

Recycled Water

Harvey Packard

May 11, 2017



What is recycled water?



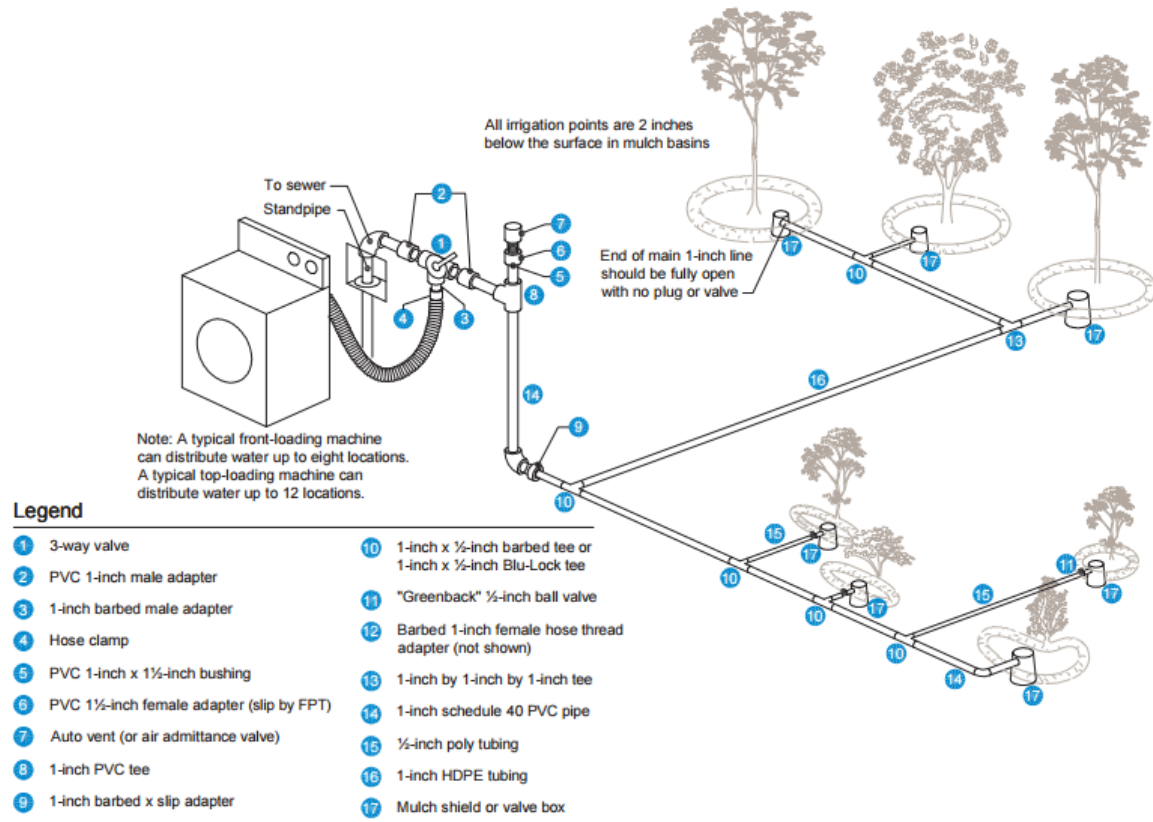


Figure 3. Laundry-to-landscape overview. Source: Clean Water Components.



Orchards of walnuts (above) and almonds (below) may be viable sites for groundwater recharge, though the potential for water damage to such high-value crops adds risk.





Figure 6. A rotary pump intake screen and diesel engine used for tailwater return. Photo: Lawrence J. Schwankl.



Figure 7. Control (butterfly) valve, air-vacuum relief valve, and check valve located downstream of tailwater return pump. Photo: Lawrence J. Schwankl.



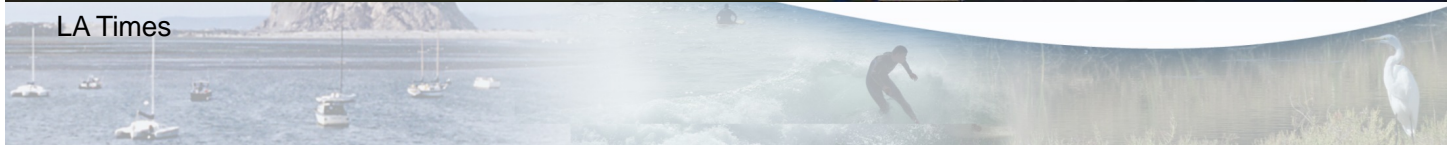
REDUCING RUNOFF FROM IRRIGATED LANDS

PUBLICATION 8225

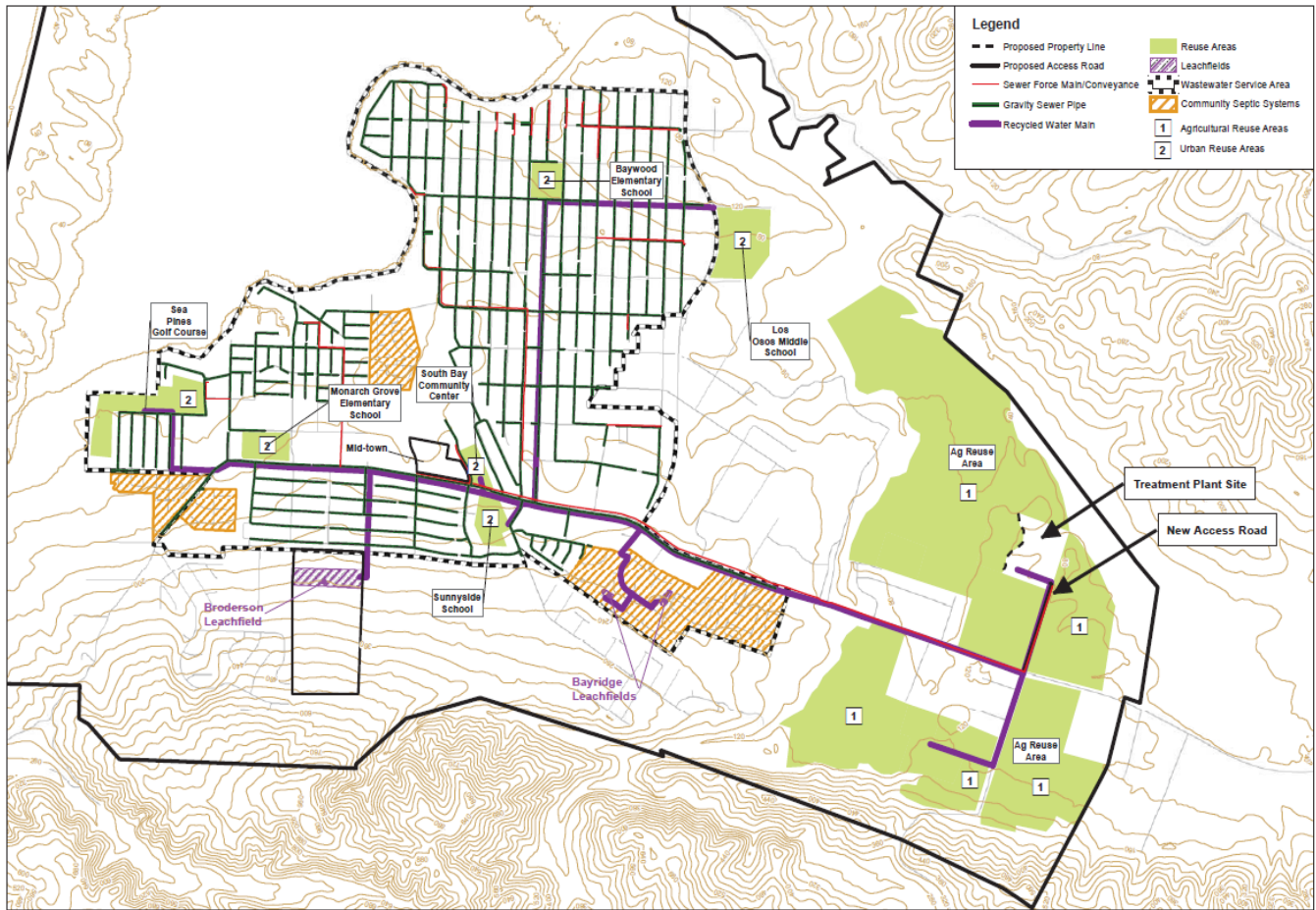
Tailwater Return Systems

LAWRENCE J. SCHWANKL, UC Cooperative Extension Irrigation Specialist; **TERRY L. PRICHARD**, UC Cooperative Extension Water Management Specialist; **BLAINE R. HANSON**, UC Cooperative Extension Irrigation and Drainage Specialist









Source: San Luis Obispo County GIS Data, Carollo Engineers, and MBA GIS Data.

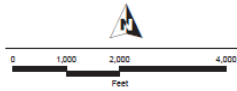


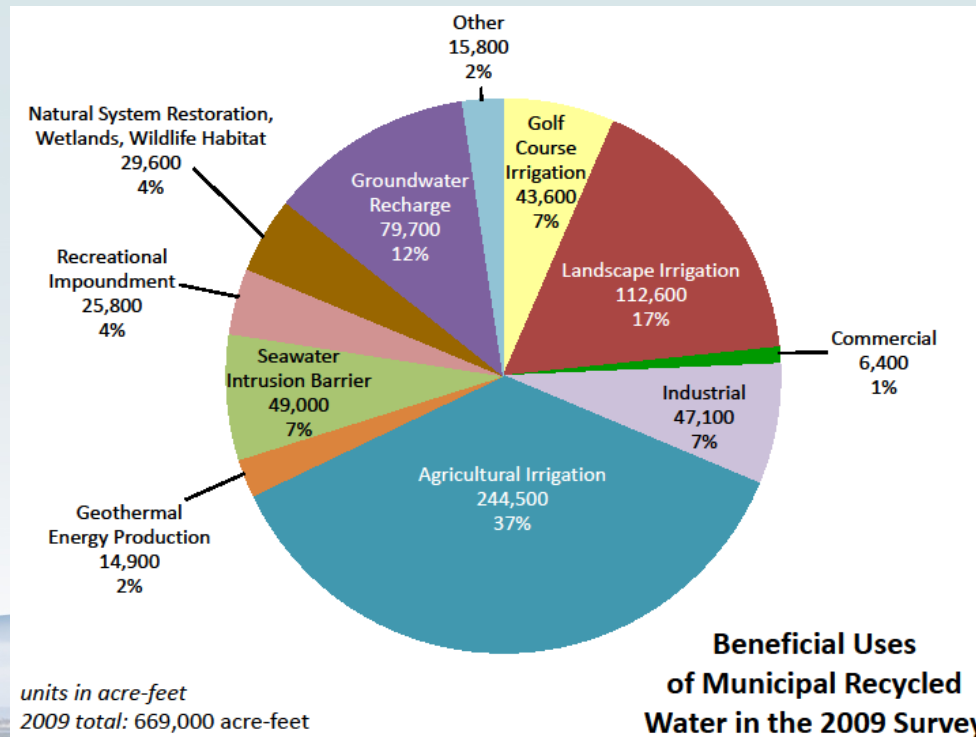
Figure 6
Reuse/Disposal Site and Pipeline Routes

COUNTY OF SAN LUIS OBISPO - LOS OSOS WASTEWATER PROJECT

Revised: 5/15/2012



2009 Statewide Recycled Water Usage



Irrigation Uses

- Edible food crops



Pajaro Valley Water Management Agency

Castroville Seawater Intrusion Project

- 12,000 acres
- 45 miles of pipe
- Uses 60% of MRWPCA's wastewater
- 1845 ac-ft/mon (Jul-Sep 2016) average



Irrigation Uses

- Edible food crops



San Benito County Water District

Irrigation Uses

- Golf courses



Pebble Beach CSD



Irrigation Uses

- Golf courses



Indirect Potable Reuse

- Groundwater Recharge
 - Percolation ponds
 - Injection wells
- Reservoirs
 - Proposed regulations in 2017
 - San Diego – construction in 2019



Direct Potable Reuse

- Are DPR regulations feasible?
- Expert Panel
- Advisory Panel
- 2016 Report to Legislature
 - DPR regulations are feasible
 - Address knowledge gaps



Recycled Water Policy

- Encourages recycling

4. *Mandate for the Use of Recycled Water*

- a. The State Water Board and Regional Water Boards will exercise the authority granted to them by the Legislature to the fullest extent possible to encourage the use of recycled water, consistent with state and federal water quality laws.



Recycled Water Policy

- Streamlines permitting
- Encourages salt and nutrient management plans
- Considers contaminants of emerging concern



Recycled Water Policy

- 2018 update



Conclusion

- Drought-proof source
- Diversification
- Higher uses

Actions

- Measure
- SGMA
- Encourage
- Funding

