

This presentation premiered at WaterSmart Innovations

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Global Earth and CIMIS Identify Over Irrigating Landscapes

by

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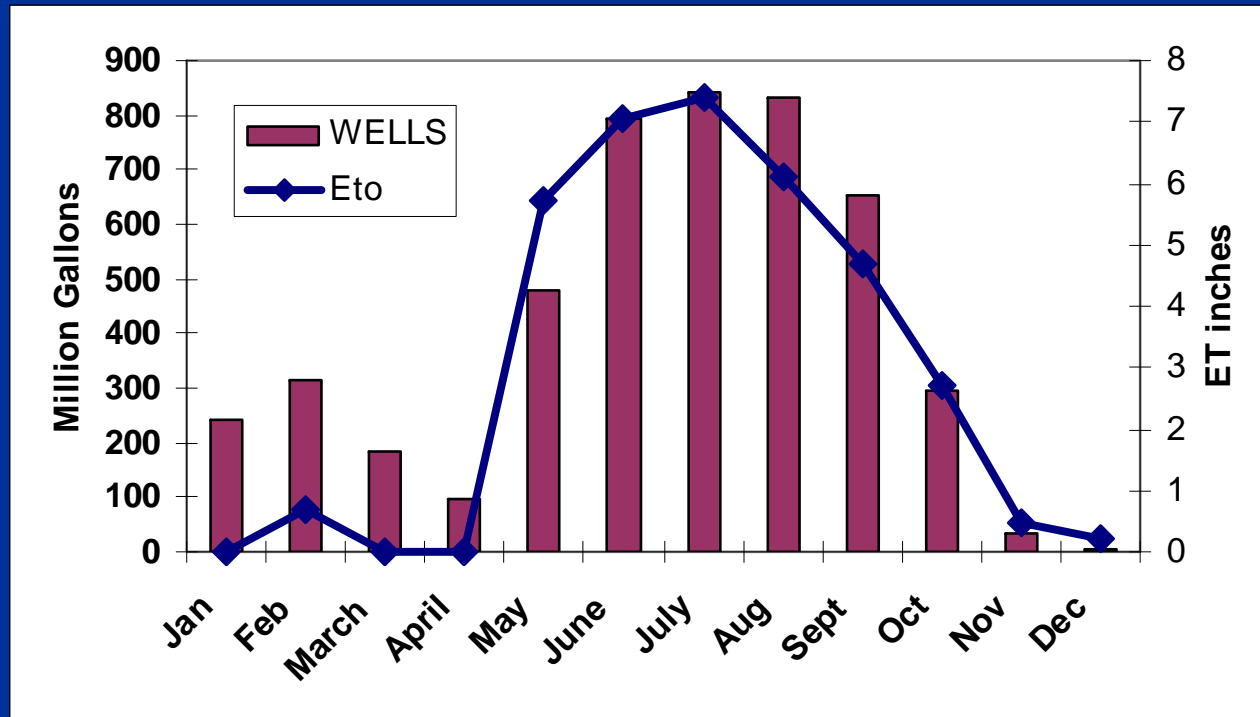
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Identify Over Irrigating Landscapes

- New water efficiency program
- 50 % of supply is applied to irrigation



Objectives:

- Identify which of 33,000 customers have 'large areas' of irrigated landscapes
- How much irrigated area per parcel
- Identify which customers apply too much irrigation water
- Minimize cost (field work, new imagery)

Identify Large Parcels

- Large parcels = 0.3 acres or more
- Data base contains Assessors Parcel Numbers and parcel size
- Sort 33,300 records to identify 2085 customers with parcels > 0.3 acres

Confirm Customer Location

San Joaquin County GIS Map Server

- Public information on Internet
- Queries of APN or street address



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Confirm Landscape Location

San Joaquin County GIS Map Server

Maps:

- street
- parcel boundaries
- ortho photos
- several years
- No tool to measure polygon area



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Google Earth Pro

Plus

- Satellite Images
- 3 meter resolution
- Polygon area tool
- Cheap

Minus

- Locations need verification
- Unknown image date



Google Earth Pro Polygon Tool



CIMIS ETo Data

www.cimis.water.ca.gov

- Calif. DWR network 200 weather stations
- Monthly ETo for local site
- Convert to CCF per acre

= inches/12 X 43560 ft²/acre X 100 ft³/CCF

	June	July	Aug	Sept	Total
ETo inches	7.05	7.41	6.12	4.69	25.27
CCF / acre	255	268	221	169	912

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Customer Applied Water

- Monthly water use
- Subtract winter use to get irrigation use
- Calculate CCF per month per irrigated acre
this example: 2.1 acres irrigated of 4.5 total

	June	July	Aug	Sept
Applied irrigation use = Total Month – Feb CCF	598	762	1023	574
Applied CCF / irrigated acres	284	362	487	273

Customer Applied Water

Calculate CCF per month per irrigated acre

- Compare to 100% ETo for June – Sept

	June	July	Aug	Sept	Total
CCF / acre	284	362	487	273	1408
ETo / acre	255	268	221	169	912
% of ETo	113	138	224	164	154

- Target list of customers to contact

Results

- **Methodology works to initially identify prospects for landscape reviews**
- **Google Earth Pro provides an inexpensive tool to measure landscape areas → need supporting resource to confirm locations**
- **CIMIS is a proven reliable source of ET data**

Thank You

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