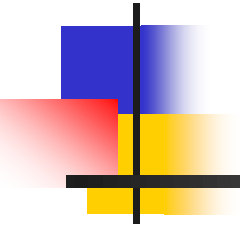
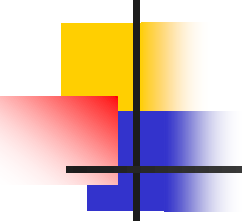


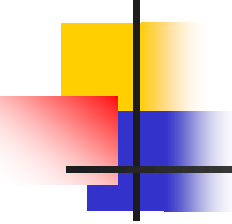
# Pesticide Use and Water Quality Considerations



---

Bob Hays  
Hays Environmental Services

- 
- **Waters of the United States** – EPA regulations at 40 CFR 122.2 define Waters of the United States as follows:
    - (a) All waters which are currently used, were used in the past, or may be susceptible to use in interstate or foreign commerce, including all waters which are subject to the ebb and flow of the tide;
    - (b) All interstate waters, including interstate “wetlands;”
  - (c) All other waters such as intrastate lakes, rivers, streams (including intermittent streams), mudflats, sandflats, “wetlands,” sloughs, prairie potholes, wet meadows, playa lakes, or natural ponds the use, degradation, or destruction of which would affect or could affect interstate or foreign commerce including any such waters:
    - (1) Which are or could be used by interstate or foreign travelers for recreational or other purposes;
    - (2) From which fish or shellfish are or could be taken and sold in interstate or foreign commerce; or
    - (3) Which are used or could be used for industrial purposes by industries in interstate commerce;
  - (d) All impoundments of waters otherwise defined as Waters of the United States under this definition;
  - (e) Tributaries of waters identified in paragraphs (a) through (d) of this definition;

- 
- (f) The territorial sea; and
  - (g) “Wetlands” adjacent to waters (other than waters that are themselves wetlands) identified in paragraphs (a) through (f) of this definition. [40 CFR 230.3 (s)]
- 
- Waste treatment systems, including treatment ponds or lagoons designed to meet the requirements of CWA (other than cooling ponds as defined in 40 CFR 423.11(m) which also meet the criteria of this definition) are not Waters of the United States. Waters of the United States do not include prior converted cropland. Notwithstanding the determination of an area's status as prior converted cropland by any other federal agency, for the purposes of the Clean Water Act, the final authority regarding Clean Water Act jurisdiction remains with EPA. [40 CFR 122.2]
  - Delineated Waters of the United States may or may not be wet at the time of discharge; however, discharges to such are still considered discharges to Waters of the United States. Also, this permit refers to the term “Waters of the United States” to identify those point source discharges required to obtain NPDES permit coverage. Any modification to the regulatory definition of “Waters of the United States” at 40 CFR 122.2 during the effective term of this permit becomes the legal standard for identifying those point source discharges required to obtain NPDES permit coverage consistent with the effective date of such regulations. See EPA’s website for up-to-date guidance on identifying Waters of the United States.



















# NPDES – The Basics

---

- National Pollutant Discharge Elimination System (NPDES)
- Part of the USEPA's Clean Water Act (CWA)
- Administered in Idaho by Region X EPA (Dirk Helder)





# PESTICIDE GENERAL PERMIT

---

- Mosquito and Other Flying Insect Pest
- Weed and Algae Pest Control
- Animal Pest Control
- Forest Canopy Pest Control



ID 0224 AT 12





# NPDES – The Basics

---

- Decision Makers and Applicators

- Decision Making Tool

<http://cfpub.epa.gov/npdes/pesticides/prtool.cfm>

- **Why is this important to me?**



# Importance

---

- Water Quality Concerns
- Criminal and Civil penalties (fines)
- \$37,500 per day of violation
- Third Party Lawsuit







# Aquatic Pesticide Applications

---

- To, or over waters of the U.S.
- NPDES Permit Required
- Pesticide General Permit
- Self-issue aspects





# Aquatic Pesticide Applications

---

- First Year of Implementation
- Phased Permit Levels
- Conditional Requirements
- NOI (Notice of Intent)



# Aquatic Pesticide Applications

---

- State DEQ Requirements (water intakes, notifications, etc.)
- PDMP (Pesticide Discharge Management Plan)
- Recordkeeping
- End of the Year Reports





# Experiences in Implementation



---

- Existing Permits
- Permit Overlaps
- Adverse Incidents
- Plan Updates





# Other NPDES Permits

---

## Point Sources

- Treatment Facilities
- Processing Plants
- Fish Hatcheries
- Storm Water Return – Municipalities
- Impaired Waters







# Overlaps

---

- Treatment of a site by multiple operations.
- Irrigation systems tend to be very well defined.
- Mosquito control varies by pest population thresholds and monitoring.
- Weed control varies by noxious weed infestations.







# Adverse Incidents

---

- Report requirements.
- Communication requirement.
- Determination of non-incidents and subsequent record keeping requirements.
- Not my application!







# Fish Kills

---

- Two Situations
  - Irrigation water source
  - Fish planted in ponds for recreation.
  - Over application of algaecide.
  - CWA Violation?
  - FIFRA Violation?









# Fish Kills

---

- Irrigation source
- HOA site
- MAD applications
- Applicators communicated to each other & determined that they do not have an adverse incident from their applications
  - *underdetermined cause.*







# HOA

---

- Decision Makers
- Relationship to applicator.
- Compliance of conditions of the PGP.
- Conflict of MAD Policy, Process and Practices



GEN COUNTY MOSQUITO  
ABATEMENT DISTRICT  
1646 West Highway 52  
Emmett, ID 83617  
(208) 365-5628





# Technical Effluent Measure

---

- Calibration
- Equipment Maintained
- Monitoring



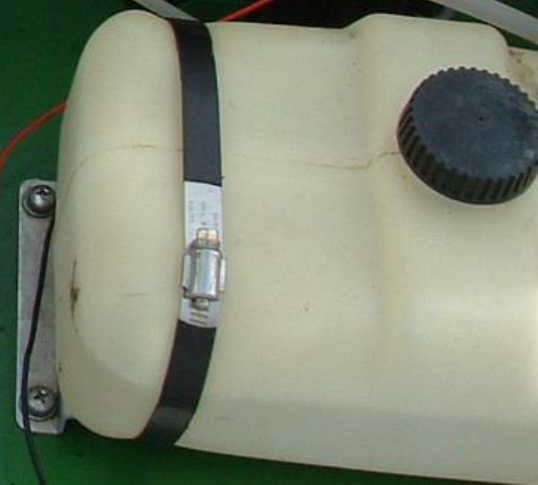
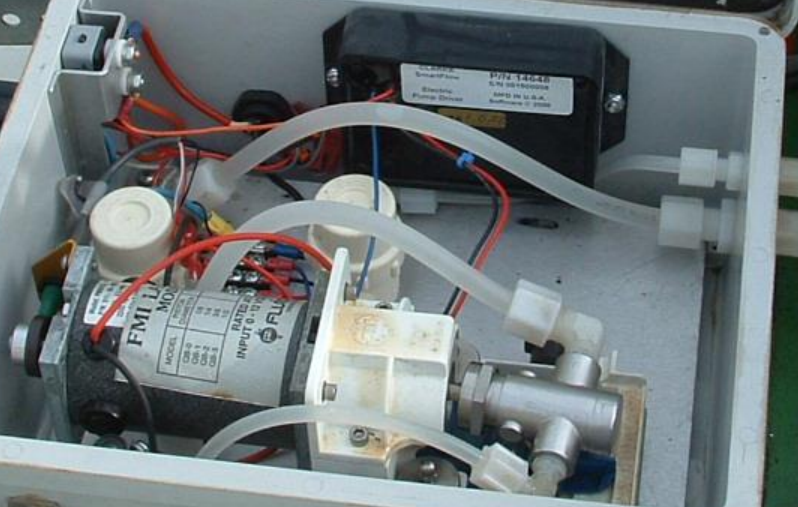


# SmartFlow

©CLARKE

ENGINEERING  
TECHNOLOGIES, INC. 199 Gordon Avenue  
Plymouth, IL 60172 USA

Tech/Parts Line 1-800-859-2847 • Tech/Parts Fax 763-428-8643





# End-of-the-Year Reports

---

- Overlap may present a multiplier effect on acres of application and therefore create more “Waters of the US” than actually exist, when multiple reports are reviewed.









# General Observations

---

- Once the permit becomes operational and you work through an annual cycle it starts to make some sense.
- There are noted benefit in situations where operational buffers are observed along waterways on both fertilizer and pesticide use.
- There are other factors calling for water quality considerations such as monitoring irrigation water for e-coli and pesticide residues for food crop that do not require processing prior to consumption. (GFSI –GAP – GMP)
- Late growing season drain-way water use for crops like mint which is very sensitive to pesticide residues in crop oils.
- CDC report on pesticide residue studies.
- ISDA pesticide residue reports on drain-ways.
- Downstream water quality standards.







# Bob Hays

---

- Hays Environmental Services
- NPDES – IPM – FIFRA Consultations
- IMVCA Executive Coordinator

208-880-3522

[bnbhays@cableone.net](mailto:bnbhays@cableone.net)