Water Reuse Farm Operational Realities And Hawaii and Idaho Different Reuse Rules?

Ken Windram, Administrator

Hayden Area Regional Sewer Board

PRESENTATION TAKE AWAYS

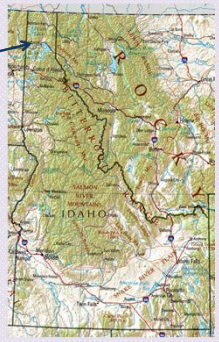
Sensitive Resource Aquifer:
How it effects Reuse Operations

Reuse Farm Operations:

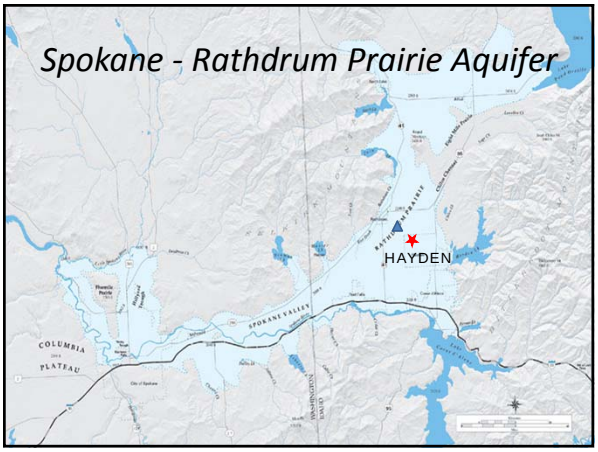
Hawaii to Idaho:
Reuse Operations Comparison

HAYDEN AREA REGIONAL SEWER BOARD

HAYDEN
IDAHO



Spokane - Rathdrum Prairie Aquifer



SOLE SOURCE AQUIFIER

Designation -Sole Source Aquifer (Federal Register Vol. 43, No. 28, 1978)

1978 EPA designated the Spokane Valley-Rathdrum Prairie Aquifer as a Sole Source Aquifer. Reasons:

- Principal Source of Drinking water for the area
- If contaminated would become a significant hazard to public health
- No alternative drinking water source(s)
- Aquifer is vulnerable to contamination
- Has very good water quality

IDAHO STATE

Designation – Sensitive Resource Aquifer

In 1997 Board of Environmental Quality designated the Rathdrum Prairie Aquifer as a Sensitive Resource Aquifer.

Criteria –Sensitive Resource Aquifer

- The water quality is better than the ground water quality standards and maintenance of quality is needed to protect beneficial uses
- The ground water in the aquifer is considered to
  - » be highly vulnerable
- The ground water in the aquifer represents an
  - » irreplaceable source for beneficial use

HAYDEN AREA REGIONAL SEWER BOARD

- 2 MGD Treatment Plant
- Oxidation Ditch Secondary WWTP
  Chlorine Disinfection
- No River Discharge When Spokane River flow is < 2,000 CFS
- 246 Acre of Farm Crops w/ 2 Pivots
- 51 Acres of Poplar Trees w/ Drip Irrigation

REUSE FARM OBJECTIVES

REUSE THE WATER

MAINTAIN A VIABLE CROP

CONTROL NEUTRIENT LOAD

"NO WATER PAST THE ROOT ZONE"

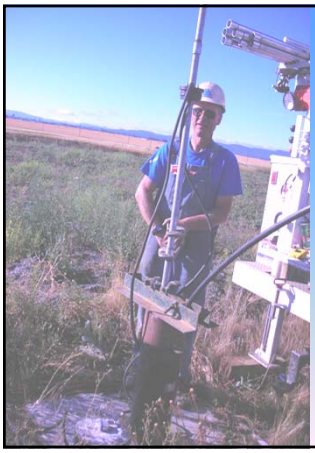
HANDLE FARM ISSUES

FARMER ISSUES

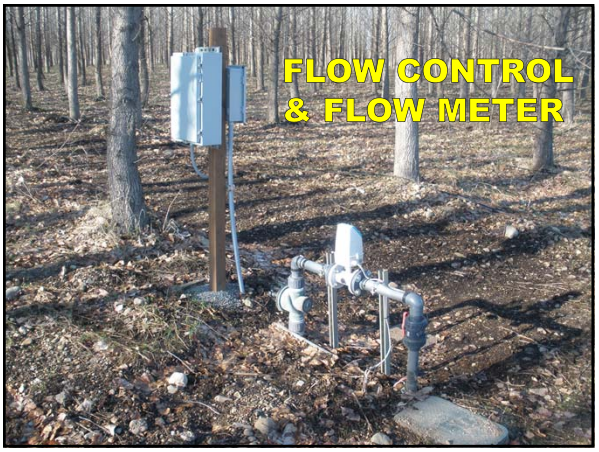
PIVOT MEET FARM EQUIPMENT

CONTROL FARMING ACTIVITIES

- FERTILIZER LIMITATIONS
- IRRIGATION CONTROLS
- HARVESTING CONDITIONS



ADJUST GROUND WATER MONITORING WELL PUMP LEVEL



IRRIGATION RATE PER CROP PER YEAR

- OATS – 7 INCHES PER ACRE
- ALFALFA – 13 INCHES PER ACRE
- POPLAR – 11 TO 21 INCHES PER ACRE


HIGHER SPRAYS HAVE
MORE EVAPORATION


MOISTURE SENSOR STATION
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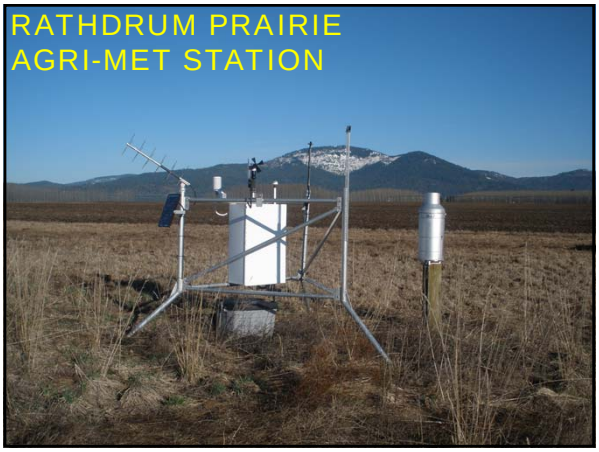
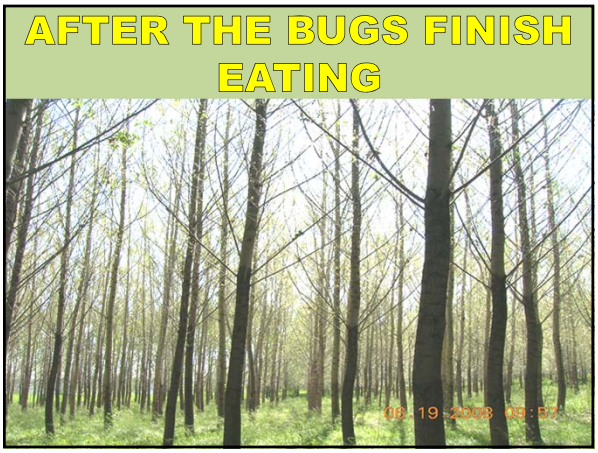

RATHDRUM PRAIRIE
AGRI-MET STATION


BUGS & OTHER CRITTERS


ALFALFA


AFTER THE BUGS FINISH EATING

HAWAII vs IDAHO REUSE

- SAME GROUND WATER ISSUES
- SIMILAR REUSE REGULATIONS
  - R-1 vs Class B
  - Reverse Osmosis = R-2
  - Reuse Water Spill Reportable
  - Golf Course Irrigation

IRRIGATE 300+ DAYS / YEAR

NEWS FLASH

HOT OFF THE PRESS

The North Idaho Building Contractors Association has filed a lawsuit against the city of Hayden challenging the legality of a building permit fee. The nonprofit trade association lawsuit claims the sewer capitalization fee is being used to generate revenue for the city and expand the city sewer system. They claim the fee, should only be used to pay for "operation and maintenance of the existing system". The association position is that the City can't use the money collected through the sewer capitalization fee to expand the system.

8 Steps For a Successful Reuse Program

1. Identify potential water users
2. Determine water needs:
   Quantity & Quality
3. Identify ALL the Stakeholders
4. Brand Name the Water
5. Project Spokesperson
6. Public Outreach:
   a. Simple message
   b. Natural Process
   c. Community Benefit
   d. Stakeholder Presentations
   e. Community Feedback
7. Local Water Reference Examples
8. Be Honest and Factual