

El Dorado County Surveyor's Office



Mission & Goals for 2018-2019 Budget Year
Phil Mosbacher, Deputy County Surveyor
Jose Crummett, GIS Manager
18-0104 B 1 of 36

Survey Department Programs

Land Survey Program

- 1. Check and process maps and documents submitted by Professional Land Surveyors
- 2. Provide property ownership information

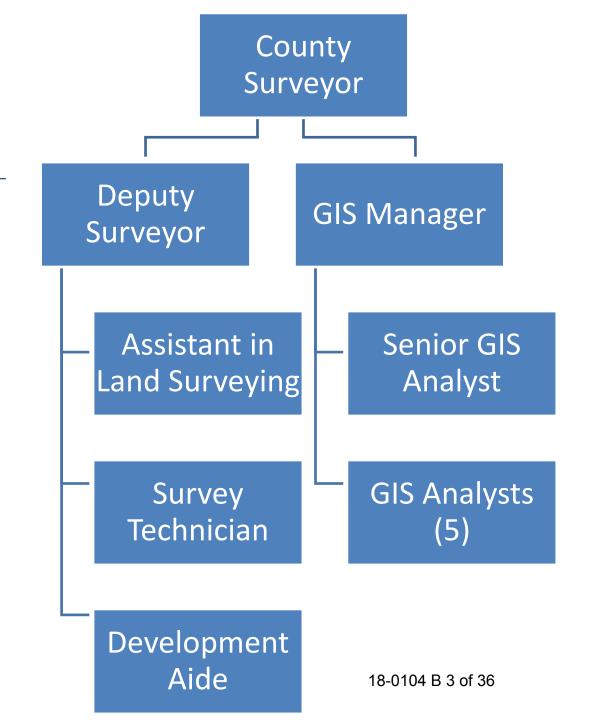
Geographic Information System Program

- Maintain computerized maps of parcels, roads and political jurisdictions in El Dorado County
- OF LIFORNIA

2. Deliver County and private projects

Department & Support Staff

- Land Survey Program 5 FTE
- Geographic Information Systems Program
 7 FTE
- CAO Financial Admin Staff, IT Programming & Database Staff



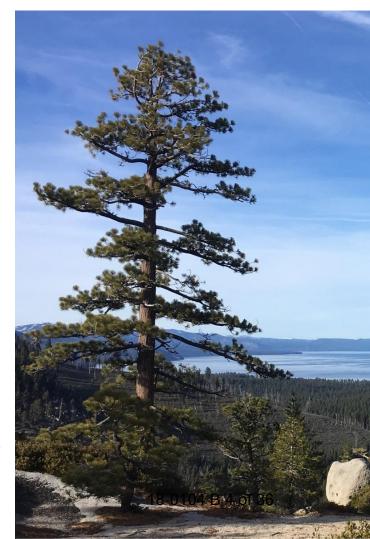


Land Survey Program Responsibilities

Review all projects submitted

- Parcel Maps
- Subdivision Maps
- Records of Survey & Corner Records
- Lot Line Adjustments
- Certificates of Compliance
- Street Naming and Parcel Addressing





Land Survey Program Responsibilities

- Provide property ownership information
- Process Abandonment of Public Easements and Irrevocable Offers of Dedication
- Provide expertise and assistance to County Departments and outside agencies



County Surveyor Office Clients

General Public

- Professional Land Surveyors
- Civil Engineers
- Professional & Private
 Developers
- 270+ monthly public counter contacts

County Land Use Departments

- Planning
- Building
- Facilities
- Transportation
- Agriculture
- Environmental Management



County Surveyor Office Clients

Government Departments

- Board of Supervisors
- County Counsel
- Recorder
- Assessor
- CAO
- IT

Public Safety Departments

- District Attorney
- Public Defender
- Sheriff
- Fire



County Surveyor Authority Defined by Law

- 1. CA Government Codes
- 2. CA Code of Regulations: Board of Professional Engineers, Land Surveyors and Geologists
- 3. CA Business and Professions Code
- 4. CA Public Resources Code
- 5. CA Code of Civil Procedure
- 6. CA Penal Code

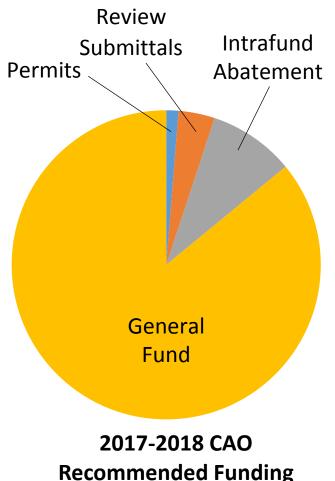


7. El Dorado County Code

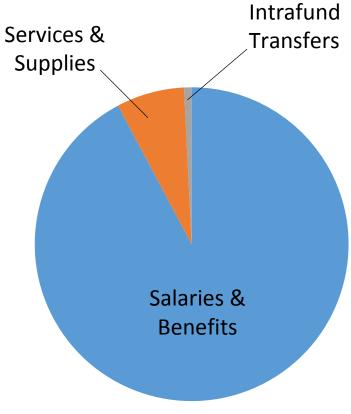
Surveyor's Office Budget: 2017-2018

Net cost to County

• Estimated \$1.5 million



Recommended Funding



2017-2018 CAO **Recommended Expenses**

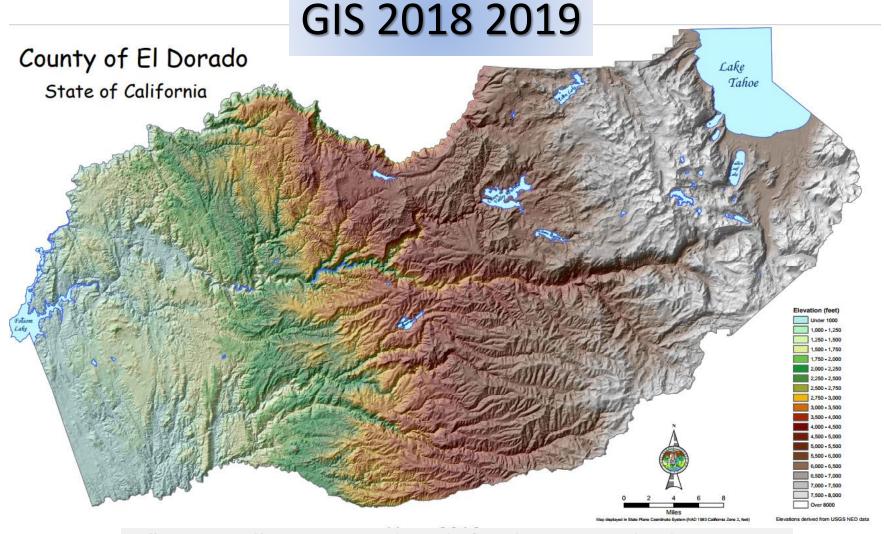


18-0104 B 9 of 36

FY 2018-2019 Land Survey Program Goals

- Align Department procedures to incorporate new project management (TrackIT), Tax Administration (Megabyte), and financial (FENIX) systems
- Design & implement paperless map submittal and review system





"... overall mission and goals for the coming budget year to inform and educate the Board on the County business and services we provide..."

Maintenance: Land Management Information System - Mainframe



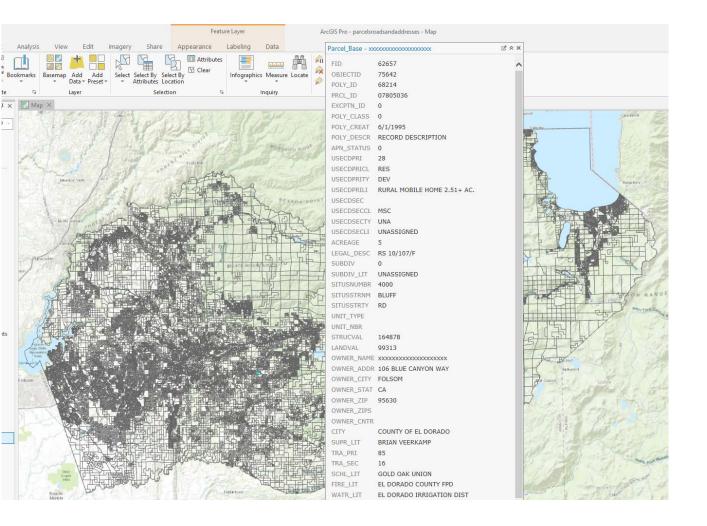
Public Safety	
Infrastructure	
Healthy Communities	
Economic Development	
Good Governance	

Permits, land divisions,
Code enforcement, addressing,
24 million rows
485 tables
1327 user accounts
500 Million dollars in
permit fees
10 Billion dollars in permit
valuaton.

Mission: Maintain the core functionality of these LMIS components which are housed on unsupported systems until replacement applications are in place.

Goals FY 2018-2019: Support transition to Megabyte, TrakIT, and re-build அத்தர்த் நடிகு நியு சூர்வ

Maintenance: El Dorado County Parcel Base



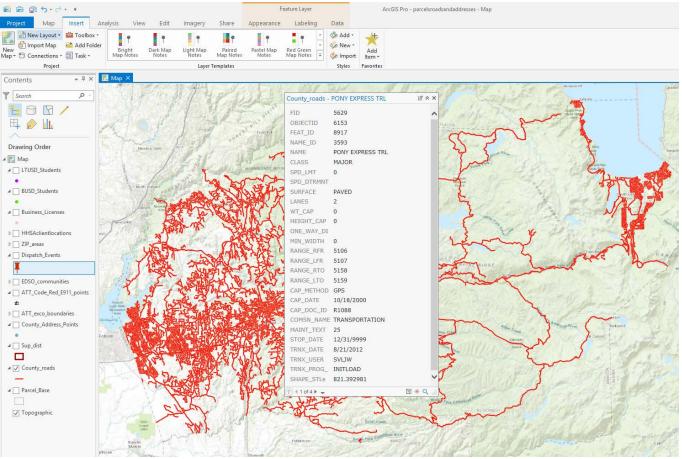
Public Safety	
Infrastructure	
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Economic Development	
Good Governance	

112,000 parcels.
10+ years of history.
Versions for Assessor,
Planning, Recorder.
Updated daily.

Mission: Maintain current and historical geometries of all parcels. Insure availability to internal and external clients; and provide framework for all parcel based processes and initiatives.

Goals FY 2018-2019: Automate the xref process, improve display performance B 13 of 36

Maintenance: El Dorado County Transportation Network



Public Safety	
Infrastructure	
Healthy Communities	
Economic Development	
Good Governance	

6,000 unique roads
18,000 segments
All roads: Federal, County,
City, Agency, and private.
Completely GPSd.
Updated as needed.

Mission: Maintain current and highly accurate representations of the transportation networks in the County.

Goals FY 2018-2019: Improve manual attribute process and integration with addressing.

Maintenance: El Dorado County Jurisdictions and Geographies.



Geography Name
Adopted Plans
Ag. Districts
ATT exchange communites.
Attendance Areas
Basin Boundaries.
Bio Corridors
Census Boundaries
Community Plan Areas
Community Regions
Elevation
Fire Safe Councils
Hazards (fire, flood, soil,)
Historic Districts and Overlays
Mitigation Areas
Mo. Flat Districts
NOA
Oak Woodland
Parks (non -county)
PLSS
Precincts
Preserve Boundaries
Quake Zones
Rural Centers
Sheriff Event Communities
Sheriff Response Zones
Specific Plans
State and Federal Election Districts
TAZ
Townships Official and Customary
-

Public Safety	
Infrastructure	
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Areas of Benefit to Zip Codes. 1289 Tax Boundaries. Critical to community identity.

Used for locating addresses, noticing, elections, land use updates, zoning updates, redistricting, and permitting. And for city, school, fire, and water district administration.

Updated as needed, often to sync with other GIS layers.

Mission: Maintain boundaries of cultural, environmental, tax, political, and planning areas so that events which impact these areas can be adequately assessed.

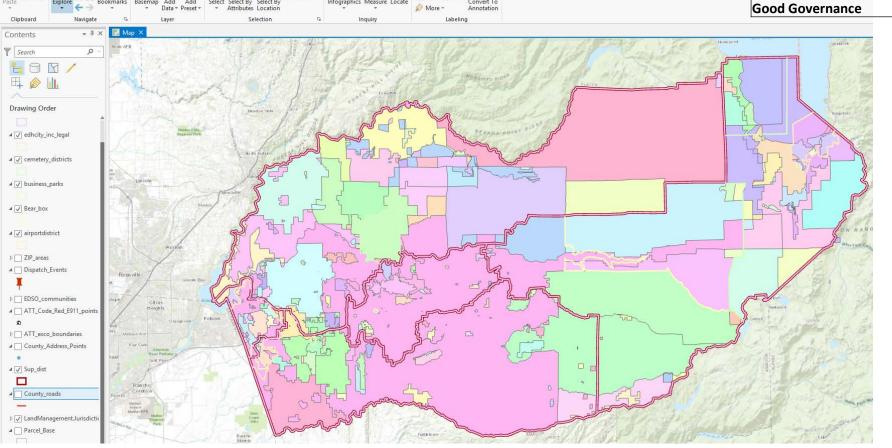
ZIP Codes

Goals FY 2018-2019: Move LMIS required to alternate platform, provide ability to define your own community.

Maintenance: El Dorado County Jurisdictions and Geographies.

Public Safety
Infrastructure
Healthy Communities

Economic Development



Mission: Maintain boundaries of cultural, environmental, tax, political, and planning areas so that events which impact these areas can be adequately assessed.

Goals FY 2018-2019: Move LMIS required to alternate platform, provide ability to define your own community.

Maintenance: Land Management Information System – GIS SQL Server/GIS Libraries

http://edcnet/surveyor/gis data.htm

① edcnet/surveyor/gis_data.htm			
Data Description	Server	Path	Filename or Folder
Address Base Maps	\\gisdata\sv-libraries	transpt	addressbase.shp
Address Geo-Coding	\\gisdata\sv-libraries	transpt address_locators	curroads20130618.loc
Adopted Plan	\\gisdata\sv-libraries	parcel landuse	adpt pin.shp
Aerials - flown 1997 (black & white)	\\gisdata\sv-acrials	Aerials_1997	Aerials 1997.gdb
Aerials - flown July 2003	\\gisdata\sv-aerials	EIDorado-03	eldorado-03.map
Aerials - flown April 2004	\\gisdata\sv-aerials	\WestEIDorado-04	westeldorado-custom-04.map
Aerials - flown January 2007	\\gisdata\sv-aerials	EIDorado-07	eldorado-county-1ft-0107_3596.map
Aerials - flown July 2011 thru March 2012	\\gisdata\sv-aerials	\Aerials_2011	aerials2011.gdb
Aerials - flown May 2006 (Mr Sids)	\\gisdata\sv-aerials	Aerials_2006	FOLDER
Aerials - flown January 2007 (Mr Sids)	\\gisdata\sv-aerials	\Aerials_2007	FOLDER
Aerials - NAIP 2014 (Mr Sid)	\\gisdata\sv-aerials	\Aerials_2014	ortho_1-1_1n_s_ca017_2014_1.sid
Ag Districts	\\gisdata\sv-libraries	parcel landuse	agdist.shp
Ag Preserves	\\gisdata\sv-libraries	parcel	agpreserve.shp
Airport - (cameron park)	\\gisdata\sv-libraries	transpt	cpairpt.shp
Airport Safety Zones	\\gisdata\sv-libraries	transpt airports safety zones - 6-22-2012 Safety Zones	safety_zn.shp
Airports	\\gisdata\sv-libraries	transpt	airport.shp
Alpine County (parcels)	\\gisdata\sv-libraries	jursdic counties alpine county	parcels_04.shp
Alpine County (roads)	\\gisdata\sv-libraries	jursdic/counties/alpine county	roads.shp
Amador County (parcels)	\\gisdata\sv-libraries	jursdic counties Amador County	Parcels.shp
Amador County (boundary)	\\gisdata\sv-libraries	jursdic counties Amador County	AmadorBoundary.shp
Amador County (city limits)	\\gisdata\sv-libraries	jursdic/counties/Amador County	CityLimits.shp
Areas of Benefit (aob)	\\gisdata\sv-libraries	jursdiclarea_of_benefit	marble_valley_aob.shp
Asbestos	\\gisdata\sv-libraries	surface NOA	FOLDER
Assessor Books Outline	\\gisdata\sv-libraries	parcel	bkoutln.shp
Auburn Lake Trails - FSC (fire safe council)	\\gisdata\sv-libraries	jursdic fire Fire_Safe_Council	aubumlaketrails_fsc.shp
Bike Routes (2002)	\\gisdata\sv-libraries	transpt	bikerts.shp
Bike Routes (2005)	\\gisdata\sv-libraries	transpt	bike_rts_2005.shp
Bio Corridor	\\gisdata\sv-libraries	surface biology	bio_corr.shp
Bridges	\\gisdata\sv-libraries	transpt	bridges.shp
Bus Routes	\\gisdata\sv-libraries	transpt transit	bus_routes.shp
Bus Stops	\\gisdata\sv-libraries	transpt transit	bus_stops.shp
Business Parks	\\gisdata\sv-libraries	jursdic business_parks	business_parks.shp
C.D.F. Communities	\\gisdata\sv-libraries	jursdic state	cdf_comm_83.shp
C.S.D./s	\\gisdata\sv-libraries	juradio esd	csd.shp
California Counties	\\gisdata\sv-libraries	jursdic state	ca_counties.shp
California Department of Fish and Wildlife (CDFW)	internet	https://www.wildlife.ca.gov/Data/GIS/Map-Services	

Public Safety	
Infrastructure	
Healthy Communities	
Economic Development	
Good Governance	

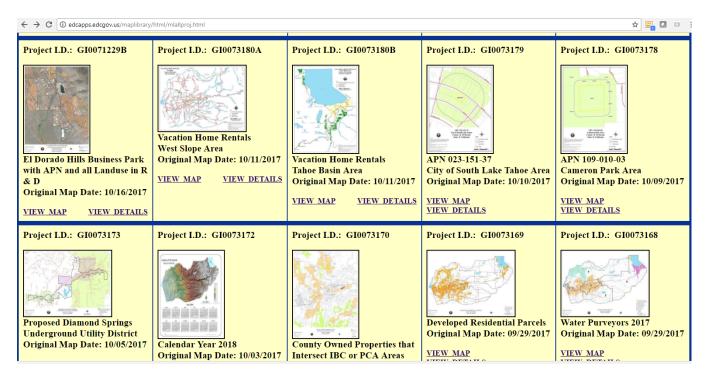
Over 500 GIS layers.
Over 250 tables and views.
Hundreds of map services.
Support virtually every County initiative and process.

Mission: Maintain database and file structures that promote data integrity, flexibility, share ability, and re-usability.

Goals FY 2018-2019: Improve accessibility by offering cloud based extract sites.

http://edcapps.edcgov.us/maplibrary/html/mlallproj.html

Maps



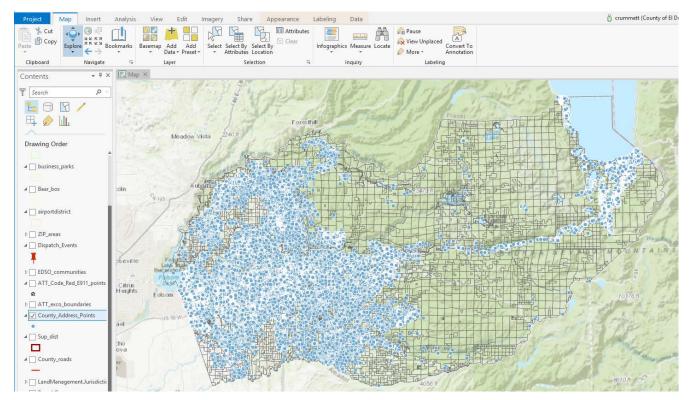
Public Safety	
Infrastructure	
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Good Governance	

5,000 maps

Mission: Maintain a secure repository for project maps that are easily accessible to internal and external clients.

Goals FY 2018-2019: Move images to the cloud, enhance search capabilities, reduce image sizes.

Data to Maps: County addresses to County parcels



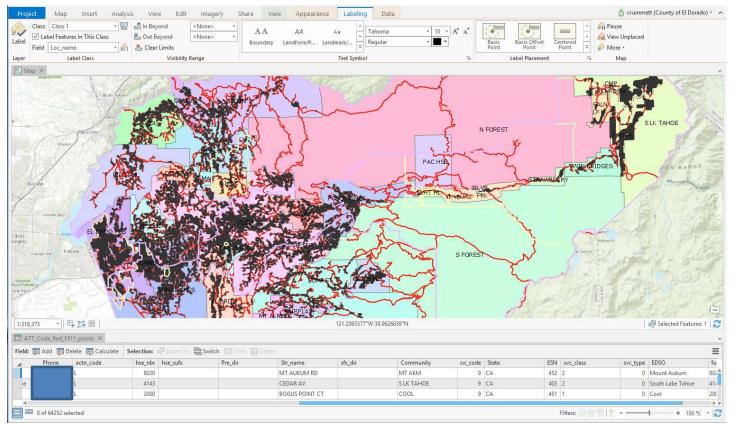
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95,000 addresses.

"Current estimates of federal funding to California show a potential loss of \$18,000 over the next ten years for each *resident* missed." State Census Data Center, California Department of Finance

Mission: Maintain and understand interrelated data relationships to make sure they can be used to present, understand, and solve problems for a variety of clients and applications.

Data to Maps: Code Red ATT addresses, ATT communities, x GIS road segments.

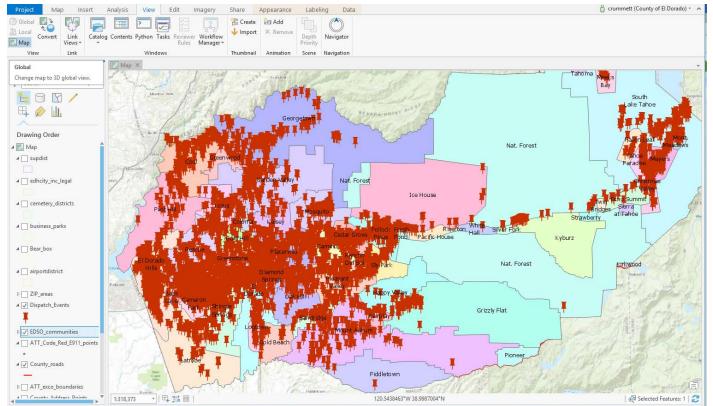


Public Safety	
Infrastructure	
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Good Governance	

64,000 phone lines

Mission: Maintain and understand interrelated data relationships to make sure they can be used to present, understand, and solve problems for a variety of clients and applications.

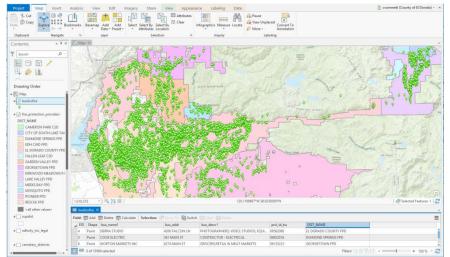
Data to Maps: Dispatch Events, EDSO Communities, x GIS road segments



Public Safety	
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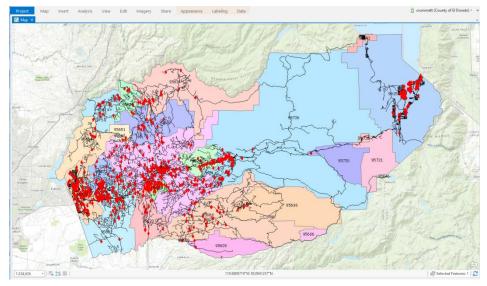
Mission: Maintain and understand interrelated data relationships to make sure they can be used to present, understand, and solve problems for a variety of clients and applications.

Data to Maps: Business Licenses, by parcel location, then assign Fire District



Public Safety	
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Data to Maps: HHSA Client Locations, by zip code

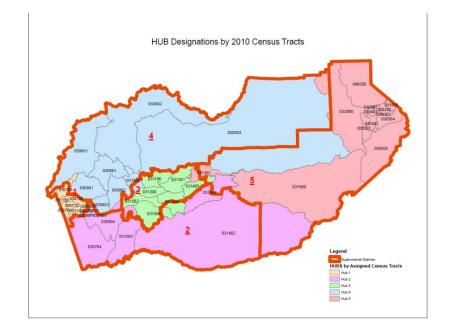


Mission: Maintain and understand interrelated data relationships to make sure they can be used to present, understand, and solve problems for a variety of clients and applications.

Maps to Data To Reports: Census Blocks, to Community HUBs to Supervisor

AGE	Hub 1	Hub 2	Hub 3	Hub 4	Hub 5	Grand Total
Total Population	39658	36809	30597	40718	34311	182093
Under Age 5	1975	1708	1375	1416	1903	8377
to 9	3365	1803	1685	2164	1947	10964
10 to 14	3675	2494	1324	2655	1544	11692
15 to 19	2609	3016	1638	2729	2042	12034
20 to 24	1898	1911	1846	1974	2501	10130
25 to 34	2612	3249	3692	3406	4549	17508
35 to 44	5131	3906	2824	4311	4408	20580
45 to 54	7204	5843	4604	6578	5169	29398
55 to 59	3139	3389	2568	3760	2944	15800
60 to 64	2628	2807	2733	3422	2973	14563
65 to 74	3594	4290	3409	4613	2904	18810
75 to 84	1329	1803	1973	2557	1090	8752
35 plus	499	590	926	1133	337	3485
/ETERANS	Hub 1	Hub 2	Hub 3	Hub 4	Hub 5	Grand Total
Civilian population over age 18	28746	28932	25196	32597	27690	143161
Number of civilian veterans	2698	3208	2868	4440	2145	15359
LANGUAGE	Hub 1	Hub 2	Hub 3	Hub 4	Hub 5	Grand Total
Population 5 years and over	37683	35101	29222	39302	32408	173716
Speak a language other than English at home	6406	2714	2813	3178	7637	22748
Speak English less than "very well"	2595	1032	1083	938	3273	8921
	1					1
GENDER	Hub 1	Hub 2	Hub 3	Hub 4	Hub 5	Grand Total
Male	20175	18061	15151	20158	17425	90970
Female	19483	18748	15446	20560	16886	91123
RACE/ETHNICITY	Hub 1	Hub 2	Hub 3	Hub 4	Hub 5	Grand Total
White	32400	33074	27418	37858	27143	157893
Black	695	421	185	93	392	1786
American Indian/Alaskan Native	87	416	452	410	200	1565
Asian	3819	984	295	640	1461	7199
Native Hawaiian/Other Pacific Islander	0	62	70	20	82	234
Two or More Races	1890	1449	923	1434	905	6601
Hispanic or Latino	3686	4080	3412	3248	8293	22719
White alone, Not Hispanic or Latino	35972	32729	27185	37470	26018	159374
DISABILITY	Hub 1	Hub 2	Hub 3	Hub 4	Hub 5	Grand Total
Von-institutionalized population	39647	36781	29938	40576	34063	181005
Population with disability	2615	4771	4913	5454	4913	22666
Population under 18 with disability	218	383	200	281	147	1229
Population age 18-64 with disability	1140	2447	2175	2407	3019	11188
opulation age 65+ with disability	1257	1941	2538	2766	1747	10249
HEALTH_	Hub 1	Hub 2	Hub 3	Hub 4	Hub 5	Grand Total
Civilian non-institutionalized population	39647	36781	29938	40576	34063	181005
With health insurance coverage	37319	32149	26117	36221	27655	159461
With private health insurance coverage	35665	27435	20006	30988	21264	135358
With public health insurance coverage	7222	12242	12107	13717	11707	56995
No health insurance coverage	1438	3363	2865	3185	5187	16038
Under age 6 with health insurance	2522	1900	1735	1776	2315	10248
Under age 6 with no health insurance	72	279	12	13	54	430
Age 6 to 17 with health insurance	8176	5587	3453	6034	3946	27196
Age 6 to 17 with no health insurance	131	83	149	271	257	891
	+					
HOUSEHOLD CHARACTERISTICS	Hub 1	Hub 2	Hub 3	Hub 4	Hub 5	Grand Total
Total households	12927	13682	11639	15254	13584	67086
Total family households	10787	10005	7338	11068	8076	47274
Average household size	3.09	2.69	2.59	2.66	2.23	2.60
Average family household size	3.40	3.10	3.13	3.09	2.81	3.06
Grandparents living with own grandchildren under age 18	342	414	359	472	382	1969
Grandparents responsible for grandchildren under age 18	55	145	125	166	63	554
amily households with own children under 18	5265	3554	2287	3515	3322	17943
Households with one or more people under 18	5400	3929	2649	4143	3627	19747
	+					
NCOME	Hub 1	Hub 2	Hub 3	Hub 4	Hub 5	Grand Total
Average of household median income	126313	77206	59577	73203	47401	72575
Average of household mean income	146223	92381	78237	90733	61541	89213
Average of family median income	133016 154631	86521 103615	74701 92248	87057 103010	58754 72670	83871 100602
Average of family mean income						
Average of Per_capita income	48581	35188	30874	35253	26039	33912
Average percent of families living in poverty	2.2%	8.6%	7.1%	5.2%	8.9%	6.4%
Average percent of children living in poverty	3.2%	16.5%	15.0%	13.9%	20.6%	13.8%
Iverage percent of people living 200% above poverty	could	not	find	this	data	
Average unemployment rate	7.6%	11.5%	13.9%	10.2%	11.6%	11.0%
	1					
EDUCATION	Hub 1	Hub 2	Hub 3	Hub 4	Hub 5	Grand Total
opulation 25 years and over	26136	25877	22729	29780	24374	128896
Less than 9th grade	548	582	545	397	1519	3591
9th to 12th grade, no diploma	439	1275	1591	1510	1511	6326
High school graduate or equivalent	3407	5953	6301	6636	5835	28132
Some college, no degree	5611	7238	6571	9444	7373	36237
Associate's degree	2620	2898	2507	3140	2094	13259
Bachelor's degree	8396	5308	3424	5467	4232	26827
Graduate or professional degree	5115	2623	1790	3186	1810	14524
High school graduate or higher	25149	24020	20593	27873	21344	118979

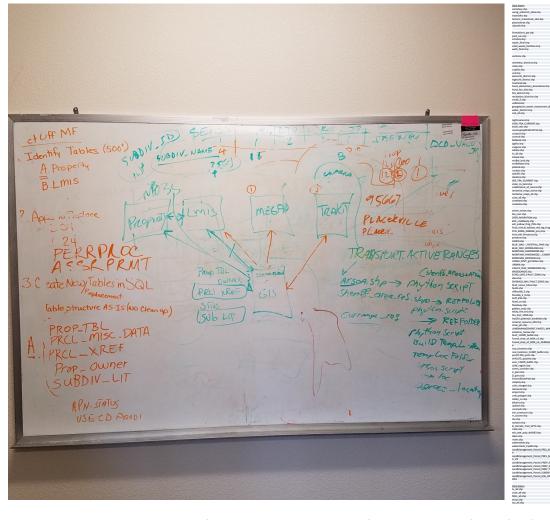
Public Safety	
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Economic Development	
Good Governance	



Mission: Maintain awareness of changes, data releases from Census, American Community Survey, American Fact Finder, SACOG, Cal. Dept. of Finance and understand relationship to County data resources.

Goals 2018 2019: Be prepared to respond to data requests from SACOG₁₈₋₀₁₀₄ Epsylvi for 2020 census.

Maintenance: GIS to TrakIT, GIS to MegaBite.



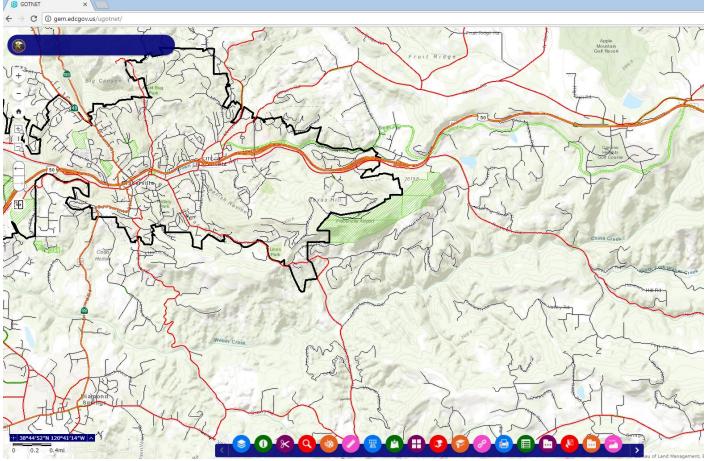
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Build TrakIT database and replicate 150 layers, build daily update, build TrakIT map server. Rewrite address application, rewrite CofC application. Nearly doubles maintenance work.

Mission: Create and maintain an architecture that links the various land management application databases including GIS, Megabite, and the various components of TrakIT.

Goals FY 2018-2019: Identify gaps, redundancies, and fix as necessary.

universal GOTNET



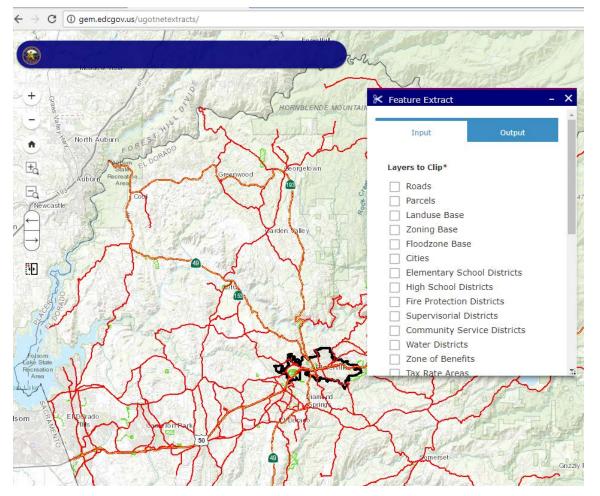
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13 Thematic Categories120 Layers19 Tool Boxes

Mission: Provide <u>universal</u> access to current, relevant, and actionable parcel information to the public, businesses, and public agencies.

Goals FY 2018-2019: Enhance print, search tools, voice activated interface, refocus application to provide only information we can provide consistently and reliably. B 25 of 36

gem.edcgov.us/uGOTNETextracts



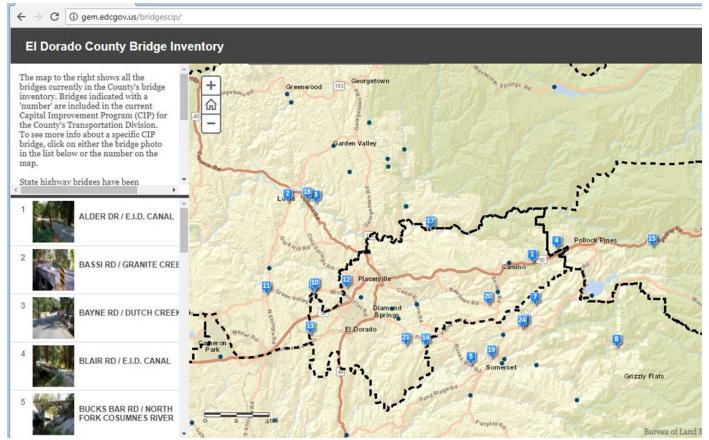
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EID, City of So. Lake Tahoe, SACOG, CAL Fire, STPUD, and many others use in operational work-flow.

Mission: Provide <u>universal</u> access to current, relevant, and actionable parcel information to the public, businesses, and public agencies.

Goals FY 2018-2019: Add layer and feature class metadata. Add revision dates.

gem.edcgov.us/bridgescip



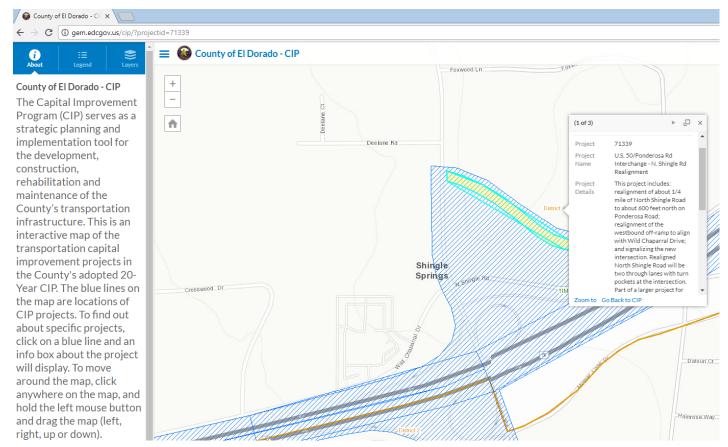
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Lists both state and County bridge locations. CIP and non-CIP bridges.

Mission: Provide the public with information on infrastructure responsibility and maintenance plans.

Goals FY 2018-2019: Improve update process, change state data to hosted service if available, consolidate into CIP application.

http://gem.edcgov.us/cip/



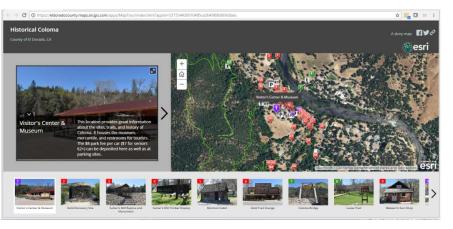
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Mission: Provide the public with information on infrastructure responsibility and maintenance plans.

Goals FY 2018-2019: Consolidate application with bridges application, improve connection link to CIP database, add media (photos, video), improve search and reports. 18-0104 B 28 of 36

Maps, assets, and community based Web GIS

http://arcg.is/2kn6yaO

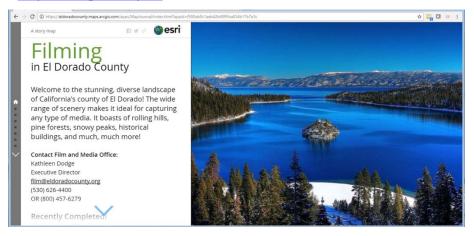


http://arcg.is/ST5yz



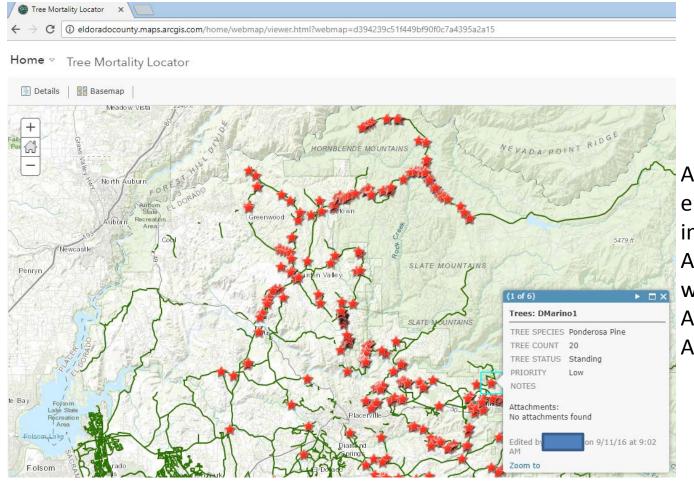


https://arcg.is/15qKv8



Mission: Promote the County through Web based application that link location to our rich history, recreation, and commercial opportunities. Provide STEM opportunities for County youth while using County GIS resources as a foundation.

Web GIS: Mobile work platforms and data collection: Infrastructure Risk Assessment



Public Safety	
Infrastructure	
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Economic Development	
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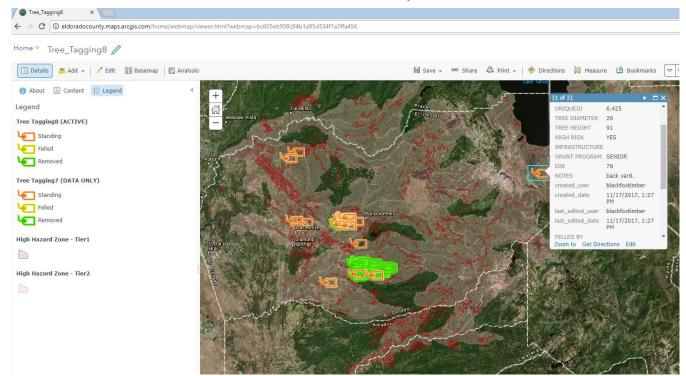
All county roads in elevation band inventoried.
Application enhanced while crews in the field.
Application "borrowed" by Amador County.

Mission: Provide a mobile application that allows for the efficient collection of required data in the absolute shortest amount of time.

Goals FY 2018-2019: Enhance as necessary.

Web GIS: Mobile work platforms and data collection:

Risk identification, reduction, and compensation.

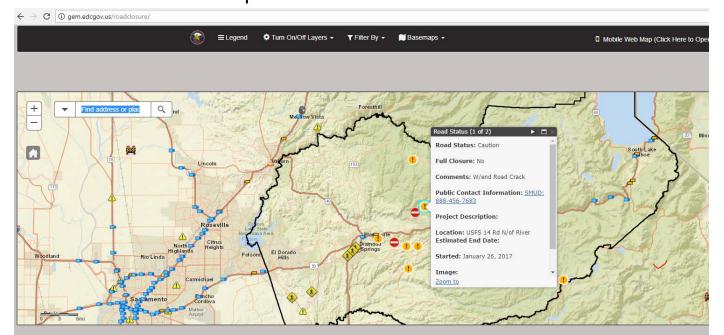


Public Safety	
Infrastructure	
Healthy Communities	
Economic Development	
Good Governance	

Mission: Provide Tree Mortality project manager, tree removal companies, and County with application to track the tagging, felling, disposal, and re-imbursement for all trees removed.

Goals FY 2018-2019: Consolidate versioned databases, add project area boundaries, update state base layers with HHZ services when available.

Web GIS: Mobile work platforms and data collection: Risk identification and public notification.



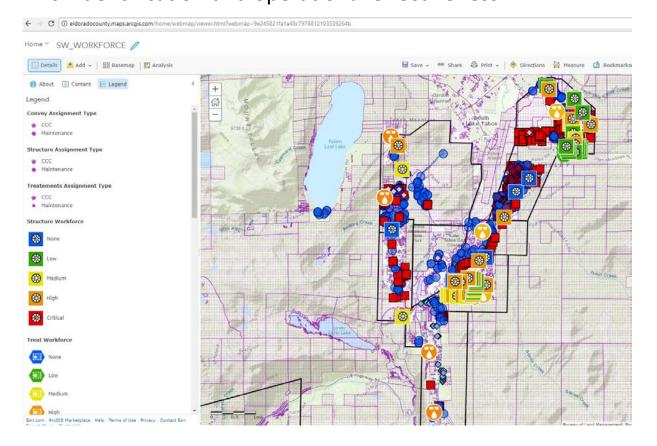
Public Safety	
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County OES, Parks, DOT, SMUD. CHP and CalTrans feeds Updated every two minutes.

Mission: Provide field application for identifying and reporting of hazardous transportation situations.

Goals FY 2018-2019: Improve photo capture and storage functions. Add feeds for WAZE, traffic volume, and additional agencies. Add notification functions for start and stop dates.

Web GIS: Mobile work platforms and data collection: Risk identification and operational effectiveness.



Public Safety	
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Storm water infrastructure Tahoe Basin. Integrates inspection and workforce management. Trying to get 10 minute update intervals.

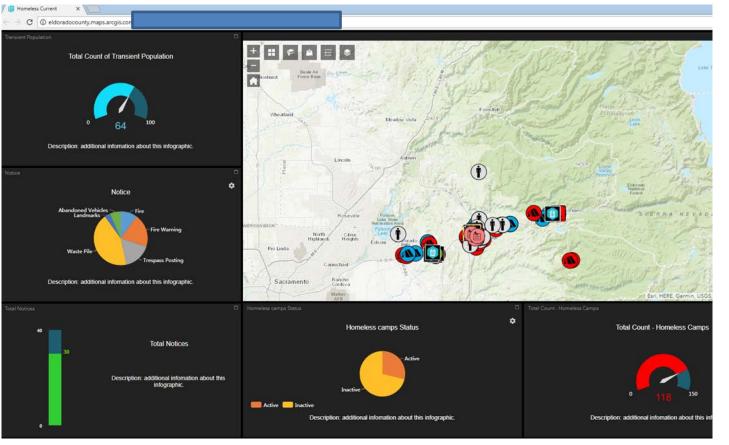
Mission: Provide field application for recording inspections, work performed, scheduling, analysis, and reporting.

Goals FY 2018-2019: Updated reports, move the application down the hill, re-engineer database architecture, complete integration with WorkForce.

18-0104 B 33 of 36

GIS Web: Mobile work platforms and data collection:

Operational effectiveness and collaboration.



Public Safety	
Infrastructure	
Healthy Communities	
Economic Development	
Good Governance	

Field collection application wrapped in real time reporting dashboard.

Mission: Provide field application for recording interviews, documenting status, locating facilities, mapping camp perimeters, tracking movements, and advising of support agencies and outreach programs.

18-0104 B 34 of 36

Summary:

GIS team is responsible for maintaining a vast, varied, and complex set of data resources.

These data are foundational for many critical County applications.

These data resources are critical to numerous external agencies.

Providing the public with "where" is critical to transparency and effectiveness.

Providing County staff with mobile collection, distribution, and storage applications is critical for a mobile, flexible, and effective work-force.

Keys to the future:

The existing GIS data foundation needs to be augmented with next generation data collection processes including: IoT, smart infrastructure, remote sensing, unmanned data collection, open data sources, mapping services, and image services.

The integration of and competency in managing new types of data and applications such as: LIDAR, 3D, Augmented Reality, Virtual Reality, updated aerials, Arc GIS Portal, Arc GIS Online, Arc GIS Open Data, Arc GIS Pro and Drone2Map needs to begin.