



GIS and the Web

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GIS and the Web

Some of the benefits Web GIS Apps

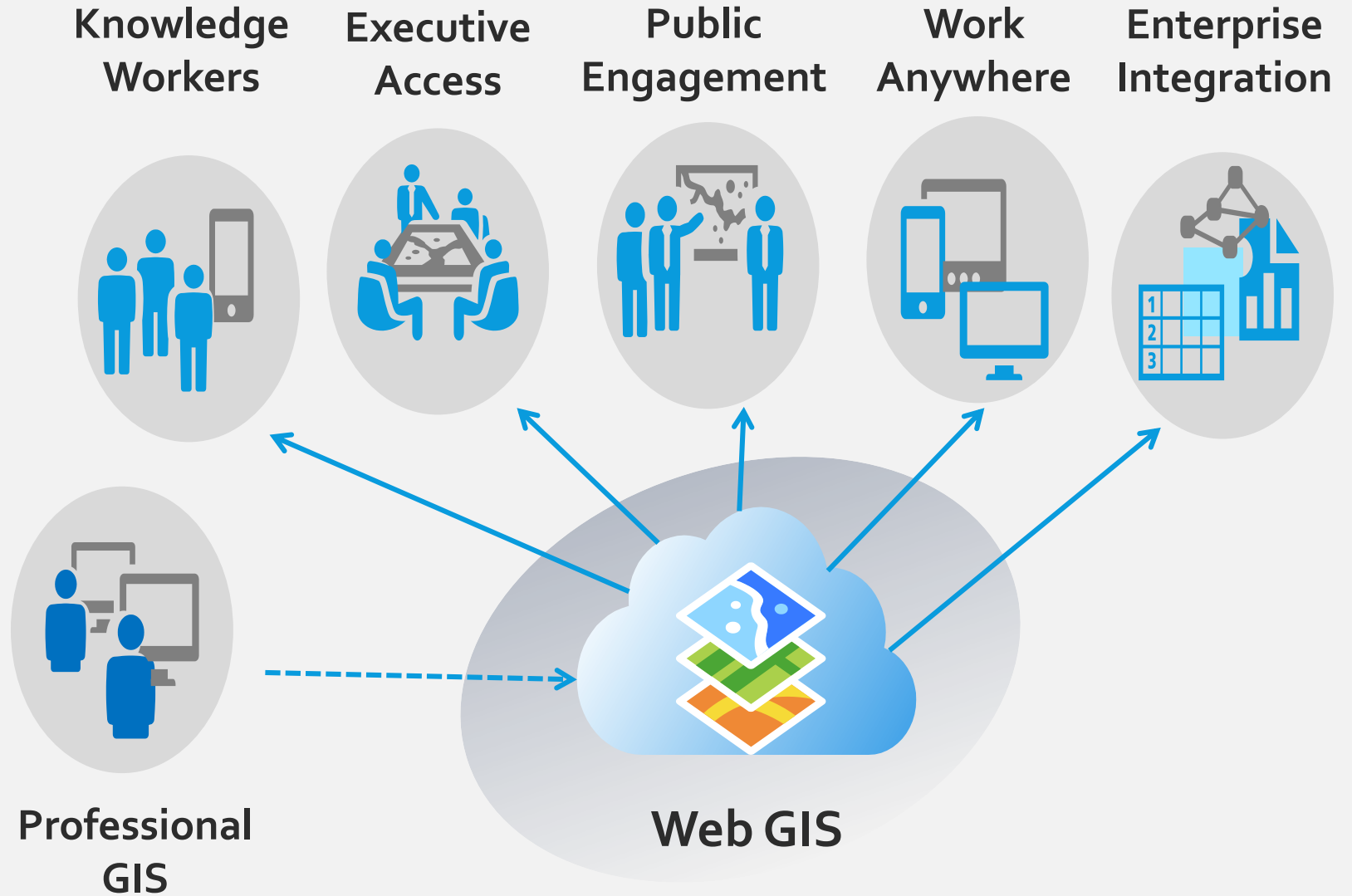
Considerations when developing Web GIS Apps

Overview of GISWeb, Santa Cruz County's flagship Web GIS App

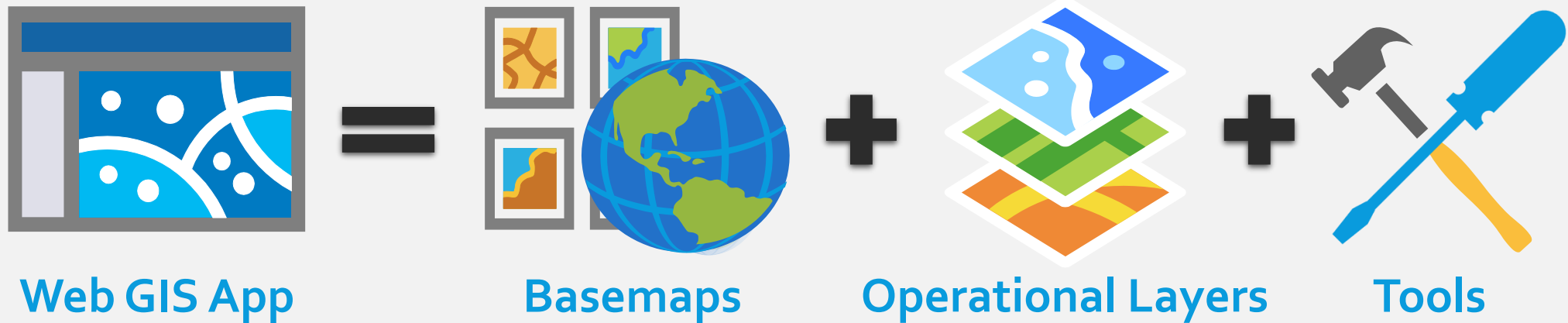


Benefits

Global reach
More users
Cross-platform
Lower cost
Easier to use
Diverse applications



Things to consider: What is a Web GIS App?



Things to consider: Developer challenges

Making the app user friendly and fun to use

Fast and responsive

Providing relevant data

Meeting the use case needs of the end user



Web Mapping Apps = Web Page Design +
Design Principles for Computer Applications +
Dynamic Cartography



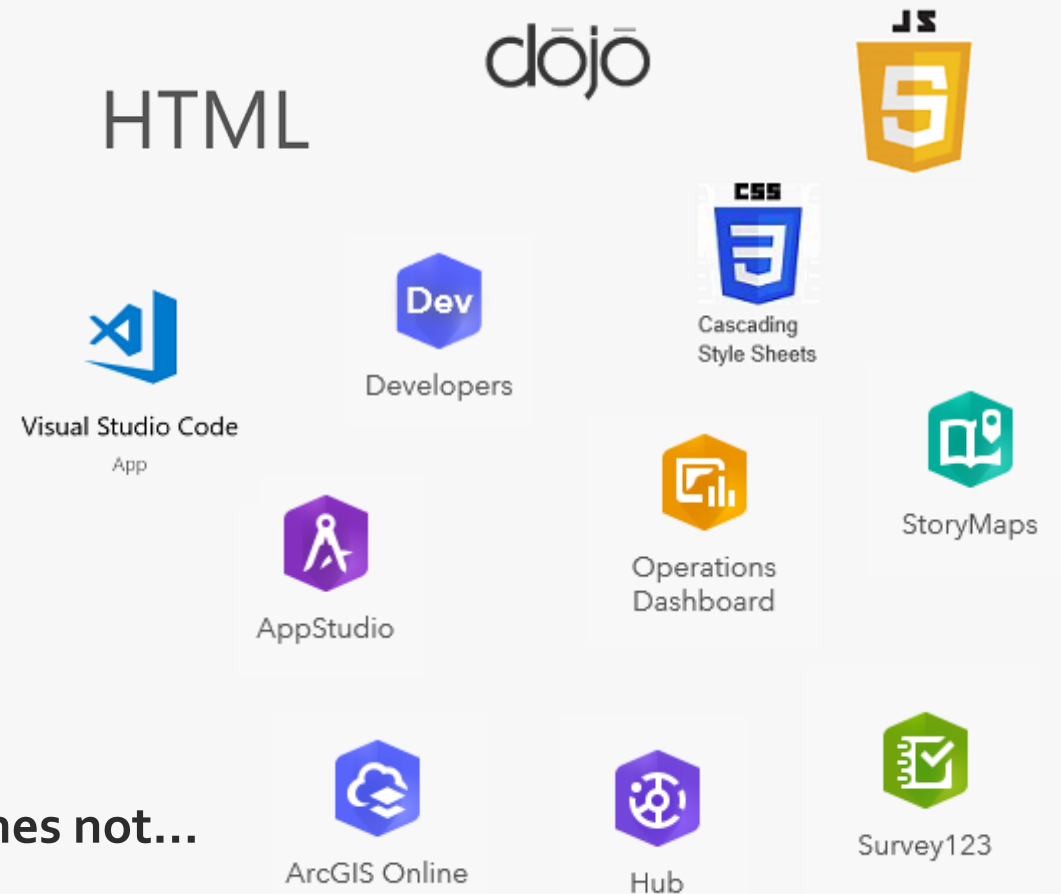
Things to consider: Custom Apps v. Templates

Custom Apps:

- Take longer
- Can be tailored to a workflow
- Have flexibility to control all aspects

Templates:

- Fast to develop / built on best practices
- Have a specific set of tools
- Leverage existing code libraries
- Less control and flexibility
- Sometimes workflows can be adjusted sometimes not...



Things to consider: Targeted v. Kitchen Sink



Pros

Focused

Faster

Single message

Cons

Less flexible

App proliferation

Data limitations

Pros

Robust info

Broad audience

Flexible

Cons

Slower

More complex

Difficult to learn

View a single layer or many layers in **CONTEXT** ?

Things to consider: Device and Audience

Phone - Tablet - Desktop - any?

Orientation

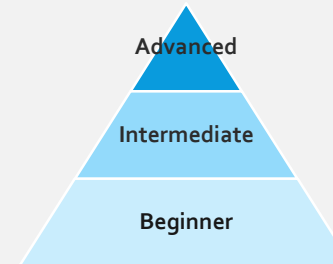
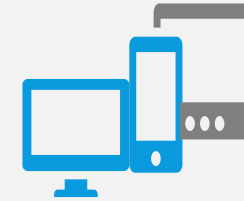
Purpose of app

Audience - who will use it?

Different browsers

Different level of skill of the users

Sources and validity of data



Things to consider: Functionality

Change scale (zoom in and out)

Search and Identify features

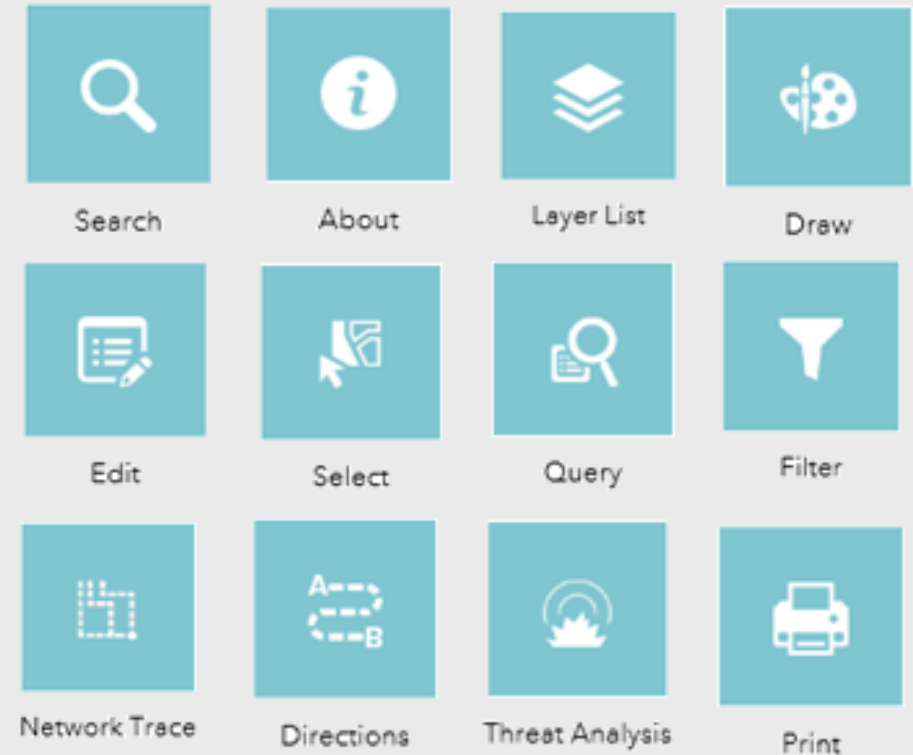
Turn off and on layers

Edit features or draw on map

Find directions / Conduct analysis

Query / Filter

Print results





Santa Cruz County's GISWeb



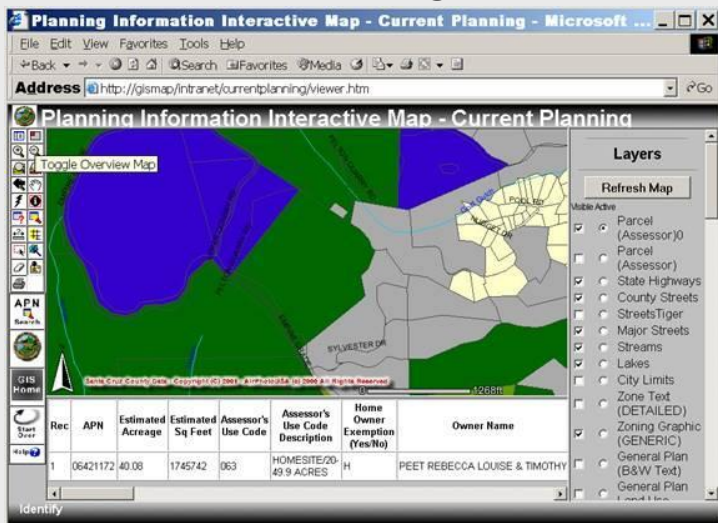
Started as 'Planning Info' tool in 2000

Expanded over the last two decades to support:

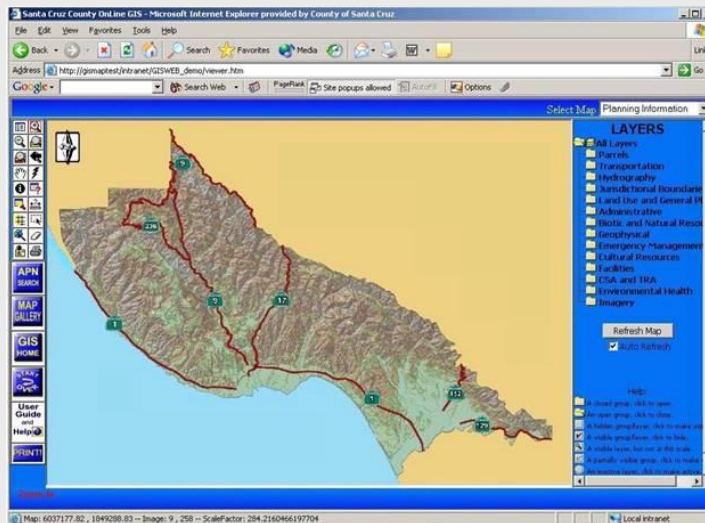
Land Use Planning
Public Works
Environmental Health
Elections
Assessors Office

Realtors
Surveyors/Engineers
Geologists
Architects
General Public

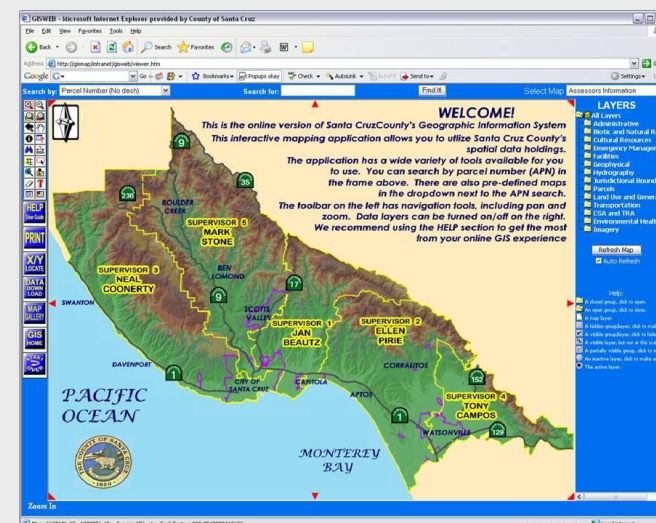
2000-2003



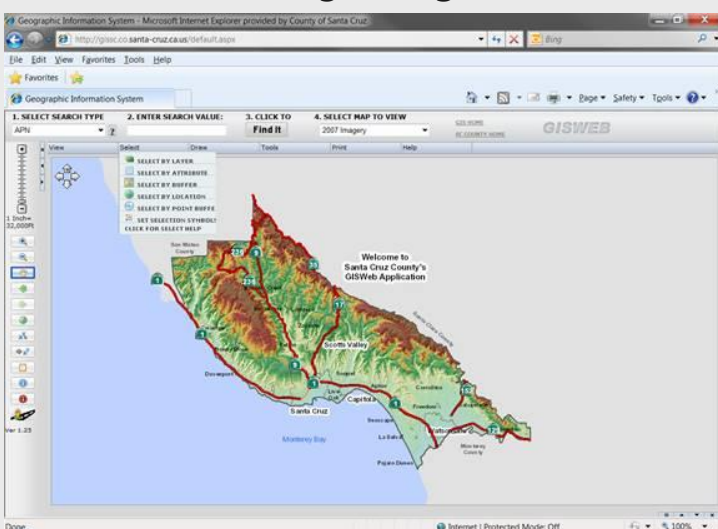
2003 - 2005



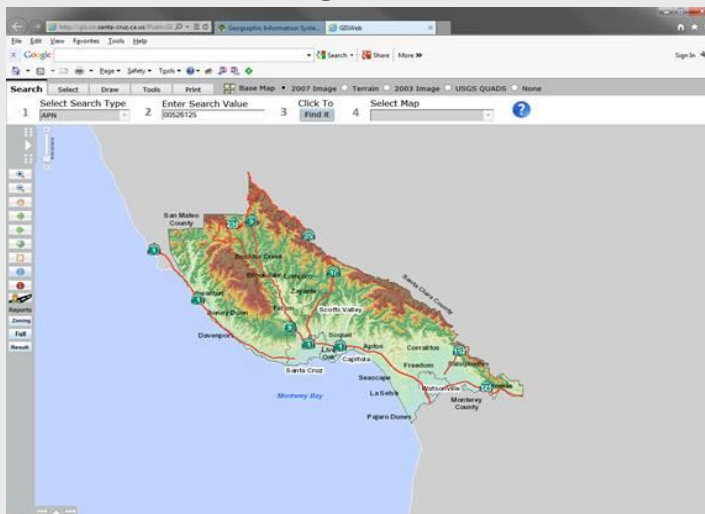
2005 - 2009



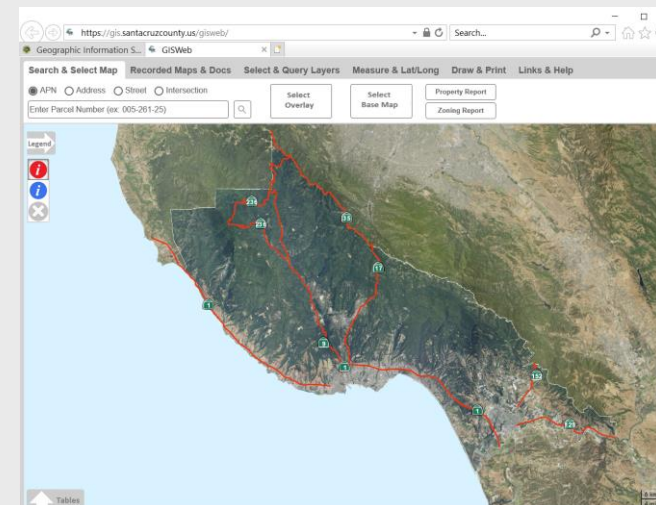
2009 - 2013



2013 - 2018



2018+





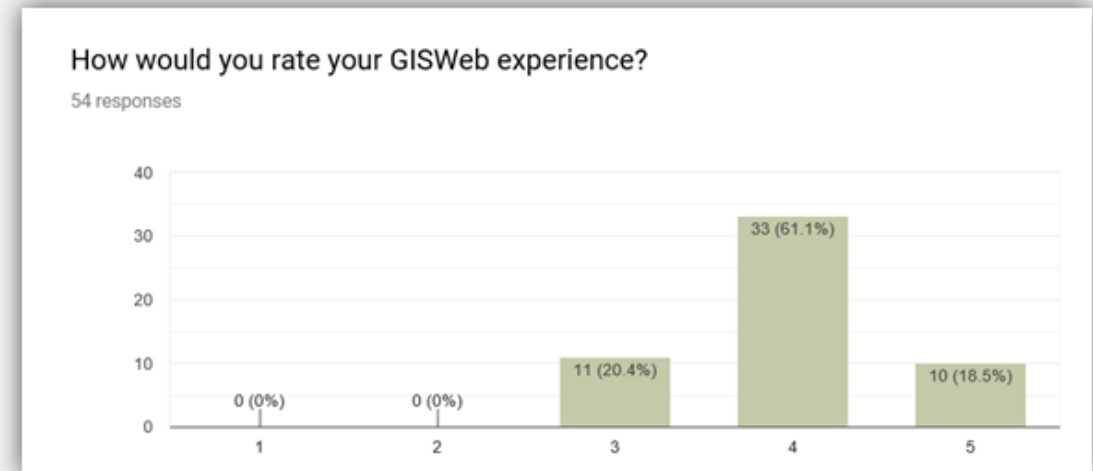
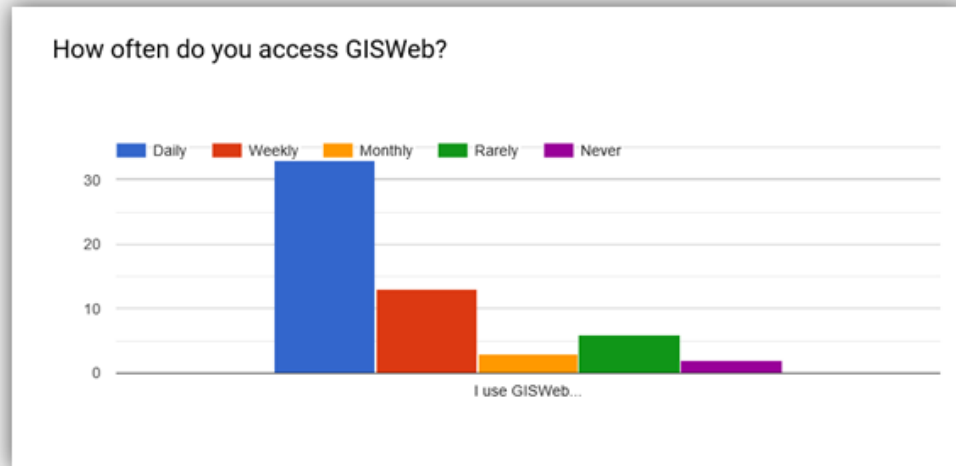
Santa Cruz County's GISWeb



Designed to be flexible for a broad range of users

We try not to change the user interface more than 20%

Conducted survey to get users feedback in 2018



APN Address Street Intersection

03914106



Select Overlay

Select Base Map

Property Report

Zoning Report



| Close | Parcel Info | Land Use | Biotic & Water Resources | Special Districts | Jurisdictional, Elections, & Census | Hazards & GeoPhysical | School Districts & CSAs |
|--------------------------|--------------------------------|-------------------------------|--------------------------|-------------------|-------------------------------------|--------------------------|-------------------------|
| | Attribute | Value | | | Attribute | Value | |
| Parcel Information | APN (Click for Assessor Info) | 03914106 | | | Sect Town Range | SEC12; T11S-R1W | |
| | APN Map (Click for Map) | 03914 | | | Tax Code Areas | 69-273, 96-110 | |
| Recorded Maps & Docs | Click for Permit Data: | Permit Data | | | Map Book | 039 | |
| | Click for Other Planning Data: | Planning Data | | | Home Owner Exemption (HOE=Yes) | | |
| Select and Query Results | Assessor's Acreage | 42.2300 | | | Assessor's Use Code Description | 914-STATE SCHOOL/COLLEGE | |
| | Assessor's Square Feet | 1839538.8000 | | | Assessor's Use Code | 914 | |

Select Recorded Maps and Documents Layer

Recorded Maps



STATE OF CALIFORNIA
WELL COMPLETION REPORT
 Refer to Instruction Pamphlet

Original File with DWR Page 1 of 1
 Owner's Well No. 500184
 Date Work Began 7/19/97
 Local Permit Agency Santa Cruz
 Permit No. 97-094

WELL OWNER
 Name: Ron Pellegri
 Mailing Address: 855 First Lane
 Santa Cruz, CA 95062

WELL IDENTIFICATION
 Well No.: 500184
 Well Name: 855 First Lane

WELL LOCATION
 Township: 34S
 Range: 12E
 Section: 17

WELL DEPTH
 Depth to First Water: 145 ft

WELL CONSTRUCTION
 Casing: 4" Galvanized Steel
 Screen: 1/2" Galvanized Steel
 Gravel: 20-40 Mesh

WELL OWNER INFORMATION
 Building Owner's Name: Albert & Ann Wagner
 Building Street Address: 3443 Alameda Lane
 City: Santa Cruz, CA
 State: CA
 ZIP Code: 95073

WELL IDENTIFICATION
 Building Use: Residential
 Building Type: Single-Family Dwelling
 Building Age: 1997

WELL IDENTIFICATION
 Well Use: Domestic Water Supply
 Well Depth: 145 ft
 Well Diameter: 4 inches
 Well Construction: Casing, Screen, Gravel
 Well Completion Date: 7/19/97

WELL IDENTIFICATION
 Well Completion Date: 7/19/97

WELL IDENTIFICATION
 Well Completion Date: 7/19/97

Close

Parcel Information

Recorded Maps & Docs

Select and Query Results

| Recorded Maps | Non Recorded Maps | Improvement Plans | Sanitation As-built | Wells | Soil Reports | Geologic Reports | Benchmarks | Zoning History | Zoning History (Parcel) |
|---------------|--------------------------------|---|---------------------|-----------------|--------------|------------------|------------|----------------|-------------------------|
| Volume-Page | Click for Link | Map Title | Surveyor | Owner | Tract | MLD | | | |
| 022M13 | Click for Link | | WALLACE, JOHN | CASTRO, MARTINA | | | | | |
| 087M48 | Click for Link | RECORD OF SURVEY FOR SANTA CRUZ COUNTY BEING A FIRST ORDER CONTROL SURVEY OF GPS CONTROL POINTS | CE15310 | | | | | | |
| 104M19 | Click for Link | MAR SERENO ESTATES | LS7367 | DEMAR, WILLIAM | 1419 | | | | |
| 081M11 | Click for Link | Second Order of Control Survey, Santa Cruz County California | LS5790 | | | | | | |

Visible layers will update as you turn layers off and on

Sanitation Network - Structures Select Field to Query Contains Select Attribute Export Results

- Metro Bus Routes
- Street Labels
- State Highways
- Major Roads
- Streets
 - Unnamed
 - Street
 - State Highway
 - Ramp
 - Major Road
 - Levee
 - Driveway
 - Business Route
 - Alley
- RTC Bike Paths
- Scenic Roads
- County Maintained Roads
- FHWA
- Biotic and Water Resources
- Hazards and Geophysical
- Zoning
- Land Use and General Plan
- Special Districts
- Jurisdictional, Elections, Census
- School Districts and CSAs
- Utilities
 - Wells
 - Storm Drain Junctions
 - Storm Drain Conduits
 - Sanitation Network - Structures
 - Pump Station
 - Rectifier
 - Annode
 - Gate Valve
 - Blowoff Valve



| Close | Results | MAG_MANHOLE | MAG_DEPTH | MAG_RIM_ELE | MAG_STAT_CD | MAG_STRC_C |
|--------------------------|--------------------------|-------------|-----------|-------------|-------------|------------|
| Parcel Information | <input type="checkbox"/> | AD12 | 155.12 | 160.4 | 5 | 2 |
| Recorded Maps & Docs | <input type="checkbox"/> | AD6 | 153.15 | 160 | 5 | 2 |
| Select and Query Results | <input type="checkbox"/> | AD10 | 143.17 | 149 | 5 | 2 |

Measurement Units

Feet / Square Feet

Segment: 300.58

Length: 0.00

Get

0

Lat: 36 58 40.0835

Long: -122 1 21.2146

GoTo

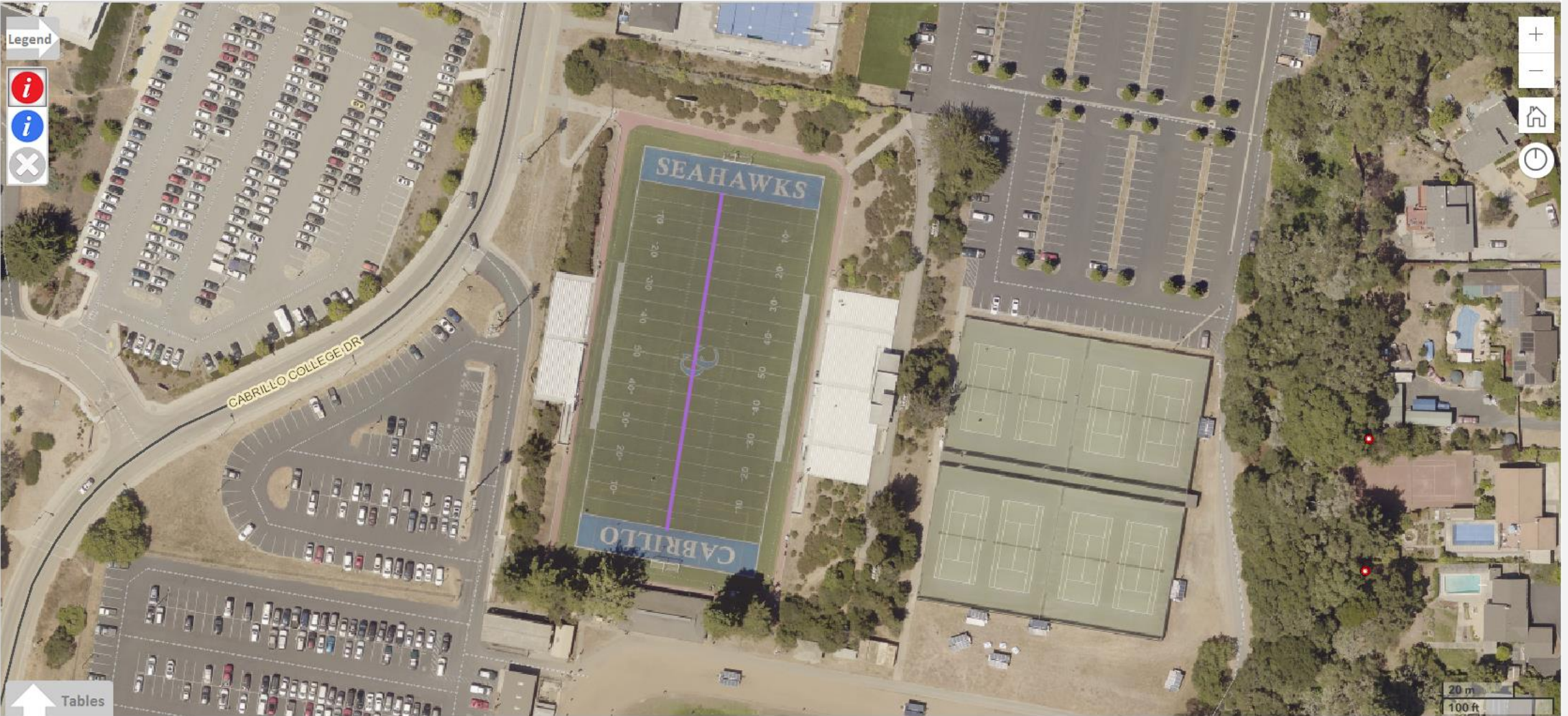
🔍

Lat Long (DMS)

Lat Long (DD)

State Plane

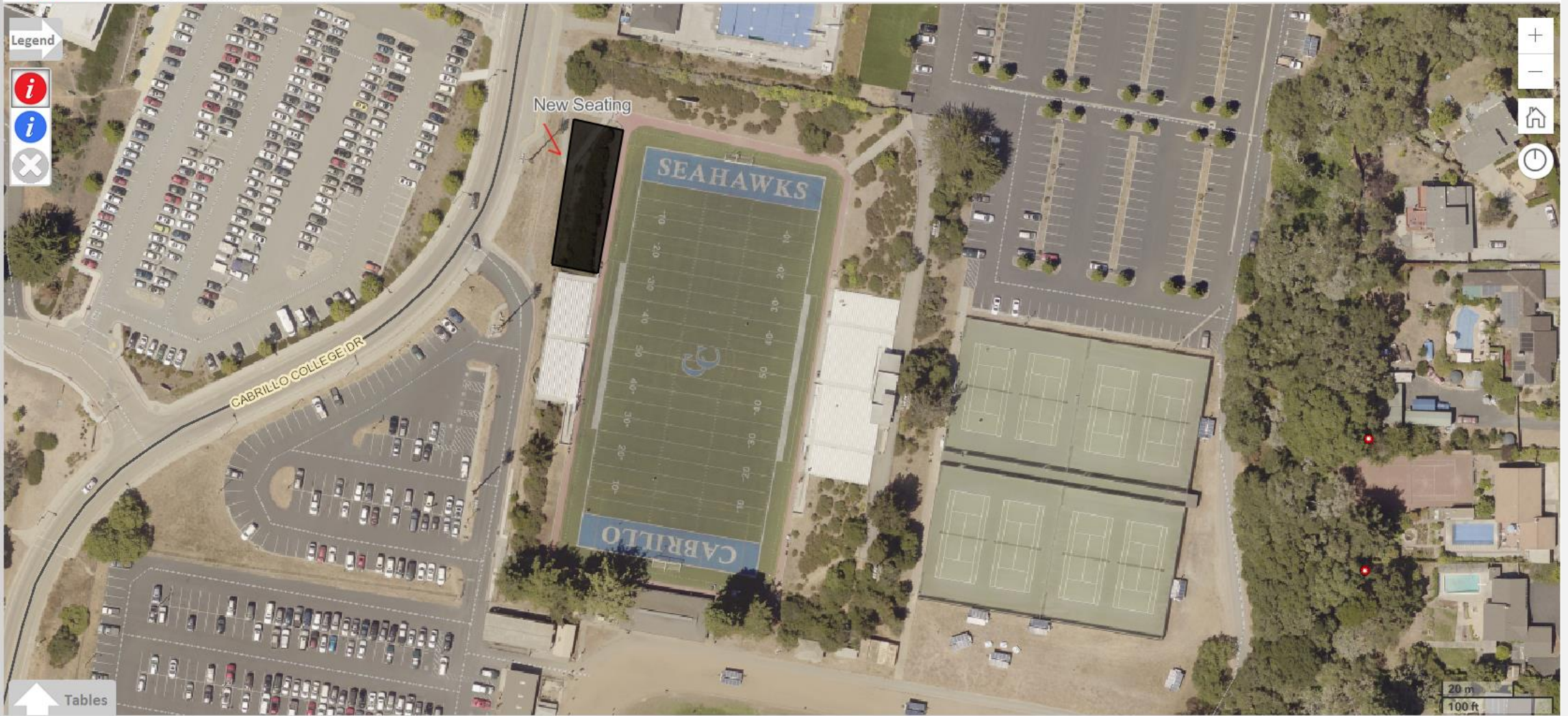
Legend



Tables

Draw Tools Edit Small
 Solid

New Seating Map
Letter (11x8.5) Landscape Show Legend PDF



In memoriam: Vaidehi Campbell Williams



[Remembering Vai](#)

Some Web GIS Links

[Chapter 1 of Esri's Getting to Know Web GIS](#)

[Esri apps for everyone](#)

[Esri solutions](#)

[Santa Cruz County GIS Web](#)

[Santa Cruz County GIS Home](#)

Thanks!