Economic Framework: Performance Standards for Water Loss

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Economic Level of Leakage

Present value of cost

Level of leakage

Costs associated with water loss

Economically Recoverable

Potentially Recoverable

Unavoidable Real Loss

Economic level of leakage

Net cost of intervention

Cost of intervention
Cost of Compliance

- Staffing
- Technology
- Monitoring and record-keeping
- Outreach
- Operation and maintenance
- Installation/Implementation
- Analysis
Need for a Long-term Approach
Benefits from Compliance

Avoided cost of water
Benefits from Compliance

Avoided damages

Avoided cost of outages

Impacts on traffic

Customer satisfaction
Intervention Toolbox

Achievable leakage levels: Combination of available interventions at different leakage levels

Cost of intervention
Intervention Toolbox

- Speed and Quality of Repairs
- Active Leakage Control
- Asset Management
- Economically Recoverable Real Loss
- Pressure Management
Monitoring and Initial Implementation
Phases 1 and 2

- Comply with grade 4 requirement: Oct. 1, 2021
- Submit Component Analysis: Dec. 1, 2022
- Standard for Allowable water loss volume: Nov. 1, 2023
- Two submissions of Component Analysis: Dec. 1, 2026
- Standard for Allowable water loss volume: Nov. 1, 2027
Initial Performance Standards

Costs for Monitoring and Analysis
- Component Analyses
- Pressure Monitoring

Cost of Interventions for reducing losses at a given level of leakage

Avoided cost of lost water

Water Loss Audits
- Water loss estimates
- System characteristics
- Intervention costs at different leakage levels

Electronic Annual Reports
- Reduction through different interventions
- Cost of water
- Avoided costs: Outages, Damages, Energy, Capacity

Case studies

Literature

+
Adjustments for Phases 1 and 2

Phase 1
• Compliance date for:
  o Grade 4 for Average Operational Pressure (AWWA audit)
  o Submission of Component Analysis
• Allowable water loss volume for Phase 2
  o Adjustment requests based on audit data

Phase 2
Allowable water loss volume for Phases 3 and 4
• Submission of adjustment requests based on initial implementation
Additional Data from Phases 1 and 2

Annual Water Loss Audit + Electronic Annual Report

Leakage Component Analysis

Adjustments
Systemwide Implementation
Phase 3

- Reassessment of initial standards: Nov. 1, 2027 to June 1, 2028
- Reassessed standard for allowable water loss volume: Oct. 2028 to Oct. 2035
- Maintain allowable water loss volume: Oct. 1, 2035
Reassessed Performance Standards

Water Loss Audits
- Initial implementation

Electronic Annual Reports
- Adjustments

Component Analysis
- Case studies
- Literature

- Water loss estimates
- System characteristics
- Intervention costs at different leakage levels
- Leakage profile

- Reduction through different interventions
- Cost of water
- Avoided costs:
  - Outages, Damages, Energy, Capacity
- Implementation constraints

Costs for Monitoring and Analysis
- Component Analyses
- Pressure Monitoring

Cost of Interventions for reducing losses at a given level of leakage

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Avoided cost of lost water
Summary of Proposed Framework

• Long term phased approach
  • Adjustments in compliance requirements
  • Findings from initial implementation
• Cost-effective implementation from intervention toolbox
  • Data from water loss audits, Component Analysis, initial Implementation, case studies, literature
    • System characteristics, leakage profile, water loss estimates, intervention efficiencies, water cost profile
• Benefits
  • Revenue
  • Avoided costs of damage, outages, energy and capacity
  • Customer satisfaction
Next steps

• Spring 2019 workshop on economic model: May - June 2019
• Formal rulemaking process expected to begin: Early July 2019
### Hot Topics
- Conservation
- Agriculture
- Cannabis Cultivation
- Delta Watermaster
- Beaches & Ocean
- Drought Year Info

### Programs
- Enforcement
- Financial Assistance
- Groundwater
- Human Right to Water
- Operator Certification
- Permit / Licensing
- Petitions
- Septic Systems
- Storage Tanks
- Storm Water
- Strategic Plan
- Water Quality
- More Programs

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https://www.waterboards.ca.gov/water_issues/programs/conservation_portal/water_loss_control.html