10-Year Water Quality Roadmap and Nutrients Reduction Voluntary Incentive Program

December 14, 2017
History of Nutrients Management in Colorado
We have been working on this for a long time

1998: USEPA develops Numeric Nutrient Strategy

2001: USEPA develops timeline for implementation nationwide

2002: CDPHE submits CO’s plan to USEPA and begins work group process

2004

2006
We have been working on this for a long time

2008: USEPA develops nationwide progress report

2011: USEPA issues cooperation memo and CO delays rulemaking to focus on cost benefit

2012: CO adopts rulemaking that allows for phased implementation of nutrient controls (Reg #85 and 31.17 of Reg #31)

2015: Reg. #85 and Reg. #31.17 TRIH

2016: EPA R8 action letter on 2012 rulemaking
Current regulatory strategy

**Nutrients Management Control Regulation**
- Technology based treatment requirements
- Enhanced controls for stormwater dischargers
- Voluntary controls of nonpoint sources
- Monitoring requirements

**Scientifically-based numerical values**
- Focused on protection of classified uses
- Applied to streams and lakes above dischargers
- Applied to protect municipal water supplies
Progress on implementing Regulation #85

- Implementation in permits
- Engineering reviews
- Grants and loans
- Monitoring
- Standards
10-Year Roadmap Details
Why a 10-year roadmap?

- Stoner and Beauvais memos - nutrient management plan
- Priorities
  - Standards actions - different approach
  - Importance of implementation and feasibility
  - Work group and outreach efforts
- Time for permittees to plan regulatory strategy
10-Year Water Quality Roadmap

Roadmap begins

2018

Draft cadmium and arsenic criteria

2019

Reg. #85 Review

2020

Draft lakes TN & TP criteria

2021

Reg. #31 RMH clean-up, cadmium, arsenic, temperature standards revisions

2022

Adopt chla for streams, TN & TP for DUWS/Swim Beaches

Reg. #85: NPS controls, incentive efforts

Outreach
Adopt TN & TP for remaining waters and adopt ammonia and selenium statewide.

- **2023**: Draft ammonia criteria
- **2024**: Draft selenium criteria
- **2025**: Reg. #85 Review
- **2026**: Draft streams TN & TP criteria
- **2027**: Adopt TN & TP for remaining waters and adopt ammonia and selenium statewide.
Regulatory actions

- **2021 - Reg. #31 RMH**
  - Cadmium, arsenic, and temperature - statewide
  - Delay adoption of ammonia and selenium

- **2022 - Reg. #31/#85 RMH**
  - Chlorophyll ‘a’ statewide
  - Adopt TN and TP for targeted lakes and reservoirs
  - Nonpoint source
  - Other TRIH items
Regulatory actions (continued)

- 2026 - Reg. #31 RMH
  - Clean-up and corrections
- 2027 - Reg. #31/#85 RMH
  - Ammonia and selenium - statewide
  - TN and TP for remaining waters - statewide
Standards Development Technical Efforts

● 2020
  ○ Draft cadmium criteria available
  ○ Draft arsenic criteria available

● 2021
  ○ Draft updated TN and TP criteria for lakes

● 2023
  ○ Draft ammonia criteria available
Standards Development Technical Efforts (continued)

- **2024**
  - Draft selenium criteria available

- **2026**
  - Draft TN and TP criteria for stream available
Feasibility studies and implementation efforts

- **2022**
  - Treatment competition and feasibility study results available (temperature, ammonia, selenium, nitrogen, and phosphorus)

- **2020-2027**
  - Focus on implementation strategies
Work group efforts and outreach

- Quarterly Roadmap meetings - start spring 2018
- TACs - technical work by parameter
- Annual updates
  - WQCC
  - WQ Forum membership meetings
Annual timeline for updating the roadmap

**Apr**
Division updates 10-Year Water Quality Roadmap. Feedback from forum.

**May**
Division responds to feedback. Division will update 10-Year Water Quality Roadmap if necessary.

**Jul**
Further discussion at forum retreat.

**Sep**
Feedback from WQCC at their annual meeting. Division will finalize updates and post updates to division’s website.
Incentives for early nutrient reductions

- WQCC Policy 17-1 (flexibility)
- Compliance Schedule (CS) Incentive encourages facilities to reduce below Reg #85 limits before required
- Available to all facilities discharging to a surface water (size; DWWTW; industrial)
- Incentive designed to enhanced biological nutrient reduction
- Voluntary
Incentive Compliance Schedule: Interplay with Existing Framework

- Early reductions = more time to comply with Reg #31 limits; flexibility
- Incentive earned 2018 thru 2027
- Incentive compliance schedule applicable in permits issued after 2027
- Must opt into program by December 31, 2019: form and plan
Incentive Compliance Schedule: Interplay with Existing Framework

- Minimum: monthly composite samples (TP and TIN)
- Annual median driven
- Trading (1:1 and 2:1)
- Sharing of credits
Incentive Compliance Schedule: Mechanics of Program

- Duration of CS calculated based on annual reporting
- Incentive CS is “additive” to other CS independently justified in a permit
  - Permit writer = underlying CS
  - Policy 17-1 = Incentive CS
Incentive program details (statewide)

- Linear scale to calculate months between upper and lower bounds
- Facility can earn up to 7.5 years each for TIN and TP reductions independently
- May only earn incentive for TIN or TP
- Total incentive earned after adding TIN and TP together cannot exceed 10 years
- Total incentive additive with permit compliance schedule
## Accumulation of incentive months

**(statewide)**

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<th>Total phosphorus annual median (mg/L)</th>
<th>≥1.0</th>
<th>≤0.7</th>
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<td>Months earned</td>
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<td>12</td>
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<th>Total inorganic nitrogen annual median (mg/L)</th>
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<th>≤7</th>
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<td>Months earned</td>
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Incentive program details
(for Barr Milton TMDL facilities)

• Linear scale to calculate months between upper and lower bounds for TIN
• Broken linear scale for TP at 0.7 mg/L
• Facility can earn up to 7.5 years for TIN and 10 years for TP reductions
• May only earn incentive for TIN or TP
• Total incentive earned after adding TIN and TP together cannot exceed 10 years
Accumulation of incentive months
(for Barr Milton TMDL facilities)

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Incentive scaling for DSVs

- Facilities that obtain a DSV where no additional feasible pollution control alternative exists will not be able to use incentive credit for an extended compliance schedule.
- Facilities that obtain a DSV where a feasible pollution control alternative exists will be able to use incentive credit but the years earned as part of the incentive program will be reduced by 33 percent.
- Total duration may not exceed 12 years.
EXAMPLE "cap" for incentive compliance schedules for WQBEL vs. DSV AEL

Length of compliance schedule (years)

- WQBEL
  - Cap=15 years
- DSV AEL
  - Outstanding Issue Cap=12 years

Incentive compliance schedule
Underlying compliance schedule
Outstanding Issue: AEL compliance schedule vs. DSV Duration

● AEL compliance schedule length must be less than or equal to the DSV duration per EPA’s new water quality standards rule

● Maximum of 12 years
  ○ 5 years maximum for underlying compliance schedule
  ○ 6.6 years maximum (33% of earned) incentive compliance schedule
Safety Clause

● Division Proposal: Section 85.5(1.5)(e)

● In implementing the Incentive Program the division maintains its authority to:
  ○ WQCA - Issue orders to address public health emergencies
  ○ Regulation #61 - Modify permits to address endangerment to public health or classified uses

● Purpose: Transparency in the context of nutrients regulation and Incentive Program
Outstanding Issue: Safety Clause

Statement of Basis and Purpose

- Division exercise of authority not anticipated
- Examples of situations that could trigger exercise of this authority
- Case-by-Case: All potential contributors will be evaluated to address such situations
  - Municipal Stakeholders: Alternate SBP language to address how emergency situations will be evaluated