

Attachment A

of Appendix D – Traffic Impact Assessment

Traffic Impact Assessment

RBF Consulting

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This attachment consists of a traffic impact assessment associated with what was previously referred to as the “Draft Plan” and is now referred to as the “2012 Initial Draft Map”.

This 2012 Map was circulated for public review from February 1 to March 18, 2013 as part of the initial Supplemental Environmental Impact Report (SEIR) prepared for the Forest Conservation Initiative (FCI) Lands General Plan Amendment (GPA).

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COUNTY OF SAN DIEGO GPA FOR FCI LANDS TRAFFIC IMPACT ASSESSMENT

Prepared for:

County of San Diego

5510 Overland Avenue, San Diego, CA 92123

Prepared by:



5050 Avenida Encinas, Suite 260, Carlsbad, CA 92008
CONTACT: DAWN WILSON 760.476.9193 dwilson@rbf.com

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1.0 PURPOSE AND NEED

The County of San Diego is preparing a General Plan Amendment (GPA) for the former Forest Conservation Initiative (FCI) parcels, along with approximately 400 acres of private lands adjacent to former FCI lands. The GPA is intended to ensure that the private lands within this project are consistent with the current General Plan through the General Plan Update (GPU) land use designations and the Guiding Principles and policies which were adopted by the County Board of Supervisors (BOS) in November 2011. This traffic impact analysis report evaluates the impacts associated with buildout of the GPA Community Planning Group (CPG) Recommended Land Use Maps ("Project") for areas in each of the affected nine community and sub-regional planning areas (These maps are available at the following link: <http://www.sdcounty.ca.gov/pds/advance/FCI.html>).

In the County's GPU Program Environmental Impact Report (EIR), also certified by the County BOS in November 2011, several Mobility Element roadways were identified to operate at deficient levels of service (LOS) at buildout of the General Plan. In some cases, reclassifications of the roadways were identified to achieve adequate LOS on those Mobility Element roads. In other cases, no improvements were recommended and the Mobility Element roads were accepted at a deficient LOS based on specific rationale (refer to Appendix I of the GPU EIR, available at: http://www.sdcounty.ca.gov/pds/gpupdate/docs/BOS_Aug2011/EIR/Appn_I_Rationale.pdf).

While this report focuses primarily on the Mobility Element roads that are forecast to operate at LOS E or F at buildout, other roadways that are forecast to operate at LOS D at buildout were also evaluated, as identified by County staff.

This report identifies the overall traffic impacts and recommended changes to the County Mobility Element relative to the overall change in land use designations for the Project as a whole. This report does not evaluate the detailed impacts of individual Project parcels that may develop within the affected communities. The individual impacts from future development of these parcels will be addressed on a case-by-case basis and reviewed by the County when development applications are filed.

The residential yields assumed in the GPU Program EIR for the former FCI lands under the buildout scenario are identified in the Supplemental Environmental Impact Report (SEIR) Project Description. Following the expiration of the FCI, the land use designations reverted back to those that were in effect per the previous General Plan, prior to the adoption of the FCI. As a result, the buildout scenario of the former FCI parcels per the previous General Plan is more intensive than the buildout scenario for adjacent parcels in the unincorporated County lands, as evaluated in the GPU Program EIR (see SEIR Project Description, Section 1.2). Also, the proposed Project and the re-assignment of appropriate land use designations over these lands would be less intensive than the previous General Plan land use designations for these lands which reflect the pre-FCI General Plan which is no longer in effect.

This report does not include analysis of the non-Mobility Element internal circulation system in the vicinity of the former FCI lands. In accordance with County development review processes, when development applications are submitted for individual parcels within the Project areas, detailed maps and analyses will need to be provided on a case-by-case basis. Access and frontage improvements and off-site mitigation measures will be also addressed on a case-by-case basis as part of the future development review process.

2.0 AFFECTED COMMUNITIES

The nine community and sub-regional planning areas affected by the Project land use changes include: Alpine, Central Mountain, Desert, Jamul/Dulzura, Julian, Mountain Empire, North Mountain, Pendleton/De Luz, and Ramona. Exhibits 1 through 9 illustrate the Project areas in each of the nine communities analyzed in this report. The Central Mountain sub-region has the largest land mass affected by the proposed GPA with over 27,000 acres. The Desert sub-region has the smallest land mass affected with 188 acres.

3.0 TRIP GENERATION RATES OF PROPOSED LAND USES

For each of the affected communities, a trip generation comparative analysis was conducted to determine the net increase in trips that is forecast to occur with the Project). The trip generation analysis compares the trips generated within the Project areas based on land uses assumed in the GPU Program EIR and the proposed land use designations in the CPG Recommended Land Use Maps.

Table 1 summarizes the land use types and associated trip generation rates included in the GPU Program EIR and the proposed GPA.

Table 1
Summary of Land Uses and Trip Generation Rates
GPU EIR and Proposed GPA

Designation	Land Use Definition	Unit	Daily Trip Rate
OS (C)	Open Space (Conservation)	acre	0
OS (R)	Open Space (Recreation)	acre	50.2
P/SP	Public/ Semi-Public Facilities	acre	268
PAL	Public Agency Lands	acre	2
RC	Rural Commercial	acre	250 ¹
RL-20	Rural Lands- 20 (1 DU per 20 acres)	DU	12
RL-40	Rural Lands- 40 (1 DU per 40 acres)	DU	12
RL-80	Rural Land- 80 (1 DU per 80 acres)	DU	12
SPA	Specific Plan Area	NI	NI
SR-1	Single-Family Residence - 1 DU per 1 acre	DU	12
SR-2	Single-Family Residence - 1 DU per 2 acres	DU	12
SR-4	Single-Family Residence - 1 DU per 4 acres	DU	12
SR-10	Single-Family Residence - 1 DU per 10 acres	DU	12
Tribal	Tribal Lands	acre	0 ²
VCMU	Village Core Mixed Use	acre	407 ³
VR-2	Village Residential-2 - 2 DUs per 1 acre	DU	12
VR-4.3	Village Residential-4.3 - 4.3 DUs per 1 acre	DU	12

NI = Not Included

Notes:

¹ Trip rate of 250 trips per acre is applied to all Rural Commercial uses within County Water Authority (CWA) Boundary. Acreage outside the CWA Boundary is reduced by 50% to account for physical, environmental and infrastructure constraints not accounted for in the forecast model.

² Applied to tribal lands without casinos and supporting facilities only. The SANDAG existing land use layer is applied to Tribal lands with casinos and supporting facilities.

³ The trip rate of 407 trips per acre for Village Core Mixed Use is based on the average of the General Commercial trip rate (694 trips per acre) and a Multi-Family Residential trip rate of 120 trips per acre, which was calculated based on an assumed density of 20 DU per acre and 6 trips per DU.

The traffic analysis in the GPU Program EIR assumed primarily low density residential land uses (i.e., 1 dwelling unit per 40 acres) within the former FCI lands, while this GPA generally proposes an increase in density for these lands, including both residential uses and commercial/retail uses.

Based on the trip generation rates provided in Table 1, a net change in trips was forecast for each affected parcel in each community included in this report. Table 2 summarizes the changes in average daily trip (ADT) generation that are forecast for each community. Maps of each community illustrating the trip generation of the GPU assumed land use designations and the proposed GPA land uses are provided for each community in Appendix A of this report.

Table 2
Forecast Trip Generation by Community

Community	Total Acres Affected	General Plan Update ADT	General Plan Amendment ADT	Net Increase in ADT
Alpine	13,725	18,937	134,252	115,317
Central Mountain	27,086	13,222	14,910	1,688
Desert	188	26	26	0
Jamul	1,330	804	840	36
Julian	8,465	4,056	4,612	556
Mountain Empire	2,036	216	303	88
North Mountain	17,298	11,044	14,776	3,732
Pendleton/De Luz	1,020	336	336	0
Ramona	832	2,296	2,610	314

In most of the communities, the net change in trips by individual parcel is negligible (less than 10 trips per day). However, when the parcels are aggregated together, collectively the increase in trips becomes more substantial. Exhibits 10 through 18 illustrate the net increase in trips by parcel for each community, along with the roadways that are forecast to operate at a deficient LOS.

As shown in Exhibit 10, there are parcels in the Alpine community that will result in an increase of more than 500 trips per day. The other communities are not forecast to result in a net increase of trips that would exceed 500 ADT. It is expected that when these future trips distribute onto the Mobility Element network, the overall number of trips will dissipate and will therefore have a minimal effect on the roadway circulation system.

4.0 COUNTY GENERAL PLAN MOBILITY ELEMENT

With the approval of the GPU in 2011, the County updated the Mobility Element. Roadway classifications within the Mobility Element and associated capacities are summarized in Table 3.

A number of roadways were forecast to operate at deficient LOS (LOS E or LOS F) in five of the nine communities within the Project areas. Exhibits 19 - 23 illustrate the forecast deficient roadway segments for those communities (Alpine, Desert, Jamul, Mountain Empire and Ramona) affected by the Project land use changes. There were no forecast deficient roadway segments identified in the remaining four affected communities (Central Mountain, Julian, North Mountain, Pendleton/De Luz). The deficient segments and mitigation measures identified in the GPU are summarized in Table 4.

As shown in Table 4, not all roads within the County were mitigated by capacity increases via higher road classifications with the GPU. Several roads throughout the County were determined to have forecast deficiencies and were accepted to operate at LOS E or F in accordance with criteria established by Mobility Element Policy M-2.1.

Of the five communities where deficient roadway segments are forecast, the community of Alpine will likely be most affected by the Project. In the Desert, Jamul, Mountain Empire, and Ramona communities, the net increase in trips relative to the GPA land use changes is less than 500 ADT. Since these trips are distributed throughout the County and the impact will likely dissipate before reaching the deficient roadway segments, the Project will not have significant impact on the forecast deficient segments.

Table 3
County of San Diego Mobility Element
Roadway Classifications and Capacities

No.	Travel Lanes	Design Speed	Road Classification	Level of Service (in ADT)				
				A	B	C	D	E
6.1	6	65 mph	Expressway	36,000	54,000	70,000	86,000	108,000
6.2	6	65 mph	Prime Arterial	22,200	37,000	44,600	50,000	57,000
4.1A	4	55 mph	Major Road with Raised Median	14,800	24,700	29,600	33,400	37,000
4.1B			Major Road with Intermittent Turn Lanes	13,700	22,800	27,400	30,800	34,200
4.2A	4	40 mph	Boulevard with Raised Median	18,000	21,000	24,000	27,000	30,000
4.2B			Boulevard with Intermittent Turn Lanes	16,800	19,600	22,500	25,000	28,000
2.1A	2	45 mph	Community Collector with Raised Median	10,000	11,700	13,400	15,000	19,000
2.1B			Community Collector with Continuous Turn Lane	3,000	6,000	9,500	13,500	19,000
2.1C			Community Collector with Intermittent Turn Lanes	3,000	6,000	9,500	13,500	19,000
2.1D			Community Collector with Improvement Options	3,000	6,000	9,500	13,500	19,000
2.1E			Community Collector	1,900	4,100	7,100	10,900	16,200
2.2A	2	40 mph	Light Collector with Raised Median	3,000	6,000	9,500	13,500	19,000
2.2B			Light Collector with Continuous Turn Lane	3,000	6,000	9,500	13,500	19,000
2.2C			Light Collector with Intermittent Turn Lanes	3,000	6,000	9,500	13,500	19,000
2.2D			Light Collector with Improvement Options	3,000	6,000	9,500	13,500	19,000
2.2E			Light Collector	1,900	4,100	7,100	10,900	16,200
2.2F			Light Collector with Reduced Shoulder	5,800	6,800	7,800	8,700	9,700
2.3A	2	35 mph	Minor Collector with Raised Median	3,000	6,000	7,000	8,000	9,000
2.3B			Minor Collector with Intermittent Turn Lanes	3,000	6,000	7,000	8,000	9,000
2.3C			Minor Collector	1,900	4,100	6,000	7,000	8,000

Source: County of San Diego Public Road Standards (March 2012).

Table 4
Mobility Element Roadways Forecast to Operate at LOS E or LOS F in the
General Plan Update EIR (2011)

Roadway	Segment Limits	Current GPU ME Classification	LOS D Threshold	ADT	LOS	GPU EIR Reclassification to Achieve LOS D
Alpine						
Alpine Boulevard	Boulders Rd to Alpine Special Treatment Center	2.2A	13,500	20,300	F	4.2B
	Alpine Special Treatment Center to W. Victoria Dr.	2.2A	13,500	15,200	E	4.2B
	W. Victoria Dr to Louise Dr.	2.2A	13,500	20,400	F	4.2B
Willows Road (West)	Alpine Blvd to Otto Ave	2.2E	10,900	20,400	F	4.2B
	Otto Ave to Viejas Grade Rd	2.2E	10,900	27,200	F	4.1B
Jamul						
Lyons Valley Road	Campo Rd to Skyline Truck Trail	2.2B	13,500	18,200	E	4.2B
Ramona						
Main Street/ SR-78	9 th St to 11 th St	4-Ln State Highway	NA ⁽¹⁾	29,300	E ⁽¹⁾	6-Ln State Highway
7 th Street	Elm St to A St	2.2E	10,900	12,900	E	2.1D
	Main St to D St	2.2E	10,900	14,500	F	2.1D
Wildcat Canyon Rd	Harry Hertzberg Rd to Lakeside/ Ramona CPA	2.1D	13,500	35,100	F	6.2

⁽¹⁾ Note: State Route LOS is based on peak demand rather than ADTs

Source: County of San Diego GPU Program EIR Volume IV (Appendix E, 2011).

5.0 PROJECT IMPACTS AND MITIGATION NEEDS

As previously discussed in this report, nine community and subregional planning areas are affected by the Project land use changes: Alpine, Central Mountain, Desert, Jamul, Julian, Mountain Empire, North Mountain, Pendleton/De Luz, and Ramona. Based on analyses of trip generation and forecast deficiencies in the GPU, it was determined that Alpine would be the only community with a potential for significant traffic-related impacts. To determine the impacts, the parcels forecast to have substantial increases in trips were grouped together into Focus Areas. The trips forecast for each Focus Area were loaded onto the roadway network and operating conditions were evaluated for Project conditions.

The five Focus Areas in the Alpine community are outlined in yellow in Exhibits 24-26. The yellow-outlined areas identify Focus Areas where more than 500 ADT are generated (collectively or individually by parcel). Table 5 summarizes the trips by Focus Area for the Alpine community. Please note that the sum of the net increase in ADT for the five focus areas does not match the sum shown in Table 2 for the Alpine community because not all of the FCI parcels in the Alpine community are located within the five Focus Areas; therefore, the total net increase in ADT for the Alpine community (Table 2) is higher than the sum of the five focus areas shown below in Table 5.

Table 5
Trip Generation for Focus Areas in Alpine Community

Focus Area	Total Acres Affected	General Plan Update ADT	General Plan Amendment ADT	Net Increase in ADT
Focus Area A-1	523	1,406	10,971	9,565
Focus Area A-2	252	554	86,969	86,415
Focus Area A-3	921	3,213	16,767	13,556
Focus Area A-4	791	1,776	4,305	2,529
Focus Area A-5	1,324	4,284	5,940	1,656

Focus Areas A-1 and A-5 are primarily residential uses. Focus Areas A-3 and A-4 consist of a mix of residential and commercial uses. Focus Area A-2, which generates the highest number of trips within the Alpine parcels, is primarily commercial. Approximately 50% of the trips in Focus Area A-2 are generated by the Village Core Mixed-Use designation.

Table 6 summarizes the project-specific traffic significance standards for roadway segments as defined in the County's *Guidelines for Determining Significance – Transportation and Traffic* (August 2011). The significance criteria shown in Table 6 are used to determine the Project's traffic impacts on the study roadway segments.

Table 6
County of San Diego Project Traffic Significance Criteria

Level of Service	2-Lane Road	4-Lane Road	6-Lane Road
LOS E	200 ADT	400 ADT	600 ADT
LOS F	100 ADT	200 ADT	300 ADT

Source: County of San Diego *Guidelines for Determining Significance – Transportation and Traffic* (Aug. 2011).

The County of San Diego identifies traffic impacts as either direct or cumulative impacts. A *direct impact* is caused individually by the increase in traffic generated by a proposed project that results in one of the following:

1. The addition of project-generated traffic results in a change from an acceptable (LOS D or better) to a deficient (LOS E or worse) LOS; OR
2. At a location operating at a deficient LOS (LOS E or worse) without the project, the addition of project traffic results in an increase in ADT on a roadway segment that exceeds the project significance thresholds shown in Table 6.

A project that results in a direct impact is fully responsible for mitigating the impact to restore the deficient roadway segment to an acceptable LOS.

A *cumulative impact* is caused by the increase in traffic generated collectively over time by a group of development projects that results in a deficient LOS. On roadway segments operating at a deficient LOS without the project, any incremental increase in traffic is considered to be a cumulative impact. Cumulative impacts are typically mitigated through contributions to the County Traffic Impact Fee (TIF) program. Even if no cumulative impacts are identified within the project study area, contribution to the TIF program is typically required to mitigate any potential regional cumulative impacts outside of the immediate study area.

Table 7 summarizes the impacts of the Project's proposed land use changes on Mobility Element roadways that are forecast to operate at LOS D, E, or F according to the GPU Program EIR. The buildout ADT volumes on roadways that are forecast to operate at a deficient LOS (LOS E or F) without the addition of Project traffic are taken directly from the GPU Program EIR Volume IV (Appendix E, July 5, 2011). Buildout volumes on roadways forecast to operate at LOS D are derived from the traffic forecast model developed for the GPU Program EIR. The GPU Program EIR Volume IV document and model plots showing the forecast buildout ADT volumes are provided in Appendix B of this report.

As shown in Table 7, the impacts of the proposed land use changes for the Project areas on the study roadway segments are limited to the community of Alpine, for the reasons stated previously. Table 7 shows that 12 of the 16 study roadway segments in the Alpine community would be significantly impacted by the proposed land use changes.

Table 7
Forecast Project Impacts
General Plan Amendment (FCI Lands)

Roadway	Segment Limits	Current GPU ME Classification	LOS D Threshold	GPU EIR		FCI Added ADT	GPA (Project)		Significant Impact ?
				ADT	LOS		ADT	LOS	
Alpine									
Alpine Boulevard	Tavern Rd to Boulders Rd	2.2A	13,500	13,500 ⁽²⁾	D	2,849	16,349	E	Yes
	Boulders Rd to Alpine Special Treatment Center	2.2A	13,500	20,300 ⁽¹⁾	F	3,251	23,551	F	Yes
	Alpine Special Treatment Center to W. Victoria Dr.	2.2A	13,500	15,200 ⁽¹⁾	E	3,654	18,854	E	Yes
	W. Victoria Dr to Louise Dr.	2.2A	13,500	20,000 ⁽¹⁾	F	7,339	27,339	F	Yes
	Louise Dr. to Viejas View Pl	2.1D	13,500	12,200	D	10,097	22,297	F	Yes
	Viejas View Pl to West Willows Rd	2.1D	13,500	14,300	E	11,639	25,939	F	Yes
	West Willows Rd to East Willows Rd	2.1C	13,500	1,300	A	19,781	21,081	F	Yes
Harbison Canyon Rd	Arnold Way to Bridle Run	2.2A	13,500	9,900	D	0	9,900	D	No
South Grade Road	Eltinge Dr to Olive View Rd	2.2C	13,500	13,500 ⁽²⁾	D	2,296	15,796	E	Yes
Tavern Road	Victoria Park Terrace to Alpine Boulevard	4.1A	33,400	30,100	D	588	30,688	D	No
	Arnold Way to Huey Ln/White Oak Dr	2.2D	13,500	9,900	D	1,839	11,739	D	No
Victoria Park Terrace	New Road 11 to Gentian Way	2.2A	13,500	9,900	D	0	9,900	D	No
Viejas Casino Rd.	West Willows Rd. to East Willows Rd	4.2B	25,000	21,900	D	7,751	29,651	E	Yes
Willows Road (West)	Alpine Blvd to Otto Ave	2.2E	10,900	20,400 ⁽¹⁾	F	15,845	36,245	F	Yes
	Otto Ave to Viejas Grade Rd	2.2E	10,900	27,200 ⁽¹⁾	F	20,536	47,736	F	Yes
Willows Road (East)	Viejas Casino Rd. to I-8 on ramp	2.2E	10,900	9,300	D	37,356	46,656	F	Yes
Desert									
Borrego Springs Road	Cloudy Moon Dr to Diamond Bar Dr	2.2D	13,500	13,200	D	0	13,200	D	No
	Diamond Bar Rd to Tilting T Dr	2.2D	13,500	13,500 ⁽²⁾	D	0	13,500	D	No
	Tilting T Dr to Country Club Dr	2.2D	13,500	9,900	D	0	9,900	D	No
Palm Canyon Drive	Ocotillo Cir to Borrego Springs Rd	2.2A	13,500	13,500 ⁽²⁾	D	0	13,500	D	No
	Borrego Springs Rd to Stirrup Rd	2.2A	13,500	11,200	D	0	11,200	D	No

⁽¹⁾ Source: County of San Diego GPU Program EIR Volume IV (Appendix E, 2011).

⁽²⁾ The GPU Program EIR Volume IV (Appendix E, 2011) identified these segments at LOS D; however, the volumes on these segments were not specifically reported. It was determined that the volumes are approaching the LOS D threshold. Therefore, for this analysis, the GPU EIR volumes are assumed to be equal to the LOS D capacity. The Project volumes were then added to the LOS D capacity to determine the GPA ADT volumes for the study roadway segments.

⁽³⁾ Note: State Route LOS is based on peak demand rather than ADTs.

Table 7 (continued)
Forecast Project Impacts
General Plan Amendment (FCI Lands)

Roadway	Segment Limits	Current GPU ME Classification	LOS D Threshold	GPU EIR		FCI Added ADT	GPA (Project)		Significant Impact ?
				ADT	LOS		ADT	LOS	
Jamul									
Lyons Valley Road	Campo Rd to Skyline Truck Trail	2.2B	13,500	18,200 ⁽¹⁾	E	0	18,200	E	No
North Mountain									
East Grade Rd/S7	Will Valley Rd to SR 76	2.3C	7,000	6,000	D	0	6,000	D	No
Ramona									
Julian Road/ SR-67	Poway city limits to Archie Moore Rd	4-Ln State Highway	NA ⁽³⁾	32,300	D ⁽³⁾	0	32,300	D ⁽³⁾	No
	Rancho de Oro Rd to Mussey Grade Rd	4-Ln State Highway	NA ⁽³⁾	32,200	D ⁽³⁾	0	32,200	D ⁽³⁾	No
	Mussey Grade Rd to Highland Valley Rd	4-Ln State Highway	NA ⁽³⁾	28,600	D ⁽³⁾	0	28,600	D ⁽³⁾	No
Main Street/ SR-78	Ramona St to Montecito Rd	4-Ln State Highway	NA ⁽³⁾	28,900	D ⁽³⁾	0	28,900	D ⁽³⁾	No
	9 th St to 11 th St	4-Ln State Highway	NA ⁽³⁾	29,300 ⁽¹⁾	E ⁽³⁾	0	29,300	E ⁽³⁾	No
Julian Road/ SR-78	3 rd St to East Julian Rd	2-Ln State Highway	NA ⁽³⁾	9,800	D ⁽³⁾	0	9,800	D ⁽³⁾	No
	Amigos Rd to Magnolia Ave	2-Ln State Highway	NA ⁽³⁾	9,800	D ⁽³⁾	0	9,800	D ⁽³⁾	No
3 rd Street	SR78 to Via Aligre Dr	2.2E	10,900	8,200	D	0	8,200	D	No
7 th Street	Elm St to A St	2.2E	10,900	12,900 ⁽¹⁾	E	0	12,900	E	No
	Main St to D St	2.2E	10,900	14,500 ⁽¹⁾	E	0	14,500	E	No
	E St to G St	2.2E	10,900	10,800	D	0	10,800	D	No
10 th Street	SR67 / Main St to H St	2.1B	13,500	12,500	D	0	12,500	D	No
San Vicente Rd	H St to 11 th St	2.1B	13,500	13,500 ⁽¹⁾	D	0	13,500	D	No
	11 St to Warnock Dr	2.1B	13,500	12,500	D	0	12,500	D	No
	Warnock Dr to Vicente Meadow Dr	2.1B	13,500	12,500	D	0	12,500	D	No
Wildcat Canyon Rd	San Vicente Rd to Painted Rock Rd	2.1D	13,500	10,200	D	0	10,200	D	No
	Painted Rock Rd to Harry Hertzberg Rd	2.1D	13,500	13,500 ⁽¹⁾	D	0	13,500	D	No
	Harry Hertzberg Rd to Lakeside/ Ramona CPA	2.1D	13,500	35,100 ⁽¹⁾	F	0	35,100	F	No

⁽¹⁾ Source: County of San Diego GPU Program EIR Volume IV (Appendix E, 2011).

⁽²⁾ The GPU Program EIR Volume IV (Appendix E, 2011) identified these segments at LOS D; however, the volumes on these segments were not specifically reported. It was determined that the volumes are approaching the LOS D threshold. Therefore, for this analysis, the GPU EIR volumes are assumed to be equal to the LOS D capacity. The Project volumes were then added to the LOS D capacity to determine the GPA ADT volumes for the study roadway segments.

⁽³⁾ Note: State Route LOS is based on peak demand rather than ADTs.

Of these 12 segments, the Project ADT would worsen six roadways that are forecast to operate at deficient LOS prior to the Project, and the following six additional segments were identified to change from an acceptable LOS D or better to a deficient LOS E or F with the addition of project traffic:

- Alpine Boulevard from Tavern Road to Boulders Road
- Alpine Boulevard from Louise Drive to Viejas View Place
- Alpine Boulevard from West Willows Road to East Willows Road
- South Grade Road from Eltinge Drive to Olive View Road
- Viejas Casino Road from West Willows Road to East Willows Road
- East Willows Road from Viejas Casino Road to I-8 On-Ramp

The GPU EIR includes the reclassifications that would be needed to achieve LOS D or better operations on the deficient roadway segments, as shown in Table 8 in the column titled “GPU EIR Reclassification to Achieve LOS D”. However, based on specific criteria under Policy M-2.1 of the Mobility Element, the County determined it is more appropriate to maintain deficient LOS E or F operations on some roadway segments instead of adding travel lanes to increase capacity. In the Alpine community, the roadway segments where LOS E or F operations were accepted at buildout are listed below:

- Alpine Boulevard from Boulders Road to Louise Drive
- West Willows Road from Alpine Boulevard to Viejas Grade Road

Table 8 shows the forecast LOS of the significantly impacted roadway segments (refer to Table 7) in the Alpine community after the Project impacts are accounted for. Table 8 also shows the reclassifications identified by the GPU EIR traffic study to achieve LOS D or better for the above-listed deficient roadway segments in Alpine where LOS E or F operations are accepted per the Mobility Element.

As shown in Table 8, the following roadway segments that are forecast to operate at LOS D, E or F under the GPU Program EIR would operate at LOS E or F with the increase in Project trips even after implementation of the reclassifications needed to meet LOS D, as identified in the GPU EIR Volume IV (Appendix E):

- Alpine Boulevard from:
 - Tavern Road to Boulders Road
 - West Victoria Drive to Louise Drive
 - Louise Drive to Viejas View Place
 - Viejas View Place to West Willows Road
 - West Willows Road to East Willows Road
- South Grade Road from Eltinge Drive to Olive View Road
- Viejas Casino Road from West Willows Road to East Willows Road
- West Willows Road from:
 - Alpine Boulevard to Otto Avenue
 - Otto Avenue to Viejas Grade Road
- East Willows Road from Viejas Casino Road to I-8 On-Ramp

Table 8
Roadway Segment LOS with GPU EIR Reclassification
Alpine Community

Roadway	Segment Limits	GPU EIR Reclassification to Achieve LOS D	LOS D Threshold	GPU EIR ADT	GPU EIR LOS	FCI Added ADT	GPA ADT	GPA LOS	Impact Mitigated?
Alpine Boulevard	Tavern Rd to Boulders Rd	2.2A	13,500	13,500 ⁽²⁾	D	2,849	16,349	E	No
	Boulders Rd to Alpine Special Treatment Center	4.2B	25,000	20,300 ⁽¹⁾	C	3,251	23,551	D	Yes
	Alpine Special Treatment Center to W. Victoria Dr	4.2B	25,000	15,200 ⁽¹⁾	C	3,654	18,854	C	Yes
	W. Victoria Dr to Louise Dr	4.2B	25,000	20,400 ⁽¹⁾	D	7,339	27,739	E	No
	Louise Dr to Viejas View Pl	2.1D	13,500	12,200	D	10,097	22,297	F	No
	Viejas View Pl to West Willows Rd	2.1D	13,500	14,300	D	11,639	25,939	F	No
	West Willows Rd to East Willows Rd	2.1C	13,500	1,300	A	19,781	21,081	F	No
South Grade Road	Eltinge Dr to Olive View Rd	2.2C	13,500	13,500 ⁽²⁾	D	2,296	15,796	E	No
Tavern Road	Victoria Park Terrace to Alpine Boulevard	4.1A	33,400	30,100	D	588	30,688	D	Yes
	Arnold Way to Huey Ln/White Oak Dr	2.2A	13,500	9,900	D	1,839	11,739	D	Yes
Viejas Casino Rd.	West Willows Rd to East Willows Rd	4.2B	25,000	21,900	D	7,751	29,651	E	No
Willows Road (West)	Alpine Blvd to Otto Ave	4.2B	25,000	20,400 ⁽¹⁾	D	15,845	36,245	F	No
	Otto Ave to Viejas Grade Rd	4.2A	27,000	27,200 ⁽¹⁾	D	20,536	47,736	F	No
Willows Road (East)	Viejas Casino Rd to I-8 on ramp	2.2E	10,900	9,300	D	37,356	46,656	F	No

⁽¹⁾ Source: County of San Diego GPU Program EIR Volume IV (Appendix E, 2011).

⁽²⁾ The GPU Program EIR Volume IV (Appendix E, 2011) identified these segments at LOS D; however, the volumes on these segments were not specifically reported. It was determined that the volumes are approaching the LOS D threshold. Therefore, for this analysis, the GPU EIR volumes are assumed to be equal to the LOS D capacity. The Project volumes were then added to the LOS D capacity to determine the GPA ADT volumes for the study roadway segments.

These ten impacted roadway segments as shown in Table 8 will require additional reclassifications to mitigate Project impacts of the additional traffic associated with the proposed land use changes. The following reclassifications to meet Policy M-2.1 (LOS D) would be needed for the ten impacted roadway segments:

- Alpine Boulevard from Tavern Road to Boulders Road: Reclassify roadway segment from a Light Collector with Raised Median (2.2A) to a Boulevard with Intermittent Turn Lanes (4.2B).
- Alpine Boulevard from West Victoria Drive to Louise Drive: Reclassify roadway segment from a Light Collector with Raised Median (2.2A) to a Major Road with Intermittent Turn Lanes (4.1B).
- Alpine Boulevard from Louise Drive to Viejas View Place: Reclassify roadway segment from a Community Collector with Improvement Options (2.1D) to a Boulevard with Intermittent Turn Lanes (4.2B).
- Alpine Boulevard from Viejas View Place to West Willows Road: Reclassify roadway segment from a Community Collector with Improvement Options (2.1D) to a Boulevard with Raised Median (4.2A).
- Alpine Boulevard from West Willows Road to East Willows Road: Reclassify roadway segment from a Community Collector with Intermittent Turn Lanes (2.1C) to a Boulevard with Intermittent Turn Lanes (4.2B).
- South Grade Road from Eltinge Drive to Olive View Road: Reclassify roadway segment from a Light Collector with Intermittent Turn Lanes (2.2C) to a Boulevard with Intermittent Turn Lanes (4.2B).
- Viejas Casino Road from West Willows Road to East Willows Road: Reclassify roadway segment from a Boulevard with Intermittent Turn Lanes (4.2B) to a Major Road with Intermittent Turn Lanes (4.1B).
- West Willows Road from Alpine Boulevard to Otto Avenue: Reclassify roadway segment from a Light Collector (2.2E) to a Prime Arterial (6.2).
- West Willows Road from Otto Avenue to Viejas Grade Road: Reclassify roadway segment from a Light Collector (2.2E) to a Prime Arterial (6.2).
- East Willows Road from Viejas Casino Road to I-8 On-Ramp: Reclassify roadway segment from a Light Collector (2.2E) to a Prime Arterial (6.2).

Table 9 summarizes daily roadway segment LOS with the Mobility Element road classifications needed to achieve LOS D or better operations and mitigate Project impacts to the above-listed roadway segments.

Table 9
Roadway Segment LOS with Reclassification to Meet Policy M-2.1 (LOS D)
Alpine Community

Segment	Location	Reclassification to Achieve LOS D	LOS D Threshold	With GPA LU		Impact Mitigated?
				ADT	LOS	
Alpine Boulevard	Tavern Rd to Boulders Rd	4.2B	25,000	16,349	C	Yes
	W. Victoria Dr to Louise Dr.	4.1B	30,800	27,739	D	Yes
	Louise Dr. to Viejas View Pl	4.2B	25,000	22,297	D	Yes
	Viejas View Pl to West Willows Rd	4.2A	27,000	25,939	D	Yes
	West Willows Rd to East Willows Rd	4.2B	25,000	21,081	D	Yes
South Grade Road	Eltinge Dr to Olive View Rd	4.2B	25,000	15,796	C	Yes
Viejas Casino Rd.	West Willows Rd. to East Willows Rd	4.1B	30,800	29,651	D	Yes
Willows Road (West)	Alpine Blvd to Otto Ave	6.2	50,000	36,245	B	Yes
	Otto Ave to Viejas Grade Rd	6.2	50,000	47,736	D	Yes
Willows Road (East)	Viejas Casino Rd. to I-8 on ramp	6.2	50,000	46,656	D	Yes

6.0 CONCLUSIONS

The County of San Diego is preparing a GPA for privately-owned parcels affected by the former FCI, along with approximately 400 acres of private lands adjacent to former FCI lands. This traffic impact analysis report evaluated the impacts of the changes in proposed land uses in these areas in each of the affected nine communities.

The results of the analysis showed that the impacts associated with the proposed land use changes would be limited to the community of Alpine. The improvements that are recommended in the County's GPU Program EIR (2011) for the impacted deficient roadways in Alpine will mitigate most of the impacts associated with the proposed land use changes in the Project areas. However, the following ten roadway segments would either operate at a deficient LOS at buildout or need to be upgraded to the reclassifications identified in Table 9:

- Alpine Boulevard from:
 - Tavern Road to Boulders Road (LOS E)
 - West Victoria Drive to Louise Drive (LOS E)
 - Louise Drive to Viejas View Place (LOS F)
 - Viejas View Place to West Willows Road (LOS F)
 - West Willows Road to East Willows Road (LOS F)
- South Grade Road from Eltinge Drive to Olive View Road (LOS E)
- Viejas Casino Road from West Willows Road to East Willows Road (LOS E)
- West Willows Road from:
 - Alpine Boulevard to Otto Avenue (LOS F)
 - Otto Avenue to Viejas Grade Road (LOS F)
- East Willows Road from Viejas Casino Road to I-8 On-Ramp (LOS F)

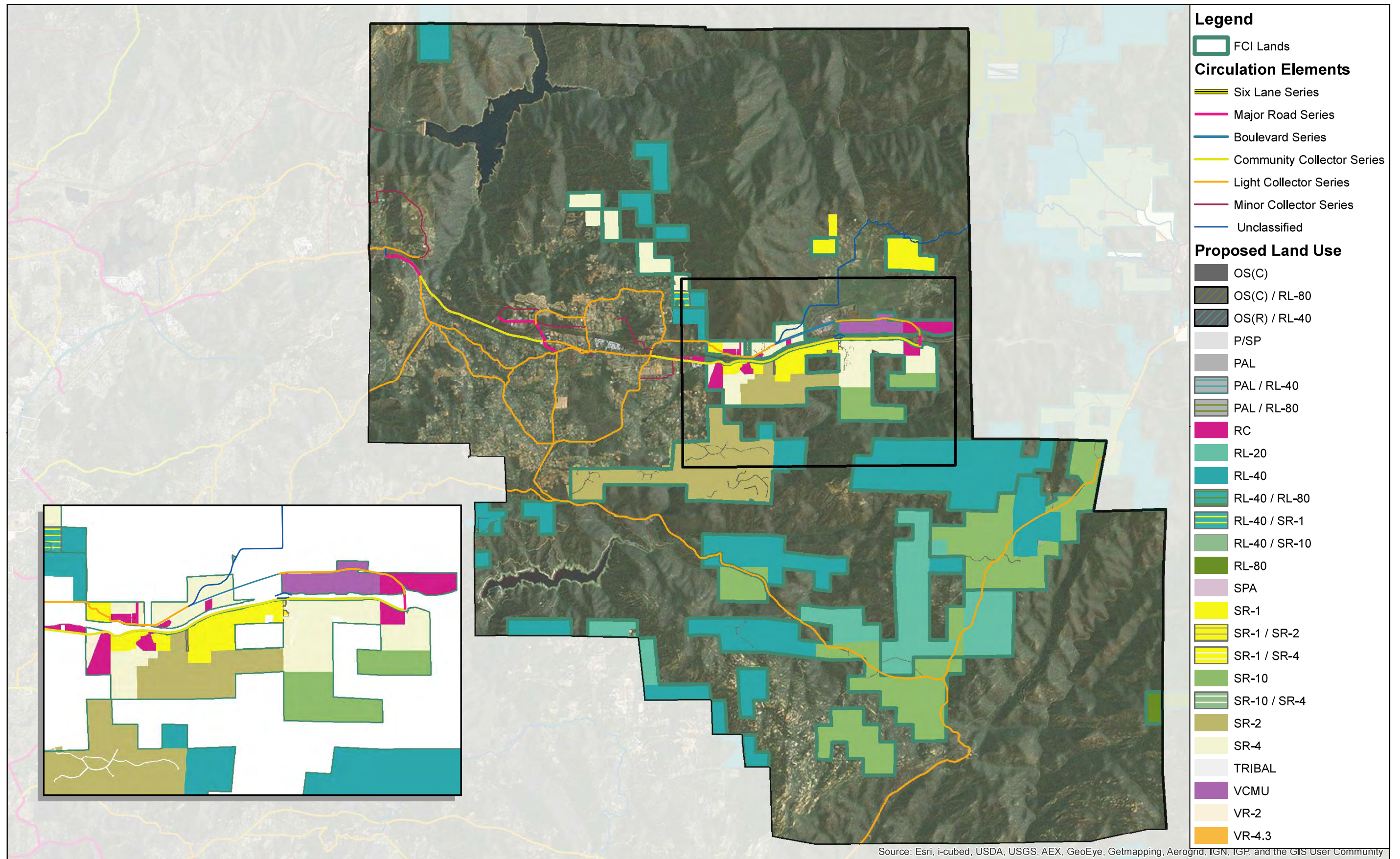
The following reclassifications to meet Policy M-2.1 (LOS D) would be needed for the ten impacted roadway segments:

- Alpine Boulevard from Tavern Road to Boulders Road: Reclassify roadway segment from a Light Collector with Raised Median (2.2A) to a Boulevard with Intermittent Turn Lanes (4.2B).
- Alpine Boulevard from West Victoria Drive to Louise Drive: Reclassify roadway segment from a Light Collector with Raised Median (2.2A) to a Major Road with Intermittent Turn Lanes (4.1B).
- Alpine Boulevard from Louise Drive to Viejas View Place: Reclassify roadway segment from a Community Collector with Improvement Options (2.1D) to a Boulevard with Intermittent Turn Lanes (4.2B).

- Alpine Boulevard from Viejas View Place to West Willows Road: Reclassify roadway segment from a Community Collector with Improvement Options (2.1D) to a Boulevard with Raised Median (4.2A).
- Alpine Boulevard from West Willows Road to East Willows Road: Reclassify roadway segment from a Community Collector with Intermittent Turn Lanes (2.1C) to a Boulevard with Intermittent Turn Lanes (4.2B).
- South Grade Road from Eltinge Drive to Olive View Road: Reclassify roadway segment from a Light Collector with Intermittent Turn Lanes (2.2C) to a Boulevard with Intermittent Turn Lanes (4.2B).
- Viejas Casino Road from West Willows Road to East Willows Road: Reclassify roadway segment from a Boulevard with Intermittent Turn Lanes (4.2B) to a Major Road with Intermittent Turn Lanes (4.1B).
- West Willows Road from Alpine Boulevard to Otto Avenue: Reclassify roadway segment from a Light Collector (2.2E) to a Prime Arterial (6.2).
- West Willows Road from Otto Avenue to Viejas Grade Road: Reclassify roadway segment from a Light Collector (2.2E) to a Prime Arterial (6.2).
- East Willows Road from Viejas Casino Road to I-8 On-Ramp: Reclassify roadway segment from a Light Collector (2.2E) to a Prime Arterial (6.2).

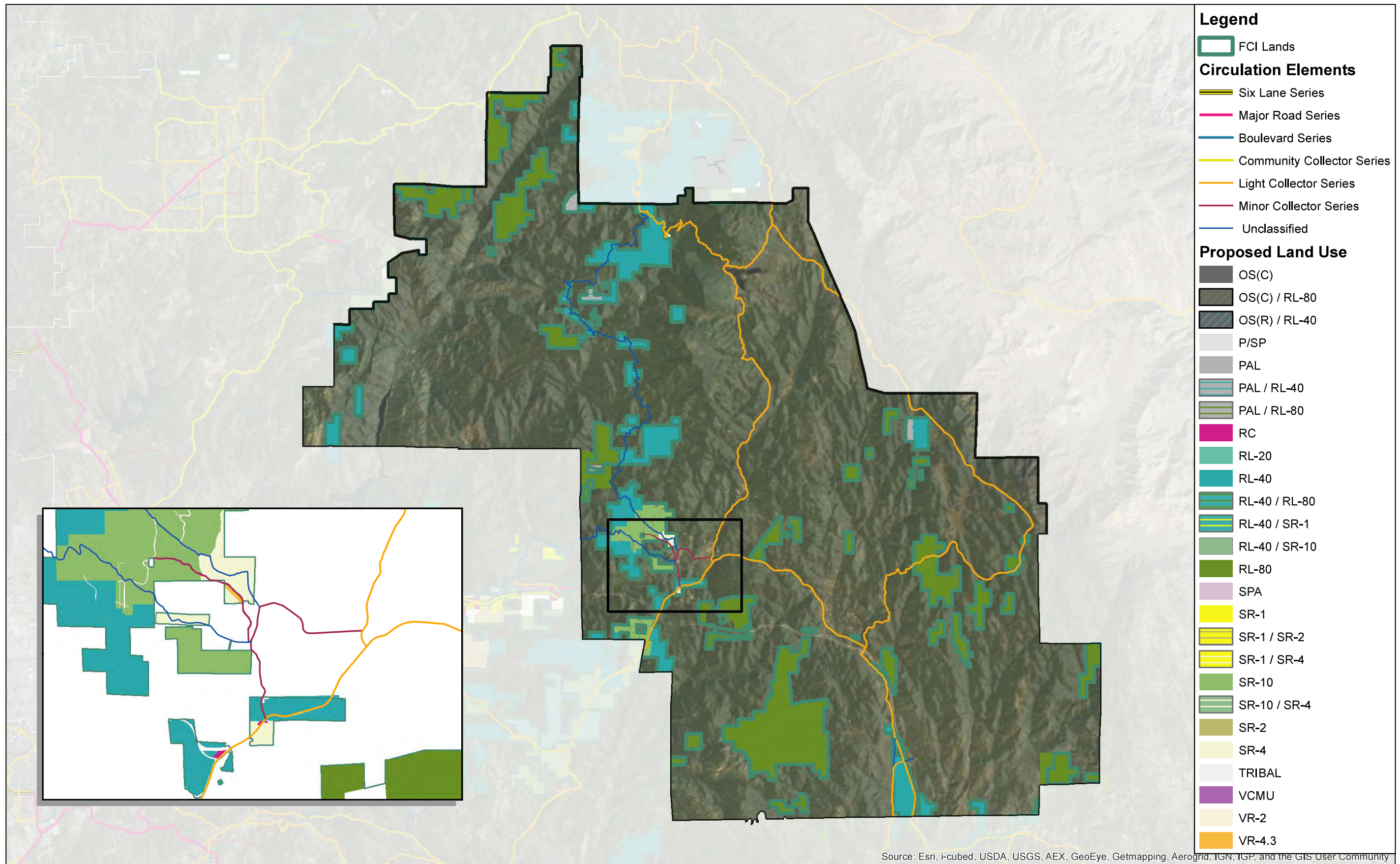
The results of the analysis showed that the reclassifications would improve daily operations on the impacted roadway segments to acceptable LOS.

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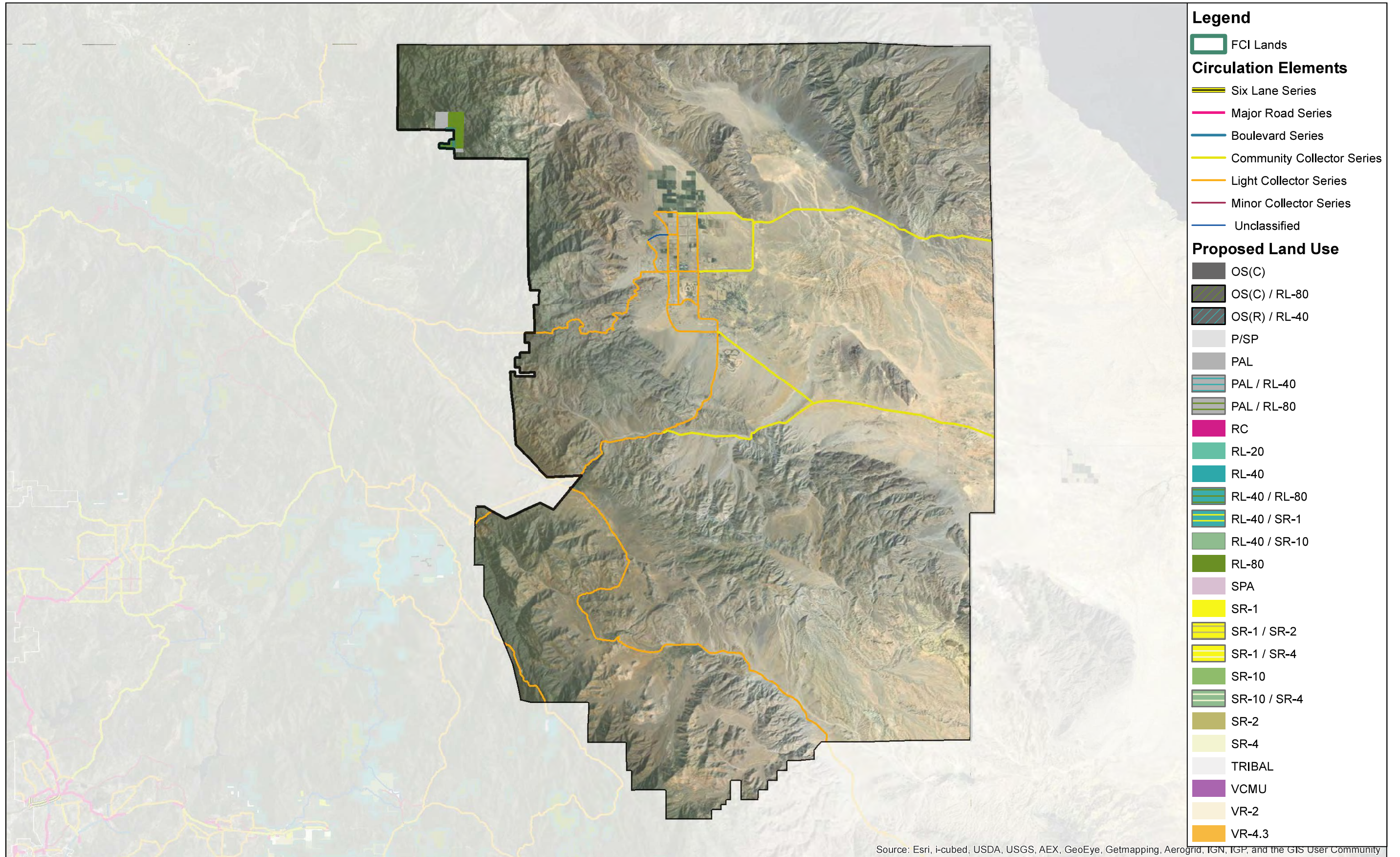
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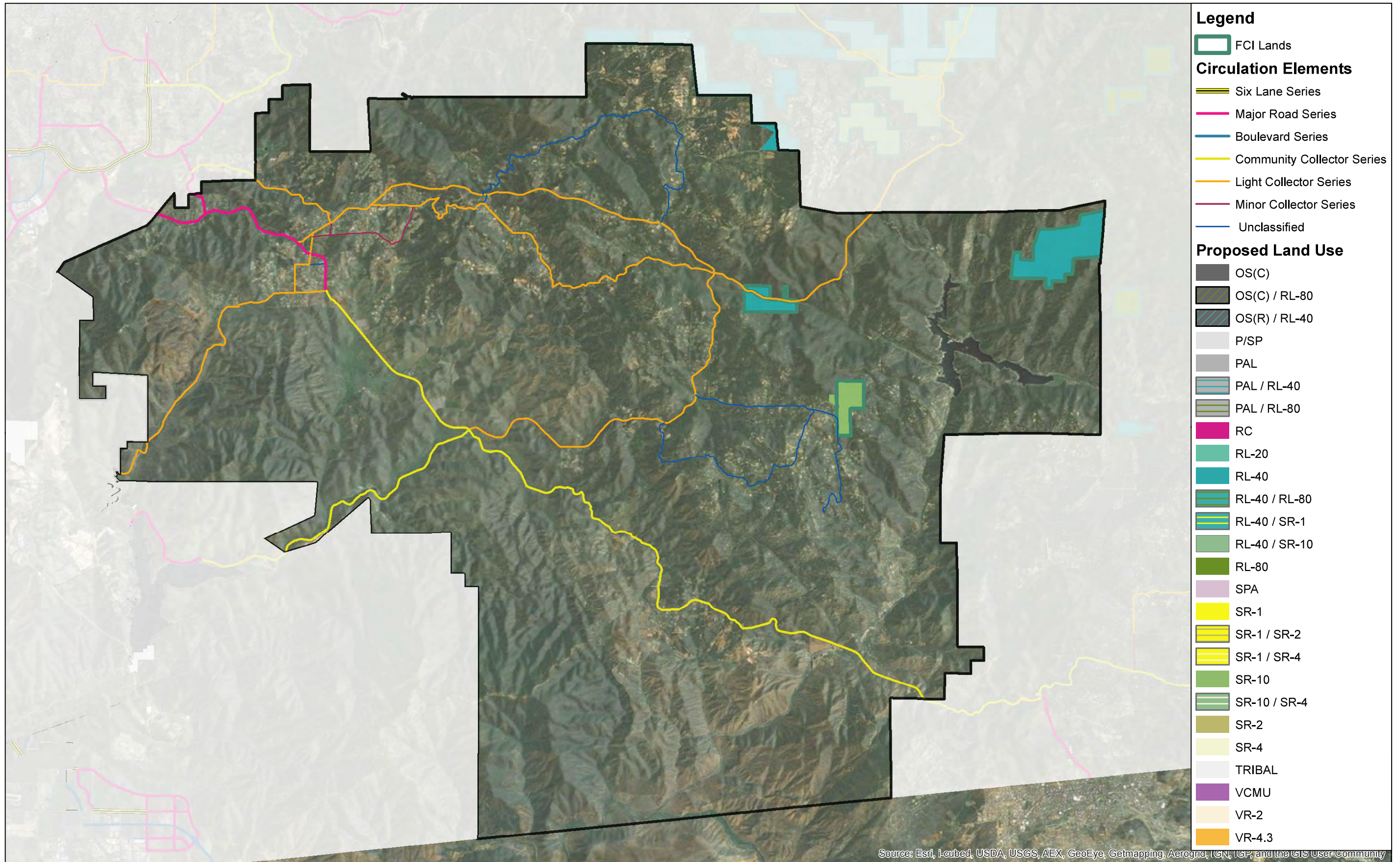


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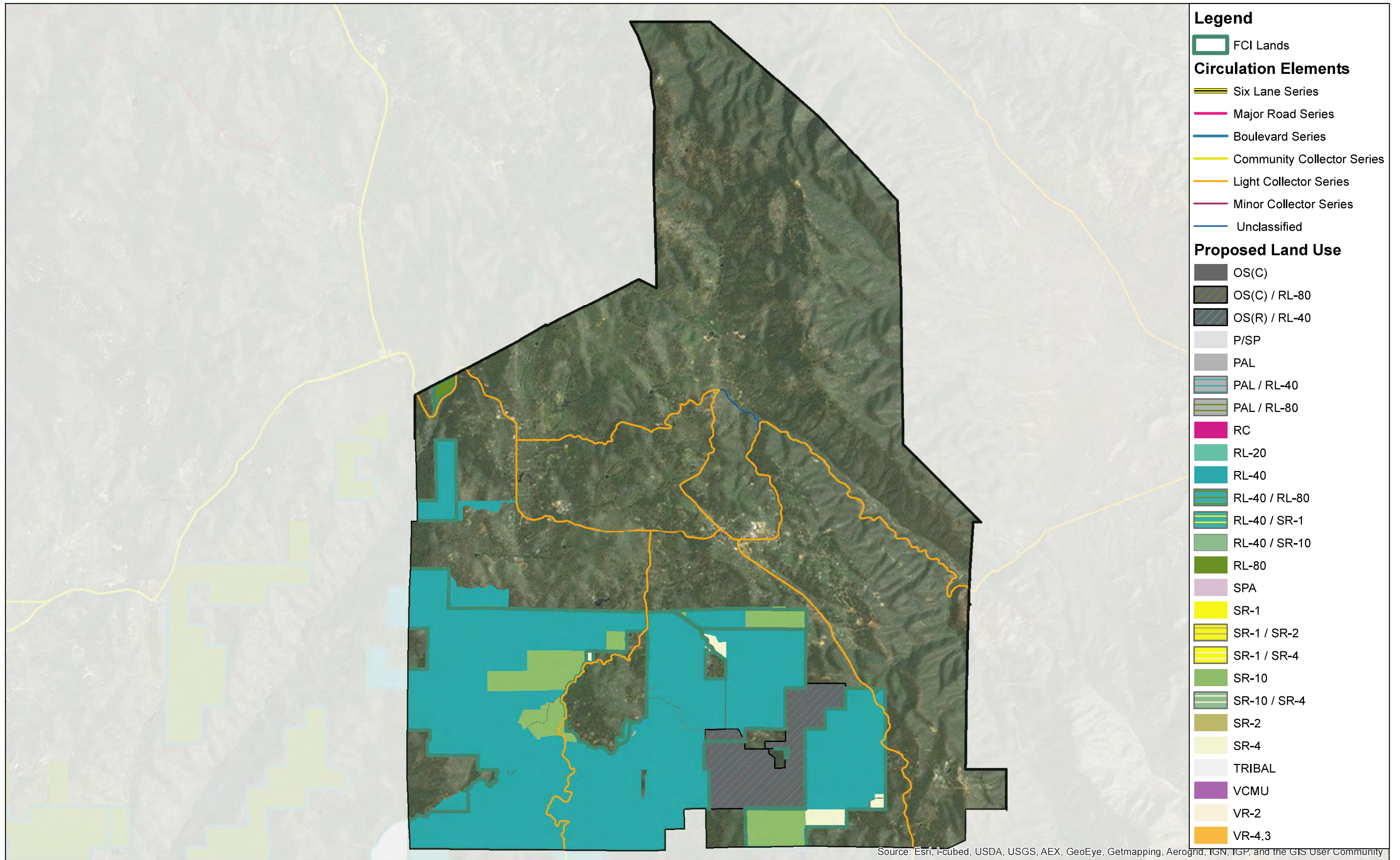


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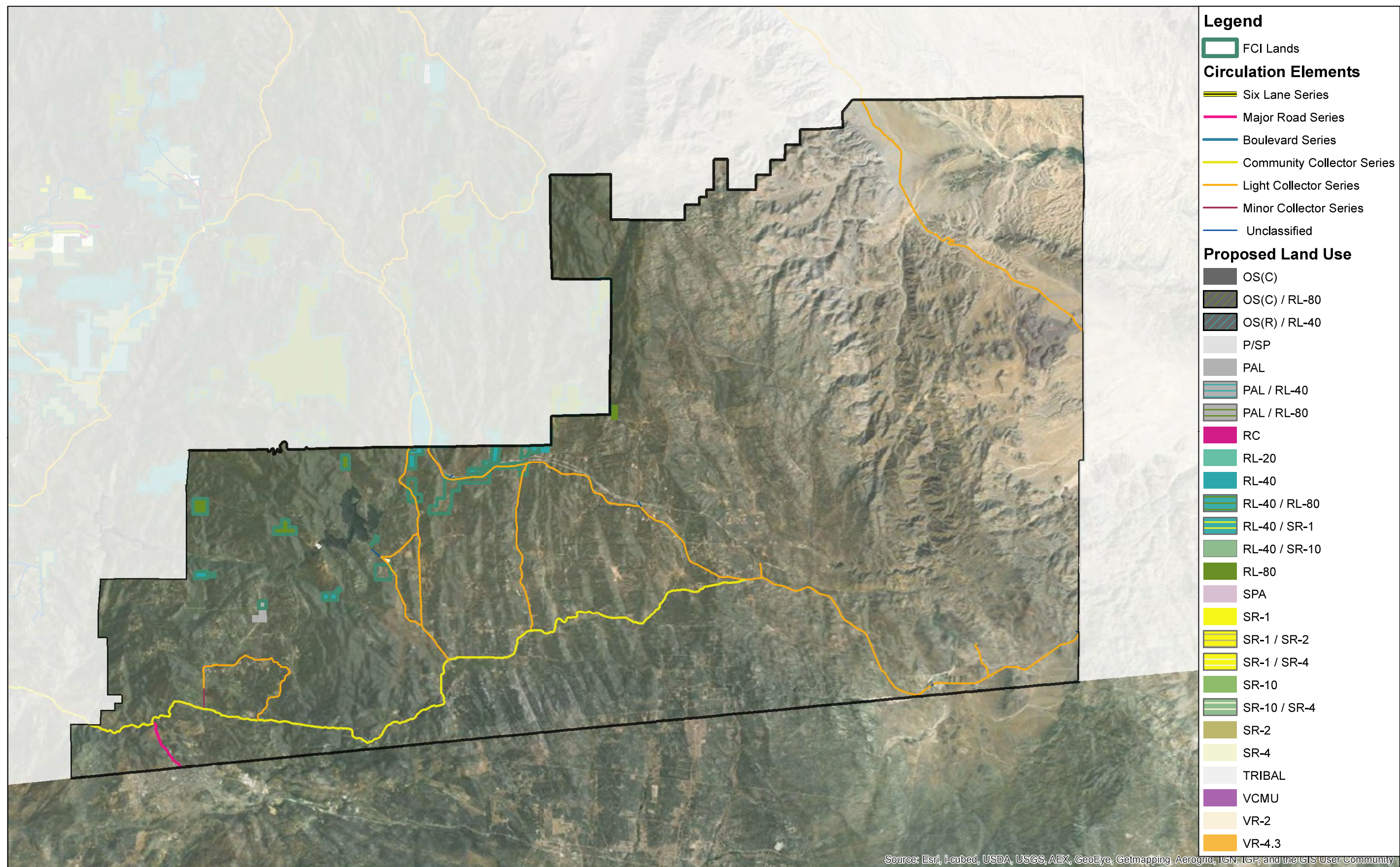
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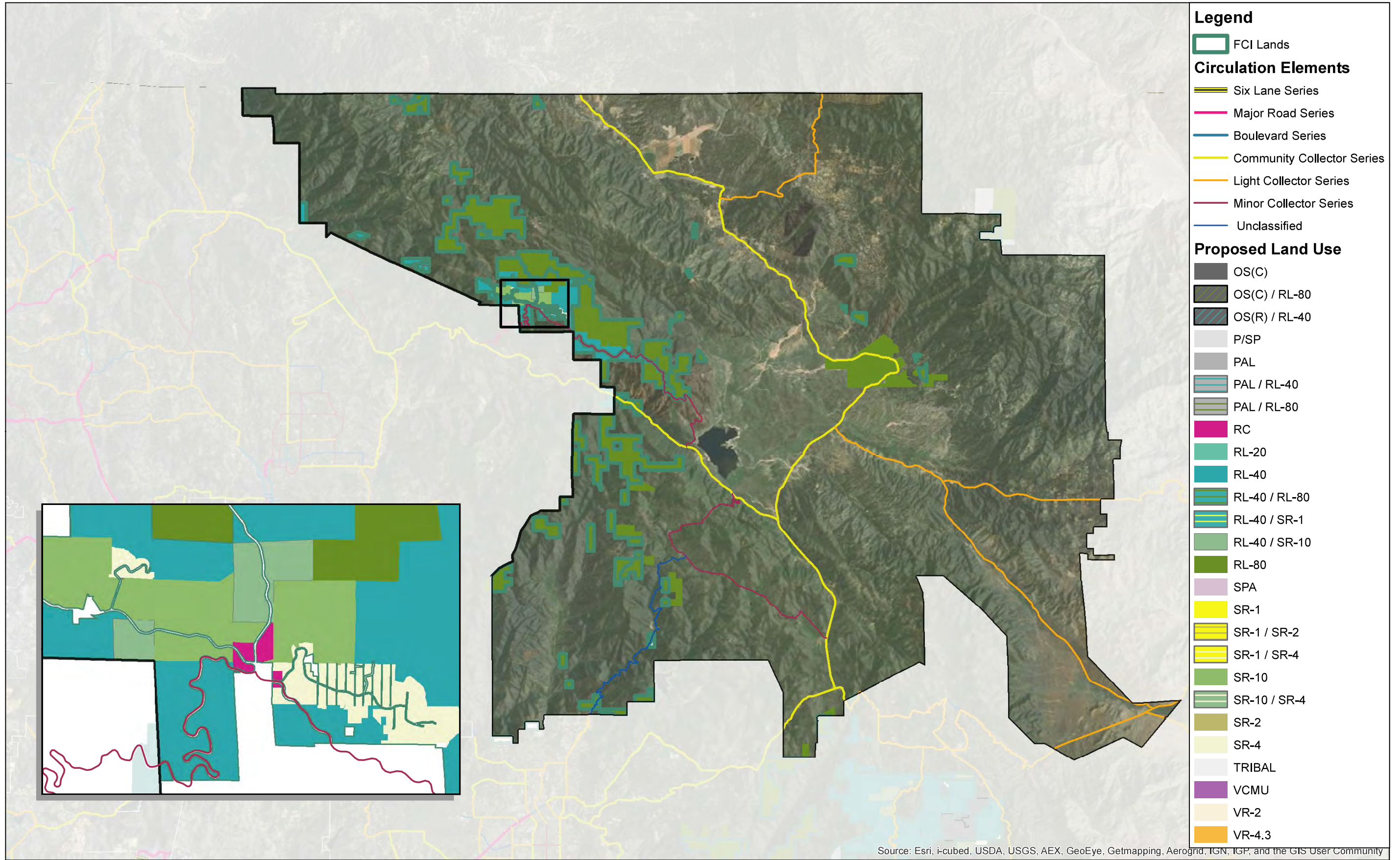


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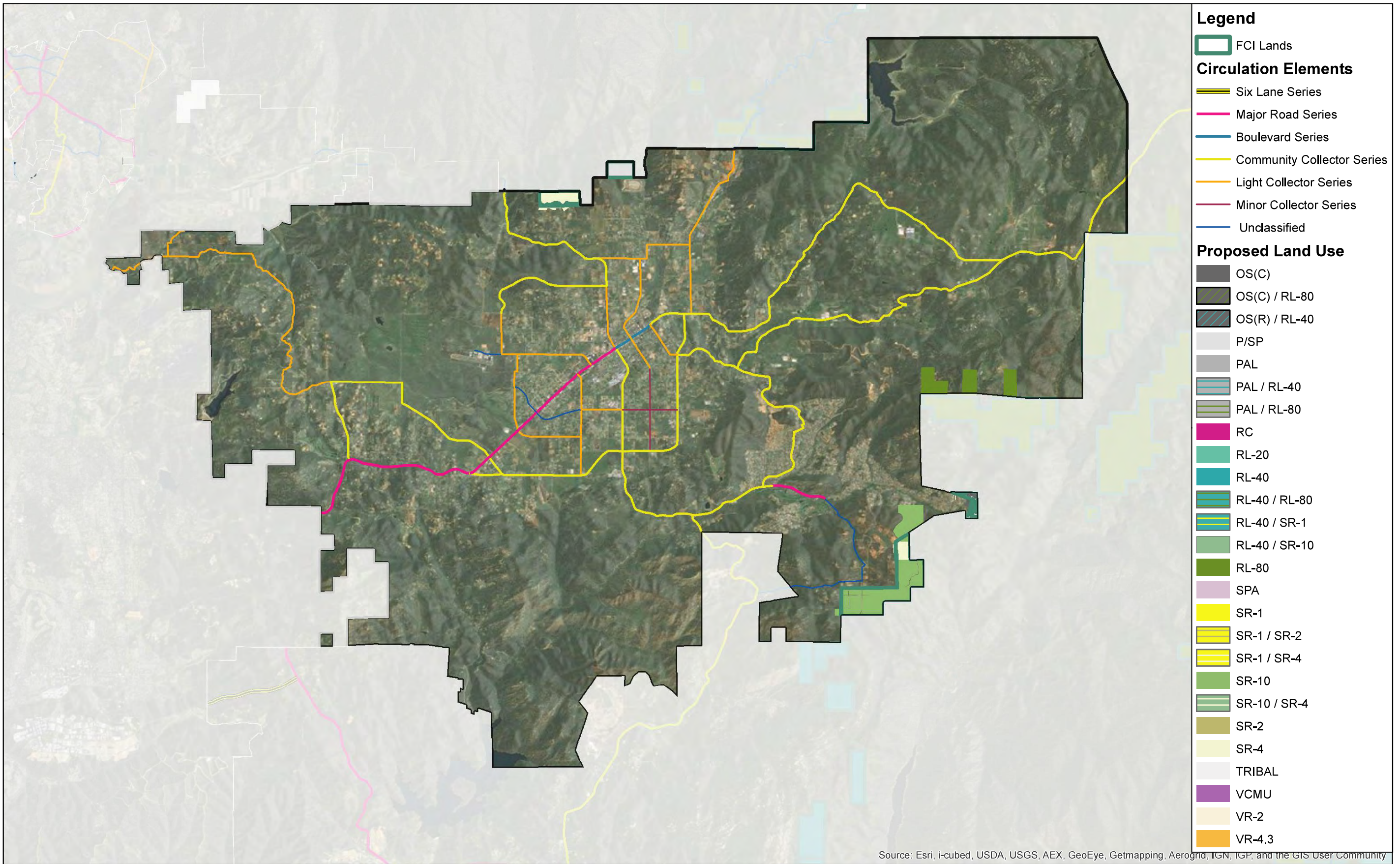
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