

Planned Communities Leading the Way in Implementing DEQ's Wastewater Reuse Policy



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Third Idaho Wastewater Reuse Conference

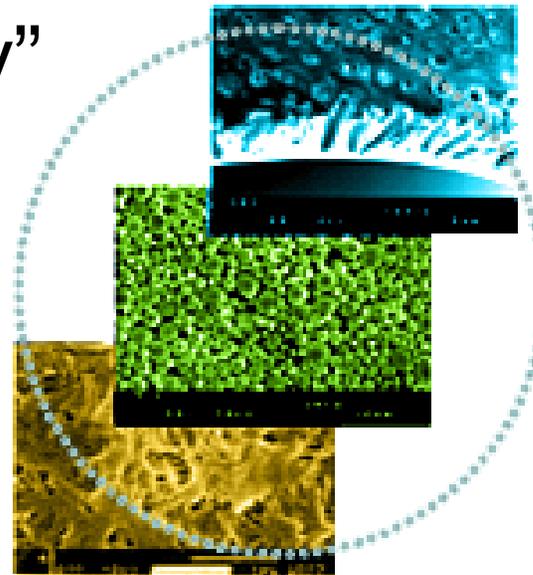
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Wastewater Reuse Implementation in Idaho

- Policies, guidance, and reports
- Reuse opportunities
- Planned communities
 - Integrated water management
 - PC case histories
- Non-growing season dilemma
- Promoting WW reuse

Pertinent Policies & Reports

- Reuse policy
- Regionalization report
- Reasonable access “policy”



Wastewater Reuse Policy

- “To promote the practice of reuse of...
- Both municipal and industrial reclaimed wastewater...
- Through the continued creation and implementation of...
- Rules and guidance that give permittees...
- Various opportunities for new forms of reuse.”



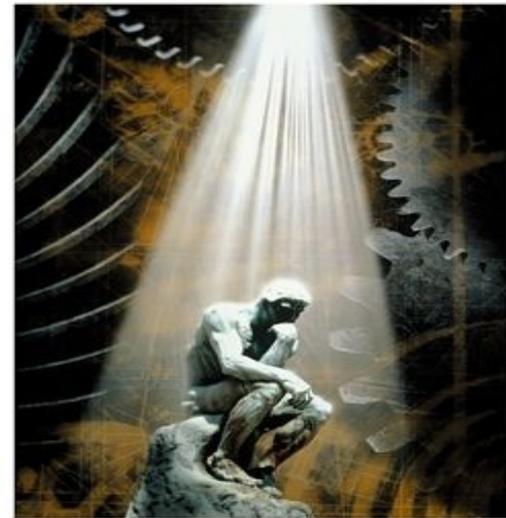
Wastewater Regionalization Report

- SCR 130 (2006)- DEQ to study methods to encourage and provide incentives for development and operation of regional water and wastewater services
- Legislative intent:
 - Regional facilities more efficient and cost-effective
 - Protect surface waters
 - Create long-term sustainable sources of water
- Limited agency resources



Reasonable Access Considerations

- Permits may be denied if “public or central wastewater treatment facilities” are “*reasonably accessible*”
- 7 criteria
 - Comprehensive planning
 - Capacity
 - Sewer construction within 2 years
 - Distance to collection line
 - Cost
 - Proportionality of cost
 - Available easement



Opportunities for Wastewater Reuse

- Municipalities
- Industry
- Planned communities

Municipal Wastewater Reuse

- Established infrastructure
 - “Big”, centralized treatment
 - “Always done it this way”
- Few incentives
 - Cheap raw water
 - Adequate supply
 - Minimal public pressure
- Private water vs. public wastewater



Industrial Wastewater Reuse

- Long-term investments in land application
- Comfort with existing systems
- Long-term permit histories
- Adequate water supplies
- Inadequate financial incentives



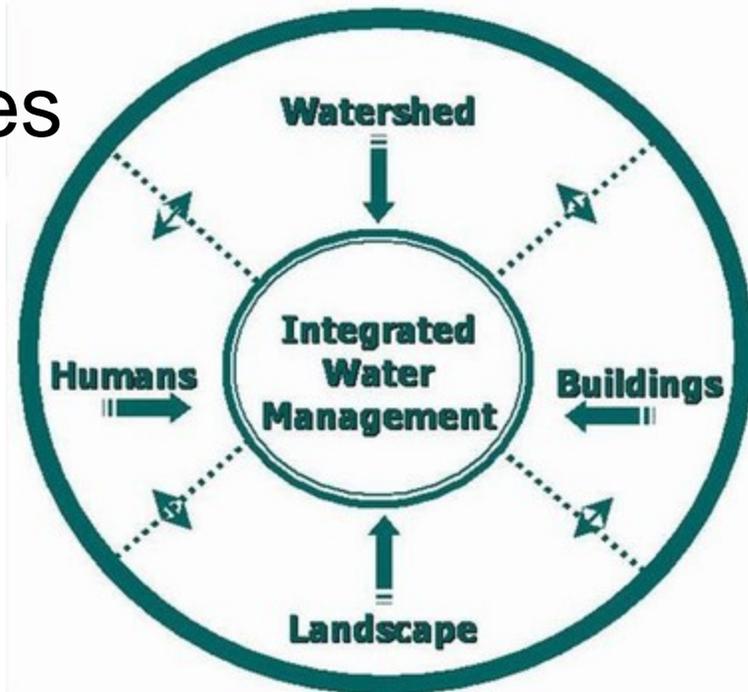
Planned Community Reuse

- De facto regional planning
- Reducing urban sprawl
- Conserving agriculture lands
- Preserving open space
- Minimizing groundwater contamination



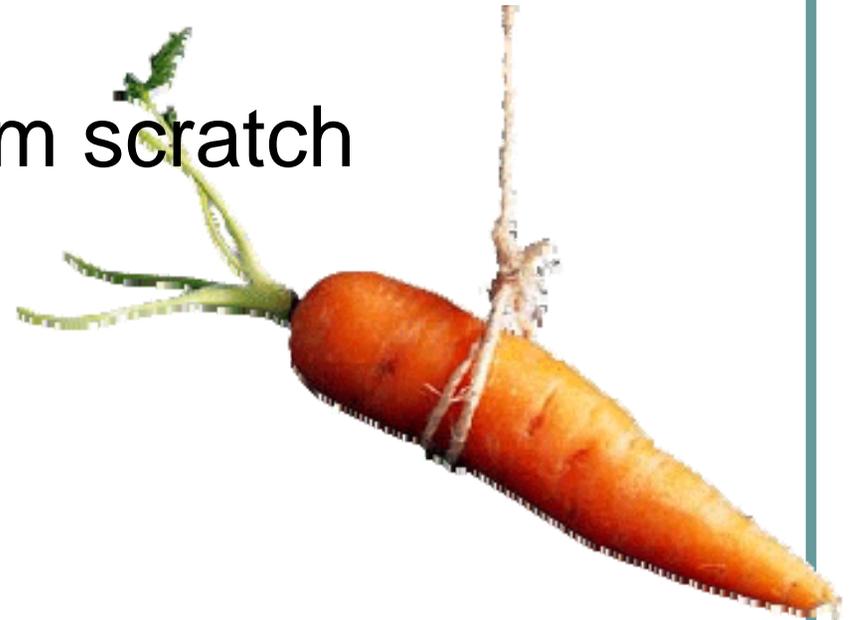
Planned Communities and Integrated Water Management

- Require native species
- Limit residential turf
- Drip irrigation
- Grey water
- Harvest stormwater
- Open space recharge areas
- Reclaimed water use



Wastewater Reuse Incentives Planned Communities

- Water shortages
- Water rights
- Opportunity to do from scratch
- Water conservation
- Sustainable design
- Green marketing
- Profit



Barriers to Planned Community Reuse

- Rigorous regulatory standards
 - Big agencies like big technology
 - Inadequate agency staffing
 - Legacy of substandard developments
- “Reasonable access”
- Upfront investments
- Non-growing season dilemma



Non-Growing Season Dilemma

- Lined ponds
- Unlined ponds
- Groundwater injection
- Surface water discharge



Lined Ponds

- Protect and “control” valuable asset
- Expensive to build
 - 3.2 MGD for 180 days (typ.)
 - 100 acres at 20’ deep
- Expensive to maintain
- Evaporation
- Safety & liability
- Aesthetics



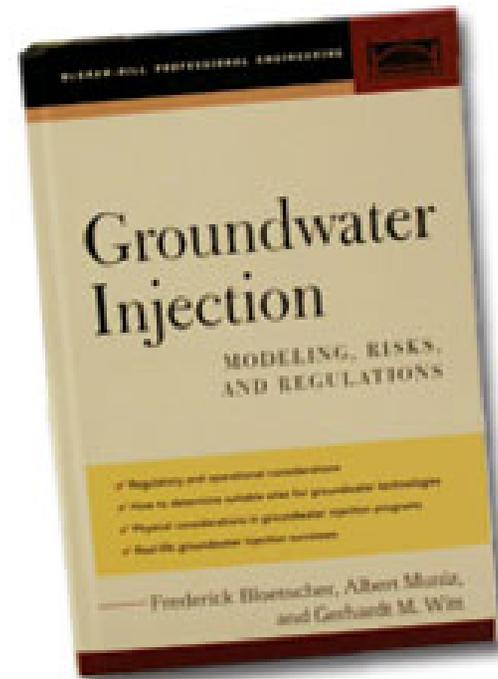
Unlined Ponds

- Rapid infiltration basins- Class B
- Cheaper to construct
- O&M ensures percolation
 - Alternating basins
- Water rights
- Safety & liability



Groundwater Injection

- Direct insertion of treated water into groundwater
- Class A sufficient?
 - PPCPs
- Dual regulation
 - IDWR- permitting
 - DEQ- groundwater quality rule
- Water rights
- Public perception
- Public education



Surface Water Discharge

- Agencies discourage
 - Historical bias aimed at secondary treatment
 - Carried through even with Class A
 - Reclaimed water is valuable resource
- Idaho does not have NPDES primacy
- EPA
 - Inadequate resources
 - Permit writers in Seattle
 - 3+ years for permit

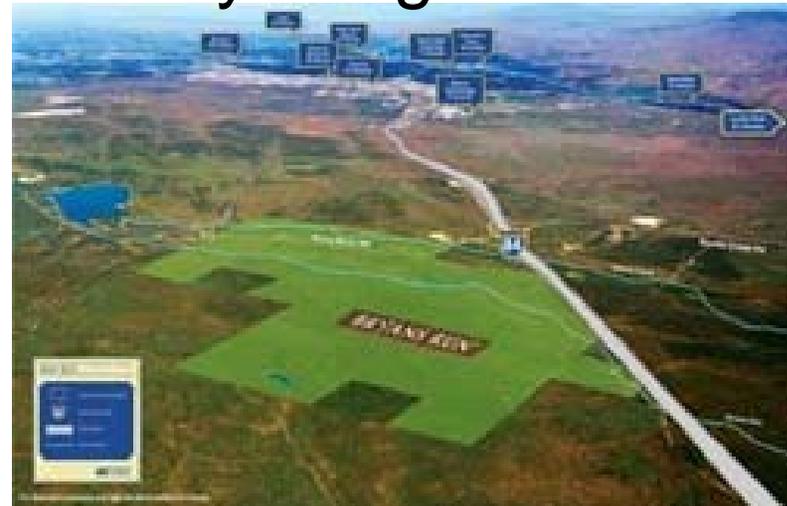
Case Histories

- Specific reuse sagas and issues
- Bryans Run- Ada County
- Bella Reve- Valley County
- Cove Springs- Blaine County



Bryans Run

- Blacks Creek; 10 miles east of Boise
- 2,000 acres; 10,000 residences; non-ag land; 3.2 MGD wastewater
- Quality lifestyle (no inversions); quality housing on east side of county; freeway congestion
- Film studio- 4000 jobs
- Reuse benefits
 - Regional water shortage
 - 25+% of water demand
- Injection opportunity



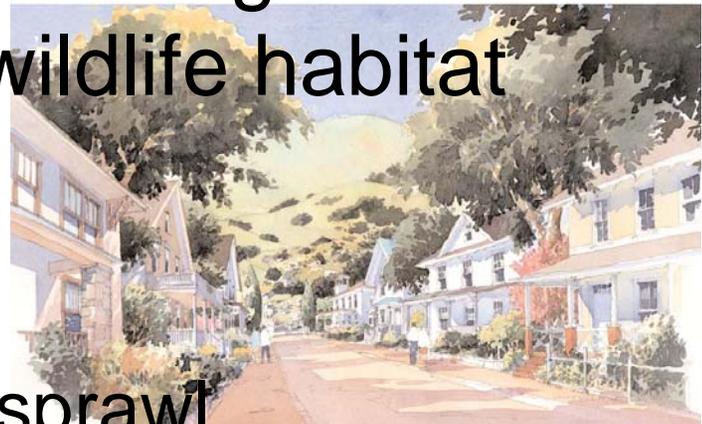
Bella Reve

- East shore of Lake Cascade, Valley County
- 550 acres, vacation and permanent residences, equestrian center, hotel
- Reuse issues and benefits
 - Phosphorus TMDL
 - “Reasonable access”
 - Permitting
 - Easement
 - High groundwater
 - Cost
- Unlined pond with Class A; irrigate
- Initiate MBR construction this fall



Cove Springs

- Historic Cove Ranch, Blaine County
- 4000 acres, clustered housing on 400 acres; working ranch; wildlife habitat
- Reuse benefits
 - Sustainable community
 - Minimize county urban sprawl
 - Minimize groundwater withdrawal
 - Maximize open space and vistas



Advancing Wastewater Reuse

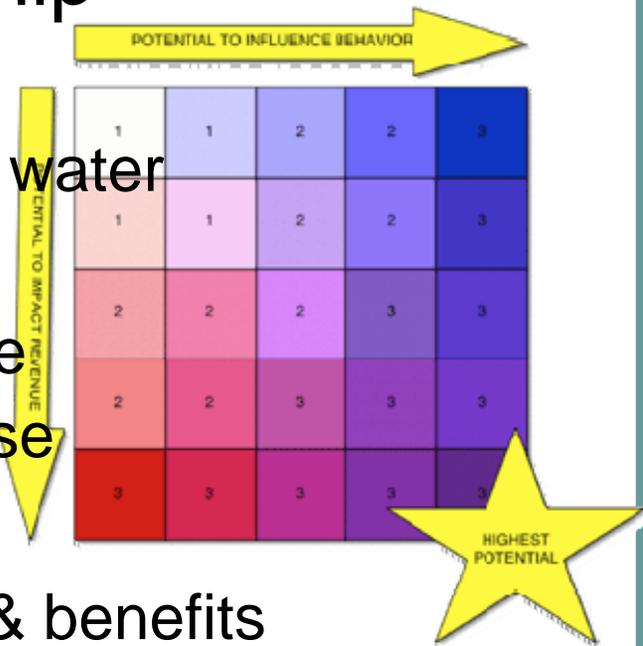
- Statement of IDAHO public policy
- Financial and other incentives
- Research and demonstration
- Public education



Reuse It New Jersey !

IDAHO Reuse Policy

- Reuse role in meeting water challenges
- State government leadership
 - Legislature
 - Intent to maximize reclaimed water
 - Governor
 - Call for agencies to cooperate
 - Set goals for wastewater reuse
 - Agencies
 - Assess/ Inform about safety & benefits



“Reuse” Awareness in Idaho

Google Hits for “Wastewater Reuse” by State

- CA 109,000
- WA 60,000
- NM 51,700
- CO 36,900
- AZ 34,800
- OR 15,900
- NV 15,800
- UT 11,800
- **ID 11,100**
- MT 9,670
- WY 940



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Planned Communities: Reuse Challenges for Idaho

- Existing DEQ reuse policy is good start
- Consider reuse in developing policies
 - Reasonable access factors
 - Regionalization report
- Non-growing season storage
- Next steps
 - Facilitate and promote reuse
 - Broaden state leadership
 - Address *yuck* and *fear* factors



Challenges for Planned Communities

- Legacy
 - Developments
 - Technology
 - O&M
- Non-growing season storage (retrieval)
- Public used to paying **less** to conserve
 - In future, may pay more up front
 - Savings come over long-term
- Manage overlapping regulatory interests
- Manage public expectations
- Manage reclaimed water inventory
- Manage local government concerns



Planned Communities-Opportunities

Leading Idaho's Wastewater Reuse Initiative

- Invest in quality planning, design, technology, O&M
- Develop sustainable communities
- True integrated water management
- Serve as regional facilities
- Set stage for municipalities
- Opportunity and responsibility to reuse wastewater

