

Managed Aquifer recharge in the East Snake Plain Aquifer (ESPA)

Speaker: Neal Farmer, Idaho Department of Water Resources

Wednesday, January 28, 2015 11:30 -1 pm (talk will start at 11:45)

Location: Washington Group Plaza Executive Dining Room (Turn left at the front desk and right at the cafeteria).

720 Park Blvd

Boise, ID 83712

Cost: Free

IDAWRA thanks the Corps of Engineers for providing the venue.

Abstract:

Aquifer recharge in the East Snake Plain Aquifer (ESPA) has gained momentum in recent years with more funding, more modeling and more sites to deliver water too. For purposes of recharge, the ESPA is split into essentially the upper basin and the lower basin with the boundary located at the American Falls Reservoir Dam. The main reason for the boundary is based from the Water Board's policy that recharge will not compete with upper basin reservoir fill. This effectively eliminates recharge above American Falls Dam during the late fall, winter and spring unless there is an abundant supply of spring runoff water that exceeds the reservoir system capacity to retain it. Statistical analysis shows that roughly 50% of the time recharge cannot be done above American Falls Reservoir due to low water supplies. Recharge below American Falls is different because it does not compete with upper basin reservoir fill. Therefore, recharge (especially below Minidoka Dam) can occur in the late fall, winter and spring because of natural flow in the Snake River of approximately 500 cfs spilling at Milner Dam during this time period. This water is then available below American Falls Dam and the Water Boards recharge water right is in priority during this time period. The real problem is conveying this water to locations that are geologically and geographically acceptable to receive high flow rates of water without causing impacts. Currently, a two pronged approach is being implemented to implement recharge; one by direct injection of waters into the subsurface via injection wells and the other to route water through existing conveyance structures (canals) to land surface spreading/leakage basins. Both of these options have their own unique set of issues at each individual location. Getting water into the ground in meaningful volumes and flow rates isn't as easy as you might think it is!

Speaker Biography:

Neal Farmer has worked for Idaho Department of Water Resources since 2007 on a variety of water resource management projects and for the National Park Service from 1996 to 2007 at the Hagerman Fossil Beds National Monument with fossils, landslides, dye tracing perched aquifers and geologic mapping. Born and raised in Southern Idaho and attended U of I with completion of a B.S. in Geology and M.S. in Groundwater.

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