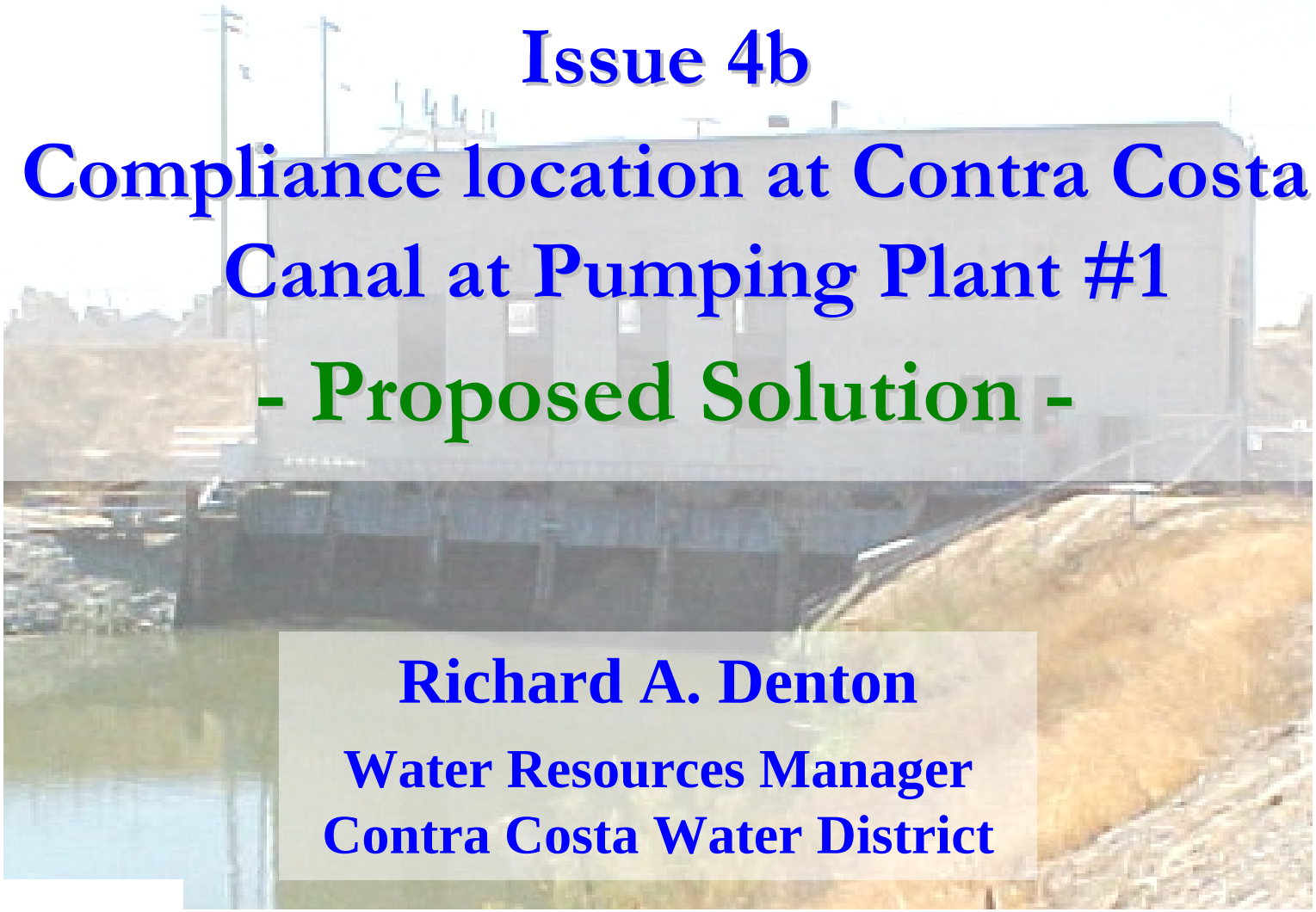
Issue 4b

Compliance location at Contra Costa Canal at Pumping Plant #1

- Proposed Solution -



Richard A. Denton

Water Resources Manager
Contra Costa Water District

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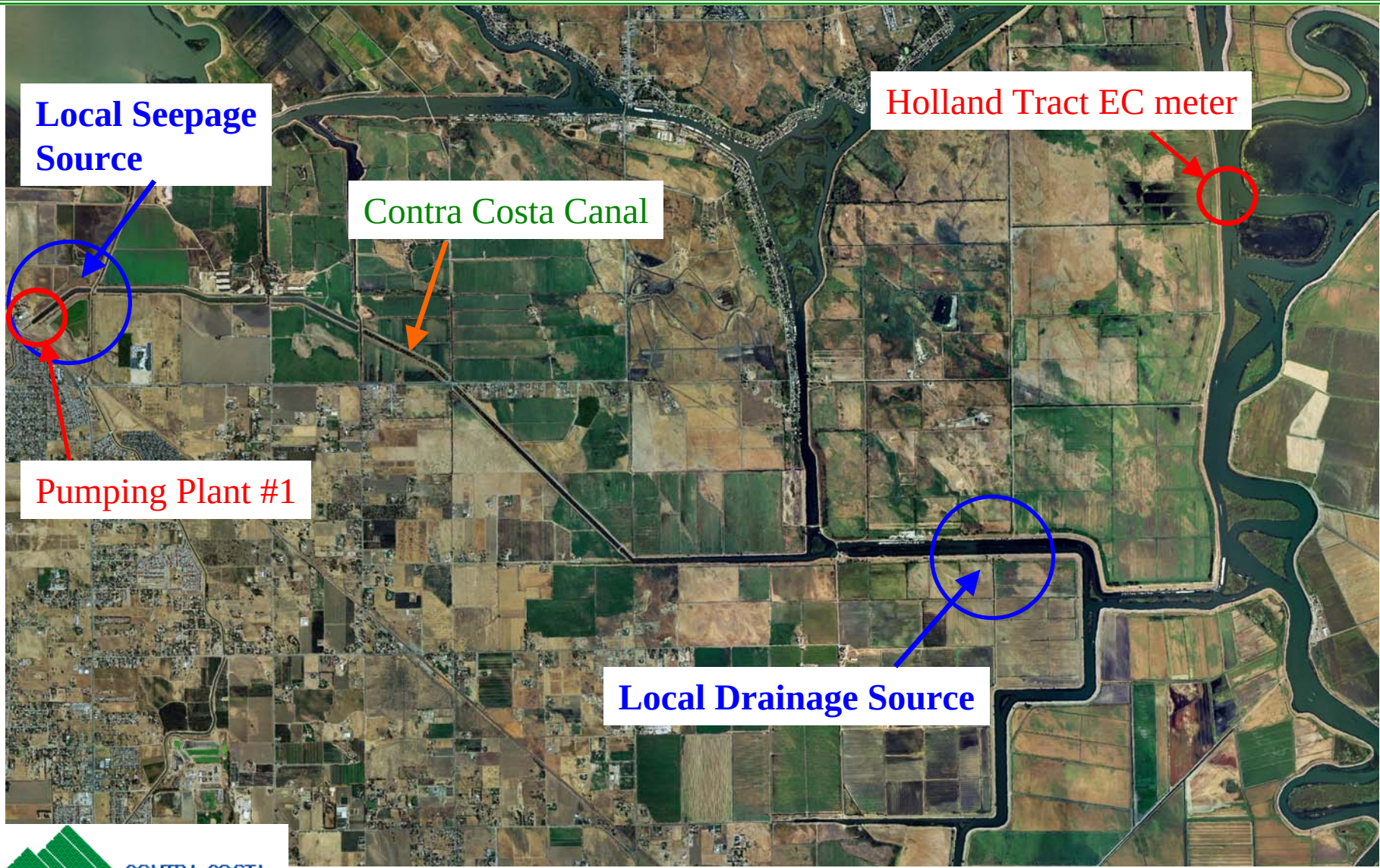
Location of Sources of Degradation



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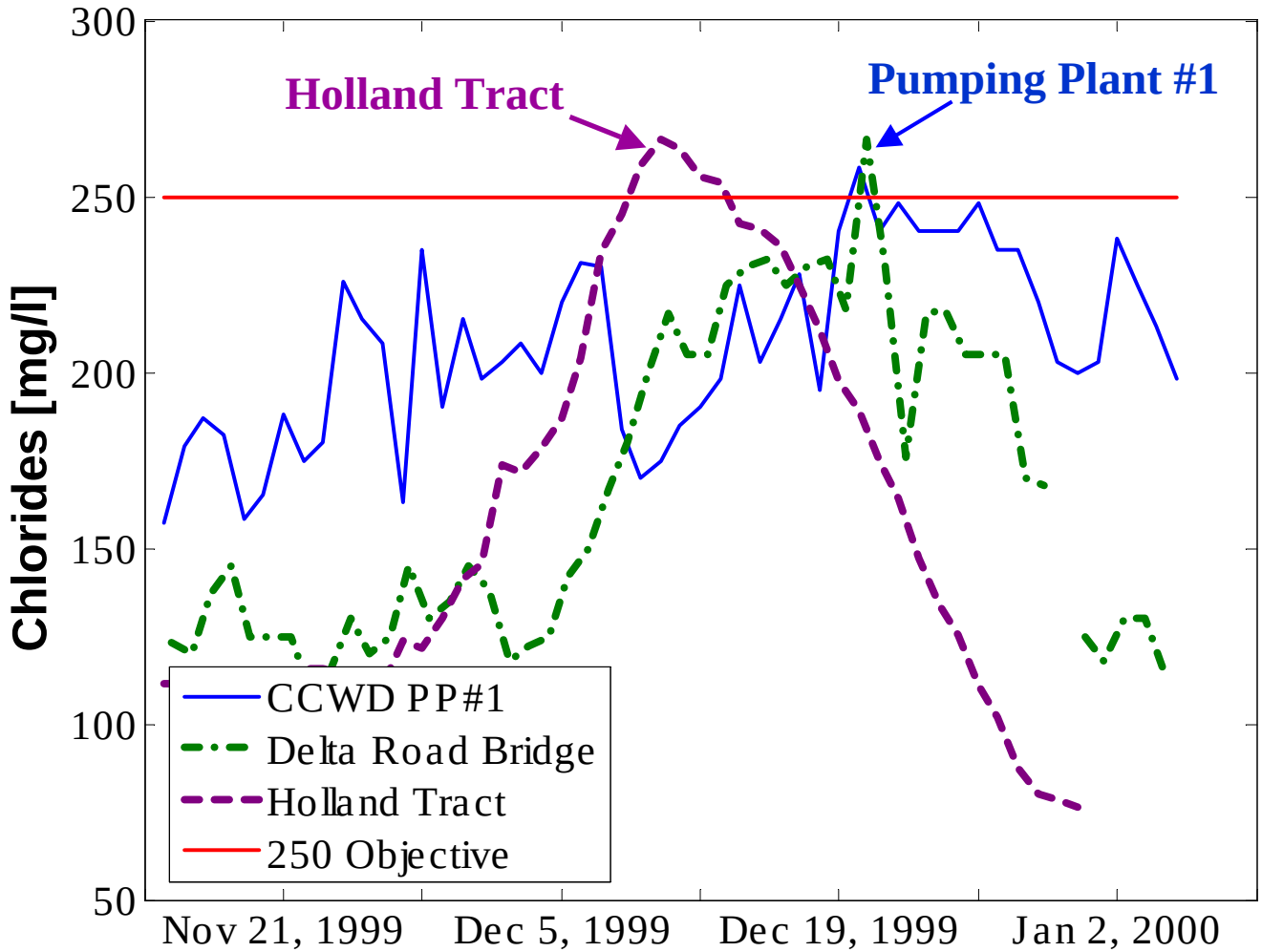
CCWD Reduced Pumping Helped with 250 Compliance in Nov. 1999

Chlorides (mg/L)



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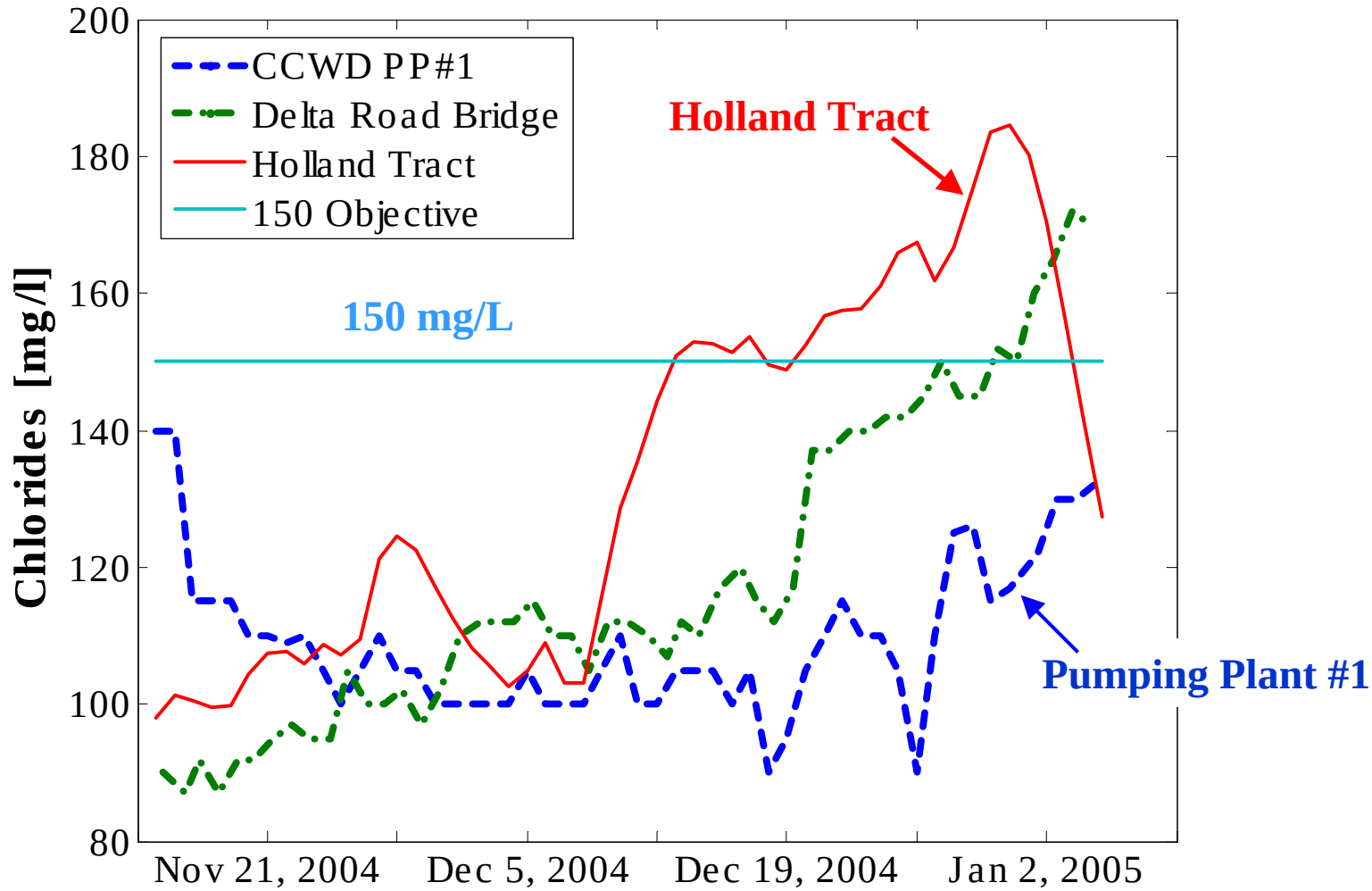
Reduced CCWD Pumping Helped with 150 Compliance in Dec. 2004

Chlorides (mg/L)



Dec04_timeseries.m
09-Jan-2005 mm

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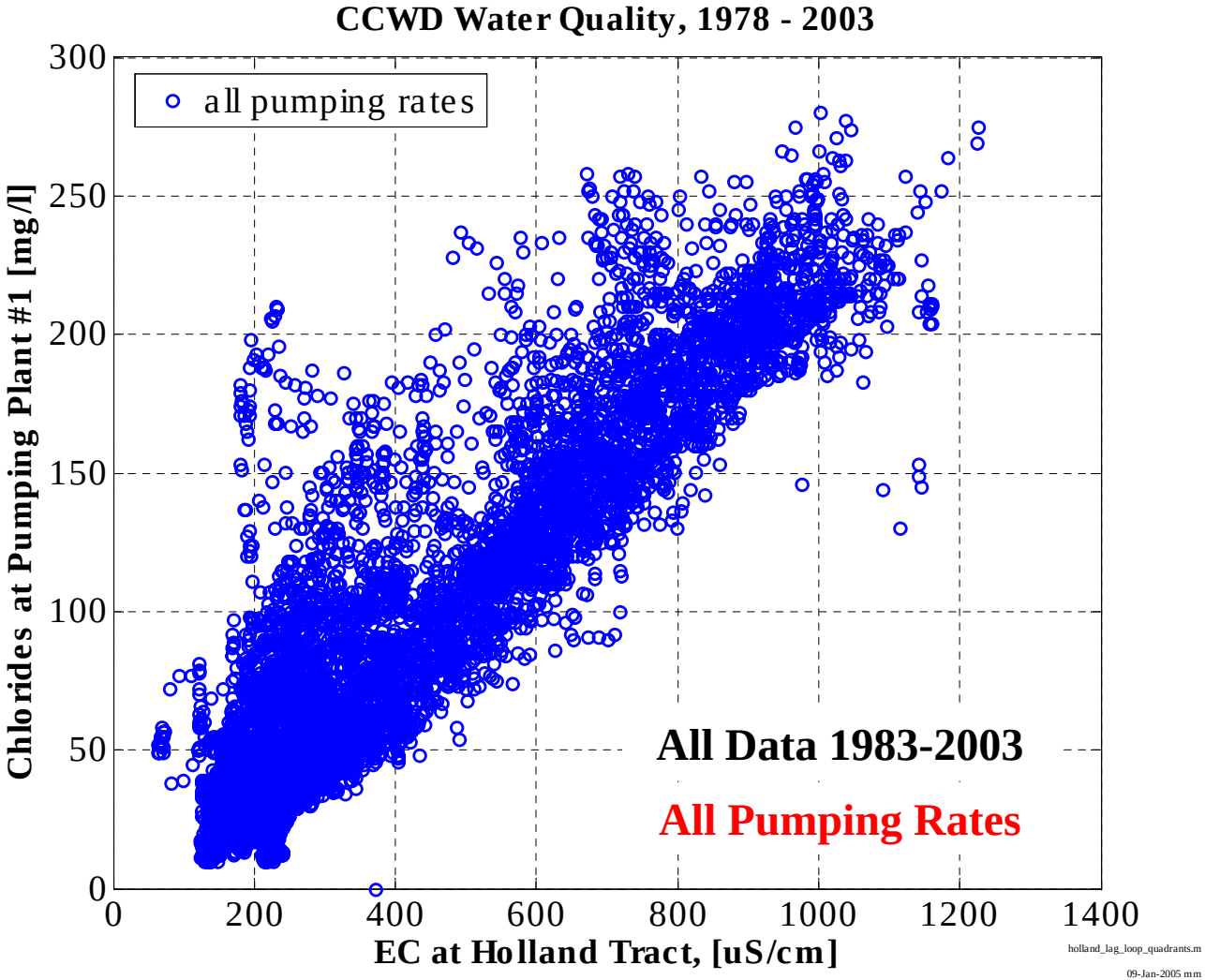
Historical data show degradation due to seepage and local drainage

Pumping Plant #1 Chlorides (mg/L)



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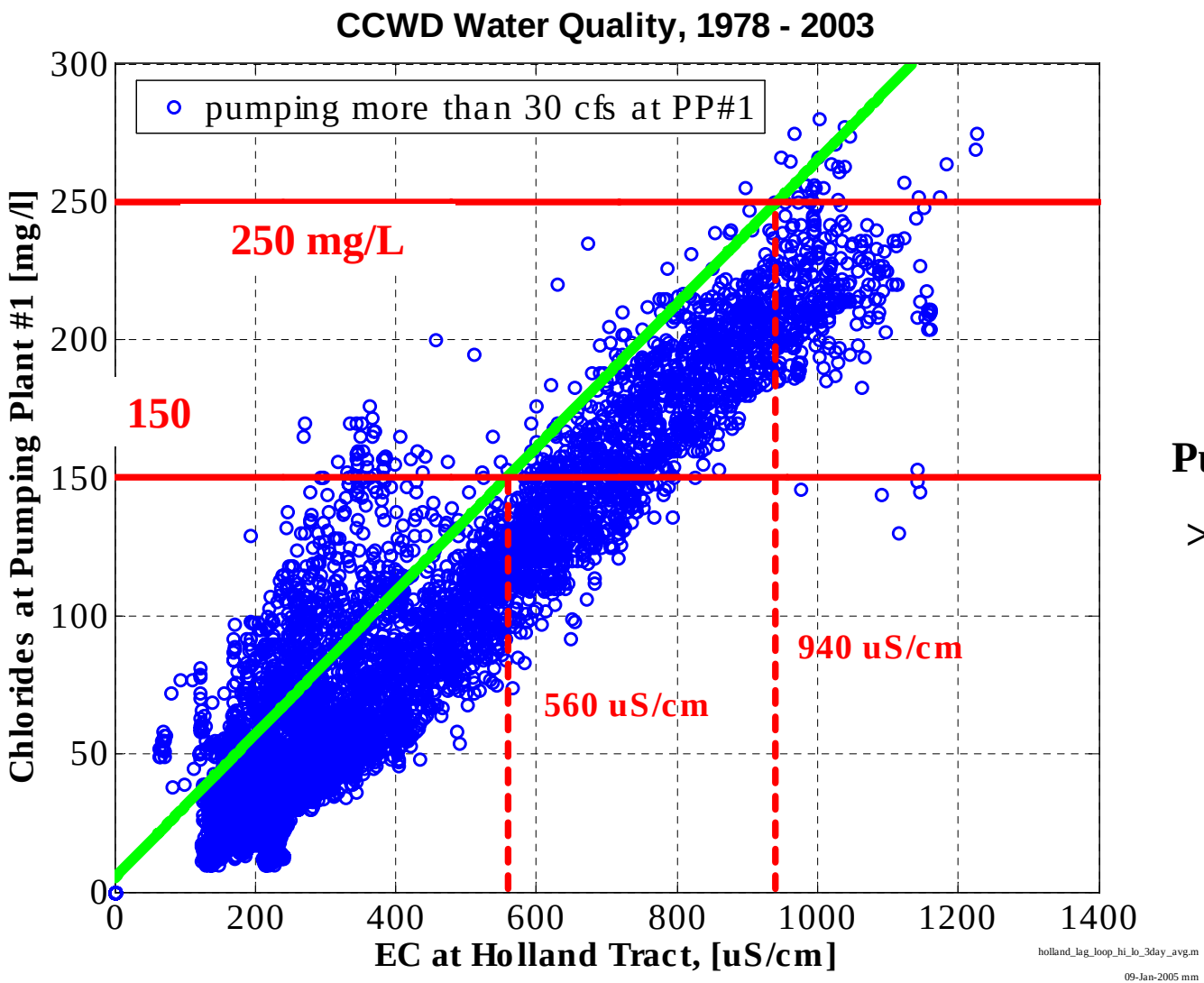
Pumping 30 cfs eliminates most effects

Pumping Plant #1 Chlorides (mg/L)



Pumping > 30 cfs

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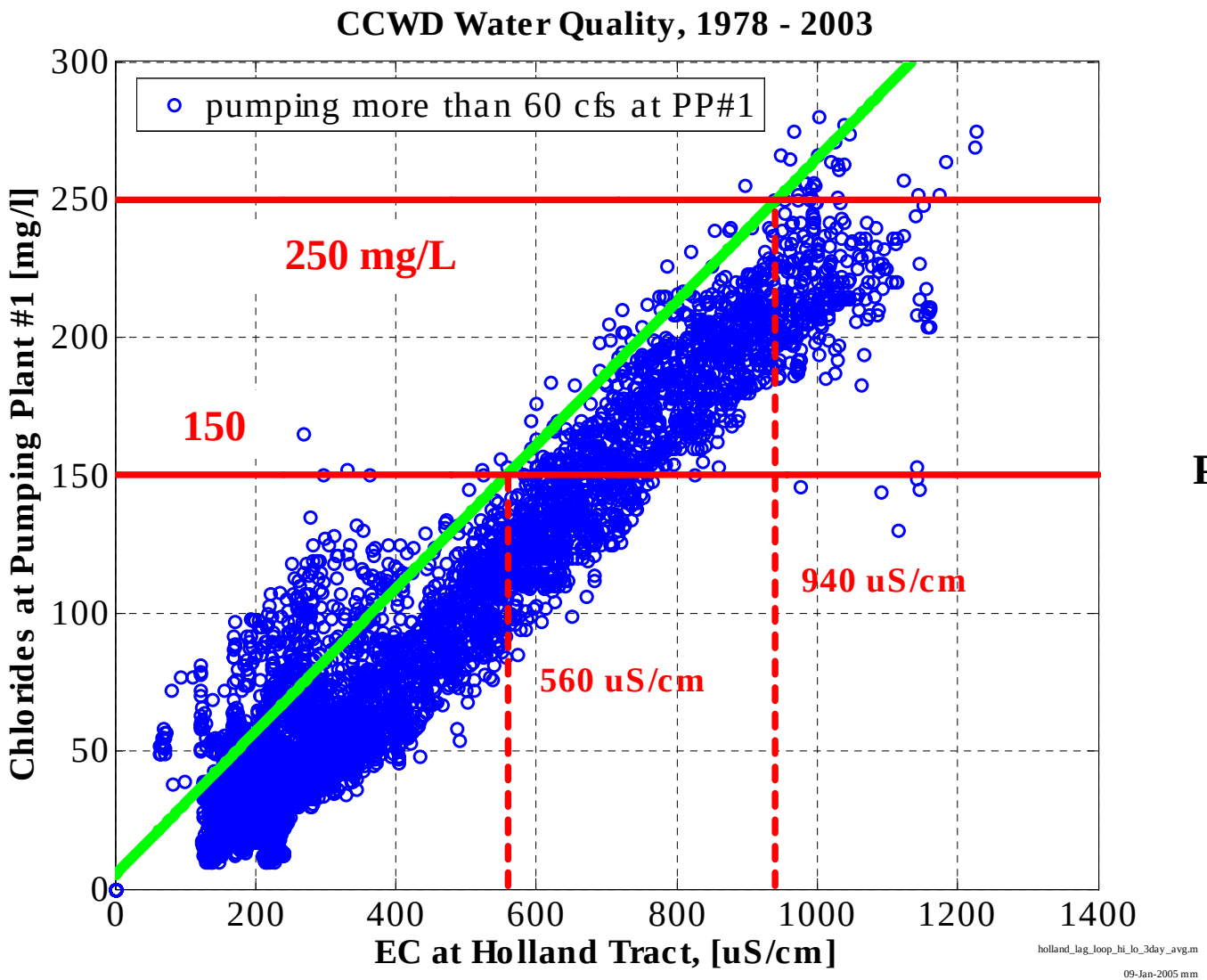
Use cutoff between 30 cfs and 60 cfs

Pumping Plant #1 Chlorides (mg/L)



Pumping > 60 cfs

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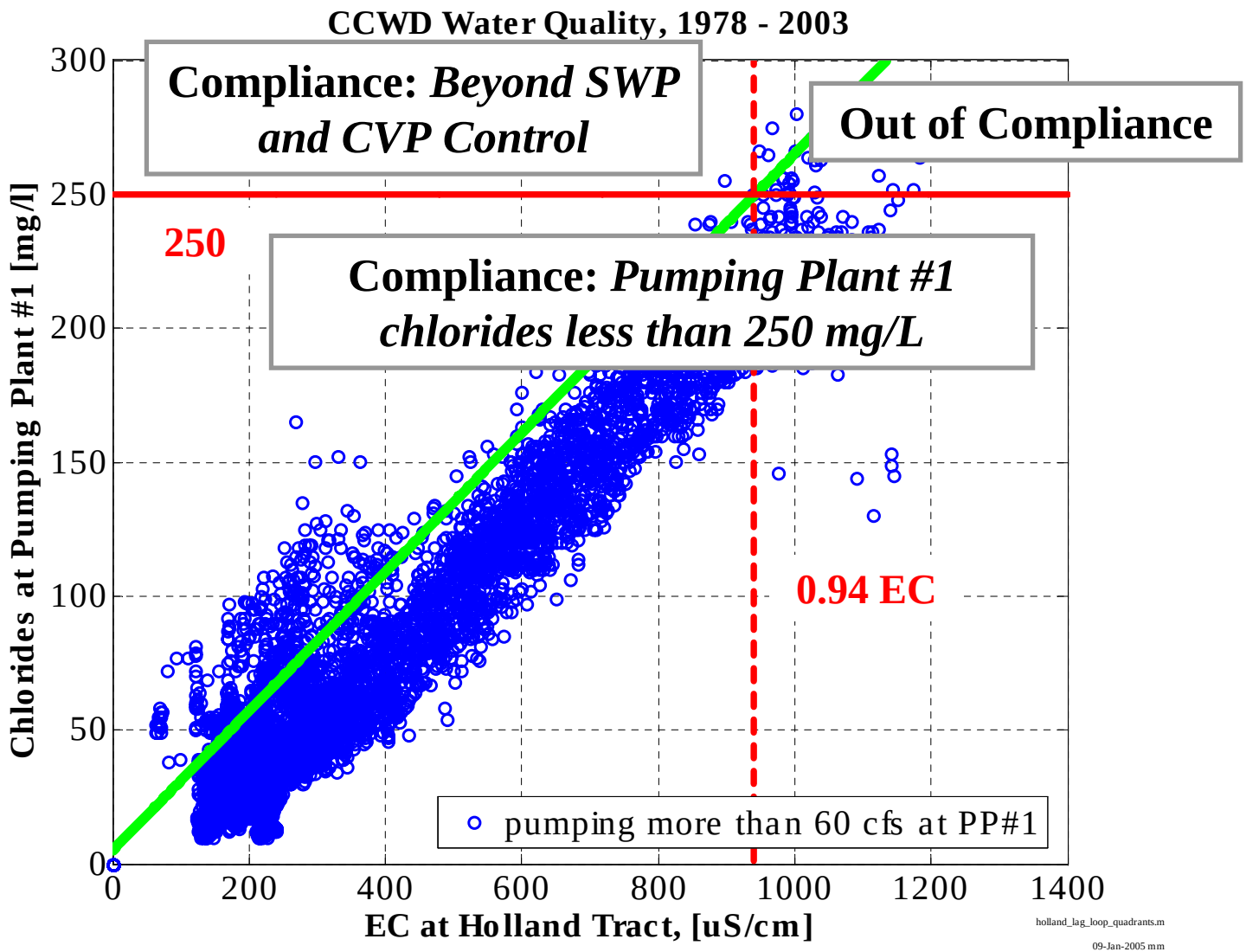
Use Holland Tract to Determine Control



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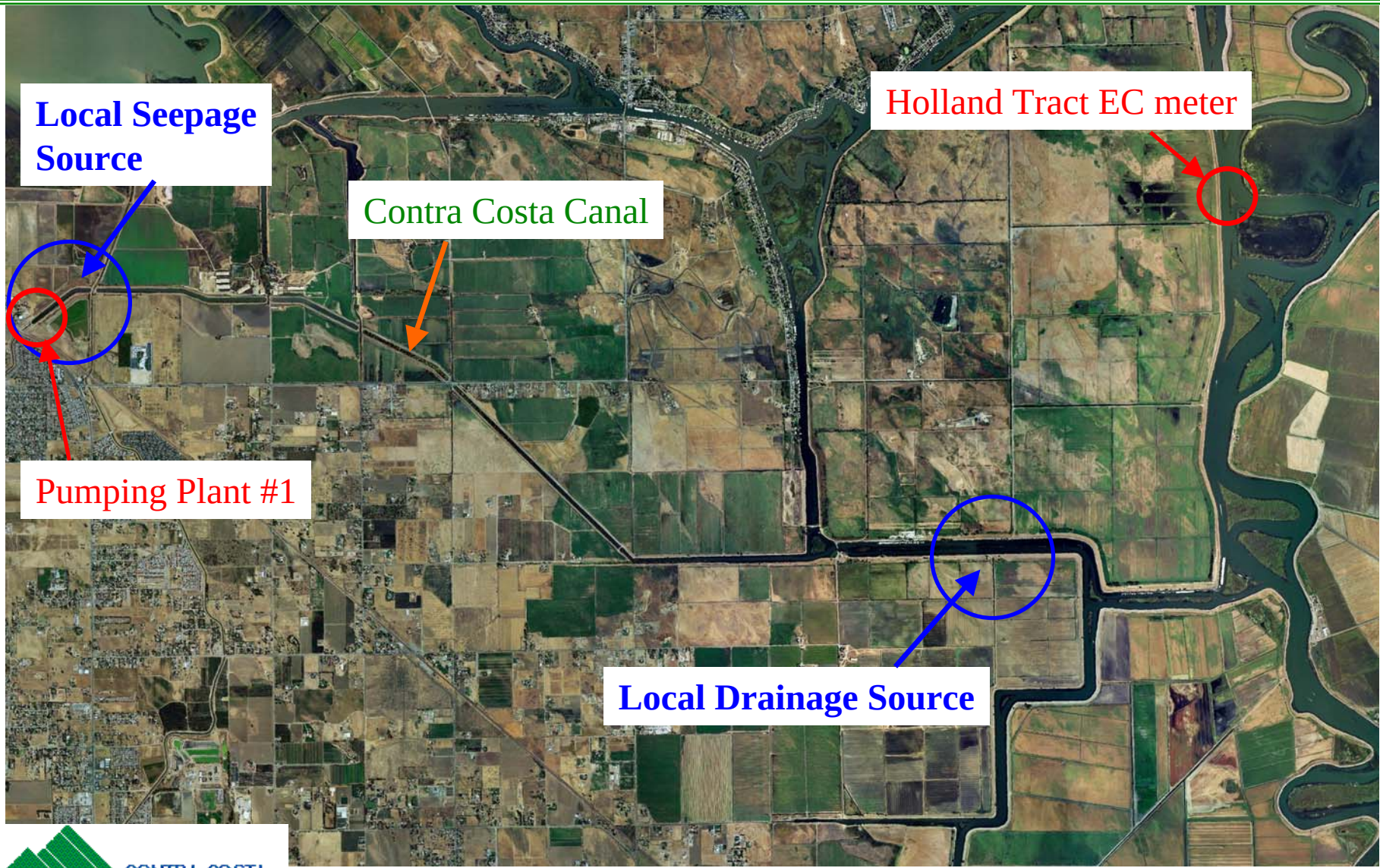
Location of Sources of Degradation



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Proposed Modification: 250 M&I Objective

- If CCWD diverting **more than** 20 cubic feet per second (cfs) at Pumping Plant #1 (3-day running average) and **250** mg/L chloride objective **not met**, M&I chloride objective considered exceeded
- If CCWD diverting **less than** 20 cfs at Pumping Plant #1 (3-day average) and **250** mg/L chloride **not met**, then:
  - Check Holland electrical conductivity (EC) from 3 days previously
  - If Holland EC greater than 0.94 mS/cm, M&I objective considered exceeded
  - If Holland EC equal to or less than 0.94 mS/cm, situation beyond control of DWR and USBR, and M&I objective not exceeded

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Proposed Modification: 150 M&I Objective

- Similarly, if CCWD diverting **more than** 20 cfs at PP#1 (3-day average) and daily chloride at PP#1 is **above 150** mg/L, day does not count toward 150 mg/L objective
- If CCWD diverting **less than** 20 cfs at PP#1 (3-day average) and chlorides **above 150** mg/L chloride, then:
  - Check Holland electrical conductivity (EC) from 3 days previously
  - If Holland EC greater than 0.56 mS/cm, that day does not count toward 150 mg/L M&I objective
  - If Holland EC is equal to or less than 0.56 mS/cm, situation is beyond control of DWR and USBR, and day counts toward meeting 150 mg/L objective

Summary of CCWD Comments

- Compliance location must remain at Pumping Plant #1 to ensure water diverted by CCWD is at or better than 150 mg/L and 250 mg/L M&I chloride objectives
- Two major projects are currently well underway to eliminate effect of the two primary sources of degradation in Rock Slough and unlined section of Contra Costa Canal
- If Pumping Plant #1 diversions less than 30-60 cfs (3-day average), M&I chloride objectives should not be considered exceeded at Pumping Plant #1 provided electrical conductivity at Holland Tract is at or better than specific EC targets
    - 250 mg/L = 0.94 EC
    - 150 mg/L = 0.56 EC

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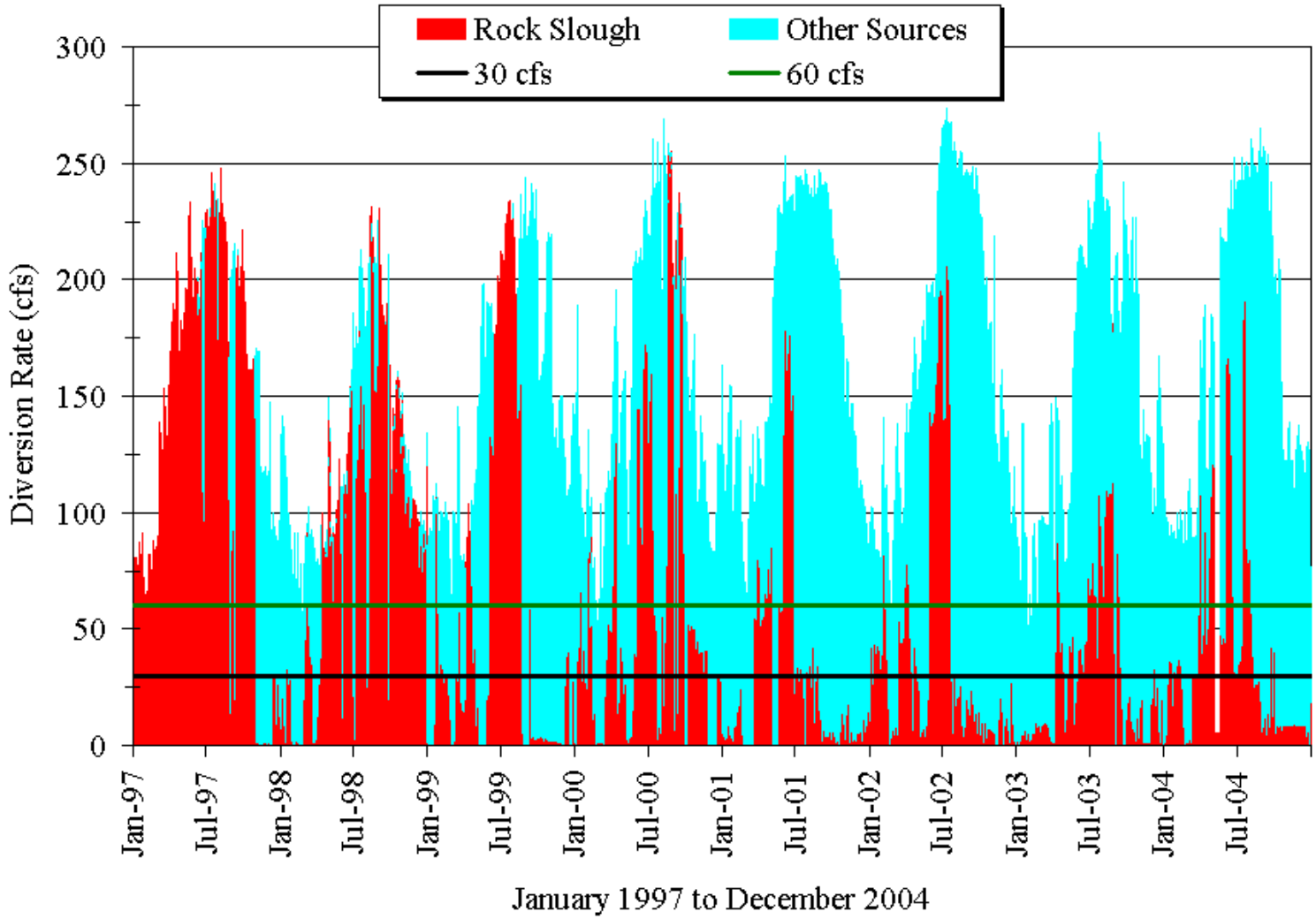
Even with Los Vaqueros, CCWD still uses Rock Slough for water quality and water supply



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