EPA Region 8 Agriculture Strategy
FY 2007-2008

Contents

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Purpose

The Region 8 Agricultural Strategy will summarize our priority activities related to agriculture and describe our approach for working with the agricultural community to maintain and improve environmental quality.

Vision

EPA Region 8 will work in partnership with the agricultural community, other federal agencies, states, tribes, and others to help achieve continual environmental improvement and promote sustainable production of safe, abundant supplies of food and fiber.

Mission

The Region 8 Agricultural Advisory Team (AAT) (Appendix 1) will coordinate with EPA programs involved with agriculture and collaborate with other federal agencies, states, tribes, agricultural interests, the regulated community, and others to address environmental issues related to agriculture and help achieve measurable environmental improvements. EPA Region 8 programs will communicate with the agricultural community to increase awareness of environmental impacts related to agriculture, explain the purpose and requirements of applicable environmental regulations, promote environmental results, and understand the agricultural perspective on environmental issues.

Background

EPA Region 8 comprises the states of Colorado, Montana, North Dakota, South Dakota, Utah, and Wyoming, including Indian country located within these states. This area encompasses the heart of the American West, including much of the Rocky Mountains, Great Plains, and the Colorado Plateau. Over two thirds of the roughly 10 million people in the Region live along Colorado's Front Range or Utah's Wasatch Front. These areas, along with many other cities and towns continue to experience rapid population growth.

The Region also includes some of the most rural counties in the nation. These areas are characterized by vast open spaces, mountains, plains, canyons, and deserts, along with small concentrated population centers. They also include some of the nation's most recognizable landscapes, including Yellowstone, Glacier, Rocky Mountain, Badlands, Zion, and other National Parks, and millions of acres of forests, rangeland, and farmland. Public lands, including those managed by the U.S. Forest Service, Bureau of Land Management, and the National Park Service, comprise over one third of the land area in Region 8. The 27 tribal nations are also prominent. Private land holdings constitute about half of the land area and are mainly located on

the high plains east of the Continental Divide and in river valleys west of the Divide.

EPA Region 8 is also arid, placing a premium on the availability and quality of water resources to meet competing demands from agricultural, municipal, and recreational uses as well as ecological needs. Many rivers originate in the Rocky Mountain states, including the Missouri, Colorado, Rio Grande, Clark's Fork of the Columbia, Snake, Arkansas, and Platte Rivers, which are vital sources of water for people, plants and animals.

Our Region encompasses an abundance of natural resources that support our states, tribes, and communities and are an important part of our regional identity. Our economies, including agriculture, energy development, mining, recreation, and tourism, thrive on these resources.

Agricultural Production in Region 8

Agriculture is one of EPA Region 8's priorities, along with energy, homeland security, revitalization, and direct implementation, (www.epa.gov/region8/about/priorities.html), which are briefly addressed in Appendix 2, as well as building state and tribal capacity, Regional workplace management, and mercury. Agriculture is vital for EPA Region 8, with over $16.1 billion in annual commodity cash receipts. Our Region has almost one fourth of the total farm and ranch area in the nation and includes over 240 million acres of public and private grazing land. There are almost 145,000 farms and ranches in Region 8, with an average size of about 1,500 acres. Other selected agricultural statistics, obtained from National Agriculture Statistics Service reports (www.usda.gov/nass/sso-rpts.htm), are provided in Appendix 3.

Beef cattle represent the most important commodity in the Region with about 12.7 million cattle and calves and annual sales value of $7.14 billion. Over 30 percent of the nation's sheep and lambs are produced in Region 8. The Region also has a growing number of dairies.

Crops with the largest acreage and production in Region 8 are wheat, hay, corn, and soybeans. Region 8 has almost half of the national dry bean acreage, over half of the nation's barley production, over 70 percent of the national sunflower acreage and production, and over 90 percent of the canola in the nation. Region 8 also produces a variety of quality minor crops, including Rocky Ford Cantaloupe, Flathead Cherries, Olathe Sweet Corn, and Palisade Peaches.

In addition to food and fiber production, the agricultural community provides a number of amenities including open space, wildlife habitat, biodiversity, and recreational opportunities. There is also increasing interest in energy production from agricultural products, residues, or land. However, agricultural operations have the potential to adversely affect the quality of the water, air, soil, and land resources, as well as human health.

EPA Responsibilities

EPA has been working to protect human health and the environment for more than 35 years. EPA is responsible for implementing a variety of environmental laws and regulations, a number of which apply to agriculture (www.epa.gov/agriculture/llaw.html). A brief summary of environmental laws that affect agriculture is provided in Appendix 4. Where necessary, EPA develops new policy or regulations to implement new or revised laws or to address emerging environmental issues.

EPA shares the responsibility for protection of human health and the environment with state and tribal governments by delegating or approving certain environmental programs as authorized by law if states or tribes agree to accept the programs. State and tribal agencies such as the departments of environmental quality and the departments of agriculture accomplish most of the work for delegated or approved programs. EPA provides funding assistance and program oversight under performance partnership agreements, performance partnership grants, or cooperative agreements.

EPA supports voluntary efforts to protect environmental quality by providing technical assistance and funding innovative demonstration and applied research projects. Project results verify the feasibility of production practices that promote sustainability and encourage environmental stewardship. Potential funding sources available for projects are described in Appendix 5. EPA will also encourage improved environmental performance through recognition and awards.

EPA Region 8 will continue to work closely with agriculture sector contacts from other Regions and Headquarters Offices, and support the Counselor to the Administrator for Agricultural Policy at EPA Headquarters and the national Agricultural Compliance Assistance Center in Kansas City, Kansas (www.epa.gov/agriculture). Region 8 representatives will continue to participate in national EPA Agriculture Sector Contacts meetings. This strategy is intended to complement the EPA National Strategy for Agriculture.

Priority Activities

The following five priority areas have been identified by the AAT and Regional management as major areas of emphasis. Activities, objectives, tasks are described for each priority, along with responsibilities and measures for the activities.

1. Maintain and Enhance Water Quality

Activity 1-1: Implement Concentrated Animal Feeding Operations (CAFO) regulations

Strategic Plan Objective: 2.2.1 Improve Water Quality on a Watershed Basis

Task: EPA Region 8 will concentrate on the implementation of the CAFO regulation and effluent limitation guidelines (www.epa.gov/OW-OWM.html/pdfs/cafonoda.pdf). EPA will

review and comment on proposed strategies and regulations from all Region 8 states to ensure the states adopt regulations that are consistent with appropriate best management practices (BMPs) and federal requirements and will track state progress in implementation of the CAFO regulations. Region 8 will work with EPA Headquarters and other regions, tribes, and local entities to implement the CAFO regulation in Indian country, develop and approve a general permit for CAFOs in Indian country, and develop a national strategy for CAFO enforcement. Region 8 is conducting preliminary surveys of CAFOs in Indian country. EPA will continue to work with producer organizations, conservation districts, universities and state and federal agencies, as appropriate, to make sure that producers are aware of the CAFO requirements. EPA Region 8 will continue to conduct CAFO inspections in cooperation with the states.

Responsibility: Water Permits Program, Tribal Assistance Program, Technical Enforcement Program.

Measures: Number of states with approved CAFO regulations. Number of states that have issued statewide general permits or otherwise substantially implemented the permit program, consistent with these new requirements. Amount of funding provided to states to support CAFO implementation. General CAFO permit for Indian country. Strategy for CAFO enforcement. Number of CAFO inspections. Number of individuals attending outreach activities conducted on animal feeding operations.

Activity 1-2: Provide medium-sized animal feeding operation (AFO) technical assistance.

Strategic Plan Objective: 2.2.1 Improve Water Quality on a Watershed Basis

Task: EPA Region 8 will develop strategies and support efforts to identify environmental conditions that would warrant an AFO to be permitted as a CAFO. EPA Region 8 will continue to encourage producer education and implementation of effective BMPs throughout Region 8 to prevent pollution and to sustain AFOs as appropriately managed livestock production facilities. EPA will also work with states and tribes, as well as with local entities, conservation districts, and agricultural organizations, to help small and medium sized animal feeding operations to identify and correct the conditions that might otherwise qualify the operation as a CAFO so a permit would not be required. Small and medium animal feeding operations must obtain a permit if they have certain conditions, such as animals with direct access to surface water or discharge to surface water through a manmade conveyance.

Responsibility: Non-point Source Program, Water Permits Program, Agricultural Advisor.

Measures: Number of AFOs that have corrected environmental conditions that would have required them to be regulated as CAFOs.

Activity 1-3: Conduct watershed assessment, planning, and monitoring.

Strategic Plan Objective: 2.2.1 Improve Water Quality on a Watershed Basis

Task: EPA Region 8 will encourage the use of non-point source program resources to complement Farm Bill conservation programs by focusing on watershed assessment, planning, and monitoring in watersheds listed for sediment, nutrients, including nitrate and phosphorous, pathogens, salts, or thermal loading (www.epa.gov/OWOW/win/index.html). Region 8 will work with states, tribes, and local stakeholders to identify, prioritize, and target restoration programs towards waters and watersheds impaired by agricultural sources of pollution. EPA will also encourage and support use of non-point source funds for monitoring programs to document water quality and for implementation of suitable best management practices to attain water quality standards established for particular designated uses. EPA will support the development of outreach and educational materials by state agencies, universities, or agricultural organizations for nutrient management planning, including effective ways to decrease phosphorous and nitrogen runoff from fields, reduce excessive nitrogen loading in fields and potential leaching to groundwater, and properly managing animal waste to protect environmental resources.

Responsibility: Non-point Source Program

***Measures*:** Identify a minimum of one watershed in each state impaired by agriculture that will achieve the watershed improvement goal of Water Quality Standards in at least 80% of assessed water segments. Number of partially or fully restored water bodies that are primarily impaired by agriculture related non point sources. Nutrient Criteria Development Plans and Nutrient Criteria Plans funded or implemented. Number of projects on reservations to implement BMPs for reducing high-priority sources of nutrients and sediment. Number of additional TMDLs for surface waters impacted by agricultural pollutants.

2. Encourage Agricultural Pollution Prevention

Activity 2-1: Promote use of reduced risk pesticides and pest management techniques.

Strategic Plan Objective: 4.1.1 Reduce Exposure to Toxic Pesticides

Task: EPA Region 8 will continue to participate in the Strategic Agriculture Initiative (SAI) to provide a reasonable transition from the use of high risk pesticides, such as organophosphate and carbamate insecticides and carcinogenic products, to reduced risk pesticides and pest management practices (www.epa.gov/pesticides/grants/aginitiative.htm). We will fund innovative research and demonstration projects by universities or agricultural groups to reduce potential adverse impacts on human health and the environment that may result from pesticide use and to encourage sustainable agricultural production systems. Project results will be provided to EPA Headquarters and to interested parties in the agricultural community. We will also work with the Pesticide Environmental Stewardship Program (PESP) (www.epa.gov/oppbppd1/PESP/about.htm) to support integrated pest management (IPM) (www.epa.gov/pesticides/factsheets/ipm.htm) and sustainable production practices by soliciting

project proposals and selecting suitable projects for national funding and by participating as Agency contacts for PESP partners, as appropriate.

Responsibility: Pesticides Program

Measures: Amount spent to fund innovative research and demonstration projects to reduce potential adverse impacts on human health and the natural environment.
Number of projects funded to promote the transition to reduced risk pesticides or pest management practices. Number of acres in transition to reduced risk pesticides.
Amount of high risk pesticide use eliminated on funded projects. Number of outreach activities conducted related to the SAI.

Activity 2-2: Cooperate with national IPM centers and participate in the development of pest management strategic plans.

Strategic Plan Objective: 4.1.1 Reduce Exposure to Toxic Pesticides

Task: EPA will work in partnership with the U.S. Department of Agriculture Regional Integrated Pest Management Centers. We will become involved with the development of Pest Management Strategic Plans for major crops grown in Region 8, in coordination with university experts and agricultural groups.

Responsibility: Pesticides Program, Agricultural Advisor.

Measures: Input on Pest Management Strategic Plans. Number of Pest Management Strategic Plans developed. Participation in project selection process.

Activity 2-3: Encourage voluntary development and implementation of Environmental Management Systems (EMSs) for agricultural operations emphasizing pollution prevention and commitment to compliance that fit with the objectives of individual operations.

Strategic Plan Objective: 5.2.2 Pollution Prevention and Promotion of Environmental Stewardship by Industry.

Task: EPA Region 8 will explore opportunities to encourage development EMSs for livestock and crop production and within the agribusiness sector in cooperation with the Cooperative Extension System (www.uwex.edu/AgEMS/livestock/), state agencies, and EPA Headquarters (www.epa.gov/ems/index.htm), as well as agricultural organizations (www.iasoybeans.com/membership/policyenvironat.html). EPA can share technical expertise to promote pollution prevention, assist with the development of EMSs, and conduct EMS and pollution prevention audits to help agricultural operations achieve environmental objectives and improve environmental performance. EPA will also encourage recognition of outstanding environmental performance through the Performance Track program.

Responsibility: Agricultural Advisor, State Partnerships and Sustainable Practices Program, Pollution Prevention Program.

Measures: Number of EMSs developed, implemented, and certified for agricultural operations. Number of EMS related meetings attended. Number of agricultural sector facilities in Performance Track.

Activity 2-4: Support the EMS permit pilot project.

Strategic Plan Objective: 5.2.4 Environmental Policy Innovation

Task: EPA has provided funding to support the EMS permit pilot project at the Colorado Department of Public Health and Environment (CDPHE). The pilot project will develop and implement environmental permits based on EMSs, including permits required for CAFOs. CDPHE intends to develop EMS permits for one operation each in the cattle feeding, swine production, and dairy industries.

Responsibility: State Partnerships and Sustainable Practices Program

Measures: Number of EMS permits developed for CAFOs.

3. Protect Health of Agricultural Workers

Activity 3-1: Provide technical assistance and guidance to Region 8 states/tribes on EPA's Worker Protection Standard (WPS). Continue to enforce WPS provisions.

Strategic Plan Objectives: 5.1.1Compliance Assistance, 5.1.3 Monitoring and Enforcement, 4.1.1. Reduce Exposure to Toxic Pesticides

Task: EPA Region 8 has the responsibility for enforcing the WPS (www.epa.gov/oppfead1/safety/workers/principl.htm) in Wyoming and in Colorado until pesticide enforcement is fully delegated. Region 8 will provide technical assistance to the Colorado Department of Agriculture to ensure a seamless transition of the Colorado Private Pesticide Applicator Program (CPPA). Implementation of the CPPA includes implementation of all worker safety aspects of the pesticide applicator program, including the WPS.

We intend to provide focused compliance monitoring and timely enforcement. We will continue to conduct targeted inspections to determine compliance. In addition to taking appropriate enforcement action, if necessary, Region 8 will attempt to provide positive feedback to growers that are in compliance or exceed the WPS regulatory requirements. EPA Region 8 will continue to review the WPS programs in states where the responsibility for pesticide enforcement has been delegated recognizing differences in the states because of agricultural worker populations and enforcement priorities. We will continue to support appropriate compliance assistance

efforts by state programs with delegated authority for WPS compliance consistent with state priorities and available resources.

Responsibility: Technical Enforcement Program, Pesticides Program, Environmental Justice Program, Agricultural Advisor

Measures: Number of WPS inspections conducted. Number of enforcement actions taken**.** For all states and tribes in the Region, the total number of pesticide incidents reported and complaints investigated annually to the state/tribal public health agencies (or the appropriate entity having jurisdiction over pesticide incident reporting) that involved occupational pesticide exposure or illness. Percent of incidents reported or investigations conducted that result in an enforcement action.

Activity 3-2: Ensure safe drinking water supplies for migrant workers

Strategic Plan Objective: 4.2.2 Restore Community Health

Task: Region 8 will continue to work in rural areas, with the cooperation of producers, agricultural groups, and state and local agencies to evaluate the quality of drinking water supplies. Testing will be provided at no cost to growers. We intend to examine best management practices and feasible treatment options to improve drinking water quality to meet health based standards.

Responsibility: Environmental Justice Program, Laboratory

Measures: Number of drinking water samples analyzed. Percent of drinking water samples that exceed health based standards. Educational material developed or distributed.

Activity 3-3: Protect farm worker children from harmful levels of pesticide exposure and pollutants.

Strategic Plan Objective: 4.2.2 Restore Community Health

Task: In coordination with the Children's Health Initiative (yosemite.epa.gov/ochp/ochpweb.nsf/content/homepage.htm), state and local agencies, agricultural interests, and migrant worker advocates, Region 8 will explore ways to reduce or prevent exposure of farm workers' children to pesticide residues or contaminated drinking water.

Responsibility: Environmental Justice Program, Pesticides Program, State Assistance and Sustainable Practices Program

Measures: Education and outreach materials developed and distributed. Estimated reduction in exposure to pesticides residues or contaminated drinking water among farm workers' children.

4. Improve Outdoor Air Quality

Activity 4-1: Monitor and evaluate emissions from animal feeding operations.

Strategic Plan Objective: 1.1 Healthier Outdoor Air.

Task: Region 8 will support the Utah AFO Air Quality Strategy and National Air Emissions Monitoring Study (www.epa.gov/agriculture/anafoidx.html#afoair) for selected AFOs. The Region will complete its review of the State's emission testing and quality assurance plan, resolve any identified issues, and approve the final plan. The Region will also provide ongoing technical support for the State as it implements the Air Quality Strategy. Region 8 will support Office of Air Quality Planning and Standards, on an as needed basis, in the implementation of the National Air Emissions Monitoring Study and will stay updated and informed on the progress of the study to serve as a source of information to interested parties. EPA will communicate information about air emission estimating techniques derived from the National Air Emissions Study, as appropriate.

Responsibility: Air and Radiation Program, Legal Enforcement Program, Agricultural Advisor

Measures: Final quality assurance plan for Utah AFO Air Quality Strategy. Percent of responses to OAQPS requests for support completed. Amount of information distributed.

Activity 4-2: Encourage retrofit or replacement of diesel engines for farm equipment and irrigation pumps and support production and use of clean diesel.

Strategic Plan Objective: 1.1.2 Reduced Risk from Toxic Air Pollutants.

Task: Participate in the development and implementation of a National Clean Diesel Campaign (www.epa.gov/cleandiesel/) and the Rocky Mountain Clean Diesel Collaborative outreach plan for the agricultural sector. Distribute outreach information developed by EPA Headquarters. Distribute available information about diesel engine retrofits and replacement (www.epa.gov/otaq/retrofit/index.htm). Arrange educational workshops with appropriate agricultural stakeholders in cooperation with EPA Headquarters. Provide information about available funding opportunities for projects that demonstrate the technological and economic feasibility and cost effectiveness of diesel emission mitigation strategies in the agriculture sector. Explore how to effectively promote clean diesel with state agencies and agricultural interests.
Responsibility: Air Program, Agricultural Advisor

Measures: Amount of outreach material distributed. Number of presentations or workshops provided. Number of demonstration projects in Region 8 funded and implemented.

Activity 4-3: Assess agricultural contribution to nitrogen deposition in Rocky Mountain National Park.

Strategic Plan Objectives: 1.1 Healthier Outdoor Air, 1.6.2 Conduct Air Pollution Research

Task: Participate in Rocky Mountain National Park Initiative (www.cdphe.state.co.us/ap/rmnp.html) along with experts from the CDPHE Air Pollution Control Division, the Air Resources Division of the National Park Service, and Colorado State University to examine potential sources of nitrogen emissions affecting the Park and to evaluate options for addressing wet and dry nitrogen deposition at high and intermediate elevations, resulting in adverse impacts to the Park's air quality related values. Cooperate on technical assessments and studies, field work, and other initiatives related to the development of air quality management policies and programs to address harmful impacts to air quality and other natural resources occurring in Rocky Mountain National Park. Share and refine information on emissions, modeling, and monitoring that are relevant to the air quality issues affecting the Park. Review and evaluate relevant scientific literature, professional presentations, and other information to determine the extent of contributing emissions from various sources and make appropriate recommendations.

Responsibility: Air Program, Agricultural Advisor

Measures: Meetings of the Colorado Air Quality Control Commission and Rocky Mountain National Park Agriculture Team. Number of documents or studies reviewed. Proposals for further research developed. Best management practices identified or evaluated. Formal policies or recommendations adopted.

5. Build and Maintain Productive Partnerships

Activity 5-1: Participate in meetings with leaders of state and tribal agricultural and environmental agencies.

Objective: State and Tribal Partnerships

Task: EPA Region 8 will continue to conduct and participate in joint meetings and conference calls with the leaders of the state agricultural and environmental agencies and to meet regularly with tribal leaders. Members of the EPA senior leadership will also visit each state annually to hold planning meetings with the departments of agriculture and the departments of environmental quality. EPA Region 8 Program managers will continue to meet periodically with representatives from relevant state programs, such as pesticide program managers, water program managers, and non-point source program managers, and tribal environmental directors. EPA will continue to participate in regional and national events sponsored by the Association of State Departments of Agriculture (www2.nasda.org/NASDA) and the Environmental Council of States (www.sso.org/ecos).

Responsibility: Senior Leadership Team, Agricultural Advisor, State Partnerships and

Sustainable Practices Program, Pesticides Program, Water Program, Non-point Source Program.

Measures: Number of meetings attended or conducted related to agriculture.

Activity 5-2: Coordinate with the U.S. Department of Agriculture (USDA), Natural Resources Conservation Service (NRCS) and attend NRCS State Technical Committee and Local Work Group meetings.

Objective: Partnership with Federal Agencies

Task: EPA Region 8 intends to continue building our partnership with NRCS (www.nrcs.usda.gov) by participating in State Technical Committee meetings and on selected Local Work Groups or watershed groups, as appropriate. We will explore areas of common interests and priorities and examine opportunities for efficient use of available funding and technical assistance to address natural resource concerns. EPA Region 8 leaders will meet with NRCS State Conservationists as opportunities allow. We will also review the potential benefits and feasibility of participating in the national pilot program to exchange staff liaison positions with NRCS, as circumstances allow.

Responsibility: Agricultural Advisor, Non-point Source Program, Pesticides Program

Measures: Number of State Technical Committee and Local Work Group meetings attended. Number of meetings with NRCS State Conservationists. Memorandum of Agreement for liaison positions from EPA to NRCS or from NRCS to EPA.

Activity 5-3: Coordinate with the U.S. Department of Interior (USDI), Fish and Wildlife Service (FWS)

Objective: Partnership with Federal Agencies

Task: EPA Region 8 intends to continue working with FWS (www.fws.gov/endangered/) to fulfill our responsibilities under the Endangered Species Act (ESA). We will consult with FWS, as required, on any agricultural projects funded by the Region that we determine may affect threatened or endangered species. EPA will work with FWS and other state and federal agencies to identify areas where threatened or endangered species may be adversely affected by pesticide applications or pollutants from agricultural sources, and to develop and distribute information, such as how to access available County bulletins, to prevent harm to threatened or endangered species that may result from agricultural activities. Region 8 will support scientific research or demonstration projects, if feasible, to determine effects or mitigate impacts of pesticides or agricultural pollutants on threatened or endangered species or important habitat.

Responsibility: Agricultural Advisor, Non-point Source Program, Pesticides Program

Measures: Development of program specific ESA policies. Number of biological assessments

evaluated and consultations completed on Regional projects. Number of areas identified where pesticides or agricultural pollution might contribute to the decline of threatened or endangered species populations or critical habitat. Regional information developed and distributed about threatened or endangered species. Technical guidance, education and training provided to states, tribes or the public. Number of meetings with FWS officials.

Activity 5-4: Establish productive working relationships with the Farm Bureau (www.fb.org) and other organizations representing agricultural producers

Objective: Partnerships with Agricultural Interests

Task: EPA Region 8 has met with officials from the Colorado Farm Bureau to explain our approach for enforcement of theWPS, answer questions regarding our enforcement response policy, and form the basis for a productive partnership. We intend to hold future meetings with Colorado Farm Bureau representatives, including producers to discuss relevant agricultural issues. Regional representatives will continue to participate in the annual Colorado Farm Bureau meetings. EPA Region 8 has supported and encouraged programs of the Utah Farm Bureau to educate agricultural producers and to encourage implementation of BMPs for appropriate management of livestock production and livestock wastes. Meetings with Farm Bureau representatives may be expanded to other states in the Region in coordination with state agricultural of environmental agencies.

Responsibility: Agricultural Advisor, Senior Leadership Team

Measures: Number of meetings attended with Colorado Farm Bureau or Farm Bureaus for other states. Number of articles written for newsletters.

Activity 5-5: Establish and maintain productive working relationship with State Associations of Conservation Districts

Objective: Partnerships with Conservation Districts

Task: EPA Region 8 has worked with the State Associations of Conservation Districts to conduct outreach to animal feeding operations and has supported and encouraged programs of the South Dakota, Utah, and Wyoming Associations of Conservation Districts to educate agricultural producers and to encourage implementation of BMPs for appropriate management of livestock production and livestock wastes. We have participated in the annual meeting of the State Associations of Conservation Districts in Colorado (CACD), South Dakota, Utah and Wyoming, as well as the Northern Plains and the Southwestern Regional meetings of the National Association of Conservation Districts (NACD) (www.nacdnet.org). EPA Region 8 has also participated in watershed partnership meetings in eastern Colorado, sponsored by the CACD. We intend to maintain and expand our valuable relationship with state Associations of Conservation Districts, the NACD, and individual districts as appropriate.

Responsibility: Agricultural Advisor, Non-point Source Program, Water Program

Measures: Number of meetings attended with the State Association of Conservation Districts or the Northern Plains and the Southwestern Regions of the NACD. Number of watershed meetings attended. Number of new partnerships with agricultural interests.

Activity 5-6: Continue the productive working relationship with the state land grant university cooperative extension service.

Objective: Partnership with universities.

Task: Work with the regional team of water program coordinators from land grant universities in each Region 8 state, funded by the U.S. Department of Agriculture Cooperative State Research, Education and Extension Service, (www.region8water.org) to implement education based water programs in agriculturally managed watersheds. EPA Region 8 will continue to collaborate with this program to implement water quality education programs targeted at agricultural producers. A Region 8 representative will serve as an advisory committee member for the Northern Plains and Mountains Regional Water Program.

Work with pesticide safety education specialists in the Region 8 states to support training of pesticide applicators, which is partially funded by EPA. Region 8 will coordinate with land grant universities and state departments of agriculture to promote the safe and proper use of agricultural pesticides by commercial and private applicators and pesticide handlers.

Responsibility: Agricultural Advisor, Non-point Source Program, Pesticides Program

Measures: Number of collaborative educational programs presented. Number of agricultural producers contacted. Number of agricultural research, education, or extension projects funded. Number of pesticide applicator training materials and manuals developed.

Appendix 1: EPA Region 8 Agricultural Advisory Team

Name	Program	Phone
John Larson, Chair	Regional Administrator's Office	303-312-6030
Jeanne Bellile	Environmental Justice	303-312-6556
Judy Bloom	Pollution Prevention, Pesticides, and Toxics	303-312-6395
Brad Crowder	Ecosystems Protection	303-312-6396
Jaslyn Dobrahner	Pollution Prevention, Pesticides, and Toxics	303-312-6252
Laurel Dygowski	Air and Radiation	303-312-6144
Jack Hidinger	State Partnerships and Sustainable Practices	303-312-6387
Linda Himmelbauer	Pollution Prevention, Pesticides, and Toxics	303-312-6020
Marcella Hutchinson	Ecosystems Protection	303-312-6753
Ted Lanzano	Planning, Budget, and Management	303-312-6596
Douglas Marshall	Tribal Assistance	303-312-6291
Jennifer Meints	Technical Enforcement	303-312-6334
Richard Mylott	Communications	303-312-6654
Tim Osag	Technical Enforcement	303-312-6582
Peg Perreault	Pollution Prevention, Pesticides, and Toxics	303-312-6286
David Rise	Montana Office	406-457-5012
Patti Tyler	Regional Administrator's Office	303-312-6081
Suzanne Wuerthele	Pollution Prevention, Pesticides, and Toxics	303-312-6039
Qian Zhang	Water	303-312-6267

Appendix 2. Relationship to other Region 8 Priorities

Homeland Security

Counter Terrorism Because of the rural character of EPA Region 8, the potential for bioterrorism or agro-terrorism activities intended to disrupt the nation's food supply is a great concern. Region 8 will work with government agencies and agricultural businesses, as appropriate, to promote implementation of adequate security measures at agrichemical dealers, food processors, and crop storage facilities. Region 8 will distribute available information as appropriate. We will also work with state, tribal, and federal governments, agricultural organizations, and producer groups to encourage reporting of unusual livestock disease outbreaks or crop conditions to proper authorities. EPA's pesticide and enforcement programs help protect against illegal importation of pesticide products and contribute to national security efforts through the approval process for imports.

Regional Incident Coordination Team Members of the Agricultural Advisory Team are involved with the Regional Incident Coordination Team (RICT). The RICT will support senior management of Region 8, to coordinate EPA response actions and communication during extraordinary emergency situations with national or international significance or significant incidents within Region 8. Region 8 has established a RICT to address potential outbreak or avian or pandemic flu with a focus of continuing operations of key infrastructure for drinking water treatment and providing support for necessary disposal and decontamination activities. EPA will provide appropriate support to other federal agencies if an act of terrorism affects crop or livestock production or food processing industries. The Region 8 Response Support Corps (RSC) consists of Region 8 employees who have the knowledge, experience and training, to provide assistance during EPA field operations and support to the Regional Response Center.

Energy

Wind Power There is an interest in wind power in many rural communities. Wind power facilities have been installed at several locations within Region 8, including tribal lands. Individuals and groups are conducting assessments to determine feasibility for wind power generation in several areas. There is a potential for leasing agricultural land for placement of wind turbines at promising sites.

Biogas EPA has supported a project under the AgSTAR program (www.epa.gov/agstar/index.html) near Lamar, Colorado to demonstrate the feasibility of utilizing biogas produced from a heated plug flow anaerobic digester at a swine facility to generate heat and power for use at the facility and for sale to the electric grid. There may be potential of other anaerobic digesters for swine and dairy operations within the Region, as well as opportunity to expand use of anaerobic digesters into beef cattle production. Biogas may be used in conventional internal combustion engines generators or in microturbines. EPA has also

supported a project to examine the use of biogas in fuel cells.

Ethanol Ethanol is a promising alternative fuel that can be used as a gasoline additive (E10) or as a major component of fuel in certain cars and trucks (E85). EPA Region 8 currently has three flexible fuel vehicles that can operate on E85 in its fleet. Ethanol production can reduce the demand for fossil fuel and contribute to the nation's energy independence (www.25x25.org/). Ethanol is currently produced from corn grain, which provides an alternative market for corn growers. The resulting dry or wet distiller's grain may also be used as livestock feed.

Research is ongoing at the Department of Energy National Renewable Energy Laboratory (www.nrel.gov/biomass) in Golden, Colorado, to produce ethanol from biomass, including crop residues like corn stover and grain stubble as well as wood fiber. The technology pathways involve enzymatic and thermal production processes. Life cycle analyses indicate that producing ethanol from biomass would be more efficient than from corn or other starch when comparing the energy contained in the ethanol with the energy required to produce it. Commercial production facilities need to be developed for these technologies.

Biodiesel and Biolubricants Production of biodiesel and biolubricants using oilseed crops is a growing industry in Region 8 (www.biodiesel.org). Biodiesel is currently being marketed along the Colorado Front Range. EPA is supporting programs for use of biodiesel in school buses (www.epa.gov/otaq/schoolbus/index.htm). Biodiesel offers increased lubricity for longer engine life and reduced emissions compared to conventional diesel. Biolubicants are a biodegradable alternative to petroleum based lubricants and hydraulic fluids, which is particularly desirable in sensitive environments such as forests or ski slopes. Oilseeds provide a viable alternative rotational crop for many production systems, which also utilize less water than traditional crops grown in certain areas. Additional oilseed processing facilities may be required to efficiently meet increasing demand.

Coal Bed Methane In coal bed methane production, water is pumped out of coal formations to release methane gas. The discharge of untreated "production" water into surface waters or intermittent stream beds may impact the quality or quantity of water available for irrigation, stock water, or drinking water downstream. Region 8 supports environmentally protective energy exploration, development, production, transmission, and storage.

Revitalization

Redevelopment of brownfields in urban settings (www.epa.gov/swerosps/bf/index.html) may provide for community gardens or demonstration farms that can be used to educate urban residents about agriculture and food production. Smart growth development in urban areas may reduce suburban and exurban sprawl. Sprawl has often resulted in conversion of valuable agricultural land, noxious weed infestations, reduced wildlife habitat, excessive water consumption, additional traffic congestion, and more air pollution.

Direct Implementation

EPA directly implements its programs in Indian country unless a tribe has applied for and been approved to run the program. The Assiniboine and Sioux Tribes (Fort Peck Reservation), Cheyenne River Sioux, Confederated Salish and Kootenai Tribes (Flathead Reservation), Oglala Sioux (Pine Ridge Reservation), Standing Rock Sioux, and Three Affiliated Tribes (Fort Berthold Reservation) receive pesticide program funds and have responsibilities for pesticide investigations. The Cheyenne River Sioux Tribe has two pesticide circuit riders and the Confederated Salish and Kootenai Tribes (Flathead Reservation) have one circuit rider to assist with pesticide investigations on other nearby reservations. The Cheyenne River Sioux and Oglala Sioux Tribes have pesticides and ground water management plans on which Region 8 has concurred. The Assiniboine and Sioux Tribes (Fort Peck Reservation), the Confederated Salish and Kootenai Tribes (Flathead Reservation), and the Ute Mountain Ute have EPA-approved water quality standards and, along with the Northern Cheyenne, have been granted "treatment as a state" (TAS) status. The Blackfeet, Cheyenne River Sioux, Chippewa Cree (Rocky Boy's Reservation), Confederated Salish and Kootenai Tribes (Flathead Reservation), Crow, Flandreau Santee Sioux, Gros Ventre and Assiniboine Tribes (Fort Belknap Reservation), Lower Brule, Northern Cheyenne, Southern Ute, Spirit Lake, Turtle Mountain, and Ute Mountain Ute have been granted TAS status to receive non-point source grants and implement non-point source programs to help improve water quality. EPA Region 8 has direct implementation of the CAFO rule in Indian country.

EPA implements certain environmental programs, which are described below, in states where the programs have not or cannot be delegated.

EPA is responsible for pesticide use enforcement (www.epa.gov/Region8/compliance/fifra.html), including WPS requirements, in Wyoming and for private applicators in Colorado, until Colorado receives program delegation. Pesticide use provisions ensure that pesticides, including pesticides classified as Restricted Use, are used according to labeling directions. EPA is responsible for private pesticide applicator certification in Colorado, until the program is delegated. EPA is also responsible for enforcement of pesticide registration and production requirements.

EPA Region 8 enforces provisions of the Oil Spill Prevention, Control and Countermeasures (SPCC) program throughout the Region (www.epa.gov/oilspill/spcc.htm). Facilities that have aboveground or underground fuel tanks above certain capacities must have an SPCC plan that addresses design, maintenance, operation, containment, and clean up procedures.

EPA is responsible for enforcement of the Risk Management Program (yosemite.epa.gov/oswer/ceppoweb.nsf/content/RMPS.htm) in all Region 8 states except North Dakota. Agricultural establishments that store, handle, or use certain toxic or flammable chemicals, including ammonia, chlorine, and flammable fuels, above threshold amounts must develop and implement a program to prevent accidental releases.

EPA is responsible for implementation of the drinking water program in Wyoming and in Indian country, including enforcement of drinking water maximum contaminant levels in public and community water supply systems.

Appendix 3: Region 8 Agricultural Statistics

	CO	MT	ND	SD	UT	WY	Region 8	% of US
Farms (1,000)	30.5	28.0	30.3	31.4	15.2	9.2	144.6	6.9
Land Area (million ac)	30.7	60.1	39.4	43.7	11.6	34.4	219.9	23.6
Average Size (ac)	1,007	2,146	1,300	1,392	763	3,739	1,521	343
Grazing Land (million ac)	45.9	59.0	12.9	26.7	42.7	53.3	240.5	29.7
Wheat (million ac)	2.570	5.340	9.090	3.315	0.163	0.169	20.647	36.1
Wheat (million bu)	54.0	192.5	303.8	133.4	7.1	4.7	695.5	33.0
Hay (million ac)	1.55	3.00	3.03	4.00	0.69	1.14	13.41	21.8
Hay (million T)	4.09	5.85	5.65	7.56	2.59	2.20	27.94	18.6
Corn (million ac)	1.21	0.11	1.58	4.87	0.97	0.11	7.98	9.1
Corn – grain (million bu)	140.6	2.5	154.8	470.1	2.0	6.9	776.9	7.0
Soybean (million ac)			2.95	3.90			6.85	9.5
Soybean (million bu)			107.3	138.6			245.9	8.0
Barley (1,000 ac)	60	900	1,200	65	40	75	2,340	60.4
Barley (million bu)	7.7	39.2	57.2	2.3	1.9	5.6	113.9	53.8
Sunflower (1,000 ac)	215	5	1,140	550			1,910	70.5
Sunflower (million lb)	262.3	4.4	1,752.7	877.0			2,896.4	72.1
Canola (1,000 ac)		17.0	1,040.0	0.6			1,057.6	91.3
Canola (million lbs)		21.3	1,461.6	0.4			1,483.3	93.8
Dry Beans (1,000 ac)	125	18	620	17.5	4.5	34	819	49.2
Dry Beans (1,000 Cwt)	1,898	282	8,588	301	23	776	11,868	43.4
Sorghum (1,000 ac)	182			200			382	6.7
Sorghum – grain (million bu)	3.41			4.42			7.83	2.1
Sugar Beets (1,000 ac)	36.4	53.9	255.0			36.2	381.5	29.4
Sugar Beets (1,000 T)	833	1,143	4,593			801	7,370	26.8
Potatoes (1,000 ac)	63.1	11.0	92.0	1.0	1.0		168.1	15.2
Potatoes (million Cwt)	24.0	3.4	20.5	0.3	0.3		48.5	11.5
Onions (1,000 ac)	10.0				1.6		11.6	6.9
Onions (1,000 Cwt)	4,180				780		4,960	6.5
Apples (million lbs)	31.0				32.0		63.0	0.6
Cherries (million lbs)	0.60	4.72			25.20		30.52	3.9
Peaches (million lbs)	24.0				10.0		34.0	1.3

	CO	MT	ND	SD	UT	WY	Region 8	% of US
Cattle and Calves (million)	2.65	2.40	1.72	3.75	0.82	1.44	12.78	13.2
Hogs and Pigs (1,000)	840	175	157	1,480	690	113	3,455	5.7
Sheep and Lambs (1,000)	383	306	104	376	311	460	1,940	31.6
Wool (million lbs)	2.65	2.49	0.69	2.58	2.18	3.53	14.12	37.9
Dairy Cows (1,000)	104	19	33	81	88	5	330	3.7
Milk (million lbs)	2,348	372	527	1,437	1,661	74	6,419	3.6
Chickens – layers (million)	4.06	0.35		2.23	3.43	0.01	10.08	2.2
Turkeys (million)			1.10	4.60			5.70	2.2
Honey (million lbs)	1.82	8.71	33.67	17.38	1.04	2.24	64.86	37.1
Commodity Cash Receipts ($ billion)	4.525	1.882	3.958	3.835	1.116	0.864	16.180	8.1
Crop Cash Receipts ($ million)	1,216	733	2,969	1,576	258	138	6,890	7.2
Livestock Cash Receipts ($ million)	3,309	1,149	989	2,258	858	726	9,289	8.8
Farms with over $100,000 in sales	3,930	5,027	9,900	9,666	1,587	1,807	31,917	10.2
Average net income per farm ($1,000)	11.7	12.6	32.0	28.4	14.4	12.2	20.1	106

Appendix 4: Regulatory Requirements and Authority

Clean Water Act (CWA)

Under the CWA, EPA, states, and some tribes have established water quality standards, including use classifications and criteria to protect designated uses. EPA and the states are required to monitor and evaluate water quality, list impaired waters that do not meet the standards, and develop total maximum daily loads (TMDLs) to protect waters from pollutants causing the impairment.

Direct discharge of any pollutant into waters of the U.S. from a point source requires a National Pollution Discharge Elimination System (NPDES) permit issued by EPA or an authorized state program. Effluent Limitations Guidelines establish technology-based requirements within an economic sector for specific types of discharges and are enforceable through a NPDES permit. The recycling and beneficial reuse of biosolids are among EPA's objectives under the CWA and represent a major activity of wastewater treatment plants.

The Non-point Source program provides funding and technical assistance to control water pollution from many diffuse sources caused by runoff. The CWA provides for the protection and restoration of wetlands and regulates discharge of dredged and fill material into waters of the U.S. The Oil Spill Prevention, Control and Countermeasures (SPCC) program is authorized under the CWA to prevent oil spills from certain above-ground and underground storage tanks.

Safe Drinking Water Act (SDWA)

EPA has developed drinking water standards under the SDWA authority that apply to finished water supplied by certain public drinking water systems. The National Primary Drinking Water Regulations consist of maximum contaminant level goals (MCLGs), which are non-enforceable health-based goals, and maximum contaminant levels (MCLs), which are enforceable limits set as close to MCLGs as possible, considering cost and feasibility of attainment.

Source Water Protection under the Safe Drinking Water Act focuses on preventing contamination of aquifers or surface waters that are or could be used as sources of public drinking water. Specific SDWA authorities include the Source Water Assessment Program, under which states provide public water systems with information needed to decide on local action to protect sources of drinking water, and the Wellhead Protection Program, in which state programs focus on providing a framework for local protection of drinking water wells and recharge areas. The SDWA provides for the designation of sole source aquifers and prohibits use of federal funds for projects that may contaminate such a principal source of drinking water.

The Underground Injection Control (UIC) program was created under the authority of the SDWA to protect existing and future underground sources of drinking water. Shallow disposal

systems that discharge certain types of fluids, including septic systems receiving waste fluids other than sanitary waste, are known as Class V wells. Facilities that discharge waste fluids into Class V wells must obtain a permit from EPA or an authorized state and monitor contaminants of concern.

Federal Insecticide, Fungicide and Rodenticide Act (FIFRA)

Generally, any pesticide that is distributed or sold in the U.S. must be registered by EPA. Exceptions are pesticides with approved emergency exemptions or experimental use permits or pesticides with ingredients that are specifically exempted from federal registration requirements by regulation. Pesticides are registered if EPA determines that they do not cause unreasonable adverse affects to the environment considering economic, social, and environmental costs and benefits, and human dietary risk resulting from use of a pesticide on food. EPA also establishes tolerances for pesticides on food or feed, which are the maximum levels of pesticide residues allowed on crops or livestock at the "farm gate."

Pesticide labeling is approved in the registration process and provides specific directions for use, safety information for applicators and agricultural workers, environmental precautions, and other information for proper use of the product. It is a violation of federal law for anyone to use any registered pesticide in a manner inconsistent with its labeling, as defined in FIFRA, or to distribute or sell an unregistered pesticide product.

Labels for pesticides used on crops have information related to the protection of agricultural workers and refer to the Worker Protection Standard (WPS) regulation. The WPS is designed to reduce risks to workers, handlers, and others that may result from occupational or accidental exposure to pesticides used on farms, forests, nurseries, or in greenhouses. Provisions of the WPS include notification of pesticide applications, entry restrictions, pesticide safety training requirements, decontamination supplies, and availability of emergency assistance.

Some pesticides are classified as restricted use, which means that the pesticides can only be sold to and used by certified applicators or persons under their direct supervision. Additional training in labeling comprehension, safety, environmental considerations, pests, pesticides, application equipment and techniques, and laws and regulations is required to become a certified applicator. Applicators usually must pass an examination to obtain certification.

EPA is responsible for registration of genetic material in plants or microorganisms that are genetically modified to produce pesticidal chemicals, known as plant incorporated protectants. EPA has authority for pre-marketing approval of these products under a separate registration process, but no directions for use are required for the end user. Approved products include BT corn, soybeans, and cotton that contain genes from the bacteria, *Bacillius thuringiensis* to produce a substance that is toxic to certain insect pests.

Food Quality Protection Act (FQPA)

The FQPA establishes a standard for registration of pesticide products used on food to provide a reasonable certainty of no harm resulting from aggregate exposure to pesticide chemical residues. It establishes an additional 10 fold safety factor for children's exposure unless reliable data indicate a more appropriate safety factor. Aggregate exposure considers use of all pesticides with a similar mode of action. Since many organophosphate and carbamate insecticides share a similar mode of action, risk assessments must consider exposure to all of the products combined, rather that each product individually, which may limit availability of some of these products for particular uses.

The FQPA requires EPA and the U.S. Department of Agriculture (USDA) to implement research, demonstration and educations programs to support adoption of Integrated Pest Management (IPM) and requires federal agencies to promote IPM. The FQPA defines IPM as a sustainable approach to managing pests by combining biological, cultural, physical, and chemical tools in a way that minimizes economic, health, and environmental risks.

Toxic Substances Control Act (TSCA)

TSCA gives EPA the authority to regulate the manufacture, processing, and use of chemical substances, and requires manufacturers to provide information about the health and environmental effects of certain chemicals to EPA. The major objective of TSCA is to understand the risks of a chemical before it is introduced into commerce, and to regulate unreasonable risks, considering economic and social benefits. Under TSCA, EPA regulates microorganisms that are genetically engineered to produce industrial products. EPA also works in cooperation with the U.S. Department of Agriculture (USDA) and the Food and Drug Administration (FDA) to evaluate transgenic plants that are engineered to produce pharmaceuticals and industrial chemicals.

Clean Air Act (CAA)

The Clean Air Act (CAA) provides the authority to EPA to regulate sources of air pollution. Under the CAA, EPA sets limits on how much of a specific pollutant can be in the ambient air and establishes regulations for specified categories of air pollution sources. State and local agencies do much of the work to implement and enforce the CAA. EPA has an oversight role in permitting stationary sources located in state and local jurisdictions, reviewing permitting actions to ensure that all CAA requirements are being met, and providing technical and regulatory support to the state authorities.

The Chemical Accident Prevention rule requires covered facilities to submit risk management plans describing their chemical accident prevention programs. The objectives of the rule and the Risk Management Program are to prevent accidental releases of chemicals that could cause

serious harm to human health or the environment and to reduce the severity of releases that may occur. EPA has established a list of regulated substances and thresholds.

Resource Conservation and Recovery Act (RCRA)

RCRA contains requirements for treatment, storage, and disposal of hazardous waste and solid waste. RCRA regulations list acutely hazardous and toxic wastes and specify hazardous waste characteristics. They also define generators of hazardous waste and specify storage and permitting requirements for generators depending upon the quantity of hazardous generated. However, farmers who dispose of waste pesticides from their own use are exempt from RCRA generator provisions, as long as the emptied pesticide container is triple rinsed, or equivalent, and the pesticide residues are disposed of on his own farm in a manner consistent with the disposal instructions on the pesticide label. EPA has established a separate regulatory program under the hazardous waste rules for collecting and managing certain pesticides defined as universal wastes.
EPA's primary role for solid and hazardous wastes is to provide technical assistance to states for solid waste issues. EPA is authorized to take action to restrain an imminent and substantial endangerment to health or the environment in situations that pose a risk of harm or potential harm.

All Region 8 states have received program approval from EPA for regulating Municipal Solid Waste Landfills. Each state's standards for Municipal Solid Waste Landfills may include leachate management, liner systems (clay, synthetic, or combination), groundwater monitoring, and daily cover of wastes. States vary in how they apply their definition of infectious waste, which could affect the standards associated with collection, handling and disposal of waste that can include tissue, body parts, and carcasses.

Emergency Planning and Community Right-to-Know Act (EPCRA)

EPCRA provides for state and local planning in case of emergencies, requires notification of chemical releases above a certain amount, and addresses communities' right to know about toxic and hazardous chemicals. Agricultural establishments that store extremely hazardous substances must notify the state emergency response commission and the local emergency planning committee. Non-permitted release of extremely hazardous substances or hazardous chemicals, including ammonia and hydrogen sulfide, over certain amounts must be reported to federal, state, and local authorities. Proper application or storage of pesticide products by an agricultural producer is excluded from EPCRA requirements.

Pollution Prevention Act

The Pollution Prevention Act established pollution prevention as a national objective and

required EPA to implement a strategy for source reduction. The Pollution Prevention Act also established a hierarchy of activities. Wastes that cannot be prevented should be recycled. If it is not feasible to prevent or recycle waste materials, they should be properly treated. Disposal is the least desirable alternative. Pollution prevention is broadly defined as source reduction and other practices that reduce or eliminate the creation of pollutants through increased efficiency in the use of raw materials, energy, water or other resources and the protection of natural resources by conservation.

Endangered Species Act (ESA)

The ESA requires all federal agencies to conserve species listed as threatened or endangered by the FWS or the National Marine Fisheries Service of the National Oceanic and Atmospheric Administration (NOAA). EPA must consult with FWS or NOAA about any agency action that may affect listed species to insure that the action will not jeopardize the continued existence of listed species or result in the destruction or adverse modification of critical habitat. Region 8 consults with the FWS regarding water quality standards, TMDLs, and non-point source projects. The services will issue a biological opinion indicating whether the action is likely to jeopardize a listed species and suggesting reasonable and prudent alternatives or measures to avoid jeopardy or mitigate potential harm. Under the ESA, taking of any listed species is prohibited except under an approved permit or cooperative agreement with a state.

EPA is implementing an endangered species protection program to protect listed species from harm that may result from pesticide use. EPA is required to conserve listed species while minimizing the impacts on agriculture and other pesticide users.

Energy Policy Act

The Energy Policy Act of 2005 gives EPA authority to implement a nationwide renewable fuels program, including a credit trading program. EPA has developed implementing regulations for an ethanol mandate requiring fuel manufacturers to use 7.5 billion gallons of ethanol in gasoline by 2012. The act directs EPA to establish a credit program to allow for trading of excess renewable fuel and to provide for the generation of an appropriate amount of credits for biodiesel. EPA, in consultation with USDA and the Biomass Research and Development Technical Advisory Committee, will establish the Advanced Biofuel Technologies Program to demonstrate advanced technologies for the production of alternative transportation fuels, with priority given to projects that enhance geographic diversity of alternative fuels production.

Appendix 5: Regional Funding Opportunities

Regional Priorities Grant Program

Purpose: EPA Region 8 offers grants from five different funding sources through a single combined procedure (http://www.epa.gov/region08/community_resources/grants/index.html) to achieve measurable environmental and public health results within the Regional priority areas, including agriculture. Proposals are considered for the following programs: Tribal Source Water Protection, Regional Geographic Initiative (RGI), Total Maximum Daily Load (TMDL) Program, Source Reduction Assistance (Pollution Prevention) Program, and the Strategic Agriculture Initiative.

Tribal Source Water Protection provides for completion of source water assessments in accordance with EPA guidelines and implementation of Source Water Protection for public water systems in Indian Country within Region 8. A complete source water assessment includes the following steps: 1) delineation of Source Water Protection Area(s); 2) completion of inventory of potential contaminant sources; 3) susceptibility analysis to determine relative risk to water source posed by inventoried potential contaminant source; and 4) a report to the public.

RGI funds support projects that have been identified as a high priority by the Region, states, tribes, localities or citizen groups due to high or potentially high human health or ecosystem risk, or due to significant potential for risk reduction or avoidance. Water quality demonstration projects may be funded to improve impaired or threatened water bodies in focused geographic areas (http://www.epa.gov/region8/water/rgi/fy07rfp.html) to eventually meet water quality standards. These projects should reflect restoration activities identified as part of a comprehensive watershed plan. Air quality projects addressing community-based air toxics (www.epa.gov/air/toxicair/community.html) or air quality related issues from energy and agricultural operations will be considered. For air toxics projects, proposals must support and promote the coordination and acceleration of research, investigations, experiments, demonstrations, surveys and studies relating to local air toxics assessment, reduction, and/or elimination or support education and outreach activities related to air toxics. Agricultural air quality projects must address, through research, investigations, experiments, demonstrations, surveys, and studies, the identification and minimization of the impact of air pollutant emissions from the agricultural sector to ambient air quality and to air quality related values, such as deposition and visibility impacts. Projects that contribute to meeting this measure include conducting monitoring and analysis of air pollutants, source emissions quantification, improved emission inventories, and outreach on best management practices for reducing emissions.

The TMDL funds are intended for use by the regions, states, tribes, and non-profit agencies toward making progress in fulfilling EPA's commitment to resolving non-point source problems in impaired water bodies that have been identified on an EPA approved Clean Water Act Section 303(d) list. The proposals should address high priority TMDL activities, including the development of TMDLs for impaired or threatened waters that are polluted with sediments, nutrients and pathogens or other agricultural pollutants that significantly result from agricultural land uses, such as run-off from fields and pastures.

Source reduction is any practice that reduces the amount of any hazardous substance, pollutant, or contaminant entering any waste stream or otherwise being released into the environment prior

to recycling, treatment, or disposal. Source reduction reduces the hazards to public health and the environment associated with the release of such substances, pollutants or contaminants. Pollution prevention includes source reduction and other practices that reduce or eliminate the creation of pollutants through increased efficiency in the use of raw materials, energy, water or other resources or protection of natural resources through conservation. Examples of projects that EPA would consider for funding include but are not limited to: implementing more sustainable agricultural practices, developing and implementing EMSs for agricultural operations, and implementing innovative measures to reduce pollution from agriculture by turning waste products into environmentally beneficial products.

The purpose of the FQPA Strategic Agriculture Initiative Grant Program is to support "transition" efforts by growers to more environmentally-sound pest management practices. The program supports grants for education, extension, demonstration and implementation projects for FQPA transition and reduced-risk practices for pest management in agriculture. Priority is placed on project proposals that include a "whole systems" approach by integrating pest, soil, and crop management practices, address an array of commodities, focus on sustainable agriculture, or incorporate conservation planning. An outreach and extension component should be included. "Sustainable" agriculture refers to farming practices that are environmentally sound, economically viable, and socially responsible. Measures of success should be linked to reduction of pesticide use/risks, implementation of sustainable agricultural practices and/or similar impacts. For assistance in developing proposed project performance measures, see the SAI Toolbox (http://www.aftresearch.org/sai).

Funding: The total amount of funding available under this solicitation is dependant on final budget allocations that have not yet been determined for FY 2007. However, based on FY 2006 funding levels, we estimate that approximately $857,602 will be available for awards under this solicitation. Final decisions are dependent on funding availability. The Source Reduction Assistance (Pollution Prevention) Program requires a 5 percent match. Match is optional for the other programs, but leveraging funds from other sources will be considered in the evaluation of the proposals.

Eligibility: State agencies, tribes, local governments, other public or nonprofit institutions and organizations, and individuals are eligible. However, for-profit organizations are not eligible to apply directly to EPA for these funds. The only exception is that individual farmers can apply directly for funding under the Strategic Agriculture Initiative.

Funding cannot be used for the purposes of routine program implementation, implementation of routine environmental protection or restoration measures, or meeting any legal mandate (such as federal, state or local regulations or settlement agreements). RGI and TMDL Program funds may not be used for any activities that the Congress funds from the State and Tribal Assistance Grant account.

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Website www.epa.gov/region8/community_resources/grants/index.html

Pesticide Environmental Stewardship Program (PESP)

Purpose: The goal of PESP is to reduce the risks associated with pesticide use in agricultural and non-agricultural settings in the United States. Projects may address pesticide pollution prevention, IPM, children's health issues related to pesticides, and those research methods for documenting IPM adoption or the reduction of risks associated with changes in pesticide use. Other projects will be considered as they complement these goals through public education, training, monitoring, demonstrations, and other activities. Emphasis will be placed on those projects with defined outcomes that can quantitatively document project impacts.

Funding: Each year since 1996, EPA's Office of Pesticide Programs, in coordination with the EPA Regional Offices, has awarded approximately $500,000 annually to eligible state and tribal entities for projects supporting pesticide risk reduction. The maximum award amount per proposal is set at $40,000. The Agency will consider funding a broad range of projects that reduce pesticide risk to human health and the environment. Although the proposal may request funding for activities that will further long-term objectives, this program provides one time funding, and the maximum period of performance for funded activities is expected to be not more than 24 months.

Eligibility: States and tribes, including any agency or instrumentality of a state, such as state universities, and all federally recognized Native American Tribes that are eligible to receive federal funding may submit a project proposal. Local governments, private universities, private nonprofit entities, private businesses, and individuals are not eligible. The organizations excluded from applying directly are encouraged to work with eligible applicants in developing proposals that include them as participants in the projects.

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Website www.epa.gov/oppbppd1/PESP/regional_grants.htm

Non-point Source Program

Purpose: Non-point source pollution continues to be the largest remaining source of water quality impairments in the nation. States and tribes receive grant money that supports a wide variety of activities including: technical assistance, financial assistance, education, training, technology transfer, demonstration projects, as well as monitoring to address non-point source pollution and improve water quality and to assess the success of specific non-point source implementation projects. The non-point source program has emphasized watershed-based planning to develop solutions that prevent and remedy water quality problems. The program has also focused on restoring impaired waters through development and implementation of TMDLs.

States and tribes have enhanced their technical tools and capabilities, strengthened and increased their partnerships, nurtured a vast network of community-based action on a watershed basis and,

in many cases, developed stronger financial bases and legal support for their upgraded programs. As a result, the nation is experiencing increasingly positive results in terms of both on-the-ground action and actual water quality improvements. Most of these successes are the direct result of state and tribal non-point source agencies' cooperation with other governmental agencies, private sector interests, and citizen groups at the state and watershed level.

Funding: EPA provides over $230 million annually in formula grants to the states and tribes to implement non-point source projects and programs. Incremental funds ($100 million annually) are intended for the implementation of state-approved watershed-based plans to restore waters impaired by non-point source pollution and to achieve non-point source TMDLs. The remaining "base" funds are to be used by the states and tribes to generally implement all aspects of their non-point source programs. Approved states and tribes may use the "base" for the full range of activities addressed in their approved non-point source management programs, including protection of unimpaired waters and for restoration of impaired waters. The non-federal share for the non-point source program must be at least 40 percent.

Eligibility: Non-point source grant funds are directed towards implementation of dynamic and effective programs designed to achieve and maintain beneficial uses of water. Approved non-point source management programs provide the framework for determining what activities are eligible for funding. Each funded program activity or project must result in the accomplishment of management program objectives that are identified in the state's or tribe's approved non-point source management program. Grant work plans must link the funded activities or projects to the relevant elements of the non-point source management program. States and tribes may use funds to provide financial assistance to "persons" only if the costs are related to implementing demonstration projects. However, a successful approach may need to be assessed and demonstrated in many locations to indicate its widespread utility in a variety of settings or provide education, information, and outreach necessary for others to adopt the approach.

Contact: Peter Monahan, 303-312-6946, monahan.peter@epa.gov

State Revolving Funds

Purpose: Funds are available through the Clean Water State Revolving Fund (CWSRF) and the Drinking Water State Revolving Fund (DWSRF) programs to finance a variety of assessment and protection activities. Source water assessments identify the source water protection area, identify potential sources of drinking water contamination, determine the susceptibility of water supplies to contamination, and make information available. Protection efforts include managing contaminants, implementing non-point source projects, and establishing agricultural best management practices. States have funded a wide array of projects other than traditional water infrastructure projects, including manure management systems, alternative watering sources, fencing for livestock operations, conservation tillage equipment, efficient irrigation equipment, erosion control practices, the purchase of conservation easements, and wetlands rehabilitation.

Funding: The CWSRF and DWSRF are low interest loan programs managed by the states. The

CWSRF currently is funding nearly $3 billion worth of water quality projects annually. Funds are repaid over terms as long as 20 years. Repaid funds are recycled to fund other water quality projects. Each state must approve a source of loan repayment as part of the application process.

Eligibility: Each state administers its own CWSRF and DWSRF programs differently and establishes its own priorities. States develop annual Intended Use Plans that describe how they will use funds in the program to support water quality objectives. The CWSRF may fund water protection projects from eligible loan recipients including public water systems, community groups, individuals, conservation districts, and nonprofit organizations, however, the types of applicants eligible for assistance varies by state. Loans provided by the DWSRF must go to water systems, but agricultural interests may coordinate with local water systems.

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State representatives may be found on the CWSRF website www.epa.gov/owm/finan.htm

Performance Partnership Grants

Purpose: Performance Partnership Grants (PPGs) support environmental programs delegated to states or tribes and address state or tribal environmental priorities established in performance partnership agreements. PPGs are block grants which are made to the states to carry out work for which EPA traditionally made individual, categorical grants for different programs. These PPGs are funded with State and Tribal Assistance Grants funds. Funds from authorized grant programs, including air pollution control, water pollution control, non-point source management, water quality cooperative agreements, underground water source protection, hazardous waste management, underground storage tanks, pollution prevention incentives for states, pesticide enforcement, or pesticide applicator training and certification may be combined into a single award.

Eligibility: States or tribes are eligible for PPGs for delegated programs.

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Website www.epa.gov/Region8/states/PPGs/ppgelig.html