Idaho Wastewater Reuse Conference

June 17 and 18, 2008

The choice between Class A and Class B Reclaimed Wastewater

Rules, Guidance, Permitting

- BEFORE YOU START:
- READ ALL THE RULES and Part of the Guidance
- Hire an Experienced Consultant
- Plan a concept for your project
- Make an appointment with DEQ to discuss

Rules, Guidance, Permitting

- IDAPA 58.01.17 – Reuse Rules – http://adm.idaho.gov/adminrules/rules/idapa58/0117.pdf
- Definitions: Reuse vs. Land Application
- IDAPA 58.01.16 – Wastewater Rules – http://adm.idaho.gov/adminrules/rules/idapa58/0116.pdf
- Reuse Guidance – http://www.deq.idaho.gov/water/permits_forms/permitting/guidance.cfm
- Permit Application – See Reuse Rules and Chapter 1 of Reuse Guidance

Rules, Guidance, Permitting

- Submittals for Reuse Projects:
  - Facilities Plan (overall Wastewater project)
  - Preliminary Engineering Reports (PER) for Wastewater components
  - (Class A) Engineering Report for all treatment and reuse components (may be combined with PER requirement above)

Rules, Guidance, Permitting

- Submittals for Reuse Projects (cont.)
  - Reuse Application
  - Plans and Specs, TFM, O&M
  - Don’t forget the Drinking Water Project has separate requirements and submittals

Class A and Class B Requirements

- Both Class A and B:
  - Oxidized, coagulated, clarified, filtered
  - Pilot tested or otherwise approved by DEQ
  - Total Coliform = 2.2 per 100 ml
  - Point of Compliance is prior to storage
  - Minimum Size for Private Systems is 25,000 gpd (average day flow) based on Wastewater Rules
  - Reuse Permit REQUIRED for all Classes

Class B Requirements

- Class B:
  - Potential for Groundwater Monitoring
  - Buffer distances – see Chapter 6 of Reuse Guidance
  - Operator Certification for Distribution
  - Residual Chlorine Required

Class B Requirements

- No Aquifer Recharge (Rapid Infiltration allowed)
- What's the difference between aquifer recharge and rapid infiltration?
- Treatment Redundancy still required by Wastewater Rules
- Purple Pipe Recommended, not required
- Distribution System licensed operator required

Class A Requirements

- Class A:
  - More Uses
  - Distribution System Operator Licensing not required
  - Specific Engineering Report Requirements
  - Distribution System Requirements
  - Purple Pipe Required
  - No Residual Chlorine Required

Class A Requirements

- Class A:
  - Filtration Technology Acceptance Prior to Design – http://www.deq.idaho.gov/water/permits_forms/permitting/ww_filtration_technology_acceptance.cfm
  - Nutrient Removal Requirements
    - Total N = 10 mg/L max for Ground Water Recharge
    - Total N = 30 mg/L max for Irrigation and other non-recharge uses

Class A Requirements

- Class A:
  - Turbidity Requirements:
    - 2.0 NTU for granular and cloth filters
    - 0.2 NTU for membrane filters

Class A Requirements

- Class A:
  - Disinfection Requirements:
    - Total Coliform = 2.2 per 100 ml AND
    - 5 log Inactivation of Virus using approved UV systems or 450 CCT with Chlorine

Class A Requirements

- Class A:
  - Reliability and Redundancy Requirements:
    - Complete Redundancy to treat peak day flow

      AND
    - One of the following
      - 1. Approved Alternative Disposal Option or
      - 2. Diversion to adequate lined storage (7 days) or
      - 3. Equivalent Backup System
      - Any of these three must be automatically activated if turbidity exceeds limits...

Class A Requirements

- Class A
  - Standby Power Required
  - Standby Filter Units Required

  - OR for both of above:
    - Automatic by-pass of filtration to alternative permitted disposal option.

Class A Requirements

- Class A:
  - BOD5 = 5 mg/L max. for Groundwater Recharge and 10 mg/L max. for Non-recharge
  - pH between 6.0 and 9.0
  - Owners of Groundwater Recharge systems must control the ground within 1000 ft. or 6 months aquifer travel time down gradient from the recharge location
  - Class A mixed with canal and surface water can be used as Class A

Class A Requirements

- Class A:
  - Technical Capacity required to be submitted prior to receiving permit
  - Financial Capacity required to be submitted prior to receiving permit
  - Managerial Capacity required to be submitted prior to receiving permit
  - TFM (modified) also required for all Wastewater Projects under Wastewater rules

Class A Uses

Class A Uses:

- Residential Irrigation
- Ground water Recharge (no injection)
- Specific fire and dust suppression
- Toilet flushing, other approved uses
- Subsurface Disposal
  - permitted by DEQ, not Health District
  - based on both Reuse and Subsurface Rules
  - slightly reduced trench surface area based on effluent quality

Class B Uses

Class B Uses:

- Irrigation of parks, playgrounds, golf courses
- Rapid Infiltration Basins (rest and dose)
- Specific fire and dust suppression
- toilet flushing, other approved uses

Decisions, Decisions?????
Class A or Class B

QUESTIONS:

- Ground Water Recharge vs. Winter Storage
- Disposal vs. Reuse
- Aquifer Storage and Recovery (ASR)?
- Water Rights
- Other?

Decisions, Decisions?????
Class A or Class B

- Use Specific
- Site Specific
- Budget
- Operations and Maintenance!!!!!!!!!!