

*Benton County Riparian and Wetlands Project*  
<http://www.co.benton.or.us/cd/riparian>  
*Inventory Report*

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## **Executive Summary**

The Benton County Riparian and Wetlands Inventory report was completed by Benton County Staff, with support from the Riparian and Wetlands Advisory Group. The inventory is a review of best available information on the location and type of riparian and wetland resources in Benton County. Benton County completed the inventory with input from county residents both through riparian project community meetings and through the guidance of the current comprehensive plan (updated 2007), which was developed with considerable public input. Comprehensive Plan Goal 5 (Natural Resources) and Goal 6 (Water Quality) provided the guiding policies of the Inventory with focus on riparian areas/stream sides, wetlands, and water quality.

Inventory work included three general areas: 1.) preparing an inventory pursuant to Statewide Planning Goals 5 and 6, 2.) compiling technical and policy information, and 3.) outreach and education to county residents. Inventory work will be used to draft a riparian and wetland work updates including code changes. Inventory work included increasing locational accuracy of riparian and wetland areas. GIS mapping and LIDAR remote sensing technology enabled significant improvement in stream channel location. Mapping work also provided for improved understanding of high priority streams, including fish bearing streams and water quality limited streams. Inventory work also included select field site assessments to determine accuracy of mapping work, and included wetland assessments using the Oregon Rapid Wetland Assessment Protocol.

During the Inventory period, two separate rounds of countywide community meetings occurred (Fall 2009 and 2010) with additional outreach and education on the project provided through the project website, phone calls and other media. The large amount of policy-related information from State agencies was synthesized, including presentations by state agency staff at the public monthly meetings of the advisory group.

The policy and technical information presented in the Inventory Report are applicable to most riparian and wetland resources across the county and can be utilized as a template for other counties in Oregon, working to implement riparian, wetland, and water quality related goals.

## **General Riparian, Wetland, and Water Quality Issues**

The various Benton County land uses (forestry, agriculture, rural and urban development) affect aquatic ecosystems through various impacts. These impacts are complex and occur at several scales throughout a given watershed. For example, urban and rural-residential development results in changes in the volume, location, timing, and quality of stormwater runoff. Land use/development has also been documented as an impact to the physical, chemical, and biological structure of water resources. Watershed councils and other non-

profit, private and governmental organizations have documented the range of impacts through watershed assessments within Benton County.

Benton County has several streams that are documented as ‘water quality impaired’. These streams are impacted by land uses that result in sedimentation, bacteria, increased stream temperatures and other water quality impacts including pollution to streams and wetlands from surface water runoff. Water quality impairments occur from land uses including activities such as landscaping, farming, timber harvests, and construction, as well as leachate from septic systems and landfills, bacteria from livestock, failing septic systems and other sources. In addition, development can often lead to removal of riparian/streamside vegetation, reducing buffer capability, which contributes to further water quality and habitat impairment.

## **Inventory Approach and Findings**

Benton County developed an inventory approach which adheres to State administrative rules, with the support of a volunteer Riparian and Wetlands Advisory Group. The Riparian and Wetlands Advisory Group was composed of a diverse group of volunteers including local landowners, academic and governmental scientists and county staff and other attendees. Participating Advisory Group members developed the goal of supporting conservation and improvement of riparian and wetland resources, to meet State and local goals and policies within unincorporated areas of Benton County. Benton County staff compiled best available data to meet project goals approved by the Benton County Board of Commissioners. The following inventory objectives were developed by the Riparian and Wetlands Advisory Group, based on local, State, and Federal policy and goals:

- Prepare and adopt a Statewide Planning Goal 5 inventory for riparian corridors and protection program for ‘fish bearing streams, ‘fish bearing lakes’ in Benton County to meet local comprehensive plan goals.
- Prepare a Statewide Planning Goal 6 (water quality) related inventory for improving water quality to meet local comprehensive plan goals.
- Encourage land use, development and transportation projects and other private and public work to be designed to minimize incursions and other impacts to floodplains, wetlands, and riparian areas through: policy, outreach, education, and incentives.

Inventory work led to several findings regarding riparian and wetland resources in Benton County:

- Several perennial and intermittent streams have been documented as fish bearing streams, providing habitat for threatened/endangered and game fish species.

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- Stream channels delineated using LIDAR data (where data is currently available) are more accurate and LIDAR data provides enhanced understanding of a given property's drainage features.
- Compiled Oregon Wetlands Explorer maps and data are accurate in providing an improved understanding of potential significant wetland locations (based on rapid wetland assessments); however no formal delineations of boundaries were completed during the project period.
- Fish bearing streams and other water bodies have varying protection based on what zone the resources are located in;
- There are many perennial streams that are not considered fish bearing under State law, and large numbers of intermittent streams within Benton County that are not considered under Goal 5 safe harbor inventory, yet which are vital for maintaining safe harbor inventoried streams, and are located throughout the county;
- Based on reviewed research and recommended buffers for maintaining riparian and wetland functions, Benton County can work to improve the protection of riparian and wetland resources, including water quality through outreach education, helping landowners with incentives along with an update of land use requirements, that will not result in 'taking' of private property and will be focused on not affecting property values.

## **Conclusions & Next Steps**

Based on the reviewed scientific information documenting the connection between land use and water quality, riparian and wetland resources, Benton County recommends developing a policy that would:

- a) Apply a Goal 5 safe harbor riparian buffer to Goal 5 riparian resources, and
- b) Use existing voluntary programs to gain funding and support to improve water quality on non-fish bearing perennial and intermittent streams.
- c) Utilize compiled mapping information to better identify possible riparian and wetland resources on property within Benton County.

Through additional Riparian and Wetland Advisory Group meetings, and input through additional community outreach, proposed policy and incentives will be reviewed and updated to meet State and local goals during the project period. The goal is to prepare a hearings ready program for Planning Commission review by June 30<sup>th</sup>, 2011.