Eastside Water District
Diffused Surface Water Project
2014

Presentation to Landowners
Friday, July 11, 2014

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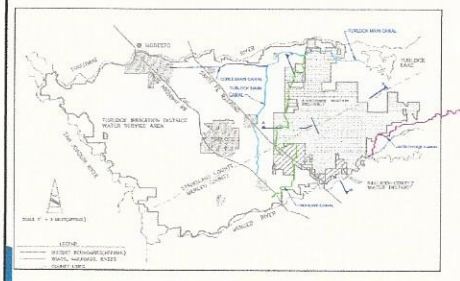
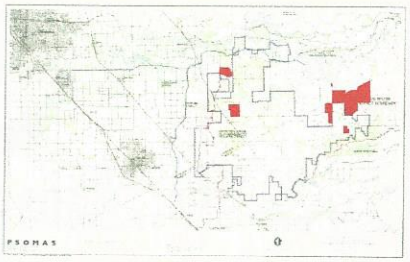
2003 EWD Boundary Map



Outline

- Introductions & EWD History
- Groundwater Overdraft –Turlock GW Basin
- EWD & Landowner Accomplishments
- Pilot Studies & Proposed Next Step (EWD DSWP)
- Pseudo EWD Master Plan
- Diffused Surface Water Project (DSWP) 2014
- Summary
- Expected Outcomes:
  - Landowners communicate with EWD Board of Directors
    - ✓ Voice any concerns or conditions to be met
  - Consensus reached that EWD is on acceptable 'path'
    - ✓ If not the DSWP than tell EWD what it can do
  - Support from landowners to fund DSWP
    - ✓ Proposition 218 election likely in 2015 for annual assessments

Areas Annexed to EWD in 2012



Introductions & EWD History

- Al Rossini, Chair; Dave Long, Vice-Chair
- Directors Tim Johnson, Norik Naraghi, & Ward Burroughs
- EWD formed in 1983
- 61,293 acre boundary (3/28/12 Annexation)
- EWD has no water rights
- Sought water from Turlock Irrigation District (TID), Merced Irrigation District (MerID) over past 30-years
- EWD-TID November 2013 meeting started latest momentum towards greater cooperation
- Results of two pilot projects show feasibility of groundwater recharge using storm water runoff that does not reach natural water ways ['diffused surface water']

Overdrafted GW Basin - 2008 GWMP

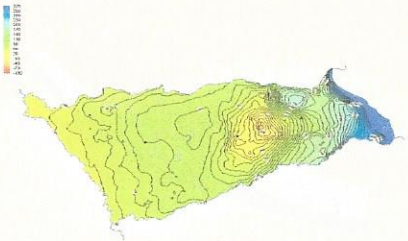
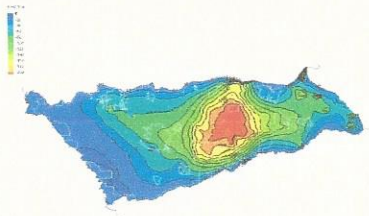


Figure 3.6a Simulated Groundwater Levels (High Specific Yield) During Repeat of 1976-1977 Drought Fall 2016

Worst Case Scenario – Dire Prediction



Change in Water Level After a Severe Drought Years (2007-2023)

EWD & Landowner Accomplishments

- Water Conservation – landowner water consumption rates reduced by half due to improved irrigation methods
- EWD studied GW Recharge methods (natural, direct, & in-lieu)
- Pilot Testing of Direct Method (2-locations)
- TID 'sphere of Influence' water purchases for EWD landowner irrigation (in-lieu GW recharge)
- Minimal progress in addressing GW overdraft due to no EWD-TID agreement on conveying and using available surface water for the benefit of the common Turlock GW Basin
- EWD-TID November 2013 meeting started latest momentum towards greater cooperation

Recharging Avenues – To Replenish Turlock GW Basin – Plan View

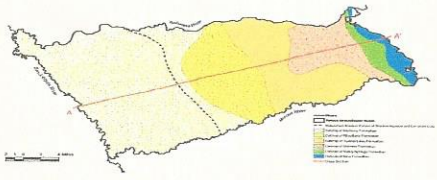
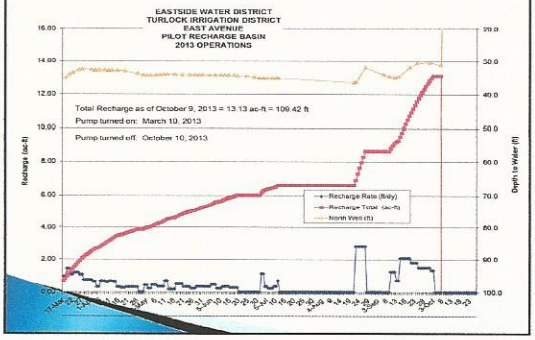


Figure 1.2 Surface Geology in the Turlock Groundwater Basin as Modeled

2013 Data – Two GWR Methods Used



Recharging Avenues – To Replenish Turlock GW Basin – Section View

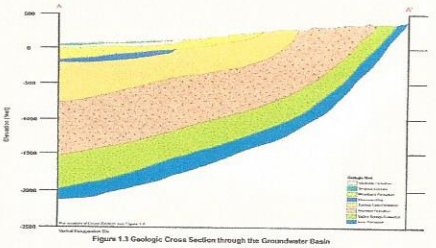


Figure 1.3 Geologic Cross Section through the Groundwater Basin

East Avenue Pilot Project – Redesigned Deep Basin With Ridges (8/29/13)

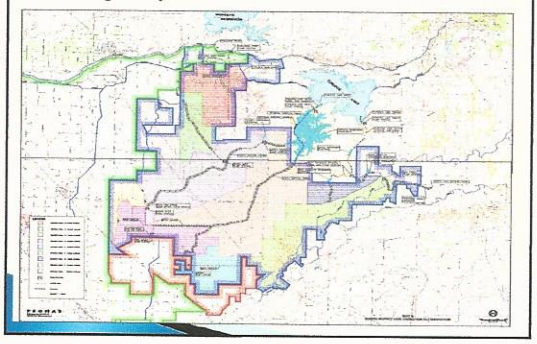
Pilot Studies & Proposed Next Step (DSWP)

- Winter of 2013-14 not productive due to no local diffused surface water available
- Planned diversion of 2014-2015 diffused surface water to existing pilot project on East Avenue
- Diffused surface water (local storm water not reaching natural streams) is not subject to appropriation, and is not part of any riparian right; and can be used for GW recharge benefit
- Deep Basins (similar to pilot); or
- Multiple 'dry-wells' as alternative to deep basins
- EWD 2014 design effort will look at regional GW recharge opportunities, focusing near-term projects associated with the TID Highline Canal

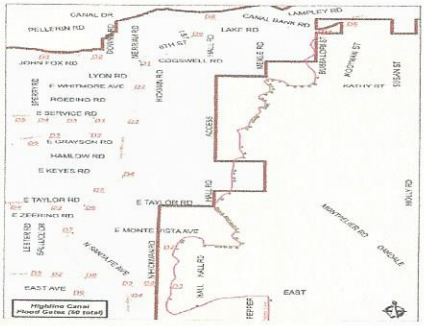
Diffused Surface Water Project (DSWP) 2014

- EWD-TID November 2013 meeting started staff discussions and created current momentum
- TID committed on June 6 to:
  - Allow EWD's use of TID facilities during the non-irrigation season for the purpose of conveying diffused surface water coming from the existing TID flood gates;
  - TID staff assistance with EWD in its 2014 diffused surface water project design efforts;
  - TID staff to negotiate a MOU on behalf of the TID Board of Directors to accomplish these commitments.
- EWD awarded design contracts on June 12 (P&P and WR-EPURE)
- Design team will be confirming and identifying potential recharge sites and methods regionally, but focusing on sites near TID's Highline canal for this initial phase
- Design effort will also look at potential recharge sites within and surrounding EWD boundary
- Level of design target is 30%, which will include facilities to accept up to 60 cfs of DSW and an estimate facility costs

Pseudo EWD Master Plan - 2003 GW Recharge Planning Study



Potential Sites - Highline Canal & Adjacent Areas



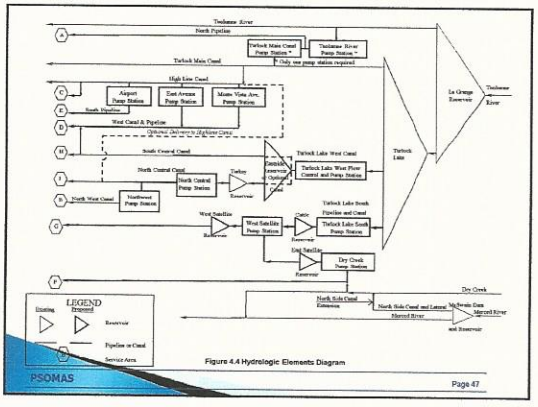
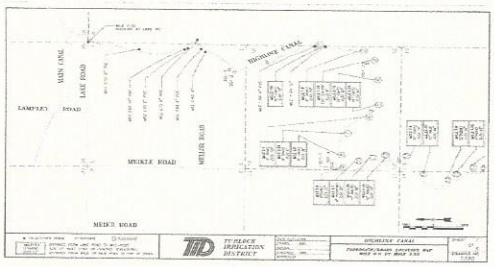


Figure 4.4 Hydrologic Elements Diagram

Potential Sites - Highline Canal Inlets



DSWP 2014 – Potential Site

Summary

- EWD will continue to manage its portion of the Turlock GW Basin, but without a surface water supply further progress will continue to be limited
- TID, MerID, and other agencies of the Turlock Basin recognize the value of cooperating with EWD on GW recharge projects
- The EWD–TID cooperative is expected to lead to other similar efforts and ultimately achieve a long-term sustainable water supply for all residents overlying the Turlock GW Basin

DSWP 2014 – Potential Site

Expected Outcomes

- What EWD asks landowners to commit to:
  - Open communication with EWD Board of Directors so that your expectation can be met
  - When landowners understand the DSWP, agree to support the DSWP with your vote (on assessments)
  - Continue to trust your personal inner-circle of advisors, but give EWD a chance to address the overdrafted Turlock GW Basin
- Did this meeting achieve the 'Expected Outcomes'?
  - Landowners communicate with EWD Board of Directors
    - ✓ Voice any concerns or conditions to be met
  - Consensus reached that EWD is on acceptable 'path'
    - ✓ If not the DSWP than tell EWD what it can do
  - Support from landowners to fund DSWP
    - ✓ Proposition 218 election likely in 2015 for annual assessments
- Thank you! Any other Questions?

Estimate of Expected Landowner Funding Requirement for each $1 million in Project Costs

- Per the EWD 7/1/14 Newsletter, $16.13/acre capital cost and $3.23/acre annual assessment was illustrated
- Assumed a $2 million DSWP with ½ capital cost funded by State or Feds
- Calculations: $1,000,000/62,000 = $16.13
  - And 10% * ($2,000,000/62,000) = $3.23
- Should the landowners desire a project smaller or larger than the assumed cost, the per acre charges can be calculated proportionally