SAWPA OUTDOOR WATER BUDGET TOOLS

DATA LAYERS AND TOOLS AVAILABLE TO DETERMINE CUSTOMER OUTDOOR WATER BUDGETS

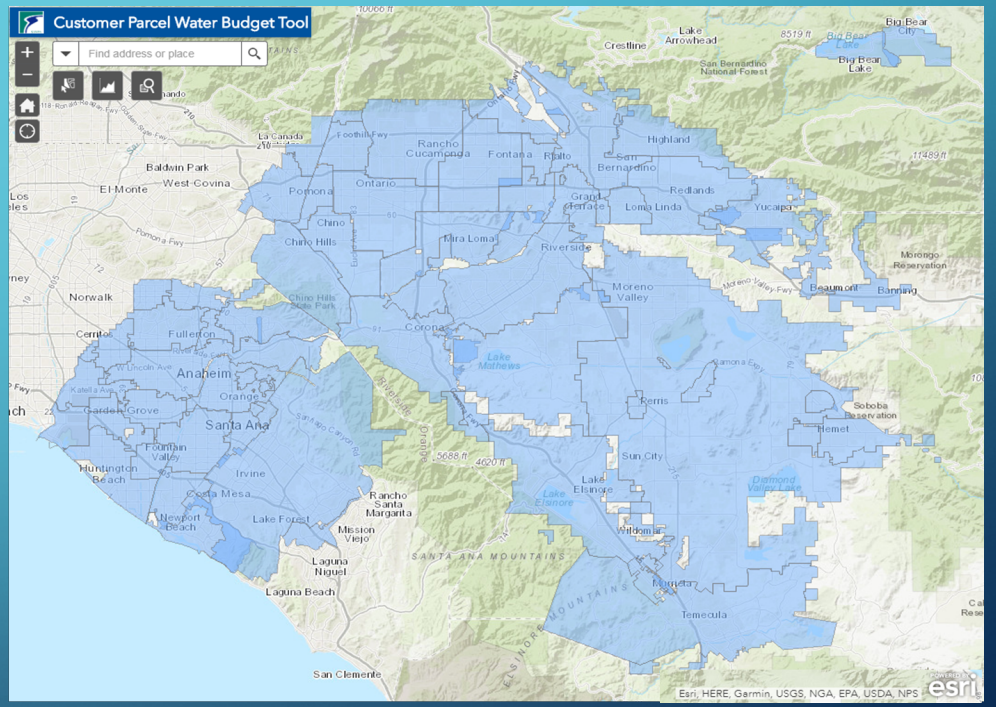
OVERVIEW

- Legislation
- Data
- Demo
- Purpose
- Getting Started

PROPOSITION 84 FUNDED: AERIAL IMAGERY AND RELATED WATER USE EFFICIENCY TOOLS

SAWPA ‘s technology based Program to Support Water Use Efficiency

- Watershed Wide Aerial Mapping
- ESRI GIS Web Application
- Water Meter and NAICS CII Geocoding
- Conservation Based Rate Structures



RECOGNIZING THE IMPORTANCE OF NEW REGULATIONS

SB 606 and AB 1668 require reporting based on budgets and possible fines starting in 2027.

Level of Severity	Earliest Action Can Take Place	State Water Board Action	Required Remedy or Penalty
	Nov 2023	Informational Orders	No action required; no penalties
	Nov 2024	Notices of Failure to Meet Objective	May request retailer to address areas of concern in its next annual report; no penalties
	Nov 2025	Conservation Order	May include measures designed to assist a provider in reaching its objective; no penalties
	Nov 2027	Orders and Regulations	May be liable for fines of $1,000 per day and up to $10,000 per day if the violation occurs during emergency drought conditions

Provided by WaterNow Alliance analysis; author Caroline Koch.

DATA OVERVIEW

PURPOSE

INFO

STATS

AERIAL PHOTOS

LANDCOVER ANALYSIS

GIS TOOL

DATA PURPOSE

- To measure the irrigated and recently irrigated areas in residential parcels for the purpose of coming up with an outdoor water budget

DATA INFO

- Aerial Photography
- County Parcels
- Categories

+

+

TURF

TREES/SHRUBS

POOLS

DEAD VEG

DATA STATISTICS

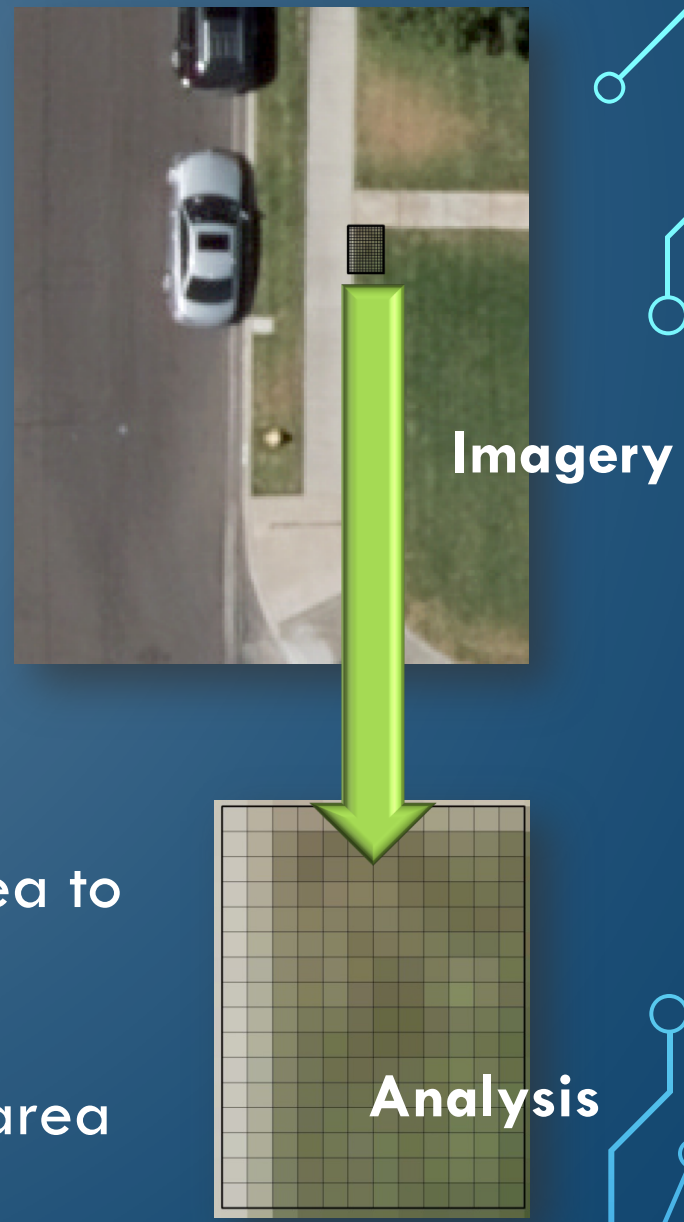
- Cost $0.59 per Parcel : $880,000 / 1,497,804 Parcels
- 4 Terabytes
- Delivered in 3 ways
  - Physical Drive
  - Web Spatial Service
  - Web Application (Tool)

AERIAL PHOTOGRAPHY

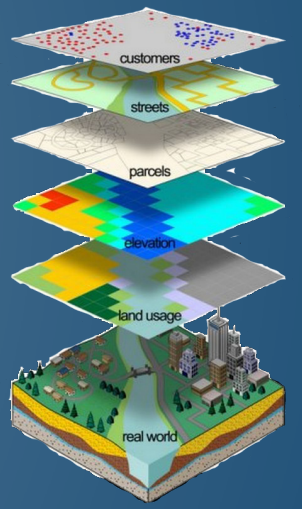
- 3 inch 4 Band digital imagery
- Flown June – July 2015

LAND COVER ANALYSIS

- Probability Model
- 80 approximate spectral classes
- 4 categories
- Probability is summed against the modified parcel area to get land cover areas
- Modified parcel area includes parkway and canopy area
- Display Probability Model is colored by range of values



USING GIS TOOL



- Parcel boundaries over layered on to Imagery Model
- 2 kilometer grid spatial California Irrigation Management Information System (CIMIS) to model Evapotranspiration (ET)
- 6 inch contours to adjust model for slope

Outdoor Water Budget Formula
(Gallons)

=

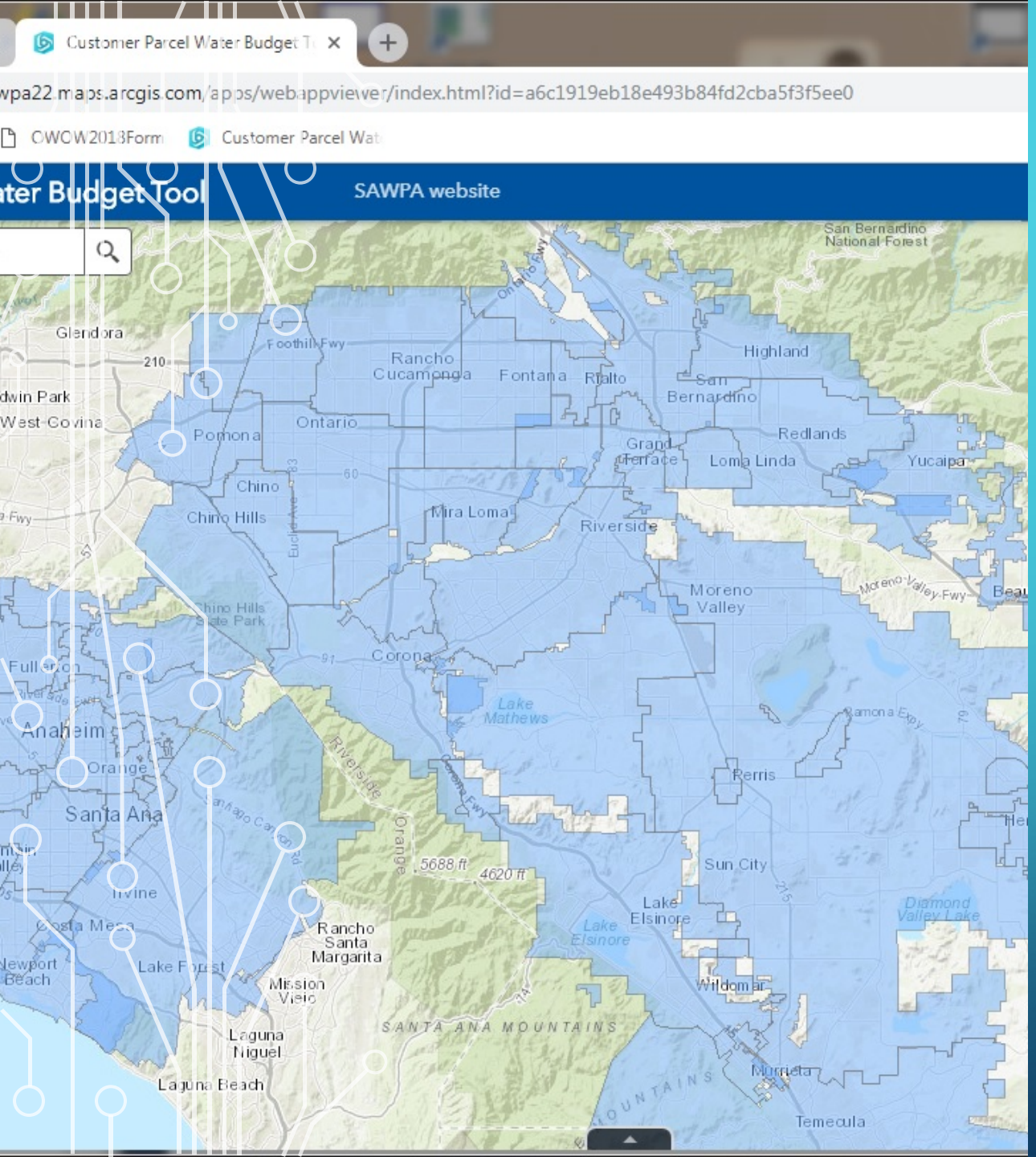
AREA

Irrigable Area
(Square Feet)

×

WATER NEEDS

Weather Data
(Gallons per Square Foot)



DEMO

BUDGET TOOL / PETE VITT

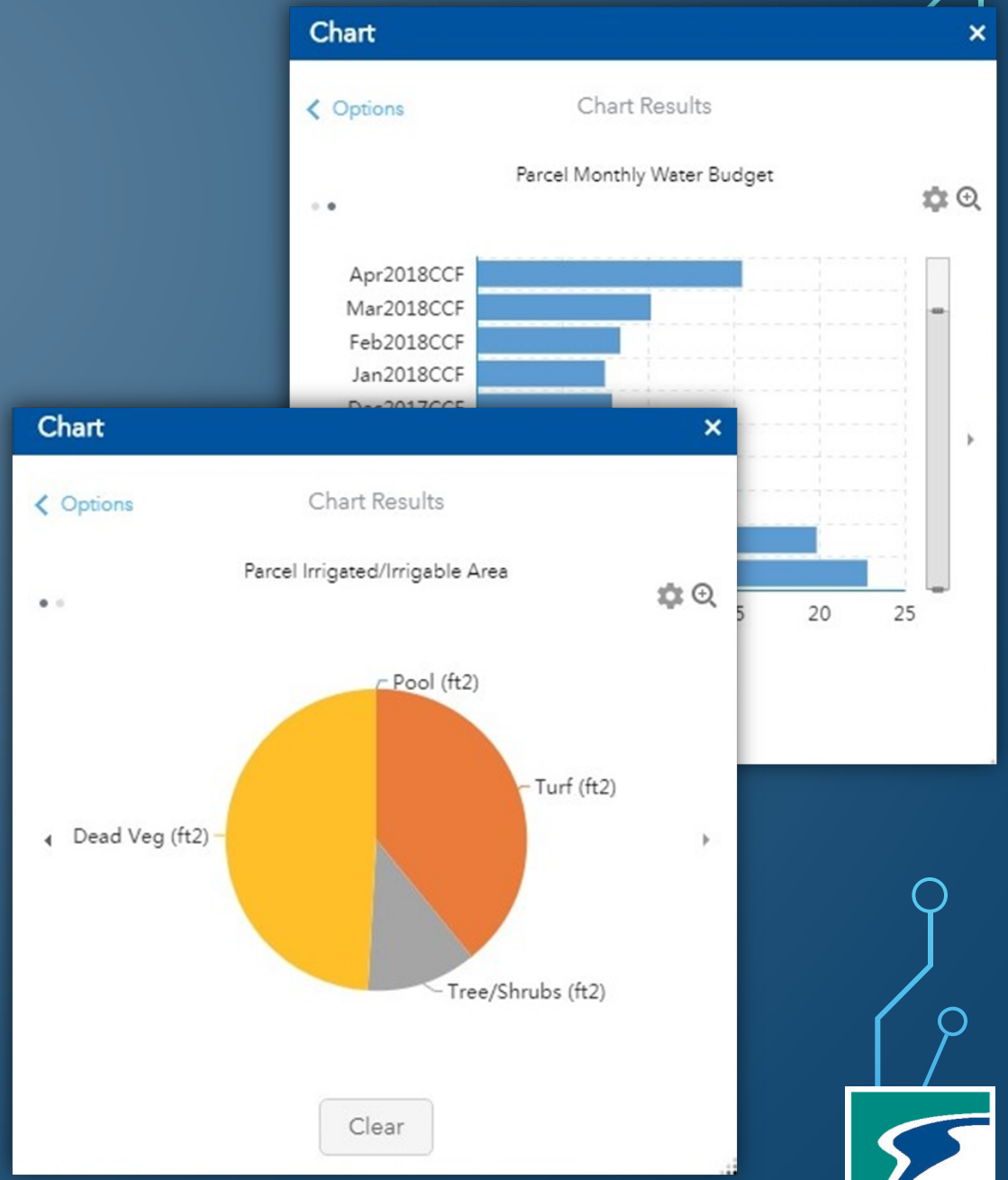
TOOL LINK

PURPOSE AND NEXT STEPS

HOW TO / ACCESS / FUTURE

POTENTIAL USE

- Residential customer support / knowledge
- Residential customer type identification
- Residential water budget



FUTURE

- North American Industry Classification System (NAICS) Codes
- Aerial Photography
  - Southern California Association of Governments (SCAG)
    - Over 70 retail water agencies in SAWPA area purchase aerial imagery
    - Goal of every 3 to 5 years
  - DWR using State-wide 2018 aerial imagery (1 foot resolution)
- Watershed Image analysis
- Additional vegetation classes
- Improved parcel boundaries

HOW TO GET DATA / ACCESS / SUPPORT

- Data – Rick Whetsel rwhetsel@sawpa.org / Pete Vitt pvitt@sawpa.org
- ArcGIS Tool – Dean Unger dunger@sawpa.org / Pete Vitt pvitt@sawpa.org
- Spatial Imagery Service – Dean Unger dunger@sawpa.org
- Support – Rick, Dean or Pete
- SAWPA Web Page: http://www.sawpa.org/water-use-efficiency/

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