



PRESIDENT’S NOTES: Rabia Ahmed, Greene Economics – AWRA-WA Section President



I am filled with immense gratitude and pride as I write my last presidential notes - gratitude for the hard work and support of our 2019 Board Members, our two student chapters, our members and students who volunteered throughout the year, and our sponsors; and pride at what all those efforts have achieved. It has been my honor to serve as AWRA-WA President in 2019. I look forward to working with you as AWRA-WA's Past President in 2020 and continue to support our mission to promote the advancement of water resources management in Washington and the Pacific Northwest.

We hosted another successful **Annual State Conference in October: “Water Resources Planning and Implementation: Challenges, Complexity, and Uncertainty”**, where the participants had the opportunity to hear from some of the most accomplished water resources professionals in the State. The Keynote Speaker, Will Stelle, kicked off the day by speaking from several decades of experience in fisheries management, followed by other speakers and panelists highlighting the role of water resource planning efforts in Washington in addressing competing needs and sources of future uncertainty. The conference had about 160 attendees who benefitted from talks by 18 speakers, a continuation of the trend from previous conferences. **Conference session notes are on pages 2-8.** We have already jump started our planning for next year’s conference, so stay tuned to hear more about that!

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ANNUAL AWRA-WA MEETING DEC 10th!
 Join us at **Pyramid Alehouse Restaurant (1201 1st Ave S, Seattle)** on **December 10!** AWRA-WA will be showing inspiring water-themed movies at 7 pm with a social hour starting at 5:30 and dinner at 6:30. Only \$15 for AWRA-WA members and \$20 for non-members. **AWRA-WA will announce 2020 Board election results following the social hour. All AWRA-WA members are invited!** Register at WAAWRA.ORG

The AWRA-WA honors the dedication and accomplishments of professional and students in the water resource community. The **Outstanding Water Resources Professional award for 2019 was presented to our very own Tom Ring** at this year’s Annual State Conference for his work in water resources planning and policy in Washington State. Tom has also served on our Board for over a decade and is highly respected within the water resource community. Read more about Tom later in this newsletter on page 15. Of special note was the recognition of Tom’s work by Governor Jay Inslee in his recorded message to the Association.

We also organized six Dinner Meetings and three student mixer and networking events so far this year in western and eastern Washington. These meetings are the heart of our organization to draw members, students, and the public together for presentations and discussions on diverse topics of interest in water resources. We brought speakers related to legislative outcomes, the Yakima Basin Integrated Plan, climate change, stormwater funding, bioretention hydrologic performance monitoring, and the Department of Ecology’s 2019 Stormwater Management Manual. Watch your emails and visit the [AWRA-WA Dinner Meetings web page](#) for registering and more information on our Dinner Meetings and student events.

We continue to support students, whose participation is so important to AWRA-WA. Thanks to our generous sponsors, we offer free attendance at our Dinner Meetings and Annual Conference, support student networking events, provide our Mentorship Program, and grant two annual fellowship awards. Our Student Fellowship award amount has been raised to \$2,500, so encourage students you know to apply. **Instructions for 2020 Fellowships (due 2/14/2020) and Mentoring Program are on page 14.**

This is the third and final newsletter for the year, which continues to complement our annual efforts and presents additional topics of interest from our members. Please do not hesitate to talk to one of the Board Members if you want to contribute. On the administrative side, while our long-range planning effort continues into 2020, we signed a brand-new set of Bylaws this year.

This is also the time of year for Board Elections. With a heavy heart, we say goodbye to Dave Christensen from the Department of Ecology, who is leaving the Board in 2020. We thank Dave for his service to the organization as Co-chair of the 2018 Annual Conference, Chair of the Strategic Relations Committee, and for all his ideas and tireless work to make AWRA-WA successful.

The Board is thrilled to present **two new candidates for the 2020 Board; Carrie Sessions from the Department of Ecology and Katherine Ryf from Landau Associates.** We encourage you to learn more about them on **pages 9-12.** Both Carrie and Katherine have long been involved with AWRA-WA and bring welcome energy and interest in participating in a “working board”. Our continued efforts to pursue all sorts of diversity for the Board is reflected in these nominations. **See all of our 2020 Election slate on pages 9-12 and remember to vote.** Our Annual All Members Meeting and 2020 Board Election results is coming up shortly on December 10 at Pyramid Alehouse Restaurant located at 1201 1st Ave South, Seattle. Hope to see you there!

2019 CONFERENCE: “CHALLENGES, COMPLEXITY AND UNCERTAINTY”

Keynote Address – Will Stelle, J.D., Senior Advisor at Washington Water Trust

Scribe: Greg McLaughlin



Will Stelle - Photo by Tom Ring

The 2019 Keynote speaker spoke from several decades of experience in fisheries management and the administration of the controversial west coast Federal salmon ESA program, including several tours of duty as the regional director for NOAA Fisheries for the PNW and the West Coast regions under both President Clinton and Obama. Mr. Stelle started his keynote with a challenge to the AWRA professionals gathered for the conference. “Lean into the water resources challenges that are coming at us. Build the coalitions to solve these problems. Don’t wait for others. The people in this room have to capacity to develop home grown solutions. You know what needs doing, and we need your leadership to enable it to occur.”

Stelle identified tighter integration of water use and water infrastructure planning and implementation as one of the key policy challenges facing today’s water resource community. “The management of water, like land, is deeply siloed and balkanized,” he said, describing the disparity of institutional cultures, metrics, and machinery that have developed within the often disconnected worlds of water quality, surface and ground water management, storm water management, and

riparian land use. As a response to this challenge, he cited promising new efforts at integrated planning among agencies and resource management partners.

His experience in federal agencies responsible for salmon recovery programs deepened his belief that partners would do well to align the architecture of their decision-making systems to focus on restoring function of aquatic systems at the watershed scale. “Almost never did we talk about water resources in the context of conventional water right constructs” he said of ESA planning, “but salmon recovery planners were wrestling with the exact same issues as the water resources folks in the next cubicle.”

Stelle joined NOAA when the agency lost several major lawsuits on Snake River dams and salmon, and he recalled worries that the technical and social challenges would be “like the spotted owl but exponentially more difficult.” The complex life cycle of salmonids from freshwater to saltwater and back again challenged recovery planning architects to try to achieve overall cumulative improvements in survival and productivity for salmon populations across a wide variety of aquatic habitats, from the riverine spawning grounds in the upland forest to the estuaries and into the distance in the North Pacific Ocean.

Stelle explained that the big strengths of the ESA is the ability to compel actions across a wide swath of federal agencies and the use of science to inform actions. Strong and binding implementation requirements for federal “action agencies” (USFS, BLM; USACE; BOR, BPA; EPA; FEMA; DOT), empower NOAA Fisheries (in the case of listed salmon populations) to compel changes to the underlying activities of other federal agencies to reduce negative impacts of their on-going or new actions. In addition, the application of a “best available science” doctrine dictates the formulation of actions according to technically-grounded and measurable results. Stelle also indicated a need for improved coordination between federal, state, and local agencies in ESA implementation. In many cases, he observed that the interaction between federal and state and local agencies was clumsy or even non-existent. This made it very difficult to integrate salmon recovery required actions with state, local, and NGO entities.

Stelle then turned to challenges facing our own state’s water resource managers. Washington State’s population will grow by 20% to 9.3 million residents in the next twenty years. Concurrently, modeling data by Washington State climatologist Nick Bond projects temperatures increases of up to 4.5 degrees Celsius in the late summer, with resulting precipitation patterns leading to a seven percent decrease in late season flows of the State’s rivers and tributaries. Stelle cited these trends as framing the water management challenges coming at us “like a freight train”, arguing that the conventional ways of managing the uneasy integration of water rights, fisheries conservation, treaty rights, and water quality are going to fracture under the collision of climate change and populations growth facing us. Stelle closed with a strong endorsement of place-based integrated water resource planning and implementation as a core strategy for engaging these coming challenges.

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WATER RESOURCES AND ENVIRONMENTAL CONSULTING

Session 1: Introductory Session — Lessons learned from Watershed Planning

Scribe: Paul J. Pickett

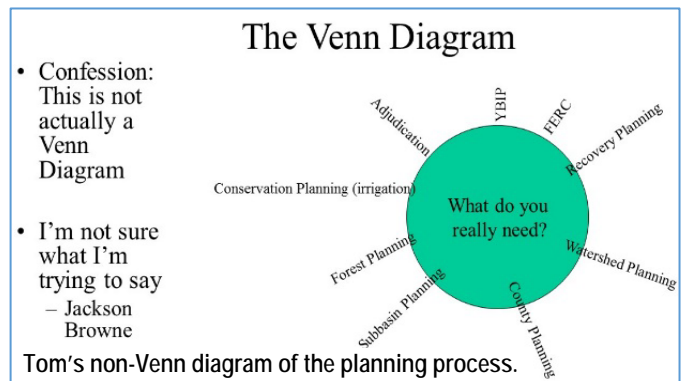
Session 1, moderated by **Steve Nelson of RH2 Engineering**, provided a panel of speakers: Tom Ring, Yakama Nation; John Kounts, WPUA; Sharon Haensley, Squaxin Island Tribe; and Mike Kaputa, Chelan County. The speakers explored the history of watershed planning in Washington and the current Streamflow Restoration planning process (RCW 90.94).



Kounts - Photo by Tom Ring

John Kounts, Water Program Director for the Washington Public Utility Districts Association, presented a “trip down memory lane” of his history with watershed planning. Although water utilities are “not so passionate” about watershed planning, they like it because it serves a diverse community, fulfills legal obligations, supports a predictable and adequate water supply, and synchs long-term water planning with growth management goals. Utilities were at the table from the beginning in the Chelan agreement in 1990 and the 90.82 process. Hard lessons were learned: patience and persistence are required; you must address diverse perspectives, be inclusive, and not cut people out; and ultimately it will need to pass muster in Court. The “next act” is 90.94? While mainly about the Growth Management Act and permit exempt wells and not aimed at utilities, they may be part of solutions such as providing service instead of PEWs. The Foster pilot studies are more relevant, seeking solutions to “very strict water-for-water in-place in-time requirements”.

Tom Ring, hydrogeologist with the Water Resources Program of the Yakama Nation, walked (galloped?) through a history of water planning in the Yakima basin. He described the idea of a “Normative River” – the functional norms of the hydrology that supported ecosystems, and (speaking for himself) described the Yakima 90.82 planning process as a “black hole” and a “failed process”. His Venn diagram illustrated the concept of finding the nexus of everyone’s activities where they share interests. Ring noted that planning can’t succeed without the Treaty Tribes. He proceeded to rattle off the defects that led to failure: Power grab by initiating governments; a state planning process in a federalized basin; tribes placed in “back of the bus” status; a “bait-and-switch” with funding; and writing a plan that ignored tributaries and reservoir fish passage. Ultimately the Yakama Nation left the process. Ecology said “we can’t not give these guys more money”; and funded a plan that failed to get consensus of all three counties, a plan that had no chance to be implemented and has sat on a shelf ever since. As his time expired, Ring noted that salmon recovery was more successful, and that watershed planning worked well in the Entiat and Wenatchee basins where the process was based on good science and respectful of tribal interests. In the end, he acknowledged that planning would never be easy and advocated starting by working with your worst adversaries: “Why waste your time planning with people you already agree with?”



Sharon Haensley, attorney for the Squaxin Island Tribe, noting “my views are my own”, described the Tribe’s historical perspective as “People of the water”, for whom fishing is central, with rights protected by treaty. Haensley expressed frustration with historic water management, from outdated Instream Flow Rules – set in the 1980s, unmet in over-appropriated basins and mostly ignored – to the 90.82 planning process – “chock full of wishful thinking” and “designed to sit on a shelf”. The Tribe stated concerns about the 90.82 plans in four WRIAs, but were ignored and vetoed the plans. Later they went to court over WRIA 14 rules, and filed an amicus brief in the Hirst case. Why is the Tribe involved with 90.94? The legislation is an opportunity to develop tools to restore watersheds, access funds for restoration projects, and protect the Tribe’s interests. The Tribe is looking for plans that get implemented and cause restoration. The law calls for doing more than mitigating future permit exempt wells. Broader issues need to be addressed, such as inchoate municipal rights, climate change, better instream flow rules, and linkage of water management to comprehensive plans. She added that the 90.94 process offers benefits, such as “money on the table”, incentives for collaboration, and data analysis resources. It’s a good alternative to “kicking the can down the road” or adjudication.

Mike Kaputa, Director of the Chelan County Natural Resources Department, reviewed the history of planning affecting Chelan County, especially the 90.82 plans and salmon recovery planning. A “black hole” loomed with the appeal of GMA. But since it was “better to be at the table than in court”, and also out of fear of ESA enforcement, the County took a lead role in planning. He described the complexities of the Wenatchee basin. Some lessons learned: planning takes time; context matters and changes with case law; personalities matter; collaboration can lead to durable solutions (e.g Yakama Nation participation); experiences can be applied to other situations (like Lake Chelan); good staffing and policy direction is always needed; and local government always struggles with capacity. Kaputa described the world of post-watershed planning, including Instream Flow Rule amendments, coordinated cost reimbursement, the Icicle Work Group, and implementation of irrigation efficiency, floodplain, and riparian projects.

Session 2: Hirst and Beyond



David Troutt - Photo by Tom Ring

Scribes: Jason McCormick and Greg McLaughlin

Session 2, moderated by Jon Turk of Aspect Consulting, featured speakers on tribal, agency, and local county perspectives of the Streamflow Restoration Act: Lisa Dally-Wilson, Dally Environmental and David Troutt, Nisqually Tribe; Bennet Weinstein, Ecology; and Andy Hover, Okanogan County.

Lisa Dally Wilson, Principal at Dally Environmental, provided her perspectives as a licensed environmental engineer and watershed scientist who specializes in facilitating multi-stakeholder groups with complex technical and policy objectives in the natural resource arena. She's recognized as a strategic thinker who drives critical decisions and action plans. She related her experiences working on the Nisqually Plan under RCW 90.94, the first watershed plan provided to Ecology under the Streamflow Restoration Act. She spoke to one of the strengths in the Nisqually over the years being as strong history of collaboration, with the Nisqually Tribe taking the lead. Ecology approved a plan for up to 2,987 new wells and 1.03 cubic feet per second (cfs) of new consumptive water use, being installed over the next twenty years. This plan was approved based on the projected environmental benefit provided by water rights acquisitions, offset actions for the City of Yelm water uses, managed aquifer recharge projects, and the Ohop Creek Floodplain Restoration Project. Wilson emphasized the Ohop Creek project as a good example of the data correlation between habitat and instream flows.

David Troutt, Natural Resources Manager for the Nisqually Indian Tribe, spoke from his experience as chair of the Nisqually River Council and president of the Nisqually River Foundation. He is the chair of the Puget Sound Salmon Recovery Council and previously served on the Washington Biodiversity Council. Troutt noted that he was impressed that treaty rights had been mentioned by so many previous speakers, and talked about the important of the Nisqually tribe as a founding partner in the Nisqually River Council. He emphasized the important benefits from a proposed 10,000 – 60,000-acre development of a community forest, which is comprised of managed forest lands on a longer-than-corporate harvest schedule. The benefit of these forest lands is that they are allowed to mature and provide watershed benefits before harvesting. He provided a recommendation that funds through the Streamflow Restoration Act would best be distributed to each individual basin to support their plans, as opposed to the current competitive grant process.

Bennett Weinstein, Streamflow Section Manager for the Washington Department of Ecology, shared his experience leading Ecology's implementation of RCW 90.94, the Streamflow Restoration law. He sees this program as working to restore streamflows to levels necessary to support robust, healthy, and sustainable salmon populations while providing water for homes in rural Washington. This focus on balance and collaboration recognizes that often interests between people, farms, and fish can be in conflict with one another. He mentioned several of the watersheds covered by 90.94 RCW are working on accelerated plans, with the Nisqually completed in early 2019 and the Colville Basin in WRIA 59 also due for rapid completion. He also provided information on the next competitive grant round solicitations. This grant round opens February 3, 2020 and closes on March 31st, 2020, and will provide up to \$22 million for eligible projects. While priority is given to those projects identified in adopted watershed plans or rulemaking under RCW 90.94.020 or RCW 90.94.030, the highest priority factor for scoring are projects that quantitatively improve streamflow. Guidance for applicants is available at Ecology's website under "Streamflow Restoration Competitive Grants".

Andy Hover, Okanogan County Commissioner, provided thoughts from his experience on the Upper Columbia Salmon Recovery Board, the Methow Watershed Council, and Eastern Washington Cascades Provincial Advisory Committee. Raised in the Methow Valley, where he and his family maintain a small cattle operation and a custom framing business, he has a deep understanding of the perspectives in a conservative eastern Washington county. Their low population density compared with the rest of the state creates unique dynamics of project scale and available local resources for regional water planning. In their updates to the existing instream flow rule in WRIA 48 (Methow), there are provisions for both new domestic wells and stock water uses. In their planning process, they have started by getting all of the stakeholders around the same table and starting to lay their cards on the table with respect to their water needs and values. He would like to see the planning process improved by allowing for longer project planning horizons, and expressed that Ecology needs to build in more leeway for unique local characteristics.

David Troutt, Natural Resources Manager for the Nisqually Indian Tribe, spoke from his experience as chair of the Nisqually River Council and president of the Nisqually River Foundation. He is the chair of the Puget Sound Salmon Recovery Council and previously served on the Washington Biodiversity Council. Troutt noted that he was impressed that treaty rights had been mentioned by so many previous speakers, and talked about the important of the Nisqually tribe as a founding partner in the Nisqually River Council. He emphasized the important benefits from a proposed 10,000 – 60,000-acre development of a community forest, which is comprised of managed forest lands on a longer-than-corporate harvest schedule. The benefit of these forest lands is that they are allowed to mature and provide watershed benefits before harvesting. He provided a recommendation that funds through the Streamflow Restoration Act would best be distributed to each individual basin to support their plans, as opposed to the current competitive grant process.

Session 3: Uncertainty in Planning

Scribe: Stephen Thomas



Carrie Sessions - Photo by Tom Ring

For the third session, our four speakers covered the concept of uncertainty related to planning, with climate change a key driver, and regulatory uncertainty. They used case histories in Texas and closer to home.

Visiting from southern California, **Dr. Abhishek Singh** of Intera introduced some general principles of planning under uncertainty, and suggested that all audience members are, in essence, planners. He pointed out that the roadmap from present to future involves making decisions and taking actions – and that to do so ignoring uncertainty is relatively reactive and short-termism. He suggested that taking a more probabilistic, adaptive approach is likely to provide better outcomes. His recommended five-step program involves: identifying and characterizing the uncertainties; relating these to the key decisions; performing a sensitivity assessment; and managing them in order to reduce problems. Dr. Singh described an excellent case study for the [Texas Water Development Board](#) that utilized this approach to plan for the state's future water needs; the plan incorporated a stakeholder-driven process with a drought for a 50-year plan horizon. His study involved factoring in demand and supply uncertainties, developing multiple scenarios, using integrated groundwater/surface water models, and projecting cost/reliability relationships for these scenarios.

Overall, he suggested that this approach of sequentially adding layers of uncertainty provides a more robust method of planning than a more traditional.

Guillaume Mauger of the UW Climate Impacts Group presented an update on the climate projection modeling his team has been conducting for the state of Washington. He led off by reminding us of the impacts we can expect from sea level rise, more intense rain events, and reduced snowpack, as well as increased wildfires, and sediment deposition. In short, climate impacts are complex, and affects everyone and everything differently. His three main ideas centered around risk management, climate change not being the only problem, and the need for climate change planning to be iterative. A key part of this process is correctly assessing impacts; for this, Guillaume suggested using past observations and predictive modeling as essential tools, but stressed the need to carefully consider the relative emphasis of these two as some conditions may not have been seen in the past. He illustrated this with a case example of coastal flooding in the Olympia area, and how a planning tools for [future culvert size](#) is being developed for the state.

A regular Chapter guest speaker, **Carrie Sessions** of Ecology's Water Resources Program gave a view of planning under emergency drought conditions in Washington State. Her talk covered aspects of drought emergency declarations in the statute, decision making, and ways to mitigate the risk of droughts on the State's water resources. The RCW both defines a drought as when the water supply for an area is below 75 percent of normal and the shortage is likely to create hardships for uses and users. The current Water Code also instructs Ecology to issue "emergency power" orders (such as issuing temporary withdrawal permits and grant funding). Carrie pointed out one of the major challenges is the timing of droughts – this is especially true for agriculture, where planting and other planning decisions are made well ahead of knowledge of the upcoming season's snowpack and water supply. As a result, the response time for actions is small. To help plan for these, the State has developed an elegant risk mitigation tool that views "likelihood" and "consequence" for an event. At its core, the tool considers the impacts of early, late, or no drought declaration in the event of a drought occurring or not; all have pros and cons depending on the actual conditions. To mitigate the uncertainty, she suggested we could lower the likelihood (for example, by improving our forecasting skills) or lowering the consequence (for example, by implementing better preparedness actions and contingency planning, as was proposed in the unsuccessful [HB 1622](#)).

Finally, past Chapter President, **Joe Mentor** of Mentor Law Group, gave a personal view of the legal and regulatory challenges he experienced during the planning and application for the Suncadia Resort near the Cle Elum River of the Yakima Basin. Mentor provided the background and history of the project that required acquisition and transfer of water rights to meet the resort's demand – a process involving a detailed permitting strategy and the cost reimbursement agreement. However, the process was crucially stalled when the ESA listed steelhead. Mentor provided some valuable lessons learned from his experiences: have a plan, but make sure there is some flexibility; don't quit, be persistent; always make your worst case outcome better; use all the available tools in the bag; and do not expect the permitting process to be linear – and expect to have to re-evaluate and adjust accordingly.

Session 4: Bookends of the Planning Process

Scribe: Stan Miller

Session 4, moderated by **Stacy Vynne McKinstry of Ecology Water Resource Program**, featured two speakers in this session that represent the “bookends” of water resources planning. The contrast actions proposed for a mostly rural environment with those for an urban environment. They represent large scale projects involving large storage projects for water supply with numerous small scale actions directed at contaminant control. And, they represent actions appropriate for the dry conditions of central and eastern Washington with those more in line with the wetter climate of western Washington.

Urban Eberhardt, Kittitas Reclamation District (KRD) Manager, and Kittitas County farmer, talked about KRD’s role and perspective as a major supporter of the Yakima Basin Integrated Plan. It has taken 40 years to develop this plan which protects the \$4.5 billion agricultural industry while helping restore fisheries. The target was to increase the few thousand returning salmon at the onset of the work in the late 1970’s to a number closer to the 800,000 plus that returned historically.

Developing the plan has been a collaboration, sometimes with great difficulty, among the U. S. Bureau of Reclamation, Washington Department of Ecology and the Yakima River Basin Enhancement Project (YRBWEP) Workgroup. The Workgroup is composed of representatives from Yakima Nation, federal, state, county, city governments, environmental organizations, and irrigation districts. The YBIP has several major components: Improving fish passage, increasing water storage, habitat protection and enhancement, water conservation, and operational changes are some of the most significant. Recent work on the Cle Elum reservoir has been a major improvement in the system. Improving fish passage at the Cle Elum dam has opened up many miles of spawning habitat. In addition the reservoir storage in Lake Cle Elum has been increased. The creation of the nearby 50,000 acre Teanaway Community Forest insures that the valuable habitat along many of the areas tributary streams will be protected. Another of the most significant actions taken was the use of 150 thousand acre feet of Kittitas Reclamation District water to supplement tributary stream flow. During the spawning period during the 2015 drought this water connected the main stem of the Yakima to significant sections of habitat.



Abby Hook and Urban Eberhardt - Photo by Tom Ring

Abby Hook, Environmental Affairs Officer in the King County Department of Natural Resources and Parks, is responsible for implementing many of the elements of the Clean Water, Healthy Habitat Initiative. The Initiative was created by County Executive Dow Constantine to improve the effectiveness of the county’s investment in the environment. King County takes many regional land-use, transportation operations, utility management, and pollution clean-up actions every year to protect and restore the County’s waters and lands. Yet the billions of dollars the County spends to deliver environmental services may not be generating the greatest return. Due to constrained funding sources, regulatory requirements, or programs working too much in isolation those investments may not be producing the greatest benefit to our environment. One of the major weaknesses in the County’s programs is the “silo” effect. There is often little communication among the several agencies that might be involved in a project. The lack of integration also exacerbates the problems of funding limits and regulatory compliance.

In an effort to improve the effectiveness of the County’s investment in the environment, County Executive Dow Constantine created the Clean Water, Healthy Habitat Initiative. The Initiative is not about spending less. Rather it is about using the available funding more effectively. How can a project be tweaked to produce multiple benefits; can a storm water improvement project be enhanced to also improve stream habitat for fish? Central to the initiative is creating better defined outcomes that guide the work of all agencies. To accomplish this more coordinated approach, a set of 30-year outcomes will be accomplished through specific 5-year plans. All units of County government, down to the individual work group, are charged with showing how their ongoing efforts contribute to the overall County water quality and habitat outcomes and what progress they need to make to achieve the goals. The current plans call for the highest level of effort be directed toward storm water management and habitat preservation. To this end the County has identified 65,000 acres of prime habitat that needs to be protected. Using conservation futures funding it is planned that this land will be put into public ownership over the 30-year outcome horizon. Administratively, the Initiative is working with the several local agencies to reprioritize their actions into a coordinated effort. This will require institutional and individual behavior in many agencies to change. For some this will be difficult, but the outcome will be more efficient use of the available funds to improve the environment of the County.

Session 5: Closing Panel

Scribe: Gretchen Greene

Session 5, moderated by **Adam Gravely, Van Ness Feldman**, featured the panelists answering the following two questions: 1) How do we make planning more effective? And 2) what about a State water plan? Panelists were Tom Ring, Yakama Nation; Will Stelle, Washington Water Trust; Andy Hover, Okanogan County; and Steve Malloch, Western Water Futures.



Closing Panel – Photo by Jason McCormick

Steve Malloch

Malloch began by stating that we all use a lot of water in the state, and that climate change will make it worse for everyone by bringing bigger droughts in the summer and larger floods in runoff periods. He suggested that we might either stumble along (e.g. stapling together a bunch of policies and calling it a plan) or we could learn, plan, and act. The latter solution would be best brought about by an integrated water resource plan.

Malloch had recently read twenty state water plans; most of which were large and dull. Still they had good things scattered throughout. All states should have a plan that takes into consideration demographics and the changing climate while also addressing water needs for both people and the environment. Malloch recalled that Dow Constantine has said we need to invest in the right actions at the right time, and this will lead to the right opportunities. Further, a state plan focused on the biggest problems can really help when looking for funding. A good plan would also have provisions that allow for regular revisions that integrate climate scenarios, new innovations, uncertainty, floods, and storm water management.

Washington State is getting first-hand experience in water planning as a result of Hirst, Malloch said. The next step is aligning the local needs with State planning. Washington plans are going further than broad statewide planning in some other states by doing both planning and also providing targeted funding at the watershed level. States like California are leading the way with some sophisticated and detailed approaches, for example, by setting a hard cap on urban water use. Some important considerations in a robust integrated water resources planning effort incorporate substantive water conservation, groundwater consideration, flood planning and thinking about water as a basic human right.

Andy Hover

Commissioner Hover emphasized the diversity in the people and thought processes that effective plans will need to incorporate. Planners are often silent in their overall process, and the balance of funds spent for domestic use, fish, and agricultural use needs to be a negotiation. For example, there really needs to be a transparent process whereby everyone gets a place at the negotiation table when there is a discussion about tradeoffs between fish and property rights.

Hover believes that a statewide plan would be very difficult in a state with such diverse local interests. Some key questions are, “how much water would be needed for all of these values?”, and, “what can the watershed deliver?” When the answers are known, the planning can develop, given those numbers. In addition to the plan, he said, we need to implement the plan and really make it work. Once planners decide how they can best meet the needs of agriculture, housing, fisheries work, then “We just have to do the best we can.” Hover recommended locally-grounded plans with local governments, tribes, and irrigators, saying the focus of these plans should not be how to not take water from one or the other, but rather how to make the resources viable into the next 50 to 100 years.

Tom Ring

Ring explained that before the Yakima Basin Integrated Plan succeeded there was a massive effort by Dan Evans, with a lot of help from Joe Mentor, which did not lead to a consensus solution. However, through the force of time, some difficult droughts, and the adjudication, Ring said, “We were left with a lot of distrust and difficult paths forward.” It was against this backdrop that several folks started a conversation in a parking lot, which turned into conversations with key stakeholders. Ring described how the Yakama Nation and Roza Irrigation District, long time adversaries, then drafted a joint letter to Ecology and Reclamation. The letter laid out the framework for a package to deal with the big problems for fisheries and irrigation in the Yakima Basin. Derek Sandison of Ecology was smart enough to say “Wow!” and helped turn the letter into an EIS. This led to agreement around a package including reservoir fish passage, additional storage and several other components. The working agreement between the Yakama Nation and Roza Irrigation District snowballed and grew into consensus among irrigators, the many environmental organizations, fisheries regulators, agencies, and local governments.

Regarding a “statewide water plan”, Ring said that given the geologic, hydrologic, and political diversity, including diverse tribes, planning is much better at the scale of a watershed. Watersheds east of the Cascades have very different water needs. For example, he said, one large Yakima basin irrigation district diverts 3 times as much water as Seattle Public Utilities diverts to serve water to a million and a half people. This is just one reason why Ring felt a state water plan would be too hard.

Will Stelle

How to make planning more successful?

Stelle said it would be good to get the local leadership to be ambitious in this next round of flow restoration projects. If we limit our restoration aspirations to the narrow requirements required by the current Streamflow Restoration statute, he said, we will not succeed in addressing the longer-term problems coming straight towards us in the form of population growth and climate change. He explained that, while, Ecology has said that simply mitigating future uses is the minimum requirement for compliance with the new law, they have also said they will support the larger restoration projects, and we should aspire towards that.

State Water Plan. “I agree with both Steve and Andy”, Stelle said, clarifying that both views are compatible. He said planning implemented at state vs the local level should telescope into each other nicely, explaining that some roles and capabilities are most helpful at each level.

Adam Gravley then refined his original questions by asking how the local planning processes could be supplemented to include climate change adaptation, resilience, and other things?

Will Stelle said this is a good idea. Ecology can make it clear by saying that local planners can choose to use a more dynamic baseline. And if so, then Ecology can provide the analytic support as best they can. Then the local WRIA planning groups can be as judicious as they like in lining that up.

Tom Ring remarked that we are always fighting the last war. Hirst had to do with fighting for the instream flow rights. For the Yakama Nation, the goal is a healthy harvestable surplus of fish. However, this is a basin that was fully appropriated twice. We withdrew all the water, then built storage, and then still used up every drop. By the time the petition in Kittitas County was filed for a moratorium on exempt wells, there really wasn't any other answer than working together on a watershed-scale solution. Ring suggested that watershed planning should not be focused on the next little hit that doesn't leave enough water, but rather on a bigger picture that includes fish, at the minimum, but hopefully much more than that.

Steve Malloch- Malloch reflected that the theme for each AWRA-WA meeting for the last ten years seems to have been that we have already used up all the water, the climate change is changing, and demand is changing demand. It makes sense that now is the time to take a broader view, he explained.



2019 AWRA-WA board members at the 2019 Annual State Conference

Special thanks to Tom FitzHugh, Jenna Mandell-Rice, and the rest of AWRA-WA's Conference Planning Committee and student volunteers for another amazing conference. See you all again next year!

AWRA – WASHINGTON SECTION ANNUAL MEETING

The AWRA Washington Section will convene its Annual All Members Meeting on December 10 at **Pyramid Alehouse Restaurant (1201 1st Ave South, Seattle)**, and is conducting elections for the 2020 Board of Directors. Our elections process will be electronically administered. Each AWRA-WA member in good standing will be sent a link to a secure ballot and can vote for up to 16 individuals for the 2020 Board, with the option to add write-in candidate(s). Biographies of those nominated for the 2020 Board Candidate Slate are presented on the following pages for review. Election results will be announced at the December 10 Annual All Members Meeting.

The Board of Directors includes up to 16 Directors, plus the past President. All AWRA-WA members may attend the Annual Meeting and nominate other candidates. Board Members actively participate and support the following activities: attending monthly Board Meetings, refining section policies, running Dinner Meetings, organizing the Annual Conference, securing articles for newsletters, supporting the student chapters and establishing new student chapters, and other activities.

The 2019 Board of Directors presents the below candidates for the 2020 Board:

| | | | |
|----------------------|---------------------------|-----------------------------|---------------------------|
| Rabia Ahmed | Felix Kristanovich | Stan Miller | |
| Tyson Carlson | Jessica Kuchan | Tom Ring | Stephen Thomas |
| John Chandler | Jenna Mandell-Rice | Katherine Ryf | Patrick Vandenberg |
| Amanda Cronin | Greg McLaughlin | Jennifer Saltonstall | |
| Tom FitzHugh | Jason McCormick | Carrie Sessions | |

CANDIDATE BIO'S



Rabia Ahmed - Rabia is a Principal Economist and Managing Partner at Green Economics, LLC. She has over 16 years of experience in water and natural resource economics, policy and regulatory economics, litigation support, and international development, with previous work at Maul Foster & Alongi, Ramboll, Cardno, and Northwest Economic Associates. Her expertise includes studying water laws and water markets, assessing and valuing surface and groundwater rights in that context, conducting assessment of water rights, carrying out water supply security analyses, supporting the water rights applications process, and conducting cost-benefit and feasibility analyses of water projects. Rabia has carried out a number of water management projects in more than twenty-five US States and internationally. She also has many years of experience in the international development sector, and worked directly with communities in some of the remotest areas of Pakistan and Bangladesh. Rabia has an MS degree in Economics from Portland State University. She lives in Lynnwood, Washington, with her husband, two children, and a beautiful cockatoo. In her spare time, she likes hiking and sailing with her family.



Tyson Carlson - Tyson is a Senior Associate Hydrogeologist with Aspect Consulting with 20 years of experience specializing in water resource development and water rights. Serving private and public sector clients, Tyson's water rights experience includes both new appropriations – municipal, agriculture, fish propagation, and commercial/industrial purposes – and transfer/change of existing rights, including use of the State's Trust Water Right Program for purposes of instream flow, habitat, and mitigation through water banking. Tyson's strong background in analytical and numerical groundwater modeling is often used in the development of site-specific conceptual models describing groundwater-surface water interaction, saline intrusion, well hydraulics, and aquifer sustainability. These skills are also used in Tyson's work in large-scale hydrogeologic characterization – such as regional tunnel alignments, contaminant fate and transport modeling, and construction dewatering design. Tyson has a BS in Soil, Water, and Environmental Science and a MS in Hydrology from The University of Arizona. Outside of the office, he can be found skiing the deepest of Cascade powder, on his bike, or fly fishing his favorite waters.



John Chandler - John is the technical lead of water resources at Puget Sound Energy. He manages nearly two million acre-feet of water a year (on average) at the Baker River Hydroelectric Project for multiple objectives including flood management, the environment, recreation, power production, and ancillary benefits. John has presented to audiences all over the country, from fourth graders to international technical groups, on the topics of water management, adaptation in a changing climate, and hydropower in general. John received his P.E. in Washington State in 2012 and M.S. focused in water resources and environmental engineering from the University of Maine at Orono in 2008.



Amanda Cronin - Amanda is a Manager at AMP Insights. She has fifteen years of professional experience in water rights, water transactions, stream restoration and conservation program design and implementation. At AMP Insights, Amanda has worked on water banking in the Snoqualmie Valley, groundwater mitigation bank design and implementation in Arizona, as well as other water transaction programs in Arizona, California and Wyoming. Currently, Amanda is providing strategic guidance on flow enhancement for the Arizona Land and Water Trust and the Nature Conservancy of California. Before joining AMP, Amanda was a Project Manager at the Washington Water Trust for more than a decade. At the Water Trust, Amanda led the development of both the Walla Walla Water Exchange and the Dungeness Water Exchange, water banks that offset the impact of new consumptive uses on stream flows. Amanda holds a MS with distinction in Environmental Science and Policy from Northern Arizona University and a BA from Whitman College. Amanda is based in Seattle and enjoys spending time outside; backpacking, mountaineering, cross country skiing, gardening and playing ultimate frisbee.



Tom FitzHugh - Tom FitzHugh is a Water Resources Scientist with Stantec Consulting, in Bellevue, Washington. He specializes in hydrologic modeling of surface water systems, including reservoir and water supply system operations, riverine and reservoir temperatures, and rainfall-runoff processes. His current work is analyzing water supply operations for water agencies and other clients in California's Central Valley. Prior to joining Stantec in 2015, he worked for the Bureau of Reclamation in Sacramento, California for 5 years, where he conducted modeling for long-term planning studies such as the Shasta Lake Enlargement study and analysis of new environmental flow standards in the San Joaquin River Basin. From 1999-2009 he worked for The Nature Conservancy in Chicago and Olympia, where his responsibilities were regional conservation planning, analysis of environmental flows, scientific software development and training, and GIS. He has an M.S. in GIS and Remote Sensing from the University of Wisconsin-Madison, and a B.A. in Political Science from Lawrence University. In his spare time he enjoys hiking, learning and practicing his Spanish, and following the Seattle Sounders and the Reign.



Felix Kristanovich - Felix is a senior water resources consultant with Ramboll in Seattle.. He has 32 years of professional experience in the United States and overseas working on watershed analysis, streamflow restoration projects, water quality monitoring programs, environmental impact studies, hydrologic field investigations, floodplain analysis, and design and modeling of storm water systems. Felix has conducted evaluation for industrial clients, banks, international development agencies, and federal agencies. Felix is actively involved in several professional societies, including AWRA, where he organized 2005 and 2009 National AWRA Conferences in Seattle, and 2013 National AWRA Conference in Portland, Oregon. Felix moderated technical sessions at the 2012, 2013, and 2019 National AWRA conferences, and presented technical papers at numerous AWRA conferences. Felix enjoys backpacking, hiking, telemark skiing and outdoor photography, and sea kayaking with his wife June around Puget Sound and in Alaska.



Jessica Kuchan - Jessica is a partner with Confluence Law, PLLC where she helps clients with issues relating to water resources, land use and natural resources. Jessica works with local governments, non-profits, and private water users to find innovative solutions to complex water resource issues. Prior to law school, Jessica was an environmental scientist with the King County Department of Natural Resources researching the impact of water quality changes on fresh water mussels, macroinvertebrates and salmon. Jessica received a BS in biology from Gonzaga University and juris doctor from Lewis and Clark Law School with a certificate in Environmental and Natural Resource Law.



Jenna Mandell-Rice – Jenna is a senior associate in the Seattle office of Van Ness Feldman LLP. She practices in the areas of water, natural resources, and environmental law, with a focus on water resources development, civil litigation, and public policy. Jenna has worked with municipal water utilities and suppliers to address water rights, water supply and water quality challenges, and has assisted clients in finding solutions for municipal and agricultural water supply. She also helps clients navigate complex regulatory, permitting, enforcement and litigation matters under a range of environmental statutes, including the Federal Power Act, Clean Water Act, Safe Drinking Water Act, Washington State Environmental Policy Act, National Environmental Policy Act, and Endangered Species Act. Prior to joining private practice, Jenna served as a law clerk for the Council on Environmental Quality (CEQ), an office within the Executive Office of the President that coordinates Federal environmental efforts and works closely with agencies and other White House offices to develop environmental policies. She also served as an intern for the Honorable Christine M. Arguello in the U.S. District Court for the District of Colorado



Katherine Ryf - Born and raised in rural Franklin County, Katherine is a native of the rolling dry land wheat hills of Kahlotus, Washington. She graduated from Eastern Washington University with a BS in Environmental Biology. She has three daughters immersed in Quincy's community, public and private schools. Katherine manages the Quincy office of Landau Associates. Katherine has nearly 20 years of experience with water rights and water supply solutions. She is highly knowledgeable of Washington and federal water laws, agricultural practices, and real estate acquisition. Prior to joining Landau Associates, she served as a water right analyst for the Washington State Department of Ecology (Ecology) and water right specialist for the Washington State Department of Fish & Wildlife. Katherine represented Ecology as a liaison to the US Bureau of Reclamation, the Columbia Basin Irrigation Districts, municipalities, water users and local stakeholders to implement integrated water supply solutions. While living in Four Lakes, Washington she served as the Board of Directors for the Friends of Turnbull National Wildlife Refuge. Living in Quincy, Washington, Katherine currently serves on the Grant County Economic Development Council Board of Directors, and is a regular participant of the Ecology Water Resources Advisory and Palouse Basin Aquifer Committees.



Greg McLaughlin - Greg is a Senior Program Manager with Washington Water Trust, where he has worked since 2006, opening the Ellensburg Field Office in 2008. His instream flow and water resource management projects have provided permanent streamflow to rivers tributaries throughout Washington State. His work includes water right reviews, connecting project benefits to salmon recovery plans, and shepherding those projects through the Ecology review process. He is a frequent presenter statewide on water rights valuation and transactions, trust water, and water law. Greg has worked since 1997 on collaborative resource management projects from his hometown in rural Missouri to the Mekong River in Thailand. Greg currently lives in Lynnwood, WA, and spends his free time as a youth pastor, traveling and doing community service with his wife and four sons. He is also the AWRA-WA newsletter editor.



Jason McCormick – Jason is the founder of McCormick Water Strategies (MWS) with ten years of water resources experience. Jason is recognized regionally as a water rights and water transactional expert. In 2015, Jason formed MWS after working in the private, public, and non-profit water resources sectors. His experience includes six years at Washington Water Trust (WWT) in Central Washington, specializing in water transactions, trust water, mitigation banking, representing conservation buyers, geospatial water rights evaluation, permitting, and water rights instruction. Prior to WWT, Jason worked as a permit writer for the newly formed Washington State Department of Ecology, Office of Columbia River (OCR) where he worked in water rights permitting, project planning, geospatial water resource mapping, program outreach, and coordinated initial grant solicitations. From his experience in the private sector, WWT and OCR, he excels at water rights permitting, water transactions, water rights evaluations, water resources problem solving, and water rights instruction. In addition, he draws a strong appreciation for the communities and unique local values of Eastern Washington from his local roots.



Stan Miller - Stan is semi-retired, and currently doing water resources consulting as Inland Northwest Water Resources. Prior to venturing into retirement, Stan held the position of Program Manager for Spokane County's Water Resources Section in the County Utilities Division of the Public Works Department for over 20 years. The prime focus of Water Resources is the regional aquifer protection program. In that capacity he worked toward integrating the groundwater protection efforts of all municipalities and water purveyors using the Spokane Valley-Rathdrum Prairie Aquifer. In addition to working on this program at the administrative level, Stan has developed technical information and conducted local studies on the potential impacts of storm water infiltration on ground water quality and the interaction of the Spokane River and the Spokane Valley Aquifer. Stan is a long-time member of the AWRA-WA Board and a past president of the Chapter. Away from work, Stan enjoys canoeing, backpacking, running, and working on the restoration of a turn-of-the-century home.



Tom Ring - Tom is a hydrogeologist with the Water Resources Program of the Yakama Nation. He has held this position since 1990 and, in that role, has worked on a variety of projects involving groundwater and surface water quantity and quality, water rights, irrigation and fisheries issues and planning for future water needs. Previously he worked for the Water Resources Program at the Washington Department of Ecology. Tom has BS and MS degrees in geology from Central Washington University and Northern Arizona University respectively. He has taught geology and hydrogeology classes at Central Washington University and is a licensed geologist and hydrogeologist in Washington State. When not working, he enjoys hiking, climbing, and skiing in the mountains of the west.



Jennifer Saltonstall - Jenny is a licensed Hydrogeologist in Washington State, a Principal at Associated Earth Sciences, Inc., and consults on Puget Sound area hydrogeology, geology, and geologic hazards assessments for both private and public sector clients. She is a leader in stormwater infiltration feasibility and practical stormwater infiltration site investigation and design, both for shallow conventional systems and deep stormwater recharge Class V UIC wells. Jenny is an expert in complex Puget Sound stratigraphy and has a fundamental understanding of subsurface “plumbing” system in our area from managing hundreds of infiltration projects from design through construction. Jenny provides senior review for geologic and hydrogeologic studies, is a regular contributor at technical conferences, and has been an invited speaker on infiltration components for “green” stormwater management seminars. Outside of work, Jenny and family love backpacking, board games and backyard projects.



Carrie Sessions - Carrie is the Policy, Legislative and Economic Analyst for the Department of Ecology’s Water Resources Program. In that role, she leads discussions about statewide policy issues, analyzes proposed rules and legislation, and works with the legislature on changes to water law. Prior to joining Ecology, Carrie did policy and economic analysis on the state, federal, and international levels, including work for consulting firms and for the United Nations Environment Program. She also spent several years teaching applied leadership. Carrie is a graduate of Colorado College and holds a MPA and MS from the University of Washington in environmental policy and economics, with an emphasis in water resource management. She graduated from all three programs with top academic honors.



Stephen Thomas - Stephen is lead hydrogeologist in the Seattle office of Shannon & Wilson, Inc. He has 23 years of experience as a consultant in the areas of geologic and water resources. He manages and performs technical aspects of hydrogeological investigations for groundwater resources development, wellhead protection and groundwater management, groundwater contamination and waste disposal, dewatering, and environmental projects. A native of the United Kingdom, Stephen moved to Seattle in 2001, having previously lived in Los Angeles since 1992. He holds a BS in Geology from the University of Cardiff (Wales) and a MS in Hydrogeology from the University of Birmingham (England), and is a licensed hydrogeologist in the states of Washington and California. Stephen has been on the AWRA-WA Board since 2009, and has held positions of Vice-President, Secretary, and Treasurer, and has chaired the Dinner and Sponsorship committees. Stephen enjoys many outdoors activities, particularly rugby football, cycling and open-water swimming, and annoying his neighbors with his guitar playing.



Patrick Vandenberg - Patrick, a native of Southern California, has called Seattle home for about three years now. He is the Senior Civil Engineer at Seattle Public Utilities District, where he specializes in hydrology and hydraulic modeling. He received his BS from UCLA and his MS at UW, both in Civil Engineering. He was formerly the University of Washington Student Chapter Representative to the AWRA-WA Board. Patrick previously worked for King County as a hydraulic modeling engineer in the Wastewater Treatment Division. Before moving to Seattle, he worked as an environmental engineer for AECOM in Long Beach, CA. He enjoys playing ultimate Frisbee and volleyball. He is also the AWRA-WA Webmaster.

BRINGING SALMON HOME TO THORNTON CR.*A PROJECT WITH XYLEM RENTAL SOLUTIONS AND SEATTLE PUBLIC UTILITIES***By Jaren Stensland, Xylem Sr. Applications Engineer****Photo: Xylem Rental Solutions**

An anomaly of sorts, Seattle's Thornton Creek serves as the marriage of residential properties and natural parks, draining a 7,402-acre urban watershed from Lake Washington to Puget Sound. Originally enveloped with evergreen forests, urban development has permeated the area's ravines and floodplains. With the arrival of an interstate highway, commercial complexes and neighborhoods the area's population grew to about 75,400, naturally combatting the ability of the local wildlife and plants to thrive — specifically the salmon.

The salmon are particularly valuable to the ecosystem in the Pacific Northwest to help it run smoothly by returning nutrients back to other wildlife, as well as feeding the surrounding land and naturally regulating the temperature of the water. Due to the extensive manipulation to the creek over the past several decades, the creek no longer existed as a healthy place for salmon to survive, compromising their ability to benefit the area and reducing their numbers drastically. While the creek effectively served as a drain for surrounding flooded areas, it prevented humans and wildlife from coexisting.

Seattle Public Utilities decided it was time for change. With the help of infrastructure solutions firm HNTB Corp. and Xylem Rental Solutions, a ground-up evaluation of the creek began. The team planned an \$11 million restoration with the fish in mind, so that they might be able to break down polluted particles in the waterbed. Before restoration could begin, the teams dewatered the entire creek — but not before making proper accommodations for about 200 fish, collecting them and placing location trackers on them so they could be safely returned at a later time.

With the arrival of an intense summer thunderstorm, the dewatered area began to flood, and restoration operations came to a halt. Fortunately, Xylem Rental Solutions had a plan. Xylem's water experts and local contractors installed two Godwin pumps running 8-inch inlets to recover the work they had lost. "From an unexpected storm event, you just have to get back to the way you were as quickly as possible and move forward," said Kevin Casey, construction manager at HTNB.

Soon after, the removal of the dam was the final barrier to freedom, thanks to Xylem's temporary Godwin pumps. Even with peak flows measuring at 100 times the base flows, the employed pumps both accepted and embraced flow levels at all levels as they roared off surrounding pavement, houses and downspouts. In the wake of the restoration project, Chinook salmon were spotted spawning for the first time in eight years. Thornton Creek was more than ready for their return.

STUDENT CHAPTER UPDATES

University of Washington Chapter Notes

By Eric Zimdars, University of Washington, AWRA-WA Student Chapter President**L to R: UW-AWRA Pres Eric Zimdars, PA Officer Hojeong Bang, Treasurer Rose McLoone, and VP Sean Wu. Photo: Chris Turner**

On October 30th, the AWRA-UW Student Chapter hosted John Chandler and Tom FitzHugh at our opening meeting for the 2019-2020 Academic Year. The meeting was facilitated by Interim President Eric Zimdars, Vice President Sean Wu, and Public Affairs Office Hojeong Bang. After brief introductions, John Chandler outlined how AWRA-WA supports our student chapter with resources and opportunities to engage with working professionals. He proceeded to mention how the professional chapter has benefited him, and then touched on the annual AWRA-WA fellowship. Tom FitzHugh then went over the mentorship program and how it serves to connect students seeking guidance in professional development with the AWRA-WA network.

A handful of students in attendance were able to share their interests in water resource issues: from research into legacy contaminants to hydrologic modeling. Ideas were generated to help direct the AWRA-UW leadership teams planning of future activities, with the goal of meeting the needs/interests of the student chapter members. At the close of the meeting, everyone stayed to share pizza and refreshments. Students had the chance to chat with John and Tom about their professional work. Their presence was greatly appreciated and we hope to see more professional chapter members in the near future!

Central Washington University Chapter Notes**By Silas Sleeper, CWU AWRA-WA Student Chapter President**

The AWRA student chapter at Central Washington University had its first meeting on October 11th. During the first meeting Jason McCormick kindly drove up from Yakima to talk to the club. Jason discussed the background of the AWRA organization outlining its goals and accomplishments for the new members. After Jason's talk we discussed as a club what we wanted to do in the upcoming year. We decided that we would aim to go on two water resource related fieldtrips and have at least two local dinner meetings. We have grown as a club slightly from last year and now have geology, chemistry, and resource management graduate students participating as club members.

Thus far, the club has gone on one field trip in the upper Yakima River watershed. The field trip was led by Dr. Gabriel, a geography professor here at central who welcomed us to join his hydrology class as they discussed fluvial morphology, stream channel classification, and the water resource history of the upper watershed. Our next event will likely be a field trip in collaboration with the hydrogeology class during winter quarter.

DINNER MEETING UPDATES

By Felix, Kristanovich, PhD, PE, Senior Water Resources Consultant - Ramboll

October Dinner Meeting

On **October 24, 2019**, the AWRA-WA Section hosted a dinner meeting at TuttaBella Neapolitan Pizzeria in Seattle Wallingford neighborhood. The speaker was **Amanda Heye from Washington State Department of Ecology**, who served as the main technical editor of newly released **Stormwater Management Manual for Western Washington**. Amanda leads the engineering team responsible for the Manual updates and provides technical assistance for stormwater retrofit projects that receive Ecology grant funding.

Amanda focused her presentation on the major revisions of the manual since its previous publication in 2014. Most important revisions included usability enhancements (making Manual more user-friendly) and several significant changes. The Western Washington Hydrology Model (WWHM) was updated to include incorporation of BMPs and addition of van Genuchten algorithm for modeling of bioretention. Other updates included new hard surfaces redevelopment threshold, the equivalent area threshold, minimum requirements 2, 5, and 7, and wetland protection guidance that now requires monitoring and modeling of high value wetlands. The Manual also incorporated the Underground Injection Control (UIC) Program Guidance that was previously a stand-alone document. This event was attended by twenty professionals, who feasted on endless appetizers, pizzas, and beer during the event.

September Dinner Meeting

On **September 23rd, 2019** **Bill Taylor from Raedeke Associates, Inc.** presented results of the two-year monitoring study of **bioretention facilities in Western Washington**. This presentation followed AWRA-WA dinner meeting at Pyramid Alehouse in Downtown Seattle.

Bioretention facilities can be an important part of stormwater management within site development plans. If designed, constructed, and maintained properly, they can provide water quality treatment and flow control to meet the Department of Ecology's stormwater requirements. The monitoring studies were funded by the NPDES Stormwater permittees via the Strategic Action Monitoring (www.ecology.wa.gov/SAM). Until these studies, very little was documented about how constructed bioretention facilities actually performed, whether they meet the design expectations of the engineers, and on the accuracy of hydrologic modeling (i.e. WWHM). Bill presented monitoring and modeling results from twenty constructed bioretention facilities located throughout Western Washington – with sites from Bellingham to Olympia, Poulsbo to Issaquah. These results included measured flows and infiltration rates passing through the units, vegetation community composition and success, and modeling observations. The results offer suggestions to engineers, hydrogeologists, and landscape architects for better designs for future facilities.



Photo by Felix Kristanovich

STUDENTS – BE AN AWRA-WA FELLOW!

The Washington State Section of the American Water Resources Association (AWRA) is seeking nominations for its 2019 – 20 Fellowship Award. For the 2019 – 20 academic year two fellowships will be given. One award will be to a member of a Washington Section affiliated Student Chapter. The other award will go to a student enrolled in a graduate program at a college or university in Washington State. Both fellowships are for a full-time graduate student completing an advanced degree in an interdisciplinary water resources subject. In addition to \$2500 in cash, the award includes a one-year membership in both the State and National AWRA, a one-year subscription to the Journal of the American Water Resources Association, and admission to the Washington State Section Annual Conference. For additional information contact Stan Miller by email at samillerh2o@comcast.net

Applications are due February 14, 2020.

Apply at:

<https://www.waawra.org/People&Awards/Fellowships>

AWRA-WA MENTORSHIP PROGRAM

By Tom FitzHugh, Water Resources Scientist – Stantec Consulting

Just a reminder that AWRA-WA has a mentorship program whose goal is to connect young professionals and students in the field of water resources with experienced professionals who share a similar specialty and are interested in building a mentoring relationship. Information on the mentorship program can be found on our website, and anyone who is interested in being involved (either as a mentor or mentee) can apply/register there. Mentees who apply/register will be connected with an appropriate mentor based on their stated interests. For any questions about the mentorship program, please contact Tom FitzHugh (thomas.fitzhugh@stantec.com).

CONGRATULATIONS TOM RING! OUTSTANDING WATER RESOURCES PROFESSIONAL - 2019

By Stan Miller



Urban Eberhardt Presenting the Tom with his personalized bobblehead. Photo by Greg McLaughlin

The Outstanding Water Resources Professional award for 2019 was presented to Tom Ring at this year's state conference. Tom will retire in 2019 from a long and storied career as a hydrogeologist for the Water Resources Program of the Yakama Nation. In that capacity, Tom worked on a variety of projects involving groundwater and surface water quantity and quality, water rights, irrigation and fisheries issues and planning for future water needs. He spent decades working on the Yakima River adjudication and insuring that water flow and quality was adequate to support salmonid fishery in the Yakima River system. Prior to joining the tribal program in 1990, Tom worked in the Water Resources program at the Washington Department of Ecology. Tom earned a BS in Geology at Central Washington State University and an MS, also in Geology, from Northern Arizona University. Tom is a licensed geologist and hydrogeologist in Washington State.

In addition to his work with the Yakama Nation, Tom has contributed to the Water Resources field in other ways as well. He has taught geology and hydrogeology courses at CWU. He is on the board of the Washington Water Trust and has served on the Board of the Washington Section of the AWRA for over a decade. While on the AWRA board Tom was instrumental in getting the CWU Student Chapter started. With his connections in the larger field of water resources in the west, Tom has been a key to bringing in a number of top-notch speakers for the Washington Section's annual conferences. He has also served as our unofficial photographer, providing images for many of our publications, especially those from our conferences.

In addition to receiving a plaque acknowledging their receiving this award, AWRA-WA provides a \$500 contribution, in the recipient's name, to a water resources related non-profit organization. Tom selected the Kittitas Conservation Trust for this year's award.

Of special note was the recognition of Tom's work by Governor Inslee in his recorded message to the association. Also, at the award presentation Tom received special recognition from the Kittitas Reclamation District when Urban Eberhardt presented Tom with his own personal bobble head.

In his "retirement" Tom will have more time to enjoy his many outdoor pastimes; hiking, climbing, and skiing in the mountains of the West.

AWRA-WA REPRESENTED AT NOVEMBER AWRA NATIONAL CONFERENCE IN SALT LAKE CITY



AWRA-WA's John Chandler (Vice President), Felix Kristanovich (Board Member) and Rabia Ahmed (President) attended AWRA's Annual Water Resources Conference in Salt Lake City, Utah in November 2019.

American Water Resources Association, Washington Section
P.O. Box 2102
Seattle, WA 98111-2102

(Change service requested.)

Special Thanks to Washington Water Trust for word processing support on this newsletter.

2020 MEMBERSHIP / CHANGE OF ADDRESS FORM

(⌂ please circle, as appropriate ↗)

Annual membership in the state chapter costs \$35.

Name _____ Position _____ Affiliation _____

Street Address _____ City _____ State _____ Zip _____

Phone (_____) _____ Fax (_____) _____ E-mail _____ @ _____

Please check this box to indicate if you prefer to receive your newsletter electronically.

NEW MEMBERSHIP OPTION – ADD SUPPORT FOR THE AWRA-WA STUDENT FELLOWSHIP FUND

_____ 2020 Membership Dues: \$35.00 (\$5 automatically donated to the AWRA-WA Student Fellowship Fund!)

_____ I am including an additional Donation of \$_____ to support the AWRA-WA Student Fellowship Fund

Preferred Method: Pay via Paypal on our website: www.waawra.org

For Checks: please make payable to AWRA Washington Section.

Mail to: American Water Resources Association Washington Section

P.O. Box 2102 Seattle, WA 98111-2102

The American Water Resources Association Washington Section is a scientific and educational 501(3)(3) non-profit organization established to encourage and foster interdisciplinary communication among persons of diverse backgrounds working on any aspect of water resources disciplines. Individuals interested in water resources are encouraged to participate in the activities of the Washington Section. Opinions and views expressed in articles of this newsletter are those of the author, not AWRA-WA.