

Non-Point Pollution

Nonpoint source (NPS) pollution comes from many diffuse sources and does not result from a discharge at a specific location. As it moves across the landscape, runoff or percolation from rain or melting snow will pickup and carry off natural and manmade pollutants. This nonpoint pollution will be deposited into the receiving streams, rivers, lakes, and other bodies of water. The collective contribution of nonpoint pollution from an entire region or location can be substantial to the receiving waters.

Examples of nonpoint source pollution include (U.S. EPA, 2010):

- Excess fertilizers, herbicides, and insecticides from agricultural lands and residential areas;
- Oil, grease, and toxic chemicals from urban runoff and energy production;
- Sediment from improperly managed construction sites, crop and forest lands, and eroding stream banks;
- Salt from irrigation practices and acid drainage from abandoned mines;
- Bacteria and nutrients from livestock, pet wastes, and faulty septic systems;
- Atmospheric deposition and hydromodification (dams, etc.).

Sediment and nutrients are the most common NPS pollutants in Oklahoma. The activities resulting in significant NPS pollution include agricultural land, animal feeding operations, construction sites, road building and maintenance, septic tanks, silviculture, exploration for oil and gas, mining activities (gravel, coal, etc.), stream bank erosion, and urban lawn and garden maintenance.

Large and medium sized animal feeding operations/confined animal feeding operations (AFO/CAFOs) are required to have NPDES permits in Oklahoma. Large and medium operations are defined by U.S. EPA and/or the states that regulate them. Poultry operations must be registered with the State Dept of Agriculture, but are not required to have a NPDES permit. (That is, if I understand the regulations correctly). NPDES stands for National Pollution Discharge Elimination System. It is the way in which point sources discharges are regulated by the U.S. EPA and the states.

The land application of poultry waste in watersheds is regulated by the **Oklahoma Registered Poultry Feeding Operations Act**. The regulations are relevant to poultry farmers producing more than 10 tons of poultry waste per year and confining birds for 45 days or more in any 12-month period. Training, certification, and continuing education is also require for individuals applying more than 10 tons of poultry waster per year to land (OSU, 2012).

The Oklahoma Conservation Commission (OCC) is the primary agency responsible for the assessment and control of NPS pollution, but other agencies also contribute. Included are the Oklahoma Water Resource Board, Oklahoma Department of Environmental Quality, Oklahoma Corporation Commission, Oklahoma Department of Wildlife Conservation, Oklahoma Department of Agriculture, Oklahoma Scenic Rivers Commission, United States Geological Survey, and the Army Corps of Engineers. These agencies makeup the NPS Working Group that prioritizes the need for restoration and directs funds and technical assistance to projects. The OCC has developed education programs that assist landowners with reducing NPS pollution. The agency also assists with the implementation of restoration projects designed to reduce NPS pollution, including pre- and post-assessment and some cost-sharing.

These efforts have paid off recently with Oklahoma recognized by U.S. EPA as one of the top five states in reducing contamination in streams and rivers.

Effects of Recession on Pollution Monitoring

ODEQ has lost personnel due to attrition of employees without replacement after retirement or leaving for other jobs. The existing personnel still monitor for pollution, work with businesses/industries not in compliance, etc., but not in as timely a manner as previously done. (Personal communication, Dr. Nancy Cain, formerly of OWRB and ODEQ). Other regulatory agencies are probably having similar experiences with their employees.

U.S. EPA. 2010. www.epa.gov/owow/NPS/ga.html. Accessed August 23, 2012.

Oklahoma State University (OSU). 2012. <http://oces.okstate.edu/poultrywaste/oklahoma-regulations>. Accessed August 23, 2012.

Links:

Link to OK DEQ water quality documents (streams, lakes, etc):
http://www.deq.state.ok.us/wqdnew/305b_303d/index.html

Link to OK DEQ Public Water Supply Report 2011:
<http://www.deq.state.ok.us/wqdnew/pws/CY2011%20Annual%20Compliance%20Report.pdf>

Link to U.S. EPA for local drinking water information. Sources of drinking water, size, violations:
<http://water.epa.gov/drink/local/ok.cfm>

Link to OSU's Water Quality Webpage:
<http://www.waterquality.okstate.edu/index.asp>

Link to Water Quality Reports from OWRB:
<http://www.owrb.ok.gov/quality/index.php>

Link to Oklahoma's Environmental Agencies from the Sierra Club:
http://oklahoma.sierraclub.org/chapter/pdf_files/AgencyGuide03.PDF