Prop 1 Enhanced Decision Support Tool Update

Rick Whetsel| Senior Watershed Manager

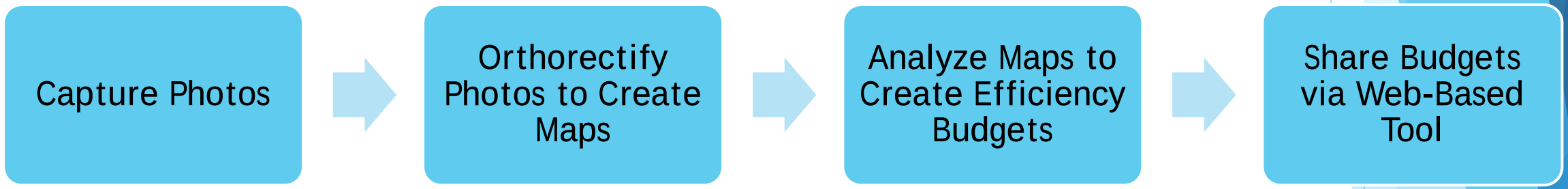
Project Agreement 22 Committee

December 14, 2021

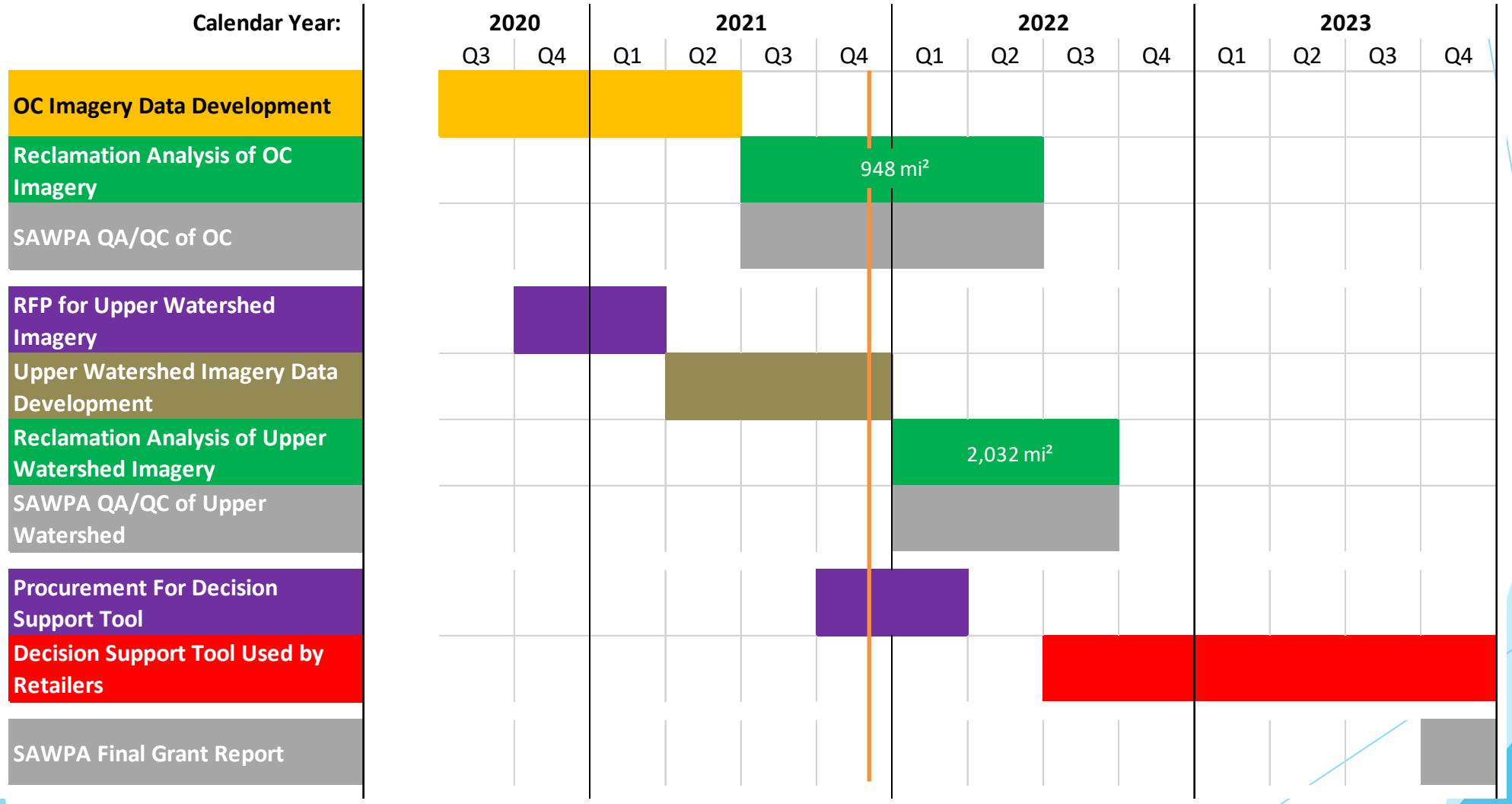
Proposition 1
IRWM Grant

SAWPA

Purpose of Project



Project Schedule

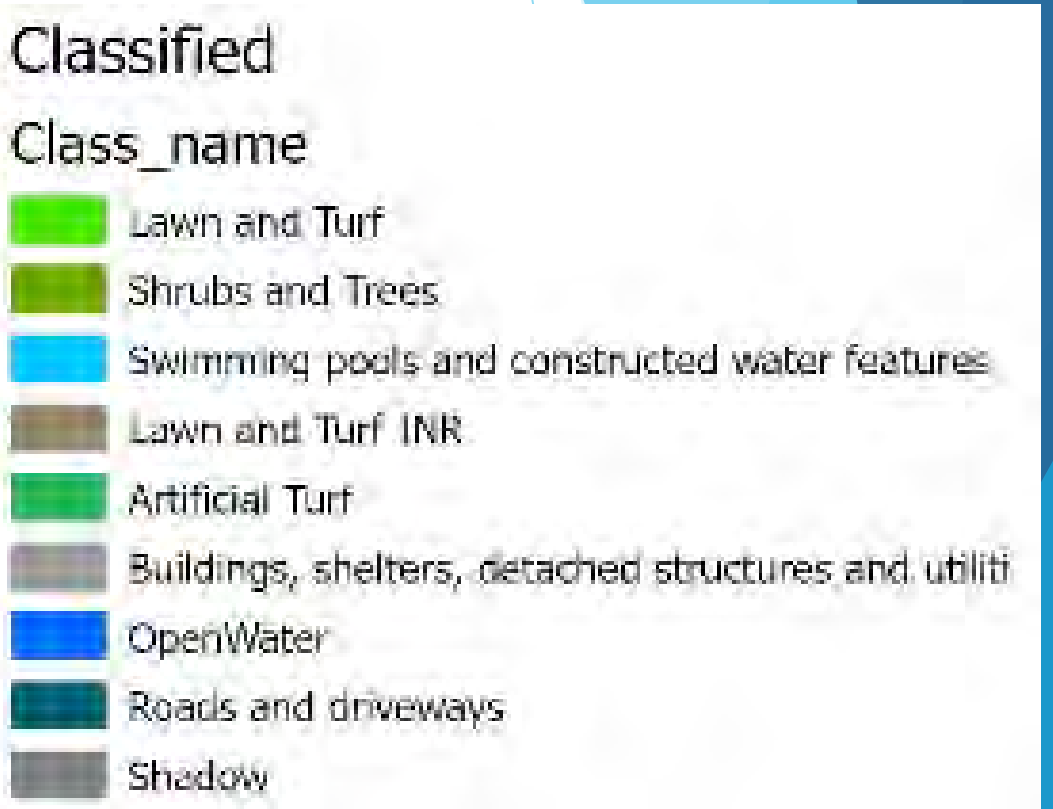


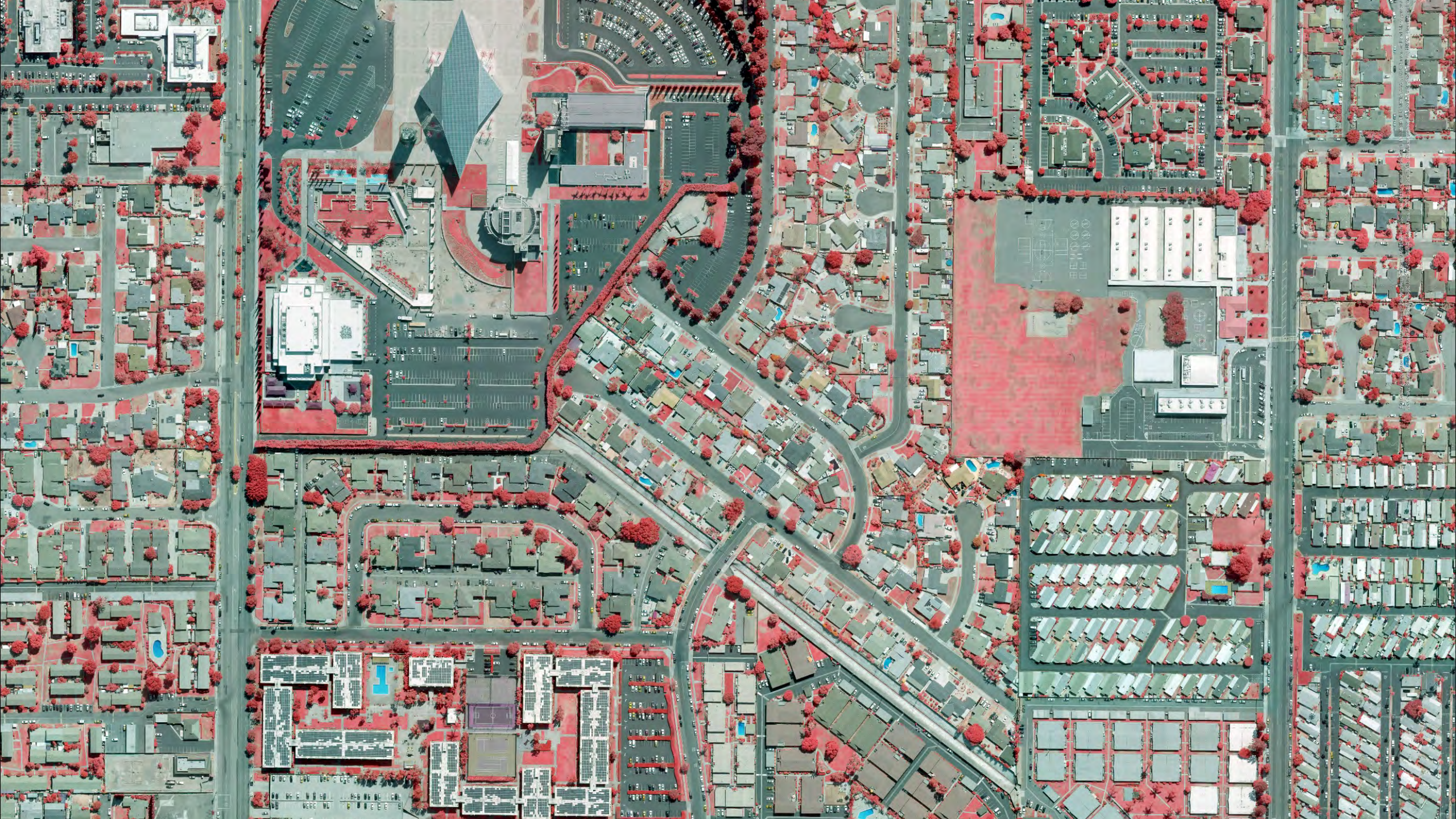
Project Status

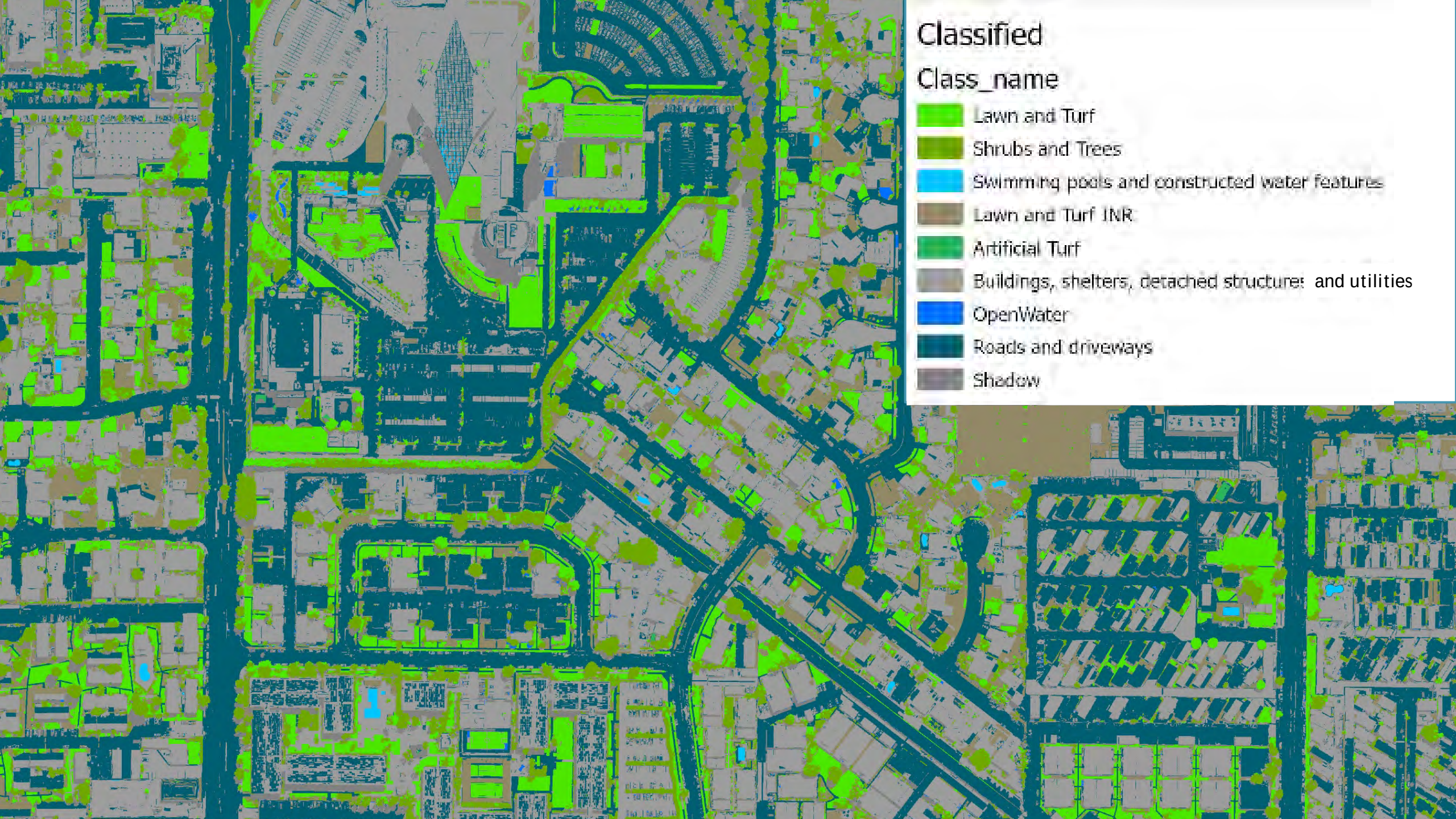
- Upper Watershed Aerial Imagery (Geophex)
  - Completed collection of Aerial Imagery and Aerial Triangulation tying the imagery to known ground coordinates.
  - Production of orthophotos to be completed by end of 2021.
- Landscape Analysis (USBR)
  - Model to classify common outdoor landscape objects (such as trees, shrubs, grass) under development.
  - Model is currently being tested on Orange County Imagery.
- Web-Based Tool (SAWPA)
  - Initiate conversation with member agency staff on the features and capabilities of the tool.

Classification Table Bureau To Use

Canopy Priority Classification System	
Level 1	**Level 2**
1. Impervious	Impervious
2. Pools	Swimming pools/man made water features
3. Irrigated	3.1 Turf grass/ground cover 3.2 Canopy/planting beds
4. Irrigable not irrigated	4.1 Turf grass/ground cover 4.2 Canopy/other
5. Non irrigated vegetation	Undeveloped for the purposes of irrigation
6. Undeveloped lands	Undeveloped Lands
7. Horse Corrals	Horse Corrals
8. Open Water	Other open natural water (rivers/ponds)
9. Artificial Turf	Artificial Turf
10. Agricultural Land	Agricultural Land (.25 acre mmu)






Classified
Class_name
Lawn and Turf
Shrubs and Trees
Swimming pools and constructed water features
Lawn and Turf INR
Artificial Turf
Buildings, shelters, detached structures and utilities
OpenWater
Roads and driveways
Shadow

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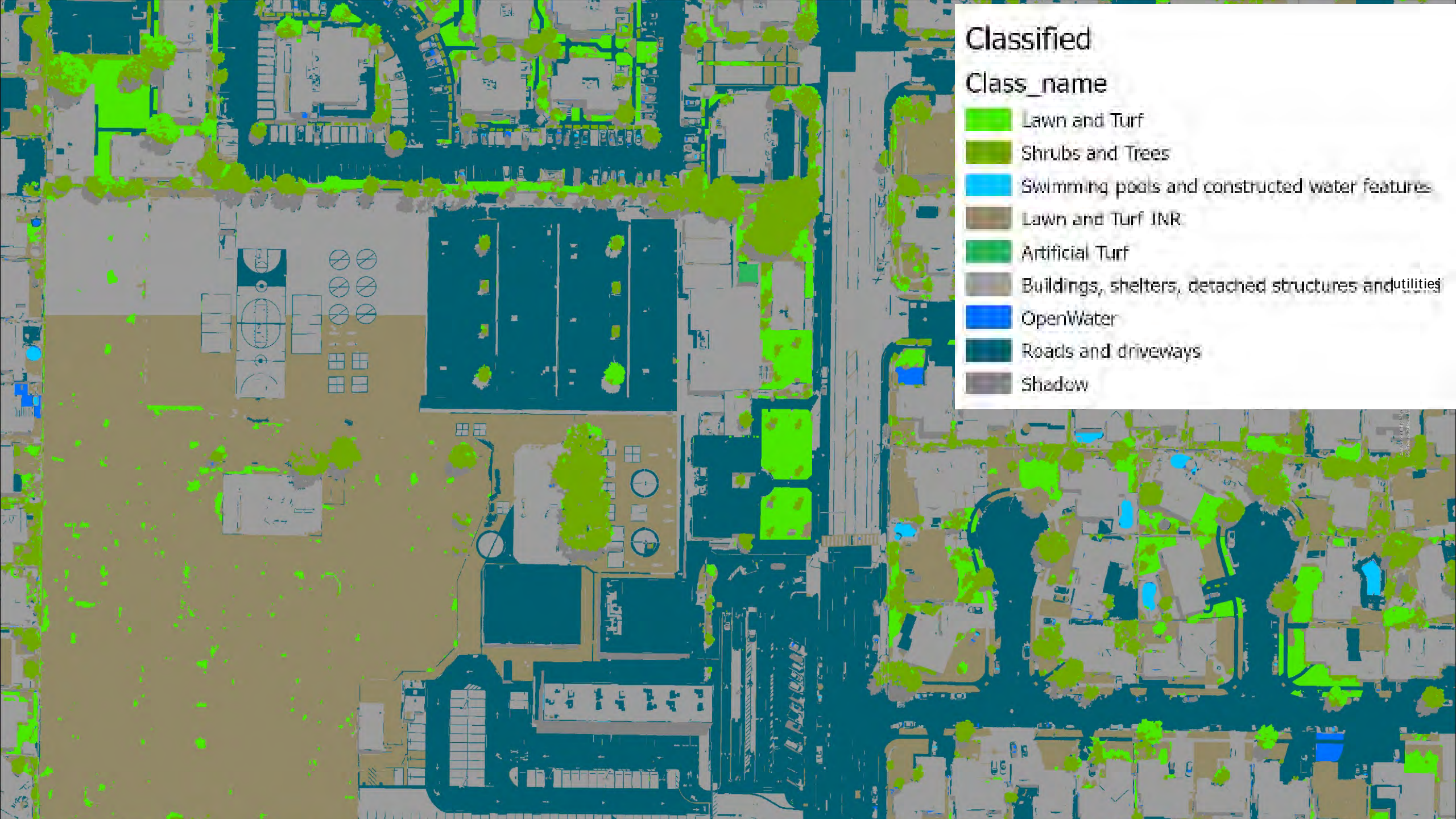
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Web-Based Tool

- Imagery Data (Bureau of Reclamation)
  - Irrigated landscape and irrigable land measurements sufficiently detailed to provide customer parcel-level outdoor water budgets.
  - Evapotranspiration Coverage (Spatial CIMIS?)
  - (Retail Agency water budgets from State?)
- Features
  - Web-based tool with GIS interface and dashboard
  - 2021 aerial imagery
  - Retail service area/parcel level boundaries
- Capabilities
  - Parcel level outdoor landscape measurements
  - Estimated annual/monthly parcel level outdoor water budgets (retail/parcel level)
  - (Estimate indoor budgets?)
  - (Edit features?)

Questions

SARCCUP Water Efficiency Budget Assistance Project Update

Agenda Item 4.B.

Ian Achimore | Senior Watershed Manager

PA 22 Committee | December 14, 2021

SARCCUP

SAWPA

Project Purpose

- Help **10** retail agencies comply with State regulations* that require water agencies to adhere to agency-wide water use efficiency budgets,
  - Project specifically creates dedicated landscape meter water efficiency budgets through GIS and in-field consultant work.
- PA 22 Committee approved two retail water agency partners per SAWPA member agency
  - OCWD/MWDOC are lead in North OC per PA 22 Committee approval.

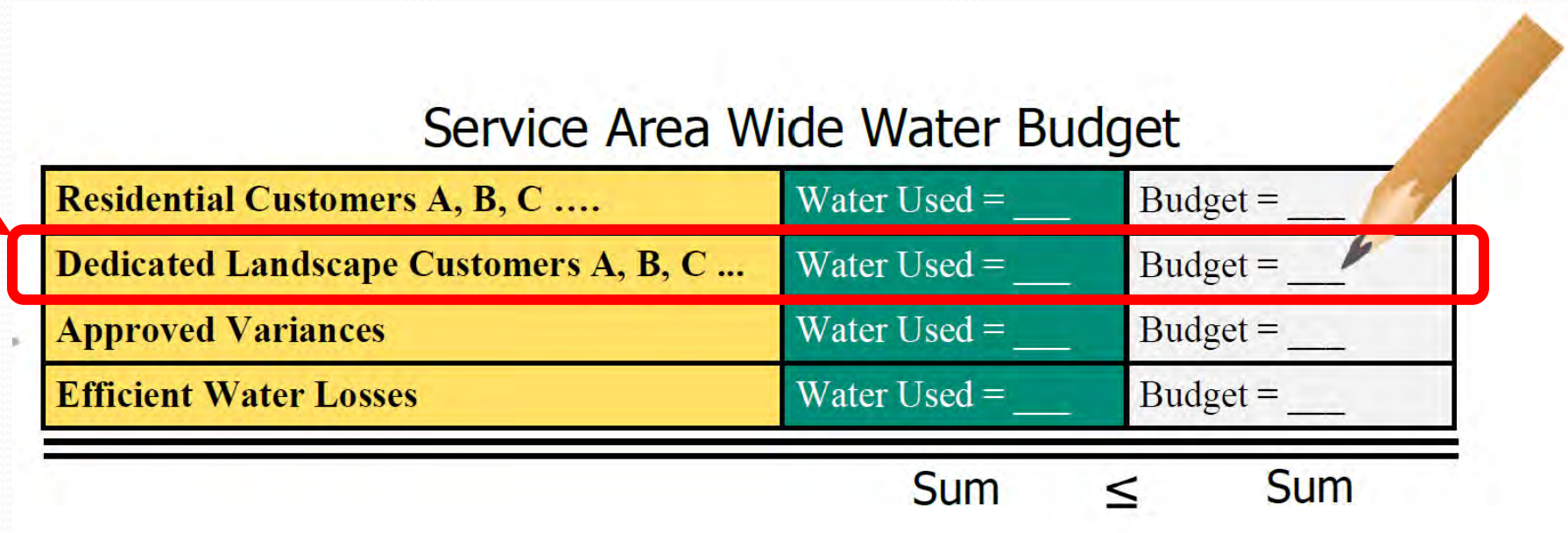
Dedicated Landscape Meter Customer Example

* Senate Bill 606 and Assembly Bill 1668

Water Efficiency Budget Regulations

- Per Senate Bill 606 and AB 1668, most urban retail agencies will have to create service area wide water efficiency budgets by January 2024.
- Gradually escalating enforcement by the State could potentially result in a civil fine on retailers for service area wide water efficiency budget non-compliance.

Project helps fill in the blank here

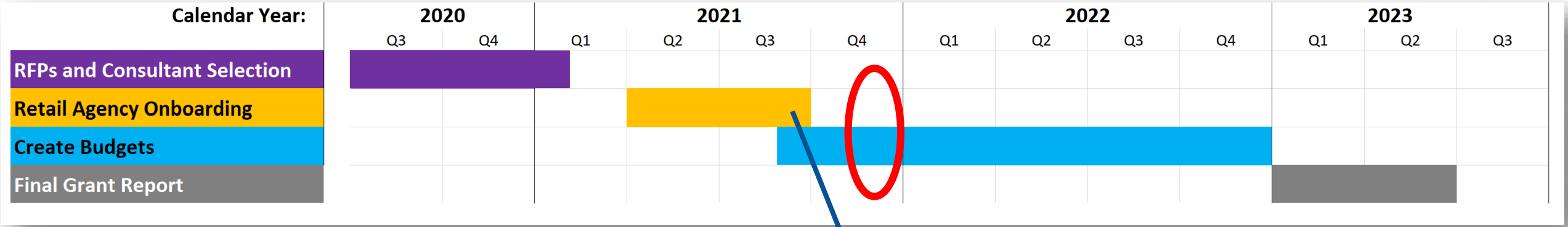


Service Area Wide Water Budget

Residential Customers A, B, C ….	Water Used = ___	Budget = ___
Dedicated Landscape Customers A, B, C ...	Water Used = ___	Budget = ___
Approved Variances	Water Used = ___	Budget = ___
Efficient Water Losses	Water Used = ___	Budget = ___
	Sum	≤ Sum

Not shown in table is potential retailer bonus for recycled water

Overall Project Schedule

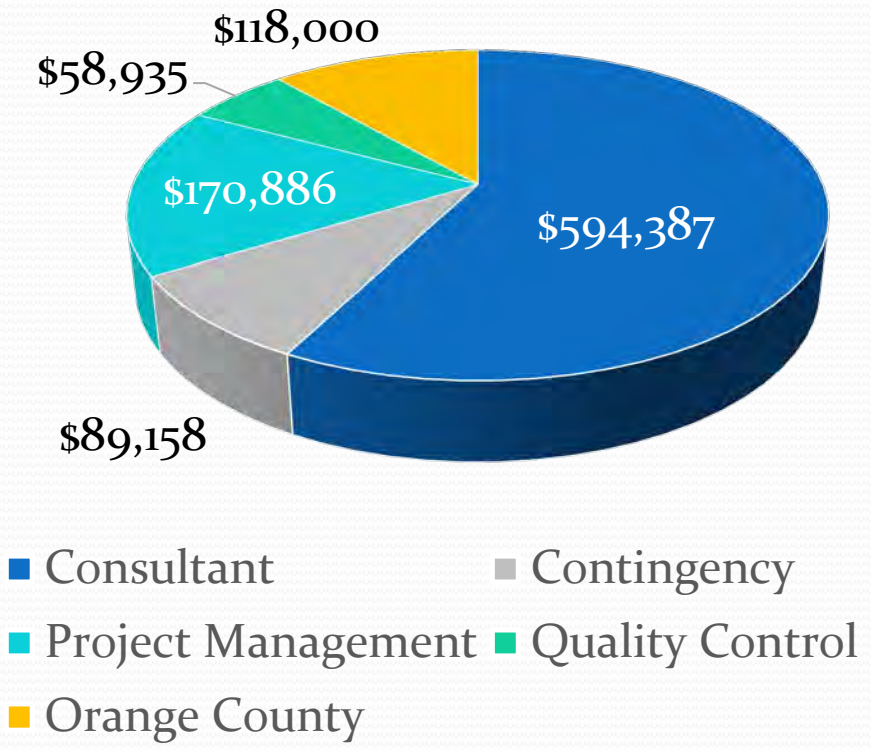


= Current phase

Still recruiting last two retail partners.

Estimated 3 Year Project Costs

- Consultant = NV5, Eagle Aerial and Waterfluence,*
- Contingency = Consultant (15% of consultant contract),
- Project Management, Outreach and MOUs = SAWPA staff costs, and
- Quality Control = SAWPA GIS staff costs.



Total Costs = Approximately $1,031,000

*$594,387 represents contract approved by PA 22 Committee.
**Includes outreach and MOU execution with retailers.

Latest Progress with Retail Partners

Agency Who Has Signed MOU	MOU Signature Date	Status Updates
Chino Hills	Nov 2, 2021	City staff is providing NV5 with their data soon for their city-maintained properties.
Hemet	Aug 19, 2021	NV5 and the City met on 12/1 to confirm certain nuances of their data. NV5 now waiting on a full-year of consumption data, once received they will then prioritize Hemet's customers for analysis.
Monte Vista Water District	June 29, 2021	Had customer prioritization meeting with MVWD staff on 10/14. MVWD will review and provide feedback on prioritization. NV5 is confirming certain nuances of their data.
Perris	Aug 9, 2021	City staff to provide billing dataset to NV5 by 12/15 for their 55 dedicated landscape meters.
Riverside Public Utilities	June 29, 2021	Had customer prioritization meeting with RPU staff on 11/30. Waiting on HOA data from Department of Water Resources before moving forward with final customer prioritization.
San Bernardino Municipal Water Dept.	Nov 10, 2021	Had kick-off meeting with SBMWD staff on 11/10. City staff has provided GIS data to NV5 but is still compiling water usage data.

Ongoing Recruitment with Retailers

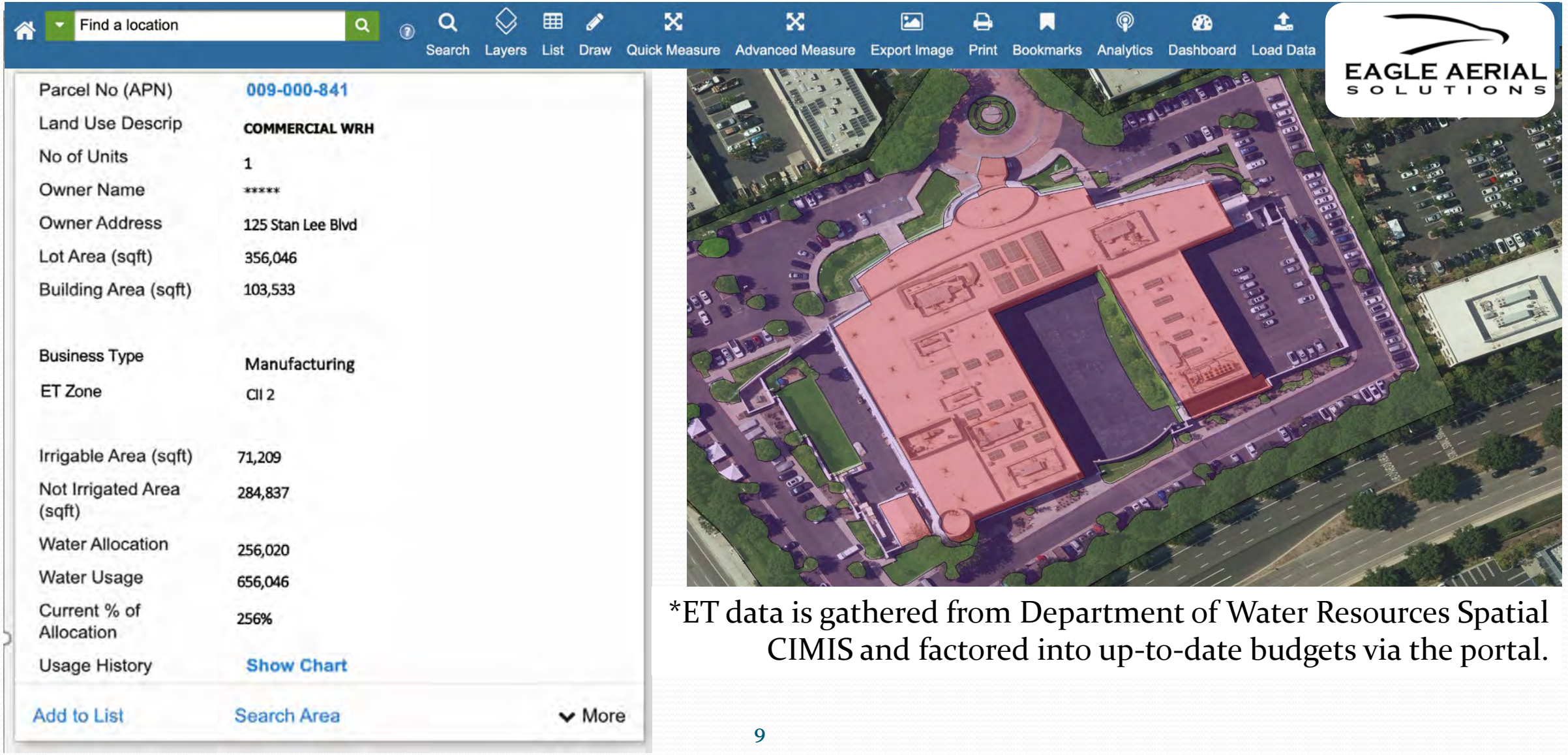
- SAWPA is still working with the following retailers to encourage them to participate:

Agency Actively Being Recruited	Status Updates
Jurupa Community Services District	SAWPA followed up with Jurupa staff on 11/30 to check-in. Their staff is still interested in the Project.
Loma Linda	SAWPA sent information on how to streamline the Project for just city-owned properties and updated MOU to City staff on 11/15. They have about 260 dedicated irrigation meters.

Project Tasks for Each Recruited Retailer

1. Hold individual kick-off meeting with NV5 and SAWPA,
2. Retailer to provide NV5 their data for the customers included in the project,
3. NV5 analyzes data and labels customers needing complex budget analysis,
4. Optional meeting held to discuss final prioritization customer list,
5. NV5 begins GIS analysis (and any in-field analysis if needed) to create budgets,
6. NV5 will provide the final budgets digitally to retailer for their approval, and
7. Through a web portal, ongoing local evapotranspiration data will be incorporated to create up-to-date efficiency budgets for the customers (for one year).

Evapotranspiration (ET)* and Web Portal

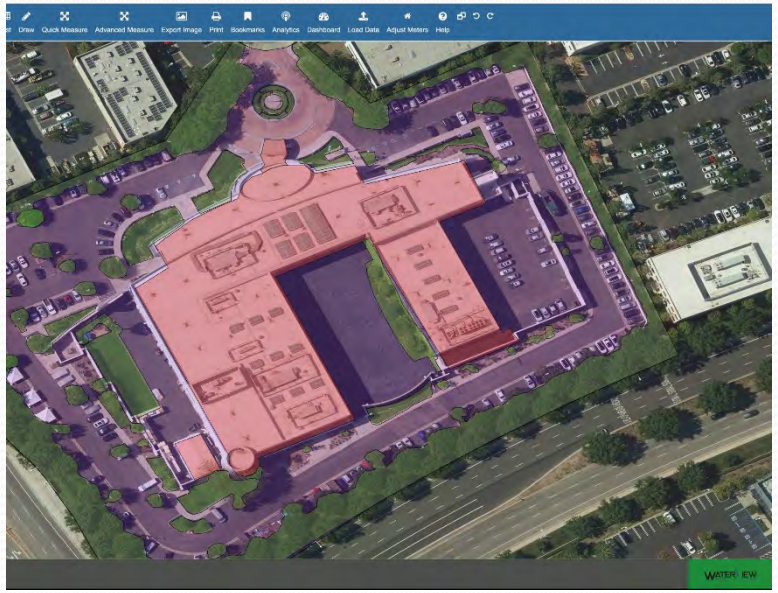


*ET data is gathered from Department of Water Resources Spatial CIMIS and factored into up-to-date budgets via the portal.

Final Project Deliverables

1

Online Portal (Will Include Continually Updated ET data)
Each retailer has access for one year.



2

Table Format (Retailers will also get shapefiles of new Meter Service Areas and irrigated/irrigable areas)

Customer ID	Historical ET Average	Meter Location or Meter Service Area Points	Meter Service Area (MSA)	Irrigated Area	Irrigable Area

Update from OC Partners

- The cities of Brea, Fountain Valley and Newport Beach, Orange, and Seal Beach have signed project agreements with MWDOC,
  - These five cities will all likely be included in Project as their amount of dedicated irrigation meters can be covered by SARCCUP grant/match funding,
- Each city has had, or is planning, kick off meetings with MWDOC and NV5,
- Brea's analysis has started, other cities are currently compiling data for NV5 and will submit it in December or early 2022.

Questions