. We are building essential new technologies for modern water data management. Because there are so many overlapping jurisdictions, missions, and mandates, it's really better to bring everyone together to work in targeted ways. The Internet of Water supports that effort with a variety of online resources and tools, which you can find in our Learning Center on our website.

We are working in close collaboration with USGS by connecting to their national hydrography infrastructure, or their national map.

You need data and information to handle questions with precision. Particularly during times of drought such as is being currently experienced, having a grip on the natural system and human use of the water and environmental flow needs and all of these conditions, we need to manage the water data. The data are essential to the science and technology and modeling activities. Many of you advocate for more gages. I'm all for that. And then we need to bring that data together and manage it more effectively for the purpose of modeling.

The IOW concept builds on decades of previous work by the USGS, and is dedicated to findable, accessible, interoperable, and reusable water data, so we can all take it and use it for many purposes.

The IOW was created with the support of six private foundations after a meeting of the Aspen Institute in 2018. He shared some examples of collaborative projects to solve problems, a great number of which have focused on water supply. In North Carolina, the IOW is helping them build a water conservation and supply dashboard tool that helps utilities share demand, water conservation, and other data relevant to water supply and streamline their reporting to the state. The state likes the tool well enough that they are transforming the way they get the data from the utilities. Again, we do this in a very collaborative, user-driven sort of way; we don't tell them what they need, we ask the stakeholder what is needed with regard to water, and then we help them construct the modern, lightweight thing that allows for this exchange of data. A second example is on the Pecos River – to improve data management and decision support in the lower Pecos Valley. We're advancing careful monitoring of groundwater wells to improve management of groundwater withdrawals from wells in the Pecos Valley Artesian Conservation District, and working with Reclamation and New Mexico Tech to track these particular sites. It

accelerates the return of data back to the District (closer to real time), influencing their pumping and irrigation decisions.

In the Colorado River Basin, we've held a dialogue facilitated by WSWC, and in response to stakeholder questions and requests we have created a water budget navigator. It was built to help compare budgeting formulas and use estimates across states. I encourage you to look at this on our website. A starting point was to use the same terms, etc. As the river crosses state boundaries the volume doesn't change, but the way it's measured and evaluated might change. So getting a grip on that and making the translation across these boundaries is important for the overall management of the Colorado River.

In California, we support other policy goals beyond water supply like clean water. We're working to integrate tribal and community data sets into the state's harmful algal bloom monitoring and notification system. We are proud of this project in particular as we have worked with the tribes and local groups, and HABs are a growing concern.

If you are not already a member of our community of practice, we invite you to join us. We have 145 members and involvement with 33 states, and anybody who's involved in water management data can be involved. We've engaged with more than 700 participants through our webinar series where we're teaching folks about how to take steps to do water data management in a more effective way. I highly encourage you to take a look at our Data 101 guidebook, which provides critical guidance on water data and metadata standards and advancing FAIR principles.

We are developing essential new technologies that will make an internet of water possible. The data hubs are critical. A system of thematic hubs is appearing. These include WSWC, CUAHSI, Water Data Collaborative, and 2 geographic hubs in TX and NM, and a growing list of federal hubs. These hubs are critical. The data providers, such as states, have to manage the data themselves, and we are offering a way to create the great data center in the sky, the network for exchanging that data that are discoverable through a common technology.

The Water Data Exchange (WaDE) at the WSWC is really the western cornerstone of the Internet of Water. We could not possibly create an IOW without WaDE. And you have my eternal gratitude, because you are pioneers, as westerners are famous for being pioneers, in the creation of this kind of modern water data exchange. WaDE was created in 2010, 2011. This sets the stage for the rest of the country for doing things like this. We appreciate your support of WaDE and its components.

Geoconnex is a partnership we are building with USGS. It uses the national hydrography infrastructure. It is a prototype, and we are in the process of piloting it with USGS. This could be used potentially throughout all of North America. He showed a demonstration. This Geoconnex system is machine readable. For example, on the Snake River, I should be able to get every single piece of data from the Corps, USGS, Wyoming, Montana, and I shouldn't have to know all the individual websites to go to get that information.

The IOW is a neutral third party. We assist others in managing their data. This is done with free open-source software solutions. The IOW provides an opportunity to build on prior research and leverage millions in philanthropic contributions. This has not been done previously because we don't organize our data in a modern way and because there has been no third party to pull the data together. There is no market demand system for this data. We're the garbage collectors of the data. Google had no interest in making these datasets discoverable. Philanthropy has stepped up to help solve this problem.

Questions

Tom Riley: I'm a great supporter of data collection. How do we protect against bad data and that data that people could misuse unknowingly?

Peter: Right, that's a great point. So like everything related to the internet, there's always a little bit of danger associated with the fact that people misuse data all the time. The best way to mitigate against that is for all of us to publish data of known quality with all its metadata, with the description explaining that this is authoritative data from Nebraska. Then the user has a chance to decide which data is authoritative data and which is junk data. The underlying benefit of exposing all of this data is so great that when Geoconnex comes and finds your stuff, I as the user know I am getting something authoritative. As a community of practice we can do these things in an intelligent way, through good descriptions and careful marking of authoritative sources.

Erica Gaddis: Are you integrating the existing water quality portal data, which already combines USGS and all of us and EPA?

Peter: Yes. So the water quality portal is a hub of the IOW. Geoconnex will find all of the data through WQX WQP. So if you're pushing data, please, please push it to WQP, that's where we're going to find it most likely.

Erica: What about high frequency data?

Peter: We are working with CUAHSI to create a sensor data hub that, in theory, will produce data every 15 minutes, almost a live feed of data. NWIS, the USGS system, is kind of the main system for sensor data, stream flow sensors occurring at high frequency. There are also many other time series data sets that should be available at higher frequencies. Getting this done is a big challenge. There is also a challenge in organizing remote sensing data, and I'm hoping in the future to talk to NASA about where we can get their water-related remote sensing data organized.

Roger Gorke: Could it be linked for emergency situations in sending out an "amber alert?" Is this a possibility?

Peter: Good question. I'm really familiar with this problem since I came from NOAA. The IOW itself is not structured to handle emergency alerting. Everything we collect is used in a

model. Google maps is a model. The modeling has to be done by authoritative emergency management agencies. We can feed the models and the outputs of those models could be discoverable through IOW. Someone could build an app. In theory, yes, the IOW makes it possible for people to build apps. There isn't enough modeling happening.

COMMITTEE REPORTS

A. Water Resources Committee

Jon Niermann reported on behalf of Mary Verner who was attending virtually. He briefly reported on the presentations given principally around drought. The Committee took action on two items: the FY21-22 work plan was approved, and it recommended approval of Position #423 with two small corrections for clarity.

Micheline proposed a couple of edits, standardizing the use of the WSWC acronym and referencing tribes and Alaska Native communities for consistency with a recent position on drinking water infrastructure.

Jon moved to readopt #423 with the correction mentioned, and authorizing staff to insert the federally recognized tribes qualifier into the resolution. Second by Chris(?). Motion carried.

B. Water Quality Committee

Erica Gaddis gave an update and review of the Water Quality Committee topics. She noted that there are two sunsetting positions coming up this Fall. The Committee supported the decision to draft and pursue a position on abandoned mines in concert with the related WGA resolution. Subcommittee will also be drafting a letter re: EPA Office of Deserts, Mountains, and Plains.

The Committee adopted the FY21-22 work plan, and recommended readopting resolution #424. Erica moved to readopt #424 with the changes as included in the briefing materials. The motion was seconded and passed.

C. Legal Committee

Chris Brown briefly reviewed the Legal Committee agenda topics and updates. Please note the upcoming symposium on the settlement of reserved Indian water rights claims. The grazing water report has been finalized and posted on the website. He described how he used that report in the Wyoming legislative session. Take advantage of the legislative summaries included with the briefing materials.

The FY21-22 work plan was approved. Sunsetting position #425 on Endangered Species was recommended for approval. Some minor edits were included. He read the revised language. Chris moved to approve the modified position. There was some minor discussion. Micheline seconded, and the positions was unanimously approved.

D. Executive Committee

The Executive Committee meeting was held prior to coming to Cody, WY. The Committee preliminarily approved the budget under Tab D, which is a working document. The Management Subcommittee has authority to make changes as needed. We have one change to our staff, as our Policy Analyst Jessica Reimer has been accepted into a doctoral program at the University of Utah, working on environmental mediation.

If you look at Tab E, there is a report on a number of activities. The WSWC has been much more involved in the appropriations process, in part with the leadership of Jeanine Jones, looking at funding for NOAA's recommended S2S pilot projects to look at winter precipitation in the West. The seasonal to subseasonal predictions are the space between weather predictions and climate predictions, and we are hoping to get to a point where we actually have meaningful skill three months out to a year or two. The current skill is at about 8% on NOAA's heightened skill score, but if you're wrong 92% of the time, it's hard to manage water based on that. We've also submitted written testimony on various Appropriations Subcommittees regarding water policies and programs the WSWC has been involved with.

WESTFAST REPORT

Roger Gorke, the new incoming WestFAST Chair, provided an update on WestFAST efforts. WestFAST was started 12-13 years ago. From the federal perspective we have had significant benefits since the creation of WestFAST. There are 23 members. An Executive Council meets weekly with our WestFAST Liaison. He shared a powerpoint slide that depicts the entire WestFAST membership.

WestFAST priorities are to continue to develop and enhance lines of communication, awareness of the need for and opportunities for proactive collaboration, and to develop effective working state/federal partnerships. We've begun to see how WestFAST can better support state water planning efforts, along with drought resilience, infrastructure issues, and the impacts of wildfire on water resources, and provide better communication between the state partners and the WestFAST Principals. We're starting with a better understanding of how water managers use federal assets and data provided to the states. To that end we are sending out a short survey with the WSWC to have some listening sessions with states interested in a kind of pilot demonstration. We want to know what is going well and what isn't with each state on various water-related issues, such as wildfire mitigation and the healthy watersheds program, and how SRFs could be used to deal with long-term remediation and rebuilding those forests. We're excited about the possibilities to improve our communication and coordination.

The WestFAST team has pulled together some very interesting special topic webinars.

Roger will become the Chair and Chris Carlson is the Vice-Chair, with Heather as the Liaison. Pat Lambert will continue as part of the team as the immediate past Chair.

STATE REPORTS

North Dakota: Jennifer Verleger reported the State is in a terrible drought, as are many of the western states. This drought is pretty much the driest the State has had in 127 years. The main thing we have going on right now is the Drought Disaster Livestock Assistance Program, which was activated on April 8 of this year following the governor's crop disaster declaration. The Water Commission approved three separate funding appropriations totaling $4.15M available for cost share funding. The program is intended for sustainable long-term water supply projects that will continue to produce during times of drought, such as new wells, rural water connections and pipeline extensions. Basically, we are just trying to get water out to livestock producers so they don't have to sell off their herd. There's $1.2M remaining in the fund so far. There are only four counties in the state that don't have a project under this program.

North Dakota has been having a lot of wildfires this year. For the entire year in 2020, we had 921 fires, which burned 11,956 acres. This year, as of June 2021, we've had more than 1,400 fires and over 100,000 acres have burned, which is a dramatic increase from what we're used to seeing. Two of the main fires we have had were the Roosevelt Creek Fire in the little Missouri National Grasslands, Northern Medora. Medora is one of our most highly visited tourist attractions because it's right in the middle of Theodore Roosevelt National Park. Over Easter, that fire burned more than 4,600 acres, and the entire town had to be evacuated. It did not end up reaching the town, which was great news. Another fire on the Fort Berthold Reservation burned an estimated 9,800 acres. So again, fires are a huge issue right now.

There has been some legislative actions. The Office of the State Engineer, which has existed since 1905, has been eliminated, and has now merged with the Water Commission. They changed the name of the agency to the Department of Water Resources. The State Engineer used to be in charge of both of those agencies. That position is going to be replaced with a director of Water Resources, which does not have to be a technical person. The state engineer role still exists in one little piece of the statute, but nobody's quite sure exactly what that role is going to be going forward. Right now, John Paczkowski is our interim state engineer, which he has been since Garland Erbele retired. Presumably, John will still be the state engineer once all this goes through, but I guess it will be up to the new Director, who should be hired by August 1, 2021.

The legislature passed a bill to do a study on the assessment drain process. A lot of the local water resource districts and their constituents were not happy with the assessment drain process. The bill was initially a study to amend the assessment drain procedure, and as the legislative session went on, every water problem under the sun that was brought forward, got put into the study. They put about 10-years' worth of work into the three-year interim study. One of the things they put into this study was looking at was maybe eliminating the prior appropriation

doctrine since we are in a drought and people are getting cut off or are not getting permits. So that study has started. They have narrowed the topics somewhat. There were about 20 people that they listed that were going to be part of doing this study, with some voting members and some non-voting members, but the non-voting members—including the state agency that handles water rights—were removed.

Colorado: Becky Mitchell - Drought is at the forefront, and agricultural recovery as it relates to this drought. We do have water projects across the state that are taking in around 5% of what they would normally take in an average year. It's definitely been painful and all of that is having a lot of effect on the whole Colorado River Basin. We're thinking about the negotiations on the Colorado River, and the drought definitely puts an emphasis on the need to consider much-varying hydrologies as we look to towards the future.

It's wildfire season. We have not had any fires as big as last year, which was horrible for Colorado. We're still in recovery from 2020. The legislature passed significant funding to get recovery funds out to wildfire affected areas. There's air-deployed mulching happening probably as we speak. It is expensive, but definitely needed as the runoff does affect water supplies. We are hoping for a better season in terms of wildfires.

We are currently working on updating our Colorado Water Plan from 2015 to be focused and very much inclusive of climate change scenarios and really making sure that all of our future planning is focused on that and has the funding associated with it. For our legislature, everything that was discussed about water was a very consensus-based and bipartisan and so we got support on funding levels and commitments to continue focus on funding for all types of water projects across Colorado.

Texas: Jon Niermann thanked Wyoming for hosting. Texas is not as bad as several other states in regards to drought. We are going into a special session, which shouldn't affect our jurisdiction I don't anticipate, but we're launching right into the sunsetting provision for our agency, which is a 12-year cycle typically, and so it's going to be a bumpy several months for us going through that process.

Relating to water more directly, we have a lot going on. In February we had a winter storm that was in the national news because of the power outages. I was thankful that the water failures were not in the news, but they were extensive. We had approximately 16 million people on a boil water notice. That's over half the population of Texas. Many users were without water. The agency is engaged in cataloging what went wrong and developing policy solutions to address those issues. The failures were myriad. I'm speaking primarily about drinking water systems, but also wastewater systems that were only prepared for short power outages - they had enough fuel, the ones who planned ahead and had generators and maintain their generators and add fuel on site - but they were not prepared for a week long freeze. The successful ones had to figure out how to get fuel trucks across icy roads, or chemical supplies for treating water systems. There were a number of challenges and the number of failure points. We're engaged in addressing those.

Oklahoma: Sara Gibson also thanked Wyoming and Council staff for hosting the meetings. Oklahoma just wrapped up their legislative session, which was better than predicted last year. We have money to continue to operate our programs.

We are experiencing drought in some small areas of the state, on the western half of the state. I believe one part of southeast Oklahoma received 350% of their average rainfall in May so we were also dealing with flooding issues, which leads into programmatic notes. We will be beginning to work on our first ever state flood plan to review our infrastructure and work on identifying needs. In the future, we're also beginning the 2025 update of the state's comprehensive water plan. We'll begin meeting with stakeholders on all the issues across the state. The Oklahoma Water Board and the Department of Environmental Quality has entered into a strategic alliance with our Oklahoma Rural Water Association to address both personnel issues as well as demand issues. Part of the initial owner operators in these rural water districts are aging out and we're seeing a shortage of people being able to operate these systems, as well as deal with their supply issues.

Wyoming: Chris Brown thanked Council staff, especially Cheryl for helping plan the meetings. Steve Wolff left the State of Wyoming just this month to take a position in Colorado. Chris also reviewed previous positions held.

Wyoming has been fairly healthy with regard to carryover reservoir storage, but due to drought, they will be relying on that fairly heavily this year. As far as budgets, I think across the board it's been more work, less people. I lost an attorney position, but gained an entire agency to represent. That's kind of the way we're starting to roll. Our State Engineer's Office lost between 10 and 15% of its total personnel. Of course, in drought times the work just picks up.

A few current issues. The Colorado River is going to be a gift that keeps on giving at least until 2026. All the basin states are gearing up to think about creative ways to address the incredibly difficult problems that we're facing on that river. In January, the first piece of the upper basin Drought Contingent Plan (DCP) that was passed in 2019 kicked in. That's called the drill of the drought response operation agreement, which is intended to prop up the elevations at Lake Powell for power generation purposes, and for compact compliant purposes so that the upper basin can continue to meet its obligations under the 1922 compact. We've been meeting with Reclamation on at least a bi-monthly basis trying to develop a plan in how we might release stored water from what are called the upper initial units, which include: Flaming Gorge in Wyoming and Utah, the Aspinall in Colorado, and Navajo in New Mexico. The projections from January were bad and it's just continued. I feel like that water that was in that tube that Glen Canyon Dam spillway - we're going to get to the bottom and just explode. It just keeps going down faster. We are likely going to have to act much more quickly than we ever anticipated we would. That is going to be a fairly difficult issue that's going to keep us occupied.

There's been a significant dispute between the City of Laramie and the University of Wyoming. The University is the City of Laramie's largest water customer paying along the lines of $1.5 to $2 million in water fees each year for its water. The University, in an attempt to reduce its costs because it's suffering the same budget cuts as every other Wyoming agency,

drilled some wells under a permit issued by the State to irrigate much of its landscaping with its own well. City of Laramie passed an ordinance that basically says you can't do that, you're in the city of Laramie, where you have to go through our system, or have a permit from us in order to use any other water source within the City of Laramie, which then of course implicates state authorities with regard to the allocation and appropriation of water. We attempted a full day of mediation by the Wyoming Attorney General that was attended by the governor in attempt to bring the two sides together to a resolution which failed. The legislature stepped in and offered a solution which is to pass a statute that says essentially, the University of Wyoming can do what it wants regardless what the City of Laramie says, which has prompted two separate lawsuits: (1) the University to the City saying that the ordinance can't be enforced and that the city can't drill new wells; and (2) the City of Laramie sued the University saying that the statute that was passed is unconstitutional along with some other claims that they've made. Just this morning, I filed an appearance to defend the constitutionality of the statute that says the University doesn't have to listen to the City of Laramie, so that should be interesting.

The legislature through the interim is exploring the stock rights on federal lands issue. Essentially, they are looking for ways to assure that the federal entities who own those stock rights can't somehow alienate those rights to the detriment of the grazing permit holders. We're still working through the process to see whether or not a piece of proposed legislation like makes it to the next session. The legislature is, also in the interim, looking at this question of hydraulic connectivity, between groundwater and surface water in Wyoming, whether there should be a bright line test and what would be the purpose of the test, how does it implicate interstate obligations, how do you use co-produced groundwater permitted for surface water types of uses, all kinds of questions with regard to comingled or hydrologically connected groundwater. Finally, they're considering codifying easements associated with centuries-old ditches, water pipelines, and water conveyance systems in general. I think the idea is that folks with old ditches an pipelines who aren't sure whether they have an easement, where it's not an express easement, don't have to hire a lawyer to know what the easement rules are. I'd be very interested if other states have similar statutes.

Jennifer Zygmunt (Wyoming) provided a few water quality updates in Wyoming. We did receive Class VI UIC primacy last August and are continuing to fine-tune our rules related to that primacy program. Based on some feedback from EPA, answering questions from other states and permittees, we do expect to see our first application in around 2023. It's a very robust permitting process that we're gearing up to develop guidance, answer questions, develop application forms, etc.

We're monitoring harmful algal blooms this summer. One of our targeted watersheds is Boysen Reservoir, which is an important reservoir about two hours south of here that we've identified and prioritized for some proactive nutrient reduction efforts.

We've been fortunate to retain funding and develop a partnership with NRCS to split a 50/50 position for a watershed coordinator to lead nonpoint source and point source mitigation activities in that watershed. So we're really excited to have continuing positive relationship with NRCS and really start leveraging some targeted funds for some meaningful results in that

watershed. We're in our review process for chapter one water quality standards. Quite a bit of changes proposed for redoing our designated use classification system, recreation use definitions and criteria, drinking water criteria and/or turbidity criteria.

Finally, we have been issuing permits for land application for beneficial reuse of produced water. We are seeing increased interest in that, and we have very robust permitting process for that too. We have three county-wide land application permits that have been approved after extensive review of information.

Chris Brown mentioned resolutions of appreciation for Kevin Frederick and Steve Wolff.

Nebraska: Tom Riley – The Nebraska legislature, at least in my view, is pretty quiet. Similar to Oklahoma, we are finishing up a flood hazard mitigation plan that was directed by the legislature. Last year that came on the heels of really historic flooding in Nebraska in 2019. We had major dam failure and issues that impacted people all along river systems in Nebraska, and we're still recovering from a lot of those incidents of flooding. So we continue to work on that and are gaining public input to have some better flood resilience. The floodplain group is also very active in renewing and updating our floodplain maps and some of the data, with non-stationarity of the data, is certainly changing how those mapping processes are laid out, and probably grabbing more lands in the floodplain than we otherwise might have seen in previous mapping. Continues to be very busy. Nebraska's water is divided up between the prior appropriation system, which my department handles, and our Natural Resource Districts, the correlative rights system that does groundwater. We've come together to work on those problems and issues through integrated management plans. The 23 NRDs in Nebraska are now working conjunctively with the Department to develop those plans and try and get at some of the issues that are the best management of resources. So we're very busy in that area. One of the elements of those IMPs is that some of them are in their second and third generation. The plans that are further down the line have really been focusing on drought management.

Fortunately, drought in Nebraska has not been quite as bad. In fact, we had really good rain, over about half the state last night. Apparently I'll have to seek a storage permit based on some recon from my son, because our shop is full of water. We'll see how that goes.

Staffing is a real concern and has been from day one that I've sat in the seat. The Department is down about 10-15% of staff. It's really difficult to recruit and keep folks at the Department. This was something I was having trouble with in private practice too so I don't think it's unusual to us. It's been a real challenge to get people into positions, especially given COVID. One last thing, the Department is moving for the first time. We've actually moved out of our space and have continued to work remotely. I have about 70 staff, coming off COVID we continue to work in a remote fashion. So that's been a real challenge to meet people and work with people. They'll be joining Director Macy in their very nice space in the northwest part of Lincoln, along with some other departments. He thanked Wyoming for hosting and thanked WSWC staff as well.

Jim Macy (Nebraska) apologized for not participating the past couple of years, but he had a leadership responsibility with the Environmental Council of States (ECOS) as Vice President and then last year president of that organization. Unfortunately, they didn't coordinate with the Western States Water Council on when we all met together.

With regard to the environmental quality part of our shop, this July will be our 50th anniversary of the formation of the agency. On July 1st, we're going to have a big kickoff with the governor. A couple pieces of significant legislation led to the creation of the Department of Environment and Energy. Two years ago we incorporated the Department of Energy into our agency. Then this last year, we moved the drinking water folks that used to be over at Health and Human Services, well standards folks and our agency. Now the department oversees all things water and energy and environment within the state.

In speaking of the 2019 flooding, we just want to remind you that we do also oversee the State Revolving Fund. During that 2019 experience, we did have significant leveraging issues occur between communities that were wiped out and needed critical infrastructure to be restored. We did ask EPA to consider some memorandum with FEMA. That was a successful attempt. Now there is a permanent way that you can use your state revolving fund dollars at a 0% financing to help with bridge loans while waiting for FEMA dollars. That's still available. It's a very useful tool for communities whether you're experiencing drought and can address state water quality issues or flooding. We may be experiencing both of those this year. With the 2019 flooding, there's some successes and some failures.

A couple of litigation occurrences just happened in the last couple of weeks. There was a gentleman named Dick Miner in Cherry County that decided to get rid of some flooded area in the sand hills area of the Cherry County that joined the Snake River. He excavated about three miles of sand and put a direct ditch into the Snake River. We had a pretty big rain event shortly after he did that, and now there's a significant impact on water quality issues into the Snake River now. EPA just announced a settlement on that issue. There's a five-year mitigation plan associated with that for restoration efforts. The other thing that you may have been reading about in Nebraska is one that impacted the ethanol industry. One of manufacturers had been using treated seed corn over a number of years to produce ethanol. Long story short, the byproduct of that was a wet cake that wasn't consumable by livestock. The owner/operator allowed that to accumulate over a couple of years so we have a significant water and wet cake land issue going on with this facility. The State's attorney entered into a complaint and we're seeking a resolution of issues with the owner/operator. Behind the scenes, we've been working with the seed companies for the last five months to conduct interim measures. Happy to report that those six contributing seed companies have entered into a voluntary compliance cleanup plan, which will start the planning process as soon as they sign an agreement with our agency. We think that will be a great step forward in cleaning up this area.

The last thing that I want to share with you is that over the last couple of years, we've had a couple of significant delistings. One in particular that used conservation efforts to a great extent over the last 20 years. It's a project called the Shell Creek area, and it's the largest delisting on Atrazine, but it covered 350,000 acres in the central part of Nebraska. Originally, it

was a project targeting flooding, but the ancillary benefits of that flood control and good crop management was the delisting a couple years back of Atrazine. So some interesting things that you can read about on the Shelf Creek delisting.

Idaho: John Simpson - instead of giving you our standard drought report, I wanted to focus on an effort that we're trying to undertake in response to some federal funding that's coming our way through the American Rescue Plan Act. Broadband, water and sewer is where these funds are targeted. Treasury came out with an interim rule recently that Idaho commented on. Governor Little provided some comments because we felt like it was a little bit too confining, or restricted for our particular interest in the West. I would encourage you to look at the interim rule to see how it may apply to your state. How to utilize funds not just for drinking water and water quality (SRFs) – also creating some flexibility to help with water supply projects for resiliency that help water supply issues, climate resilience. Could the WSWC with the help of WGA look at how there might be more flexibility in the utilization of those funds. Again, our governor sent a letter, which I can get to Tony and Michelle if you're interested in that, but I think broader communication between western states looking for that flexibility and combining funds for various water projects could be useful.

Arizona: Amanda Long Rodriguez - We've had quite a few bills related to water that have been introduced. I'm not going to go deep on all of them, but HB 2622 was passed, which requires the Arizona Department of Water Quality to adopt water quality standards and BMPs for non-waters of the US, and also published a list of all protected waters. The budget bills in Arizona also have a pretty big impact on the Arizona Department of Water Resources, including staff salary increases and also the establishment of the Drought Mitigation Revolving Fund. We actually just got news this morning that was passed yesterday. The Department also continues to lead the Arizona Reconsolidation Committee process, which has been modeled similar to DCP, in preparation for Colorado River management current set of rules which expires in 2026. We also continue to work with the Governor's Water Augmentation Innovation Conservation Council. Most of the work here is done through the committees who have so far put together briefs and summaries on several topics including water augmentation, desalination, and a framework for groundwater management after 2025. Last year, we hit a pretty big milestone of completing the remaining fourth management plans, which includes mandatory conservation programs for various sectors, we are now working through the stakeholder process for the fifth management plan, while concurrently beginning the actual large task of developing and drafting the actual plan. In part because the COVID, our team has worked really hard to increase transparency and engagement throughout this process, including multiple methods of comment, several interactive dashboards and a dedicated web page summarizing all of the conservation proposals. Finally, drought like every state, persists in Arizona with almost 95% of the state in severe to exceptional drought. And as you may have seen on the news, Arizona has many wildfires burning right now. The fire restrictions for the entire state have changed to stage two.

Tom Buschatzke (Arizona) – I just wanted to add a couple of things. Amanda mentioned the Drought Mitigation Fund. This is something that's never existed before - $200 million, really to look at water projects like the ones Idaho described something I never thought I would ever see the state of Arizona do in the four years I've been doing this. She mentioned salaries at

ADWR - that was to get us to some equivalent level of other state agencies, including our own AZ Department of Environmental Quality, who were siphoning away our employees and paying them more money. Something that I've been working on for six years as the director that finally came to fruition. A lot of this is because COVID money is coming into the state. Three big steps forward on the horizon for the state of Arizona.

South Dakota: Nakaila Steen - mentioned her predecessor was Kent Woodmansey who has taken a new position as the Director in the Division of Agriculture and Environmental Sciences. In April, the merger between our Department of Natural Resources and the Department of Agriculture was finalized. The most notable bill that passed this year was HB 1028, which required a person who wishes to petition a water permit application, they only can participate in the hearing if the person alleges that the application, upon approval, will cause an injury to the person that is unique from any injury suffered by the public in general; and is within the regulatory authority of the board. She said this came up in the permits for the TransCanada pipeline, where hearings were getting off topic and taking up a lot of time.

South Dakota is in drought just like many of the other states. What is interesting is, 2019 was the wettest year on record in a 126 years of data, much drier trends have continued in 2020 and into 2021. We have seen some fires already this season, notably a 22-acre fire that burned one residence West a Rapid City. The current stream river conditions are trending below the long term median flows. We have sent an advisory letter on the James River water users north of Huron warning of possible shut off orders later this summer. Our water from Wyoming, the Belle Fourche Rive is having flows much below the median, but the Cheyenne River has not been as critical. Lastly, thank you Council staff and Wyoming for hosting us.

Nevada: Micheline Fairbank - Our Water Planning and Drought Resiliency Program section is working on developing or updating the State Water plan, which is going to be a multi-year task. Obviously, drought is what drought is in Nevada. If you want to learn more, Nevada has a remarkable website: livingwithdrought.com. We also have livingwithfire.com, which addresses the fire side of things. The living with drought website is where we're really communicating on the public outreach side. The Nevada Supreme Court has established a commission to study the adjudication of water law cases in Nevada. There's about 20 members, led by Supreme Court Justice Hardesty who is examining our current judicial review process and exploring whether or not there's a need and desire and what it might be to improve the judicial review process both for litigation and petitions for judicial review of decisions of orders from our office, as well as just adjudication of water rights. Nevada has 256 hydrographic basins and thus far three of them have decrees or preliminary orders and orders of determination issued. Otherwise, there's a lot going on.

Jennifer Carr (Nevada) - We've got some work coming up with PFAS as a result of legislative activity. We've got a mandated workgroup to start to look at potential sources, as well as potential exposure pathways for PFAS in the state. That was where it ended upon passage. Where it started was us developing our SOC(?) stream standards and effluent limitations and everything ourselves. We told them it would be $3 million a year for many years and so they backed it off to a workgroup. There was another bill that passed related to water issues on the

quality side. Part of it is EJ definitions based on census tracks. There was another joint resolution that didn't pass that attempted some other additional language related to EJ definitions. We've decided to use a portion of our Multi-Purpose Grant offering this year to look for occurrence and surface water. We're going to use probably about $40,000 or $50,000 of that money to plan for some PFAS sampling and surface waters. The last thing I will mention is related to WOTUS. We have only had two Section 10 waters defined in the state: (1) the Colorado River system; and (2) Tahoe. As a result of WOTUS, the Corps took it upon themselves to start to convert some of our other waters that have just been defined as traditionally navigable and do the rest of the homework on those to designate them as Section 10 so that they will survive the changing definition of WOTUS a little more easily than what we've experienced. Because with the removal of the state line definition, some of our waters fell out of jurisdiction or could have been disclaimed by the Corps so they're actually doing some work to prove up some of the history on our waters and moving into the Section 10 arena, which I think will be helpful for us moving forward.

Adam Sullivan (Nevada) - Our legislature just wrapped up (120 days every other year) and like North Dakota, we had a bill proposal to change the job description for the state engineer to make it a Director of the Department or the Division of Water Resources, which was interesting, because it was acknowledging that the job of the state engineer goes way beyond engineering as all these other demands and expectations. It was a good discussion, but strongly opposed and did not pass. We had another proposal that would change the role of the State Division of Water Resources in the Nevada's representation for Colorado River negotiations, which for those of you who work on Colorado River, Nevada is represented by the Southern Nevada Water Authority in those negotiations. That was strongly opposed and did not pass. Thirdly, there were proposed bills put forward that would allow for some flexibility for irrigators to conserve water and how to incentivize conservation under prior appropriation. Again, good discussions with the legislature, but strongly opposed and did not pass. The outcome of that was a legislative led interim subcommittee to study opportunities for conservation with water. That's going to be an interesting development and we will be involved but we will not be leading that.

Utah: Norm Johnson - Most of the state is in exceptional drought. We're also dealing with all the implications of that including fire, wildland fire and others. Our legislature created a new Colorado River Authority in its last session. We're in the process of implementing that legislation, which is a different, big change for us. We're also in the process of creating watershed councils throughout the state and implementing some water banking proposals that the legislature has created. We are in litigation with our Ute Tribe, the northern Utes, Uintah and Ouray, which started out three years ago or so as the *Ute Tribe v. United States*. We intervened and were subsequently named as parties along with the Central Utah Water Conservancy District and the United States. I think we're now on our second or third amended complaint and have filed motions to dismiss, which will be heard next month by the District Court in the District of Columbia. There's a companion case, filed in the federal court of claims where very similar monetary claims were brought. That court has dismissed the claims and request now for hearing *en banc* and potential appeal if that decision stands.

Washington: Mary Verner – Our drought has not been as bad as in your states. The legislature is interested in prohibiting private profit and marketing water rights. We are preparing to adjudicate including tribal water rights in state court in two large watersheds. Safe travels.

New Mexico: John D'Antonio - Drought is everywhere. When you look at the drought monitor, we've been in 100% D1-D4 status since the start of the water year back in October. We're probably over 50% , or sustained 50% in the exceptional drought status. We've got active water resource management essentially going in a number of basins within the State of New Mexico. We've had to deal with the pandemic with respect to budgets and staff. I've got about 58 less staff than in my previous time as State Engineer under a previous Administration, and it really makes it challenging. We have a staff of 350 or so folks. We've been doing watermaster activities in the Rio Grande. In the Rio Chama, which is a tributary to the Rio Grande, we've got acequias with water rights from 1600 to 1735 that had to be curtailed last year. This year, they'll be curtailed starting in July, some on rotational schedules. Some creative within the prior appropriation system, a lot of rotational fallowing and administration with respect to shortage sharing agreements over the state of New Mexico. The Pecos River settlement agreement that we had in 2003, we've been doing supplemental groundwater pumping to the tune of about 15,000 acre-feet to try to get water to the downstream user of Carlsbad Irrigation District. So we're dealing with a lot of the same things as everybody else. The Colorado River Basin and San Juan Basin are experiencing shortages affection our big population centers in Albuquerque and Santa Fe areas. There's been a lot of interstate litigation. We've got a trial set for September 13 on *Texas v. New Mexico*. We've been providing robust technical, legal and policy support to the attorney general's office. We're currently working on six negotiated tribal settlements involving nine tribes, nations and pueblos. I really need an expansion of my staff to be able to effectively work with the federal negotiation teams on those particular issues. We've provided a lot of information on infrastructure funding needs to the federal government. The State just has a lot of challenges. I'm working on an operational plan for the governor so she can really be informed of what's going on in every aspect of the State of New Mexico as she goes for her reelection campaign. Obviously water is a huge issue within the State of New Mexico. One good aspect right now with the oil prices going up with our production in the Permian Basin has been pretty well established and revenues for the State of New Mexico are high and hopefully that'll be reflective in budgets as we move forward.

Montana: Laura Rennick, representing the Montana Department of Natural Resources and Conservation. We are dealing with a lot of the similar things that the folks in the Intermountain West are dealing with. We've had quite a few staffing changes in the State of Montana over the past two years. A few new names and faces that you'll be seeing: Anna Pakenham Stevenson replaced Jan Langle, who retired at the end of last year; and Amy Steinmetz has taken over as the Water Quality Division Administrator, Montana Department of Environmental Quality, replacing Tim Davis who took a position in Utah. The Confederated Salish and Kootenai Tribes (CSKT) compact with the state of Montana was passed by both Montana and the federal government. We're just waiting on the final execution of that and its taking a lot of coordination. We're standing up a joint board and joint office of an engineer to administrator water rights for that compact. We're kicking off our multi-year drought planning effort, updating a lot of floodplain mapping, doing repair and infrastructure work for our portfolio of state water projects,

both dams, reservoirs, and canals. We are working on a number of key initiatives to both reengage our stakeholders across the state as well as overhaul our water management and administration processes. This is a focus on water rights monitoring, or measurement and verification, monitoring, enforcement and so on. We are also anticipating our first final decrees in our adjudication process. The first final decrease in decades so that brings with it quite a bit of work as those near finalization.

Kansas: Kenneth Titus - Our legislature recently wrapped up. There was no major water legislation this year, just a couple little tweaks to some of our flexibility statutes. There was a new house water committee that spent the entire year examining how water law funding and the various agencies are organized in the state. Every state agency made a presentation, went through their budget, all of our federal partners came in, our groundwater management districts came in, and then there were various other presentations. They're having an interim meeting in August and so everyone is looking towards that to see if there are any major reorganization or funding proposals that may come for that, or any other major tweaks in our existing water laws. We've been kind of teetering on the edge of D1, or no drought for portions of the state. The latest map has about 20% of the state in D1 in the northeast and southeast part of the state. We've had pretty good rains come through the middle and northeast part of the state last night. Wheat harvest is well underway and seems everyone is having a pretty good harvest this year. In February, we finalized our third local enhanced groundwater management area. In this case, Wichita County, which is not quite on the Colorado border, but one county inside the border in west central Kansas. They put in place a five year LEMA that would require if the full amount of water allocated is used, it'll result in about a 15% reduction in use compared to 2009 to 2015. The practical effect of that, on a very low saturated thickness, will extend the time period from 7 to 16 years. The district is also now considering establishing a similar LEMA for the other four counties in the district. We think they'll have a proposal in the next 60 days, so we're looking forward to the efforts to preserve aquifer life. Lastly, the Department of Health and Environment and Kansas Geological Survey (KGS) had done some uranium testing in domestic wells throughout the Ark River from Colorado State line to Dodge City and they found some levels that were higher than they would like in some of those areas. KGS is continuing to do some work on that. They also started doing some work on some of the tributaries into the Republican River Basin in northwest Kansas, also testing for uranium there. So it'll be interesting to see what results that shows for domestic supplies.

FUTURE COUNCIL MEETINGS

Jen Verleger noted the next meeting will be in South Dakota in September.

SUNSETTING POSTIONS FOR FALL 2021 MEETINGS

Tab XYZ of the briefing materials contains sunsetting positions for the 2021 Summer meetings. Please review them and get any changes to staff.

OTHER MATTERS

There being no other matters, the meeting was adjourned.