Getting to Efficiency

Making Sense of Your Landscape Area Data

October 28, 2026 | 10:00 am – 11:30 am

Water Boards

CALIFORNIA DATA COLLABORATIVE

CALIFORNIA WATER EFFICIENCY PARTNERSHIP

HOSTED BY

PROUD PARTNERS

Getting to Efficiency: A Technical Assistance Webinar Series for Making Conservation a California Way of Life

The State Water Resources Control Board's Conservation Program, in partnership with the California Data Collaborative and the California Water Efficiency Partnership, will be holding a series of training webinars for urban retail water suppliers. The webinar topics will focus on addressing common technical barriers to completing the Urban Water Use Objective reporting required for urban retail water suppliers by the Making Conservation a California Way of Life regulation.

More webinars to be announced soon. Stay informed of upcoming webinars by subscribing to the Supplier Training Webinar Series (Conservation) Email List.

Webinar Calendar

Date	Topic	Registration	Recording	Presentation
June 23, 2026	Introduction to Getting to Efficiency	Register	Webinar Recording	Webinar Slides (PDF)
August 5, 2026	Data 101 - Data Fundamentals for UWUO Reporting	Register	Webinar Recording	Webinar Slides (PDF)
September 22, 2026	Data 201 - Data Sources & Documentation UWUO Year-Round Reporting Calendar (PDF)	Register	Webinar Recording	Webinar Slides (PDF)
October 28, 2026	Making Sense of Your Landscape Area Data	Register		

External resources

Learning Objectives

1. Understand what residential and CII landscape area data the state provides, and how it connects to UWUO reporting.
2. Learn how to access and view LAM data through the CalWEP LAM Explorer and GIS tools.
3. Identify what to review, refine, and prepare for CII landscape measurement and substantiation before the 2027 and 2028 deadlines.

Speakers



Marty Ricci

Senior Environmental Scientist
Department of Water Resources



Tia Fleming

Executive Director
California Water Efficiency Partnership



Christopher Tull

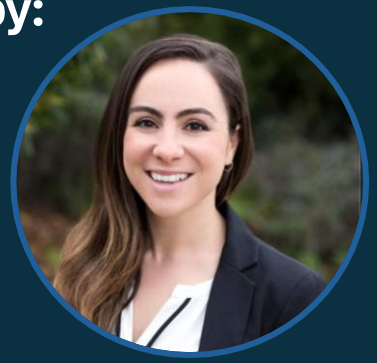
Chief Data Officer
California Data Collaborative



Marielle Rhodeiro

Research Data Specialist
State Water Resources Control Board

Moderated by:



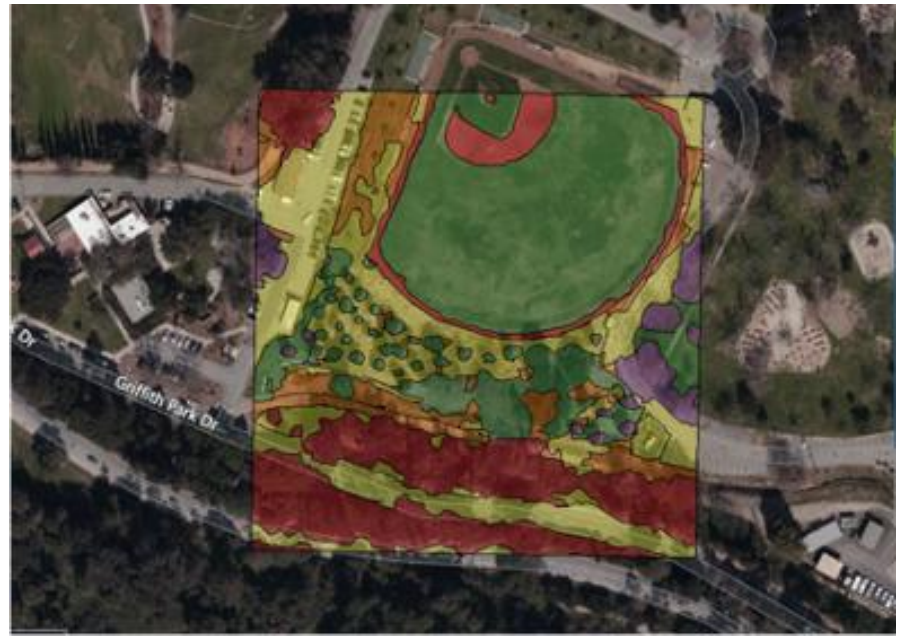
Sarah Musiker

Senior Director of Programs
California Data Collaborative

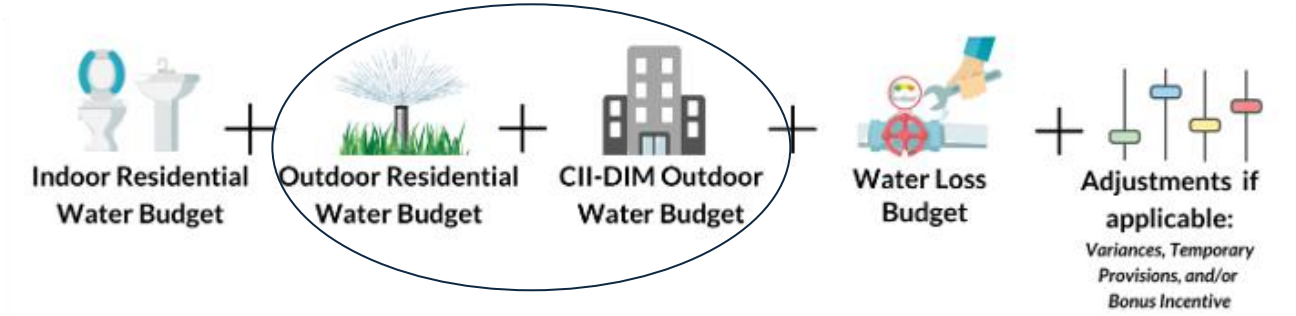
What is Landscape Area Measurement?

What is it used for?

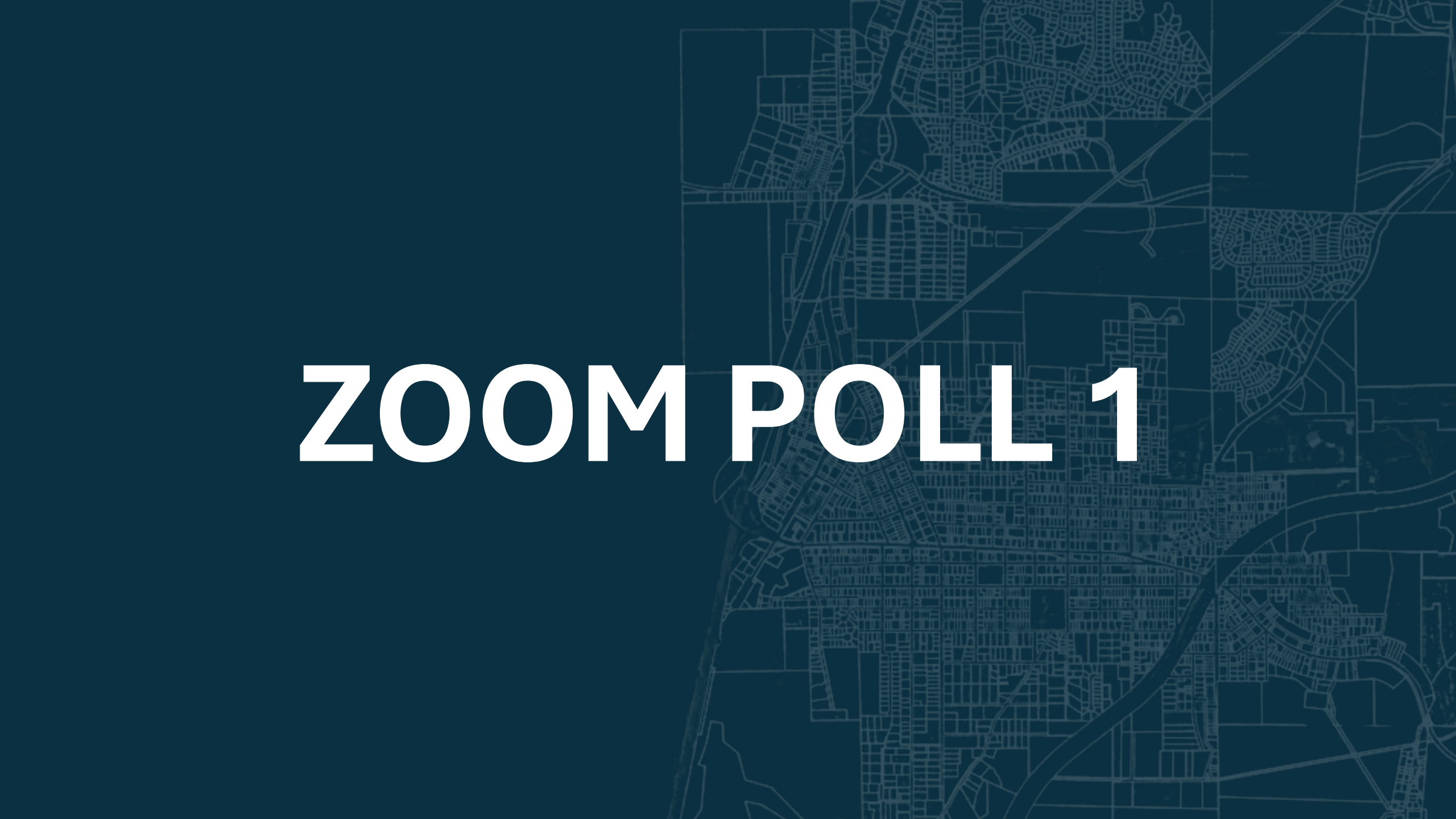
Landscape Area Measurement is the identification and calculation of the irrigable and not irrigable land.



- LAM is part of the equation to calculate your **outdoor budgets** for the Urban Water Use Objective.



- LAM is also used to identify your mixed-use meter (MUM) large landscapes for your CII performance measures

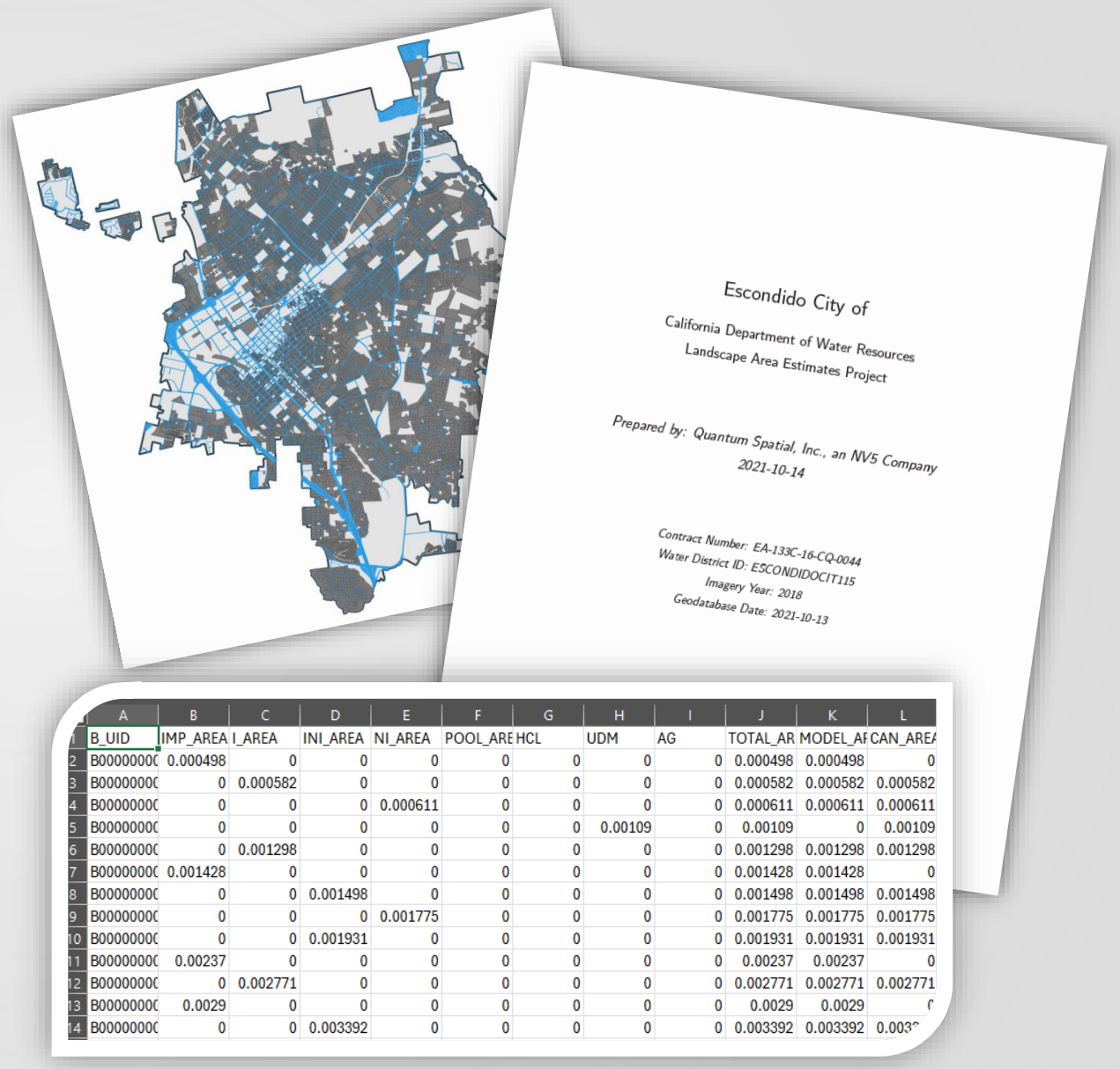

ZOOM POLL 1

Residential and CII Landscape Area Measurement Overview

Marty Ricci, Department of Water Resources

What was delivered:

- The Residential LAM Area of Influence (AOI) started at the urban retail water supplier boundary (black):
- Residential parcels (gray) include:
  - A_UID – original parcel layer
  - B_UID – topologically corrected
- Void Layer (blue)
- Provided: Shapefiles, geodatabase, report with tabular descriptions for each residential parcel



	A	B	C	D	E	F	G	H	I	J	K	L
1	B_UID	IMP_AREA	I_AREA	INI_AREA	NI_AREA	POOL_ARE	HCL	UDM	AG	TOTAL_AR	MODEL_AF	CAN_AREA
2	B00000000	0.000498	0	0	0	0	0	0	0	0.000498	0.000498	0
3	B00000000	0	0.000582	0	0	0	0	0	0	0.000582	0.000582	0.000582
4	B00000000	0	0	0	0.000611	0	0	0	0	0.000611	0.000611	0.000611
5	B00000000	0	0	0	0	0	0	0.00109	0	0.00109	0	0.00109
6	B00000000	0	0.001298	0	0	0	0	0	0	0.001298	0.001298	0.001298
7	B00000000	0.001428	0	0	0	0	0	0	0	0.001428	0.001428	0
8	B00000000	0	0	0.001498	0	0	0	0	0	0.001498	0.001498	0.001498
9	B00000000	0	0	0	0.001775	0	0	0	0	0.001775	0.001775	0.001775
10	B00000000	0	0	0.001931	0	0	0	0	0	0.001931	0.001931	0.001931
11	B00000000	0.00237	0	0	0	0	0	0	0	0.00237	0.00237	0
12	B00000000	0	0.002771	0	0	0	0	0	0	0.002771	0.002771	0.002771
13	B00000000	0.0029	0	0	0	0	0	0	0	0.0029	0.0029	0
14	B00000000	0	0	0.003392	0	0	0	0	0	0.003392	0.003392	0.003

Not included with Residential LAM

Vacant Residential Parcels (i.e. identified by the Land Use Codes) not included or analyzed

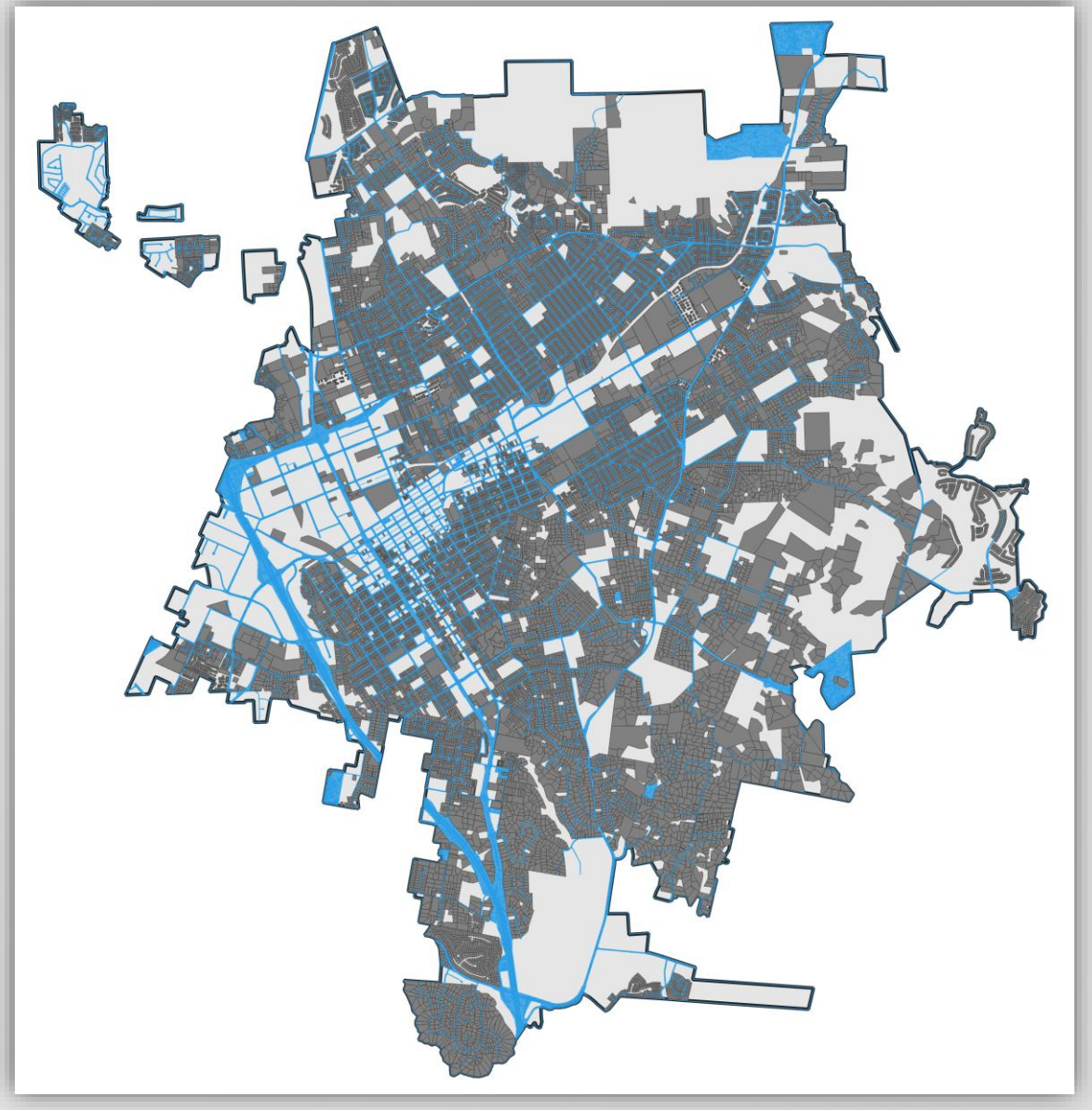
Void Areas*

- Residential parkways / extensions
- CII extensions
- * Irrigation status classified

Commercial, Industrial, Institutional Parcels

CII-LAM-LUCD will provide conditional data for the inverse of the Residential LAM area of influence

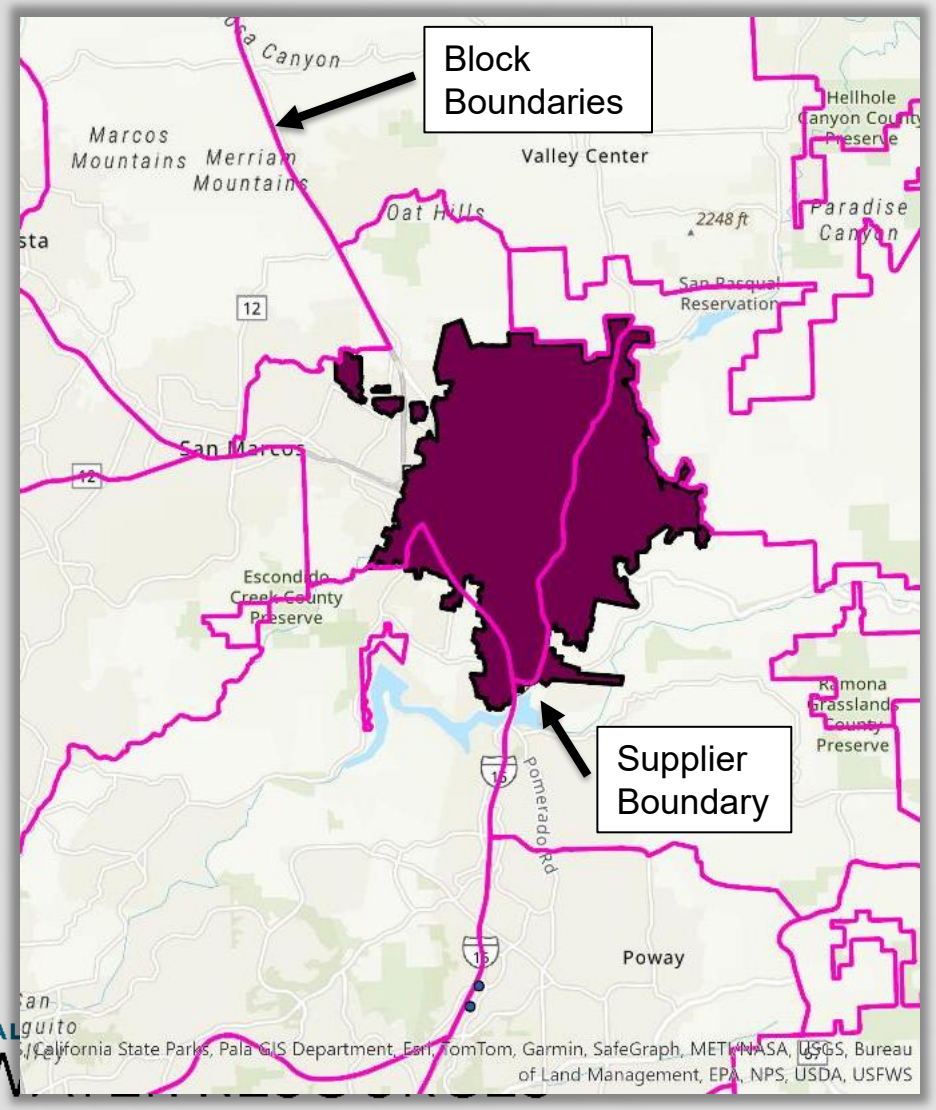
Example of Residential LAM Delivery: City of Escondido



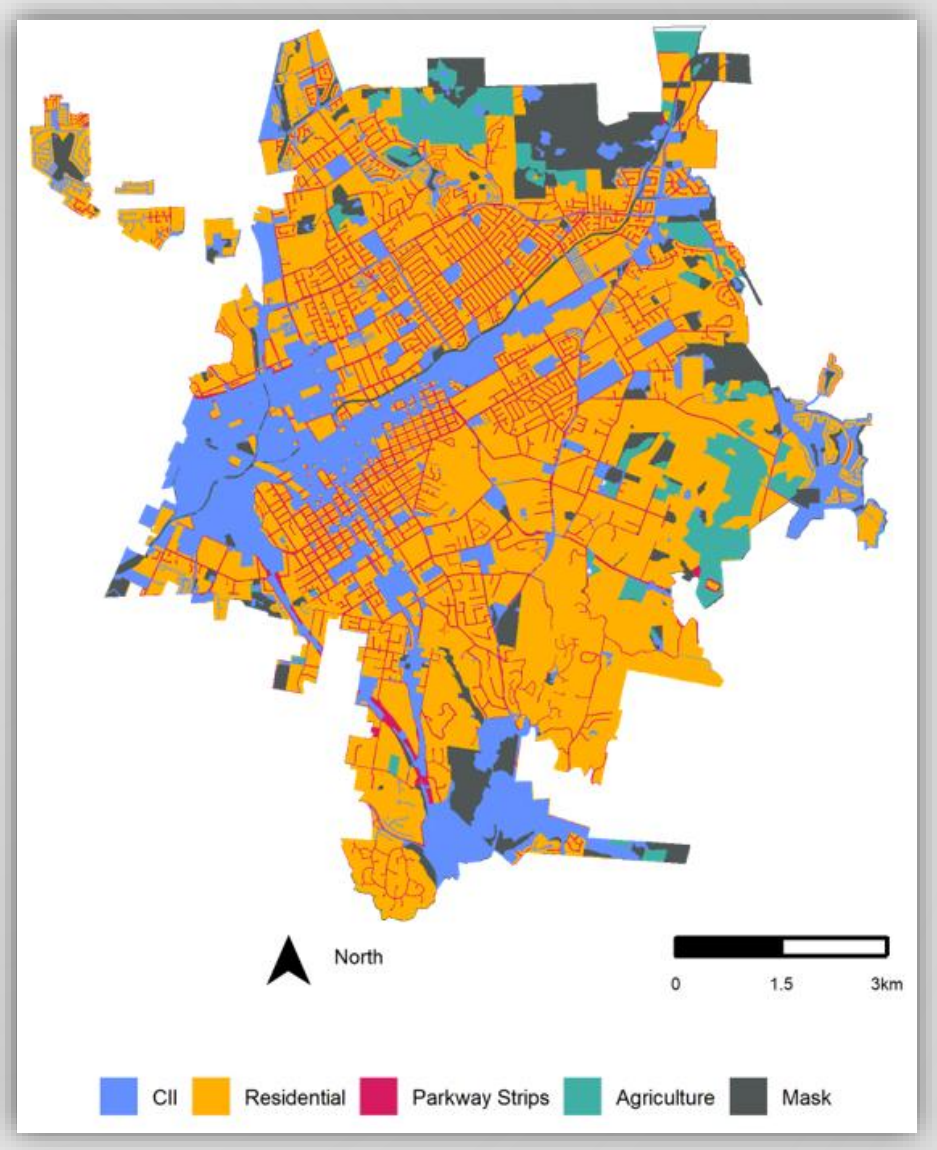
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Development of CII-LAM-LUCD Conditional Data

Processing Block Boundaries and Escondido's supplier boundary



Escondido's CII-LAM-LUCD





Conditional Data being provided

Commercial, Industrial, and Institutional (CII) Landscape Area Measurements (LAM) Land Use Classification Dataset (LUCD)

Land Masks:

- Undeveloped/Industrial lands
- Agricultural Lands

Other:

- Impervious areas
- Ponds/open water

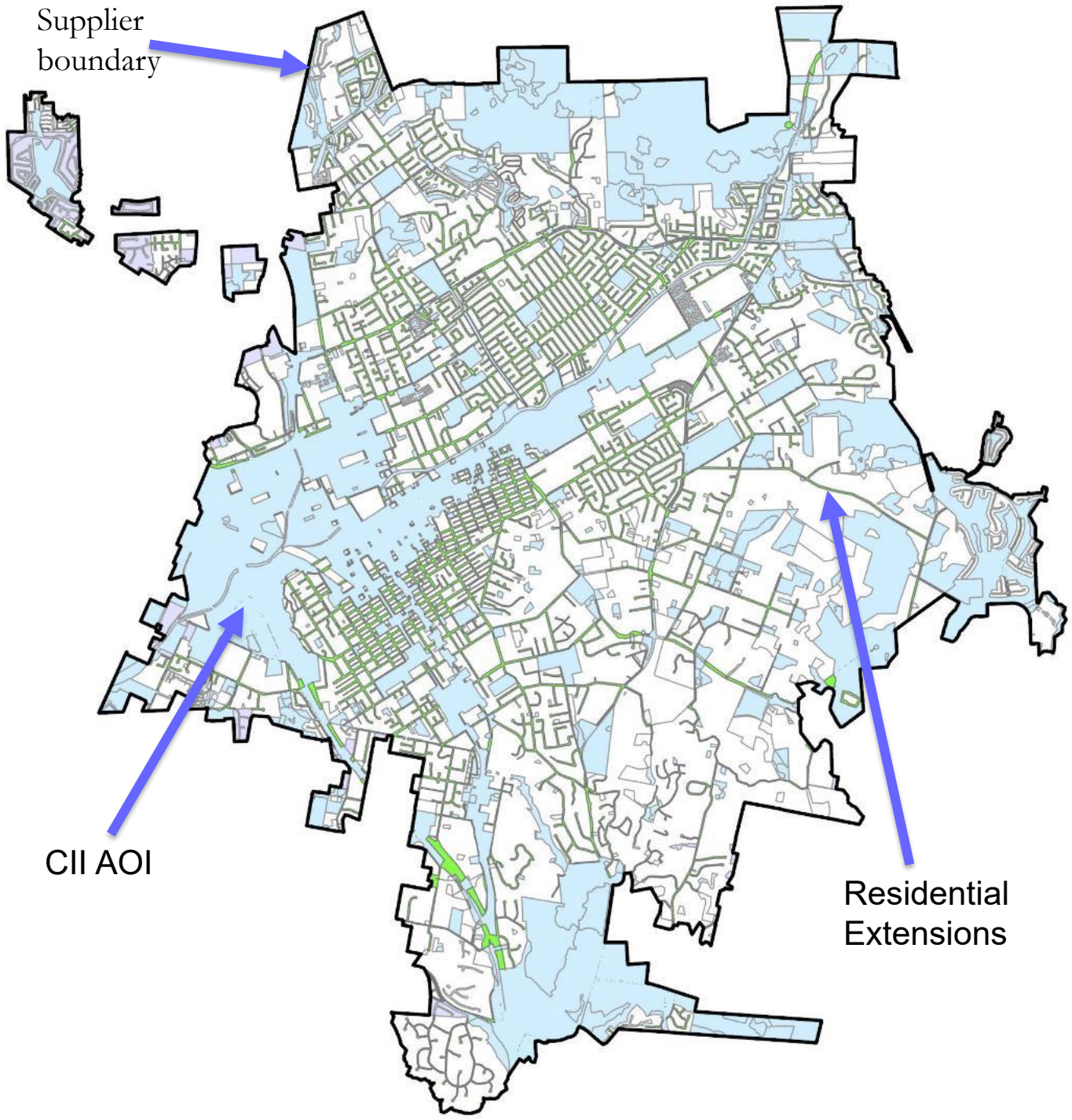
Irrigated, Irrigable Not Irrigated, Not Irrigable:

- Canopy (vegetation that casts a shadow)
- Non-canopy (groundcovers)
- Functional / Nonfunctional Turfgrass
- Horse corrals
- Artificial turf
- Pools

Will be provided in GIS geodatabases and shapefiles that suppliers can modify.

Escondido Example

Example of what will be provided to suppliers:
Inverse of Residential LAM;
Parcels with a CII land use code are included in CII AOI;
Void Areas, landscapes without a land use code, are divided with Thiessen Polygons and associated with the nearest parcel, either CII or Residential;
Masked Landscapes.



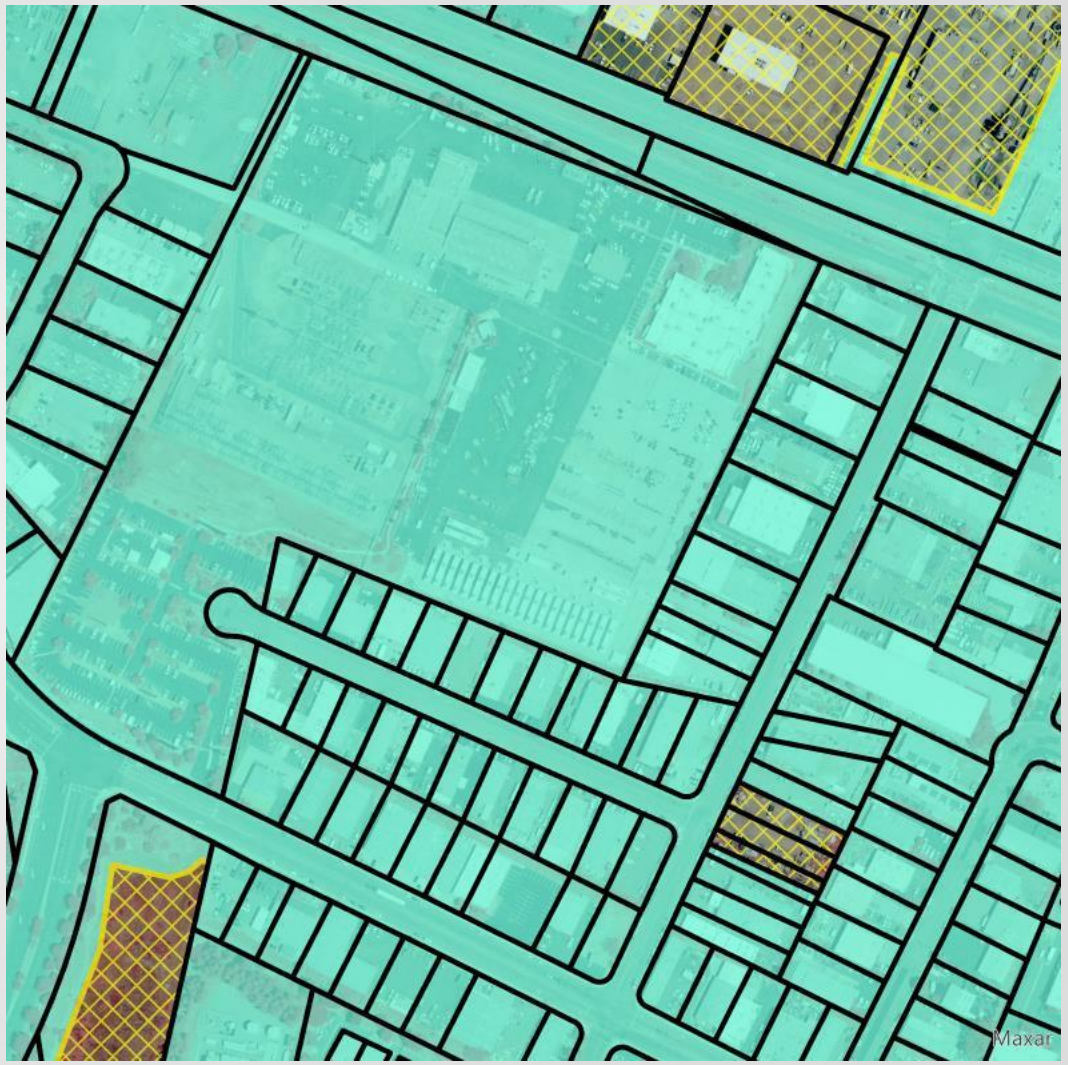
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CII land use codes include

- 2000 – Commercial
- 3000 – Commercial Office
- 4000 – Recreational / Entertainment
- 5000 – Industrial
- 6000 – Heavy Industrial
- 6500 – Transportation and Communications
- 7000 – Agricultural – Rural – (manually evaluated)
- 9100 – Institutional
- 9200 – Governmental / Public Use
- 9302 to 9308 – Historical-Private

CII identified through parcel LUCs

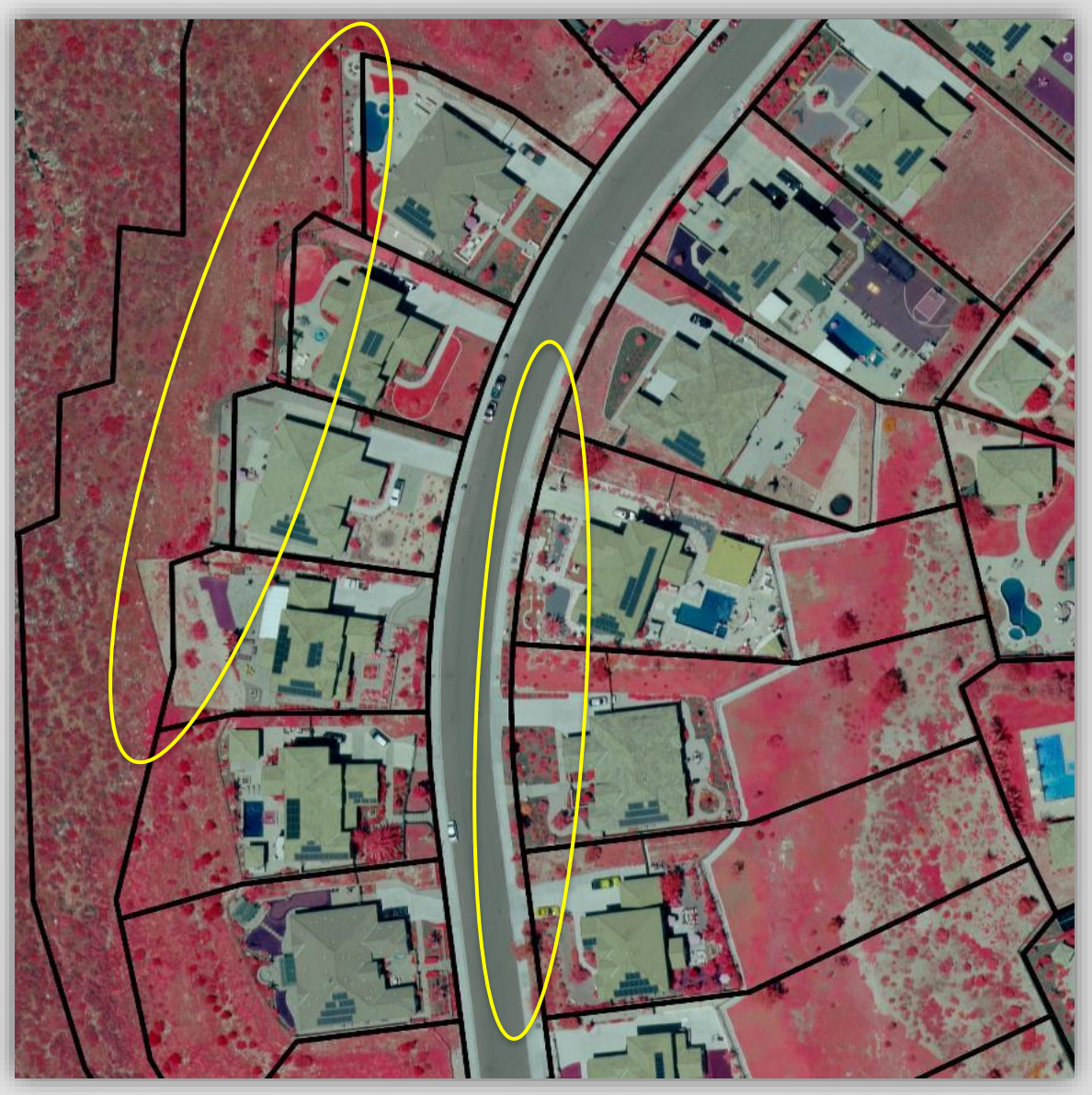




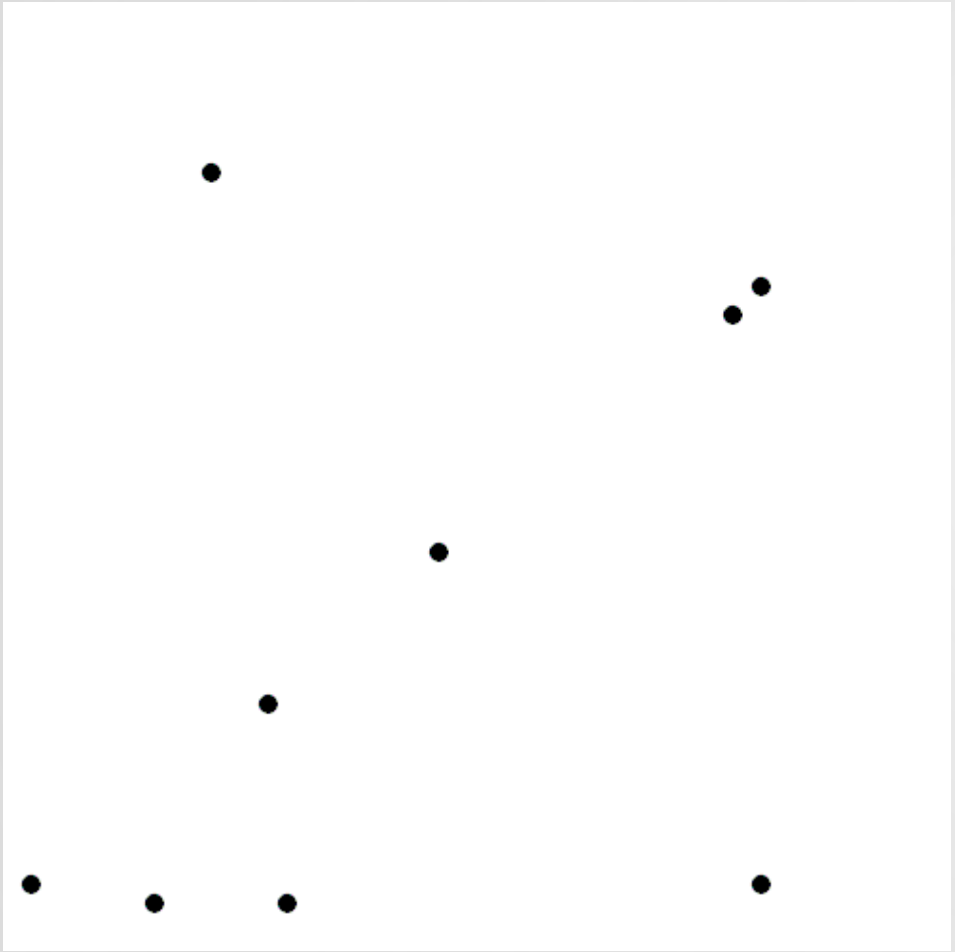
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Known data issues

- Parcel boundaries don't perfectly align with the landscapes being irrigated landscapes – i.e. Residential Extensions
- Land Use Codes based on County Assessor's data are the best available data but imperfect
- Supplier boundaries, landscapes, and customers are constantly changing
- A project goal was to provide a standardized statewide dataset tuned for diverse and complex urban landscapes



How Void Areas are Classified



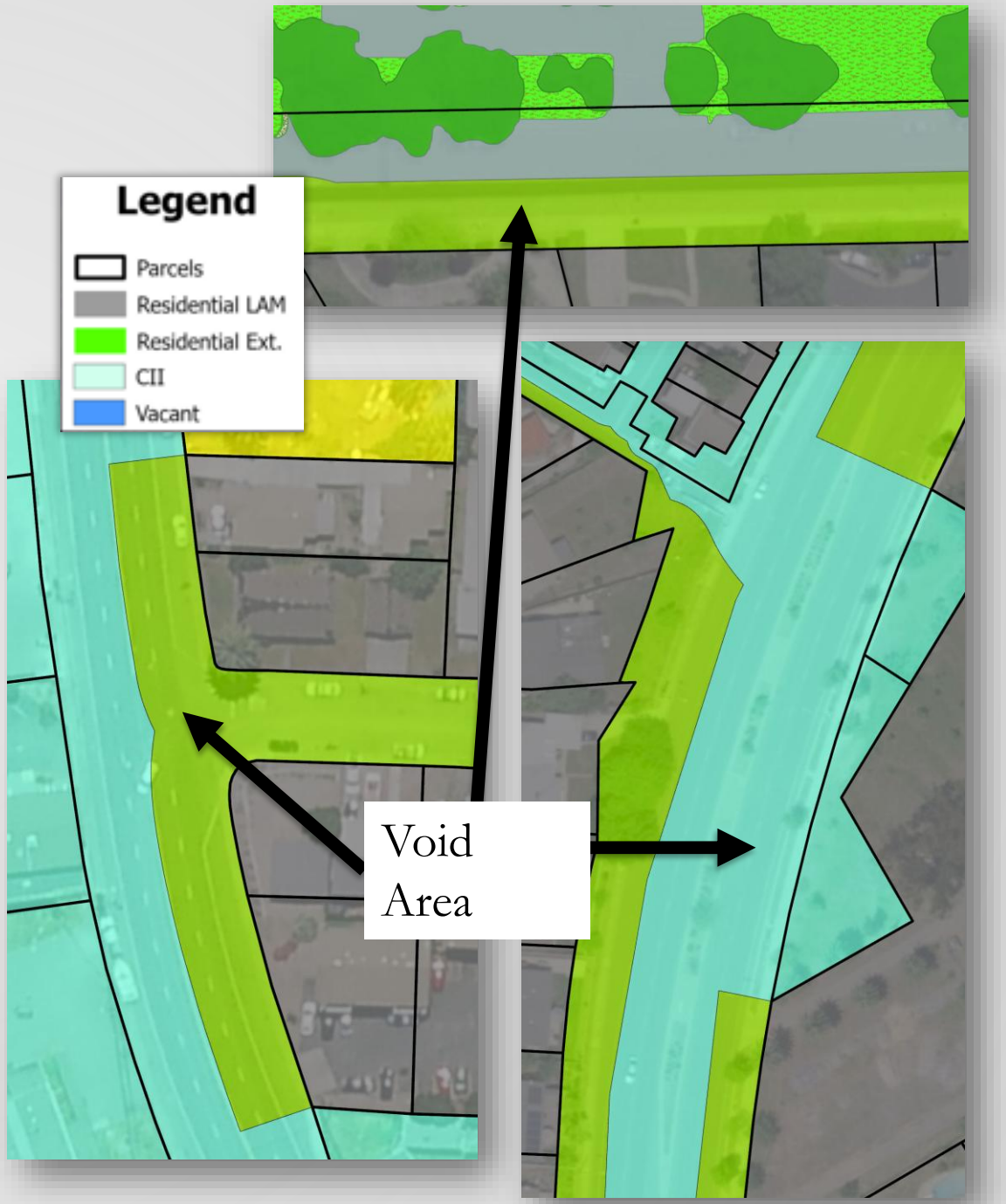
- Void spaces are areas in the supplier's AOI without a Land use code and are categorized as:
  - CII AOI
  - Residential Extensions
- Each point in the *.gif represents a CII or Residential parcel boundary
- Thiessen polygons classify all void space from the nearest parcel boundary.
- Some void spaces will look 'odd' or misaligned.

"Thiessen polygons are generated from a set of sample points such that each polygon defines an area of influence around its sample point, so that any location inside the polygon is closer to that point than any of the other sample points." – caliper.com

Void Area Classification

- Initial classification is automated then manually reviewed
- Tree canopy is split by parcel boundary
- Void areas split by dividing features:
  - Improved surfaces for motor vehicles either paved or unpaved, minimum 8 ft wide
  - Bicycle and pedestrian pathways, minimum 8 ft wide
  - Waterways (e.g. canals, rivers, streams) and large water bodies (e.g. lakes, oceans, ponds)

  *Note: Sidewalks adjacent to roads are not a dividing feature



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Escondido Example: Masked landscapes

Masked landscapes are **excluded** from analysis; (minimum area in parentheses):

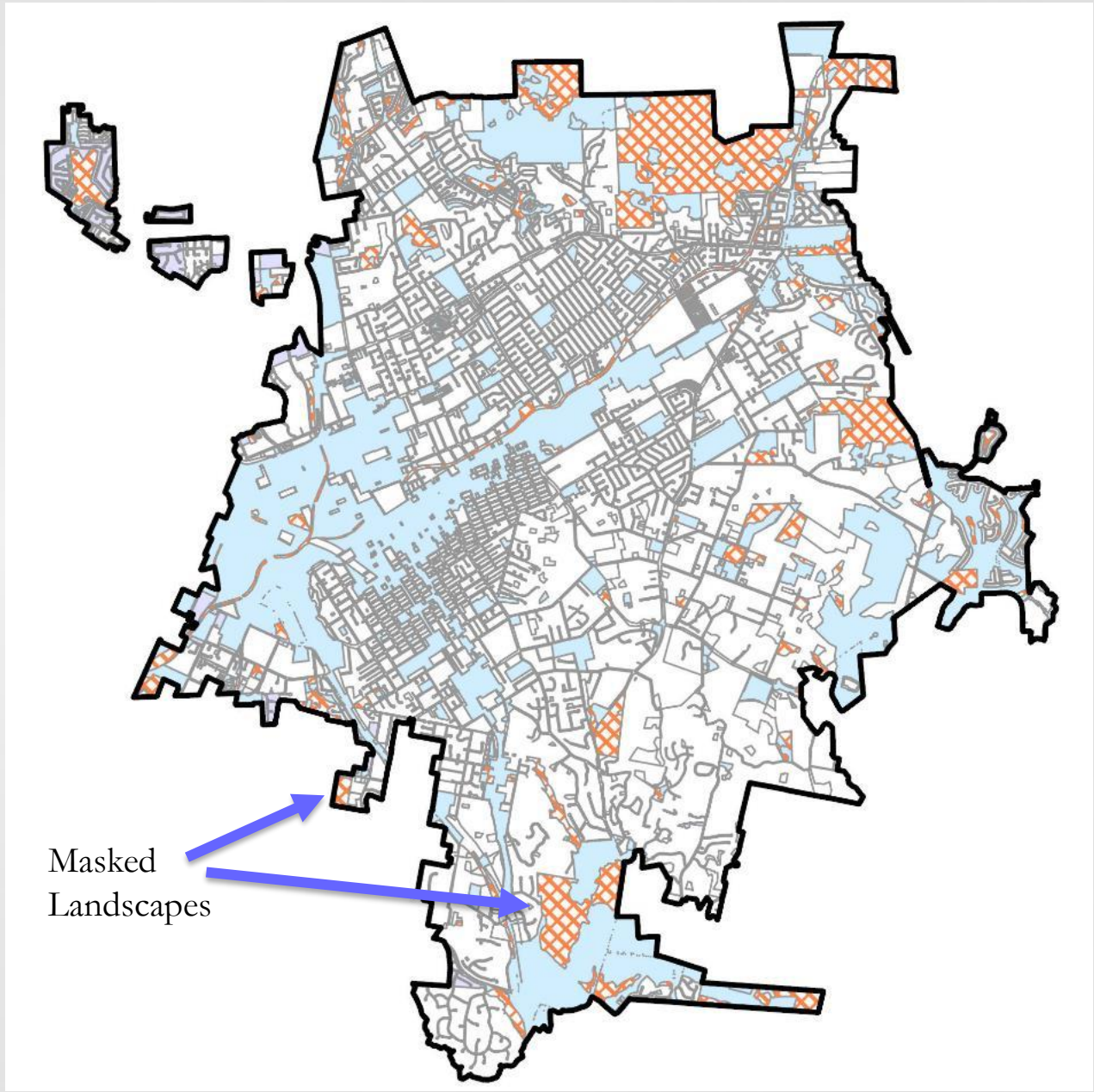
- Manually delineated
- Not developed for irrigation
  - *Exception: agricultural landscapes*

Provided in a combined file:

- Industrial Lands Mask (≥ 10 ac.)
- Undeveloped Lands Mask (≥ 0.25 ac.)

Provided separately:

- Agricultural Lands Mask (≥ 1 ac.)
  - *Landscape Efficiency Factor of 1.0*



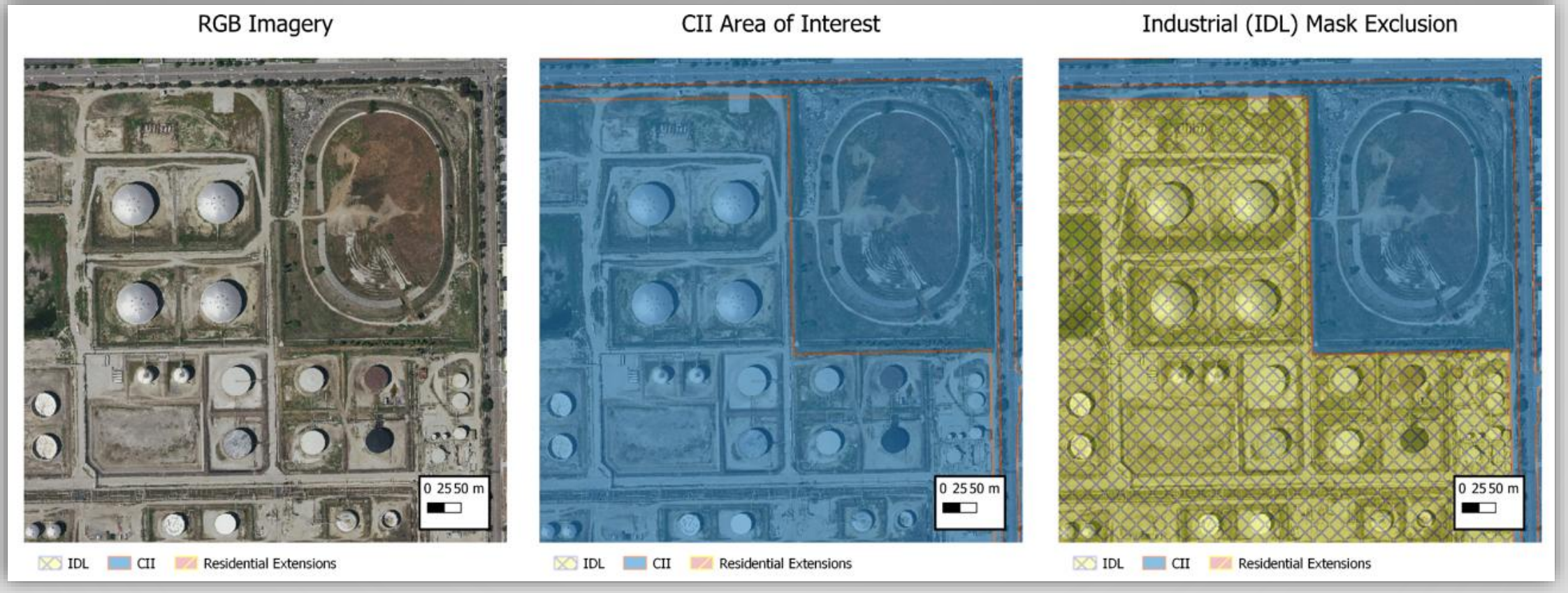
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Industrial Lands Mask

Minimum area: 10 acres, paved or unpaved

- Combined with the undeveloped lands mask

e.g. Railways, storage yards, water treatment plants, parking lots without managed vegetation, open water within these areas



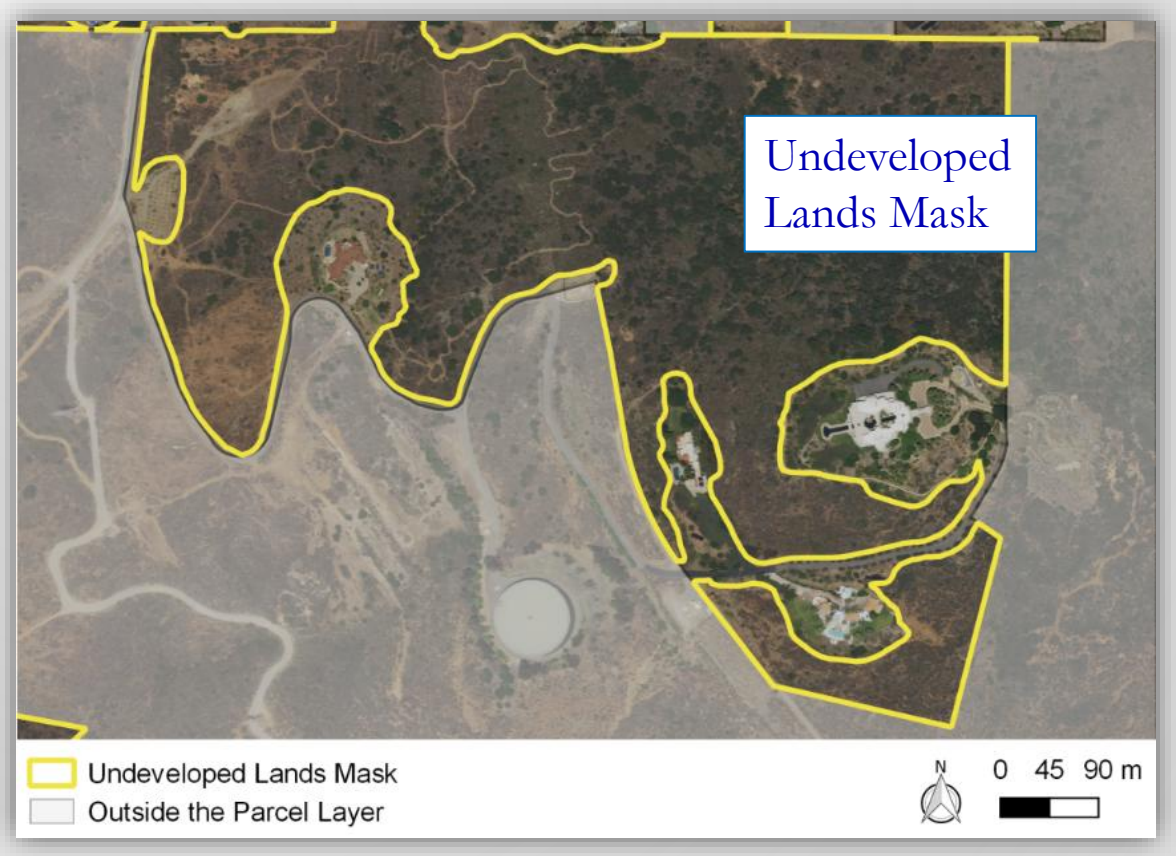
Undeveloped Lands

Vegetated landscapes not developed for irrigation: minimum area is 0.25 acre.

- Combined with the Industrial lands mask

e.g., Waterways, riparian corridors, fallow agricultural land, powerline rights of way without planted vegetation, livestock grazing

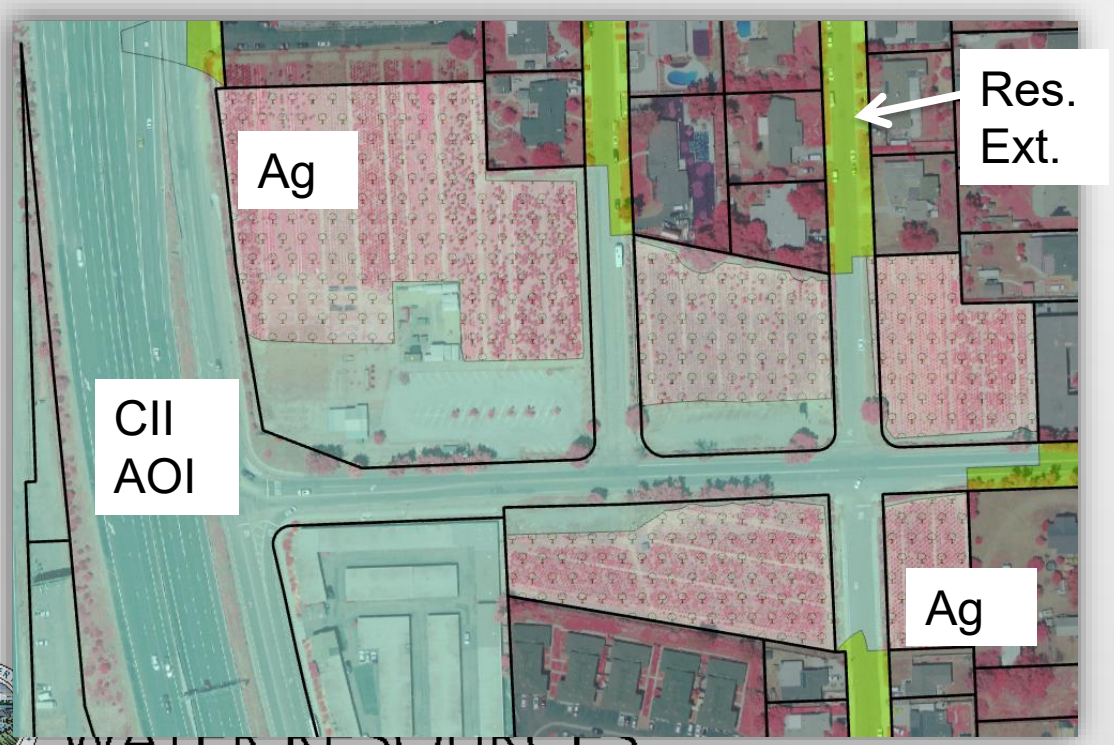


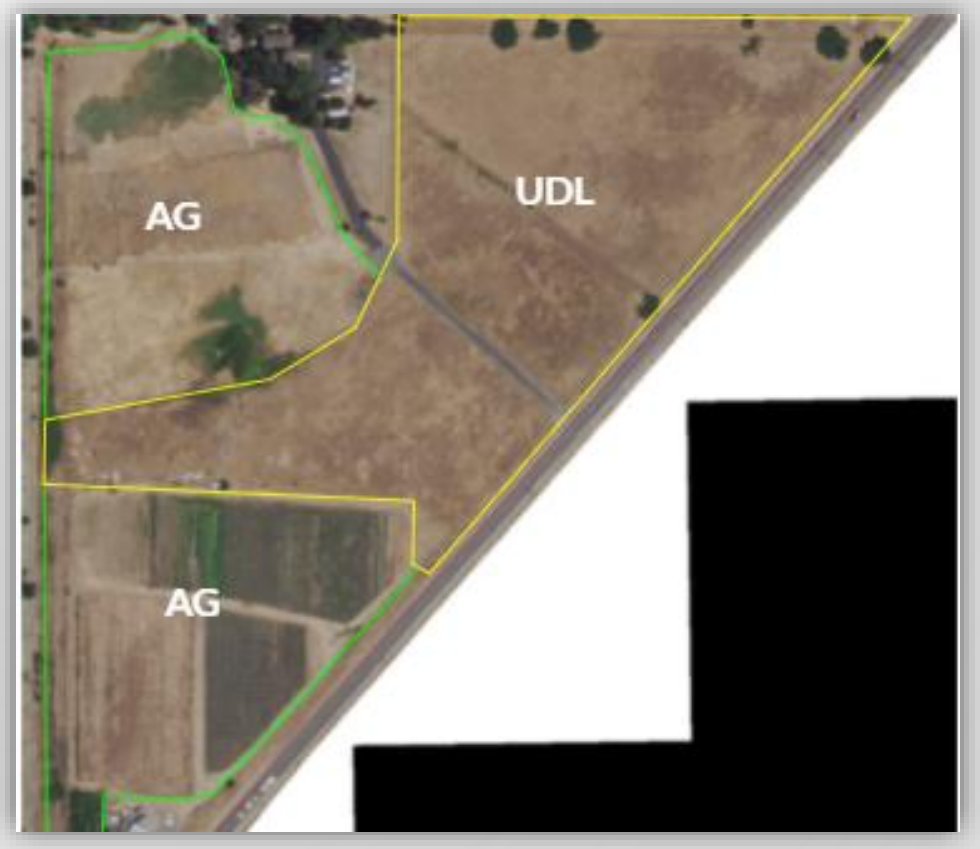


Agricultural Land

Minimum Area: 1.0 acre

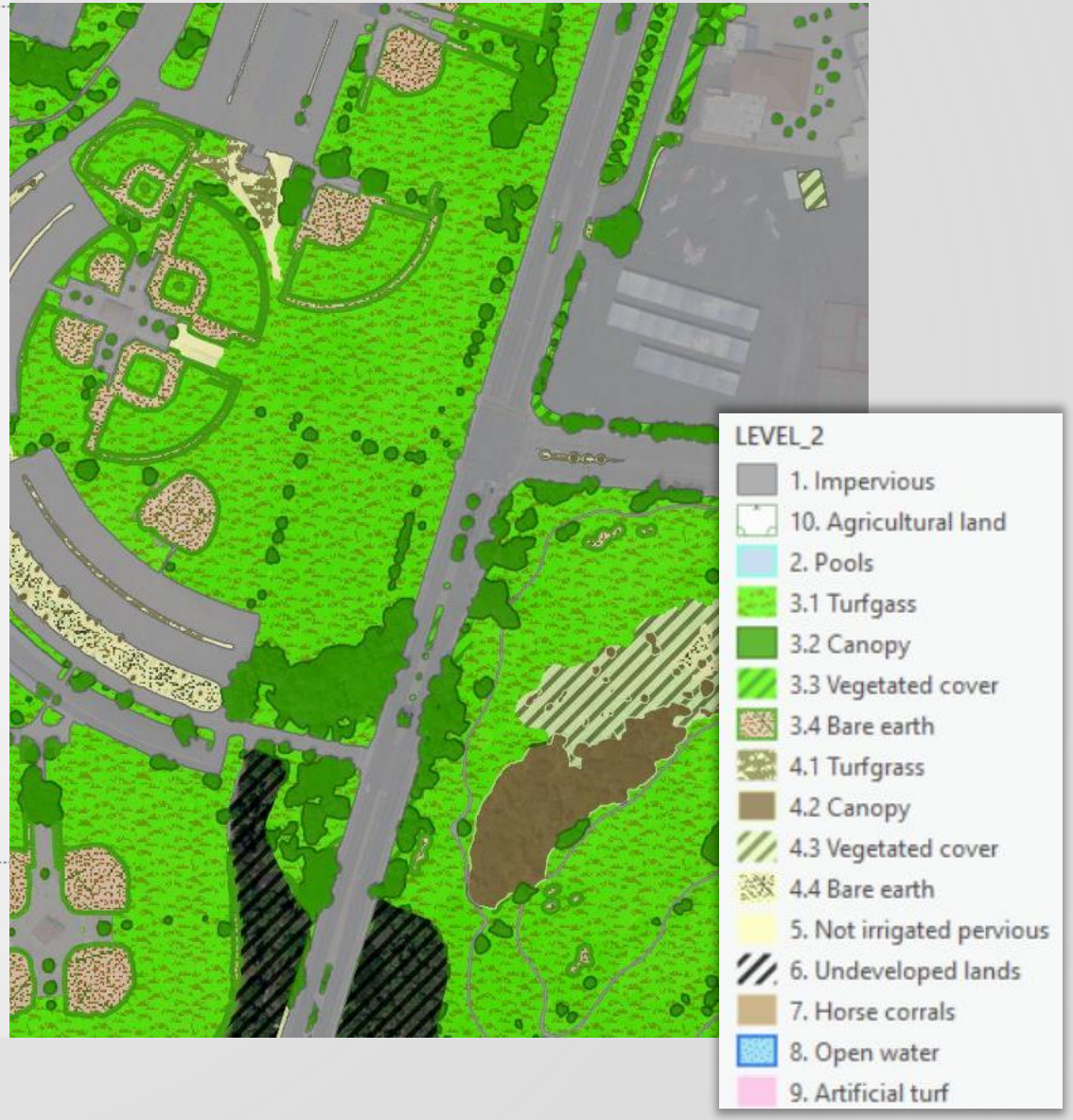
- Special Landscape Area (SLA) with LEF of 1.0
- Row and patterned crops, orchards, irrigated livestock grazing, structures associated with agricultural operations (greenhouses, barns, shade structures)





Classification System

CII-LUCD Classification System		
Level 1	**Level 2 (Validation Level)**	**Irrigation Status**
1. Impervious	Impervious	Not Irrigable
2. Pools	Swimming pools/man made water features	Irrigated
3. Irrigated	3.1.1 Turf grass (FT / NFT) 3.1.2 Other vegetated ground cover	Irrigated **(CII only: Turfgrass classified as either FT or NFT)**
	3.2 Tree Canopy 3.3 Bare	Irrigated
4. Irrigable not irrigated	4.1.1. Turf grass 4.1.2. Other vegetated ground cover	Irrigable currently not irrigated
	4.2. Tree Canopy 4.3. Bare	Irrigable currently not irrigated
5. Non irrigated vegetation	Undeveloped for the purpose of irrigation	Not Irrigable
6. Undeveloped lands	Undeveloped Lands Mask (> 0.25 acre)	Not Irrigable
7. Horse Corrals	Horse Corrals	Irrigated
8. Open Water	Other open water bodies (rivers/lakes/ponds)	Not Irrigable
9. Artificial Turf	Artificial Turf	Not Irrigable
10. Agricultural Land	Agricultural Land (> 1.0 acre)	Irrigated



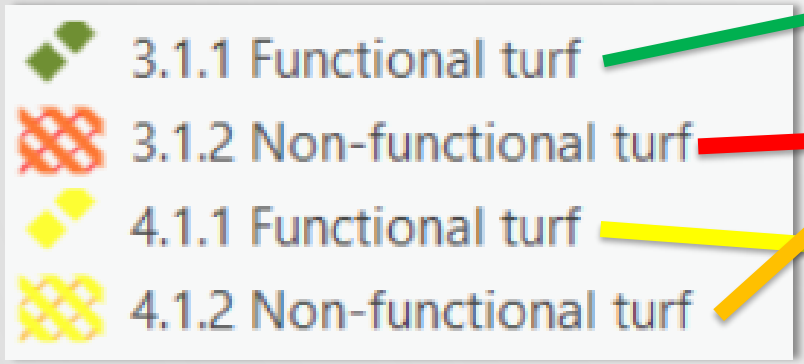
Classified Features

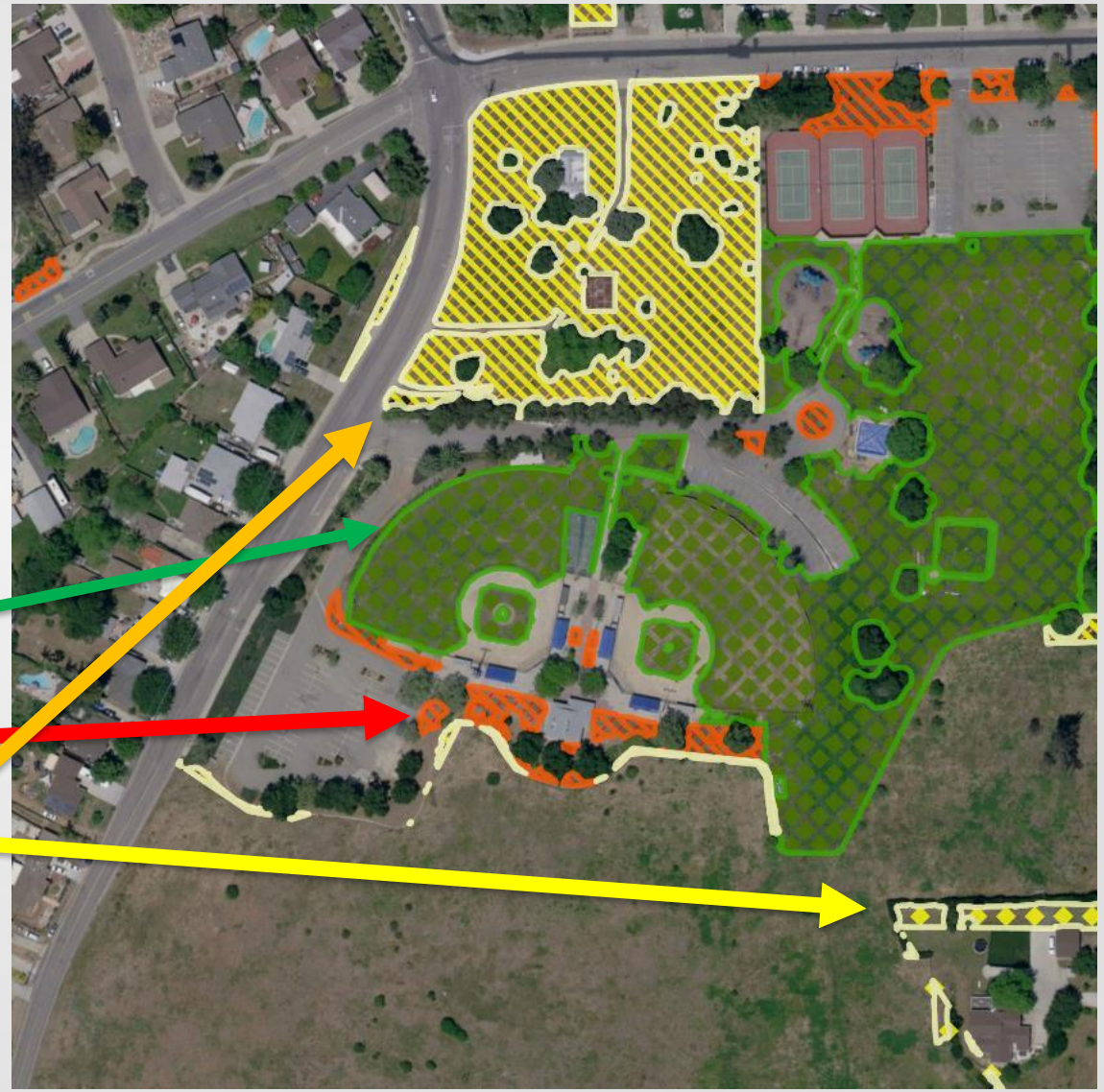




Classified Features: Turfgrass

- Turf reviewed for functionality (tables, cemeteries, putting greens, sports equipment, etc.)
- Classified based on available imagery and our best guess for the area.
- Suppliers will need to confirm these areas for functionality.





Data NOT being provided

- 2020 Imagery. However,
  - Web portal will be made available to suppliers' for streaming CII-LAM-LUCD overlaying 2020 imagery.
  - Suppliers can request access to the 2020 Hexagon imagery thru State of California, Department of Technology at: https://cdt.ca.gov/contact-us/
- Suppliers' DIM and Mixed-use meter locations
- Landscapes irrigated by DIM and MUMs

NOTE: there may be some overlap/disputed parcels you will have to work out with your neighbor(s).

Data Deliveries Started - Oct 2024

Hydrologic Region	No. of Suppliers*	No. of Blocks	Blocks: Define CII-AOI & Res Extension	Blocks: CII-LUCD & FT/NFT & Res. Ext.	Suppliers with Data	Start of data deliveries to suppliers
Central Coast	32	18	4	1	-	Fall '24 / Fall 2025
Colorado River	15	24	-	-	-	Summer / Fall 2025
North Coast	15	4	-	-	-	Summer / Fall 2026
North Lahontan	5	1	1	-	-	Summer / Fall 2026
Sacramento River	42	35	1	-	-	Spring / Summer 2025
San Francisco Bay	48	33	19	6	-	Fall '24 / Spring 2025
San Joaquin River	29	21	2	-	-	Spring / Summer 2025
South Coast	174	91	50	33	1	Fall '24 / Spring 2025
South Lahontan	18	16	-	-	-	Summer / Fall 2025
Tulare Lake	30	18	-	-	-	Summer / Fall 2026
Total	**408**	**261**	**77**	**40**	**1**	**Complete by March 2027**

Notes:
Excludes wholesale urban retail water suppliers and some supplier boundaries can be in different Hydrologic Regions
New suppliers included as part of scheduled CII-LAM-LUCD deliveries by processing block

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Contact Information:

CII-LAM-LUCD Webinar:

Link to the CII-LAM-LUCD Webinar

CII-LAM-LUCD:

WUE@water.ca.gov for general questions

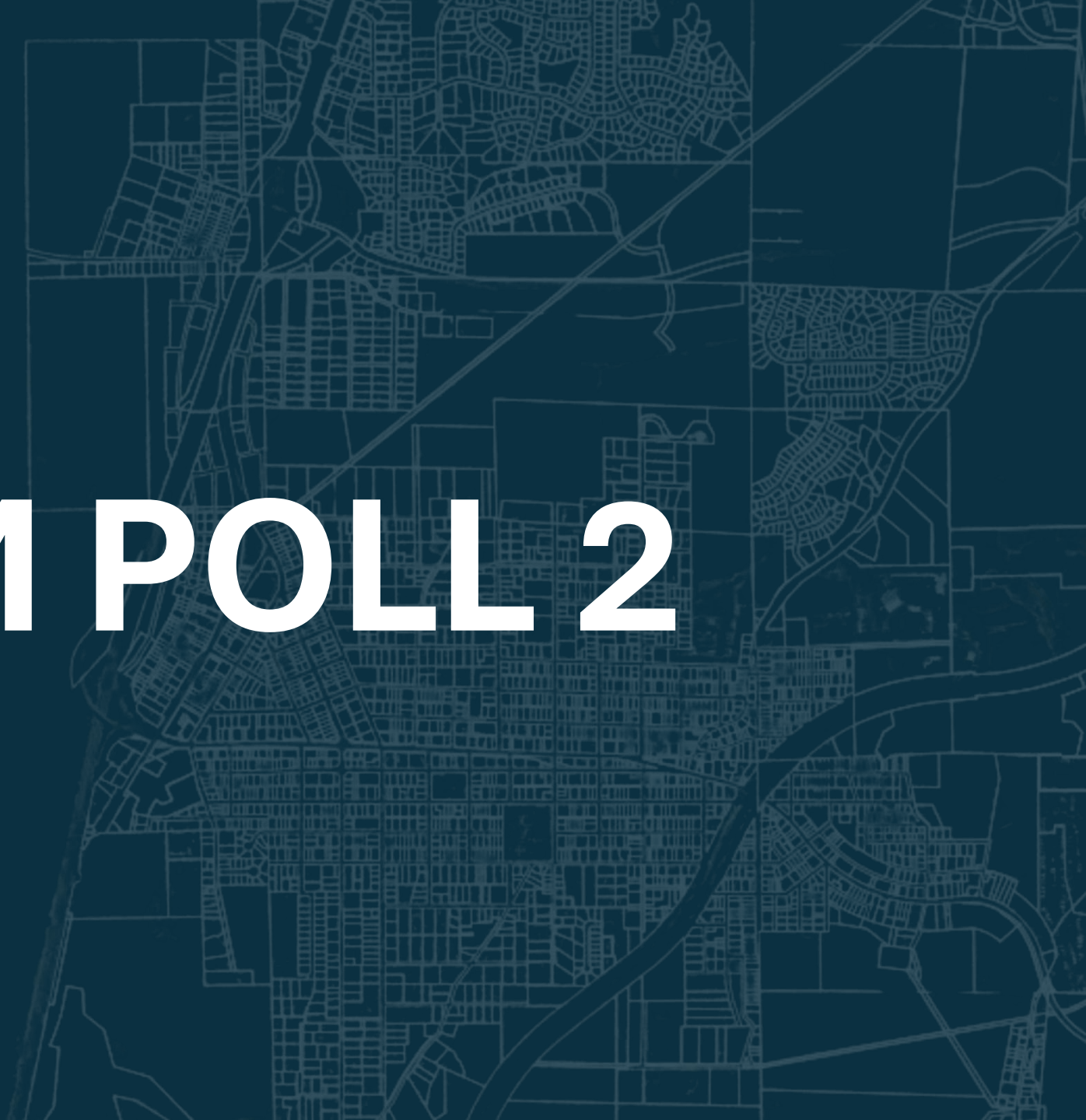
WUEStandards@water.ca.gov for CII-LAM-LUCD questions

Residential-LAM was provided in 2021

Questions? Contact: Scott.Hayes@water.ca.gov

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ZOOM POLL 2

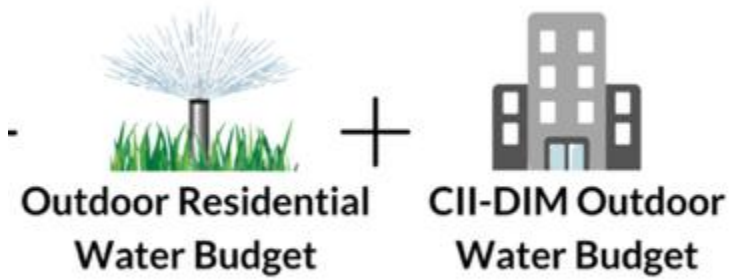


Accessing and Viewing Your Landscape Area Data

Tia Fleming, CalWEP

CalWEP LAM Explorer
POWERED BY WATERVIEW

All Your DWR Provided Data Available in One Place



- Residential LAM Data
- CII LUCD LAM
- Non-Functional Turf
- Residential Parcel Extensions
- Evapotranspiration
- Effective Precipitation

calwep.org/calwep-lam-explorer/

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CalWEP LAM Explorer

POWERED BY WATERVIEW
Water Efficiency Software

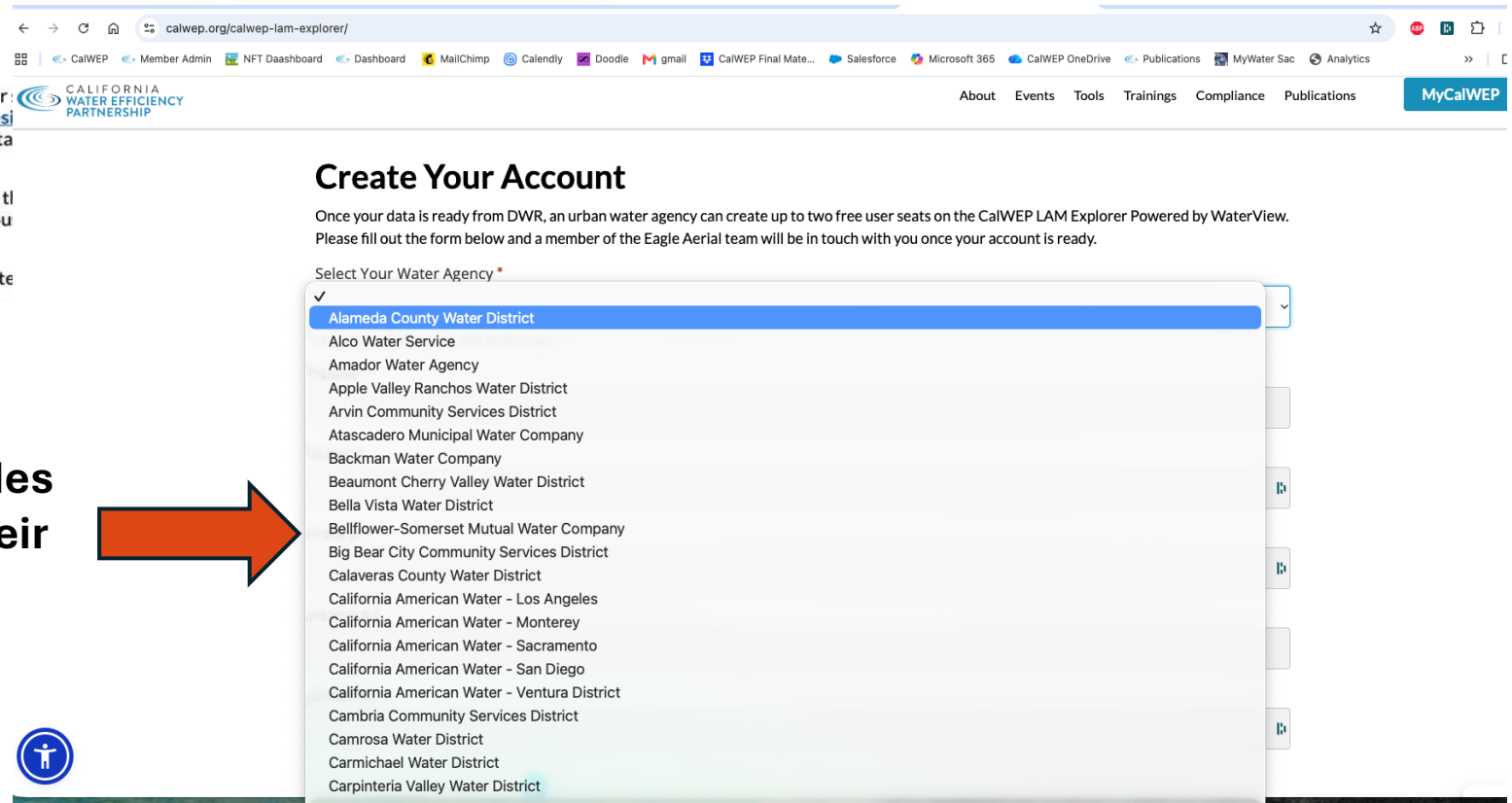
Create Your Account | Download FAQ | Contact us

The CalWEP LAM Explorer Powered by WaterView helps urban water
regulations. This dataset provides essential information for both the resi
areas and landscape types to support accurate water budgets. LAM data
water use efficiently.

CalWEP is providing access to the 2020 Hexagon Imagery and viewing tl
CalWEP LAM Explorer. Additionally, the CalWEP LAM Explorer will hou
by DWR in 2021) with the accompanied source 2018 imagery.

Thanks to Eagle Aerial Solutions for their dedication to data-driven wate
all

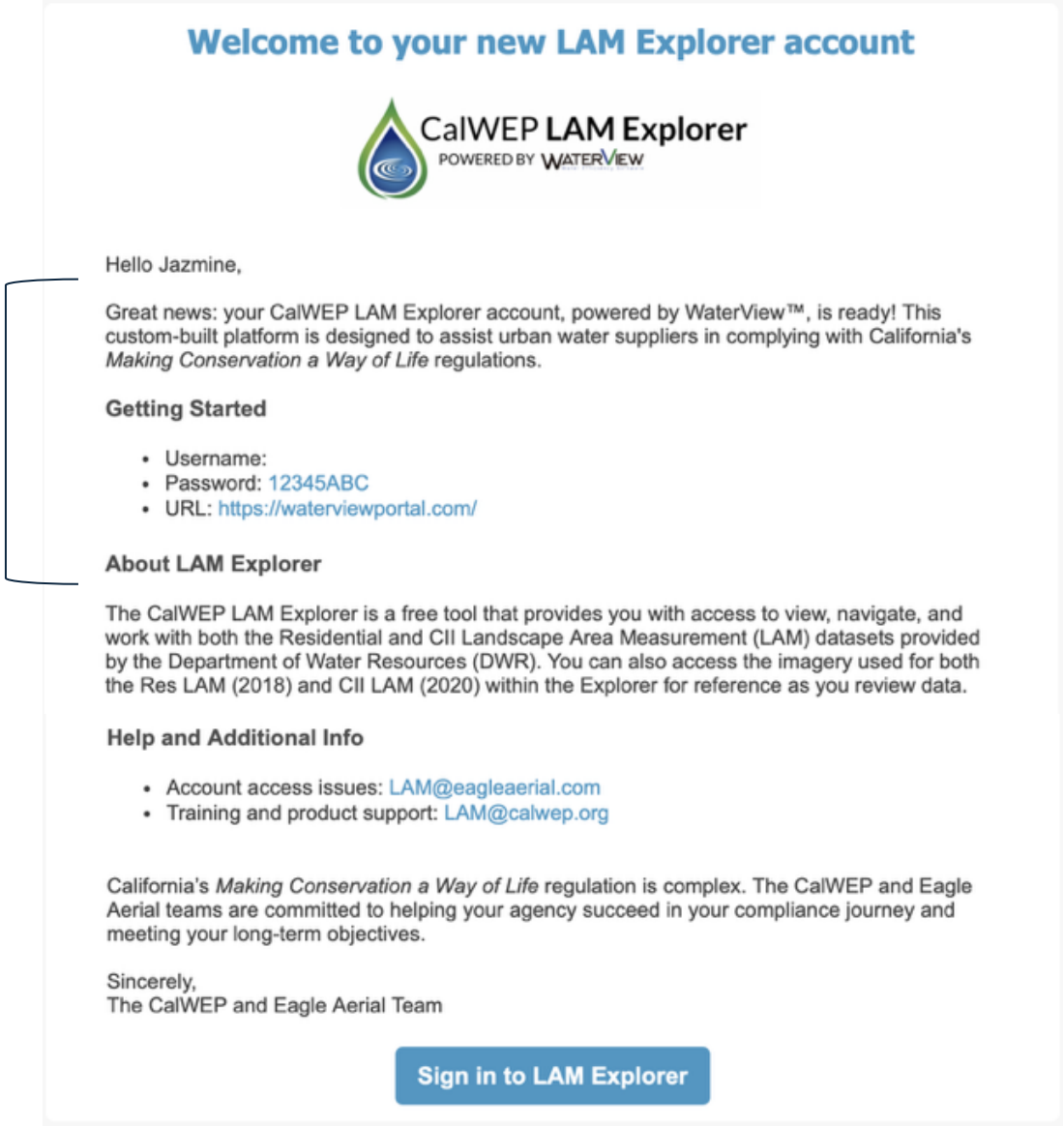
The drop down only includes agencies who have had their data released from DWR



What will you receive from Eagle Aerial:

LAM Explorer login credentials

- Each agency gets 2 users
- Once you log-in, agencies have a limited time to use the tools
- Contact LAM@calwep.org to request an extension



Welcome to your new LAM Explorer account

CalWEP LAM Explorer
POWERED BY WATERVIEW

Hello Jazmine,

Great news: your CalWEP LAM Explorer account, powered by WaterView™, is ready! This custom-built platform is designed to assist urban water suppliers in complying with California's *Making Conservation a Way of Life* regulations.

Getting Started

- Username:
- Password: 12345ABC
- URL: https://waterviewportal.com/

About LAM Explorer

The CalWEP LAM Explorer is a free tool that provides you with access to view, navigate, and work with both the Residential and CII Landscape Area Measurement (LAM) datasets provided by the Department of Water Resources (DWR). You can also access the imagery used for both the Res LAM (2018) and CII LAM (2020) within the Explorer for reference as you review data.

Help and Additional Info

- Account access issues: LAM@eagleaerial.com
- Training and product support: LAM@calwep.org

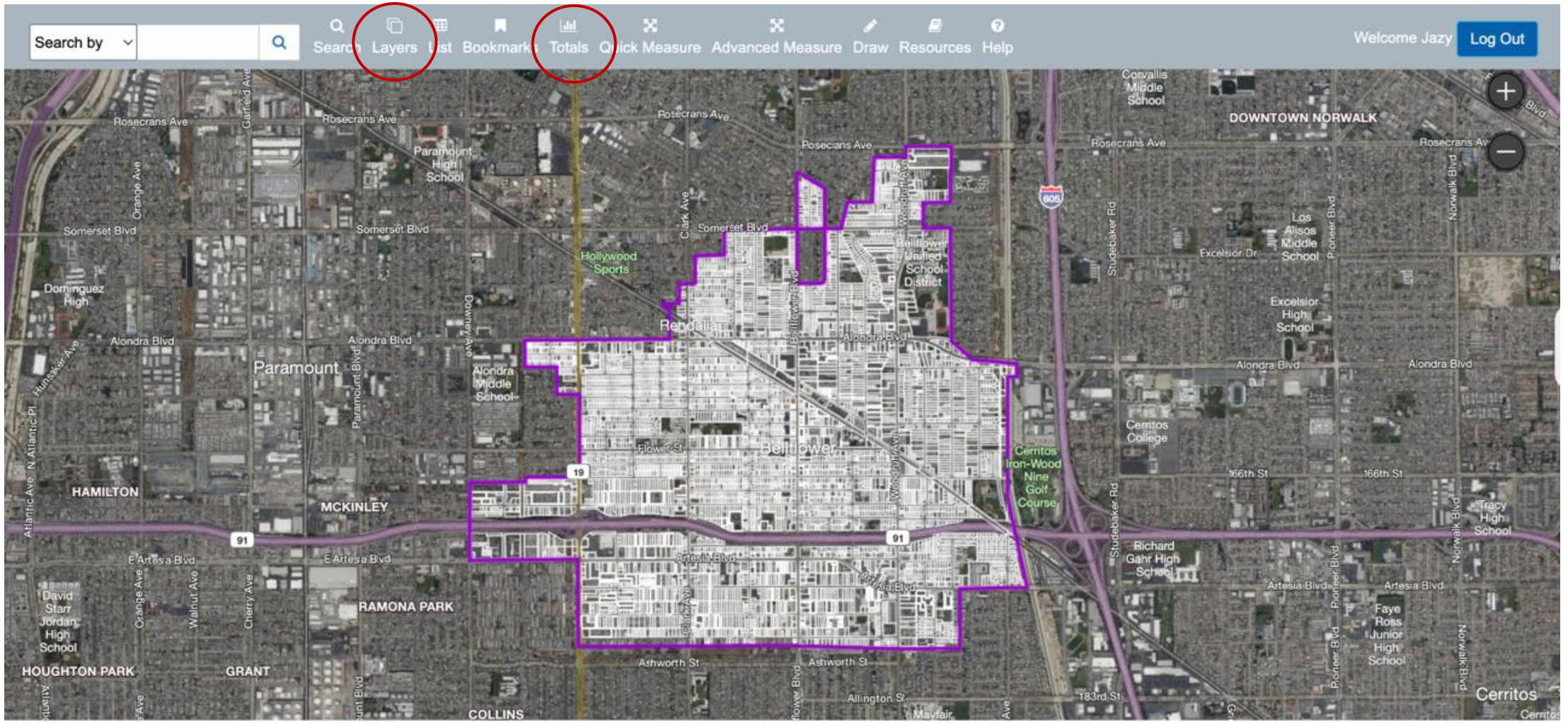
California's *Making Conservation a Way of Life* regulation is complex. The CalWEP and Eagle Aerial teams are committed to helping your agency succeed in your compliance journey and meeting your long-term objectives.

Sincerely,
The CalWEP and Eagle Aerial Team

Sign in to LAM Explorer

Logging into your LAM Explorer Account:

STEP 5:



What Does the LAM Explorer Do?

CalWEP LAM Explorer
POWERED BY WATERVIEW

What is it used for?

✅ Helps you get comfortable with your data

- View your service area's residential and CII irrigated landscapes including your residential parkway extensions
- **Navigate the source 2018 & 2020 Hexagon imagery tied to the DWR datasets, also includes 2022 imagery for comparison.**

✅ Summarizes Residential and CII Landscapes

- See total landscape areas by classification:
  - Large Turf, Large Canopy, Tree Canopy, NFT (Nonfunctional Turf), etc.
- Understand effective precipitation, ET values, and population data overlays.

✅ Allows you to explore parcels

- View updated parcel boundaries.
- Identify growth areas or missing parcels

✅ Lets you query, export, and download

- Search for parcels based on land use type (like Multi-Family landscapes, Large Turf, SLA type areas).
- Export your queries to start building your own GIS layers.
- Download your residential and CII LAM

✅ Provides markup tools

- Drop pins, add comments, draw shapes to measure Service Landscape Areas (SLAs).
- Great for creating starting notes for refinement.

What the LAM Viewer Doesn’t Do?

What are limitations?

🚫 **It is a starting point, not a final compliance tool.**

🚫 **Available for a limited time once you log in, not forever.**

🚫 **No meter or consumption data**

- There is no meter data, customer information or consumption tied to parcels.
- No identification of MUMs (Mixed-Use Meters) or DIMs (Dedicated Irrigation Meters).
- No DIM Irrigation boundaries

🚫 **No ability to modify or reclassify directly**

- You cannot edit the actual datasets inside the Explorer itself (e.g., changing NFT to FT or SLA).

Accessing and Viewing Your Landscape Area Data – DIY Options

Christopher Tull, CaDC

Spatial data doesn't need to be a mystery!

You don't need to be a GIS expert to work with geographic data

Proprietary tools



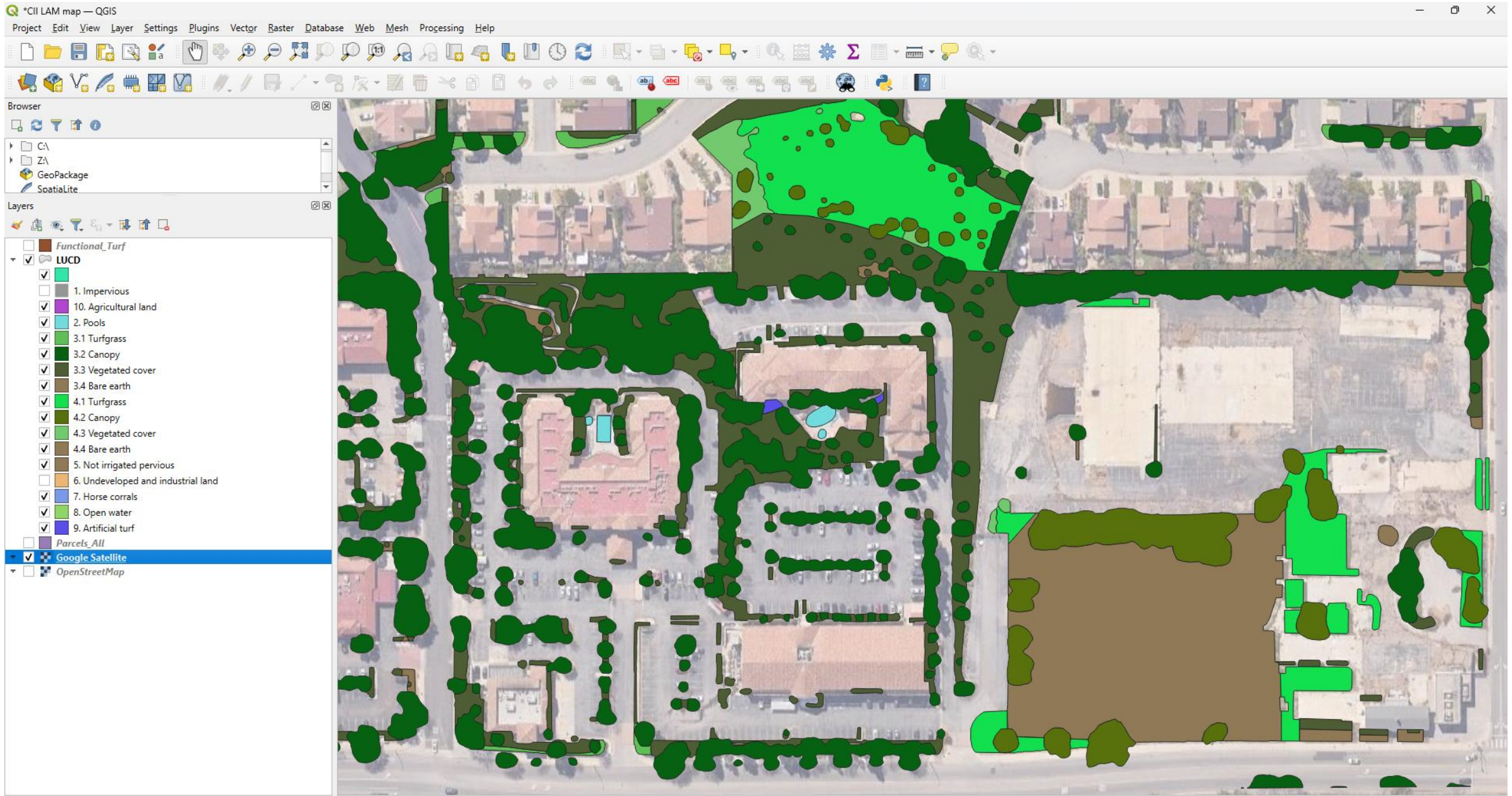


Free and open source



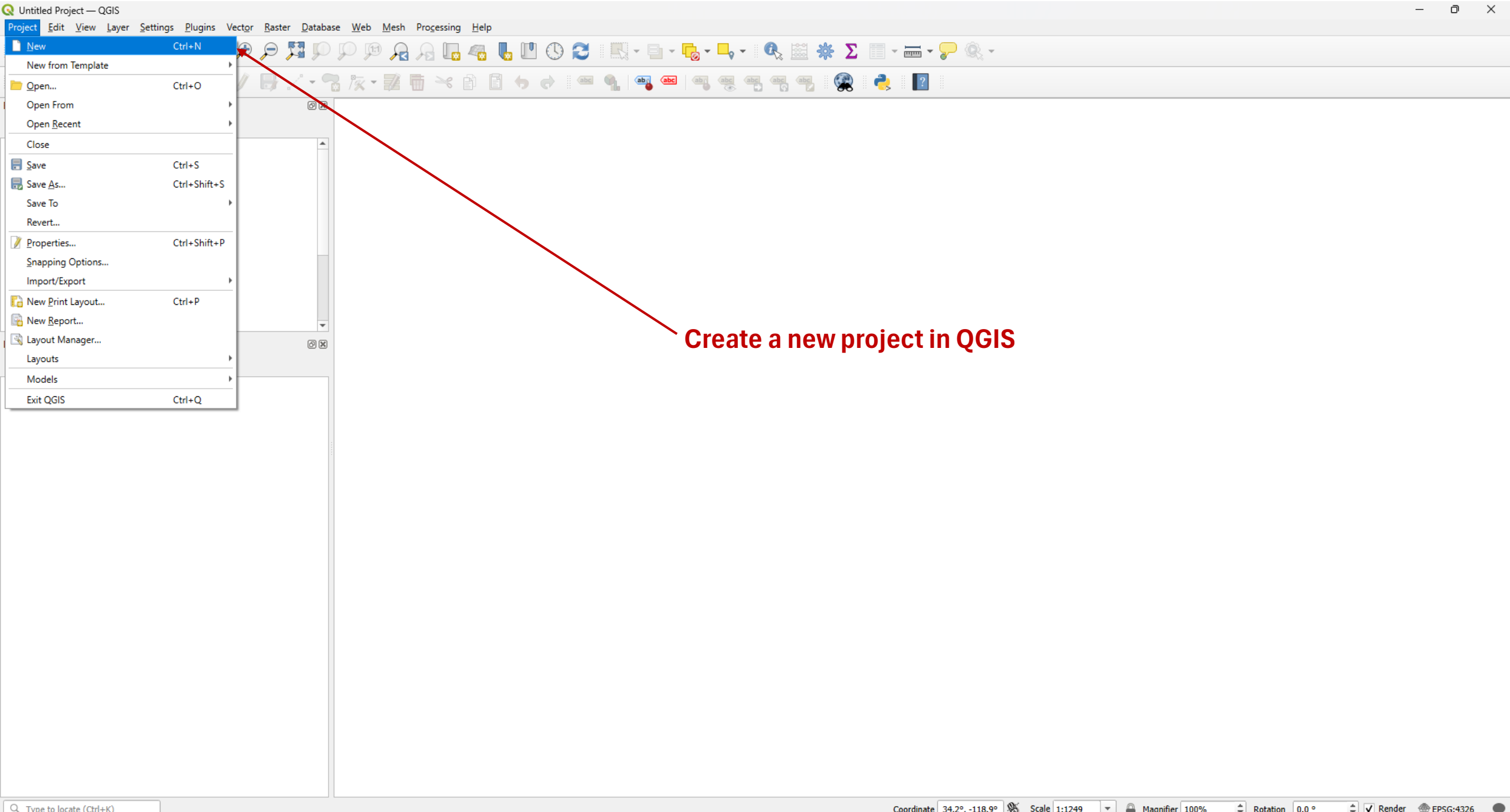


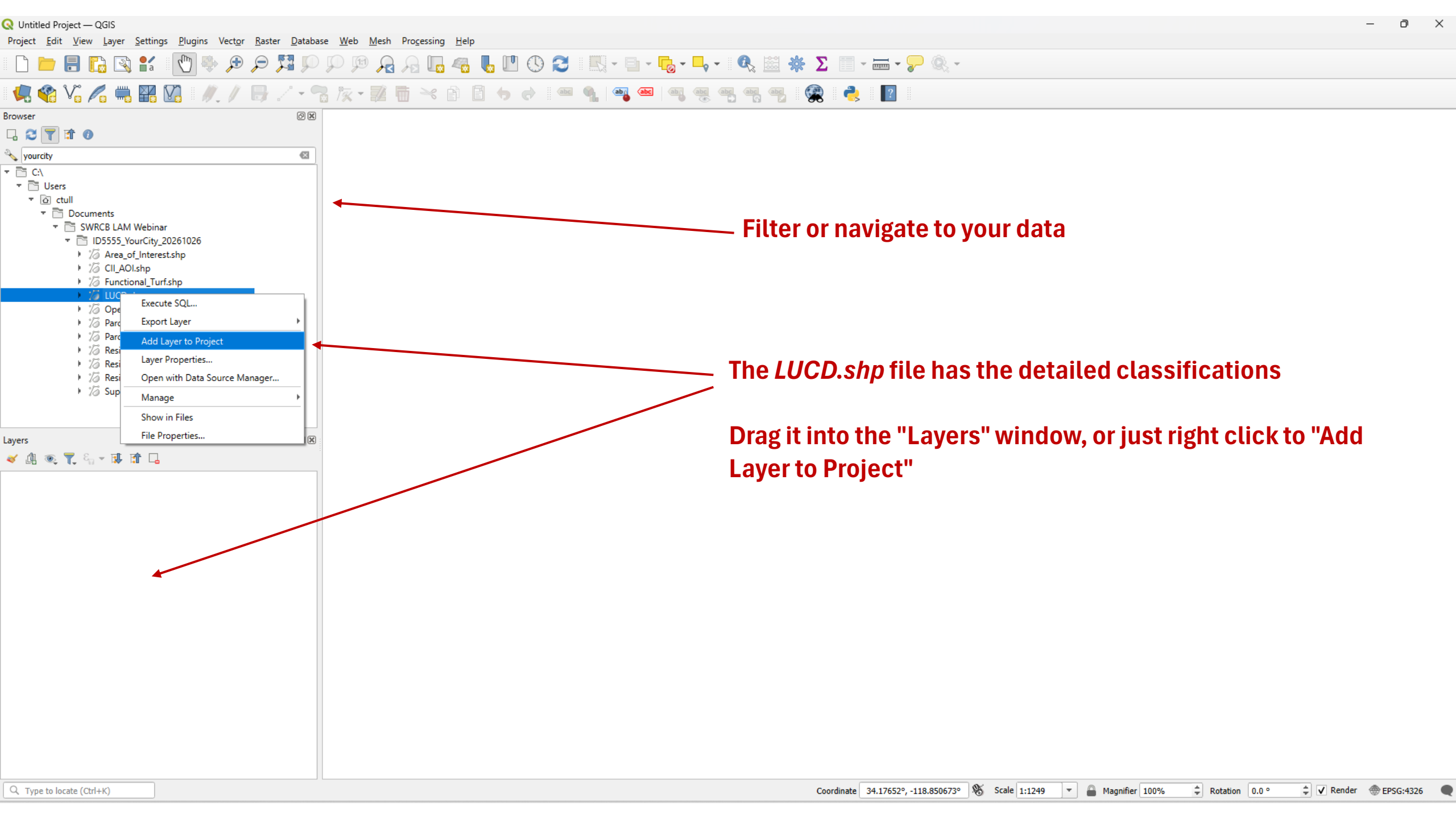
Free and open-source tools are high quality

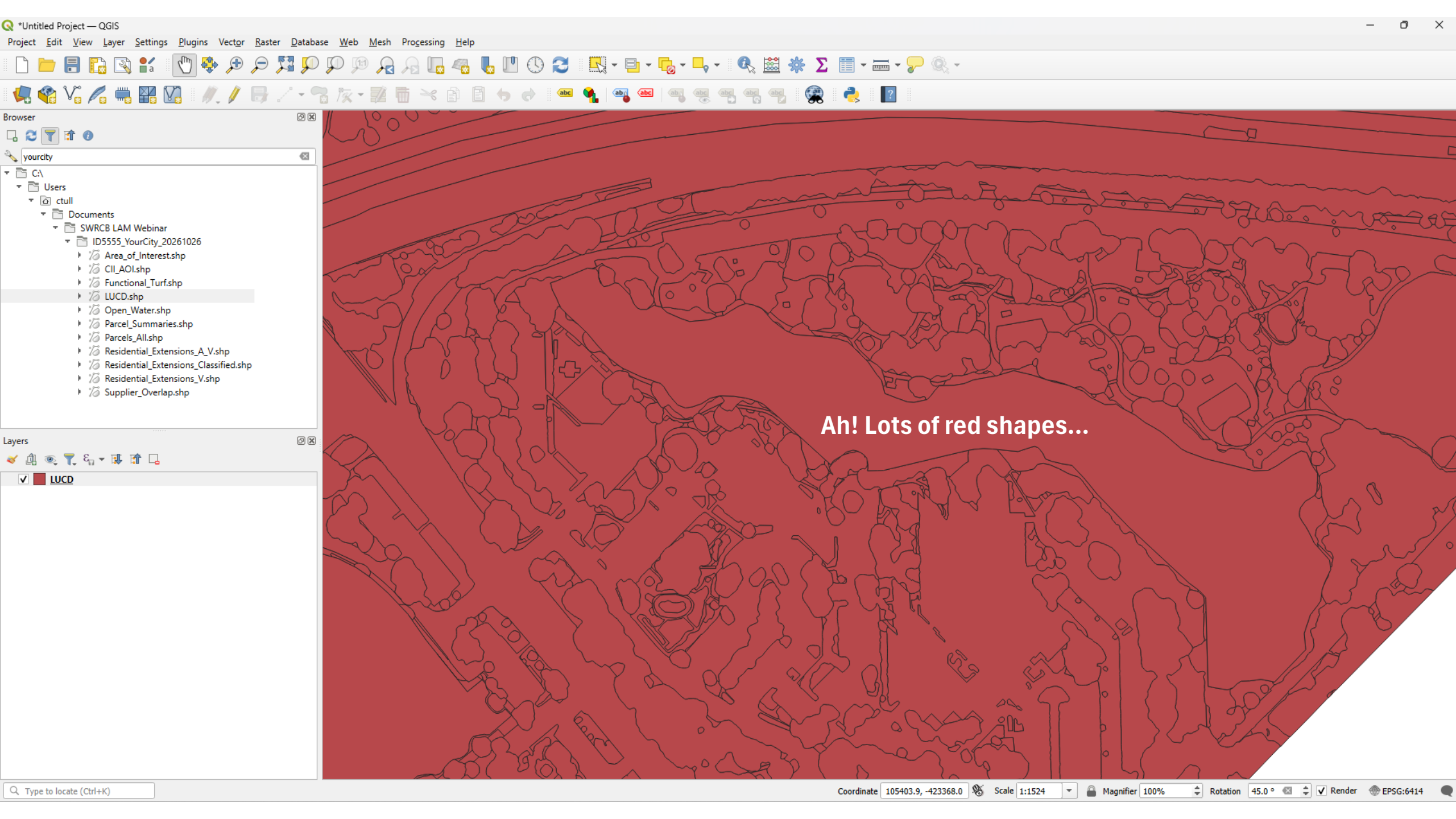


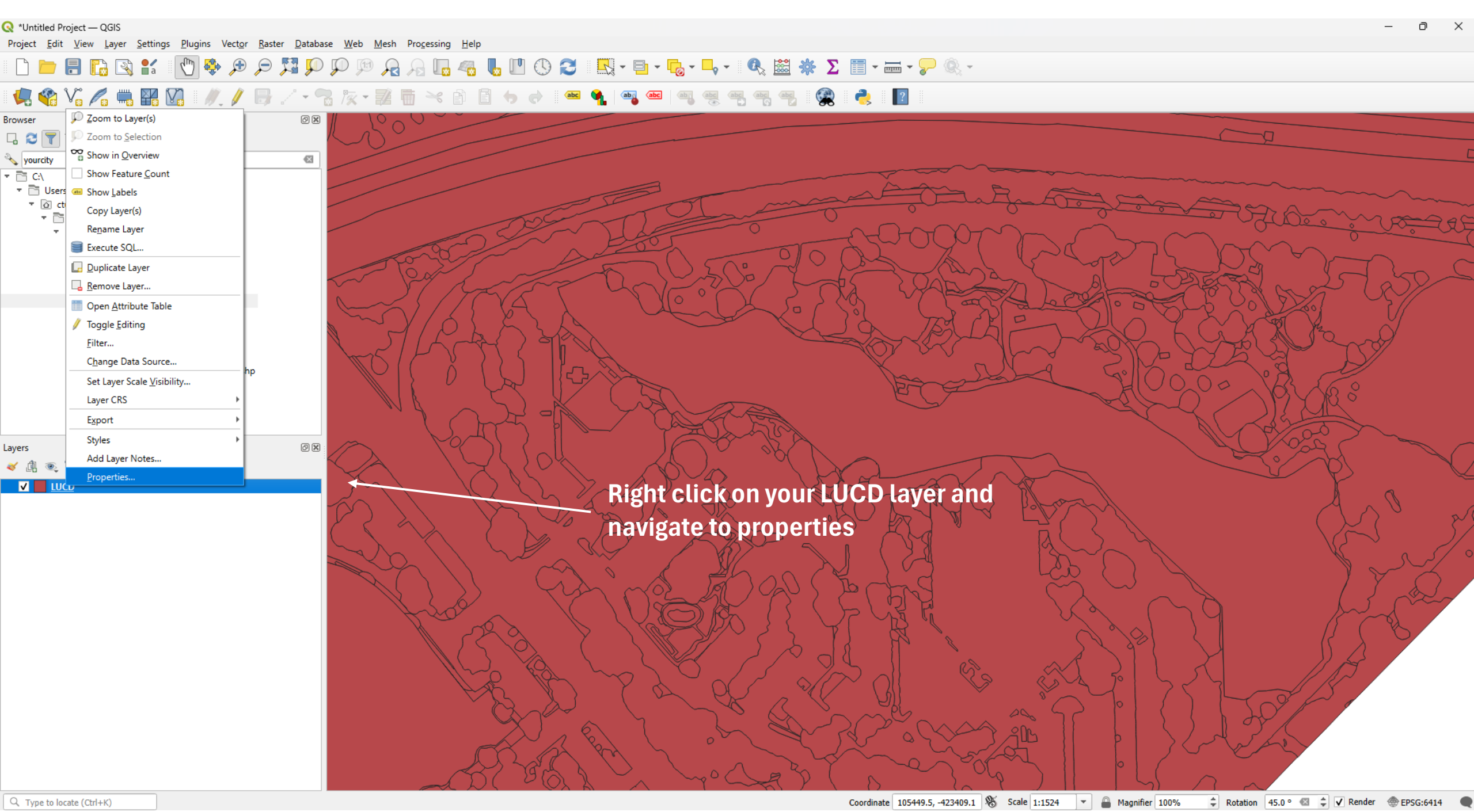
Free download

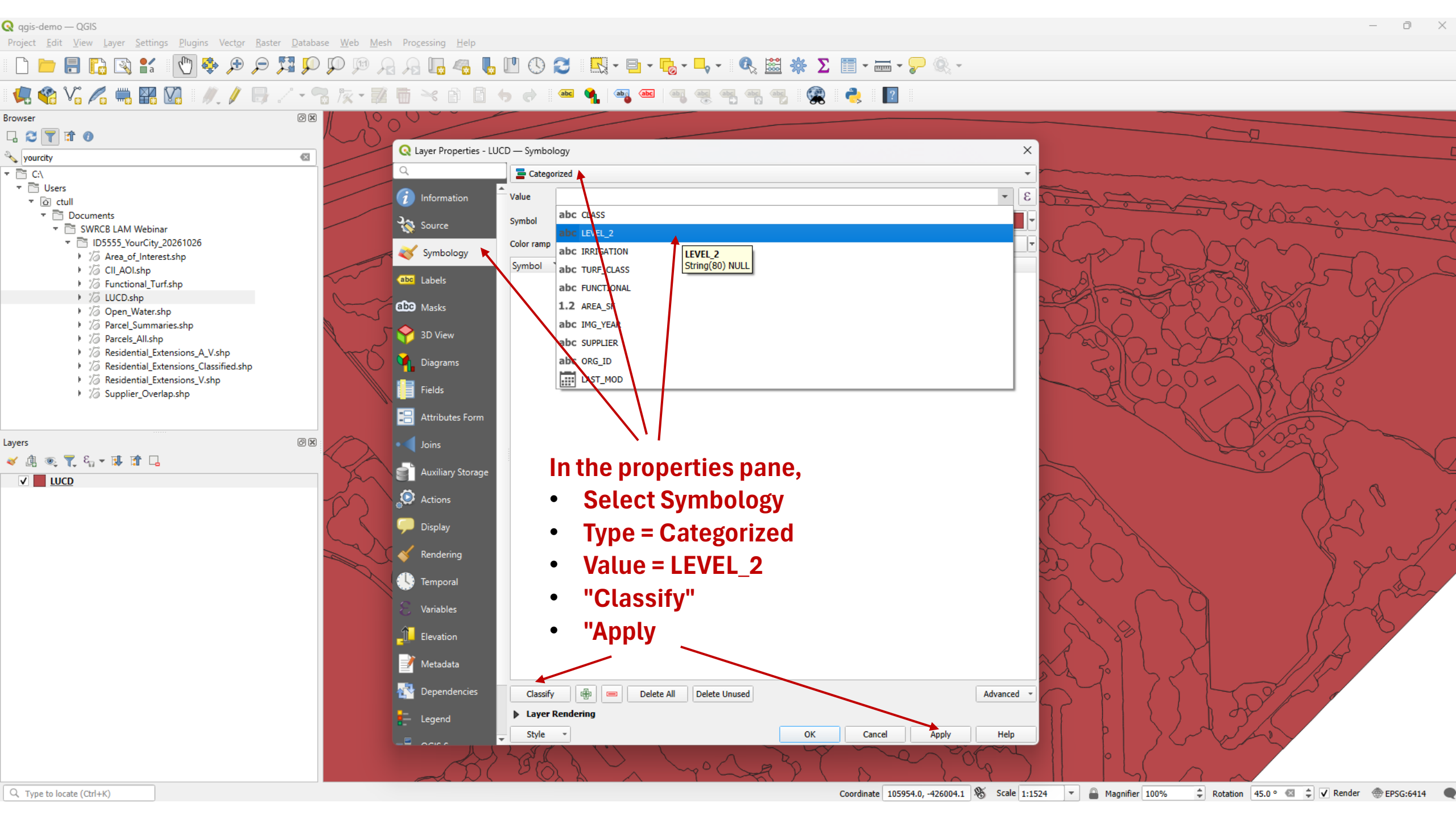


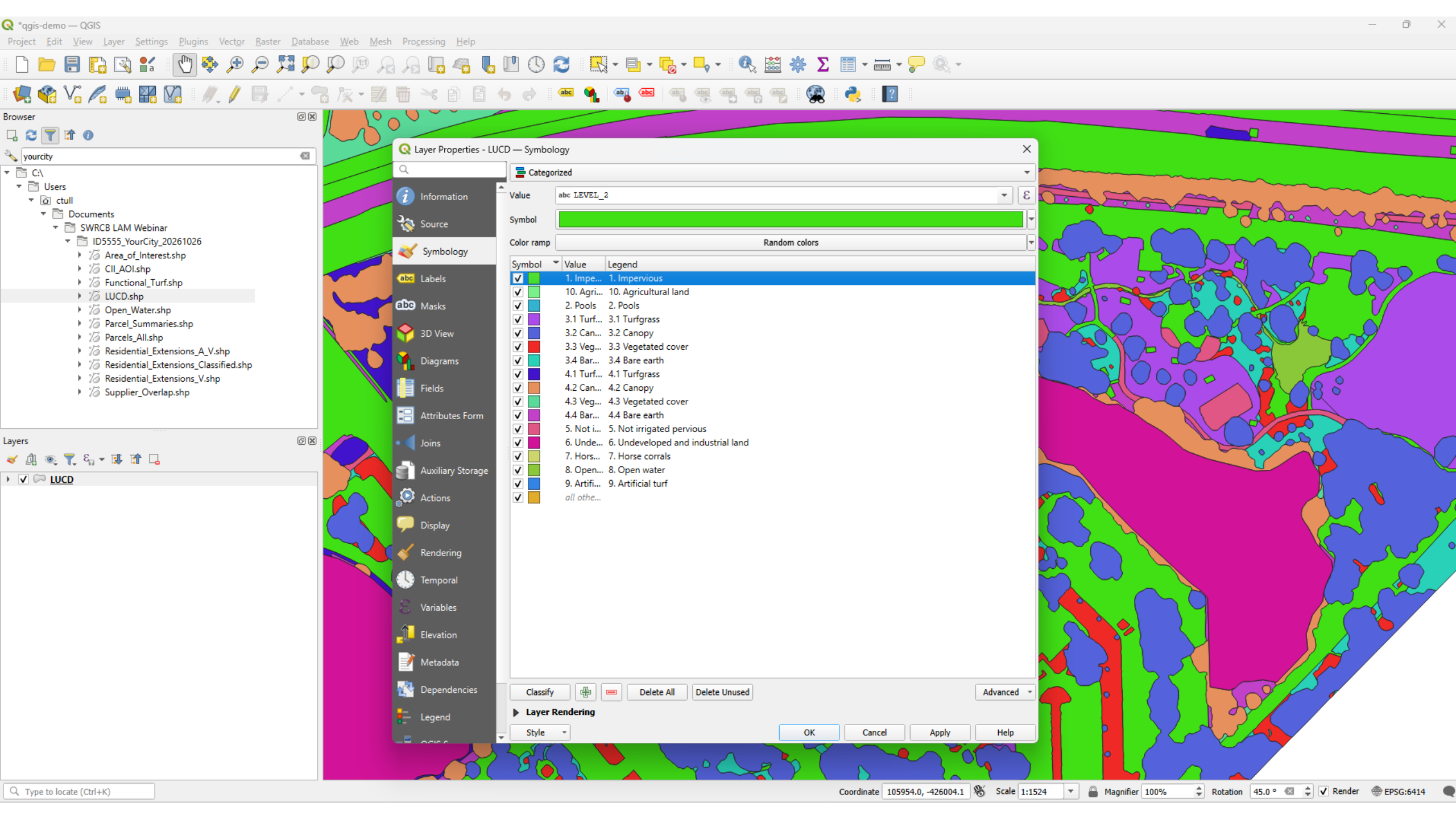

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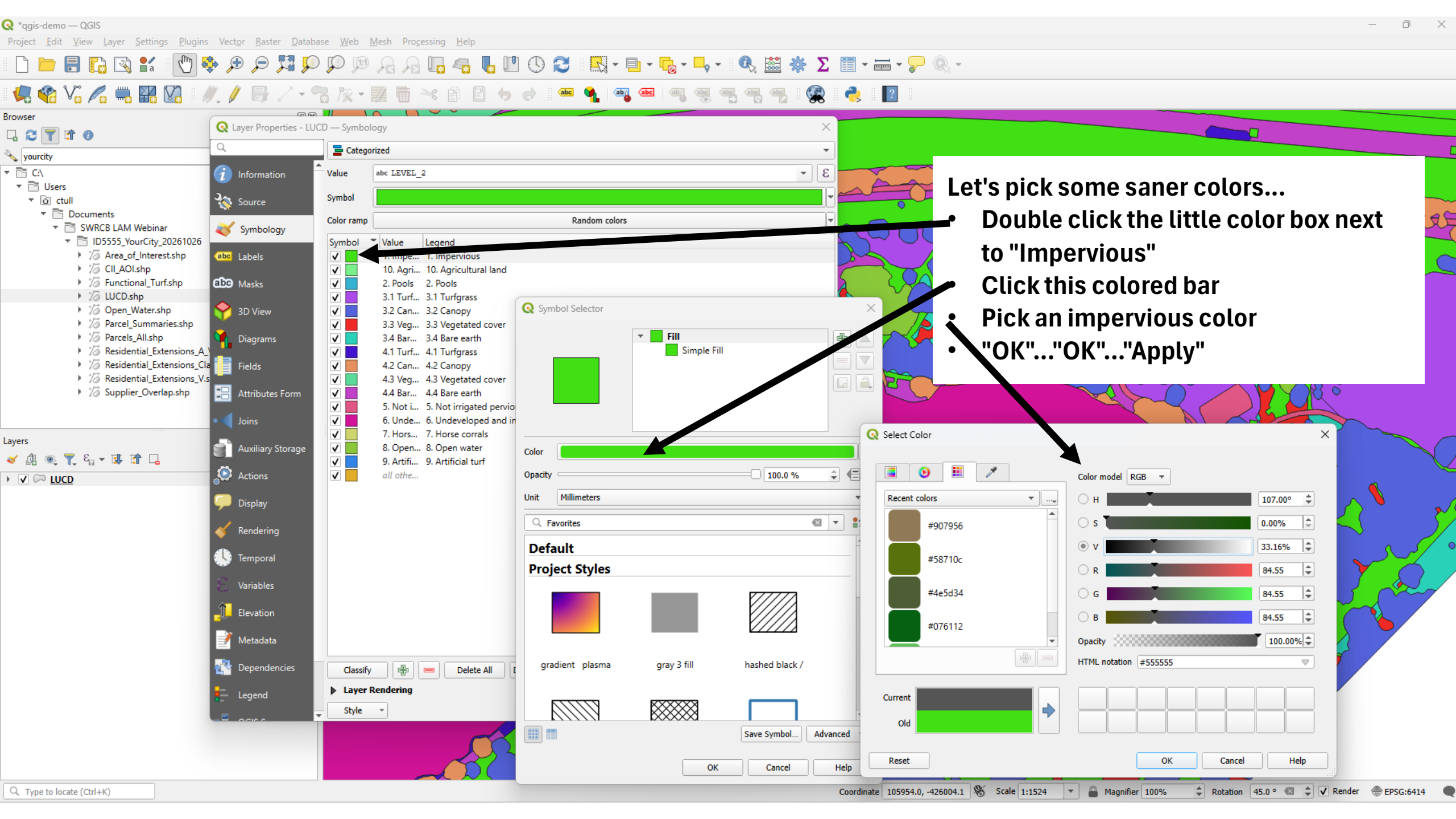

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Drag it into the "Layers" window, or just right click to "Add Layer to Project"
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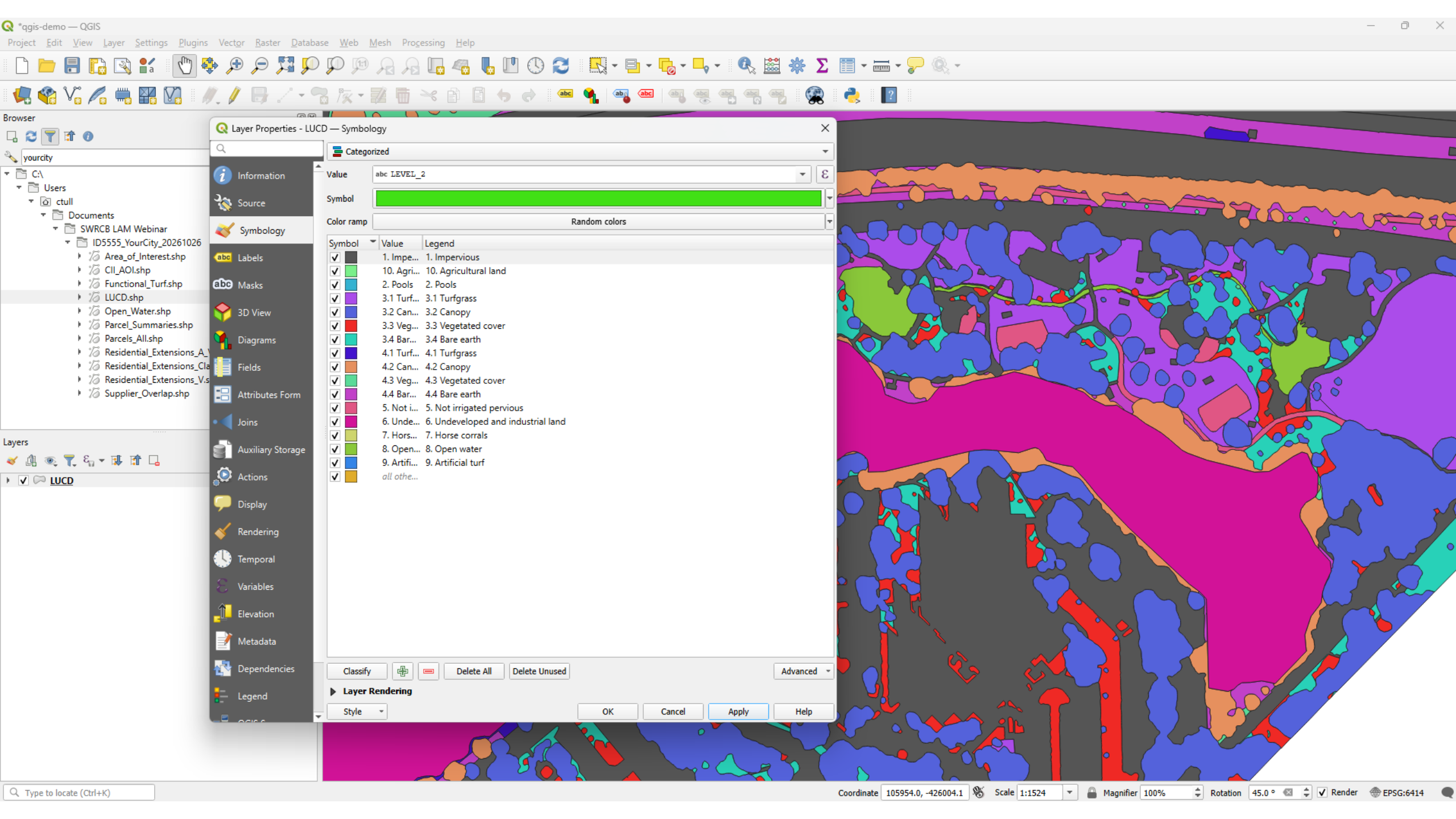

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Add Layer Notes...
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Type = Categorized
Value = LEVEL_2
"Classify"
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Classify
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3.1 Turf... 3.1 Turfgrass
3.2 Can... 3.2 Canopy
3.3 Veg... 3.3 Vegetated cover
3.4 Bar... 3.4 Bare earth
4.1 Turf... 4.1 Turfgrass
4.2 Can... 4.2 Canopy
4.3 Veg... 4.3 Vegetated cover
4.4 Bar... 4.4 Bare earth
5. Not i... 5. Not irrigated pervious
6. Unde... 6. Undeveloped and industrial land
7. Hors... 7. Horse corrals
8. Open... 8. Open water
9. Artifi... 9. Artificial turf
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Let's pick some saner colors...
Double click the little color box next to "Impervious"
Click this colored bar
Pick an impervious color
"OK"..."OK"..."Apply"
Layer Properties - LUCD — Symbology
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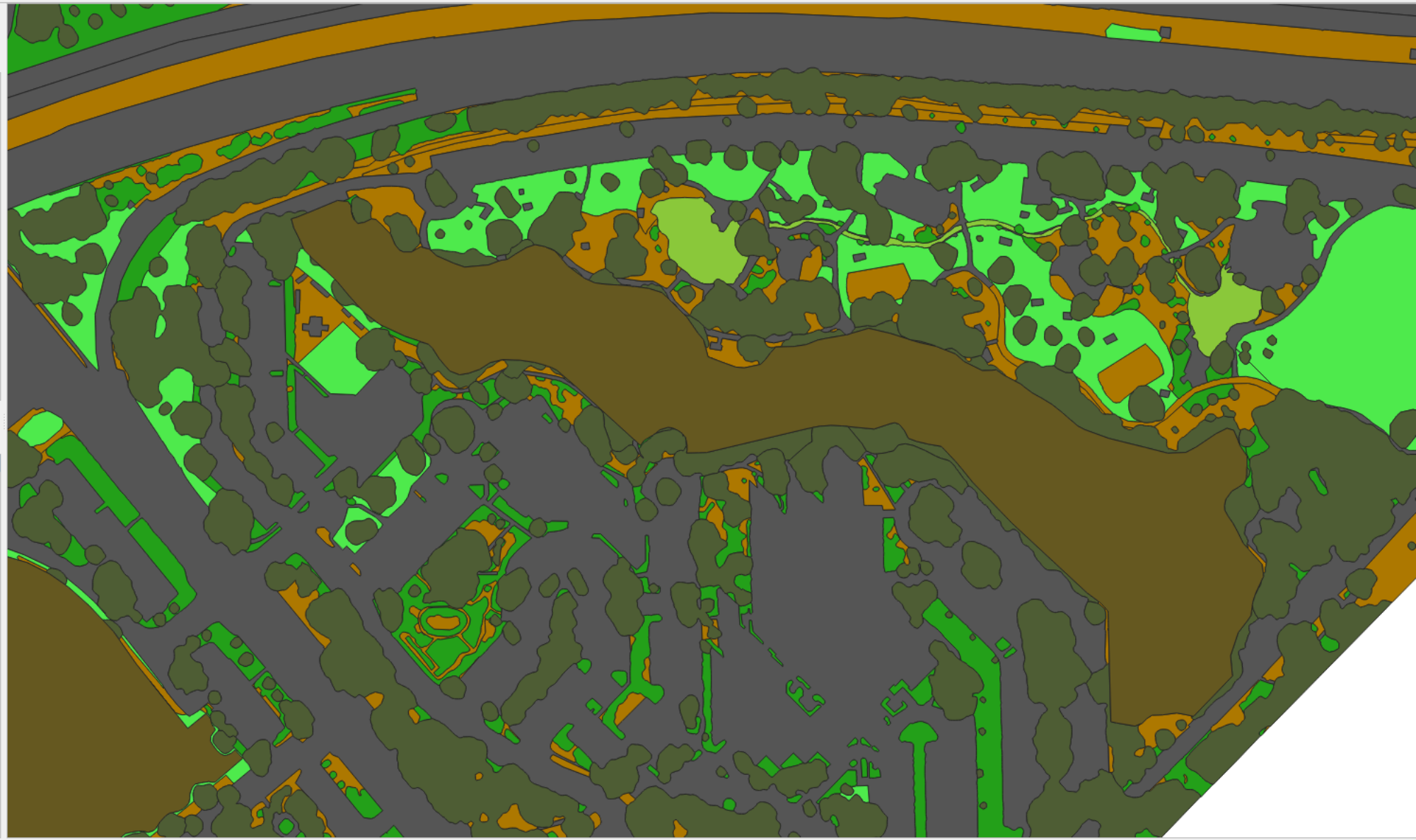
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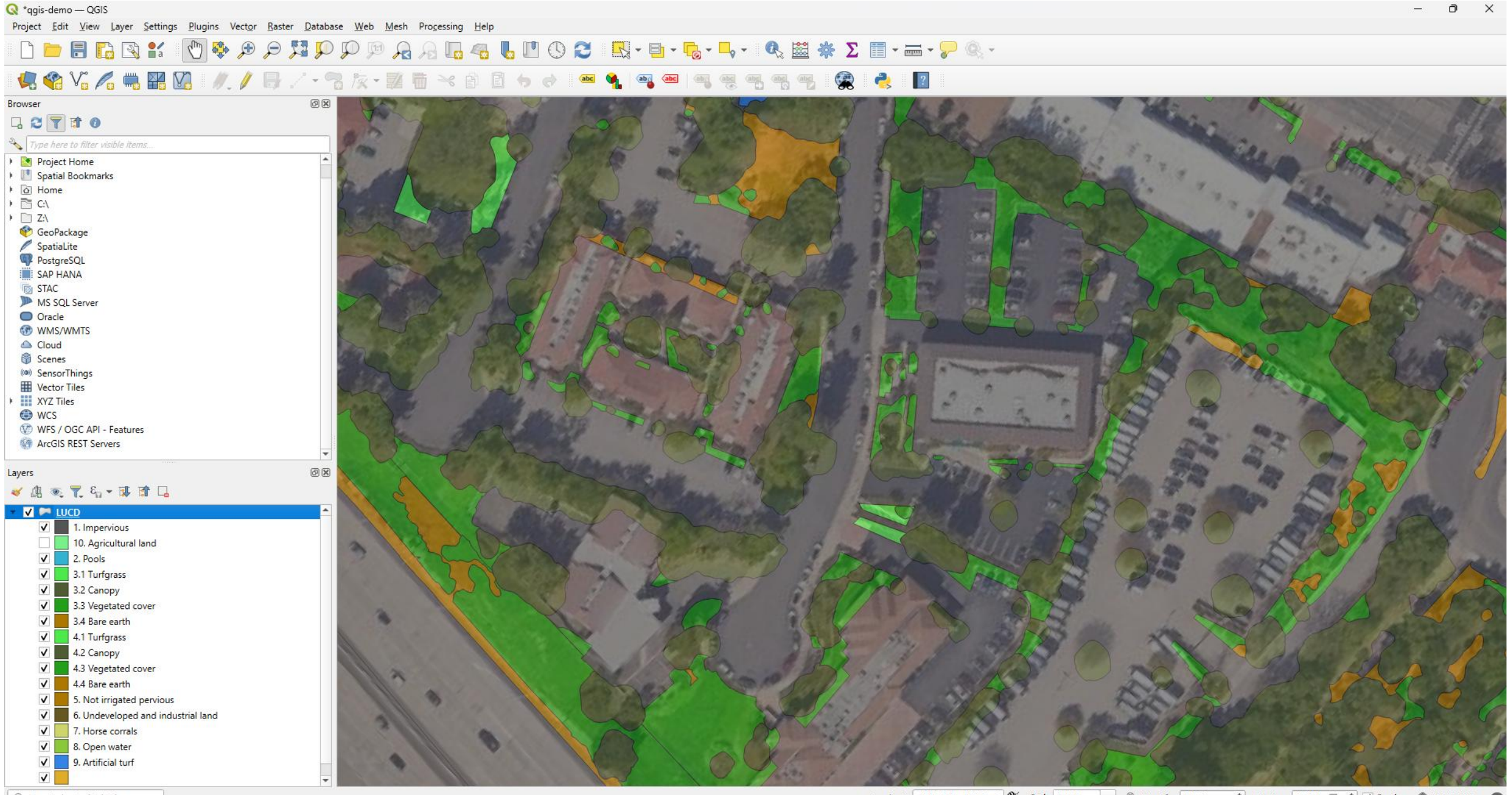
LUCD
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10. Agricultural land
2. Pools
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3.2 Canopy
3.3 Vegetated cover
3.4 Bare earth
4.1 Turfgrass
4.2 Canopy
4.3 Vegetated cover
4.4 Bare earth
5. Not irrigated pervious
6. Undeveloped and industrial land
7. Horse corrals
8. Open water
9. Artificial turf



Type to locate (Ctrl+K)

Coordinate 105390.2, -423348.1 Scale 1:1524 Magnifier 100% Rotation 45.0 ° Render EPSG:6414

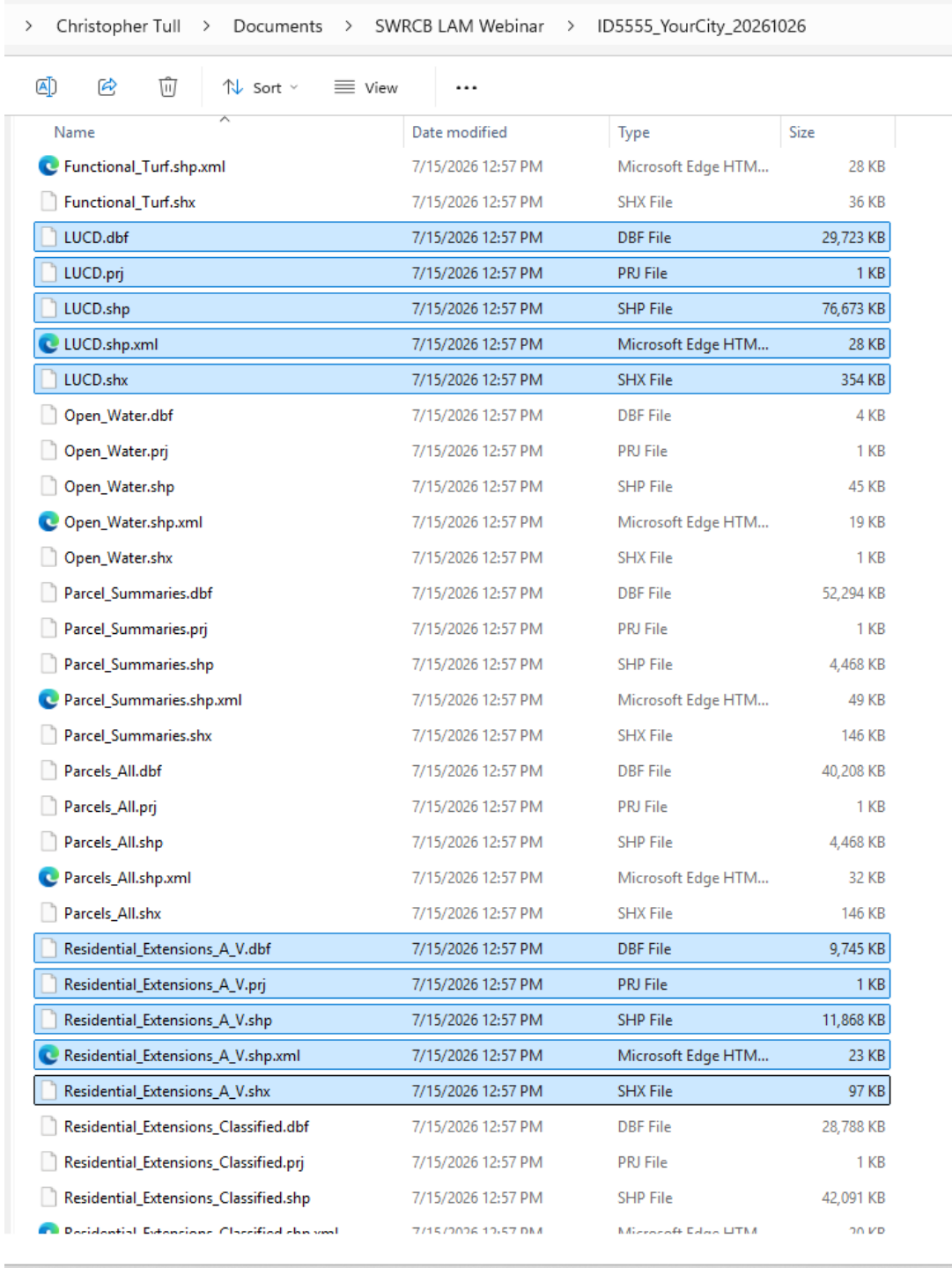
Add an appropriate basemap, adjust transparency, and… done! (tutorials available online)



Lots of other files are included in the data package

- **Land Use Classification Dataset (LUCD)**
- **Functional vs Non-Functional Turf**
- **Residential Extensions**

Full details of files are documented in the PDFs that come with the data package

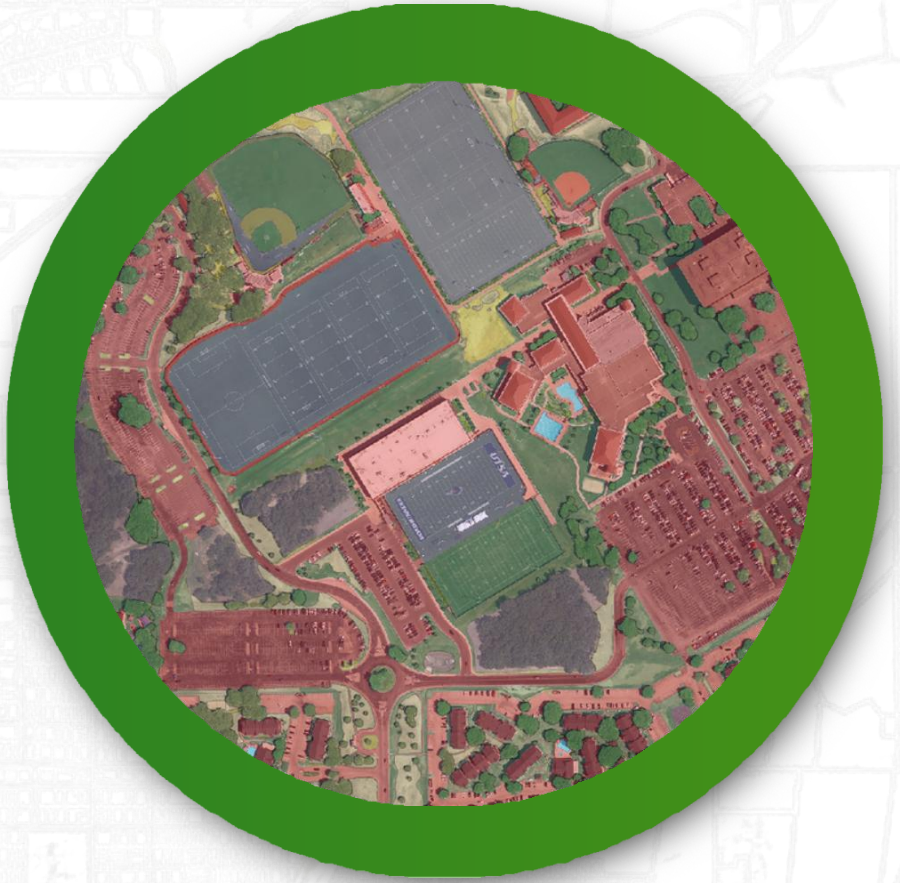


Refining Your Landscape Area Data

Tia Fleming, CalWEP

Does your urban water use objective fully reflect the landscapes you actually serve?

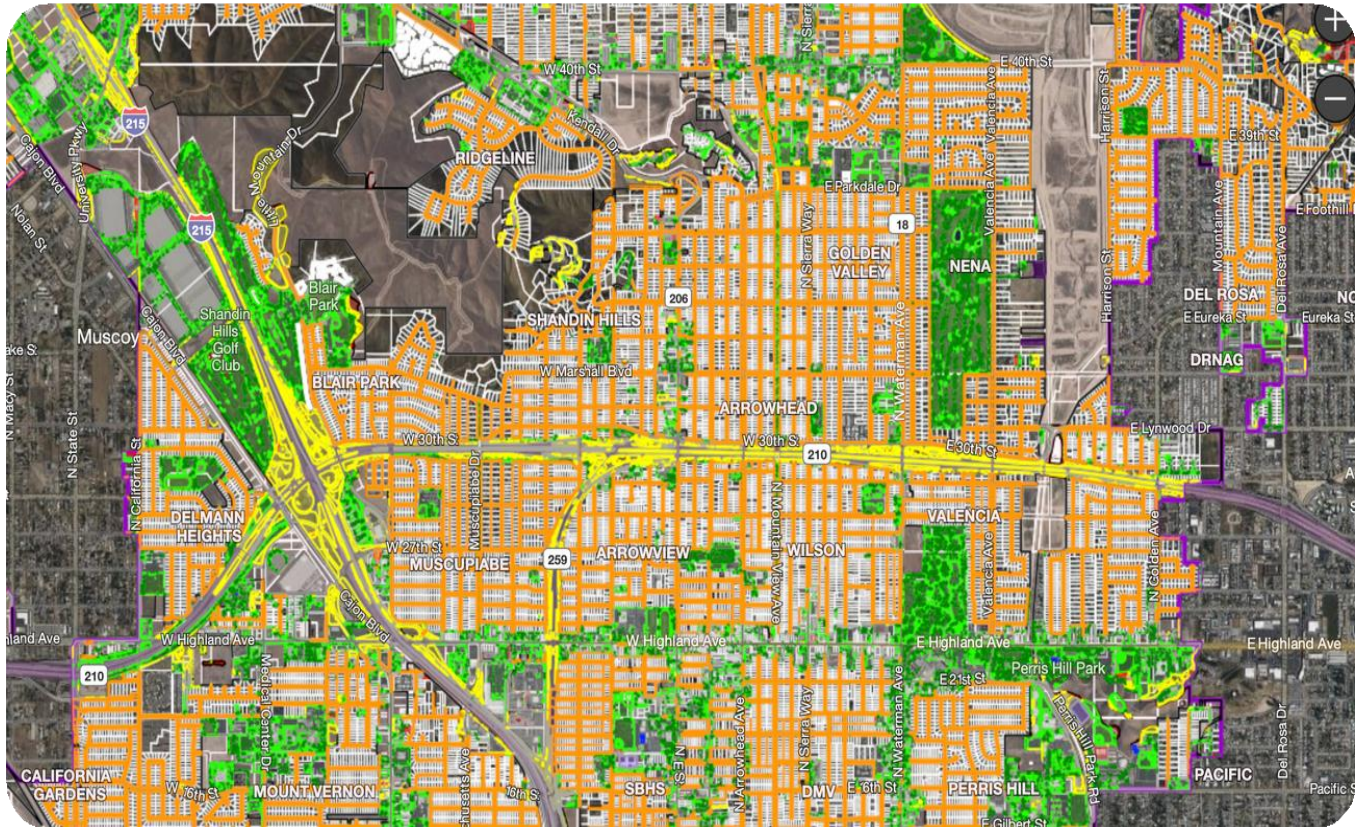
When baseline data is validated, objective calculations become more accurate, more defensible, and more achievable.



Refining your data is not required for compliance but it is recommended!

Focus: Refining LAM Data

- RESIDENTIAL PARCEL EXTENSIONS
- SPECIAL LANDSCAPE AREAS
- NEW DEVELOPMENT



RESIDENTIAL PARCEL EXTENSIONS

Supplier Tools

CalWEP LAM Explorer

Download

Water District Totals

Service Area	34 SQMI	ET	
Population	120,377	Peff	
Total Parcels	32,659	LEF (2025)	
Total RES Extensions	28,192	GPCD	
Source	DWR Annual Report	Vintage	12/1/2024

RES LAM Totals

Total Res Parcels	29,194	NI Area	132,415,629 SQFT
II Area	68,554,334 SQFT	Extension II Area	10,560,384 SQFT
INI Area	30,113,832 SQFT		

CII LAM Totals

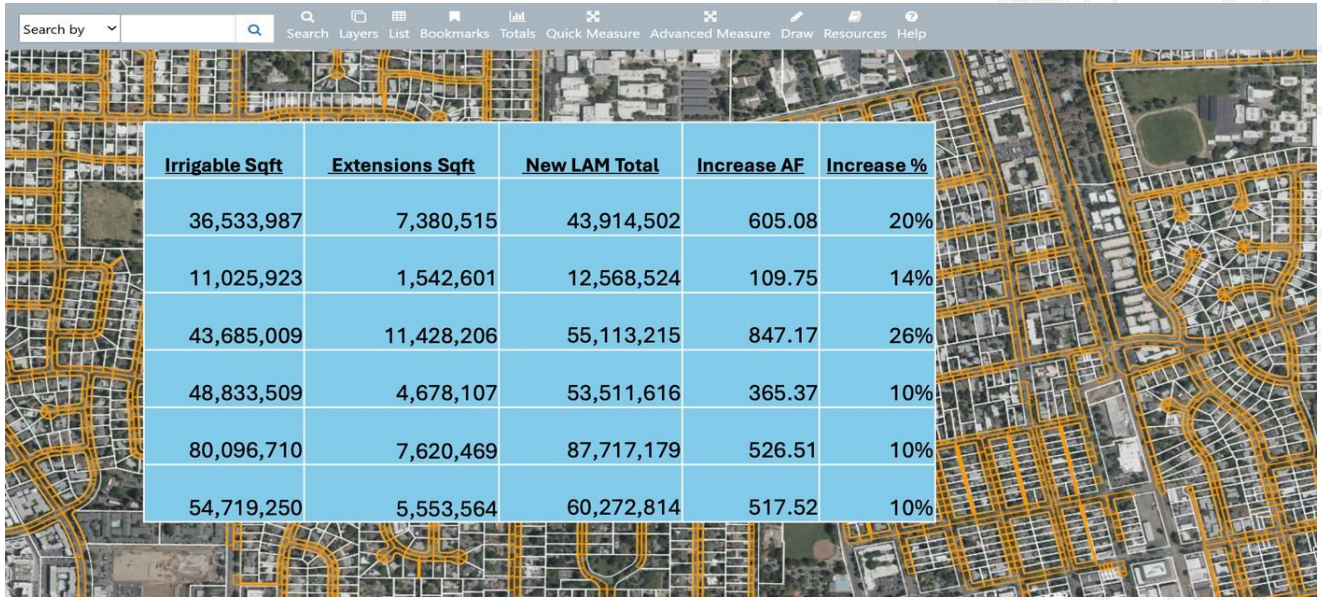
Total CII Parcels	2,977	Vegetative Cover INI	1,680,883 SQFT
II Area	67,031,606 SQFT	Bare Earth INI	4,522,253 SQFT
NI Area	396,514,041 SQFT	Pervious NI	3,402,625 SQFT
Impervious	96,714,800 SQFT	Undeveloped Lands	294,230,688 SQFT
Pools	69,854 SQFT	Horse Corrals	0 SQFT
Turfgrass II	25,178,337 SQFT	Open Water	1,763,308 SQFT
Canopy II	21,625,705 SQFT	Artificial Turf	402,619 SQFT
Vegetative Cover II	6,673,162 SQFT	Agricultural Land	9,586,911 SQFT
Bare Earth II	3,897,637 SQFT	Functional Turf	20,066,413 SQFT
Turfgrass INI	7,012,385 SQFT	Non Functional Turf	12,124,309 SQFT
Canopy INI	3,905,875 SQFT		

Total Res Parcels	29,194	NI Area	132,415,629 SQFT
II Area	68,554,334 SQFT	Extension II Area	10,560,384 SQFT
INI Area	30,113,832 SQFT		



RESIDENTIAL PARCEL EXTENSIONS

Parcel extension review helps ensure residential landscape is fully represented and documented



Irrigable Sqft	Extensions Sqft	New LAM Total	Increase AF	Increase %
36,533,987	7,380,515	43,914,502	605.08	20%
11,025,923	1,542,601	12,568,524	109.75	14%
43,685,009	11,428,206	55,113,215	847.17	26%
48,833,509	4,678,107	53,511,616	365.37	10%
80,096,710	7,620,469	87,717,179	526.51	10%
54,719,250	5,553,564	60,272,814	517.52	10%

Estimated increase in Residential allocation from a residential parcel extension audit and reporting

Agency 1	↑	16%
Agency 2	↑	13%
Agency 3	↑	10%
Agency 4	↑	11%
Agency 5	↑	10%

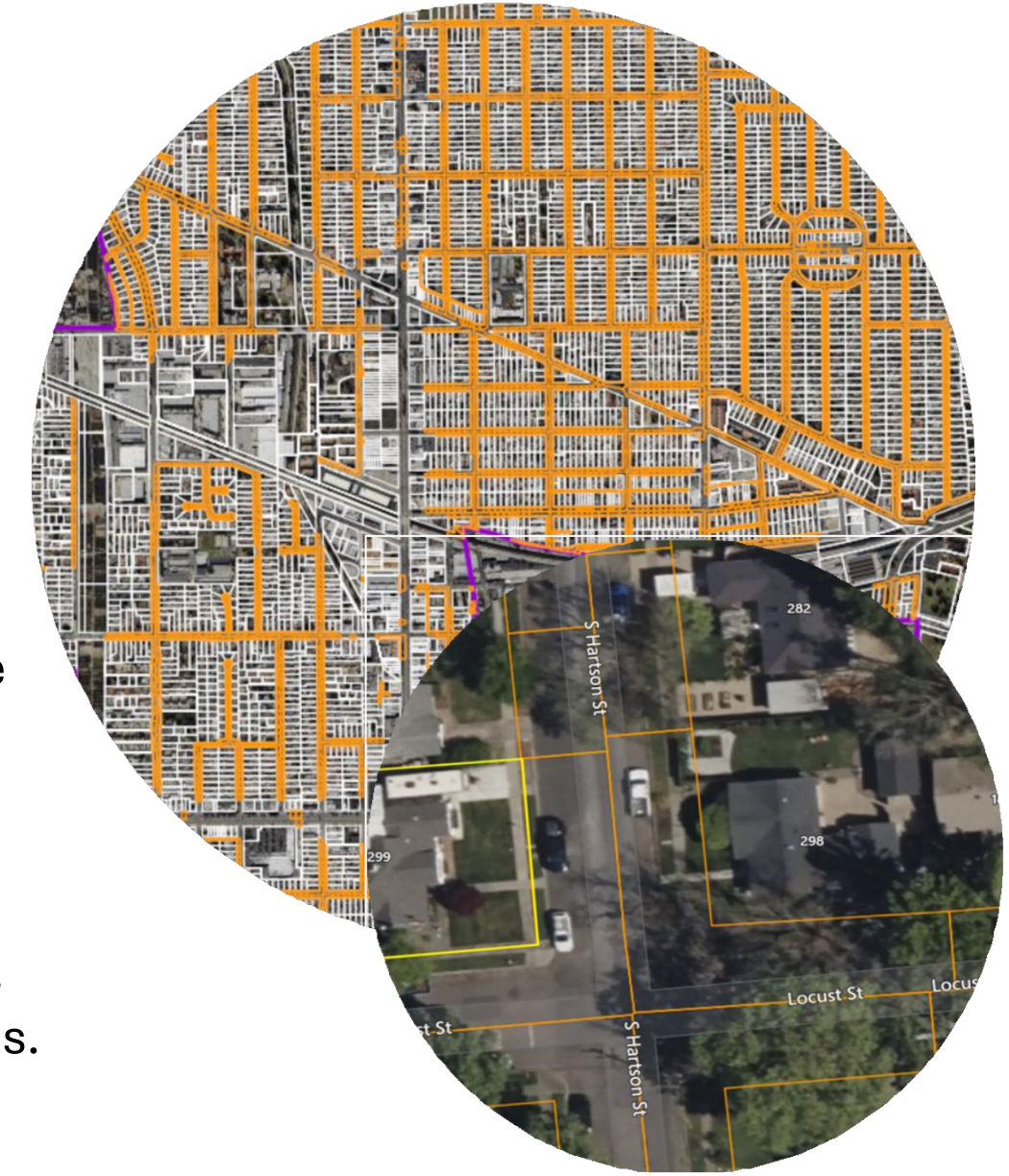
RESIDENTIAL PARCEL EXTENSIONS

To add the residential extensions square footage in their residential landscape area, the supplier should email waterconservation@waterboards.ca.gov the following:

Required: square footage of residential extensions the supplier has confirmed is associated with a residential service connection

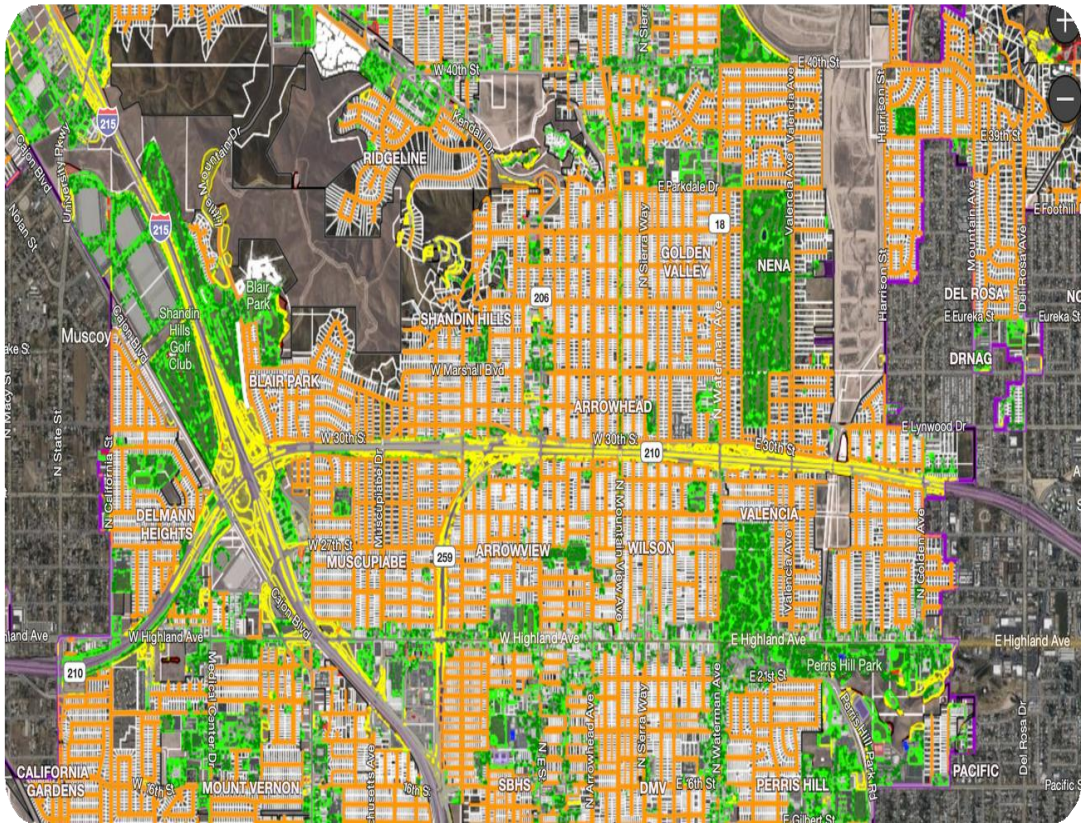
- Information showing how the supplier has confirmed the areas. This can include for example, screenshots of parcels with examples of confirmed extensions and rejected extensions.

Preferred: Shapefile with confirmed residential extensions field in attribute table.



Tips for Residential Parcel Extension Evaluation

- **Document your process for submission!**
  - How are you going through the extensions to confirm they are attached to residential parcels?
    - One by one
    - Batch processing
    - Sampling method
    - Residential meter overlay/GIS
  - Sum square footage of extensions confirmed and extensions rejected
  - Include a shape file or excel file with designations
  - Attached your narrative in your submission with final extension square footage
- **Email waterconservation@waterboards.ca.gov with questions**



SPECIAL LANDSCAPE AREAS (SLAs)







What are SLAs?

Residential:

- Residential pools, spas, and similar water features
- Residential areas dedicated solely to edible plants
- Residential areas irrigated with recycled water

Commercial:

- Active and passive recreation (Sports fields, picnic areas, etc)
- Public pools
- Landscapes irrigated with recycled water
- Engineered slopes
- Edible plants
- Cemeteries

.

WATERVIEW By Eagle Aerial Solutions

SPECIAL LANDSCAPE AREAS (SLAs)

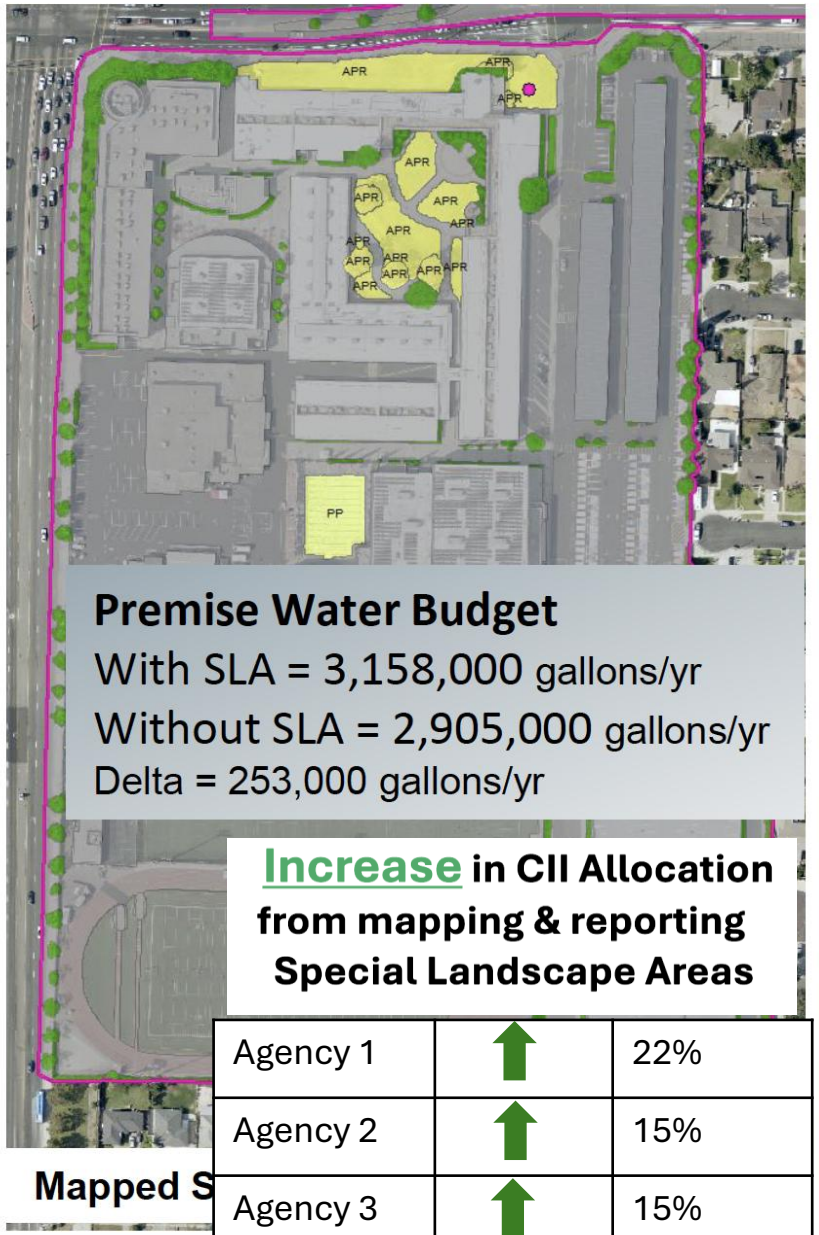


Source: Adapted from State Water Resources Control Board Public Workshop October 4, 2023

SLAs receive a higher water efficiency factor (1.0) than standard irrigated landscapes.

By accurately identifying and spatially mapping eligible SLAs, agencies can ensure these areas are properly accounted for within their objective calculations.

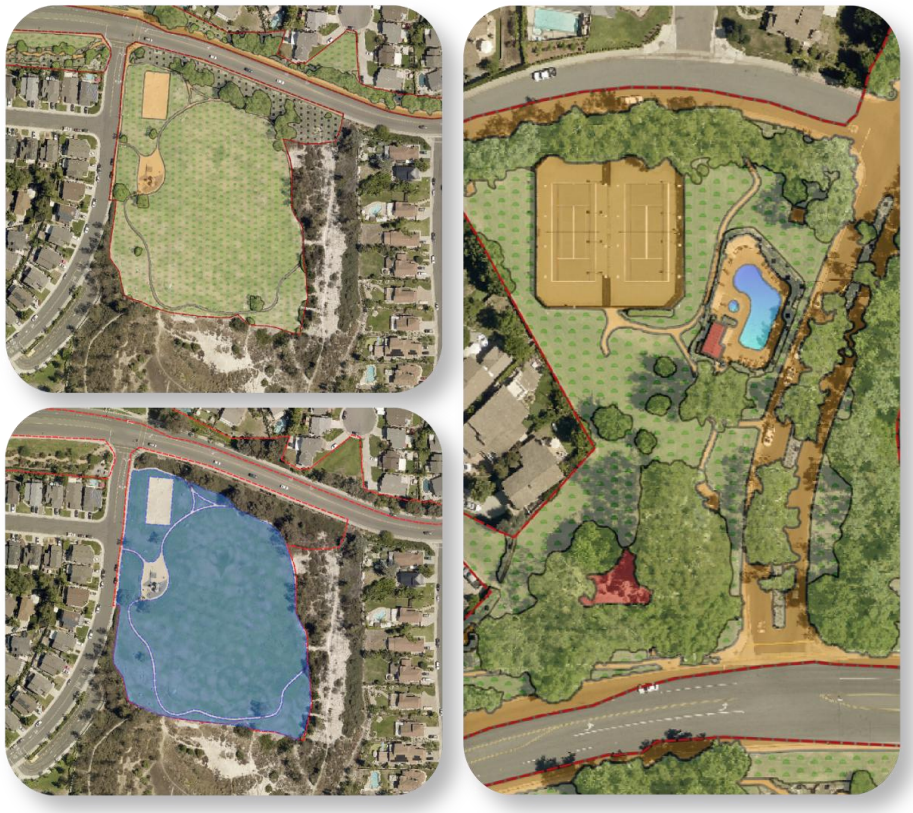
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Increase in CII Allocation from mapping & reporting Special Landscape Areas

Agency 1	↑	22%
Agency 2	↑	15%
Agency 3	↑	15%
Agency 4	↑	9%
Agency 5	↑	10%

Tips for Special Landscape Area Evaluation



- **Document your process!**
  - Show your work, name your credentials, send to DWR at wuestandards@water.ca.gov
- **Start by searching for your lowest hanging SLA fruit**
  - Sports fields and golf courses
  - Schools
  - Pools
- **Approved SLA data holds for up to five years**, so verify once and track the renewal date.

- **Residential SLAs** are in incorporated now
- **CII DIM SLAs** will first be incorporated in the FY 28/29 report due Jan 2030
  - Tip: Combine with DIM measurement workflow

NEW DEVELOPMENT

The imagery used for LAM is a snapshot in time (2018 for residential areas and 2020 for commercial areas) - landscapes added since then may be missing!

TIPS

Use existing records where available.

- Identify residential landscapes added after the period covered by your current LAM.
- Measure areas using one of these methods:
  - MWELO reports that separately identify new residential landscape area
  - On-the-ground measurements
  - Accurate remote sensing
- Submit measured areas, supporting records, and your collection method to the State Water Board.

Get approval before adding these areas to your LAM.

CII new construction review begins in reporting year 2028–2029.

Validating your LAM helps agencies:

- Fully account for the landscapes they actually serve
- Build a more accurate and defensible data foundation for the Urban Water Use Objective
- Improve confidence in reporting and annual submissions
- Reduce uncertainty before launching outreach or conservation programs
- Ensure conservation efforts are built on data that reflects real conditions



EAGLE AERIAL SOLUTIONS

Massive thanks for our partners at Eagle Aerial's WaterView for their help with images and examples for this webinar!

ZOOM POLL

Measuring your CII Dedicated Irrigation Meters (DIMs)

Christopher Tull, CaDC

WUE Regulation or Water Use Efficiency Regulation

CII LANDSCAPE MEASUREMENT TIMELINE

July 2024

Regulation adopted by State Water Board

January 2025

Annual reports due

July 2027

CII-MUM (option 1): Measure and Identify all CII-MUMs with large landscapes

DATA DUE: CII-MUM large landscape and irrigated area measured

July 2028

Implementation of CII-DIM Standard based on measured landscapes

DATA DUE: CII-DIM landscapes identified and irrigated areas measured

July 2029

CII-MUM (option 2): Measure and Identify all CII-MUMs with large landscapes that exceed individual supplier-defined budget

DATA DUE: CII-MUM large landscape and irrigated area measured

July 2024 - June 2028 CII DIM standard equals actual deliveries as reported in eAR

July 2028 onwards: CII DIM standard based on CII-DIM irrigable area

CII DIM Standard Reporting Details

Through June 30, 2028 (FY 2027/28):

Suppliers shall report **actual water deliveries** associated with landscape irrigation as reported to the State Water Board in their Electronic Annual Report (eAR)

Starting July 1, 2028 (FY 2028/29):

Suppliers will use total **irrigated square footage** for all CII-DIMs to calculate a CII-DIM water budget (**Must report by January 1, 2030*)

****

The area of all irrigated landscapes served by CII-DIMs will need to be measured no later than Dec. 31, 2029. . . How will you accomplish this?

CII MUM Landscape Area Measurement

CII mixed-use meters that irrigate ½ acre or more of landscaped area must either:

a. **Install a dedicated irrigation meter, or**
b. **implement in-lieu technologies coupled with conservation BMPs**

****

The area of irrigated landscapes served by CII-MUMs (=/> ½ acre) will need to be measured no later than June 30, 2027 (or 2029 if implementing water budgets)....How will you accomplish this?

Approaches to identify & measure CII DIM Landscapes

Choosing an Approach

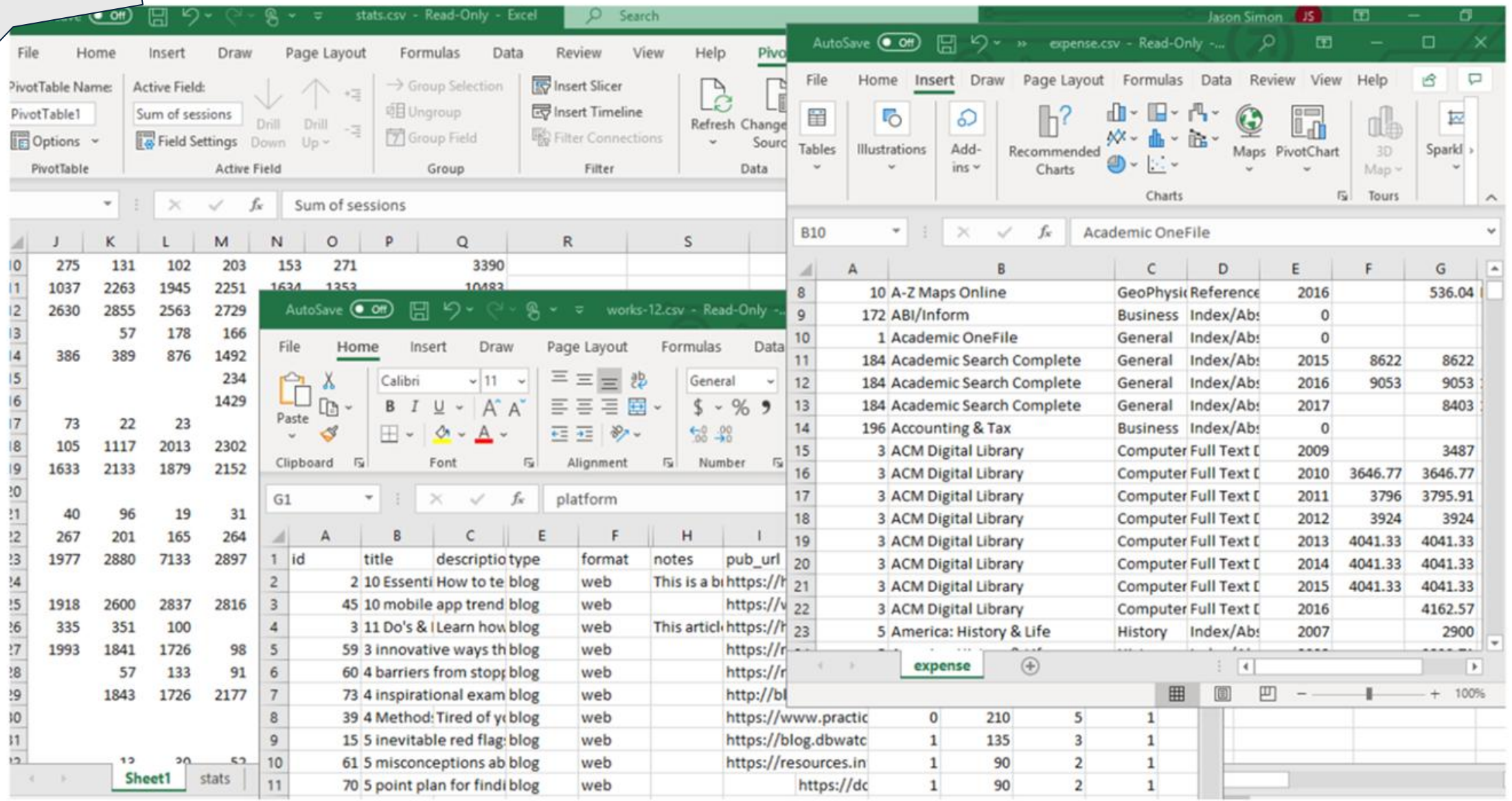


Steps to Identify & Measure Data & Report



Step 1

Customer / Meter Data



Step 1

Aerial Imagery



Step 1

Parcel Boundary



Customer / Meter Data - Geolocated

Step 1



Step 1

Identify SLAs, MUMs, NFT



Step 3

Premises / Meter Service Areas



Measure & Aggregate

Step 4



1. Sum up the area of landscape that is irrigated by CII DIMs (e.g. within the parcel, or sub-parcel area)

2. Aggregate the grand total for each type of landscape and use that for reporting.
    - CII MUMs serving > 0.5 acres
    - CII DIM
    - SLA (optional)

Key Takeaways

- **Define your goals -** compliance, water budgets for BMPs/In-lieu requirements, NFT compliance, water budget based rates, etc.
- Even using DWR data packet will require **time, money, and GIS expertise**
- Decide on **an approach**
- **Build your data team**
- **Start NOW** even if you don’t have the DWR data yet

Reporting your CII DIM Landscape Area

Marielle Rhodeiro, SWRCB

Upcoming submission of CII DIM data

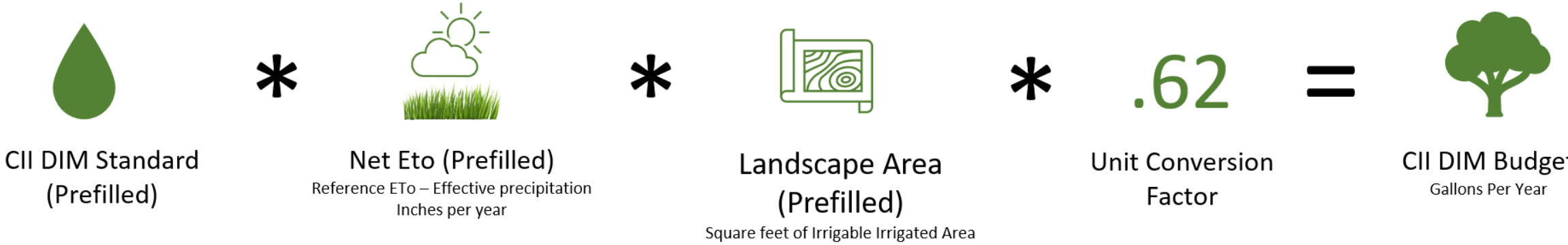
- The square footage of landscapes associated with CII DIMs will be due to the State Water Board by **June 30th, 2028**
  - Suppliers may use CII-LAM-LUCD data provided by DWR as a starting point
  - If using own landscape data, must demonstrate that there is no overlap with residential LAM
- Email submissions to waterconservation@waterboards.ca.gov with subject line "CII DIMs Submission for [ORG ID] [Supplier Name]"



What to include in CII DIM submission

- Quantified total square footage of CII DIMs
- *Optional*: quantified square footage of CII DIM SLAs and/or new CII DIM landscapes
  - SLA square footage must be approved by DWR
  - New construction square footage must be approved by SWB
- Documentation explaining how square footage was determined
- Any supplemental materials that support documentation (shapefiles, MWELO records, etc.)

CII DIM data within the reporting form



- Starting with the **FY28-29 report (due January 1, 2030)**, the CII DIM budget will utilize the landscape square footage in the budget calculation rather than CII DIM deliveries
  - Suppliers may also request CII DIM variances starting with this report
- The CII DIM section of the report will appear very similar to the residential outdoor section

Questions?

Who to Contact:

LAM Data or SLAs: WUE_LAM@water.ca.gov
CalWEP LAM Explorer: LAM@CalWEP.org
Residential Extensions, new construction and general regulatory/reporting questions: waterconservation@waterboards.ca.gov