



Applying knowledge to improve water quality

# Pacific Northwest

## Regional Water Program

A Partnership of USDA NIFA  
& Land Grant Colleges and Universities

Spring 2009  
PNWWATER 158

### Livestock Producers:

## Environmental Protection Curriculum

The universities in the Pacific Northwest are part of a team that developed a complete environmental protection curriculum for livestock producers. The Livestock and Poultry Environmental Stewardship (LPES) project delivers a curriculum and supporting educational tools to U.S. livestock and poultry industry advisors, who in turn, will help producers acquire certification and/or achieve environmentally sustainable production systems. Producers will also benefit directly from the information and the assessment tools that the curriculum provides.

The educational materials developed for the LPES curriculum, piloted in the Northwest, include 26 lessons grouped into six modules;

- ◆ Introduction
- ◆ Animal Dietary Strategies
- ◆ Manure Storage and Treatment
- ◆ Land Application and Nutrient Management
- ◆ Outdoor Air Quality
- ◆ Related Issues



The lessons and tools are for all livestock species, but special attention was paid to dairy, beef feedlots, swine, and poultry which make up most of the Concentrated Animal Feeding Operations (CAFOs) in the U.S. There is a special section for CAFOs so their management can be tailored to national rules updated in 2003. This program and its page on <http://www.extension.org> will continue to provide producers the latest information on changes to EPA rules governing CAFOs.

There is a special section for small farm livestock raisers. Joe Harrison, Extension Nutrient Management specialist for Washington State University, wrote a bulletin within the curriculum called “Protecting the water on your small farm.” Other faculty from WSU, University of Idaho and Oregon State University wrote, reviewed, and piloted several sections of the curriculum.

This project was funded with a grant from the U.S. Environmental Protection Agency (EPA) and U.S. Department of Agriculture (USDA) through its Cooperative States Research, Extension, and Education Service. It was developed by a team of land-grant university specialists, USDA Natural Resources Conservation Service (NRCS) and Agricultural Research Service (ARS) staff with assistance from Midwest Plan Service (MWPS) and guidance from the EPA’s National Agriculture Compliance Assistance Center (Ag Center).

The curriculum also introduces a new, systematic process to manage all the facets of an environmental stewardship farm plan. The materials in this section are aimed at “advisors” like Extension agents and NRCS staff that would help a livestock operation set up their plan.

The Environmental Management System (EMS) process is aimed at helping farmers and ranchers integrate environmental decision making into the day-to-day management of their operation. Specifically, a producer will:



**Pacific Northwest Regional Water  
Quality Coordination Project  
Partners**

**Land Grant Universities**

**Alaska**

Cooperative Extension Service  
Contact Fred Sorensen:  
907-786-6311

<http://www.uaf.edu/ces/water/>

University Publications:

<http://www.alaska.edu/uaf/ces/publications/>

**Idaho**

University of Idaho  
Cooperative Extension System  
Contact Bob Mahler: 208-885-7025

<http://www.uidaho.edu/wq/wqhome.html>

University Publications:

<http://info.ag.uidaho.edu/Catalog/catalog.htm>

**Oregon**

Oregon State University  
Extension Service  
Contact Mike Gamroth: 541-737-3316

<http://extension.oregonstate.edu/>

University Publications:

<http://extension.oregonstate.edu/catalog/>

**Washington**

Washington State University  
WSU Extension  
Contact Bob Simmons:

360-427-9670 ext. 690

<http://wawater.wsu.edu/>

University Publications:

<http://pubs.wsu.edu/>

Northwest Indian College  
Contact Charlotte Clausing:  
360-392-4319

[cclausing@nwic.edu](mailto:cclausing@nwic.edu) or

<http://www.nwic.edu/>

**Water Resource Research Institutes**

Water and Environmental Research  
Center (Alaska)

<http://www.uaf.edu/water/>

Idaho Water Resources  
Research Institute

<http://www.boise.uidaho.edu/>

Institute for Water and  
Watersheds (Oregon)

<http://water.oregonstate.edu/>

State of Washington  
Water Research Center

<http://www.swwrc.wsu.edu/>

**Environmental Protection Agency**

EPA, Region 10

The Pacific Northwest

<http://www.epa.gov/r10earth/>

Office of Research and Development,  
Corvallis Laboratory

<http://www.epa.gov/wed/>

For more information contact  
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- ◆ Assess current performance and regulatory compliance
- ◆ Establish effective communication
- ◆ Set priorities for environmental improvement
- ◆ Develop action plans focused on measurable objectives
- ◆ Maintain comprehensive, well-organized records
- ◆ Identify and control potential sources of error
- ◆ Monitor progress toward objectives
- ◆ Regularly improve plans and re-assess priorities

The curriculum on-line at <http://www.extension.org> also includes features like frequently asked questions (FAQs) and an Ask the Expert question feature where a citizen can ask a specific question about environmental stewardship and the question is sent to one of the experts who developed the curriculum. The expert emails the answer directly to the questioner and then has the option to turn it into a FAQ for posting on the site.

The on-line source also includes a link to the Livestock and Poultry Environmental Learning Center website where there is news and events important to producers. The Learning Center also sponsors regular webcasts that provide continuing education credits for certified crop consultants, professional animal scientists, and professional engineers. A monthly newsletter and short research reports from studies done throughout the U.S. are posted on the site, too.

The curriculum will be used in a training sponsored by the Region 10 Extension Water Team for Extension agents, Soil and Water Conservation District staff, and others this fall.

The LPES curriculum is available in the following formats:

- ◆ Searchable CD – includes the lessons in PDF files, the PowerPoint presentations, and the assessment tools.
- ◆ Printed lessons including references, an index, and assessment tools suitable for a binder. Shrink wrapped and 3-hole punched with cover and section dividers.
- ◆ 2-CD set of PageMaker files including all graphics. Can be adapted to state regulations.
- ◆ Individual lessons. Can be purchased in bulk for classroom and educational uses.
- ◆ Web-accessible individual lessons in PDF and Word format at <http://www.extension.org>.

The LPES website is <http://www.lpes.org/>.

The eXtension site is [http://www.extension.org/pages/Livestock\\_and\\_Poultry\\_Environmental\\_Stewardship\\_Curriculum](http://www.extension.org/pages/Livestock_and_Poultry_Environmental_Stewardship_Curriculum).

And the Learning Center is <http://www.extension.org/animal+manure+management>.

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**National Water Quality Program Areas**

The four land grant universities in the Pacific Northwest have aligned our water resource Extension and research efforts with eight themes of the USDA's National Institute of Food and Agriculture.

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| 1. Animal Waste Management           | 5. Pollution Assessment and Prevention |
| 2. Drinking Water and Human Health   | 6. Watershed Management                |
| 3. Environmental Restoration         | 7. Water Conservation and Management   |
| 4. Nutrient and Pesticide Management | 8. Water Policy and Economics          |

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