

Nevada Bureau of Water Quality Planning

Truckee River Water
Quality Standards Review

January 12, 2012

Background on Review of Truckee River Water Quality Standards (WQS)

- Truckee River standards haven't been reviewed since 1993
- Jan 6, 2011 – NDEP announces triennial WQS Review process, solicits input
 - Feb 22, 2011 – Third Parties submit letter to NDEP requesting review of Total Phosphorus (TP) and Total Nitrogen (TN) WQS
- Review of TMDL planned
 - NDEP: Review of standards prior to TMDL review is appropriate
- Truckee River standards and Lahontan Reservoir standards linked by virtue of Truckee Canal
 - Consideration of downstream waters - need to review Lahontan Reservoir standards
 - Truckee River standards review will be delayed 3-4 years

Key Elements of Water Quality Standards

- 1) Designated beneficial uses
- 2) Criteria to protect beneficial use
- 3) Antidegradation provision (RMHQ)

Nevada Beneficial Uses

- Municipal or domestic supply
- Irrigation
- Watering livestock
- Propagation of aquatic life (coldwater, warm water fish)
- Propagation of wildlife
- Enhancement of water quality

Nevada Beneficial Uses (cont'd)

- Industrial Supply
- Waters of extraordinary ecological or aesthetic value (Lake Tahoe)
- Recreation involving contact with the water (swimming)
- Recreation not involving contact with the water (boating)

Factors in Designating a Beneficial use

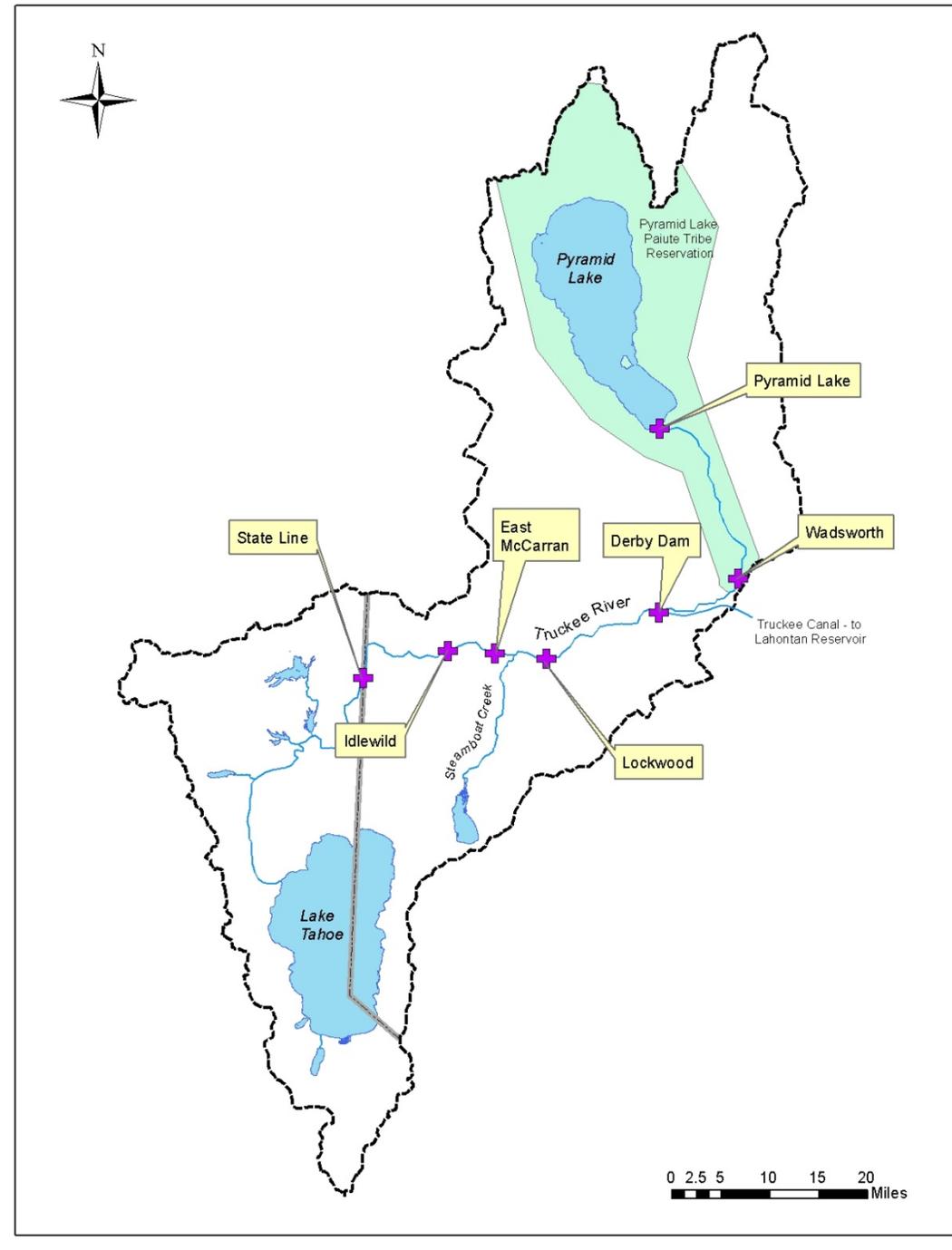
- Existing uses
- Public concerns
- Desired potential uses

Designating Reaches

- Physical characteristics (confluence)
- Changing land uses
- Beneficial uses (fish species)

Truckee River Reaches

- Stateline to Idlewild
- Idlewild to East McCarran
- East McCarran to Lockwood
- Lockwood to Derby
- Derby to Wadsworth
- Wadsworth to Pyramid Lake



Truckee River Beneficial Uses

- Irrigation
- Livestock watering
- Contact recreation
- Noncontact recreation
- Industrial supply
- Municipal or domestic supply
- Propagation of wildlife
- Propagation of aquatic life

Truckee River Beneficial Uses – Propagation of Aquatic Life

- **Stateline to East McCarran** – all life stages of mountain whitefish, rainbow trout and brown trout
- **East McCarran to Lockwood** – juvenile and adult rainbow trout and juvenile and adult brown trout
- **Lockwood to Derby** - juvenile and adult rainbow trout and juvenile and adult brown trout. However, the species which are sensitive to temperature are expected to seek a cooler microhabitat during July and August
- **Derby to Wadsworth** – early spawning Lahontan cutthroat and their incubation, larvae, juveniles and migration, from May through June, depending on hydrological conditions
- **Wadsworth to Pyramid Lake** – early spawning Lahontan cutthroat and cui-ui, and their incubation, larvae, juveniles and migration, from May through June, depending on hydrological conditions

Water Quality Criteria

- Numeric values which protect uses
- Utilize sound scientific rationale
- Criteria are guidelines in establishing standards
- Other criteria may be used (NDOW)
- Natural conditions

Truckee River Water Quality Criteria

- Routine Pollutants
 - NAC 445A.183 through 445A.190
- Toxics – Statewide criteria
 - NAC 445A.144

Truckee River Routine Pollutant Criteria

- Temperature
- pH
- Dissolved oxygen
- Chlorides
- Total phosphate
- Orthophosphate
- Nitrogen – Total, nitrate, nitrite, ammonia
- Total dissolved solids
- Turbidity
- Color
- Alkalinity
- Fecal coliform
- E coli
- Suspended solids
- Sulfate
- Sodium adsorption ratio
- BOD (biochemical oxygen demand)

Antidegradation Standards

- Nevada Revised Statute 445A.565 requires that any surface water whose quality is higher than the applicable standards must be maintained in their higher quality
- RMHQS set to characterize existing higher quality

Truckee River

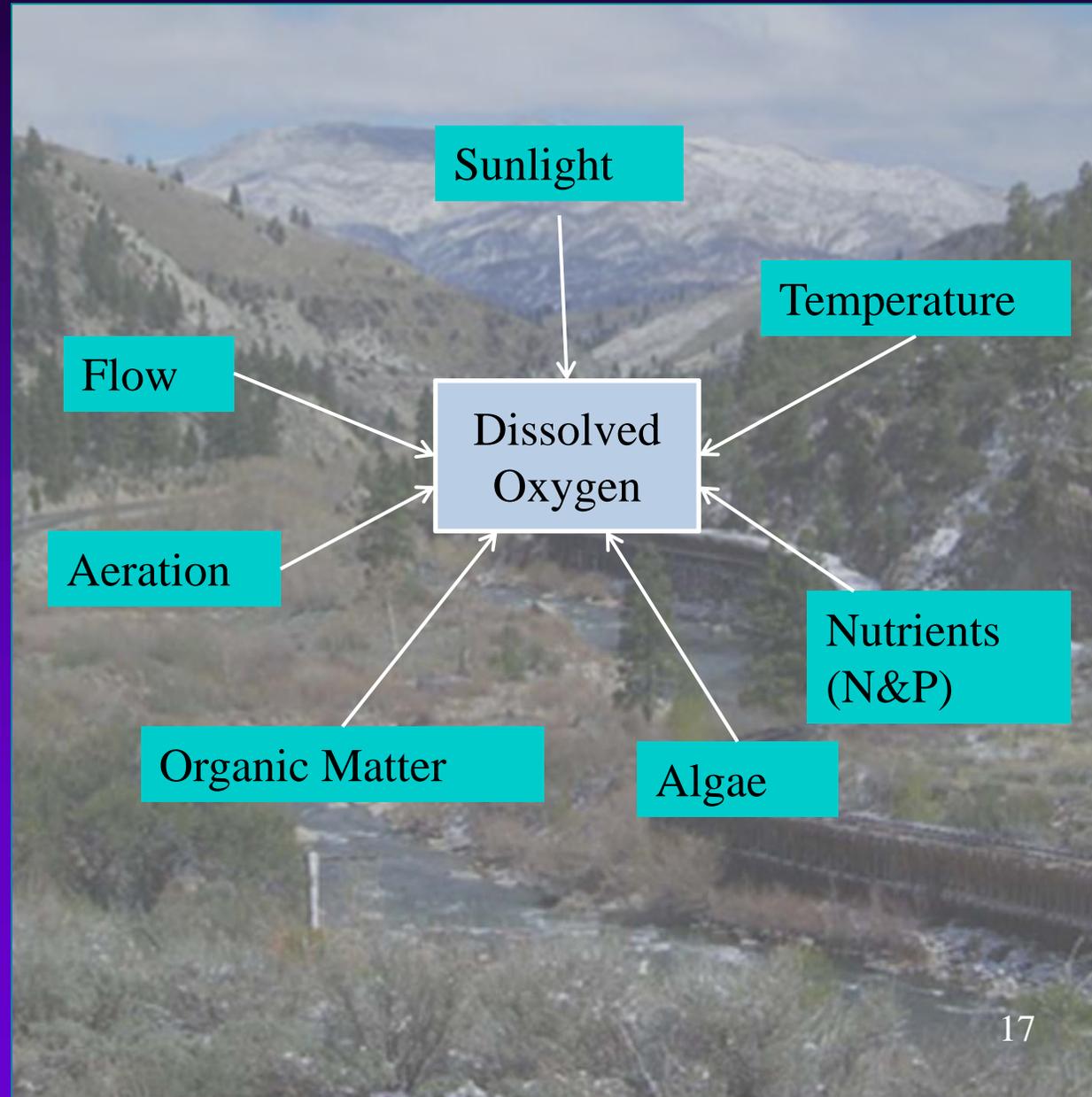
Antidegradation Standards

- Temperature
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- Total phosphate
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- Total nitrogen
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Some Potential Revisions

- Nitrogen and Phosphorus standards based upon results of TMDL modeling
 - ◆ Dependent upon compliance with Dissolved Oxygen standard and downstream standards
- Adjust nitrate standard
- Remove PLPT reaches from NAC
- Change “Total Phosphates” to “Total Phosphorus”
- Remove BOD (Biochemical oxygen demand)
- RMHQs (Requirement to maintain high quality water)

Compliance with Dissolved Oxygen (DO) Standard is Key Element for Aquatic Life Beneficial Use



Standards Adoption Process

- Target a Basin/Water or an Issue (such as toxics)
- Meet with stakeholders
- Develop data and analyze as appropriate
- NDEP proposes new/revised water quality standards
- Public workshops conducted
- Public comment received and reviewed
- State Environmental Commission
- Submittal to State Legislative Committee and the AG's Office
- EPA for approval

Thank You

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