



# MEMORANDUM

EUGENE WATER & ELECTRIC BOARD

*Rely on us.*

TO: Commissioners Simpson, Brown, Helgeson, Manning and Mital  
FROM: Steve Newcomb, Environmental Management Department Manager and  
Karl Morgenstern, Drinking Water Source Protection Coordinator  
DATE: May 24, 2013  
SUBJECT: Berggren Demonstration Farm  
OBJECTIVE: Information Only

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## **Issue**

This memo addresses a request for information from Commissioner Mital to provide justification for EWEB's support of the Berggren Demonstration Farm.

## **Background**

The goal of EWEB's Drinking Water Source Protection Program is to measure the balance between watershed health and human activities in the McKenzie Watershed and implement actions that maintain this healthy balance for production of exceptional water quality for future generations. The program is designed to develop long-term solutions to current and future threats in a way that leverages EWEB's investments with outside funding and builds partner organizational capacity to carry on the work. The Berggren Demonstration Farm is an example of this approach, and is an important component of the larger Healthy Farms Clean Water Program to address threats from agricultural activities in the McKenzie Watershed.

EWEB conducted a detailed threat analysis of agricultural activities in the watershed. McKenzie agricultural activities occur mainly along the valley floor and account for approximately 5% of the land use above EWEB's intake at Hayden Bridge. The majority of farmland is used as pasture and for hay production (70%), with hazelnuts (11%), Christmas trees (7%), annual rotational crops (5%), and grass seed production (5%) being the other significant crops grown in the McKenzie. Based on typical pesticide use associated with these crops, approximately 6,700 lbs of pesticides (active ingredient) may be used on an annual basis. Hazelnut, nursery operations, blueberry, and grass seed production tend to have the highest pesticide use per acre. A recent study with the U.S Geological Survey (USGS) found that urban runoff and agriculture pose the highest threats to drinking water with regards to pesticide contamination. Agricultural pesticide runoff was identified because: 1) it was not well characterized in the study due to limited sampling opportunities (i.e., hard to find streams that drain only agricultural lands), 2) those small tributary streams draining agricultural lands that were sampled had moderately high concentrations of pesticides, and 3) agricultural lands tend to be located along the river.

The Berggren Demonstration Farm was purchased by the McKenzie River Trust (MRT) in 2010 with funds from both EWEB and the Bonneville Power Administration (BPA) to mitigate for

hydropower impacts on fish habitat. This acquisition also supports the initiatives of EWEB's Drinking Water Source Protection program to develop long-term solutions that help mitigate and slow development along the river and in the floodplain, and to reduce pesticide use associated with agriculture.

This 92-acre piece of property is owned by MRT and jointly managed by MRT and Cascade Pacific Resource Conservation and Development (RC&D). MRT and the McKenzie Watershed Council (MWC) are currently conducting restoration work in the approximately 50 acres of riparian habitat on the property. Cascade Pacific RC&D employs a farm coordinator and farm manager to manage the upper 30 acres of farmland, including applying for and administering grants, preparing the land for raising animals and crops, developing education programs for area students and coordinating workshops for area farmers.

### **Discussion**

Commissioner Mital requested information about how the purchase and ongoing financial support of the farm helps to advance EWEB's source protection goals and to what extent it prevents chemicals and other pollutants from entering the McKenzie River.

There are several relevant pieces of information that address these concerns.

- 1) Prior to the purchase of the farm by MRT, the previous owner engaged in hay production using conventional chemicals. While it is difficult to quantify the exact amount of chemicals that may have run off the land into the river, it is clear that the current uses decrease that potential. The farm will be run as an organic operation without chemical use.
- 2) Prior to the purchase of the farm by MRT, the previous owner had plans to subdivide the property into three buildable lots. This would have resulted in additional development adjacent to the river with associated septic systems and potential yard chemical use. While a small number of new structures will arguably not have a major impact on the overall water quality of the McKenzie River, each additional residence and septic system contributes to the cumulative effect of development, which can cause problems over time. If all potentially buildable lots are developed over the next few decades, this may result in between 700 and almost 1,000 new structures along the McKenzie.
- 3) The goals of the demonstration farm align very well with EWEB's Drinking Water Source Protection Program. These goals include:
  - a. *Protect water quality within the McKenzie River Watershed by restoring habitat that maintains and enhances biological diversity and floodplain hydrology*

One of the goals of EWEB's drinking water source protection program is to encourage land uses in the floodplain that are compatible with and protective of water quality. In the case of the demonstration farm, EWEB would like to provide an example of how farming can successfully co-exist with restoration and maintenance of critical riparian habitat. Both MRT and the MWC have worked together with area experts to develop a restoration and management plan for the riparian area of the property that will advance this goal and also serve as a model for managing other riparian areas in the watershed.

- b. *Promote the development of community food systems by demonstrating sustainable and economically viable farming practices*

EWEB works closely with partners to provide coordinated support to local farmers in the watershed as a way of both supporting the local food economy, and also keeping farmland as farmland within the watershed while reducing chemical use on farms. In general, farming is a preferred floodplain land use to development. Conversion of farmland to residential uses often involves subdividing large properties into smaller buildable lots, removal of riparian forest buffers and the addition of septic systems, impervious surfaces and residential chemical use.

- c. *Provide educational and outreach opportunities for farmers and students*

The farming population in the McKenzie Watershed and elsewhere is aging and farmland is at risk of being sold off and converted to other land uses that may be more detrimental to water quality. One of the objectives of the demonstration farm is to provide a venue for workshops aimed at local farmers, and especially beginning farmers, interested in a long-term career in agriculture. The staff at the demonstration farm are working together with a local group to develop a robust farm internship program modeled off a successful effort in southern Oregon.

In addition, the demonstration farm has coordinated with local schools to provide educational opportunities out at the farm where students can learn about where food comes and how it is grown, as well as why watershed protection and fish and wildlife habitat is so critical to a healthy, functioning ecosystem. Finally, University of Oregon students have done project work at the farm where they researched and designed a native pollinator garden for the farm. This project work is expected to continue.

- 4) EWEB originally invested \$240,000 in the farm over the first three years (or \$80,000 per year) to help get the farm up and running. This included hiring necessary staff, purchasing farm equipment, designing and developing sustainable farming operations, applying for grants (and using EWEB money to leverage grant funding) and establishing educational programs to be based at the farm. EWEB has recently committed an additional \$80,000 to the farm over the next two years (or \$40,000 per year). EWEB anticipates its funding commitment to continue to decrease over time as the farm becomes more established, builds partner relationships, generates income, and develops a long-term funding plan. The farm has had success in obtaining grant funding, the most recent success resulting in a \$200,000 grant from Meyer Memorial Trust to build a mobile meat processing unit, support the annual Local Food Connection Event, develop a farm internship program, among other things.
- 5) As previously mentioned, the demonstration farm is also viewed as part of EWEB's larger Healthy Farms Clean Water Program (<http://eweb.org/sourceprotection/farms>). The overall program goal is to protect critical drinking water resources by reducing chemical use on farms while increasing the economic viability of farming. The program seeks to engage growers by providing them with a menu of options ranging from free agricultural chemical disposal, to nutrient management consultation, to assistance with accessing local food markets. This program has attracted over \$300,000 in grant funding that spurred two additional projects where EWEB and other partner organizations have worked together with

both McKenzie hazelnut farmers and regional blueberry growers on addressing serious problems they are facing by exploring alternatives to traditional chemicals. The demonstration farm is a venue where new techniques can be evaluated and modeled, without farmers having to incur risk directly on their farms.

- 6) In 2012, the demonstration farm received a Specialty Crop grant from the Oregon Department of Agriculture to establish a demonstration truffle orchard at the farm. This project is an attempt to test out the viability of a new and potentially lucrative crop in Oregon. If successful, as local hazelnut growers gradually replace their blight-stricken hazelnut trees over time, they may consider inoculating their new blight resistant hazelnut varieties with these high value culinary truffles. This could potentially open up a whole new niche market for local growers. Furthermore, growing truffles would necessitate changes in chemical use, as truffle crops cannot be sprayed with pesticides. However, farmers would not experiment with truffle growing on their own, as it would be too risky. But the demonstration farm is serving as a testing ground for such new markets and farming techniques without incurring the same amount of personal financial risk.

In summary, the Berggren Demonstration Farm is a long-term investment in watershed protection in the McKenzie Watershed. While the purchase and current management of the property has prevented some potential chemical runoff into the river as well as the development of three additional residences close to the river, the main strength of the demonstration farm lies more with its future goals and the partnerships it grows. By demonstrating how farming and floodplain habitat can co-exist successfully and still remain protective of water quality, this can be a vehicle to encourage other farmers in the watershed to take a similar approach. In addition, the farm will be used to showcase a variety of ecologically-appropriate farming practices such as planting riparian buffers, livestock and pasture management to reduce erosion, stormwater runoff treatment, establishment of native pollinator habitat, accessing new local food markets, water and energy conservation, etc.

#### **TBL Assessment**

The Healthy Farms Clean Water Program and Berggren Demonstration Farm embrace and encourage sustainable agricultural practices that benefit the Eugene community thru reduced chemical use on farms, development of local food infrastructure, reduced floodplain development, education and research opportunities, and creating jobs while protecting Eugene's sole source of drinking water.

#### **Recommendation**

EWEB staff recommends continued funding support for the Berggren Demonstration Farm as approved by the Board on 5/7/13.

#### **Requested Board Action**

None at this time.