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Breakout Session 1A: Frontiers of Science

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because it is twenty percent more efficient than onshore wind energy. During the Bush administration, there had been jurisdictional disputes that had stalled growth in wind energy. In fact, the governments of all the Atlantic states are planning to meet very soon to discuss this possibility. The current administration has placed a huge emphasis on climate change. Hayes, as the primary Interior manager, has seen the fire season lengthen, wildfires strengthen, and coastal lines change. While there was good work during the previous administration, lack of communication between bureaus slowed progress. A secretarial order has now created components to enable science centers to work regionally and with locals in order to implement new science. The federal government is the catalyst to bring interested parties together, provide baseline data, and facilitate coordination. For example, the Bureau of Reclamation will set up eight landscape conservation cooperatives in the Colorado Basin.

Second, Interior emphasizes the protection and conservation of treasured landscapes. By returning funding to the Land and Water Conservation Fund, Interior hopes to restore damaged landscapes. These sites include water-based ones such as the Colorado River Basin, Glen Canyon, the Great Lakes, Chesapeake Bay, the Everglades, San Joaquin Valley, and California Bay Delta.

Third and fourth, Hayes noted that Interior plans to help reconnect youth to the outdoors by involving young people in water activities. Next, Hayes discussed repairing relationships with Native Americans by addressing Indian water rights settlements.

Finally, Hayes examined Interior's opportunities to place more consistent attention on water challenges. These include the United States Geological Survey's science component and WaterSMART, a programmatic effort to improve spending practices.

Hayes ended his lunchtime talk by answering questions from the attendees.

Danielle Sexton

BREAKOUT SESSION 1A: FRONTIERS OF SCIENCE

Lynn Bergeson, of Bergeson & Campbell, P.C. and moderator of the panel, first introduced the topic: the presence of micropollutants and the water quality effects they have on our drinking water. Micropollutants are trace measures of chemicals that may include pharmaceuticals, disinfection byproducts, and nanomaterials. Ms. Bergeson noted that much of the current debate centers on which micropollutants are present in the water, how to identify them, and then how to communicate those findings to the public. She noted that while determining the standards or limits on micropollutants is a major concern, the lack of information regarding these pollutants makes it hard to identify contamination, and then assess the harm resulting from the contamination.

Mae Wu, a Program Attorney with the Natural Resource Defense Council, then spoke regarding the concerns with micropollutants. She first noted that humans produce approximately 80,000 to 90,000 different chemicals and that almost all of them make their way into drinking water supplies. She then noted that less than ten percent of those chemicals have data on their effects in drinking water. According to Ms. Wu, the presence of micropollutants is therefore alarming because the regulation of chemicals usually occurs when regulators can show known categories of humans at risk, high concentrations of the chemical, or knowledge of toxicity. Because limited data exists in regards to most of these micropollutants, regulation or protection of our drinking water sources rarely occurs.

Pankaj Parekh, Manger of Water Quality Compliance at Los Angeles Department of Water and Power, then gave a public water supplier's perspective of micropollutant contamination. He noted that water quality regulation may not provide an effective response to micropollutants. Mr. Parekh noted that federal regulations look at the maximum contamination levels of chemicals within drinking water. But, because water suppliers only look at the water contamination, not other sources of contamination, public exposure to unhealthy levels of contamination can occur regardless of water quality regulations. Furthermore determining the maximum contamination levels of every chemical, in Mr. Parekh's opinion, is not the right approach. Mr. Parekh noted that public health issues are expressed in the existence of a particular harm, such as skin cancer, not the existence of an elevated chemical concentration in the water source. Mr. Parekh therefore advocates for a more holistic regulatory approach, where the regulators first identify the public health issues, and then regulations address the sources of harm.

Next Justin Pritchard, a journalist with the Associated Press, discussed the recent articles he wrote concerning the existence of trace chemicals found in the public drinking water supply. He first pointed out that over 41 million households in America have trace amounts of pharmaceutical chemicals found in their tap-water. He noted that much of that pharmaceutical contamination occurs because of the "toilet-to-tap" drinking water systems that most American cities employ. Because humans rarely metabolize all the pharmaceutical chemicals that they ingest, and because municipal water treatment plants don't remove pharmaceutical chemicals from the effluent or from the water supply, large portions of the trace pharmaceuticals found in the tap occur as a result of human waste. He also noted that another large source of pharmaceutical contamination was the health care industry itself. The health care industry disposes approximately 250 million pounds of pharmaceutical drugs into the wastewater system every year. Mr. Pritchard noted that the government regulates little of this "pharma-water." He noted that the FDA needs to consider environmental impacts resulting from the improper disposal or prescription drugs during the FDA drug approval process. He argued

that the FDA should consider environmental impacts of disposed pharmaceutical waste in order for drugs to get regulatory approval, particularly because the health effects are basically unknown.

Ryan McLane

BREAKOUT SESSION 1B: CITIES FIRST – WATER FOR MUNICIPAL GROWTH

Christopher H. Meyer, of Givens Pursley LLP in Boise, began his discussion about Idaho's municipal water law by proclaiming that, while Idaho was not known for being on the cutting edge of many things, it is on the cutting edge regarding its regulation of municipal water law. Mr. Meyer discussed the basic challenges for municipalities within the prior appropriation framework. He noted that while in most industries in the United States, speculation is seen as important, but in water law, speculation is despised. The feeling of many western states regarding water is "use it or lose it." This, of course, is difficult to reconcile with the planning that municipalities must take part in regarding their water supplies. Municipalities need to have leeway when it comes to gathering the amount of water that they will need in the future. In the past, the "Great and Growing Cities Doctrine" and the "Growing Communities Doctrine" have acknowledged this need.

These doctrines are essentially an exception in most states to the forfeiture rule. In Idaho, rate of flow is the measure, and not the actual quantity of water. Mr. Meyer noted that this rule was not planned, but randomly came to be. However, municipalities have been required to engage in full disclosure and long time planning for their future water supplies, which results in the municipalities having to quantify their water rights. In Idaho there are several prohibitions on speculation, including a prohibition on obtaining future needs if there are conflicting plans, and the prohibition against the sale of future water rights.

Idaho learned from Colorado's method for dealing with municipalities. By doing so, Idaho made it optional for municipalities to operate under the 1996 Act. In Idaho, there must be an affirmative step to protect a water portfolio under the 1996 Act. Also, a municipality must show its entire water portfolio before being allowed to adjudicate a new water right. Idaho has also expanded the definition of municipal providers.

John Arum, attorney at Ziontz, Chestnut, Varnell, Berley & Slonim in Seattle, represents western Washington Indian tribes regarding the Washington Municipal Water Law of 1993, which is very similar to Idaho's 1996 Act. The tribes are concerned about the law because they have rights to harvest salmon, which are substantially affected by the water levels in the rivers. From the Tribes' perspective, the expansion of municipal water rights is done at the expense of water rights of others. The definition of a municipal law provider in the 1993 Act has resulted in the expansion of what qualifies as a municipality and