



## IDAHO WASHINGTON AQUIFER COLLABORATIVE

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 Mike Galante - President  
 Ty Wick - Vice President  
 Rob Lindsay - Secretary  
 Alan Miller - Treasurer

The Idaho Washington Aquifer Collaborative (IWAC) works to maintain and enhance water quality and quantity for present and future generations by developing management strategies which benefit the Spokane Valley Rathdrum Prairie Aquifer and the Spokane River region.

November 10, 2015, 1:30 – 4:00 PM, Liberty Lake Sewer and Water District  
 Representatives Present

	Organization	Representative	Email Address
√	<b>Avista</b>	Michele Drake Linda Kiefer	Michele.drake@avistacorp.com Linda.Kiefer@avistacorp.com
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	<b>Bar Circle S Water Company</b>	Rob Turnipseed	avondalecon@frontier.com
√	<b>City of Coeur d’Alene</b>	Jim Markley	jimm@cdaid.org
√		Terry Pickel	tpickel@cdaid.org
	<b>City of Post Falls</b>	John Beacham Matthew Isch	jbeacham@postfallsidaho.org misch@postfallsidaho.org
	<b>City of Spokane RPWRF</b>	Mike Coster	mcoster@spokanecity.org
√	<b>City of Spokane Water Department</b>	Dan Kegley Bill Rickard	dkegley@spokanecity.org brickard@spokanecity.org
	<b>Coeur d’Alene Tribe of Indians</b>	Laura Laumatia	llaumatia@cdatribe-nsn.gov
√	<b>Consolidated Irrigation District No. 19</b>	Shane Sheppard	consolidatedirrigation@comcast.net
	<b>East Greenacres Irrigation District</b>	Ron Wilson	ron@eastgreenacres.org
	<b>Hayden Area Regional Sewer Board</b>	Ken Windram Shirley Carter	ken@harsb.org
√	<b>Hayden Lake Irrigation District</b>	Alan Miller	alan@haydenirrigation.com
√	<b>Liberty Lake Sewer and Water District</b>	BiJay Adams	bijay@libertylake.org
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	<b>Moab Irrigation District</b>	Kathleen Small	kathleensmall@comcast.net
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√		Rick Neal	rick@modirr.org
	<b>Modern Electric Water Company</b>	Bryan St Clair	bstclair@mewco.com
√	<b>North Kootenai Water &amp; Sewer District</b>	Mike Galante	mikeg@nkwsd.com

√	<b>SAJB Program Leader</b>	Tonilee Hanson	sajbinfo@gmail.com
√	<b>Spokane Co. Water Resources</b>	Rob Lindsay	rlindsay@spokanecounty.org
√	<b>Spokane County Water District No. 3</b>	Ty Wick	scwd3@comcast.net
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	<b>Spokane Tribe of Indians</b>	Brian Crossley	crossley@spokanetribe.com
√	<b>Vera Water and Power</b>	Todd Henry	thenry@verawaterandpower.com
	<b>Guest Speakers</b>		
√	<b>City Idaho Water Engineering</b>	Bob Haynes	bob@idahowaterengineering.com
√	<b>Washington State University</b>	Melanie Thornton	melanie.thornton@email.wsu.edu
√	<b>Washington State University</b>	Jennifer Johnson	Jennifer.e.johnson@wsu.edu
√	<b>Washington State University</b>	Korey Woodley	Korey.southerland@wsu.edu
√	<b>Washington State University</b>	Kayla Wakulich	Kayla.wakulich@wsu.edu
	<b>Guests</b>		
√	<b>City of Spokane</b>	Doug Greenland	dgreenlund@spokanecity.org
√	<b>City of Spokane</b>	Marlene Feist	mfeist@spokanecity.org
√	<b>City of Spokane Valley</b>	Henry Allen	hallen@spokanevalley.org
√	<b>Spokane River Forum</b>	Andy Dunau	info@spokaneriver.net
√	<b>U of I Ext. Water Education</b>	Jim Ekins	jekins@uidaho.edu

## AGENDA

**Welcome and Introductions** – President Mike Galante opened the meeting and welcomed everyone. Jim Markley announced his retirement as of January 2016 and introduced the new City of Coeur d’Alene representative, Terry Pickel.

**Agenda** – The agenda was adjusted to accommodate presenter schedules.

## New Business

**Guest Presentations: Oasis Model Scenario Discussion and Public Outreach and Branding a Regional Message for Water Conservation and Efficiency.** Presented by Melanie Thornton, Jennifer Johnson, Korey Woodley and Kayla Wakulich WSU graduate and doctoral students. A pdf of the presentations was distributed following the meeting and can also be downloaded here.

**Group Discussion Question:** What is IWAC’s potential role in unifying educational efforts in the Spokane and Kootenai County regions by water and waste water purveyors, agencies, municipalities, universities and interest groups to promote protection of the SVRP aquifer and Spokane River watershed?

**Oasis Model Scenario Discussion** – Melanie Thornton reviewed a model of groundwater and river inputs and outputs which was developed using an OASIS model interface and data from Groundwater MODFLOW, USGS BI-STATE Model, river gages and Coeur d’Alene Lake data (OASIS). OASIS modeling outputs were verified as compared to 1990 to 2005 gage data, Dale Ralston’s Response Effects Spreadsheet Tool and analysis by John Covert, Washington State Department of Ecology. The margin of error was reported as less than 5%.

OASIS is designed to model growth (increased regional water demand). Additionally, OASIS includes climate change (CC) streamflow capabilities in comparison to the business as usual (BAU) model runs. The purpose of OASIS is to assist in developing water management planning scenarios. Climate change modeling is based on University of Washington's **Variable Infiltration Capacity (VIC) Macroscale Hydrologic Model**. For more information about VIC go to <http://vic.readthedocs.org/en/master/Overview/ModelOverview/>.

Following the OASIS model overview, discussion was opened with two questions:

1. What kind of scenarios, graphics, metrics and etc., would you like to see?
2. What are your Big Ideas related to water resources in the region?

IWAC discussion included suggestions for enhancements to the OASIS model, scenario development interests, and implementation and messaging considerations.

### **Suggested Enhancements to the OASIS Model**

- Is it possible to provide a 90 day graph of the critical instream flow period and/or include the shoulder months May through October?
- For comparison, include the minimum instream flow and show the seasonal changes in river flow on the graphs.
- Identify on the graph where the gage is measured.
- On graphs showing business as usual (BAU) and climate change (CC) plus 25% growth add a third line showing just the impact of climate change.
- Use a logarithmic graph to show the difference for the summer months.
- Include time-step graphing
- How do you incorporate purveyor data into OASIS that shows population growth (per capita) doesn't necessarily mean increased pumping? Higher density housing reduces green space and outdoor watering.

### **Scenario Development Interests:**

- Help the general public understand future scenarios in relationship to weather narratives and describe the changes. For example, what impact does a probability of more precipitation but less snowfall have on river flow and groundwater supply?
- Include normal vs. future changes for degree days and the impact on: precipitation quantity and form, freshet timing, slow vs fast snow melt and increased water demand due to temperatures vs growth.
- Is there a way for OASIS to demonstrate real time scenario manipulation at public planning and information events? Scenarios could be tested and generate graphs that would dynamically display potential results and show changes in assumptions. For example:
  - What happens if it snows less and rains more?
  - What would be the results for the river and groundwater of change in water demand (25% increase) with change in temperature (5 degree increase) and change in precipitation (5 % decrease)? The percentages and degrees could be

adjusted in real time to model seasonal changes and provide viable data for consideration of mitigation responses.

- Develop scenarios to graphically represent:
  - Change in the river due to growth
  - Change in the river due to projected climate change
  - Change in the river due to conservation response
  - How long would the aquifer last if recharge inflow changed significantly for four or more years?

### **Implementation Considerations:**

- Rate increases coupled with economic downturns impact short term reductions in water use but with economic rebound customers tend to return to higher levels of water use.
- It may not be a valid correlation to tie conservation results to the river. Most SVRP water purveyors cannot directly influence the river flow and, even for those whose wells are closer to the river, there is a time lag between turning off wells and seeing an impact on the river. The general public will not see direct results on the river flow from individual conservation measures. Despite 2015 conservation billboards and wildfires, pumping increased dramatically during the hot, dry periods especially in affluent communities.
- The City of Spokane (City) depends on energy generated by Upriver Dam for pumping from Well Electric. When river flow is below 200 CFS the City would have to use energy generated by Avista resulting in a higher cost to rate payers. The City's strategy is to move pumping away from the river and minimize pumping expenses. This is one case where purveyor pumping is related to river flow.
- Where are the greatest effects on Coeur d'Alene lake levels? What if 2015 is the new normal or 2016 is even drier? Connecting conservation messages to lake levels and river flows makes it tangible. People can see the lake and river but they don't relate to aquifer levels.
- What is happening in the aquifer needs to be kept separate from the river reaction and we also need to account for the differences between Idaho and Washington.
- Water Purveyors, that are not municipalities, are not in charge of land use decisions. Economies are not stagnant. New homes are being built and new connections are required. What effects will growth management decisions have long term on the SVRP aquifer, Spokane River and Coeur d'Alene Lake? Stormwater and smart growth need to be part of the message.
- AVISTA is caught in a tough situation balancing requirements to maintain CDA Lake level at 2128 feet and Spokane River flow at 600 cfs.

### **Messaging**

- Messaging to general public needs to be positive and optimistic. Let people know that collectively we are using less water for indoor uses based on retrofit and new building with high efficiency appliances, low flow faucets and toilets, improved pipes, repair of leaking systems and other efficiency and conservation measures.

- Messaging needs to encourage individual actions and address questions like: What difference does it make for me? If I change my habits by 15% what impact do I have?
- Messaging needs to distinguish between audiences such as regulatory, water management and general public.
- How does IWAC want to be part of the public conversation? We share a regional water resource regardless of where you live. This is your water as well as everyone else's and is not controlled by a state line. A regional message does not work unless it applies in all areas.
- Conservation messages, used in the past, have changed as weather and climatic conditions change and only using a conservation message is limiting. "Slow the Flow" and other conservation slogans may be useful in dry years but tend to go away in a wet year. The message needs to be more about protection. We need to consider an overarching water protection umbrella slogan that can include efficiency, conservation, stormwater, water reclamation and stewardship. What are the core messages that will last over time?
- General public messages need to:
  - be inviting
  - have a specific purpose and direct benefit
  - show simple, non- controversial, actions anyone can take (e.g., don't water during the heat of the day; Let grass grow longer to shade itself.)
  - be responsive to time and circumstances
  - distinguish between indoor and outdoor conservation
  - inform the public about what money is being spent on
  - result in actions that protect our water resources
- **Possible Messaging Products**
  - trifold with overview about protecting water quality & quantity and more in-depth messages explaining how the resource works, the value and relevance of investments, interstate collaboration and what the reader can do (e.g., water quality & quantity, stormwater, waste water, infrastructure and etc....)
  - public service announcements
  - social media and you tube videos
  - water quality interpretive signs along Idaho & Washington trails
  - The WSU team described a draft animated video story project that shows water pathways and a conceptual water cycle. A follow-up series of videos could be developed to demonstrate 1) integrated water management, 2) watershed approach, 3) wastewater best management practices for businesses and residents, and more

**Approval of Meeting Minutes** – President Galante called for additions or revisions to the Minutes for October 13, 2015. Hearing none the minutes were approved as submitted.

**Financial Report** – Treasurer Alan Miller reported a Current Account Balance of \$11,133.31. Download the Treasure's Report

## Old Business

**IWAC Website** review was tabled for the December meeting.

## Agenda for December 8, 2015 – IWAC Member Workshop

### Workshop Discussion Topics:

#### Next Steps:

Develop the regional umbrella “brand” and introduce it at the March 22-24, 2016, Our Gem Symposium and Spokane River Forum Conference.

- Determine where we want to be by March 2016 and work backwards
- Partner with Graduate Students at WSU or UI to create a messaging campaign project
- Everyone, bring ideas to create an outline of the components of the water protection umbrella and what the brand would encompass
- Invite others who should be involved
- Look at other campaigns listed on WSU presentation
  - ENVIRONMENT AMERICA – PROTECT OUR WATERS: [HTTP://WWW.ENVIRONMENTAMERICA.ORG/PROGRAMS/AME/CLEAN-WATER-AMERICA-0](http://www.environmentamerica.org/programs/ame/clean-water-america-0)
  - EPA – WE’RE FOR WATER: [HTTP://WWW3.EPA.GOV/WATERSENSE/WEREFORWATER/](http://www3.epa.gov/watersense/wereforwater/)
  - NATIONAL - WATER USE IT WISELY: [HTTP://WATERUSEITWISELY.COM/](http://wateruseitwisely.com/)
  - CALIFORNIA – SAVE OUR WATER: [HTTP://SAVEOURWATER.COM/](http://saveourwater.com/)
  - CALIFORNIA – BE WATER WISE: [HTTP://WWW.BEWATERWISE.COM/](http://www.bewaterwise.com/)
  - DENVER – USE ONLY WHAT YOU NEED: [HTTP://WWW.DENVERWATER.ORG/CONSERVATION/USEONLYWHATYOUNEED/](http://www.denverwater.org/conservation/useonlywhatyouneed/)
  - OREGON – ONE DROP: [HTTPS://WWW.ONEDROP.ORG/EN/PROJECT/BURKINA-FASO/](https://www.onedrop.org/en/project/burkina-faso/)
  - WASHINGTON – WISE WATER USE: [HTTP://WWW.MWCOG.ORG/ENVIRONMENT/WATER/WATERSUPPLY/WISEWATER.ASPO](http://www.mwco.org/environment/water/watersupply/wisewater.aspo)
  - WASHINGTON - SAVING WATER PARTNERSHIP - [HTTP://SAVINGWATER.ORG/](http://savingwater.org/)
  - WASHINGTON - SAVING PUGET SOUND: [HTTP://WWW.ECY.WA.GOV/PUGET\\_SOUND/](http://www.ecy.wa.gov/puget_sound/)
- Puget Sound Energy (PSE) was awarded a 2015 EPA Water Sense award. PSE created a water/energy nexus with a sports themed energy upgrade campaign. Golden tickets for showerhead upgrades were distributed to 10,037 sports fans and 29% of the tickets were redeemed. [http://www3.epa.gov/watersense/docs/ws\\_awards\\_fact\\_sheet\\_final\\_9\\_25\\_15\\_508.pdf](http://www3.epa.gov/watersense/docs/ws_awards_fact_sheet_final_9_25_15_508.pdf)

### Tabled - Updates Around the Table

Committee Reports: Water Modeling, Water Use, and Education and Awareness

Spokane River Stewardship Partners, Spokane Regional Toxics Task Force

Future Workshop Discussion Topic:

- **Tabled for 2016:** Rate Structure Workshop: Five minute presentations by each water purveyor sharing rate structure information such as:
  - What fixed costs does the base rate cover (e.g., labor, medical, insurance, truck, power, repairs, or infrastructure)?
  - Does the base rate include water? If so, how much?
  - How are rate changes determined? How often, How much?
  - Flat rate or tiered rates?
  - Discounts for efficiency?

**Handouts:** Agenda and October Meeting Minutes