Surface Water Compliance Metric Toolkit, Water Quality Index Ag

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Compliance with the CWAD

The Conditional Waiver for Agricultural Discharges (CWAD):

• The CWAD governs agricultural discharges to both groundwater and surface water

• Eastern Municipal Water District (EMWD) is the CWAD Coalition Group Administrator
  • WRCAC is a supporting group; developing tools for surface water oversight
The Toolkit contains self-reporting steps:

- Runoff Water Quality Index (WQI\text{ag}) is a self reporting evaluation of the field water quality performance
- Periodic soil nutrient sampling summary confirms nutrient management is present
- When high WQI\text{ag} scores are recorded, growers will have additional recordkeeping requirements

WRCAC’s Compliance Metric Toolkit
GOALS:

- Better science on runoff data by farm and by group locations
- Ability to identify problems and fix them through incentives
- Encourage BMPs to contain and control runoff
- Encourage individual farm environmental stewardship
The WQIag Tool and Toolkit Offer Growers:

- Compliance Tool
- Education opportunities during the pilot:
  - 2 hours of CWAD required training; 1.5 hours after completion of the pilot study
- Reductions in cost of water quality monitoring (over time)
- Opportunities for individual growers to reduce costs:
  - Short-term: Gradual switch to a pay-for-performance approach
  - Long-term: Improved accuracy of field evaluation and the ability to test field changes against water quality value w/o installing the actual BMP/change
Pay for Performance Incentives

Short-Term WRCAC Goal Details

- Improve the understanding of current conditions
- Better understand what crop operations need for production in this hot-arid climate
- Adjust the WQIag for this region
- Create a performance-based incentive within Ag
- The incentive will redistribute internally the Ag sector payments for in-lake credit fees or provide other options
Illustration of Performance-Based
In-Lake Credit Fee Concept

Tier 1 (Not Shown); No Discharge ➞ No fee

Tier 2 Top 25th Percentile; Highest Reduction in Fees

Tier 3 Top 26th to 50th Percentile; Moderate Reduction in Fees

Tier 4 Below 50th Percentile; Increased Fees Used to Fund Other Discounted Tiers

<table>
<thead>
<tr>
<th>Year</th>
<th>Tier 4 Increase In Fee</th>
<th>Compared to $100 Base</th>
<th>Tier 2 Decrease In Fee</th>
<th>Compared to $100 Base</th>
<th>Tier 3 Decrease In Fee</th>
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Why the WQIag Tool?

- USDA NRCS created the Runoff Water Quality Index (WQIag)
- WRCAC is adjusting the tool to be San Jacinto River Watershed specific
WQIag Calibration and Adjustments in a Data Poor Watershed

- An existing gap in Ag discharge understanding exists
  - Monitoring and operation data is missing for many cropping systems
- Future CWAD requirements for monitoring and Ag Nutrient Management Plan (AgNMP)
- WQIag is being, and will be calibrated for the San Jacinto River Watershed by:
  - The pilot study’s grower dataset that will be used to statistically define the variability among fields and soils
  - The gathered water quality monitoring data and assessments
- Once calibrated the WQIag tool has been shown to respond to conservation efforts according to how the real world responds
WQIag Comparison to Field Data

Minnesota Edge-of-Field Discharged Loading (Total Suspended Solids & Total Phosphorus) compared to WQIag Core Components
Current WQIag Pilot Study Materials Include

- Operator identified Conditional Waiver for Agricultural Dischargers (CWAD) NOI data
- GIS field maps
- WQIag instructions
- Field data entry for nine (9) categories of the operation
- Three (3) optional webinars to answer questions in November & December of 2019
- Data analysis of field variabilities in early 2020
For large parcels: a parcel may have been split up into smaller fields

WQIlag tracks different crops, equipment passes, nutrient, pesticide and irrigation management, each requiring an
2 Examples of the 9 WQIag Data Requests

Field Location Information and Nutrient Application Rates according to guidance
2 More Examples of the 9 WQIag Data Requests

Soil Condition and Nutrient Placement

& Tillage Management

Soil Condition and Nutrient Placement

Tillage Management

* Describe the soil disturbance the field experiences by selecting a Soil Tillage Intensity Rating (STIR) value.

- Conventional (STIR 61-100)
- No Till (STIR < 30)
- Mulch (STIR 31-60)
- Conventional (STIR 61-100)
- Intensive (STIR >100)

MESSAGE: Select the "OK" Button to save entries.
Questions?