

Designing a System That Helps Agriculture While Protecting a Critical Drinking Water Source

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ABSTRACT

The Eugene Water & Electric Board and its partners are working to create a regional market place that promotes water-quality protection and agricultural opportunities in the McKenzie River watershed in Oregon. As oil prices continue to increase and uncertainties associated with the affects of peak oil create economic instability, local agriculture will be relied upon to provide food and materials to nearby communities. At the same time, uncertainties associated with climate change threaten the long-term reliability of the nations drinking water sources. This project will develop a GIS-based system that promotes a healthy regional agro-economy while protecting the source of drinking water for over 260,000 people. The McKenzie Agriculture & Water Management System (MAWMS) is an interactive website that creates a market-like environment to coordinate regional food demand with locally grown crops. MAWMS provides growers easy access to technical information, markets and financial assistance to enhance existing crop production or transition to other crops. It will allow growers to take advantage of favorable local market conditions, while simultaneously helping to enhance and maintain water quality, soil resources, and fish and wildlife habitat. By providing growers with technical and financial tools to better access local and regional markets, the proposed project aims to increase the economic viability of growers, regardless of farm size. This project will encourage sustainable agricultural practices and ultimately strengthen food supplies to local communities while protecting regional drinking water resources. The initial scope of this project will focus on the McKenzie Watershed for project components such as a crop transition model and access to ecosystem services markets (temperature, water and carbon markets); but will be regional in scope for others - such as agricultural commodity markets, irrigation design model, financial and technical assistance, and best management practices. The website will be a prototype for a basin-wide (Willamette Basin), and eventually statewide Oregon Sustainable Agricultural Information Portal, part of the Oregon Explorer project of the Oregon State University Libraries and the Institute for Natural Resources.

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