

Results of Treasure Valley Future Water Demand Study

**Treasure Valley
CAMP Advisory Committee Meeting
September 29, 2010**



Presentation Summary

- **Treasure Valley Future Water Demand Results**
 - DCMI Water Demand
 - Agricultural Water Demand
 - Environmental and Water Quality Constraints
 - Conservation Assessment
- **Conclusions and Recommendations**



July 29, 2010 Presentation

- Scope of Work
 - Water demand study, not a water supply planning study
- Data Collection and Data Gaps
- Approach
- Numerous meetings with Advisory Committee members
- Additional data



Total Water Demand (TWD)

$$\text{TWD} = \text{DCMI Demand} + \text{Agricultural Demand}$$

DCMI

- Domestic Irrigation Water Demand
- Parks and Recreational Water Demand
- Urban Water Demand
- Rural Residential Water Demand
- Commercial & Industrial (Private Pumpers)
- Livestock Water Demand

Agricultural

- Reported Crops
- Seed Crops
- Wet, Dry, Average year calculations

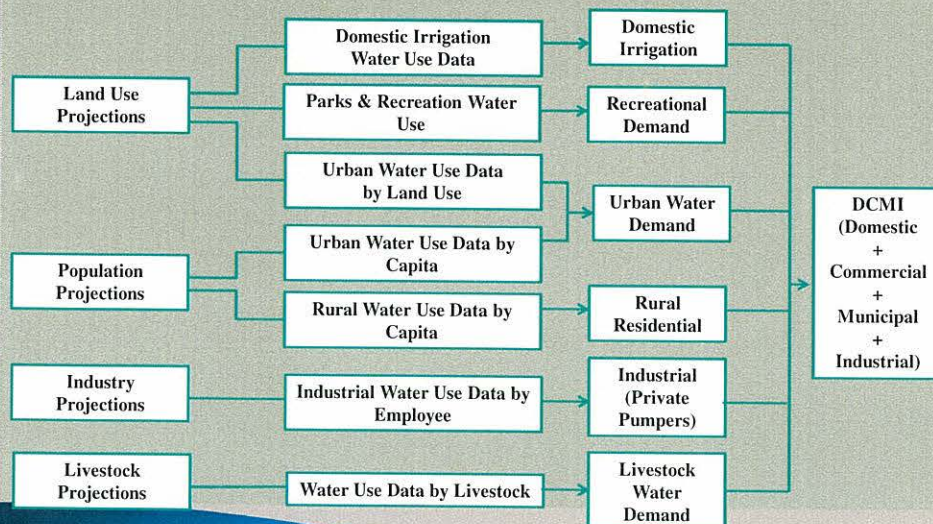


Calculation Approach

- Based on multiple methods for different components
- One method cross checked with another
- Referenced with previous studies



DCMI Demand Calculation Process

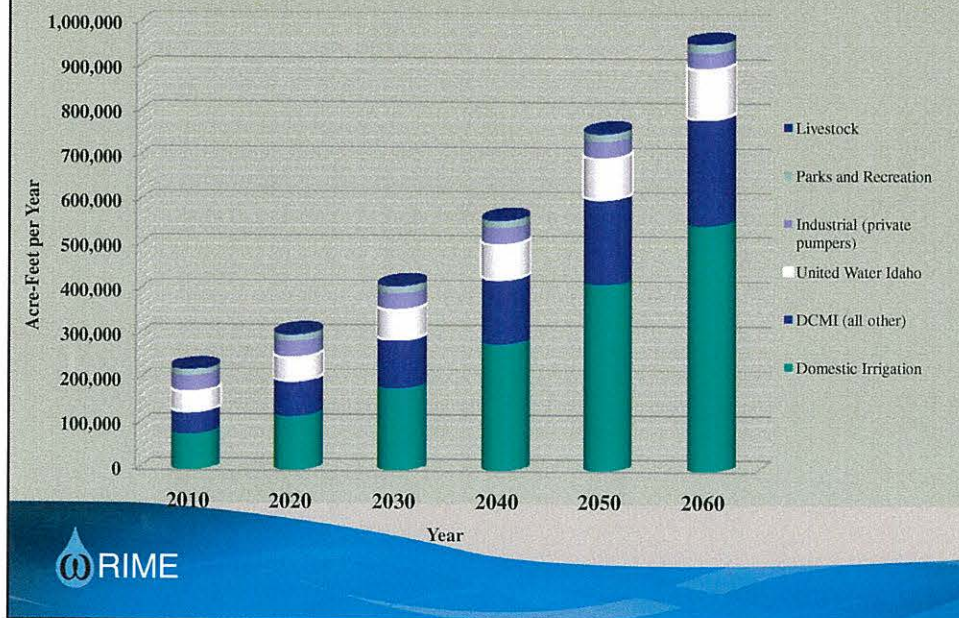


Results: DCMI

- DCMI Water Demand grows from about 230,000 AF in 2010 to 960,000 AF in 2060
- Corresponding population growth from 583,000 in 2010 to 1,650,000 in 2060
- Average residential water use ranges from about 58,300 af/year in 2010 to 244,700 af/year in 2060
- Average total urban water rate remains relatively constant at 3.2 af/acre



DCMI Water Demand

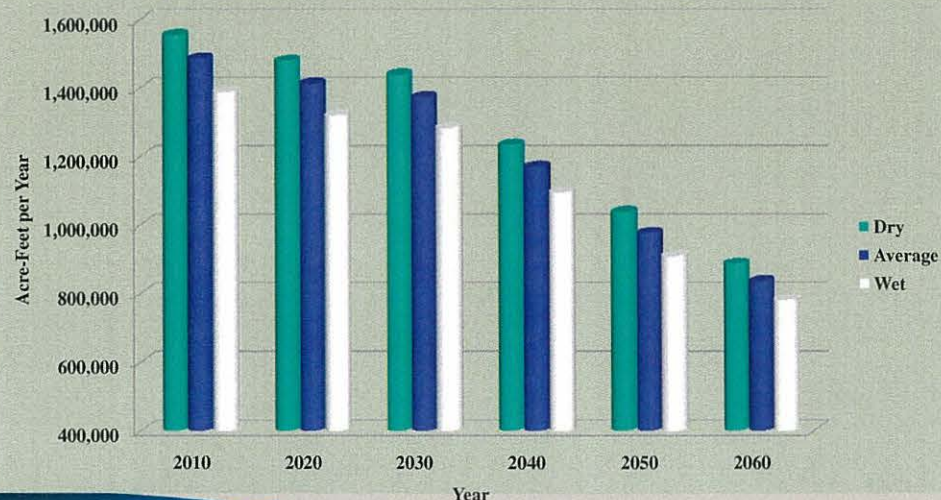


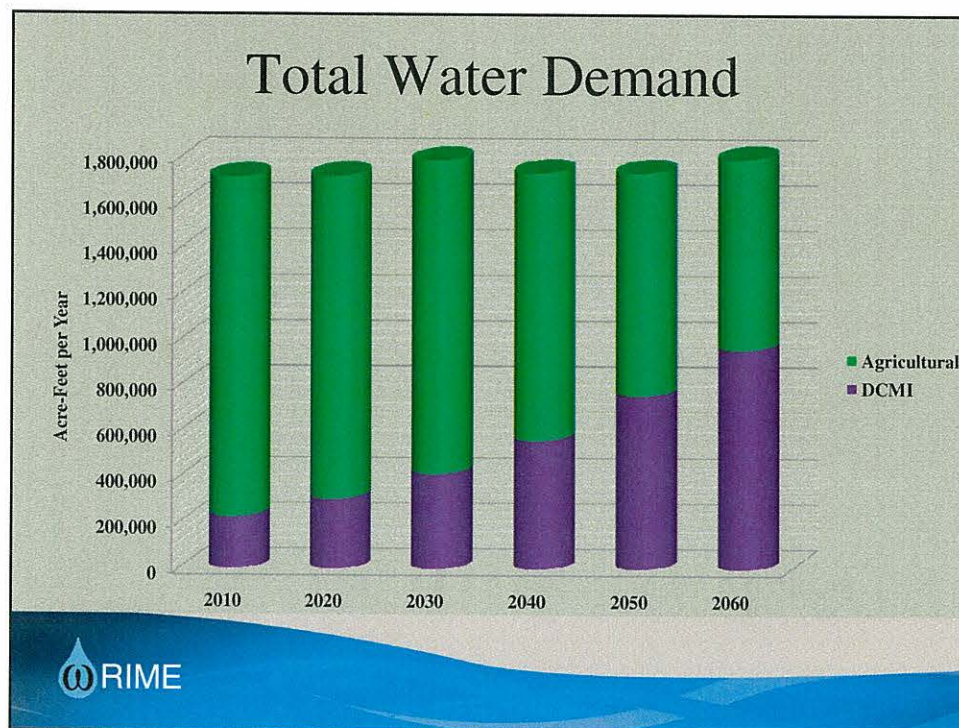
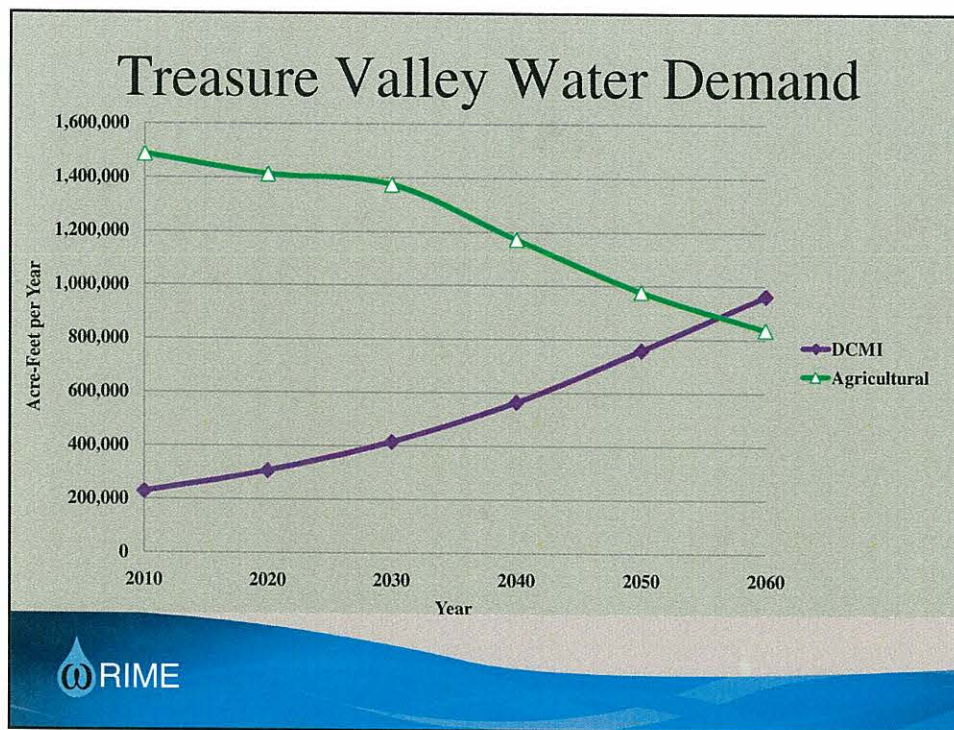
Results: Agricultural

- Agricultural Water Demand decreases from about 1.5 MAF in 2010 to 840,000 AF in 2060
- Corresponding agricultural land use reduces from 348,000 acres in 2010 to 193,000 acres in 2060
- Average agricultural water rate is 4.3 af/acre



Agricultural Water Demand





Results: Total Water Demand

- Total Water Demand increases only 83,000 AF from 2010 to 2060
- DCMI demand growth of 733,000 AF is offset by agricultural demand reduction of 650,000 AF
- Every acre of agricultural conversion to urban reduces the water demand by 1.1 af/acre (4.3 af/acre for agricultural minus 3.2 af/acre for urban)
- Every acre of undeveloped land to urban land conversion will increase the demand by 3.2 af/acre



Environmental Water Needs

- Current allocations will probably “hold up” for next 25 to 30 years
- Reclamation identified a future need: high springtime flow for cottonwood – can be met by re-operation
- Nez Perce Agreement: no pursuit of acquisition of additional water rights
- Two water rights may impact future environmental needs
 - #3-10037 and #3-10098 – Snake River
 - Relatively large recommendations compared to existing flows



Water Quality Constraints

- Current water quality for surface water and groundwater for Treasure Valley is good
- Water quality degradation is identified in several areas
- Poor well construction and abandonment could be possible sources of pollutants
- Zoning restrictions of known source areas may impact municipalities and developers, especially in Canyon county



Water Conservation

- Systems leaks are a major source of loss of water
- UWI has only 4% losses due to leaks, while other purveyors report losses ranging from 8% to 43%
- Limited conservation is assumed for this study
- Implementation of 15% conservation in DCMI water use can create savings of about 82,000 AF.

