DEPARTMENT OF ENVIRONMENTAL QUALITY
Environmental Assessment

PERMITTING AND COMPLIANCE DIVISION
Water Protection Bureau

Name of Project: Pesticide General Permit (PGP) MTG870000

Type of Project: Issue a Montana Pollutant Discharge Elimination System (MPDES) general permit that would provide coverage for the application of pesticides to or over, including near, state surface waters on a five-year renewal cycle. Owners or operators responsible for pesticide applications that are over a permitting threshold would have to submit a Notice of Intent (NOI) to the Department of Environmental Quality Water Protection Bureau (Department) and comply with the PGP.

Location of Project: Statewide (except within the boundaries of Indian Reservations)

Description of Project: The PGP would require owner/operators of pesticide applications to or over state surface water that would exceed annual thresholds to take certain actions, including:

- Submit a NOI to the Department in order to obtain authorization under the PGP;
- Prepare a pesticide discharge management plan (PDMP) which would include pest identification and development of action levels (pest activity trigger values such as density of mosquito larvae), alternative evaluation, equipment maintenance and calibration;
- Conduct pest surveillance prior to pesticide application to ensure the action threshold has been met;
- Assess environmental conditions after application to ensure no adverse impacts;
- Report adverse impacts;
- Maintain records; and
- Submit annual report to Department.

Agency Action and Applicable Regulations: The proposed action is to issue the PGP. The following are applicable regulations:

Montana Water Quality Act 75-5-101, *et seq.,* Montana Code Annotated (MCA)

ARM Title 17, Chapter 30:
- Subchapter 2- Fees
- Subchapter 6 - Surface Water Quality Standards.
- Subchapter 7 - Nondegradation of Water Quality.
- Subchapter 13 - MPDES Standards.

Summary of Issues: The Pesticide General Permit would be a new permit to regulate existing activities that have historically been regulated, to varying degrees, under other federal and state regulations as described in the following discussion.

Permitting History

Over the past ten years, several courts addressed the question of whether the Clean Water Act (CWA) requires permits for pesticide applications. These cases resulted in some confusion about the applicability of the CWA to pesticides applied to surface waters. On November 27, 2006, the Environmental Protection Agency (EPA) issued a final rule ("2006 Pesticides Rule") clarifying two specific circumstances in which a discharge permit was not required to apply pesticides to or around water. They were: 1) the application of pesticides directly to water to control pests; and 2) the application of pesticides to control pests that are present over, including near, water where a portion of the pesticides will unavoidably be deposited to the water to target the pests, in both instances provided that the application is consistent with relevant Federal Insecticide, Fungicide, and Rodenticide Act (FIFRA) requirements.

On January 9, 2009, the Sixth Circuit vacated EPA's 2006 Pesticides Rule in *National Cotton Council of America v. EPA*, 553 F.3d 927 (6th Cir., 2009). The Court held that the CWA unambiguously includes "biological pesticides" and "chemical pesticides" with residuals within its definition of "pollutant," and therefore National Pollutant Discharge Elimination System (NPDES) permits will be required for discharges to state surface waters of biological pesticides, and of chemical pesticides that leave a residue.

FIFRA
Prior to the 2009 court decision, EPA did not issue NPDES permits for the application of a pesticide to target a pest that is present in or over, including near, the water. Instead, EPA regulated these types of applications through FIFRA. FIFRA contains requirements for the sale, distribution and use of pesticides to ensure that when used in conformance with FIFRA labeling directions, pesticides will not pose unreasonable risks to human health and the environment.

All new pesticides must undergo a registration procedure under FIFRA during which EPA assesses a variety of potential human health and environmental effects associated with use of the product. Under FIFRA, EPA is required to consider the effects of pesticides on the environment by determining, among other things, whether a pesticide "will perform its intended function without unreasonable adverse effects on the environment," and whether "when used in accordance with widespread and commonly recognized practice [the pesticide] will not generally cause unreasonable adverse effects on the environment."

When EPA approves a pesticide for a particular use, the agency imposes labeling restrictions governing such use. Compliance with the labeling requirements ensures that the pesticide serves an intended purpose and avoids unreasonable adverse effects. It is illegal under Section 12(a)(2)(G) of FIFRA to use a registered pesticide in a manner inconsistent with its labeling.

Section 75-5-308, MCA
Since 1993, the Montana Water Quality Act under 75-5-308, MCA, has required Department authorization for short-term exemptions from water quality standards for the application of a pesticide... 'when it is used to control nuisance aquatic organisms or to eliminate undesirable and nonnative aquatic species' (308 authorizations). Once the PGP is effective the Department could not issue 308 authorizations for those activities that require MPDES permit coverage [75-5-308(3), MCA]. As a result, many of the pesticide applicators that were previously subject to 308 authorization requirements would instead be subject to the PGP; however, any pesticide applicators that would be below the PGP permitting threshold would remain subject to the 308 authorization requirement.

Benefits and Purpose of Action: The PGP articulates planning, control, monitoring, reporting and recordkeeping for application of pesticides to or over water that are above an annual threshold. One benefit is that both decision-makers and pesticide applicators will be more aware of options in pest management and promote better control in the applications.

Affected Environment & Impacts of the Proposed Project:

Y = Impacts may occur (explain under Potential Impacts).
N = Not present or No Impact will likely occur.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
RESOURCE	[Y/N] POTENTIAL IMPACTS AND MITIGATION MEASURES
1. GEOLOGY AND SOIL QUALITY, STABILITY AND MOISTURE: Are soils present which are fragile, erosive, susceptible to compaction, or unstable? Are there unusual or unstable geologic features? Are there special reclamation considerations?	[N]
2. WATER QUALITY, QUANTITY AND DISTRIBUTION: Are important surface or groundwater resources present? Is there potential for violation of ambient water quality standards, drinking water maximum contaminant levels, or degradation of water quality?	[Y] The pesticide general permit would apply to all state surface waters, including discharges to Outstanding Resource Waters and waterbodies classified as A-Closed and A-1. The only state-wide exceptions include irrigation water that is used up and not returned to waters of the state, and wastewater lagoons and other impoundments designed to treat waste. Montana has one waterbody listed as impaired on the 303(d) list for a currently registered pesticide. Hauser Lake is impaired for endosulfan sulfate, therefore the use of this pesticide on or over the lake would not be allowed. Review by the Department determined that discharges from pesticide activities authorized under the PGP would be considered nonsignificant and, therefore, would not be subject to review under Montana's nondegradation statute, § 75-5-303, MCA, for the following reasons: • Section 75-5-317(2)(c), MCA, categorically exempts the use of agricultural chemicals; • Section 75-5-317(2)(g), MCA, categorically exempts short-term changes in existing water quality resulting from activities authorized by the Department pursuant to 75-5-308, MCA (for application of pesticides registered by the EPA); and • Section 75-5-317(2)(u), MCA, categorically exempts "any other activity that is nonsignificant because of its low potential for harm to human health or to the environment," provided it conforms to the guidance in § 75-5-301(5)(c), MCA. Based on § 75-5-301(5)(c), MCA, the Department has determined that pesticide application discharges regulated under the PGP are nonsignificant because: 1) potential for harm to human health or the environment for all pesticides is adequately regulated by FIFRA and by the Montana Department of Agriculture (MDA), 2) the quantity and strength of the pesticide applications are controlled by FIFRA labeling requirements, and 3) pesticide activities are generally short-term. Furthermore, information available to the Department does not indicate expected violations of ambient water quality standards, as described below. Nationally, the U.S. Geological Survey (USGS) released a 10-year (1992-2001) study of 51 major river basins and aquifer systems at 186 stream sites in 2006. USGS compared the sample concentrations (most samples were analyzed for 75 pesticides and eight degradation products) with two types of aquatic life benchmarks (1) ambient water quality criteria for the pesticide and (2) benchmarks derived from the lowest acute and chronic ecological effects endpoint for the pesticide. Overall, the assessment indicates that surface and ground water are generally not being adversely affected by pesticide applications. A total of 20 pesticides or degradates exceeded an EPA benchmark in one or more agricultural streams and/or urban streams. However, EPA has since taken regulatory action against all 20 pesticides found to be in excess of a benchmark and many of their uses have been canceled (several detections were of pesticides no longer in use prior to the start of the study). In Montana, MDA and the Department, jointly, are required to conduct monitoring to determine ground water quality, assess the presence of agricultural chemicals in ground water, determine the vulnerability and sensitivity of Montana aquifers, and evaluate the effectiveness of management plans implemented for the protection of ground water resources (80-15-104, MCA). Whenever MDA monitoring results detect a new pesticide compound in state water, MDA is required to request the Department develop Water Quality Standards (WQS) for the protection of human health. Montana currently has WQS for nearly 100 pesticide active ingredients or degradates as contained in Circular DEQ-7, which can be found at http://deq.mt.gov/wqinfo/Circulars.mcpx. According to MDA, nearly 20,000 data points from approximately 750 sampling sites were obtained in the past three years. Of these, there were 983 data points that were above "non-detect" but none exceeded a pesticide WQS.

IMPACTS ON THE PHYSICAL ENVIRONMENT	
3. AIR QUALITY: Will pollutants or particulate be produced? Is the project influenced by air quality regulations or zones (Class I airshed)?	[N]
4. VEGETATION COVER, QUANTITY AND QUALITY: Will vegetative communities be significantly impacted? Are any rare plants or cover types present?	[Y] Pesticide application covered under the PGP includes herbicides to control nuisance weeds and algae in aquatic systems, including invasive species. Nuisance weeds and algae can decrease populations of native aquatic species including threatened and endangered species. Nuisance weeds and algae can reduce aquatic biodiversity by preventing desirable species growth and unbalancing desirable aquatic species populations and development (2010 NPDES Pesticides General Permit Fact Sheet Draft). The application of pesticides has been and will continue to be regulated under FIFRA. The Department believes that development of the PGP to provide additional regulation of pesticide application to or over state surface water would have "no significant impact" on vegetative communities or rare plants. Owners/operators covered by the PGP would be required to conduct surveillance prior to each pesticide application to assess the pest management area and to determine when the area would meet the action threshold (the pest population that triggers the need for active pest management). The PGP would require the pest management strategy to consist of combinations of mechanical, biological, and/or pesticidal control methods. All control measures would be required to be conducted in a manner that minimizes impacts to non-target species. If pesticides were used they would be used only as needed as determined by the action threshold, and proper best management practices including use of the optimal effective application rate. The pesticide applications are typically of short duration and have temporary effects. Lastly, the PGP would require monitoring and reporting of any adverse impacts. This includes any accidental exposure to non-target vegetation and any unexpected toxic or adverse effect by non-target vegetation. In summary, the PGP would require dischargers to meet non-numeric limits which the Department determined would protect water quality and aquatic life in the receiving water.
5. TERRESTRIAL, AVIAN AND AQUATIC LIFE AND HABITATS: Is there substantial use of the area by important wildlife, birds or fish?	[Y] In addition to herbicides, pesticide application covered under the PGP would include piscicides, lampricides, larvacides, and any other pesticide application to or over state surface waters. The application of pesticides has been and will continue to be regulated under FIFRA. For the same reasons as described above in #4, the Department believes that development of the PGP to provide additional regulation of pesticide application to or over state surface water would have "no significant impact" on wildlife, birds or fish.
6. UNIQUE, ENDANGERED, FRAGILE OR LIMITED. ENVIRONMENTAL RESOURCES: Are any federally listed threatened or endangered species or identified habitat present? Any wetlands? Species of special concern?	[Y] See #4 and #5.
7. HISTORICAL AND ARCHAEOLOGICAL SITES: Are any historical, archaeological or paleontological resources present?	[N] No impact would be expected to any historical or archaeological sites from pesticide application.
8. AESTHETICS: Is the project on a prominent topographic feature? Will it be visible from populated or scenic areas? Will there be excessive noise or light?	[N]

IMPACTS ON THE PHYSICAL ENVIRONMENT	
9. DEMANDS ON ENVIRONMENTAL RESOURCES OF LAND, WATER, AIR OR ENERGY: Will the project use resources that are limited in the area? Are there other activities nearby that will affect the project? Will new or upgraded powerline or other energy source be needed)	[N]
10. IMPACTS ON OTHER ENVIRONMENTAL RESOURCES: Are there other activities nearby that will affect the project?	[N]
IMPACTS ON THE HUMAN ENVIRONMENT	
11. HUMAN HEALTH AND SAFETY: Will this project add to health and safety risks in the area?	[Y] FIFRA regulates the application of pesticides, including reduction in health and safety risks through conformance to FIFRA labeling and pesticide safety training requirements. Although application of pesticides adds to health and safety risks above no pesticide application, there should be no discernible increase, and may be a decrease, in the risks from implementation of this PGP program due to the additional planning and regulatory review that would be required.
12. INDUSTRIAL, COMMERCIAL AND AGRICULTURAL ACTIVITIES AND PRODUCTION: Will the project add to or alter these activities?	[Y] The PGP may alter agricultural activities in that any pesticide application to or over water will require additional planning, monitoring, recordkeeping, and reporting.
13. QUANTITY AND DISTRIBUTION OF EMPLOYMENT: Will the project create, move or eliminate jobs? If so, estimated number.	[N]
14. LOCAL AND STATE TAX BASE AND TAX REVENUES: Will the project create or eliminate tax revenue?	[N]
15. DEMAND FOR GOVERNMENT SERVICES: Will substantial traffic be added to existing roads? Will other services (fire protection, police, schools, etc.) be needed?	[N]
16. LOCALLY ADOPTED ENVIRONMENTAL PLANS AND GOALS: Are there State, County, City, USFS, BLM, Tribal, etc. zoning or management plans in effect?	[Y] Implementation of the PGP would not have an impact on any of the relevant environmental plans and goals, including: • "*Aquatic Nuisance Species (ANS) Management Plan,*" August 2002, Montana Aquatic Nuisance Species (ANS) Technical Committee A subgroup of The Montana ANS Steering Committee. • "*Columbia River Basin Interagency Invasive Species Response Plan: Zebra Mussels and Other Dreissenid Species,*" October 1, 2008, Prepared for the 100th Meridian Initiative Columbia River Basin Team by: Paul Heimowitz, U.S. Fish and Wildlife Service - Pacific Region and Stephen Phillips, Pacific States Marine Fisheries Commission. • "*Montana Weed Management Plan,*" Revised May 2008, Montana Noxious Weed Summit Advisory Council Weed Management Task Force. • Mosquito Districts typically have *Integrated Pest Management Plans.* The PGP would not have a significant impact because it would not prohibit the use of pesticides. Instead, it would require decision-makers for pest management to evaluate their pest management needs and options and implement sound pest management practices.

17. ACCESS TO AND QUALITY OF RECREATIONAL AND WILDERNESS ACTIVITIES: Are wilderness or recreational areas nearby or accessed through this tract? Is there recreational potential within the tract?	[N]
18. DENSITY AND DISTRIBUTION OF POPULATION AND HOUSING: Will the project add to the population and require additional housing?	[N]
19. SOCIAL STRUCTURES AND MORES: Is some disruption of native or traditional lifestyles or communities possible?	[N]
20. CULTURAL UNIQUENESS AND DIVERSITY: Will the action cause a shift in some unique quality of the area?	[N]
21. OTHER APPROPRIATE SOCIAL AND ECONOMIC CIRCUMSTANCES:	[Y] Pesticide application is one of a number of pest management methods. There are many important human health, economic, and environmental benefits to consider in pest management, including some of the obvious: • Mosquito control – in addition to being a nuisance, they are a disease vector for West Nile virus. • Algae control – algae blooms can wreak havoc on aquatic environments. • Invasive species control – zebra mussels can close off irrigation pipelines and other water conveyance structures. • Native species restoration – piscicide application to repopulate specific water bodies with native Bull Trout.
22(a). PRIVATE PROPERTY IMPACTS: Are we regulating the use of private property under a regulatory statute adopted pursuant to the police power of the state? (Property management, grants of financial assistance, and the exercise of the power of eminent domain are not within this category.) If not, no further analysis is required.	[NA]
22(b). PRIVATE PROPERTY IMPACTS: Is the agency proposing to deny the application or condition the approval in a way that restricts the use of the regulated person's private property? If not, no further analysis is required.	[NA]
22(c). PRIVATE PROPERTY IMPACTS: If the answer to 21(b) is affirmative, does the agency have legal discretion to impose or not impose the proposed restriction or discretion as to how the restriction will be imposed? If not, no further analysis is required. If so, the agency must determine if there are alternatives that would reduce, minimize or eliminate the restriction on the use of private property, and analyze such alternatives. The agency must disclose the potential costs of identified restrictions.	[NA]

23. **Description of and Impacts of other Alternatives Considered:** The development of a PGP is required by the EPA, based on the Sixth Circuit Court decision on January 9, 2009 that the CWA

unambiguously includes "biological pesticides" and "chemical pesticides" with residuals within its definition of "pollutant." NPDES permits will be required by April 9, 2011 for discharges to state surface waters of biological pesticides, and of chemical pesticides that leave a residue. Montana is a delegated state with the legal authority to issue and enforce MPDES permits. The Department is required to develop a PGP that will be as stringent as the federal Pesticide General Permit. If the State of Montana does not impose the PGP, pesticide applicators will be required to obtain the federal permit from the EPA.

24. **Summary of Magnitude and Significance of Potential Impact**: The Department expects over one hundred pesticide applicators and/or decision-makers will be subject to the PGP. This is out of the universe of approximately 50 mosquito districts, 50 weed control districts, 50 irrigation districts, 10 Bureau of Land Management (BLM) and 10 US Forest Service field offices, and 100 pesticide applicators.

25. **Cumulative Effects:** Pesticide application is temporary and most pesticides are short lived; however, there are numerous types of pesticide that might be applied in the same general area for different purposes which could have short-term cumulative effects.

26. **Preferred Action Alternative and Rationale:** The preferred action is to issue the PGP because it would provide a regulatory mechanism for protecting water quality.

Recommendation for Further Environmental Analysis:

[ ] EIS [ ] More Detailed EA [x] No Further Analysis

Rationale for Recommendation: There would be no significant adverse impacts on the physical, biological or social portion of the human and natural environment for the reasons detailed above.

27. **Public Involvement:** There will be a 45-day public comment period for this General Permit.

28. **Persons and agencies consulted in the preparation of this analysis:** None

EA Checklist Prepared By: Christine Weaver, December 2010

Approved By:

Jenny Chambers, Chief
Water Protection Bureau

April 9, 2011
Date