EXPERIENCES FROM ENGAGING STAKEHOLDERS IN THE SPOKANE RIVER BASIN

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WISDM

Watershed Integrated System Dynamics Modeling





Spokane River Watershed and Spokane Valley Rathdrum Prairie Aquifer



Spokane River Basin & Spokane Valley Rathdrum Prairie Aquifer



Map from Barber et. al 2009

Water Resources Planning and Management is Challenging







Collaborative Modeling

Do regional water resource stakeholders, in both Washington and Idaho, even want to collaborate?

.... Yes!



Should establishing a plan for basinwide water resources management be a priority in the SVRP?

- •a. Yes
- •b. No
- c. Not sure/ haven't thought about it



Survey data from 2013 Spokane River Forum clicker session N~200



Move the picture.

Output CURRENT

What do water resource managers really care about?





Scenario development: Potential implications of Basin-wide Planning

- 3 Primary Scenarios
 - Conservation (decreased water use)
 - Population Growth (increased water use; land use change)
 - Plan for the Unthinkable (i.e. prolonged drought)







Scenario: Population increase: 100,000 people RESULTS



Monthly Average Streamflow at Spokane: BAU v. Scenario





Scenario: Outdoor water use conservation % to offset the addition of 100,000 people?

Public Supply Demand: Mitigate +100k people



RESULTS: 40% decrease in outdoor water use



CM for water resources planning & management





We are all in agreement then.

Thank you! Email: <u>melanie.thornton@wsu.edu</u>



