

THE HANFORD REACH—INFLUENCES OF ENERGY AND AGRICULTURE ON RESOURCES IN THE REACH

Day/Time:

Saturday, April 4, 2015;
8:30 am to 2:30 pm

Pick-Up Location:

Columbia Basin College
North Parking lot

Cost: \$18

Trip leaders:

Dr. Duane Horton, Geologist
& Dr. Janelle Downs, Ecologist



Aerial View of Hanford Reach, White Bluffs and 100-H.

The Hanford Reach field trip travels upstream alongside some of the last free flowing waters of the Columbia River, adjacent to the Department of Energy's Hanford Site and along the White Bluffs. This field trip will involve some hiking (and maybe even a little bushwhacking!).

The Hanford Reach is part of the Hanford National Monument, which has provided some protection to the adjacent lands and resources. This is in contrast to shoreline and agricultural development seen throughout most of the Columbia Basin. Still, the development of nuclear power and materials, cleanup of legacy wastes and facilities, hydropower operations, and irrigated agriculture outside the Hanford boundary all continue to influence the river and adjacent habitats. As we travel north of Pasco and east of the river, we will observe thousands of acres of irrigated agriculture that use Columbia River to water a variety of crops. Along the way, we will discuss the past Hanford Site operations that lead to subsurface contamination and the current efforts to cleanup that contamination. After reaching the river at Ringold, the trip includes stops at a number of points and overlooks to view and discuss:

- Missoula floods and their influence at Hanford
- Cause and effects of mass wasting occurring along the White Bluffs
- Ringold Formation sediments that document the history of the Columbia River in the Pasco Basin
- Columbia River Basalt and recent studies to use the basalt as a subsurface storage facility for natural gas and as a repository for sequestered carbon dioxide.
- Hydropower operations and influences on riparian vegetation and rare plants
- Rare plant habitats on the uplands
- Studies of the hyporheic zone at Hanford and implications for fish habitat

UPDATE: We are adding two components to the Hanford Reach Field Trip that focus on sagebrush steppe ecology and recovery. Richard Easterly and Debora Salstrom will lead a review and discussion at selected stops highlighting the success and failures of post-fire restoration. Scott Shaff will lead a short tour and discussion of research at the Sage-Steppe research site as we travel back to Pasco.