Introduction to
Waste Discharge Requirements for Confined Animal Facilities

Horse Keepers Workshop for Clean Water
April 26, 2017

San Francisco Regional Water Quality Control Board
Laurie Taul, Planning Division
Your Water Board
San Francisco Bay Regional Water Quality Control Board

- State agency responsible for protecting water quality and beneficial uses of water for the use and enjoyment of its people in the Bay Area

- Authorities come from:
  - The federal Clean Water Act
  - California’s Porter-Cologne Water Quality Control Act
  - Water Quality Control Plan (Basin Plan) for the San Francisco Bay Basin
Impaired Water Bodies and TMDLs

- Waters not meeting standards are designated as “impaired”

- Impaired water bodies trigger a process to evaluate sources of pollutants contributing to impairment

- Total Maximum Daily Load (TMDL)
  - Plan to address water quality impairment
  - Goal – attain or maintain water quality standards
TMDLs completed:
Pathogens
Sediment
Mercury

Pathogen Sources:
✓ Septic systems
✓ Boat discharges
✓ Grazing
✓ Dairies
✓ Equestrian facilities
✓ Municipal runoff
✓ Small wastewater treatment facilities
# TMDLs that identify CAFs

<table>
<thead>
<tr>
<th>Impaired Waters with TMDLs</th>
<th>Sources of Bacteria and Sediment</th>
</tr>
</thead>
<tbody>
<tr>
<td>Tomales Bay</td>
<td>• Dairies</td>
</tr>
<tr>
<td></td>
<td>• Horse facilities</td>
</tr>
<tr>
<td>Sonoma Creek</td>
<td>• Dairies</td>
</tr>
<tr>
<td>Napa River</td>
<td>• Confined animal facilities</td>
</tr>
<tr>
<td>San Pedro Creek and Pacifica State Beach</td>
<td>• Horse facilities</td>
</tr>
<tr>
<td>San Vicente Creek (WQ Improvement Plan)</td>
<td>• Horse facilities</td>
</tr>
</tbody>
</table>
Current Programs for Animal Sources

- **Conditional Waiver of WDRs for Grazing**
  - Tomales Bay, Napa River and Sonoma Creek watersheds

- **Conditional Waiver of WDRs for Dairies**
  - Renewed in June 2015 for 5-year term
  - Applies only to dairies that certify compliance with statewide minimum standards

- **General WDRs for Confined Animal Facilities**
  - Renewed in June 2016
  - Region-wide - Apply to all types of CAFs (dairy & non-dairy)
CAF defined as “... any place where cattle, calves, sheep, swine, horses, mules, goats, fowl, or other domestic animals are corralled, penned, tethered, or otherwise enclosed or held and where feeding is by means other than grazing.”
State CAF Regulations and Permit Requires

- Divert clean storm water away from areas with animals and/or manure
- Contain manure/bedding & storm water contacting it
- Apply solid/liquid wastes at appropriate rates for soil & crops with no discharge
- Manure/bedding must not be stockpiled or applied within 100 ft. of surface waters unless alternative practice is used.
State CAF Regulations and Permit Requires

- Keep animals out of creeks within confined areas
- Contain non-storm water and other wastes
- Manage grazing lands to reduce bacteria and sediment runoff
2016 General Permit

- **Tier 1**
  - CAFs that do not utilize liquid waste retention ponds.
  - Applied to TMDL watersheds

- **Tier 2**
  - Dairies and others that utilize liquid waste ponds
  - Future dairies and existing dairies after Waiver expires

- **Tier 3**
  - Any type of CAF that cannot certify compliance or designated by Water Board due to its complexity, threat to water quality, or is contributing to adverse water quality impacts.
Tier 1 Requirements

- Enroll by submitting Notice of Intent with fee
- Complete Monitoring and Sampling Plan
- Complete Ranch Water Quality Plan
  - Schedule for improvements
  - Request compliance extension if needed
- Submit completed Annual Report form with sampling results

<table>
<thead>
<tr>
<th>2016</th>
<th>2017</th>
<th>2018</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Annually
Water Quality Monitoring

- Surface water sampling
  - 3 storm events annually
- Measure of “residual dry matter” for grazing lands over 50 acres
- Visual inspections with photos
- Option for individual or watershed sampling program
- Option for reduced sampling after 2 years of good results
Sampling Procedures

When?
- During or directly following each of 3 major storm events, after at least 1 inch of rain per 24 hours. Sampling events shall be at least 14 days apart.

Where?
- Upstream and downstream boundaries
- Near high-use and high-risk areas

How?
- Clean container / representative sample
- Tests strip kits and water quality probe
- Each sample tested for all parameters immediately
<table>
<thead>
<tr>
<th>Constituent</th>
<th>Benchmark</th>
<th>Sampling Results</th>
</tr>
</thead>
<tbody>
<tr>
<td>Specific conductance</td>
<td>Below 2000 µS/cm</td>
<td>Sample I.D.</td>
</tr>
<tr>
<td>Total ammonia nitrogen ($\text{NH}_3 + \text{NH}_4^+$)</td>
<td>Below 1 ppm (or mg/l) and meets calculated unionized ammonia benchmark</td>
<td>Result</td>
</tr>
<tr>
<td>Unionized ammonia ($\text{NH}_3$) as calculated</td>
<td>0.025 mg/l</td>
<td></td>
</tr>
<tr>
<td>pH</td>
<td>6.5-8.5</td>
<td></td>
</tr>
<tr>
<td>Temperature ($^\circ\text{C}$)</td>
<td>none</td>
<td></td>
</tr>
</tbody>
</table>
Visual Inspections

Everyone:

- Pre-rainy season preparations and photos
- Animal housing, corrals, manure storage areas, wash racks, etc. – daily
- Before, during and after storm events
- Document problems and corrective actions
Visual Inspections

If grazing 50 acres or more:

- Monthly during rainy season
- Twice during dry season
- RDM measurement in Fall

If manure or compost is applied to land:

- Each day of application
- Record dates, location, volumes
Ranch Water Quality Plan

- Lays out how your ranch meets the permit requirements and protects water quality

- Plan includes:
  - Facility Map and Evaluation
  - Implementation plan for improvements if needed, with description of temporary measures
  - Description of pollution prevention practices for:
    - Confined areas
    - Waste storage
    - Grazing and land management
    - Land application
Summary

- Site-specific requirements
- Improvements completed by November 2018 or request an extension
- After plan in place, ongoing tasks include:
  - Implement management practices
  - Winter prep and sampling
  - Visual inspections
  - Annual reporting
Questions?

Ag Program webpages:
http://www.waterboards.ca.gov/sanfranciscobay/water_issues/programs/TMDLs/agriculture/index.shtml

Staff Contacts:
Laurie Taul: Laurie.Taul@waterboards.ca.gov
510-622-2508
Jim Ponton: Jim.Ponton@waterboards.ca.gov
510-622-2492
Sonoma Creek Watershed

TMDLs completed:
Pathogens
Sediment

Pathogen Sources:
✓ Septic systems
✓ Grazing
✓ Dairies
✓ Municipal runoff
✓ Municipal wastewater
The Napa River Watershed

TMDLs completed:
Pathogens
Sediment

Pathogen Sources:
✓ Septic systems
✓ Grazing
✓ Confined Animal Facilities
✓ Municipal runoff
✓ Municipal wastewater
San Pedro Creek and Pacifica State Beach Watershed

TMDL: Bacteria

Bacteria Sources:

- Sanitary sewer systems
- Horse facilities
- Municipal stormwater runoff and dry weather flows
San Vicente Creek Watershed

Listing: Bacteria

Priority Bacteria Sources:

- Horse waste
- Dog waste
- Municipal stormwater runoff
- Septic systems