TAHOE TRANSPORTATION DISTRICT (TTD)
TAHOE TRANSPORTATION COMMISSION (TTC)

Notice of Agenda and Agenda

Tahoe Regional Planning Agency **April 3, 2024**
128 Market Street **3:00 p.m.**
Stateline, NV 89449

The Tahoe Transportation District Board and Commission meeting will be physically open to the public at Tahoe Regional Planning Agency, Stateline, NV 89449 and in accordance with California and Nevada law, Board members may be teleconferencing into the meeting via GoToWebinar. This meeting will be held in accordance with requirements under Government Code section 54953(f).

To register for the TTD Committee and Board Meetings, go to:
https://attendee.gotowebinar.com/register/5941503988765173598

The following locations will also be available for participation by teleconference:

229 West Loop 121
Belton, TX 76513

California Department of Transportation
703 B Street
Marysville, CA 95901

Members of the public may observe the meeting and submit comments in person at the above location or via GoToWebinar. Members of the public may also provide public comment by sending comments to the Clerk to the Board by email at jallen@tahoetransportation.org. Please note which agenda item the comment pertains to. Comments will be distributed at the Board meeting and attached to the minutes of the meeting. Comments for each agenda item should be submitted prior to the close of that agenda item.

Any member of the public who needs accommodations should email or call Judi Allen who will use her best efforts to provide reasonable accommodations to provide as much accessibility as possible, while also maintaining public safety in accordance with TTD's procedure for resolving reasonable accommodation requests. All reasonable accommodations offered will be listed on the TTD website at tahoetransportation.org.

All items on this agenda are action items unless otherwise noted. Items on the agenda may be taken out of order. The Board may combine two or more items for consideration. The Board may remove an item from the agenda or delay discussion relating to an item on the agenda at any time.

I. CALL TO ORDER AND GENERAL MATTERS

A. Roll Call and Determination of Quorum of TTD/TTC
B. *For Possible Action*: Approval of Agenda for April 3, 2024
C. *For Possible Action*: Approval of Board Minutes of February 7, 2024 **Page 1**

II. CLOSED SESSION

CONFERENCE WITH LABOR NEGOTIATORS
California Government Code 54957.6; NRS 288.220(4)
Agency designated representatives: District Manager, CFO, Transportation Services Director, Clerk to the Board
Employee organization: Teamsters Local Union 533

III. RESUME OPEN SESSION AND REPORT FROM CLOSED SESSION

IV. PUBLIC INTEREST COMMENTS

At this time, members of the public shall have the opportunity to directly address the Board. All comments are to be limited to no more than three minutes per person. The Board is prohibited by law from taking immediate action on or discussing issues raised by the public that are not listed on this agenda. In addition, members of the public shall have the opportunity to directly address the Board after each item on which action may be taken is discussed by the public body, but before the public body takes action on the item.

V. *FOR INFORMATION:* PROGRAM IMPLEMENTATION COMMITTEE MINUTES OF JANUARY 12, 2024 AND REPORT OF MARCH 6, 2024 **Page 6**

VI. *FOR INFORMATION:* BUDGET FINANCE AND PERSONNEL COMMITTEE REPORT OF APRIL 3 MEETING

VII. *FOR INFORMATION:* CALIFORNIA COUNCIL OF GOVERNMENTS REPRESENTATIVE AND TRPA APC UPDATE

VIII. TAHOE TRANSPORTATION DISTRICT (TTD) CONSENT ITEMS
(All items are for possible action)

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A.	*For Possible Action*: Review and Acceptance of the District's Financial Statement of Operations for the First Seven Months of Fiscal Year 2024 Through January 31, 2024	**9**
B.	*For Possible Action:* Adopt Resolution 2024-001 Adopting the Tahoe Transportation District and Tahoe Resource Conservation District 2023 Hazard Mitigation Plan	**26**
C.	*For Possible Action:* Authorize the District Manager to Negotiate and Execute a Contract for the Purchase of One Four-Wheel Drive Toyota Tundra Hybrid and Associated Modifications and Equipment Not to Exceed $78,000	**209**

IX. TAHOE TRANSPORTATION DISTRICT (TTD) BUSINESS ITEMS

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A.	*Informational Only:* Review and Discussion of TTD's Five-Year Budget Revenues and Expenses Projections for Fiscal Year 2025 through Fiscal Year 2029 as They Relate to Current and Future Operations and Decision Making	**226**
B.	*For Possible Action:* Review, Discussion, and Approval of the Fiscal Year 2025 Proposed Budget and Work Program	**235**
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X. ADJOURN AS TTD AND RECONVENE AS TTC

XI. TAHOE TRANSPORTATION COMMISSION (TTC) BUSINESS ITEMS

XII. ADJOURN AS TTC AND RECONVENE AS TTD

XIII. *FOR INFORMATION:* DISTRICT MANAGER REPORT

XIV. BOARD MEMBER REQUESTS AND COMMENTS

XV. PUBLIC INTEREST COMMENTS

XVI. ADJOURNMENT

COMPLIANCE WITH PUBLIC NOTICE REQUIREMENTS

This notice and agenda has been posted at the TTD office and at the Stateline, Nevada post office. The notice and agenda has also been posted at the North Tahoe Conference Center in Kings Beach, the Incline Village GID office and the North Tahoe Chamber of Commerce and on the TTD website: www.tahoetransportation.org.

For those individuals with a disability who require a modification or accommodation in order to participate in the public meeting, please contact Judi Allen at (775) 589-5502 or jallen@tahoetransportation.org.

Nevada Open Meeting Law Compliance
Written notice of this meeting has been given at least three working days before the meeting by posting a copy of this agenda at the principal office of the Board and at three other separate, prominent places within the jurisdiction of the Board not later than 9 a.m. of the third working day before the meeting.

Written notice of this meeting has been given by providing a copy of this agenda to any person who has requested notice of the meetings of the Board. Such notice was delivered to the postal service used by the Board not later than 9 a.m. of the third working day before the meeting for transmittal to the requester by regular mail, or if feasible for the Board and the requester has agreed to receive the public notice by electronic mail, transmitted to the requester by electronic mail sent not later than 9 a.m. of the third working day before the meeting.

Supporting materials were provided to any person requesting such materials and were made available to the requester at the time the material was provided to the members of the Board or, if provided to the members of the Board at the meeting, were made available to the requester at the meeting and are available on the TTD website: www.tahoetransportation.org. Please send requests for copies of supporting materials to Judi Allen at (775) 589-5502 or jallen@tahoetransportation.org.

TAHOE TRANSPORTATION DISTRICT
TAHOE TRANSPORTATION COMMISSION
BOARD MEETING MINUTES
February 7, 2024

TTD/TTC Board Members in Attendance:

Alexis Hill, Washoe County, Chair
Lori Bagwell, Carson City
Cody Bass, City of South Lake Tahoe Alternate
Scott Bensing, Nevada Governor Appointee
Andy Chapman, TNT-TMA
Stephanie Holloway, Placer County Alternate
Brooke Laine, El Dorado County
Wesley Rice, Douglas County
Nick Speal, California Governor Appointee
Raymond Suarez, SS-TMA
Alex Fong, Caltrans (attended remotely)
Rebecca Kapuler, NDOT

TTD/TTC Board Members Absent:

Brian Bigley, Member at Large
Jessica Diss, Tahoe Regional Planning Agency Appointee

Others in Attendance:

Carl Hasty, Tahoe Transportation District
Joanie Schmitt, Tahoe Transportation District
Jim Marino, Tahoe Transportation District
George Fink, Tahoe Transportation District
Nick Haven, Tahoe Regional Planning Agency
Judy Weber, Tahoe Regional Planning Agency
Judi Allen, Tahoe Transportation District
Tara Styer, Tahoe Transportation District
Shanna Greathouse, Tahoe Transportation District
Mary Wagner, Legal Counsel

I. TAHOE TRANSPORTATION DISTRICT AND COMMISSION CALL TO ORDER AND ROLL

A. Roll Call and Determination of Quorum
The meeting of the Tahoe Transportation District and Commission was called to order by Chair Hill at 3:00 p.m., at the Tahoe Regional Planning Agency and via GoToWebinar. Roll call was taken, and it was determined a quorum was in attendance for TTD.

B. Approval of TTD/TTC Agenda of February 7, 2024
Motion/second by Ms. Bagwell/Mr. Rice to approve the TTD/TTC agenda for today's meeting. The motion passed unanimously.

C. Approval of TTD Meeting Minutes for December 6, 2023
Motion/Second by Mr. Rice/Mr. Chapman to approve the minutes. The motion passed unanimously.

II. PUBLIC INTEREST COMMENTS

Marsha Berkbigler commented regarding the continued plan for the multi-modal bus center in Incline and that she was opposed to it when sitting on TTD's Board and continues to have people contacting her with concerns about it. She requested staff to meet with some of the residents who continue to be concerned.

Ronda Tycer, a 34-year resident of Incline Village, stated she has lead a protest against the use of the Incline old Elementary School and she is enthusiastic about mixed use workforce housing at the site and finding another location for the hub.

III. *FOR INFORMATION:* PROGRAM IMPLEMENTATION COMMITTEE REPORT FOR JANUARY 12 MEETING

Mr. Hasty reported the committee reviewed the contract awards to Wood Rodgers and the revised audit report and recommended approval of all. The Committee also received updates regarding the FTA and TDA triennial reviews, as well as the Capital Improvement Program projects. The Committee also discussed the Committee acting on the Board's behalf to make Tahoe Transportation Commission recommendations to TRPA's Governing Board on the months the Board isn't meeting.

IV. *FOR INFORMATION:* REGIONAL PARTNERSHIPS & COMMUNICATIONS COMMITTEE REPORT FOR FEBRUARY 7 MEETING

Mr. Chapman reported the Committee continued their discussion of TTD's and TRPA's roles and responsibilities, discussed a strategic communication plan, and Mr. Teshara was elected chair to the Committee.

V. *FOR INFORMATION:* BUDGET FINANCE AND PERSONNEL COMMITTEE REPORT FOR FEBRUARY 7 MEETING

Ms. Bagwell reported the committee reviewed and recommended the requested consent items.

VI. ADJOURN AS TTD AND RECONVENE AS TTC

VII. TAHOE TRANSPORTATION COMMISSION (TTC) BUSINESS ITEMS

A. Conduct a Public Hearing and Recommend Approval of the 2023 Federal Transportation Improvement Program Amendment No. 7 to the Tahoe Metropolitan Planning Organization Governing Board
Ms. Weber reviewed this item and gave a presentation. Mr. Chapman asked how often amendments are brought to the Commission. Ms. Weber stated they usually try to make amendments quarterly, depending on funding opportunities and updates for a project.

Ms. Laine moved to recommend approval of the 2023 Federal Transportation Program Amendment No. 7 to the Tahoe Metropolitan Planning Organization

Governing Board. Mr. Bass seconded the motion. The motion passed unanimously.

VIII. ADJOURN AS THE TTC AND RECONVENE AS TTD

IX. TAHOE TRANSPORTATION DISTRICT (TTD) CONSENT ITEMS

A. Review and Acceptance of the District's Financial Statement of Operations for the First Five Months of Fiscal Year 2024 Through November 30, 2023
B. Review and Acceptance of TTD's Revised Fiscal Year 2022-23 Annual Comprehensive Financial Report and Responses to Questions Brought up During the Original Presentation to the Board at the December Meeting
C. Approval of Budget Amendment II for Fiscal Year 2024
D. Authorize Issuance of a Contract Award to Wood Rodgers, Inc. for Planning and Engineering Services for the State Route 28 Central Corridor Chimney Beach to Secret Harbor Parking, Transit, Trail, and Safety Improvements Project and Authorize the Deputy District Manager to Execute an Agreement in an Amount Not to Exceed $1,844,274
E. Authorize Issuance of a Contract Award to Wood Rodgers, Inc. for Planning and Engineering Services for the Spooner Summit Aquatic Invasive Species and Mobility Hub Project and Authorize the Deputy District Manager to Execute an Agreement in an Amount Not to Exceed $80,000
F. Authorize the District Manager to Finalize and Execute a Three-Year Plus Two One-Year Options Agreement with GMV Synchromatics Corporation in an Amount Not to Exceed $259,525

Mr. Speal moved to approve the consent calendar. Mr. Rice seconded the motion. The motion passed unanimously.

X. TAHOE TRANSPORTATION DISTRICT (TTD) BUSINESS ITEMS

A. Possible Delegation of Tahoe Transportation Commission Advisory Authority to the Program Implementation Committee when a Meeting is Required by the Tahoe Metropolitan Planning Commission in a Month the TTD Board is Not Scheduled to Meet

Mr. Hasty reviewed this item. Ms. Hill proposed to return to monthly Board meetings. Mr. Haven noted the Commission's role is an advisory role to the TRPA Governing Board and having the Committee provide that same venue for public hearings and comment and the representation on the Committee is appropriate to provide the same purpose. Ms. Bagwell stated the whole Board should be notified when the Committee is slated to have a Commission item.

Action Requested: For Possible Action

Mr. Bass moved to delegate the Tahoe Transportation Commission Advisory authority to the Program Implementation Committee when a meeting is required by the Tahoe Metropolitan Planning Commission in a month when the Board is not scheduled to meet as needed. Mr. Speal seconded the motion. The motion passed unanimously.

B. Nomination and Appointment of Committee Member to the Program Implementation Committee to Fill Vacancy and Discussion on Number of Members for the Finance and Personnel Committee and Possible Appointment

Mr. Hasty reviewed this item.

Action Requested: For Possible Action

Mr. Bass moved to appoint Mr. Friedrich to the Program Implementation Committee. Ms. Laine seconded the motion. The motion passed unanimously.

Mr. Suarez stated he feels three members on the Finance Committee are not enough. Ms. Bagwell stated she wants to have a quorum and doesn't think having five members would ensure a quorum and the Committee should stay at three members. Mr. Speal stated he would be interested. Ms. Laine stated she is also interested.

Mr. Chapman moved to appoint Mr. Speal and Ms. Laine to the Finance and Personnel Committee. Mr. Bass seconded the motion. The motion passed unanimously.

C. Facilitated Strategic Board Work Session for Short and Mid-Term Priorities to Complete Transit Multi-Modal Connectivity within the Greater Tahoe-Truckee Region from the I-80 to the US 50 Corridors

Mr. Hasty reviewed this item and introduced Caelan McGee, the facilitator. Julie Regan, Executive Director of TRPA, reviewed the four T categories, transit, trails, technology, and towns, with transit being the biggest item and most underfunded. Discussion was held regarding transit services, van pools, funding strategies, project prioritization, the Regional Transportation Plan, infrastructure, and rail. Mr. McGee noted the conversation held is a difficult one, due to the overlapping pieces, finer scale prioritization questions, sequencing questions that need to be mapped versus possible funding opportunities, and needs to sync with other plans, including evolving plans.

Action Requested: For Possible Action

No action was taken.

XI. DISTRICT MANAGER REPORT

Mr. Hasty reported he was going to the CalCOG meeting, will be headed to Washington DC in March, and next fiscal year's budget work has been started.

XII. BOARD, COMMISSION MEMBER AND STAFF REQUESTS AND COMMENTS

Mr. Speal commented he was able to use transit to attend the meeting on time.

XIII. PUBLIC INTEREST COMMENTS

There were no further public interest comments.

XIV. ADJOURNMENT

The meeting adjourned at 5:14 p.m.

Respectfully Submitted:

Judi Allen
Executive Assistant
Clerk to the Board
Tahoe Transportation District

(The above meeting was recorded in its entirety, anyone wishing to listen to the aforementioned tapes, please contact Judi Allen, Clerk to the Board, (775) 589-5502.)

TAHOE TRANSPORTATION DISTRICT
PROGRAM IMPLEMENTATION COMMITTEE
MEETING MINUTES
January 12, 2024

Committee Members in Attendance:

Wesley Rice, Chair, Douglas County
Andy Chapman, TNT-TMA
Brendan Ferry, El Dorado County (attended remotely)
John Friedrich, City of South Lake Tahoe
Nick Speal, CA Gov Appointee
Raymond Suarez, SS-TMA (attended remotely)

Committee Members Absent:

Brian Bigley, Member at Large

Others in Attendance:

Carl Hasty, Tahoe Transportation District
Jim Marino, Tahoe Transportation District
Joanie Schmitt, Tahoe Transportation District
George Fink, Tahoe Transportation District
Leslie Conard, Tahoe Transportation District
Judi Allen, Tahoe Transportation District

I. CALL TO ORDER AND GENERAL MATTERS

A. Roll Call and Determination of Quorum
The meeting of the Committee was called to order by Mr. Rice at 2:19 p.m. at the Tahoe Regional Planning Agency and via GoToWebinar. Roll call was taken and it was determined a quorum was in attendance for the Committee.

B. Approval of Agenda of January 12, 2024
Motion/second by Mr. Chapman/Mr. Speal to approve the agenda for today's meeting. The motion passed unanimously.

C. Approval of Meeting Minutes for November 1, 2023
Motion/second by Mr. Ferry/Mr. Suarez to approve the minutes. The motion passed unanimously.

II. PUBLIC INTEREST COMMENTS

There were no public comments.

III. DISCUSSION ITEMS

A. Review and Recommend the Award of a Contract to Wood Rodgers, Inc. for Planning and Engineering Services for the State Route 28 Central Corridor Chimney Beach to Secret Harbor Parking, Transit, Trail, and Safety Improvements Project in an Amount Not to Exceed $1,844,274 to the TTD Board of Directors
Mr. Marino reviewed this item. Mr. Ferry asked when construction would occur. Mr. Marino anticipates construction in fiscal year 2026-27 and expects the Spooner Summit mobility hub to be completed prior to construction starting. Mr. Speal asked if VMT studies will be completed. Mr. Marino stated yes. Mr. Friedrich asked if design

for EV charging will be included. Mr. Marino stated yes, dependent on the physical suitability of the locations.

Action Requested: For Possible Action

Mr. Chapman moved to recommend award of a contract to Wood Rodgers, Inc. for planning and engineering services for the State Route 28 Central Corridor Chimney Beach to Secret Harbor Parking, Transit, Trail and Safety Improvements project in an amount not to exceed $1,844,274 to the TTD Board of Directors. Mr. Speal seconded the motion. The motion passed unanimously.

B. Review and Recommend the Award of a Contract to Wood Rodgers, Inc. for Planning and Engineering Services for the Spooner Summit Aquatic Invasive Species and Mobility Hub Project in an Amount Not to Exceed $80,000 to the TTD Board of Directors

Mr. Marino reviewed this item. Mr. Speal commented he does not like the location for a park and ride and feels it should be at the bottom of Spooner Summit in Carson City. Mr. Ferry noted El Dorado County is partnering with TRPA to help deliver a permanent Aquatic Invasive Species station in Meyers.

Action Requested: For Possible Action

Mr. Suarez moved to recommend award of a contract Wood Rodgers, Inc. for planning and engineering services for the Spooner Summit Aquatic Invasive Species and Mobility Hub project in an amount not to exceed $80,000 to the TTD Board of Directors. Mr. Friedrich seconded the motion. The motion passed unanimously.

C. Review and Recommend Acceptance of TTD's Revised Fiscal Year 2022-23 Annual Comprehensive Financial Report to the TTD Board of Directors and Review Responses to Questions Brought up During the Original Presentation to the Board at the December Meeting

Ms. Schmitt reviewed this item.

Action Requested: For Possible Action

Mr. Speal moved to recommend acceptance of TTD's revised fiscal year 2022-23 Annual Comprehensive Financial Report to the TTD Board of Directors. Mr. Rice seconded the motion. The motion passed unanimously.

D. Informational Update Regarding Tahoe Transportation District's Federal Transit Administration's Triennial Review and Transportation Development Act's Triennial Audit

Ms. Conard reviewed this item. Mr. Speal asked for a review of the fixed route performance indicators table. Mr. Fink reviewed those items. Mr. Speal requested an updated performance indicators table with fiscal year 22/23 data incorporated.

Action Requested: Informational Only

E. Informational Update on Tahoe Transportation District Active Capital Improvement Program Projects
Mr. Marino reviewed this item. Mr. Fink noted the District will be having an EV van for a demonstration at the college on January 23.

Action Requested: Informational Only

IV. DISTRICT MANAGER REPORT

Mr. Hasty congratulated Mr. Rice on becoming chair of the Douglas County Commission. Mr. Hasty brought up the idea of the committee acting on the Board's behalf to make the Tahoe Transportation Commission recommendations to TRPA's Governing Board on the months the Board doesn't meet.

V. COMMITTEE MEMBER REQUESTS AND COMMENTS

Mr. Chapman commented they are withdrawing their support to plow the Tahoe East Shore parking lots this winter due to onerous requirements from Washoe County and/or Corridor Management team.

Mr. Suarez asked about developing a regional transit five to ten year media advertising strategy to generate revenue.

Mr. Speal shared his experience trying to take transit to the meeting today, mentioning that Route 50 stops at the Gondola and the sidewalks were not plowed, Lake Link had a 95 minute wait for a ride from the Gondola to the meeting, and thanked Mr. Friedrich for giving him a ride to the meeting.

VI. PUBLIC INTEREST COMMENTS

There were no public comments.

VII. ADJOURNMENT

The meeting adjourned at 4:15 p.m.

Respectfully Submitted:

Judi Allen
Executive Assistant
Clerk to the Board
Tahoe Transportation District

(The above meeting was recorded in its entirety, anyone wishing to listen to the aforementioned tapes, please contact Judi Allen, Clerk to the Board (775) 589-5502.)

Tahoe Transportation DISTRICT

Connecting our communities

MEMORANDUM

Date: March 27, 2024

To: Tahoe Transportation District (TTD) Board of Directors

From: TTD Staff – Joanie Schmitt, CFO

Subject: Review and Acceptance of the District's Financial Statement of Operations for the First Seven Months of Fiscal Year 2024 Through January 31, 2024

Action Requested:
It is requested the Board accept the Financial Statement of Operations for the first seven months of fiscal year 2024 (FY24) ending January 31, 2024.

Fiscal Analysis:
TTD is reporting increases to the overall FY24 fund balances through January 31, 2024, of $230,628 in the General Fund, $2,034 in the Capital Improvement Program (CIP) Fund, $1,996,314 in the Transit Operations (TO) Fund, and $34,210 in the Parking Systems (PS) Fund.

Background:
Staff has completed analyzing financial information for the first seven months of FY24, ended January 31, 2024. The presentation of the financial information will highlight December and January activity and continues to detail TTD's funds: General, CIP, TO, and PS. (Attachment A.)

Discussion:
General Fund –
Overall, the District ended with an increase of $66,712 for December and January activity. The increase can be summarized as follows:

District Operations Revenues		**District Operations Expenses**	
State of Nevada	$55,000	Personnel	$100,454
Local Revenues	$30,517	Admin Support (ICAP)	($93,898)
Rental Car Mitigation Fees (RCMF)	$11,821	Insurance	$4,583
Administrative Fees	$807	Rent, incl. Utilities	$7,635
Contributions	$21,499	Telephone	$2,483
Miscellaneous	$0	Professional Services	$3,038
Interest	$2,737	Dues, Subscriptions, Fees	$3,382
		Supplies	$3,069
		Transfer - Grant Match	$325
		Legal Fees	$2,067
		N. Shore Transit Mgmt.	$20,000
		Other	$2,531
Total Revenues	**$122,381**	**Total Expenses**	**$55,669**

JS/ja

AGENDA ITEM: VIII.A.

Local Revenues totaling $30,517 consist of $8,334 received from Douglas County; $21,350 from Washoe County, including $15,100 advanced to TTD in support of hiring the Deputy District Manager; and $833 from Carson City. Placer County's annual amount of $52,500, along with El Dorado County's annual amount of $15,000, will be invoiced during the second half of FY24.

TTD recorded an annual contribution of $20,000 to Truckee North Tahoe Transportation Management Association for support of North Shore transit management in January.

The net result increased the General Fund's overall fund balance to $1,116,370, which is $230,628 more than at the start of the fiscal year.

CIP Fund –
December and January activity ended in an increase of $474, resulting from interest of $495 earned on project advances, less bank fees of $21. Below is a brief recap of December and January activity for the CIP Fund.

Funding Source	Expenditures	Grant Balance
Caltrans		
Congestion Mitigation Air Quality (CMAQ)	$1,241	$517,899
Federal Transit Administration		
FTA 5339 (NDOT Planning)	$0	$74,281
TDA STA Reserve (Match)	$0	$18,570
FTA 5339 (NDOT Bus Purchases)	$0	$0
TDA LTF Reserve (Match)	$0	$0
TDA STA Reserve (Match)	$432	$0
FTA 5339 (FY17)	$0	$24,519
FTA 5339 (FY18)	$0	$0
FTA 5339 (FY19)	$0	$167,969
TDA LTF (FY24)	$0	$0
FTA 5339 (FY20 & FY21)	$15,808	$123,704
TDA LTF Reserve (Phoenix Bus Purchase)	$0	$400,000
FTA 5339C (FY18)	$0	$694,184
FTA 5310 (FY17 & 19)	$0	$35,187
US DOT		
SMART	$75,596	$1,401,860
US Fish & Wildlife Service		
Spooner Mobility Hub	$4,868	$183,112
NDOT		
Recreational Travel Phase II	$4,762	$149,332
General Fund (Match)	$251	$7,859
TAP – SR 28 North Parking Lots	$18,916	$1,140,012
Washoe County Bond Sale (Match)	$996	$354,232
Surface Transportation Block Grant (STBG)		
Caltrans – US 50	$13,498	$1,849,479
NDOT – Incline Mobility Hub Concept Study	$18,944	$39,657
TDA LTF Reserve (Match)	$997	$2,087
NDOT – Facility Plan	$107,869	$451,852
Douglas County (Match)	$5,677	$23,748
NDOT – Central Corridor (Chimney)	$8,066	$2,313,860
Tahoe Fund (Match)	$389	$8,028
Highway Infrastructure Program (HIP)		
Caltrans – US 50	$0	$470,655

California Office of Emergency Services	$6,589	$57,365
CTC (Match)	$2,196	$19,122
General Fund (Match)	$74	$366
California Sustainable Planning (ZEB)	$1,981	$304,112
TDA LTF Reserve (Match)	$257	$39,401
Bank Fees	$22	
Total Expenditures	$289,429	

The CIP fund purchased a utility trailer totaling $15,808 using FTA 5339 FY20 and FY21 funds. The trailer was transferred to the Transit Operations Fund "Fixed Assets" and will be depreciated over five years.

The net December and January activity resulted in increasing CIP's overall fund balance to $5,327, which is $2,034 (interest net bank fees) more than at the start of the fiscal year.

Transit Fund -
Overall, the District ended with a decrease of $19,779 for December and January activity. The decrease can be summarized as follows:

	Operations
Revenue Detail	
FTA	
5307	$613,478
5311	$291,260
5310	$0
Transportation Development Act (TDA)	$437,318
Low Carbon Transit Operations Program	$0
Nevada State Parks	$0
El Dorado County	$0
Solar Renewable Energy Credits	$1,838
Hybrid Voucher Incentive Program	$90,000
Miscellaneous	$334
Sale of Fixed Asset (Scrap)	$0
Insurance Claims	$1,118
Interest	$6,541
Total Revenues	**$1,441,887**
Expense Detail	
Personnel	$971,069
Fuel/Fuel Tax	$47,481
Insurance	$36,212
Repairs/Maintenance	$38,518
Professional Services/Contracts	$60,673
Facility Rent/Utilities/Phone	$64,737
Supplies	$10,636
Dues, Subscriptions, Member Fees	$15,861
ICAP	$90,174
Transfer - Grant Match	$1,686
Depreciation/Amortization/Warranty	$133,969
Advertising/Outreach	$773
Equipment under $5K	$0
Capital Outlay	($15,808)
Other Expenses	$5,685

	Operations
Total Expenses	$1,461,666
Increase/(Decrease)	**($19,779)**

As mentioned earlier, TTD's CIP Fund transferred a utility trailer totaling $15,808 to the Transit Operations Fund "Fixed Assets".

The Transit Operations Fund received $90,000 from Calstart for the Hybrid Voucher Incentive Program. TTD purchased two overhead chargers and one pedestal charger from Proterra in FY22 that qualified for the program. The funds were used as farebox replacement and taken off the December balance of transit operational expenses prior to allocating costs between rural (5311) and urban (5307) programs.

The net result increased Transit's overall fund balance for the year to $12,678,246, which is $1,996,314 more than at the start of the fiscal year.

Parking System (PS) Fund-
The Parking System Fund experienced a decrease of $240,024 for December and January activity. The recap is as follows:

Parking Systems Revenues		**Parking Systems Expenses**	
Parking Meters	$1,133	Personnel	$3,337
Parking Event Fees	$0	Contracts	$234,922
Parking Non-Compliance	$1,620	Professional Services	$4,154
Interest	$1,992	Subscriptions, Dues	$60
		Telephone	$166
		Admin Fees	$807
		Bank/Credit Card Fees	$1,323
		Supplies	$0
		Other	$0
Total Revenue	**$4,745**	**Total Expenses**	**$244,769**

The decrease was expected as Washoe County slurry sealed the bike path earlier in the fall and submitted an invoice for reimbursement in December. Staff are working with Nevada State Parks to submit their invoice for expenses incurred during the first half of FY24.

Year-to-date revenues and expenses between Parking Systems Operations and Parking Systems Non-Compliance are provided in the PS Financial Statement.

The net result increased Parking System's overall fund balance for the year to $743,664, which is $34,210 more than at the start of the fiscal year.

Balance Sheet-
The detailed balance sheet as of January 31, 2024, is included in Attachment A.

The capital asset balance, net of depreciation and amortization, includes $8,113,392 in Transit funds, $0 in the Government-wide funds, and $0 in the Parking System funds of federalized/state obligations. Should the District choose to liquidate a federalized/state asset, permission from the governmental agency is required and their obligation takes priority.

Cash Flows –
Staff has included FY24 cash flows for the governmental funds (General and CIP), along with the enterprise funds (TO and PS) in Attachment B.

Updated Grant Status Report -
Staff has updated the Grant Requests/Awards/Closeouts (Attachment C).

Additional Information:
If you have any questions or comments regarding this item, please contact Joanie Schmitt at (775) 589-5507 or jschmitt@tahoetransportation.org.

Attachments:
A. January Financial Statement
B. FY24 Cash Flow
C. Updated Grant Status Report

Tahoe Transportation District
Balance Sheet
As of January 31, 2024

	TOTAL	General	CIP	Transit	PS	GFA
ASSETS						
Cash & Equivalents	4,726,070	1,168,054	(82,579)	2,659,470	981,126	0
Accounts Receivable	2,524,046	24,321	321,119	2,178,309	298	
Prepaids	379,635	97,635	968	280,875	157	
Inventory	377,823			377,823		
*Capital Assets, Net Depreciation and Amortization	8,507,822			8,507,822		
TOTAL ASSETS	**16,515,397**	**1,290,009**	**239,507**	**14,004,300**	**981,581**	**0**
LIABILITIES						
Accounts Payable	470,925	10,098	96,825	126,086	237,916	
Deferred Revenues	1,204,541	163,541	137,355	903,645		
Nevada State Bank - LOC						
Subscriptions Payable	99,593			99,593		
Insurance Payable	73,632			73,632		
EE Compensated Absences	122,718			122,718		32,008
Accrued Interest Payable	380			380		
TOTAL LIABILITIES	**1,971,788**	**173,639**	**234,179**	**1,326,054**	**237,916**	**32,008**
NET POSITION						
Invested in Capital Assets	6,502,700			6,502,700		
Restricted	1,458,391			1,458,391		
Unrestricted	4,246,917	816,622		2,720,841	709,454	(36,218)
Assigned	72,413	69,120	3,293			
SUB TOTAL NET POSITION BALANCES	12,280,422	885,742	3,293	10,681,932	709,454	(36,218)
FY 24 Increase/(Decrease) to Fund Balance	**2,263,187**	**230,628**	**2,034**	**1,996,314**	**34,210**	**4,210**
TOTAL NET POSITION	**14,543,609**	**1,116,370**	**5,327**	**12,678,246**	**743,664**	**(32,008)**
TOTAL LIABILITIES & NET POSITION	**16,515,397**	**1,290,009**	**239,507**	**14,004,300**	**981,581**	**0**

* The fixed asset and land balances, net of depreciation/ amortization, include $8,113,392 in transit funds, $0 in the governmental-wide fund account and $0 in parking system funds of federalized / state obligations. Should the District choose to liquidate a federalized asset, permission from the governmental agency is required and their obligation takes priority.

Tahoe Transportation District
Statement of Operations
July 1, 2023 through January 31, 2024

	TOTAL	General	CIP	Transit	PS	GFA
Revenues						
Federal Grants	5,712,078	0	2,471,791	3,240,287	0	0
State Funding	1,669,417	192,500	56,648	1,420,269		
Contributions	22,375	21,499	876			
Local Revenues	69,059	69,059				
General Revenues	45,560	500		45,059		
Charges for Services	449,197	86,332		(558)	363,423	
Special Items	51,147	8,493	2,100	32,371	8,183	
Pass-Through Revenue						
TOTAL REVENUES	**8,018,833**	**378,382**	**2,531,415**	**4,737,429**	**371,606**	**0**
Expenses						
Personnel	2,987,170	265,490	72,712	2,610,728	38,240	0
Personnel - Compensated Absences	24,043			24,043		(4,210)
Contracts	612,288		374,105		238,182	
Fuel	178,251			178,251		
Depreciation, Amortization, Warranty	421,322			421,322		
Other Operating	1,433,839	150,751	67,239	1,154,876	60,973	
ICAP - 10%		(269,523)	8,269	261,254		
Capital Outlay	96,970			96,970		
Interest	1,763		432	1,331		
Other Funding Sources		1,037	2,006,622	(2,007,659)		
Pass-Through Expenses						
TOTAL EXPENSES	**5,755,646**	**147,754**	**2,529,381**	**2,741,115**	**337,396**	**(4,210)**
FY 24 Increase / (Decrease) to Fund Balance	**2,263,187**	**230,628**	**2,034**	**1,996,314**	**34,210**	**4,210**

Tahoe Transportation District
General Fund
Statement of Operations
July 1, 2023 through January 31, 2024

			General Fund Activity			Actual vs Budget			Program YTD
	1st Qtr	Oct - Nov	Dec	Jan	Dec & Jan	YEAR TO DATE	Board Approved Budget	Var %	District Ops
Revenues									
General Revenues									
State Revenue - NV	82,500	55,000	27,500	27,500	55,000	192,500	330,000	58.33%	192,500
Local Revenues	21,875	16,667	22,808	7,709	30,517	69,059	190,100	36.33%	69,059
Contributions				21,499	21,499	21,499	21,500	99.99%	21,499
Miscellaneous	500					500	500	-100.00%	500
Total General Revenues	**104,875**	**71,667**	**50,308**	**56,708**	**107,016**	**283,558**	**542,100**	**52.31%**	**283,558**
Charges for Services									
Administrative Fees	27,689	7,846	763	44	807	36,342	50,430	72.06%	36,342
Rental Car Mitigation Fees	32,097	6,072	8,631	3,190	11,821	49,989	85,000	58.81%	49,989
Total Charges for Services	**59,786**	**13,918**	**9,394**	**3,234**	**12,627**	**86,332**	**135,430**	**63.75%**	**86,332**
Special Items									
Sale of Fixed Assets									
Interest Revenue	2,732	3,023	1,095	1,643	2,738	8,493	10,000	84.93%	8,493
Total Special Revenues	**2,732**	**3,023**	**1,095**	**1,643**	**2,738**	**8,493**	**10,000**	**84.93%**	**8,493**
TOTAL REVENUES	**167,392**	**88,609**	**60,797**	**61,584**	**122,381**	**378,382**	**687,530**	**55.04%**	**378,382**
Expenses									
Operating									
Personnel	93,515	71,520	53,376	47,078	100,454	265,490	496,568	53.46%	265,490
Admin Support	(101,388)	(74,238)	(53,088)	(40,809)	(93,898)	(269,523)	(470,154)	57.33%	(269,523)
Repairs & Maintenance							250	0.00%	
Insurance	6,874	4,583	2,291	2,291	4,583	16,040	31,490	50.94%	16,040
Facility Rent	11,789	7,385	3,942	3,692	7,635	26,809	53,940	49.70%	26,809
Telephone	4,269	2,483	1,242	1,241	2,483	9,236	16,260	56.80%	9,236
Supplies	4,016	2,676	1,539	1,530	3,069	9,761	21,132	46.19%	9,761
Advertising & Public Relations	719	490		150	150	1,360	1,500	90.66%	1,360
Reproduction & Printing	208		60		60	268	750	35.76%	268
Postage				424	424	424	500	84.80%	424
Dues, Subscriptions & Publications	6,495	2,353	1,740	1,642	3,382	12,230	15,754	77.63%	12,230
License & Permits				500	500	500		-100.00%	500
Professional Services/Contracts	4,232	2,427	1,240	1,797	3,038	9,696	48,290	20.08%	9,696
Legal Services	1,047	9,012	1,819	248	2,067	12,126	25,000	48.51%	12,126
Auditing Services	22,000	6,810				28,810	36,810	78.27%	28,810
Bank Fee / CC Fees	61	101	63	55	119	281	800	35.14%	281
Transit Management - No Shore				20,000	20,000	20,000	20,000	100.00%	20,000
Training			560		560	560	3,500	16.00%	560
Travel	438	494	215		215	1,147	8,314	13.80%	1,147
Events		348	210	10	220	568	1,500	37.85%	568
Miscellaneous Expenses	332	320	196	87	283	935	25,000	3.74%	935
Total Operating	**54,608**	**36,765**	**15,407**	**39,937**	**55,344**	**146,717**	**337,204**	**43.51%**	**146,718**
Capital Outlay									
Office & Equipment over $5000	0	0	0	0	0	0	0	**100.00%**	0
Office & Equipment under $5000									
CIP over $5000									
Reimbursed Capital Expenses									
Total Capital Outlay	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**100.00%**	**0**

Tahoe Transportation District
General Fund
Statement of Operations
July 1, 2023 through January 31, 2024

			General Fund Activity			Actual vs Budget			Program YTD
	1st Qtr	Oct - Nov	Dec	Jan	Dec & Jan	YEAR TO DATE	Board Approved Budget	Var %	District Ops
Interest									
Interest Expense	0	0	0	0	0	0	500	0.00%	0
Total Interest Expense	**0**	**0**	**0**	**0**	**0**	**0**	**500**	**0.00%**	**0**
Other Financing Sources									
Preventive Maint (In)									
Capital Outlay (In) Out									
Transfer (In) Out	537	175	242	83	325	1,037	5,484	18.90%	1,037
Total Other Financing Sources	**537**	**175**	**242**	**83**	**325**	**1,037**	**5,484**	**18.90%**	**1,037**
TOTAL EXPENSES	55,146	36,939	15,649	40,020	55,669	147,754	343,188	**43.05%**	147,754
Increase/(Decrease) to Fund Balance	**112,247**	**51,669**	**45,148**	**21,564**	**66,712**	**230,628**	**344,342**	**66.98%**	**230,628**

Tahoe Transportation District
CIP Fund
Statement of Operations
July 1, 2023 through January 31, 2024

			CIP Fund			Actual vs Budget			Program YTD							
	1st Qtr	Oct - Nov	Dec	Jan	Dec & Jan	YEAR TO DATE	Board Approved Budget	Var %	US 50	Regional Revenue - Rec Travel	Stateline to Stateline Bikeway (Parking Lots)	Facility Plans, IMH, SMH, Warrior Way, Upgrade	SMART	Hazard Plan	Transit Ops Projects	Program Total
Revenues																
Capital Grant & Contributions																
Surface Transportation Program (STP)	93,168	50,216	108,770	43,709	152,480	295,864	1,967,032	15.04%	46,206	13,625	16,687	219,346				295,864
Congestive Mitigation & Air Quality (CMAQ)	3,845	3,209	279	962	1,241	8,295	102,500	8.09%	8,295							8,295
Fish & Wildlife Services Fund			2,696	2,173	4,868	4,868	187,981	0.00%				4,868				4,868
US Dept of Transportation - SMART	3,576	7,968	41,911	33,685	75,596	87,140	1,301,696	6.69%					87,140			87,140
Highway Infrastructure Pgm (HIP)							416,081	0.00%								
Infrastructure - COVID	335	492	252	407	659	1,486	28,375	5.24%			1,486					1,486
Office of Emergency Services (CalOES)	8,316	711	467	6,122	6,589	15,617	42,671	36.60%						15,617		15,617
Federal Transportation Administration		2,053,125	15,808		15,808	2,068,933	4,910,933	42.13%							2,068,933	2,068,933
Transportation Alternative Programs (TAP)	3,715	3,230	9,277	9,640	18,916	25,861	413,643	6.25%			25,861					25,861
CA Sustainable Transportaiton Planning	1,637	758		1,981	1,981	4,376	278,343	1.57%				4,376				4,376
Prop 1B								100.00%								
Washoe County	196	170	488	507	996	1,361	21,771	6.25%			1,361					1,361
Douglas County	2,840	915	4,481	1,197	5,677	9,432	19,736	47.79%				9,432				9,432
Contributions	2,969	527	305	2,281	2,585	6,082	40,506	15.01%			876			5,206		6,082
Total Capital Grants & Contributions	**120,597**	**2,121,321**	**184,733**	**102,664**	**287,397**	**2,529,315**	**9,731,268**	**25.99%**	**54,501**	**13,625**	**46,271**	**238,023**	**87,140**	**20,822**	**2,068,933**	**2,529,315**
Special Items																
Interest Revenue	961	643	203	292	495	2,100	2,700	77.77%	0	0	1,661	439	0	0	0	2,100
Total Special Items	**961**	**643**	**203**	**292**	**495**	**2,100**	**2,700**	77.77%	**0**	**0**	**1,661**	**439**	**0**	**0**	**0**	**2,100**
TOTAL REVENUES	**121,558**	**2,121,964**	**184,936**	**102,956**	**287,892**	**2,531,415**	**9,733,968**	**26.01%**	**54,501**	**13,625**	**47,932**	**238,462**	**87,140**	**20,822**	**2,068,933**	**2,531,415**
Expenses																
Personnel	21,872	22,339	16,638	11,863	28,501	72,712	471,141	15.43%	8,148	12,843	25,003	12,732	11,055	2,932		72,712
Contract Services	91,948	43,626	150,527	88,004	238,531	374,105	4,248,396	8.81%	45,484		18,745	225,626	71,265	12,985		374,105
Reproduction & Printing							4,800	0.00%								
Rent Meeting Room							2,300	0.00%								
Supplies							2,700	0.00%								
License & Permits		13,355		215	215	13,570	41,855	32.42%		215					13,355	13,570
Advertising / Outreach							4,200	0.00%								
Postage							1,500	0.00%								
Utilities								100.00%								
Professional Services	2,882	45,183	156	2,041	2,196	50,261	102,075	49.24%				110	138	5,206	44,808	50,261
Administrative Fees								100.00%								
Bank Fees	23	22	12	10	22	66	180	36.47%			52	14				66
Training							5,000	0.00%								
Travel - Per Diem	1,606					1,606		-100.00%					1,606			1,606
Travel - Commercial Air	1,538					1,538		-100.00%					1,538			1,538
Travel - Auto	176	23				198	1,070	18.55%	50		23		126			198
Miscellaneous								100.00%								
Dues & Subscriptions							265	0.00%								
Interest				432	432	432	432	100.06%							432	432
ICAP - 10%	2,388	2,157	2,560	1,164	3,724	8,269	30,154	27.42%	820	1,284	2,500	2,234	1,431			8,269
Total Operating	**122,433**	**126,704**	**169,892**	**103,729**	**273,621**	**522,758**	**4,916,068**	**10.63%**	**54,501**	**14,342**	**46,323**	**240,715**	**87,158**	**21,123**	**58,595**	**522,758**

Tahoe Transportation District
CIP Fund
Statement of Operations
July 1, 2023 through January 31, 2024

	CIP Fund					Actual vs Budget			Program YTD							
	1st Qtr	Oct - Nov	Dec	Jan	Dec & Jan	YEAR TO DATE	Board Approved Budget	Var %	US 50	Regional Revenue - Rec Travel	Stateline to Stateline Bikeway (Parking Lots)	Facility Plans, IMH, SMH, Warrior Way, Upgrade	SMART	Hazard Plan	Transit Ops Projects	Program Total
Capital Outlay																
Equipment over $5000	0	2,229,578	15,808	0	15,808	2,245,386	5,484,586	40.94%	0	0	0	0	0	0	2,245,386	2,245,386
Equipment under $5000		96,970				96,970	111,970	86.60%							96,970	96,970
CIP Over $5000								100.00%								
Reimb Capital Expenses		(2,326,548)	(15,808)		(15,808)	(2,342,356)	(5,596,556)	41.85%							(2,342,356)	(2,342,356)
Total Capital Outlay	**0**	**0**	**0**	**0**	**0**	**0**	**0**	100.00%	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Other Financing Sources																
Preventive Maint (In)	0	0	0	0	0	0	0	100.00%	0	0	0	0	0	0	0	0
Capital Outlay (In) Out		2,326,548	15,808		15,808	2,342,356	5,596,556	41.85%							2,342,356	2,342,356
Transfer (In) Out	(1,813)	(331,910)	(956)	(1,055)	(2,011)	(335,734)	(781,176)	42.98%		(717)		(2,679)	(19)	(301)	(332,018)	(335,734)
Total Other Financing Sources	**(1,813)**	**1,994,638**	**14,852**	**(1,055)**	**13,797**	**2,006,622**	**4,815,380**	41.67%	**0**	**(717)**	**0**	**(2,679)**	**(19)**	**(301)**	**2,010,338**	**2,006,622**
TOTAL EXPENSES	**120,620**	**2,121,342**	**184,744**	**102,674**	**287,418**	**2,529,381**	**9,731,448**	25.99%	**54,501**	**13,625**	**46,323**	**238,036**	**87,140**	**20,822**	**2,068,933**	**2,529,381**
Increase / (Decrease) to Fund Balance	**939**	**622**	**192**	**282**	**474**	**2,034**	**2,520**	80.72%	**0**	**0**	**1,608**	**426**	**0**	**0**	**0**	**2,034**

Tahoe Transportation District
Transit Fund
Statement of Operations
July 1, 2023 through January 31, 2024

			TO Fund Activity			Actual vs Budget			Program YTD
	1st Qtr	Oct - Nov	Dec	Jan	Dec & Jan	YEAR TO DATE	Board Approved Budget	Var %	Transit Operations
Revenues									
Grants & Contributions									
FTA 5311	212,827	260,445	154,256	137,004	291,260	764,532	1,221,708	62.58%	764,532
FTA 5307	1,137,373	601,414	391,888	221,590	613,478	2,352,265	4,927,657	47.74%	2,352,265
FTA 5310		33,490				33,490	98,544	33.98%	33,490
TDA - LTF		500,500	100,100	100,100	200,200	700,700	1,249,601	56.07%	700,700
TDA - STA		333,544	66,708	163,139	229,847	563,391	894,559	62.98%	563,391
TDA - SGR		27,652	3,461	3,810	7,271	34,923	104,375	33.46%	34,923
LCTOP								100.00%	
NV State Parks	85,000					85,000	85,000	100.00%	85,000
El Dorado County	35,936					35,936	40,936	87.79%	35,936
Solar Renewable Energy Credits	(2,395)		1,838		1,838	(558)	20,000	-2.79%	(558)
Sac Emergency Clean Air								100.00%	
Hybrid Voucher Incentive Pgm			90,000		90,000	90,000	90,000	100.00%	90,000
Contributions								100.00%	
Total Grants & Contributions	**1,468,741**	**1,757,045**	**808,251**	**625,643**	**1,433,894**	**4,659,680**	**8,732,380**	**53.36%**	**4,659,680**
Charges for Services									
FareBox Revenue	0	0	0	0	0	0	0	100.00%	0
Pass Sales								100.00%	
Advertising Revenue								100.00%	
Total Charges for Services	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**100.00%**	**0**
Special Items									
Sale of Fixed Assets	0	592	0	0	0	592	1,500	39.47%	592
Miscellaneous	13,379	12	9	325	334	13,725	19,400	70.75%	13,725
Insurance Claim Revenues	23,971	6,564	1,118		1,118	31,653		-100.00%	31,653
Interest Revenue	16,452	8,787	2,221	4,320	6,541	31,779	33,500	94.86%	31,779
Total Special Items	**53,802**	**15,955**	**3,348**	**4,645**	**7,993**	**77,750**	**54,400**	**142.92%**	**77,750**
Pass Through Revenue	0	0	0	0	0	0	0	**100.00%**	0
TOTAL REVENUES	**1,522,543**	**1,772,999**	**811,599**	**630,288**	**1,441,887**	**4,737,429**	**8,786,780**	**53.92%**	**4,737,429**
Expenses									
Operating									
Personnel	975,447	688,255	572,735	398,334	971,069	2,634,771	5,014,195	52.55%	2,634,771
Contract								100.00%	
Vehicle Fuel	84,312	46,604	23,706	23,630	47,335	178,251	375,000	47.53%	178,251
Sales Tax on Fuel	157		146		146	303	1,000	30.30%	303
Repair and Maintenance	203,362	300,920	22,718	15,801	38,518	542,800	991,560	54.74%	542,800
Insurance	48,723	39,834	19,426	16,786	36,212	124,770	369,204	33.79%	124,770
Reproduction & Printing	427	340	60	190	250	1,017	5,325	19.10%	1,017
Facility Rent	47,762	30,105	15,008	13,941	28,949	106,817	181,553	58.84%	106,817
Facility Utilities	28,312	17,639	18,233	10,088	28,322	74,273	202,600	36.66%	74,273
Telephone	8,438	8,504	3,733	3,733	7,466	24,408	37,920	64.37%	24,408

Tahoe Transportation District
Transit Fund
Statement of Operations
July 1, 2023 through January 31, 2024

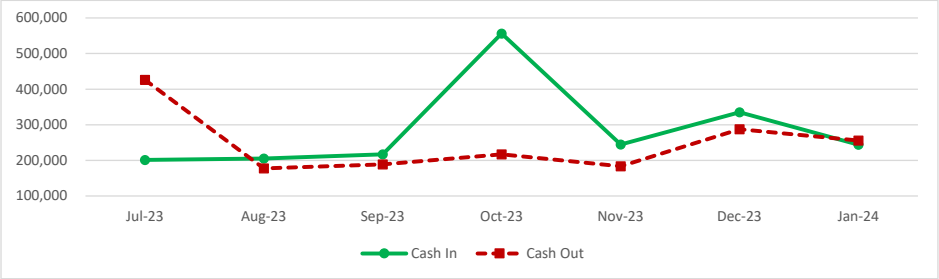
			TO Fund Activity			Actual vs Budget			Program YTD
	1st Qtr	Oct - Nov	Dec	Jan	Dec & Jan	YEAR TO DATE	Board Approved Budget	Var %	Transit Operations
Expenses Continued									
Supplies	16,259	17,429	5,356	5,281	10,636	44,325	73,450	60.35%	44,325
Advertising & Public Relations	4,651	223	434	339	773	5,648	75,000	7.53%	5,648
License & Permits	535			75	75	610	1,200	50.82%	610
Dues, Subscriptions and Publications	15,450	9,406	5,650	10,211	15,861	40,717	196,080	20.77%	40,717
Professional Services	66,062	33,294	25,169	35,505	60,673	160,029	415,160	38.55%	160,029
Bank Fees	1,488	1,079	542	636	1,178	3,745	7,200	52.02%	3,745
Training	3,769	1,850				5,619	26,625	21.10%	5,619
Travel	4,523	7,419	746	673	1,418	13,360	29,455	45.36%	13,360
Reimbursed Travel		124	(124)	650	526	650		-100.00%	650
Miscellaneous Expenses	2,918	1,961	1,632	605	2,237	7,116	55,325	12.86%	7,116
ICAP - 10%	99,000	72,081	50,528	39,645	90,174	261,254	440,000	59.38%	261,254
Depreciation/Amortization/Warranty	157,320	130,033	68,042	65,926	133,969	421,322	639,360	65.90%	421,322
Total Operating	**1,768,915**	**1,407,101**	**833,740**	**642,048**	**1,475,788**	**4,651,804**	**9,137,212**	**50.91%**	**4,651,804**
Capital Outlay									
Equipment under $5000	0	96,970	0	0	0	96,970	111,970	86.60%	96,970
Disposal of Fixed Assets								100.00%	
Reimbursed Capital Expenses								100.00%	
Total Capital Outlay	**0**	**96,970**	**0**	**0**	**0**	**96,970**	**111,970**	**86.60%**	**96,970**
Other Financing Sources									
Capital Outlay (In) Out	0	(2,326,548)	(15,808)	0	(15,808)	(2,342,356)	(5,596,556)	41.85%	(2,342,356)
Transfer (In) Out	1,276	331,735	714	972	1,686	334,697	775,692	43.15%	334,697
Total Other Financing Sources	**1,276**	**(1,994,813)**	**(15,094)**	**972**	**(14,122)**	**(2,007,659)**	**(4,820,864)**	**41.65%**	**(2,007,659)**
Pass Through Expenses	0	0	0	0	0	0	0	**100.00%**	0
TOTAL EXPENSES	**1,770,191**	**(490,742)**	**818,645**	**643,021**	**1,461,666**	**2,741,115**	**4,428,318**	**61.90%**	**2,741,115**
Increase / Decrease) to Fund Balance	**(247,648)**	**2,263,741**	**(7,046)**	**(12,733)**	**(19,779)**	**1,996,314**	**4,358,462**	**45.80%**	**1,996,314**

Tahoe Transportation District
Parking Systems Fund
Statement of Operations
July 1, 2023 through January 31, 2024

			Parking System Activity			Actual vs Budget			Parking Systems		
	1st Qtr	Oct - Nov	Dec	Jan	Dec & Jan	YEAR TO DATE	Board Approved Budget	Var %	PS Ops	PS NC	Program YTD
Revenues											
General Revenues											
Contributions	0	0	0	0	0	0	0	100.00%	0	0	0
Total General Revenues	0	0	0	0	0	0	0	**100.00%**	0	0	0
Charges for Services											
Parking Ops - Meters	262,949	74,218	1,111	22	1,133	338,300	468,400	72.22%	338,300		338,300
Parking Ops - Events	450					450	900	50.00%	450		450
Parking Non Compliance	13,492	9,561	1,206	414	1,620	24,673	35,000	70.50%		24,673	24,673
Total Charges for Services	**276,891**	**83,779**	**2,317**	**435**	**2,753**	**363,423**	**504,300**	**72.06%**	**338,750**	**24,673**	**363,423**
Special Items											
Misc Revenue	0	0	0	0	0	0	0	100.00%	0	0	0
Interest Revenue	3,665	2,525	801	1,192	1,993	8,183	14,000	58.45%	8,183		8,183
Total Special Revenues	**3,665**	**2,525**	**801**	**1,192**	**1,993**	**8,183**	**14,000**	58.45%	**8,183**	**0**	**8,183**
TOTAL REVENUES	**280,556**	**86,304**	**3,118**	**1,627**	**4,745**	**371,606**	**518,300**	**71.70%**	**346,933**	**24,673**	**371,606**
Expenses											
Personnel	21,377	13,526	2,394	943	3,337	38,240	76,227	50.17%	20,442	17,798	38,240
Contracts	3,260		234,922		234,922	238,182	292,805	81.35%	238,182		238,182
Professional Services	1,910	1,470	2,505	1,649	4,154	7,534	40,110	18.78%	5,059	2,475	7,534
Insurance								100.00%			
Telephone	494	321	160	5	166	981	1,500	65.38%	490	490	981
Subscriptions, Publications, Dues	257	57	30	30	60	375	175	214.14%	187	187	375
License & Permits							200	0.00%			
Equipment Not Transferred							14,200	0.00%			
Supplies		589				589	2,000	29.46%	589		589
Repairs & Maintenance							4,700	0.00%			
Admin Fees	27,689	7,846	763	44	807	36,342	50,430	72.06%	33,875	2,467	36,342
Travel - Auto	59	59				118	200	59.08%	88	30	118
Bank / CC Fees	9,295	4,416	1,190	133	1,324	15,034	27,000	55.68%	15,034		15,034
Misc Fees								100.00%			
Depreciation								100.00%			
TOTAL OPERATING EXPENSES	**64,341**	**28,285**	**241,965**	**2,805**	**244,769**	**337,396**	**509,547**	66.21%	**313,948**	**23,447**	**337,396**
Capital Outlay											
Equipment over $5000	0	0	0	0	0	0	0	100.00%	0	0	0
Equipment under $5000								100.00%			
Total Capital Outlay	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**100.00%**	**0**	**0**	**0**
Other Funding Sources - Revenues											
Revenues											
Capital (In) Out	0	0	0	0	0	0	0	100.00%	0	0	0
Transfers (In) Out								100.00%			
Total Other Financing Sources	**0**	**0**	**0**	**0**	**0**	**0**	**0**	100.00%	**0**	**0**	**0**
Total Expenses and Other Funding Sources	64,341	28,285	241,965	2,805	244,769	337,396	509,547	66%	313,948	23,447	337,396
Increase /(Decrease) to Fund Balance	**216,215**	**58,019**	**(238,847)**	**(1,177)**	**(240,024)**	**34,210**	**8,753**	**390.84%**	**32,984**	**1,226**	**34,210**

Tahoe Transportation District
Governmental Funds Cash Flow
July 1, 2023 through January 31, 2024

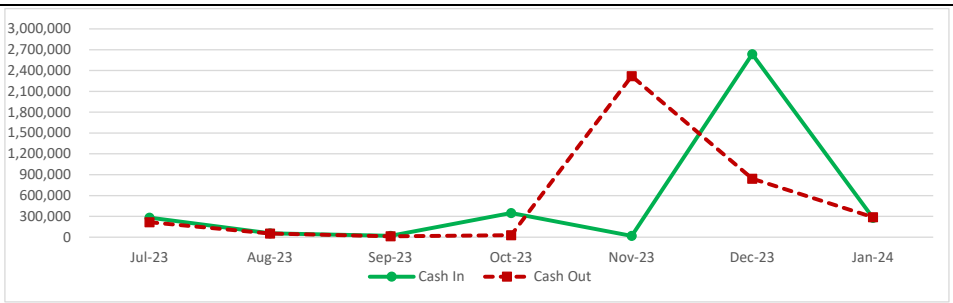
GENERAL FUND



Cash In Source	Total	RCMF	Transfer from other funds for PR Liab	ICAP	Admin Fees	Local Revenue / Contri-butions	LOC	Misc Receipts
Jul-23	201,262	3,370	155,813	29,856	11,002	0		1,221
Aug-23	204,940	15,266	145,124	33,698	10,072	0		779
Sep-23	216,847	0	158,665	37,836	6,615	12,500		1,231
Oct-23	556,349	5,463	159,800	37,429	4,682	347,500		1,476
Nov-23	244,279	5,497	159,761	36,809	3,165	37,500		1,548
Dec-23	335,053	25,099	255,008	53,088	763	0		1,095
Jan-24	244,055	23,609	177,950	40,809	44	0		1,643

Cash Out Source	Total	Net Payroll	PR Liabilities	Match To CIP	Vendor Payments	LOC	Net
Jul-23	426,061	12,508	377,815.92	288.48	35,448.98		**(224,800)**
Aug-23	177,459	21,743	139,405.75	115.51	16,194.71		**27,481**
Sep-23	188,455	21,299	153,911.84	114.55	13,129.13		**28,392**
Oct-23	216,656	20,182	160,875.82	62.88	35,534.71		**339,693**
Nov-23	183,644	20,794	155,795.23	111.78	6,942.72		**60,635**
Dec-23	287,209	31,902	246,839.75	242.01	8,225.93		**47,844**
Jan-24	255,454	26,543	180,438.70	82.94	48,389.57		**(11,399)**

CIP FUND

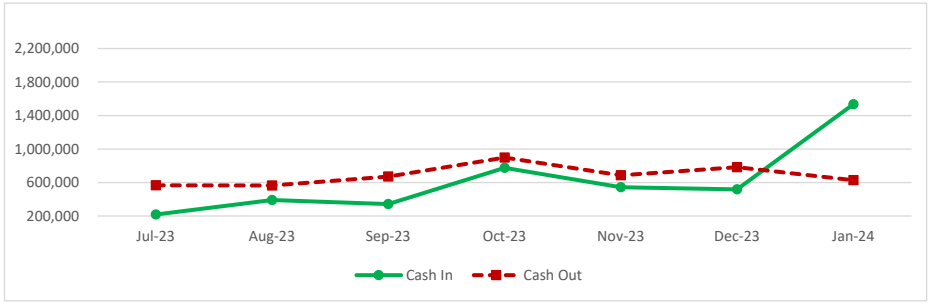


Cash In Source	Total	FTA	LOC	Caltrans - US 50 & ZEB	NDOT - FTA 5339, STBG & INFRA	CalOES	Contrib /Other	Match
Jul-23	282,794	225,707	0	7,962	48,496	0	334	295
Aug-23	56,265	2,837	0	2,873	50,080	0	324	151
Sep-23	20,060	0	0	7,032	5,500	5,877	303	1,348
Oct-23	348,496	0	0	1,277	9,758	6,461	315	330,685
Nov-23	18,489	3,576	0	3,814	9,545	0	328	1,225
Dec-23	2,636,954	0	744,060	21,593	1,870,142	0	203	956
Jan-24	278,663	183,125	0	4,923	89,267	0	292	1,055

Cash Out Source	Total	Net Payroll	PR Liabilities	ICAP	AP	LOC	Net
Jul-23	215,664	5,604	3,941	675	205,444		**67,130**
Aug-23	54,213	5,071	2,832	778	45,531		**2,052**
Sep-23	12,641	4,390	2,661	937	4,653		**7,420**
Oct-23	27,959	6,461	4,258	1,032	16,209		**320,536**
Nov-23	2,319,943	7,156	4,465	1,125	2,307,197		**(2,301,455)**
Dec-23	842,639	10,669	5,969	2,560	79,381	744,060	**1,794,315**
Jan-24	288,645	6,946	4,917	1,164	275,618		**(9,982)**

Tahoe Transportation District
Enterprise Funds Cash Flow
July 1, 2023 through January 31, 2024

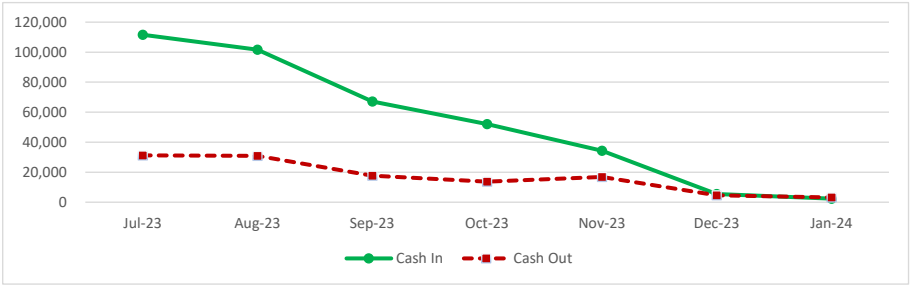
TRANSIT OPERATIONS FUND



Cash In Source	Total	FTA 5307	NDOT 5311	TDA incl SGR	Insurance Claims	Farebox Contri-butions	Misc Receipts	Interest	Sale of Fixed Asset
Jul-23	217,898	0	65,889	118,351	23,971	0	3,415	6,049	224
Aug-23	389,754	313,520	70,927	0	0	0	0	5,307	0
Sep-23	341,728	336,753	0	0	0	0	0	4,975	0
Oct-23	776,268	423,997	172,909	171,795	0	0	2,329	4,646	592
Nov-23	543,984	376,623	71,657	0	6,564	85,000	0	4,140	0
Dec-23	517,332	340,594	83,399	0	1,118	0	90,000	2,221	0
Jan-24	1,534,835	294,310	260,680	973,771	0	0	1,754	4,320	0

Cash Out Source	Total	Net Payroll	PR Liabilities	ICAP	AP	Match	Net
Jul-23	565,186	192,441	135,496	29,181	208,061	7	**(347,288)**
Aug-23	564,308	184,215	139,807	32,920	207,331	35	**(174,554)**
Sep-23	669,758	204,484	154,006	36,899	273,135	1,234	**(328,029)**
Oct-23	897,847	196,261	153,943	36,397	180,623	330,622	**(121,579)**
Nov-23	686,373	191,686	152,887	35,684	305,004	1,113	**(142,389)**
Dec-23	783,559	323,823	248,227	50,528	160,267	714	**(266,227)**
Jan-24	627,334	210,463	172,590	39,645	203,663	972	**907,500**

PARKING SYSTEMS FUND



Cash In Source	Total	Parking Meter Revenue	Non-Comp Revenue	Contri-butions	Misc Receipts	Interest
Jul-23	111,597	105,679	4,657	0	0	1,261
Aug-23	101,667	96,129	4,298	0	0	1,240
Sep-23	67,149	61,728	4,258	0	0	1,163
Oct-23	52,107	46,375	4,498	0	0	1,234
Nov-23	34,264	27,882	5,091	0	0	1,291
Dec-23	5,455	1,111	3,543	0	0	801
Jan-24	2,374	22	1,160	0	0	1,192

Cash Out Source	Total	Net Payroll	PR Liabilities	Vendor Payments	Admin Fees	Net
Jul-23	31,217	6,250	3,023	10,942	11,002	**80,380**
Aug-23	30,961	4,846	2,045	13,998	10,072	**70,706**
Sep-23	17,697	5,007	1,998	4,077	6,615	**49,451**
Oct-23	13,707	4,346	1,599	3,081	4,682	**38,400**
Nov-23	16,804	5,472	2,110	6,058	3,165	**17,460**
Dec-23	4,577	1,582	811	1,420	763	**877**
Jan-24	3,160	499	444	2,173	44	**(786)**

Grant Status Report			April 2024									
.	Funder	Work Program	Grant Name	Project	$$ Requested	Min Match %	Match $$	Match From	Submitted	Award Date	Awarded?	Status
1	FTA	4.3 - Capital Equipment	FY2023 5339(b) Low No	Capital Vehicles and Equipment	$ 3,400,000	15%	$ 600,000	Transportation Development Credits	Yes - 04/2023	Jul-23	Yes	Executed
2	TMPO	3.1 - SSCRP	2023 Regional Grant Program-NV	US-50 - Revised Design Phase	$ 2,975,962	5%	$ 156,630	Toll credits/ gas tax	Yes - 6/2023	Fall 2023	Yes	Awarded - Pending Agreement Not available until FFY25
3	FTA	4.7 - Transit Operations	FFY2023 CMAQ	Free to User Transit Program - Operations	$ 1,000,000	50%	$ 1,000,000	Toll credits	Yes - 11/2023	Spring 2022	Yes	Awarded - Pending Agreement
4	US DOT	3.3.3B NV Stateline to Stateline Bikeway	RAISE 2024	Sand Harbor to Thunderbird Cove	$ 25,000,000	0%	$ -	N/A	Yes - 02/2024	Jun-24	Pending	Submitted
5	CalSTA	4.3 - Capital Equipment	SB125 Transit & Intercity Rail Capital Program	Capital Vehicles and Equipment	$ 2,980,000	0%	$ -	N/A	Yes - 01/2024	24-Apr	Pending	Pending Decision
6	CalSTA	4.3 - Capital Equipment	SB125 Transit & Intercity Rail Capital Program	EV Charging Infrastructure	$ 1,188,816	0%	$ -	N/A	Yes - 01/2024	24-Apr	Pending	Pending Decision
7	CalSTA	3.11 - Transit Corp Yard	SB125 Transit & Intercity Rail Capital Program	Existing Maintenance Facility Renovations	$ 1,550,000	0%	$ -	N/A	Yes - 01/2024	24-Apr	Pending	Pending Decision
8	Senate Appropriations Committee	3.3.3B NV Stateline to Stateline Bikeway	FY2024 Community Project Funding for Nevada	Sand Harbor to Thunderbird Cove	$ 5,000,000	0%	$ -	N/A	Yes - 03/2023	Mar-24	Yes	Awarded - Pending Agreement

Tahoe Transportation DISTRICT

Connecting our communities

MEMORANDUM

Date: March 27, 2024

To: Tahoe Transportation District (TTD) Board of Directors

From: TTD Staff – Jim Marino

Subject: Adopt Resolution 2024-001 Adopting the Tahoe Transportation District and Tahoe Resource Conservation District 2023 Hazard Mitigation Plan

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Action Requested:
It is requested the Board adopt Resolution 2024-001 adopting the Tahoe Transportation District and Tahoe Resource Conservation District 2023 Hazard Mitigation Plan (HMP) and authorize staff to make any updates to it consistent with direction, if any, based on Federal Emergency Management Agency's (FEMA) final review.

Fiscal Analysis:
Funding for staff and consultant time for developing the HMP comes from grant funds awarded to TTD by FEMA through the California Office of Emergency Services (Cal OES). TTD was awarded $130,968.75, with an in-kind match of $43,625, accepted in the form of the vulnerability assessment completed by the California Tahoe Conservancy in partnership with TTD for a total of $174,625.

Work Program Analysis:
The development of potential projects and funding sources is part of TTD's Capital Improvement Program development process to secure resources necessary to achieve needed transportation related infrastructure and services. Project development work is included in the work program and TTD's Capital Improvement Program. The HMP will qualify eligible future work associated with the regional transportation plan and TTD's multi-modal system goals under funding programs administered by the Department of Homeland Security (DHS).

The work related to this item contributes to addressing the following Board strategic goals:

- SG-1: Improve TTD standing, networks and partnerships to lead regional, multi-modal transportation.
- SG-4: Conduct project level planning, provide leadership and fundraise for new regional transportation system elements.

Background:
Local hazard mitigation planning is driven by a federal law known as the Disaster Mitigation Act of 2000 (DMA 2000). Federal funding is provided through FEMA, an agency under DHS, and administered by Cal OES in California. Cal OES is responsible for identifying program priorities, reviewing sub-applications from state agencies, tribal governments, local governments, special districts, and private non-profits in California and forward recommendations for funding to FEMA. FEMA has final approval for activity eligibility and funding.

JM/ja AGENDA ITEM: VIII.B.

As a result of the declaration of a major federal disaster, the State of California became eligible for Hazard Mitigation Grant Program funding. Staff applied for the funding in order to prepare a Tahoe Basin Multi-Jurisdiction Hazard Mitigation Plan. This plan only addresses the California side of the Basin due to the funding from Cal OES. Both TTD and Tahoe RCD expect that future updates of the plan will include the Nevada side of the Tahoe Basin.

Staff released a Request for Proposals May 2022 for a consultant to develop the HMP. AECOM was selected to develop the HMP.

Discussion:
The public draft plan was released for comments in October 2023. After the close of the public comment period, the final draft plan was submitted to Cal OES for their review. Comments were received from Cal OES and changes made to the plan. The plan was sent to FEMA March 1, 2024 for their review. FEMA's approval is still pending as of the writing of this staff summary, however, Staff believes any changes requested by FEMA, if any, will be minor. Staff is requesting adoption of the draft final plan at this time in order to be in compliance with the Cal OES grant timeline. Upon this Board's adoption of the Plan, Tahoe RCD will then adopt the plan.

Upon approval and adoption of the Plan and resolution, TTD and Tahoe RCD will be able to apply for federal financial assistance for any existing or future grant program, including, but not limited to any of the following:

- Federally declared Disaster (DR), Fire Mitigation Assistance Grant (FMAG), California State Only Disaster (CDAA), Immediate Services Program (ISP), Hazard Mitigation Grant Program (HMGP), Building Resilient Infrastructure and Communities (BRIC), Legislative Pre-Disaster Mitigation Program (LPDM), under Public Law 93-288 as amended by the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988, and/or state financial assistance under the California Disaster Assistance Act.
- Flood Mitigation Assistance Program (FMA), under Section 1366 of the National Flood Insurance Act of 1968.
- National Earthquake Hazards Reduction Program (NEHRP) 42 U.S. Code 7704 (b) California Early Earthquake Warning (CEEW) under CA Gov Code – Gov, Title 2, Div. 1, Chapter 7, Article 5, Sections 8587.8, 8587.11, 8587.12.

The plan will be updated every five years to meet DMA 2000 regulations.

Additional Information:
If you have any questions or comments regarding this item, please contact Jim Marino at jmarino@tahoetransportation.org or (775) 589-5512.

Attachment:
A. Resolution 2024-001 with attached HMP

TAHOE TRANSPORTATION DISTRICT
RESOLUTION NO. 2024-001

A RESOLUTION ADOPTING THE TAHOE TRANSPORTATION DISTRICT AND TAHOE RESOURCE CONSERVATION DISTRICT'S 2023 HAZARD MITIGATION PLAN

WHEREAS, the Tahoe Transportation District (TTD) recognizes the threat that natural hazards pose to people and property within the Lake Tahoe Basin; and

WHEREAS, the TTD has prepared a multi-hazard mitigation plan, hereby known as the Tahoe Transportation District and Tahoe Resource Conservation District 2023 Hazard Mitigation Plan (2023 HMP), attached hereto as Exhibit A, in accordance with Disaster Mitigation Act of 2000, the Robert T. Stafford Disaster Relief and Emergency Assistance Act, as amended; the National Flood Insurance Act of 1968, as amended; and the National Dam Safety Program Act, as amended; and

WHEREAS, the 2023 HMP identifies the natural hazards that can affect the Lake Tahoe Basin and the mitigation goals and actions to reduce or eliminate long-term risk to people and property in the Lake Tahoe Basin from the impacts of future hazards and disasters; and

WHEREAS, adoption by the TTD demonstrates its commitment to hazard mitigation and achieving the goals outlined in the 2023 HMP; and

WHEREAS, adoption of the 2023 HMP by the Board of Directors allows TTD to qualify for eligibility for projects under FEMA's Hazard Mitigation Assistance and Disaster Recovery programs; and

WHEREAS, the final draft 2023 HMP is presently under final review by the Federal Emergency Management Agency (FEMA) and that FEMA may request minor revisions to the plan.

NOW THEREFORE, BE IT RESOLVED that the TTD Board of Directors hereby adopts the 2023 HMP and authorizes the District Manager or his designee to make minor changes to the 2023 HMP, as deemed necessary for final approval by state and federal agencies.

PASSED AND ADOPTED by the TTD Board of Directors at its regular meeting held on April 3, 2024 by the following vote:

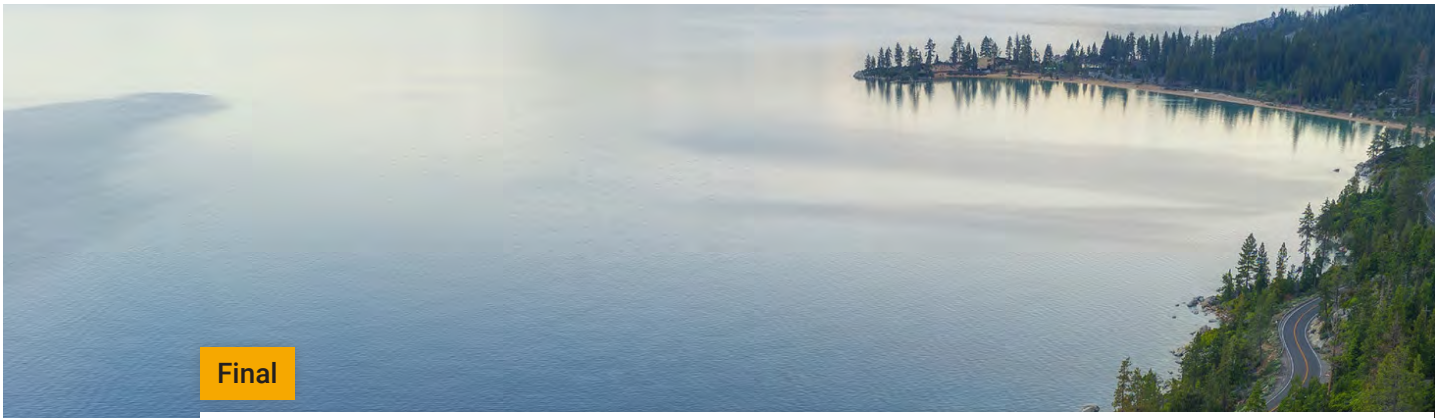
Ayes:

Nays:

Abstain:

Absent:

_____
Alexis Hill
Chair



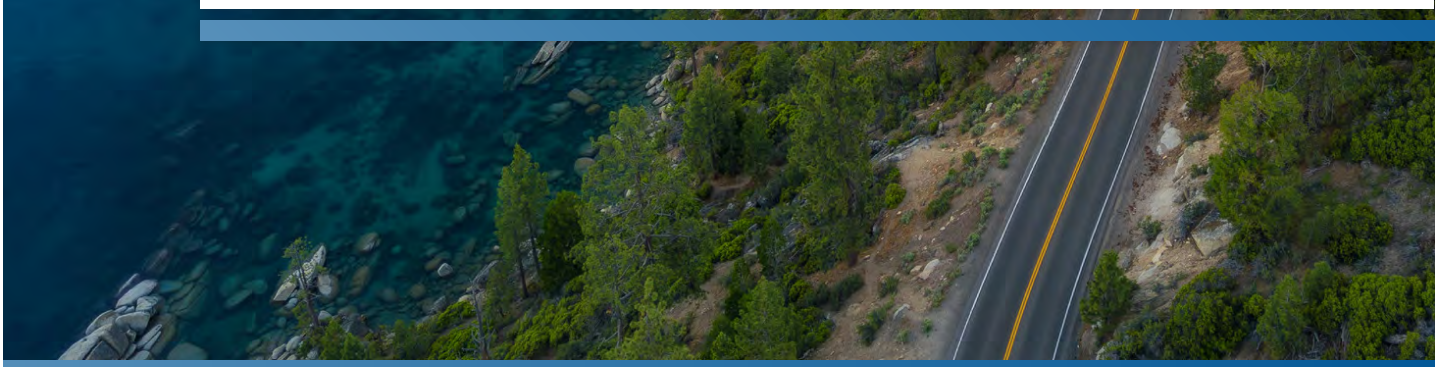
Final

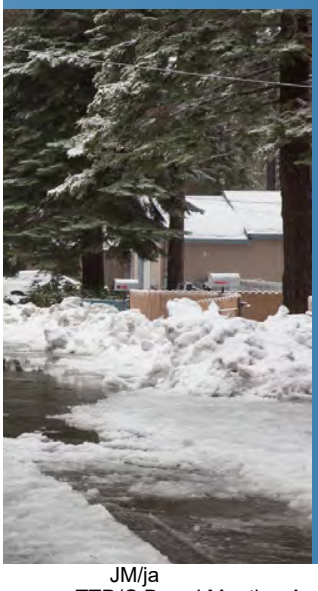
Tahoe Transportation District
Tahoe Resource Conservation District
2023 Hazard Mitigation Plan

Tahoe Transportation DISTRICT

TAHOE RESOURCE CONSERVATION DISTRICT

March 2024





Version Control Document

#	Date	Author	Summary of Changes Made

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LIST OF APPENDICES

LIST OF TABLES

LIST OF ACRONYMS AND ABBREVIATIONS

°F	degrees Fahrenheit
2023 HMP	Tahoe Transportation District–Tahoe Resource Conservation District 2023 HMP
AECOM	AECOM Technical Services, Inc.
AIS	Aquatic Invasive Species
BEPS	Bus Exportable Power Systems
BRIC	Building Resilient Infrastructure and Communities
CAL FIRE	California Department of Forestry and Fire Protection
Cal OES	California Office of Emergency Services
Caltrans	California Department of Transportation
CDFW	California Department of Fish and Wildlife
CFR	Code of Federal Regulations
CGS	California Geological Survey
CHSTP	Coordinated Human Services Transportation Plan
CO_2	carbon dioxide
CTC	California Tahoe Conservancy
CWPP	Community Wildfire Protection Plan
DFIRM	Digital Flood Insurance Rate Map
DMA 2000	Disaster Mitigation Act of 2000
DR	Major Disaster Declaration
DSOD	Division of Safety of Dams
EC	Elks Club
EDYC	El Dorado County Yard
EOC	Emergency Operations Center
FEMA	Federal Emergency Management Agency
FHSZ	Fire Hazard Severity Zone
FRAP	Fire Resource and Assessment Program
FTA	Federal Transit Administration
FTI	Fire Threat Index
GIS	Geographic Information System
HMA	Hazard Mitigation Assistance
HMGP	Hazard Mitigation Grant Program
HMP	Hazard Mitigation Plan
IVA	Integrated Vulnerability Assessment of Climate Change in the Lake Tahoe Basin (CTC and Catalyst Environmental Solutions, 2020)
LCTOP	Low Carbon Transit Operations Program
LTBMU	Lake Tahoe Basin Management Unit
LTUSD	Lake Tahoe Unified School District
LRA	local responsibility area
LTF	Local Transportation Fund
M	magnitude

MMI	Modified Mercalli Intensity Scale
mph	miles per hour
NASA	National Aeronautics and Space Administration
NEP	National Exercise Program
NFIP	National Flood Insurance Program
NOAA	National Oceanic and Atmospheric Administration
PROTECT	Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation Program
RCC	Regional Coordinating Council
RFFC	Regional Forest and Fire Capacity Program
SR	State Route
SRA	state responsibility area
SRTP	Short Range Transportation Plan
STA	State Transportation Assistance
State	State of California
STBG	Surface Transportation Block Grant
SWGP	Stormwater Grant Program
SWRP	Storm Water Resource Plan
TRPA	Tahoe Regional Planning Agency
Tahoe RCD	Tahoe Resource Conservation District
TCP	Tahoe Conservation Partnership
TDA	Transportation Development Act
TMC	transportation management center
TMWA	Truckee Meadows Water Authority
TTCF	Tahoe Truckee Community Foundation
TTD	Tahoe Transportation District
UC	University of California
USDOT	U.S. Department of Transportation
USFS	U.S. Forest Service
VAIS	Climate Change Vulnerability Assessment of Infrastructure Systems in the Lake Tahoe Basin (Energetics, 2019)

1.0 INTRODUCTION

1.1 HAZARD MITIGATION PLANNING

As defined in Title 44 Code of Federal Regulations (CFR) Subpart M, Section 206.401, hazard mitigation is "any action taken to reduce or eliminate the long-term risk to human life and property from natural hazards." As such, hazard mitigation is any work to minimize the impacts of any type of hazard event before it occurs. Hazard mitigation aims to reduce losses from future disasters. It is a process that identifies and profiles hazards, analyzes the people and facilities at risk, and develops mitigation actions to reduce or eliminate hazard risk. The implementation of the mitigation actions—which include short- and long-term strategies that may involve planning, policy changes, programs, projects, and other activities—is the end result of this process.

Over the past two decades, local hazard mitigation planning has been driven by a federal law, known as the Disaster Mitigation Act of 2000 (DMA 2000). On October 30, 2000, Congress passed the DMA 2000 (Public Law 106-390), which amended the Robert T. Stafford Disaster Relief and Emergency Assistance Act of 1988 (Title 42 United States Code Section 5121 et seq.) by repealing the act's previous mitigation planning section (409) and replacing it with a new mitigation planning section (322). This new section emphasized the need for state, tribal, and local entities to closely coordinate mitigation planning and implementation efforts. This new section also provided the legal basis for the Federal Emergency Management Agency's (FEMA's) mitigation plan requirements for the Hazard Mitigation Assistance grant programs.

1.2 2023 HAZARD MITIGATION PLAN SYNOPSIS

To meet the requirements of the DMA 2000, the Tahoe Transportation District (TTD) and the Tahoe Resource Conservation District (Tahoe RCD) have created a Hazard Mitigation Plan (HMP) known as the Tahoe Transportation District–Tahoe Resource Conservation District 2023 HMP (hereon referred to as the 2023 HMP). The goal of the planning process is to profile the natural and human-caused hazards in the Lake Tahoe Basin, determine the impacts of those hazards on the multi-modal transportation system and land conservation efforts in the basin, and develop strategies to mitigate future disasters.

Because this plan is funded through the California Office of Emergency Services (Cal OES), certain requirements in the plan only address the California side of the Lake Tahoe Basin. Both TTD and Tahoe RCD hope that future updates of the plan will include the Nevada side of the Lake Tahoe Basin as well.

The 2023 HMP is organized to follow FEMA's Local Mitigation Plan Review Tool (Appendix A), which demonstrates how hazard mitigation plans meet the DMA 2000 regulations. As such, the specific planning elements of this review tool are discussed in their appropriate plan sections.

After this introduction, the 2023 HMP consists of the following sections:

- Section 2, Planning Process, provides an overview of the planning process, starting with a timeline. It identifies advisory committee members and describes their involvement with the planning process. This section also details stakeholder outreach, public involvement, and continued public involvement. In addition, this section provides an overview of the existing plans and reports and describes how those documents were incorporated into the 2023 HMP. Documentation that supports the planning process is provided in Appendix B.
- Section 3, Prologue, describes the planning area, the Lake Tahoe Basin (and more specifically, the California side of the Lake Tahoe Basin), for the 2023 HMP. This section identifies current owned, leased, and managed critical assets and proposes a list of assets for TTD and Tahoe RCD. Figures showing the locations of the planning area and critical assets are provided in Appendix C.

- Section 4, Risk Assessment, describes each of the eight hazards addressed in this plan. Hazard figures are provided in Appendix C. This section also provides an overall summary of vulnerability description for each hazard as well as a summary of impacts to TTD and Tahoe RCD.
- Section 5, Mitigation Strategy, provides a hazard-mitigation-specific capability assessment for both TTD and Tahoe RCD. It also describes the mitigation goals, the recommended mitigation actions and plans that prioritize the mitigation actions, and the process to integrate the 2023 HMP into other planning mechanisms.
- Section 6, Plan Maintenance, describes how public participation will proceed regarding the 2023 HMP and outlines how the plan will be implemented, integrated into other documents, and updated in 5 years.
- Section 7, Plan Update, is not included, as the 2023 HMP is not an update.
- Section 8, Plan Adoption, contains scanned copies of the adoption resolutions.
- Appendices provides the appendices, including Appendix A – HMP Checklist, Appendix B – Planning Process Documents, Appendix C – Figures, Appendix D – Tahoe Transportation District, Appendix E – Tahoe RCD, and Appendix F – Multi-Jurisdictional Requirements.

2.0 PLANNING PROCESS

This section addresses Element A: Planning Process of the Local Mitigation Plan Regulation Checklist.

Element A: Planning Process	
A1.	Does the plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement §201.6(c)(1))
A1-a.	Does the plan document how the plan was prepared, including the schedule or time frame and activities that made up the plan's development, as well as who was involved?
A1-b.	Does the plan list the jurisdiction(s) participating in the plan that seek approval, and describe how they participated in the planning process?
A2.	A2. Does the plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, agencies that have the authority to regulate development as well as other interests to be involved in the planning process? (Requirement §201.6(b)(2))
A2-a.	Does the plan identify all stakeholders involved or given an opportunity to be involved in the planning process, and how each stakeholder was presented with this opportunity?
A3.	Does the plan document how the public was involved in the planning process during the drafting stage? (Requirement §201.6(b)(1))
A3-a.	Does the plan document how the public was given the opportunity to be involved in the planning process and how their feedback was included in the plan?
A4.	A4. Does the plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement §201.6(b)(3))
A4-a.	A4-a. Does the plan document what existing plans, studies, reports and technical information were reviewed for the development of the plan, as well as how they were incorporated into the document?

2.1 OVERVIEW OF THE 2023 HMP PLANNING PROCESS

The development of the 2023 HMP was a collaborative effort between TTD and Tahoe RCD (plan participants that seek plan approval) and their consultant, AECOM Technical Services, Inc. (AECOM). TTD served as the project manager for the 2023 HMP and served as the point of contact for all public outreach and stakeholder input. The planning process officially kicked off in July 2022 with the approval of TTD's Board (May 4, 2022). The planning process took a little more than a year, with a pause in the spring and into early summer of 2023 due to a project manager change. A timeline of the major planning tasks and milestones by month, including the three times the advisory committee met virtually, is provided in Table 2-1. A list of the advisory committee members and how they contributed to the development of the plan is provided in Table 2-2.

Because it was originally intended for this planning process to conclude prior to the updated Local Mitigation Planning Guide becoming effective on April 19, 2023, certain new planning requirements were not originally addressed in this planning process. For example, efforts to reach underserved and vulnerable populations were made through stakeholder involvement and public outreach but not the advisory committee itself. These public outreach and stakeholder involvement efforts are outlined in Sections 2.2 – 2.3 and the inclusion of underserved and vulnerable populations representation on the advisory committee for future updates is addressed in the plan maintenance section (Section 6).

Table 2-1: HMP Timeline

Date	Tasks	People Involved
July 2022	Received approval from TTD Board to begin planning process. Conducted project management "HMP huddle" kickoff conference call (July 26, 2022).	HMP project manager and AECOM
August 2022	Held first virtual advisory committee conference call to provide an overview of the HMP and FEMA mitigation grants and determine hazards to profile (August 8, 2022). Collected existing local and regional plans and reports. Determined the Geographic Information System (GIS) strategy for hazard profiles and collected hazard data sets.	HMP project manager, AECOM, and advisory committee
September 2022	Crafted and posted public outreach messages on TTD's website and Facebook page. Created draft hazard figures. Created draft district-specific appendices. Began to develop draft mitigation actions based on actions identified in the existing plans and reports.	HMP project manager and AECOM
October 2022	Identified initial list of stakeholders and emailed the stakeholders. Identified current and proposed critical assets.	HMP project manager, AECOM, and advisory committee
November 2022	Engaged Subject Matter Experts to review mitigation projects in existing TTD and Tahoe RCD plans and reports and develop new mitigation project ideas.	HMP project manager and AECOM
December 2022	Reached out to stakeholders to notify them of the planning process.	HMP project manager
January 2023	Conducted an overlay analysis of critical assets in hazard areas and determined which assets are at risk.	HMP project manager, AECOM, and advisory committee
February 2023	Held second virtual advisory committee meeting to review draft vulnerability analysis and discuss potential mitigation strategies (February 13, 2023).	HMP project manager, AECOM, and advisory committee
July - August 2023	Created the Internal Draft HMP.	HMP project manager and AECOM
September 2023	Review of the Internal Draft HMP. Created the Public Draft HMP.	HMP project manager, AECOM, and Cal OES
October 2023	Review of the Public Draft HMP by the public and stakeholders. Created the Final Draft HMP and submitted it to Cal OES and FEMA for review.	HMP project manager, AECOM, and Cal OES
TBD	Plan approved by FEMA.	HMP project manager, AECOM, Cal OES, and FEMA Region IX

Table 2-1: HMP Timeline

Date	Tasks	People Involved
TBD	Plan adopted by TTD Board of Directors and Tahoe RCD Board of Directors.	TTD Board of Directors and Tahoe RCD Board of Directors
TDB	Held third virtual advisory committee to go over plan maintenance procedures and FEMA grants. Closed out project.	HMP project manager, AECOM, and advisory committee

Table 2-2: Advisory Committee

Name	Title and Agency	Contribution
Danielle Hughes	Capital Program Manager, TTD	Served as the 2023 HMP project manager. Led advisory committee conference calls and reviewed and commented on hazard figures and potential TTD mitigation strategies. Attended advisory committee meetings #1 and 2.
Judi Allen	Executive Assistant, TTD	Served as the interim 2023 HMP project manager. Coordinated public outreach efforts and stakeholder involvement; provided TTD asset information; and oversaw TTD's review of the Internal Draft HMP. Attended all advisory committee meetings.
Mike Vollmer	Executive Director, Tahoe RCD	Participated in advisory committee conference calls; provided Tahoe RCD asset datasets; and reviewed and commented on hazard figures, risk assessment tables, mitigation strategies, and the Internal Draft HMP. Attended all advisory committee meetings.
Mollie Hurt	Director of Programs, Tahoe RCD	Participated in advisory committee conference calls; reviewed and commented on hazard figures, risk assessment tables, mitigation strategies, and the Internal Draft HMP. Attended all advisory committee meetings.

2.2 OPPORTUNITIES FOR STAKEHOLDERS

The HMP project manager served as the point of contact for stakeholder involvement. On October 6, 2022, the HMP project manager developed an initial list of stakeholders for both TTD and Tahoe RCD and reached out to the Tahoe RCD advisory committee members via email for input. Tahoe RCD added law enforcement agencies, local utilities, and the Tahoe Environmental Improvement Program Working Group to the draft list.

On December 6, 2022, the HMP project manager reached out to all the stakeholders via email (Appendix B) about the 2023 HMP and invited them to participate in the planning process. On December 7, 2022, one stakeholder requested to be added to any future mailing lists regarding the 2023 HMP (the stakeholder was included in future correspondence).

The HMP project manager reached out to the stakeholders for TTD and Tahoe RCD again via email on October 2, 2023, inviting them to review and provide comments on the Public Draft HMP (Appendix B). On October 16, 2023, one stakeholder provided comments. The comments were directed at the public involvement process and review and incorporation of existing plans and reports. The consultant responded to the comments on October 17, 2023, noting the public involvement process requirement can be achieved

in various ways such as social media campaigns and websites and relevant plans and reports reviewed for this plan focused on plan participant documents as well as plans that are regional in nature.

Stakeholder agencies are listed below, and additional contact information is listed in Appendix B, Table B-1. In the bulleted list below as well as Appendix B, Table B-1, TTD-specific stakeholders are identified with a "*" while Tahoe-RCD specific stakeholders are identified with a "**". Stakeholders that are relevant to both districts do not have asterisks.

- Neighboring communities: El Dorado County, Placer County, and the City of South Lake Tahoe
- State of California partners: Cal OES, California Department of Forestry and Fire Protection (CAL FIRE)**, California Department of Transportation (Caltrans)*, California Highway Patrol*, California State Parks**, and California Tahoe Conservancy**
- State of Nevada partners: Nevada Department of Emergency Management and Nevada Department of Transportation*
- Federal partners: Lake Tahoe Basin Management Unit and U.S. EPA Lake Tahoe Basin Coordinator
- Agencies that have the authority to regulate development: Tahoe Regional Planning Agency (TRPA)
- Local and regional agencies involved in hazard mitigation: Tahoe Environmental Improvement Program Working Group, Lake Tahoe Aquatic Invasive Species Coordinating Committee**, Tahoe Fire and Fuels Team**, Stormwater Quality Improvement Committee**, Nearshore Working Group**, Fallen Leaf Lake Fire**, and Lake Valley Fire Protection District**
- Representatives of businesses, academia, and other private sectors: Liberty Utilities, Southwest Gas, and South Tahoe Refuse, South Tahoe Public Utility District, Tahoe City Public Utility District, and North Tahoe Public Utility District
- Other agencies, organizations, and special districts: Truckee / North Tahoe Transportation Management Association*, South Shore Transportation Management Association*, El Dorado Health and Human Services, Placer County Human Services, Tahoe Coalition for Homeless, and Tahoe Unified School District, and Tahoe Area Coordinating Council for the Disabled

2.3 PUBLIC INVOLVEMENT

Because TTD served as the project manager for this HMP, public outreach was initially spearheaded by TTD and later supported by Tahoe RCD.

The following public outreach was conducted:

- September 30, 2022: TTD announced the 2023 HMP kickoff for both districts on their website and social media. Contact information for the HMP project manager as well as a comment section was provided on both platforms. In addition, a link to provide more information about the DMA 2000 as well as local hazard mitigation planning was provided. One public comment was received on TTD's website on October 8, 2022, requesting to be notified of the release of the public draft. This member of the public was sent a copy of the Public Draft HMP during the public comment period. In addition, the TTD Facebook post received one "share" and the Tahoe RCD Instagram post received five "likes" during the public comment period.
- October 3, 2023: Tahoe RCD and TTD announced the Public Draft and two-week public comment period on TTD's website and both districts social media. The Public Draft HMP, contact information for the HMP project manager and a comment section was provided on the TTD website. Each agency received a few emoticon responses but no comments.

Links to TTD's website and Facebook page as well as Tahoe RCD's Instagram are provided below (screenshots are provided in Appendix B):

- Website: https://www.tahoetransportation.org/tahoe-basin-hazard-mitigation-plan-notification/
- Facebook: https://www.facebook.com/TahoeTransportationDistrict/
- Instagram: https://www.instagram.com/tahoercd/

2.4 OUTREACH TO UNDERSERVED AND VULNERABLE POPULATIONS

TTD's supports underserved and vulnerable transit riders through its Paratransit and Fare Free Transit Program. Underserved and vulnerable transit riders include displaced workers that commute into the basin, those that use and/or rely on transit on a regular basis, and those that may have disabilities. Tahoe RCD supports vulnerable and underserved populations, including the elderly, low-income households, and people with medical problems or disabilities, through its Fire Adaptive Communities Program and vulnerable and underserved populations, including people of color and others who have faced barriers to outdoor recreation, through its Restoration and Land Management Program.

TTD and Tahoe RCD developed a list of agencies and organizations that represent underserved and vulnerable populations and the HMP project manager emailed and invited agencies invited them to the planning process in December 2022 and again during the public comment period in October 2023. These agencies and coalitions include the Coalition for the Homeless, El Dorado County Health and Human Services, and Placer County Human Services (Table B-1).

In addition, on October 3, 2023, TTD emailed 17 organizations that make up the Tahoe Area Coordinating Council for the Disabled about the Public Draft 2023 HMP and invited them to comment on the Public Draft 2023 HMP. The Tahoe Area Coordinating Council for the Disabled is a non-profit corporation dedicated to the needs of the disabled in the Lake Tahoe area. Contact information for each member organization is included in Appendix B, Table B-2.

There were no comments from these agencies or organizations regarding the planning process or Public Draft 2023 HMP.

2.5 REVIEW AND INCORPORATION OF EXISTING PLANS AND REPORTS

A list of the relevant existing major plans and reports reviewed and incorporated into the 2023 HMP is provided in Table 2-3. In addition, these sources of information are referenced throughout the plan. TTD-relevant plans and reports are identified with a "*" while Tahoe-RCD relevant plans and reports are identified with a "**". Plans and reports that are relevant to both districts do not have asterisks.

Table 2-3: Existing Plans and Reports

Plans and Reports	Information to Be Incorporated into the 2023 HMP
Tahoe Climate Resilience Action Strategy (California Tahoe Conservancy, 2022)	The five "focus areas" provided the basis for the goals for the 2023 HMP.
Tahoe State of the Lake Report, 2022 (University of California [UC], Davis Tahoe Environmental Center, 2022)	This scientific assessment of the climate threats to the Lake Tahoe Basin was incorporated into the hazard profiles and risk assessment.
Tahoe Climate Adaptation Action Portfolio (California Tahoe Conservancy [CTC] and TTD, 2021)	This scientific assessment of the climate threats to the Lake Tahoe Basin was incorporated into the hazard profiles and risk assessment, and the adaptation actions were incorporated into both TTD's and Tahoe RCD's mitigation strategies.

One Tahoe: A Transportation Funding Initiative (TTD, 2021)*	Transportation funding sources were incorporated into TTD's capability assessment.
2020 Regional Transportation Plan (Tahoe Regional Planning Agency, 2021)*	The recommended strategies were incorporated into TTD's mitigation strategy.
2020 Annual Report (Tahoe RCD, 2021)**	Relevant programs were incorporated into Tahoe RCD's mitigation strategy.
Integrated Vulnerability Assessment of Climate Change in the Lake Tahoe Basin (California Tahoe Conservancy and Catalyst Environmental Solutions, 2020)	This scientific assessment of the climate threats to the Lake Tahoe Basin was incorporated into the hazard profiles and risk assessment.
Strategic Plan, 2021–2023 (Tahoe RCD, 2020)**	The recommended strategies were incorporated into Tahoe RCD's mitigation strategy.
Vulnerability of California Roadways to Post-Wildfire Debris Flows (University of California, Los Angeles [UCLA] Institute of Transportation Studies, 2020)	The recommended resilient strategies were incorporated into TTD's mitigation strategy.
Climate Change Vulnerability Assessment of Infrastructure Systems in the Lake Tahoe Basin (California Tahoe Conservancy and TTD, 2019)	This scientific assessment of the climate threats to the infrastructure systems in the Lake Tahoe Basin was incorporated into the hazard profiles and risk assessment.
Caltrans Climate Change Vulnerability Assessment: District 3 Technical Report (Caltrans and WSP, 2019)*	This scientific assessment of the climate threats to the Lake Tahoe Basin was incorporated into the hazard profiles and risk assessment.
California's Fourth Climate Change Assessment, Sierra Nevada Region Report (California Energy Commission, 2018)	This scientific assessment of the climate threats to the Lake Tahoe Basin was incorporated into the hazard profiles and risk assessment.
Tahoe Transportation District Short Range Transit Plan (TTD, 2017)*	The recommended strategies were incorporated into TTD's mitigation strategy.
Linking Tahoe: Corridor Connection Plan (Stantec, 2017)*	Mapped TTD Critical assets were used in TTD's vulnerability analysis.
Linking Tahoe: Lake Tahoe Basin Transit Master Plan (Stantec, 2017)*	Mapped TTD Critical assets were used in TTD's vulnerability analysis.
Lake Tahoe Basin Community Wildfire Protection Plan (Tahoe Fuels and Fire Team, 2015)**	This scientific assessment of the climate and wildfire threats to the Lake Tahoe Basin was incorporated into the hazard profiles and risk assessment. The recommended strategies were incorporated into Tahoe RCD's mitigation strategy.

Notes:
* TTD-relevant plans and reports
** Tahoe RCD-relevant plans and reports

3.0 PROLOGUE

This section provides an overview of the planning area and the two special districts participating in this 2023 HMP.

3.1 LAKE TAHOE BASIN

As noted in Section 1.2, because this 2023 HMP is funded through Cal OES, the planning area boundaries for the plan only cover the California side of the Lake Tahoe Basin. As shown on Figure C-1, the Lake Tahoe Basin is the area in the Sierra Nevada that naturally drains into Lake Tahoe. According to the U.S. Forest Service (USFS), it is estimated that the Lake Tahoe Basin was created about 5 million years ago during the formation of the Sierra Nevada, and Lake Tahoe itself formed about 2 million years ago when several large volcanic eruptions occurred. Today's Lake Tahoe has been roughly the same size for the past million years. The forest landscape surrounding the lake is quite young comparatively speaking and has only developed over the last 7,000 years as the region's climate became "warmer and wetter."

Today, the Lake Tahoe Basin consists of 191.6 square miles of lake, 376.56 square miles of land mass on the California side of the Lake Tahoe Basin, and 136.37 square miles of land mass on the Nevada side of the Lake Tahoe Basin. On the California side of the Lake Tahoe Basin, 218.84 square miles are in El Dorado County, 151.90 square miles are in Placer County, and 6.59 square miles are in Alpine County. The Lake Tahoe Basin is an "inter-mix of forest and urban communities," and the USFS–Lake Tahoe Basin Management Unit is responsible for 75 percent of basin lands. According to the most recent Census (2020) about 54,000 people live in the Lake Tahoe Basin year-round with roughly 15 million people visiting the Basin every year. There are several towns, cities, and communities on the California side of the Lake Tahoe Basin including Carnelian Bay (pop. 565), Dollar Point (909), Kings Beach (pop. 2,826), Meeks Bay (pop. 985), Sunnyside-Tahoe City (pop. 1,576), Tahoe Vista (pop.1,233), Tahoma (pop. 1,039), and South Lake Tahoe (pop. 21,304).

The Lake Tahoe region is at near built-out already. In fact, as of 2021, the region has reached a 95 percent built-out of the development potential put in place from the 1987 Lake Tahoe Regional Plan (Tahoe Regional Planning Authority [TRPA]). TRPA regulates development in the basin under the Bi-State Compact by setting caps on new development and prohibiting new development on sensitive lands. TRPA also uses mitigation funds to support public land acquisitions to further reduce the development potential in the basin and has assisted state and federal partners with acquiring more than 9,000 vacant parcels, many of them urban lots and sensitive lands.

Within the basin, local governments do hold a small number of commercial and tourist allocations for town centers as well as residential permit allocations. Every two years, TRPA distributes additional residential allocations to the local governments based on performance with regional standards. However, according to TRPA, due to supply and demand, most redevelopment and/or new development rely on transfers of development from one property to another and as such, most redevelopment and new development occurs in and around designated population centers. It is expected that future development or "population patterns" will continue to occur in these areas as well.

3.2 TAHOE TRANSPORTATION DISTRICT

TTD is responsible for "facilitating and implementing safe, environmentally positive, multi-modal transportation plans, programs and projects for the Lake Tahoe Basin, including transit operations." The district was established in 1980, when the State of California, the State of Nevada, and the U.S. Congress amended the 1969 Bi-State Compact to implement and deliver transportation projects throughout the Tahoe Region. According to the TTD, the annual average ridership over the past three years has been 276,889.

Current and upcoming projects at TTD include the cross-lake passenger ferry service, Nevada Stateline to Stateline Bikeway Project, the State Route (SR) 28 National Scenic Byway, the SR 89 Fanny Bridge Community Revitalization Project, and US 50 South Shore Community Revitalization Project. The sphere of influence for TTD is the Tahoe Basin boundaries. However, TTD, in partnership, works outside of these boundaries too.

TTD owns, leases, manages, and operates several critical assets to carry out its mission. In addition, TTD has identified several proposed critical assets, which FEMA also identifies as community lifelines. According to FEMA, "lifelines are the most fundamental services in the community that, when stabilized, enable all other aspects of society. When disrupted, decisive intervention (e.g., rapid service re-establishment or employment of contingency response solutions) is required."

Existing and proposed assets for TTD are listed in Table 3-1 and are shown in Figures C-2 and C-2A through C-2F. According to TTD, of these assets, the most utilized critical assets by riders on the California side of the Lake Tahoe Basin include 2085 South Y Transit Center and 2111 Stateline Transit Center.

Estimated values from 2018 for existing TTD critical assets have been provided when known. Due to grant funding restrictions for this plan, only existing and proposed critical assets that are located on the California side of the Lake Tahoe Basin are included in a semi-quantitative or qualitative vulnerability analysis in Section 4. TTD's mitigation strategy is in Appendix D.

Table 3-1: Critical Assets That TTD Owns, Leases, Manages, and Operates

Category	Name of Asset
Administration	Administration building* (owned by TRPA)
Maintenance	Existing Maintenance building and yard and proposed Maintenance building and yard* (The estimated value of existing Maintenance building and yard not available. However, the yard houses 28 buses, two vans, three automobiles, two service trucks, and one piece of equipment with a total estimated replacement cost value of $6,359,037)
Bus Stops	1002 Hwy 28 at Tunnel Creek* ($30,000) 1952 US 50/Al Tahoe Blvd (US Bank) ($30,000) 1959 US 50/Bigler Ave ($30,000) 1983 US 50/Lyons Ave (Middle School) ($30,000) 1985 US 50/Takela Dr (Bank of America) ($30,000) 2011 US 50/Rufus Allen Blvd (County Library) ($250,000) 2012 US 50/Johnson Blvd (Safeway) ($30,000) 2055 US 50/Wildwood Ave ($30,000) 2085 South Y Transit Center 2111 Stateline Transit Center 4042 South Ave/3rd St (Barton Hospital) ($100,000) 4052 3rd St (Tahoe Senior Plaza) ($100,000) 4105 SR 207/Foothill Rd (Foothill Park and Ride)* ($50,000) 4107 SR 207/Foothill Rd (Foothill Park and Ride-EB)* ($50,000) 4148 Spruce Ave/Herbert Ave ($30,000) 4159 US 50/Tallac Ave (Visitor/Senior Center) ($250,000) 4168 Ski Run Blvd/Spruce Ave (Terry) ($30,000) 4173 US 50/San Jose Ave (Lakeview Commons) ($100,000) 4214 Pioneer Trail/Shepherds Rd ($30,000) 4215 US 50/Ski Run Blvd ($100,000) 4217 Pioneer Trail/Aspenwald Rd ($30,000) 4231 Pioneer Trail/Moss Rd ($30,000) 4233 US 50/Pioneer Trail (Holiday Inn Express) ($30,000) 4287 SR 207/Market St* ($50,000) 4295 Kingsbury Transit Center* 4356 Pioneer Trail/Moss Rd (7-11) ($30,000) 4720 Douglas County Community/Senior Center (Herbig Park)* 5004 US 50/Wildwood Ave ($30,000) 5006 US 50/Fairway Ave (Hotel Elevation) ($30,000) 5016 Pioneer Trail/Glen Dr ($30,000) 5017 Ski Run Blvd/Willow Ave ($30,000) 5023 Al Tahoe/US 50 (LTUSD Offices) ($30,000)
Cross-Lake Ferry Terminals	Proposed cross-lake ferry terminals have been identified for Tahoe City, Kings Beach, and South Lake Tahoe

Mobility Hubs	Lake Tahoe Community College ($1,450,562), Tahoe City, proposed Spooner Summit*, proposed Homewood, proposed Incline Village*, proposed Mt. Rose*, and proposed Sierra-at-Tahoe*
Mobility Hubs / Transit Centers (MH/TC)	Proposed Harrison Ave., proposed Heavenly Resort – California, proposed Palisades*, proposed Sugar Pine, and proposed Meyers
Transit Centers**	Proposed Northstar*, proposed Tahoma, proposed Diamond Peak Resort*, and proposed Heavenly Lodge – Boulder*

Notes:
* Critical asset is in Nevada and/or outside of the planning area.
** To avoid double counting, 2085 South Y Transit Center, 2111 Stateline Transit Center and 4295 Kingsbury Transit Center are classified in this HMP as bus stops.

3.3 TAHOE RESOURCE CONSERVATION DISTRICT

The Tahoe RCD, founded in 1974 by the California State Legislature, is a non-regulatory, grant-funded, local agency that works in the Lake Tahoe Basin. It is one of nearly 3,000 conservation districts across the United States that protect land, water, forests, wildlife, and related natural resources. The mission of Tahoe RCD is to "promote the conservation, stewardship and knowledge of the Lake Tahoe Region's natural resources by providing leadership and innovative environmental services to all stakeholders."

The Tahoe RCD, along with many partner agencies and organizations, achieves its mission using grant funding and private donations to support conservation—including water quality, wildlife habitat, fire defensible space, sustainable recreation, water conservation, and community enhancement—throughout the Lake Tahoe Basin. Current programs at Tahoe RCD focus on stormwater management, control and prevention of aquatic invasive species, and initiatives concerning land management, forestry, and conservation landscaping. These programs are described in more detail in Appendix E. The sphere of influence of the Tahoe RCD is within the same boundaries of the California side of the Lake Tahoe Basin as the sphere of influence of TTD. The Tahoe RCD also works in partnership outside of these boundaries too.

The Tahoe RCD owns, leases, manages, and operates several critical assets (community lifelines) to carry out its mission. These assets are listed in Table 3-2 and are shown on Figures C-3 and C3-A through C3-E. Estimated values for Tahoe RCD critical assets have been provided by Tahoe RCD when known. As of August 2023, Tahoe RCD is not looking to acquire more land in the future. In addition, there are no plans for additional stormwater sites either. As for inspection stations, there is a desire to create permanent inspection stations, but those will be located at the current seasonal inspection station sites.

Current Tahoe RCD critical assets that are located on the California side of the Lake Tahoe Basin are included in a semi-quantitative or qualitative vulnerability analysis in Section 4. Tahoe RCD's mitigation strategy is located in Appendix E.

Table 3-2: Critical Assets That Tahoe RCD Owns, Leases, Manages, and Operates

Category	Name of Asset
Administration	Administration building ($996,000), Tahoe Regional Planning Agency storage* ($500,000)
Inspection Station	Alpine Meadows Inspection Station, Meyers Inspection Station, and Spooner Summit Inspection Station* ($608,500 each), and Cave Rock Launch Ramp* and Lake Forest Launch Ramp ($47,500 each)
Johnson Meadow	Johnson Meadow ($8,324,450) and Johnson Meadow signage and tools ($2,800)
Meteorological Stations	El Dorado County Yard (EDCY), Hatchery, Nugget, Shop, Nevada Department of Transportation SR 431*, Tahoe Environmental Research Center*, and Shakori meteorological stations ($4,000 each)
Stormwater Monitoring Sites	Contech Inflow*, Contech Outflow*, Elks Club (EC), Jellyfish Inflow*, Jellyfish Outflow*, Lakeshore*, Pasadena Outflow, Speedboat, Tahoma, Tahoe City, Tahoe Valley (TV), and Upper Truckee (UT) stormwater monitoring sites ($16,000 each)

Notes: * Critical asset is in Nevada and/or outside of the planning area.

4.0 RISK ASSESSMENT

This section addresses Element B: Risk Assessment of the Local Mitigation Plan Regulation Checklist.

Element B: Risk Assessment	
B1.	Does the plan include a description of the type, location, and extent of all natural hazards that can affect each jurisdiction(s)? (Requirement § 201.6(c)(2)(ii))
B1-a.	Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?
B1-b.	Does the plan include information on the location of each identified hazard?
B1-c.	Does the plan describe the extent for each identified hazard?
B1-d.	Does the plan include the history of previous hazard events for each identified hazard?
B1-e.	Does the plan include the probability of future events for each identified hazard? Does the plan describe the effects of future conditions, including climate change (e.g., long-term weather patterns, average temperature, and sea levels), on the type, location and range of anticipated intensities of identified hazards?
B1-f.	For participating jurisdictions in a multi-jurisdictional plan, does the plan describe any hazards that are unique to and/or vary from those affecting the overall planning area?
B2.	Does the plan include a summary of the jurisdiction's vulnerability and the impacts on the community from the identified hazards? Does this summary also address National Flood Insurance Program (NFIP)-insured structures that have been repetitively damaged by floods? (Requirement 44 CFR § 201.6(c)(2)(ii))
B2-a.	Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards?
B2-b.	For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction?
B2-c.	Does the plan address NFIP-insured structures within each jurisdiction that have been repetitively damaged by floods?

4.1 HAZARD IDENTIFICATION, VULNERABILITY SUMMARY, AND POTENTIAL IMPACTS

During the advisory committee kickoff conference call, the HMP project manager, consultant, and advisory committee discussed potential hazards to include in the 2023 HMP based on recent disaster declarations in the area (drought, flood, landslide, wildfire, and winter storm); known probabilities and vulnerabilities based on previous events (earthquake); and regional, State, and federal plans and reports (climate change and dam failure). Based on this analysis, the advisory committee determined that the following hazards should be included in the 2023 HMP: climate change, dam failure, drought, earthquake, landslide, wildfire, and winter storm.

For each hazard, the hazard identification consists of describing the nature of the hazard, the disaster history of the hazard, the locations of historical hazard events, their extent/severity, and the probability of future hazard events. Hazard identification profiles have been developed for each of the eight hazards, and these profiles are discussed in Section 4.2 through Section 4.9. Hazard identification is discussed for the planning area that includes the California side of the Lake Tahoe Basin. Both TTD and Tahoe RCD work throughout

the Lake Tahoe Basin, and therefore there are no hazards that are unique to either one of them or that vary from those affecting the overall planning area.

In addition to hazard identification, within this section, vulnerability and potential impact tables have been prepared for the planning area, TTD, and Tahoe RCD. Vulnerability and impact tables for the planning area focus on land use, population, and future growth and development. Vulnerability and impact tables for TTD and Tahoe RCD focus on critical assets and vulnerable populations. In addition, climate-induced impact tables have been prepared for each hazard.

Finally, as noted in Table 2-3, several existing regional plans, studies, and reports were used to develop this section, including:

- California's Fourth Climate Change Assessment, Sierra Nevada Region Report (California Energy Commission, 2018)
- Climate Change Vulnerability Assessment of Infrastructure Systems in the Lake Tahoe Basin (Energetics, 2019) (hereafter referred to as the VAIS)
- Integrated Vulnerability Assessment of Climate Change in the Lake Tahoe Basin (California Tahoe Conservancy [CTC] and Catalyst Environmental Solutions, 2020) (hereafter referred to as the IVA)
- Tahoe Climate Adaptation Action Portfolio (CTC and TTD, 2021)
- Tahoe State of the Lake Report, 2022 (UC Davis Tahoe Environmental Center, 2022)

4.2 CLIMATE CHANGE

Table 4-1: Climate Change Profile

Profile	Description
Nature	Climate change is defined as the average statistics of weather, which includes temperature, precipitation, and seasonal patterns in a particular region. Climate change refers to the long-term and irrevocable shift in these weather-related patterns, either regionally or globally. The Earth and its natural ecosystem are very closely tied to the climate, and any permanent climate change will lead to an imbalance in the existing ecosystem, which impacts the way people live, the food they grow, their health, the wildlife, the availability of water, and much more. Research indicates that much of this warming is due to human activities—primarily the burning of fossil fuels and the clearing of forests—that release carbon dioxide (CO_2) and other gases into the atmosphere, which trap heat that would otherwise escape into space. Once in the atmosphere, these heat-trapping emissions remain there for many years (for example, CO_2 lasts about 100 years). If left unchecked, by the end of the century CO_2 concentrations could reach levels three times higher than in pre-industrial times. According to most climatologists, the planet is starting to experience shifts in climate patterns and an increased frequency of extreme weather events at both the global level and the local level. Over the next century, increasing atmospheric greenhouse gas concentrations are expected to cause a variety of changes to local climate conditions, including sea level rise and storm surge in coastal areas, increased riverine flooding, and stormwater inundation; and more frequent and prolonged higher temperatures (leading to extreme heat events and wildfires)—particularly inland—that decrease air quality and cause extended periods of drought. The social and economic impacts expected as a result of climate change include energy shortages, heat-related mortality and illnesses, failing infrastructure, and food and water insecurity, to name a few. Key climate impacts on the Lake Tahoe Basin include temperature, precipitation, snowpack, climate water deficit, runoff, wind, kinetic energy raindrops, wildfire, and lake level. This section will mainly address increased air temperatures as it relates to climate change in the Lake Tahoe Basin. Other climate change impacts are discussed as follows: water deficits and droughts are addressed in Section 4.4, Drought; floods and extreme precipitation are addressed in Section 4.6, Flood; wildfires are addressed in Section 4.8, Wildfire, and winter storms are addressed in Section 4.9, Winter Storm.
Location	Climate change is now affecting all of the Lake Tahoe Basin at every elevation.
History	According to the Tahoe Environmental Research Center: • Since 1911, daily air temperatures for the Lake Tahoe Basin have increased. Measured at Tahoe City, the long-term trend in average daily minimum temperature has increased by 4.50 degrees Fahrenheit (°F), and the long-term trend in average daily maximum temperature has risen by 2.25°F. • The number of days when air temperature is below freezing has declined by 29 days per year since 1911. • On average, the snowpack has been decreasing since it started being recorded in the mid-1950s. From 1960 to 2020, the average snowpack has decreased at mid-mountain (at Palisades Tahoe) from 115 inches a year to 80 inches a year.

Extent / Severity	According to the IVA, average ambient air temperature in the Lake Tahoe Basin has been rising over the past decade, and this trend is expected to intensify in the future. IVA's modeling predicts that from 2010 to 2100, average annual minimum and maximum air temperatures will increase by 3.6°F to 9.0°F. The average maximum air temperature in South Lake Tahoe for the month of August is projected to rise from 75°F (1981 to 2010) to 77°F in 2050 and 79°F in 2099. Increased annual air temperatures in the northern Sierra Nevada, including the Lake Tahoe Basin, will cause the winter season to shorten, with snowmelt occurring earlier in the spring and summer. The IVA also notes that the elevation at which snow accumulates (called the snow level) will eventually rise above the rim of the Lake Tahoe Basin, from approximately 6,200 feet to approximately 7,500 feet (by 2050) and to approximately 9,500 feet (by 2100) as less precipitation falls as snow and more falls as rain.
Future Events	Climate projections for warming air temperature for the Lake Tahoe Basin show an increase of 3.6°F to 9.0°F by the end of the century. In addition to warming air temperature, Tahoe Climate Research Center notes that increased temperatures from climate change in Lake Tahoe Basin by the 21st century will also include the following impacts: • Snow declining as a fraction of total precipitation • Extended droughts • Increased algal growth • Increased threat from aquatic invasive species • More extreme streamflow events • Increased tree mortality • Future impacts on clarity • Reduced deep lake mixing

Table 4-2: Climate Change Vulnerability

	Vulnerability
Planning Area	• Every location in the Lake Tahoe Basin is at risk to climate change. • Specific communities on the California side of the Lake Tahoe Basin that are vulnerable to droughts, floods and extreme precipitation, wildfires, and winter storms are discussed in detail in Sections 4.4, 4.6, 4.8, and 4.9. • All towns, cities, and communities and, therefore people (including vulnerable populations), on the California side of the Lake Tahoe Basin are vulnerable to increased temperature due to climate change. • All future population in the Lake Tahoe Basin is vulnerable to climate change.
TTD	• TTD critical assets that are vulnerable to droughts, floods and extreme precipitation, wildfires, and winter storms are discussed in detail in Sections 4.4, 4.6, 4.8, and 4.9. • TTD critical assets that are vulnerable to increased temperature due to climate change include the future cross-lake passenger ferry terminals due to low lake levels and transit vehicles due to pavement performance and congestion. • All transit operators, displaced workers that commute into the basin, other vulnerable populations that use and/or rely on public transit on a regular basis, and riders that may have disabilities could be at risk to deteriorating health conditions and pavement performance caused by heat stress.

Tahoe RCD	• Tahoe RCD critical assets that are vulnerable to droughts, floods and extreme precipitation, wildfires, and winter storms are discussed in detail in Sections 4.4, 4.6, 4.8, and 4.9. Tahoe RCD critical assets that are vulnerable to increased temperature due to climate change include Johnson Meadow due to associated meadow, forest, and wetland disturbances, launch ramps due to the low lake levels, and inspection stations due to increased aquatic invasive species. • People of color and others who have faced barriers to outdoor recreation may be at risk to temporary losing access or having limited access to Johnson Meadow due to meadow, forest, and wetland disturbance resulting from climate change.

Table 4-3: Potential Climate Change Impacts

	Impacts
Planning Area	• All of the Lake Tahoe Basin will be impacted by climate change. Areas that are in planning area that lack sufficient tree canopy and/or have large amounts of impervious and dark surfaces will be affected by rising temperatures and/or extreme heat. According to TRPA, the most impervious and dark surfaces can be found on paved highways around the lake and in population centers. • Extreme heat could trigger a variety of heat stress conditions for people, such as heat stroke. Higher temperatures could also contribute to the build-up of harmful pollutants and cause respiratory issues. • Due to the near build-out of the basin, it is unlikely that there will be many additional areas with large amounts of impervious and dark surfaces outside of existing population centers. Like the rest of the region, population growth and land development in and around population centers will likely be impacted by rising temperatures.
TTD	• Deteriorating health conditions for transit operators and riders could include heat stress due to rising street-level temperatures and loss of shade and poor air quality due to increased air temperatures. This is of particular concern for displaced workers that commute into the basin, other vulnerable populations that use and/or rely on public transit on a regular basis, and riders that may have disabilities. • Low lake levels could result in ferry route delays and/or cancellations thereby impacting ferry riders. • Deteriorating pavement performance due to increased temperatures could result in transit route delays, reroutes and/or cancellations thereby impacting transit riders, including displaced workers that commute into the basin, other vulnerable populations that use and/or rely on transit on a regular basis, and riders that may have disabilities. • TTD could experience increased congestion and congested safety related issues as tourists visit the region to find cooler temperatures (VAIS). • TTD is already planning for population growth and development, including increased vulnerable populations, through its transit master plan. The plan is focused not only on the way that people move around the basin but also how connected the Tahoe Basin communities are today and how they will change especially with respect to housing, in particular Transit Oriented Development within existing population centers. The short-term goal of the plan is to "create the basic structure from which the network can grow and expand in the future with little further disruption to the routes" and has the potential to expand services if land use changes or demand increases. While TTD intends to build a transit system that complements growth and land use improvement, service could be temporarily constrained by weather-based road closures and traffic congestion due to increased temperatures. This could impact vulnerable populations that use and/or rely on public transit on a regular basis.

Tahoe RCD	• Early peak streamflow / early snowmelt pack could cause severe ecological changes to riparian ecosystems such as Johnson Meadow (Tahoe Climate Adaptation Primer) • Higher temperatures could cause habitat loss and fragmentation to species that inhabit small ranges (IVA). • Lower ground water tables could lead to conifers encroaching upon and reducing meadow habitat (Tahoe Climate Adaptation Primer). • Warm surface temperatures associated with higher temperatures could cause native species to be outcompeted by aquatic invasive species that adapt well to altered environments (IVA). • Increased air temperatures could cause deteriorating health conditions, including heat stress. This is of particular concern for all of Tahoe RCD's vulnerable and underserved populations including the elderly, low-income households, people with medical problems or disabilities, people of color, and others who already face barriers to outdoor recreation. • In high or very high FHSZ and extreme FTI, population growth and land development could result in additional demands on Tahoe RCD's Fire Adapted Communities Program. • Around the shoreline, population growth and land development coupled with increased temperatures could result in additional demands on Tahoe RCD's Aquatic Invasive Species Program.

Table 4-4: Potential Climate-Driven Impacts on Increased Temperature

	Impacts
Planning Area	• Rising temperatures because of climate change will continue to be most noticeable in parts of the planning area that lack sufficient tree canopy and/or have large amounts of impervious and dark surfaces, such as the paved highways around the lake and in the town centers and city limits too. • Due to the near build-out of the basin, it is unlikely that there will be many additional areas with large amounts of impervious and dark surfaces that are at greater risk of extreme heat.
TTD	• TTD critical assets that could be vulnerable to increased temperatures due to climate change include the future cross-lake passenger ferry terminals due to low lake levels and transit vehicles due to pavement performance and congestion. • Increased local and regional transit services to accommodate population growth and land development in population centers as well as displaced workers from commuter communities outside of the basin, could temporarily be constrained by weather-based road closures and traffic congestion due to increased temperatures. These constraints could impact transit riders, including displaced workers that commute into the basin, other vulnerable populations that use and/or rely on transit on a regular basis, and riders that may have disabilities.

Tahoe RCD	• Johnson Meadow will remain vulnerable to increased temperatures associated with climate change. • Increased air temperatures associated with climate change could cause deteriorating health conditions, including heat stress. This is of particular concern for all of Tahoe RCD's vulnerable and underserved populations including the elderly, low-income households, people with medical problems or disabilities, people of color, and others who already face barriers to outdoor recreation. • The elevated fire threat in high or very high FHSZ and extreme FTI coupled with population growth (particularly vulnerable populations) and land development around the shoreline in and in the mountains could result in additional demands on Tahoe RCD's Fire Adapted Communities Program. • Around the shoreline, population growth (including vulnerable populations) and land development coupled with increased temperatures due to climate change could result in additional demands on Tahoe RCD's Aquatic Invasive Species Program.

4.3 DAM FAILURE

Table 4-5: Dam Failure Profile

Profile	Description
Nature	Dam failure, also known as a dam breach, is the structural collapse of a dam that releases the water stored in the reservoir behind the dam. A dam failure is usually the result of the age of the structure, inadequate spillway capacity used in construction, or structural damage caused by an earthquake or flood. When a dam fails, a large quantity of water is suddenly released with a great potential to cause human casualties, economic loss, and environmental damage. This type of disaster is especially dangerous because it can occur suddenly, providing little warning or evacuation time for the people living downstream. The flows resulting from dam failure are generally much larger than the capacity of the downstream channels and therefore lead to extensive flooding. Flood damage occurs because of the momentum of the flood caused by the sediment-laden water flooding over the channel banks and the impact of the debris carried by the flow.
Location	In California, any dam with a height of more than 6 feet and impounding 50 acre-feet or more of water or any dam that is 25 feet or higher and impounds more than 15 acre-feet of water is under the State's jurisdictional oversight, unless exempted. As shown on Figure C-4, according to the California Department of Water Resources, Division of Safety of Dams (DSOD), as of August 2022, there are only three dams under the jurisdiction of DSOD within the California side of the Lake Tahoe Basin. These dams are all located in El Dorado County. In addition to the three jurisdictional dams, the Bureau of Reclamation operates the Lake Tahoe Dam in Placer County. The dam controls the top 6 feet of Lake Tahoe, creating a reservoir of 744,600 acre-feet capacity, and regulates the lake's outflow into the Truckee River.
History	There are no recorded dam failures in the Lake Tahoe Basin.
Extent / Severity	The Federal Guidelines for Inundation Mapping of Flood Risks Associated with Dam Incidents and Failures (FEMA P-946, July 2013) defines the downstream hazards for dam incidents, not the probability of failure. The downstream hazards are based "solely on the potential downstream impacts to life and property should the dam fail when operating with a full reservoir." FEMA has developed three categories of increasing severity for downstream hazards: Low, Significant, and High. DSOD adds a fourth category of Extremely High. High hazard potential dams are expected to cause the loss of at least one human life if they fail. Dams that are classified as Extremely High hazard potential dams are expected to cause loss of human life or have an inundation area with a population of 1,000 or more. According to DSOD, two dams on the California side of the Lake Tahoe Basin are classified as High or Extremely High hazard potential dams: Echo Lake Dam is classified as Extremely High hazard potential, and the Emergency Effluent Holding Dam is classified as High hazard potential. A dam breach inundation map shows the downstream flooding that could result from a hypothetical failure of the dam or its critical appurtenant structure. In 2017, the California legislature passed a law requiring all owners of State jurisdictional dams—except for owners of Low hazard potential dams—to develop inundation maps approved by DSOD and emergency action plans approved by Cal OES. The approved Extremely High and High hazard potential dam breach inundation maps for the Greater Lake Tahoe Area are shown on Figure C-5, which shows that a total 1.87 square miles (0.49 percent) of mapped dam breach inundation area is located within the California side of the Lake Tahoe Basin.

Future Events	Dams fail for a variety of reasons, including substandard construction materials/techniques, spillway design error, geological instability, poor maintenance, intense rainfall, flow regulation, or earthquakes. Therefore, recurrence probabilities are unknown. State-jurisdictional dams are regulated by the DSOD, and each dam undergoes an annual inspection to ensure that it is safe, performing as intended, and not developing safety issues. According to the DSOD, dams have been designed to withstand storms so massive that they happen only once every 1,000 years (i.e., a 0.1 percent chance). In recent years, there has been growing concern about extreme precipitation events pushing aging dams beyond what they were designed to handle. Water flowing over the top of a dam is considered among the worst possible failures, as it puts pressure on the structure and increases the odds of a complete collapse. One way to measure extreme precipitation events that may cause dam failure in the Lake Tahoe Basin is to calculate the frequency return intervals for extreme storms. According to California's Fourth Climate Change Assessment (California Energy Commission, 2018), extreme storms (200-year storm sequences) will likely increase to every 40 to 50 years. Table 4-5 discusses watersheds on the California side of the Lake Tahoe Basin that will experience the greatest changes in maximum streamflow and runoff by end of the century and the dams that are located within these watersheds.

Table 4-6: Dam Failure Vulnerability

Vulnerability	
Planning Area	• As shown on Figure C-5, only 1.87 square miles (0.49 percent) of mapped dam breach inundation area is located within the California side of the Lake Tahoe Basin. • Based on a simplified point location analysis, parts of the City of South Lake Tahoe (pop. 21,304) is at risk of dam failure inundation from the Emergency Fluent Holding and Echo Lake dams. Population growth and land development in and around existing population centers of these communities could be at risk of dam failure. • As noted above, extreme precipitation events from climate change may push aging dams beyond what they were designed to handle. A simplified point location analysis shows that the South Lake Tahoe (pop. 21,304) and Tahoma (pop. 1,039) are in or near watersheds with expected increases of 15 percent or greater maximum streamflow and runoff by the end of the century when modeled by the RCP4.5 scenario or in watersheds with expected maximum streamflow and runoff of 61 percent or greater by the end of the century when modeled by the RCP8.5 scenario (see Table 4-9). These watersheds also include both Echo Lake and Effluent Holding dams. Echo Lake Dam is in a watershed with expected increases of 15 percent maximum streamflow and runoff by the end of the century (model RCP4.5 scenario) and in a watershed with expected increases of 61 percent or greater maximum streamflow and runoff by the end of the century (model RCP8.5). Emergency Effluent Holding Dam is in the watershed with expected increases of 61 percent or greater maximum streamflow and runoff by the end of the century (model RCP8.5).

TTD	• TTD does not have any critical assets located in a dam breach inundation area. The vulnerability of TTD critical assets to dam failure due climate-driven extreme precipitation is unknown. However, TTD has two proposed critical assets (Sugar Pine and Meyers MH/TCs) in watersheds with expected maximum streamflow and runoff of 15 percent or greater by the end of the century (due to climate change) when modeled by the RCP4.5 scenario. These assets are also in watersheds with expected maximum streamflow and runoff of 61 percent or greater by the end of the century when modeled by the RCP8.5 scenario (see Table 4-9). • Transit operators, displaced workers that commute into the basin, other vulnerable populations that use and/or rely on public transit on a regular basis, and riders that may have disabilities could be at risk to flooded and/or damaged infrastructure due to dam failure in South Lake Tahoe.
Tahoe RCD	• Johnson Meadow ($8,324,450) is in Echo Lake Dam's inundation area. The vulnerability of Tahoe critical assets to dam failure due climate-driven extreme precipitation is unknown. However, Tahoe RCD has four critical assets (Meyers inspection station [$608,500], Shakori meteorological monitoring station [$4,000], Johnson Meadow [$8,324,450], and EC stormwater monitoring site [$16,000]) in watersheds with expected maximum streamflow and runoff of 15 percent or greater by the end of the century (due to climate change) when modeled by the RCP4.5 scenario. These assets are also in watersheds with expected maximum streamflow and runoff of 61 percent or greater by the end of the century when modeled by the RCP8.5 scenario (see Table 4-9). • People of color and others who have faced barriers to outdoor recreation may be at risk to temporary losing access or having limited access to Johnson Meadow due to dam inundation.

Table 4-7: Potential Dam Failure Impacts

Impacts	
Planning Area	• The mapped dam breach inundation areas in and around the City of South Lake Tahoe (pop. 21,304) are most susceptible to dam breach inundation and may experience significant damage to property and livelihoods, as well as injuries and loss of life for people. • For those living in a dam breach inundation area, the potential loss of life, injuries, and damage to homes, businesses, and critical assets due to a dam failure depends on several variables, including depth and velocity of water released, number of people residing in the inundation area, warning time, and public perception of the hazard. • Population growth and land development in and around the South Lake Tahoe area (specifically within the mapped dam breach inundation areas) could be impacted by dam failure.
TTD	• TTD does not have any critical assets within a mapped dam breach inundation area. • Inundation caused by a dam failure could inundate and/or damage highways and local roads, including US 50 in the City of South Lake Tahoe, leading to transit reroutes, delays and cancellations. This would impact transit riders, including displaced workers that commute into the basin, other vulnerable populations that use and/or rely on transit on a regular basis, and riders that may have disabilities. • Within mapped dam breach inundation zones in the South Lake Tahoe area, increased transit services to accommodate population growth and land development could be temporarily constrained by inundated highways and local roads due to dam failure.

Tahoe RCD	• Inundation caused by an Echo Lake dam failure could flood and erode Johnson Meadow. • Flooding and erosion caused by dam failure in Johnson Meadow could lead to the closure of community open space. This would be of particular concern for vulnerable and underserved populations including people of color and others who already face barriers to outdoor recreation. • In the South Lake Tahoe area, population growth and land development coupled with dam failure inundation shouldn't impact on Tahoe RCD's current programs.

Table 4-8: Potential Climate-Driven Impacts on Dam Failures

Impacts	
Planning Area	• In recent years, there has been growing concern about extreme precipitation events pushing aging dams beyond what they were designed to handle. Water flowing over the top of a dam is considered among the worst possible failures, as it puts pressure on the structure and increases the odds of a complete collapse. Growth in the South Lake Tahoe area in mapped dam inundations areas could be at risk of dam failure due to extreme precipitation associated with climate change.
TTD	• Given that TTD does not have any existing or future critical assets in a mapped dam breach inundation area, it is unlikely that TTD will directly be impacted from dam failure associated with climate change. However, inundation could still cause flooding and/or damage to highways and local roads, including US 50 in the City of South Lake Tahoe. This could leave TTD at risk to transit reroutes, delays and cancellations that could impact TTD's transit riders, including displaced workers that commute into the basin, other vulnerable populations that use and/or rely on transit on a regular basis, and riders that may have disabilities. • Increased local and regional transit services to accommodate population growth and land development within the mapped dam breach inundation zones of the South Lake Tahoe area could be temporarily constrained by inundated highways and local roads due to climate-induced dam failure. These constraints could impact transit riders, including displaced workers that commute into the basin, other vulnerable populations that use and/or rely on transit on a regular basis, and riders that may have disabilities.
Tahoe RCD	• An Echo Lake dam failure due to extreme precipitation could flood and erode Johnson Meadow. Flooding and erosion caused by dam failure in Johnson Meadow could lead to the closure of community open space. This would be of particular concern for vulnerable and underserved populations including people of color and others who already face barriers to outdoor recreation. • Population growth (including vulnerable populations) and land development even within the mapped dam inundation areas of South Lake Tahoe shouldn't impact Tahoe RCD's current programs.

4.4 DROUGHT

Table 4-9: Drought Profile

Profile	Description
Nature	Drought is a normal, recurrent feature of virtually all climatic zones, including areas of both high and low rainfall, though the characteristics of droughts will vary significantly from one region to another. Drought differs from normal aridity, which is a permanent feature of the climate in areas of low rainfall. Drought is the result of a natural decline in the expected precipitation over an extended period, typically one or more seasons. Other climatic characteristics impact the severity of drought conditions, including high temperatures, high winds, and low relative humidities. Four common definitions for drought are as follows: • Meteorological drought is defined solely on the degree of dryness, expressed as a departure from actual precipitation from an expected average or normal amount based on monthly, seasonal, or annual time scales. • Hydrological drought is related to the effects of precipitation shortfalls on stream flows and reservoir, lake, and groundwater levels. • Agricultural drought is defined principally in terms of soil moisture deficiencies relative to the water demands of plant life, usually crops. • Socioeconomic drought associates the supply and demand of economic goods or services with elements of meteorological, hydrologic, and agricultural drought. Socioeconomic drought occurs when the demand for water exceeds the supply as a result of weather-related supply shortfall. It may also be referred to as a water management drought. A drought's severity depends on numerous factors, including duration, intensity, geographic extent, and regional water supply demands by humans and vegetation. Due to its multi-dimensional nature, drought is difficult to define in exact terms and poses difficulties in terms of comprehensive risk assessments.
Location	The occurrence of drought is regional in nature and scope, which holds true for the northern Sierra Nevada. Therefore, the occurrence of a drought in the northern Sierra Nevada typically affects all of the Lake Tahoe Basin. According to the IVA, modeled climatic water deficits show that drought stress on soils and plants by 2070 to 2090 will be greatest in the northeast and southeast sides of the Lake Tahoe Basin.
History	Drought is a cyclic part of the climate of California, occurring in both summer and winter, with an average recurrence interval of 3 to 10 years. The driest year to date (since record keeping began in 1895) occurred in 2022. The droughts that have occurred in the Lake Tahoe Basin and California over the past 100 years are listed below: • 1917–1921, statewide, except for central Sierra Nevada and north coast • 1922–1926, statewide, except for central Sierra Nevada • 1928–1937, statewide • 1943–1951, statewide • 1959–1962, statewide • 1976–1977, statewide, except for southwestern deserts • 1987–1992, statewide • 2007–2009, statewide, particularly the central coast • 2012–2016, statewide • 2021–2023, statewide In recent years, drought state emergencies were issued by the California governor from January 17, 2014 – April 7, 2017 (Executive Order B-17-2014) and April 12, 2021/May l 0, 2021/July 8, 2021/October 19, 2021 – February 1, 2023 (Executive Order N-7-22).

Extent / Severity	The National Drought Mitigation Center produces drought monitor maps for the United States. It classifies droughts into five categories: D0 is the least severe, with abnormally dry conditions; D4 is the most severe, with exceptional drought conditions. These maps are updated every Thursday and provide expert-based best judgment on regional-scale drought conditions based on recent precipitation totals across the country compared to their long-term averages as well as variables including temperatures, soil moisture, water levels in streams and lakes, snow cover, and runoff and drought impacts such as water shortages and business interruptions. The Lake Tahoe Basin has been classified in drought categories D0 – D3 over the past five years, including: • December 2019 – May 2020, D0 abnormally dry • May 2020 – May 2021, D1 moderate drought • May 2021 – September 2021, D2 severe drought • September 2021 – October 2021, D3 extreme drought • October 2021 – January 2023, D2 severe drought Projections show that by mid-century the Lake Tahoe Basin will experience a 2.0 – 23.6 percent increase (from historical climate water averages from 1950-2005) in climate water deficit. Areas with the biggest increases include the southeastern, northwestern, and northern parts of the basin. The very southern and southeastern portion of the basin is projected to have a -2.0 to -7.2 percent decrease in climate water deficiency. However, by end of the century, all areas of the Lake Tahoe Basin are expected to have an increase of climate water deficit of 5 – 120 percent with the greatest increases in the northeastern and southeastern portions of the basin (IVA).
Future Events	According to UCLA's Center for Climate Science, climate probabilities in Northern California (including the Lake Tahoe Basin) by the year 2100 show more weather extremes, including: • Extreme dry years will occur 1.8 times more frequently than the 1895 to 2017 frequency rate of one time every 100 years. • Dry-to-wet whiplash will occur 1.25 times more frequently than the 1895 to 2017 frequency rate of four times every 100 years. Additionally, according to the VAIS, climate projections for drought events include the entire Lake Tahoe Basin with the southern and northern parts of the basin projected to experience the biggest climate water deficit/drought stress.

Table 4-10: Drought Vulnerability

Vulnerability	
Planning Area	• All of the Lake Tahoe Basin is affected by drought. However, as noted above, according to the IVA, modeled climatic water deficits show that drought stress by 2070 to 2090 will be greatest in the northeastern and southeastern parts (Nevada-side) of the basin. • The entire population of the Lake Tahoe Basin is affected by drought. • Population growth (including vulnerable populations) and land development throughout the basin will be vulnerable to drought.

TTD	• Highways and local roads around the Lake Tahoe Basin, particularly in the southeastern, northwestern, and northern parts of the basin, could be vulnerable to subsidence and other performance issues associated with drought. Future cross-lake passenger ferry terminals could be vulnerable to low lake levels associated with extended drought. • All transit operators, displaced workers that commute into the basin, other vulnerable populations that use and/or rely on public transit on a regular basis, and riders that may have disabilities could be at risk to deteriorating health conditions and pavement performance caused by heat stress. In addition, because drought can create ideal wildfire conditions, the elderly, low-income households, and people with medical problems or disabilities may be at additional risk to drought as they may have difficulty making their homes fire safe, improving their defensible space and/or evacuating when needed.
Tahoe RCD	• Johnson Meadow could be vulnerable to drought-associated forest and wetland disturbances. Launch ramps could be vulnerable to the low lake levels associated with extended drought. • People of color and others who have faced barriers to outdoor recreation may be at risk to temporary losing access or having limited access to Johnson Meadow due to drought-associated wetland disturbances because of drought.

Table 4-11: Potential Drought Impacts

Impacts	
Planning Area	• All of the Lake Tahoe Basin is and will continue to be impacted by drought. • Lake Tahoe residents and tourists could also be vulnerable to increased heat-related illnesses and favorable conditions for wildfires may also exist. Drought can reduce air quality, which can increase pollen levels, pollution, and smoke. • Population growth and land development in and around all population centers in the Lake Tahoe Basin will likely be impacted drought, particularly by water-use shortages.
TTD	• Declining groundwater levels and subsidence associated with drought could damage highways and local roads. • Higher temperatures associated with drought could affect pavement performance causing transit route delays, reroutes and/or cancellations thereby impacting transit riders, including displaced workers that commute into the basin, other vulnerable populations that use and/or rely on transit on a regular basis, and riders that may have disabilities. • Low lake levels caused by extended drought could affect the functionality of ferry terminals. • Drought could create ideal conditions for wildfires, causing damage to and/or blocking major highways and access to local roads, transit stops, and parking lots. This could also result in transit reroute delays, reroutes and/or cancelations thereby impacting transit riders, including displaced workers that commute into the basin, other vulnerable populations that use and/or rely on transit on a regular basis, and riders that may have disabilities. A long term or prolonged drought could magnify these impacts too. • Throughout the basin, increased transit services to accommodate population growth and land development could be temporarily constrained by subsidence, pavement performance, low lake levels, and increased wildfire risks due to drought. This would impact those that rely on public transit daily.

Tahoe RCD	• Lack of consistent high groundwater from drought could make trees more susceptible to bark beetle attacks (IVA) and could cause aspen trees to die and be replaced by conifer trees (IVA). Droughts could lead to acidification, cracking, and compaction of wetland soils. • Drought could create ideal conditions for wildfires, which might destroy or disturb forests and wetlands, and buildings and infrastructure. This could be of particular concern for vulnerable and underserved populations including the elderly, low-income households, and people with medical problems or disabilities as they may have difficulty making their homes fire safe, improving their defensible space and/or evacuating when needed. • Drought may temporary close community open space (such as Johnson Meadow) due to increased wildfire risk, and that may be of particular concern for vulnerable and underserved populations including people of color and others who already face barriers to outdoor recreation. • In high or very high FHSZ and extreme FTI, prolonged drought coupled with population growth (in particular the elderly, low-income households, and people with medical problems or disabilities) and land development could result in additional demands on Tahoe RCD's Fire Adapted Communities Program. • The low lake levels and higher water temperatures associated with drought could increase algae and other aquatic invasive species in the lake (IVA), thereby impacting Tahoe RCD's Aquatic Invasive Species Program, as there will be a greater need for controlling and monitoring existing and new aquatic invasive species.

Table 4-12: Potential Climate-Driven Impacts on Droughts

Impacts	
Planning Area	• All of the Lake Tahoe Basin (including population growth and development) is and will continue to be impacted by climate-induced drought. • Climate projections show that by end of the century, all areas of the Lake Tahoe Basin are expected to have an increase of climate water deficit of 5 – 120 percent with the greatest increases in the northeastern and southeastern portions of the basin (IVA).
TTD	• Prolonged drought caused by climate change may cause subsidence and highway and local access road performance issues particularly in the southeastern, northwestern, and northern parts of the basin. Future TTD cross-lake passenger ferry terminals could be more vulnerable to low lake levels associated with extended drought too. • TTD critical assets that are vulnerable to climate-induced drought include the future cross-lake passenger ferry terminals due to low lake levels and transit vehicles due to pavement performance. Transit operators, displaced workers that commute into the basin, other vulnerable populations that use and/or rely on public transit on a regular basis, and riders that may have disabilities could be at additional risk to deteriorating health conditions and pavement performance caused by heat stress and/or subsidence caused by ongoing drought. • Increased local and regional transit services to accommodate population growth and land development in population centers as well as displaced workers from commuter communities, could temporarily be constrained by increased subsidence, decreased pavement performance, low lake levels, and increased wildfire risks due to ongoing climate-induced drought.

Tahoe RCD	• A climate-induced prolonged drought may temporary close community open space (such as Johnson Meadow) due to increased wildfire risk, and that may be of particular concern for vulnerable and underserved populations including people of color and others who already face barriers to outdoor recreation. • A climate-induced prolonged drought could create ideal conditions for wildfires, which might destroy or disturb forests and wetlands, and buildings and infrastructure, including Tahoe RCD electrical equipment. • In high or very high FHSZ and extreme FTI, a climate-induced prolonged drought coupled with population growth and land development could result in additional demands on Tahoe RCD's Fire Adapted Communities Program. This could be of particular concern for vulnerable and underserved populations including the elderly, low-income households, and people with medical problems or disabilities as they may have difficulty making their homes fire safe, improving their defensible space and/or evacuating when needed. • The low lake levels and higher water temperatures associated with a climate-induced prolonged drought could increase algae and other aquatic invasive species in the lake (IVA), thereby impacting Tahoe RCD's Aquatic Invasive Species Program, as there will be a greater need for controlling and monitoring existing and new aquatic invasive species.

4.5 EARTHQUAKE

Table 4-13: Earthquake Profile

Profile	Description
Nature	An earthquake is a sudden motion or trembling caused by the release of strain accumulated in or along the edge of Earth's tectonic plates. The effects of an earthquake can be felt far beyond the site of its occurrence. Earthquakes usually occur without warning and can cause massive damage and extensive casualties in a few seconds. Common effects of earthquakes are ground motion and shaking, surface fault ruptures, and ground failure. Ground motion is the vibration or shaking of the ground during an earthquake. Seismic waves radiate when a fault ruptures, causing the ground to vibrate. The severity of the vibration increases with the amount of energy released and decreases with distance from the causative fault or epicenter. Soft soils can amplify ground motions. Several secondary natural hazards can occur from earthquakes, including: • Surface faulting: Surface faulting is the differential movement of two sides of a fault at the Earth's surface. Displacement along faults varies in terms of both length and width but can be significant (e.g., up to 20 feet), as can the length of the surface rupture (e.g., up to 200 miles). Surface faulting can cause severe damage to infrastructure, including railways, highways, pipelines, tunnels, and dams. • Liquefaction: Liquefaction occurs when seismic waves pass through saturated granular soil, distorting its granular structure and causing some of the empty spaces between granules to collapse. Liquefaction causes lateral spreads (i.e., horizontal movements of 10 to 15 feet most commonly but up to 100 feet), flow failures (i.e., massive flows of soil, typically hundreds of feet but up to 12 miles), and loss of bearing strength (i.e., soil deformations causing structures to settle or tip). Liquefaction can cause severe damage to property. • Landslides / debris flows: Landslides and debris flows occur as a result of horizontal seismic inertia forces induced in slopes by ground shaking. The most common earthquake-induced landslides include shallow, disrupted landslides such as rockfalls, rockslides, and soil slides. Debris flows are created when surface soil on steep slopes becomes completely saturated with water. Once the soil liquefies, it loses its ability to hold together and can flow downhill at very high speeds, taking vegetation and/or structures with it. Slide risks increase during a wet winter after an earthquake. • Tsunamis: A tsunami is a series of traveling ocean waves of extremely long length, generated by disturbances associated primarily with earthquakes occurring below or near the bottom of a large body of water or on the ocean floor. Subduction zone earthquakes at plate boundaries often cause tsunamis. The most common measure of earthquake intensity used in the United States is the Modified Mercalli Intensity (MMI) Scale, which measures felt intensity, peak ground acceleration, and instrumental intensity by quantifying how hard the earth shakes in each location. The MMI Scale ranges from an intensity of I to X with the lower numbers of the intensity scale generally dealing with the "manner in which the earthquake is felt by people while the higher numbers on the scale are based on "observed structural damage." The MMI Scale includes: • Intensity I, no shaking felt. • Intensity II – III, weak shaking, felt by only a few people (mainly those indoors). Intensity IV, light shaking, felt noticeably by people indoors and outdoors by a few. • Intensity V, moderate shaking, felt by nearly everyone. • Intensity VI, strong shaking, felt by all (many frightened). • Intensity VII, very strong shaking, damage negligible in buildings of good design. • Intensity VIII, severe shaking, damage considerable in buildings of good design. • Intensity IX, violent shaking, damage great in buildings of good design.

	• Intensity X, extreme shaking, some buildings of good design destroyed.
Location	According to the California Geological Survey (CGS) and as shown on Figure C-6, the California side of the Greater Lake Tahoe Area is transected by a series of significant faults, including the Tahoe-Sierra Frontal Fault, Dog Valley Fault, Polaris Fault, West Tahoe–Dollar Point Fault, Agate Bay Fault, North Tahoe Fault (also referred to as the Stateline Fault), Tahoe Valley Fault, and Genoa Fault.
History	As shown on Figure C-6, 12 M 5.0 or greater earthquakes have been recorded in and around the Greater Lake Tahoe Area between 1769 and 2015 (CGS). There have not been any disaster declarations for earthquakes in the Lake Tahoe Basin. In addition, according to the Tahoe Environmental Research Center, a M 7.0 earthquake that occurred sometimes between 12,000 – 21,000 years ago caused a massive land area along McKinney Bay to collapse, thereby causing an underwater landslide and a tsunami generated by the landslide displacement. Geologists estimate that the tsunami had waves as high as 100 – 300 ft. with seiche waves lasting 24 hours after the initial tsunami event.
Extent / Severity	The CGS has developed probabilistic seismic hazard maps for earthquake shaking potential for California. The maps refer to an estimate of the probability of exceeding a certain amount of ground shaking or ground motion in 50 years. The hazard depends on the magnitudes and locations of likely earthquakes, how often they occur, and the properties of the rocks and sediments that the earthquake waves travel through. Regions near major, active faults are shown in orange, red, and pink and experience stronger earthquake shaking more frequently. Regions that are distant from known, active faults are shown in green and yellow; these areas experience lower levels of shaking and do so less frequently. A probabilistic seismic hazard map depicting a 2 percent probability of exceedance in 50 years, which is the same as the level of ground-shaking with about a 2500-year average repeat time, as is shown on Figure C-7. Areas shaded in orange (very dark orange/red) which include northern and southern Lake Tahoe will experience stronger earthquake shaking more frequently (MMI Scale VII – VIII). Such areas include 23.92 square miles (6.35 percent) of the California side of the Lake Tahoe Basin. Areas within the same geographical boundaries that are shaded in light orange, yellow, or yellow-green (MMI Scale V-VI) will experience lower levels of earthquake shaking less frequently. These areas, including the western and northwestern parts of the Lake Tahoe Basin include 157.73 square miles (41.89 percent) of the California side, and areas in green (60.02 square miles, or 15.94 percent of the California side) in the southwestern portion of the basin will experience the least amount of shaking the least often.
Future Events	Lake Tahoe Basin lies within one of the most active parts of the Sierra Nevada-Great Basin Zone. Active seismically significant faults in the Lake Tahoe Basin (for both the California and Nevada sides of the Lake Tahoe Basin) include the northeast-southwest-trending North Tahoe Fault, the north-south-trending West Tahoe–Dollar Point Fault, and the northwest-trending Tahoe-Sierra Frontal Fault. Two studies conducted by the Scripps Institution of Oceanography suggest that an "M 7.0+ earthquake occurs every 2,000 to 3,000 years in the Lake Tahoe Basin, and that the largest fault in the basin, the West Tahoe–Dollar Point Fault, appears to have last ruptured between 4,100 and 4,500 years ago." As noted above, probabilistic shake hazard maps show the greatest shaking potential to the north, south, and east sides of Lake Tahoe as well as under Lake Tahoe itself. According to the University of Nevada at Reno, a rupture along a fault beneath Lake Tahoe could generate a tsunami that in turn could trigger 30 feet or higher seiche waves. According to the National Aeronautics and Space Administration (NASA), there is no way of knowing at this point if and where climate-related stress could promote earthquakes.

Table 4-14: Earthquake Vulnerability

	Vulnerability
Planning Area	• As shown in Figure C-7, areas shaded in orange (very dark orange/red) will experience stronger earthquake shaking more frequently. Such areas include 23.92 square miles (6.35 percent) of the California side of the Lake Tahoe Basin. Areas within the same geographical boundaries that are shaded in light orange, yellow, or yellow-green will experience lower levels of earthquake shaking less frequently. These areas include 157.73 square miles (41.89 percent) of the California side, and areas in green (60.02 square miles, or 15.94 percent of the California side) will experience the least amount of shaking the least often. • Based on the probabilistic seismic hazard maps, a simplified point location analysis shows that on the California side of the Lake Tahoe Basin, Kings Beach (pop. 2,826), Meeks Bay (pop. 985), Tahoe Vista (pop.1,233), Tahoma (pop. 1,039), and South Lake Tahoe (pop. 21,304) are vulnerable to stronger earthquake shaking more frequently. • Population growth and land development in Kings Beach, Meeks Bay, Tahoe Vista, Tahoma, and South Lake Tahoe will be at risk to strongest earthquake shaking.
TTD	• The following bus stops with an estimated value of unknown to $30,000 each are located in areas that may experience stronger earthquakes more frequently: 1952 US 50/Al Tahoe Blvd (US Bank),1959 US 50/Bigler Ave,1983 US 50/Lyons Ave (Middle School), 2012 US 50/Johnson Blvd (Safeway), 2055 US 50/Wildwood Ave, 2085 South Y Transit Center, 2111 Stateline Transit Center, 4148 Spruce Ave/Herbert Ave, 4168 Ski Run Blvd/Spruce Ave (Terry), 4214 Pioneer Trail/Shepherds Rd, 4217 Pioneer Trail/Aspenwald Rd, 4231 Pioneer Trail/Moss Rd, 4233 US 50/Pioneer Trail (Holiday Inn Express), 4356 Pioneer Trail/Moss Rd (7-11), 5004 US 50/Wildwood Ave, 5016 Pioneer Trail/Glen Dr, 5017 Ski Run Blvd/Willow Ave, and Al Tahoe/US 50 (LTUSD Offices). The 4042 South Ave/3rd St (Barton Hospital) ($100,000) and the 4052 3rd St (Tahoe Senior Plaza) bus stops, which are both valued at $100,000 each, and the 4159 US 50/Tallac Ave (Visitor/Senior Center) bus stop, valued at $250,000, are also located in areas that may experience stronger earthquakes more frequently. In addition, the existing Maintenance yard and building and the existing Lake Tahoe Community College mobility hub ($1,450,562) along with the proposed South Lake Tahoe cross-lake ferry terminal and the proposed Harrison Ave. MH/TC are all located in areas that may experience stronger earthquake shaking more frequently too. • Transit operators, displaced workers that commute into the basin, other vulnerable populations that use and/or rely on public transit on a regular basis, and riders that may have disabilities could be at risk to stronger earthquake shaking in Kings Beach, Meeks Bay, Tahoe Vista, Tahoma, and South Lake Tahoe.
Tahoe RCD	• The Administration building, Johnson Meadow ($8,324,450), Johnson Meadow signage and tools ($2,800), Shop meteorological monitoring station ($4,000), and EC, TV, and UT stormwater monitoring sites ($16,000 each) are in areas that may experience stronger earthquakes more frequently. • People of color and others who have faced barriers to outdoor recreation may be at risk to temporary losing access or having limited access to Johnson Meadow due to earthquake shaking and other associated earthquake hazards such as landslides and liquefaction.

Table 4-15: Potential Earthquake Impacts

	Impacts
Planning Area	• On the California side of the Lake Tahoe Basin, the communities of Tahoe Vista (pop. 1,233) and the City of South Lake Tahoe (pop. 21,304) will likely experience the strongest earthquake shaking (very strong to severe). According to the USGS, in areas that experience very strong shaking, damage will be negligible in buildings of good design and construction and slight to moderate in well-built ordinary structures. However, there could be considerable damage in poorly built or badly designed structures. In areas that experience severe shaking, there could be slight damage to specially designed structures and considerable damage to well-built ordinary structures. Damage will likely be great to poorly built structures and columns, monuments and chimneys could fall. • Stronger earthquakes could trigger landslides, debris flows, rockfalls, and other associated hazards that could damage buildings, including moving them off of their foundations. Landslides could also cause damage to critical infrastructure, including water, sewers, and roadways. The CGS has not prepared a Seismic Hazard Zone Map presenting areas where liquefaction and landslides may occur during a strong earthquake in the Lake Tahoe Basin. • In addition to ground shaking and surface ruptures from an earthquake, an earthquake in Lake Tahoe could create a tsunami wave that could impact the entire shoreline with inundation and permanent subsidence. Tsunami run-up could cause flooding and damage to all shoreline communities. • Population growth and land development in Tahoe Vista and the City of South Lake Tahoe could be at risk of very strong to severe earthquake shaking. All development along the shoreline could be at risk to tsunami run-up and flooding too.
TTD	• A proposed classification for road damage due to earthquakes suggests that strong and very strong earthquake shaking may result in highway and road damage for SR 89 and US 50 around Lake Tahoe as well as the areas in and around the City of South Lake Tahoe. These types of shaking events could result in the formation of big cracks and settlement of impervious surfaces (Natural Hazards, 2011). Damage to the road work could result in transit route delays, reroutes and/or cancellations and considerable road repair work would be carried out. Transit route delays, reroutes, and/or cancellations would impact transit riders, including displaced workers that commute into the basin, other vulnerable populations that use and/or rely on transit on a regular basis, and riders that may have disabilities. • These earthquake events could also trigger landslides, debris flows, rockfalls, and other associated hazards that could damage and/or block highways and local roads, transit stops, and parking lots. This could result in transit route delays, reroutes and/or cancellations that would impact transit riders, including displaced workers that commute into the basin, other vulnerable populations that use and/or rely on transit on a regular basis, and riders that may have disabilities. CGS has not prepared a Seismic Hazard Zone Map presenting areas where liquefaction and landslides could occur during a strong earthquake in the Lake Tahoe Basin. • In addition to ground shaking and surface ruptures from an earthquake, an earthquake in Lake Tahoe could create a tsunami wave that could impact the entire shoreline with inundation and permanent subsidence. Tsunami run-up could cause flooding and damage the proposed ferry terminals as well as other transportation infrastructure around the shoreline. • Increased transit services to accommodate population growth and land development could be temporarily constrained by highway and road damage for SR 89 and US 50 around Lake Tahoe as well as the areas in and around the City of South Lake Tahoe, due to strong and very strong earthquake shaking. These constraints could impact transit

	riders, including displaced workers that commute into the basin, other vulnerable populations that use and/or rely on transit on a regular basis, and riders that may have disabilities.
Tahoe RCD	• Strong and very strong earthquake shaking could trigger landslides, debris flows, rockfalls, and other associated hazards that can damage meteorological stations and stormwater monitoring sites. As noted above, CGS has not prepared a Seismic Hazard Zone Map presenting areas where liquefaction and landslides could occur during a strong earthquake in the Lake Tahoe Basin. • Strong and very strong earthquake shaking could also create ecological disturbances such as forest destruction, grassland degradation, and loss of surface water (Ecological Indicators, 2022). • Also noted above, an earthquake in Lake Tahoe could create tsunami run-up causing flooding and damage to inspection stations around the shoreline. • Earthquake damage may temporary close community open space (such as Johnson Meadow) and that may be of particular concern for vulnerable and underserved populations including people of color and others who already face barriers to outdoor recreation. • Population growth (including vulnerable populations) and land development in strong and very strong earthquake shaking areas shouldn't impact Tahoe RCD's current programs.

Table 4-16: Potential Climate-Driven Impacts on Earthquakes

	Impacts
Planning Area	• There is no way of knowing at this point if and where climate-related stress could promote earthquakes (National Aeronautics and Space Administration 2019).
TTD	• There is no way of knowing at this point if and where climate-related stress could promote earthquakes (National Aeronautics and Space Administration 2019).
Tahoe RCD	• There is no way of knowing at this point if and where climate-related stress could promote earthquakes (National Aeronautics and Space Administration 2019).

4.6 FLOOD

Table 4-17: Flood Profile

Profile	Description
Nature	A flood occurs when the existing channel of a stream, river, canyon, or other watercourse cannot contain excess runoff from rainfall or snowmelt, resulting in overflow onto adjacent lands. Secondary hazards from floods can include: • Erosion or scouring of stream banks, roadway embankments, foundations, footings for bridge piers, and other features. • Impact damage to structures, roads, bridges, culverts, and other features from high-velocity flow and debris carried by floodwaters. Such debris may also accumulate on bridge piers and in culverts, increasing loads on these features or causing overtopping or backwater effects. • Destruction of crops, erosion of topsoil, and deposition of debris and sediment on croplands. • Release of sewage and hazardous or toxic materials when wastewater treatment plants are inundated, storage tanks are damaged, and pipelines are severed. Atmospheric rivers are strongly linked to extreme winter precipitation events in the western United States, accounting for 80 percent of extreme floods in the Sierra Nevada and surrounding lowlands.
Location	In the Lake Tahoe Basin, three main types of flooding are known to occur, including: • Riverine flooding: Also known as stream flooding or overbank flooding, riverine flooding occurs in narrow, confined channels in the steep valleys of hilly and mountainous regions to wide and flat areas in plains and coastal regions. The amount of water in the floodplain is a function of the size and topography of the contributing watershed, the regional and local climate, and the land use characteristics. Riverine flooding is generally caused from large-scale weather systems generating prolonged rainfall. However, it can also be caused by snowmelt. As shown in Figure C-8, watercourses on the California side of the Lake Tahoe Basin that pose a potential riverine flood risk include the Upper Truckee River, Eagle Creek, Meeks Creek, General Creek, Quail Lake Creek, Madden Creek, Blackwood Creek, Ward Creek, Dollar Creek, and Trout Creek. Additionally, riverine flooding can cause lake flooding. According to the Lake Tahoe Basin Management Unit, there are 63 streams that flow into Lake Tahoe but only one (Truckee River) that flows out past Reno. • Flash flooding: Flash floods are "a rapid and extreme flow of high water into a normally dry area, or a rapid rise in a stream or creek above a predetermined flood level, beginning within six hours of the causative event (National Weather Service, 2022)." Flash floods are characterized by a rapid rise in water, high velocities, and large amounts of debris. Flash floods can occur in or near burn scar areas, small creeks, and steep terrain. Recent burn scar areas in and around the Lake Tahoe Basin include the Caldor Fire burn scar area in El Dorado County. • Localized flooding: Localized flooding may occur outside of recognized drainage channels or delineated floodplains due to a combination of locally heavy precipitation, increased surface runoff, and inadequate facilities for drainage and stormwater conveyance. Modeling the location of localized flood hazard areas is extremely complex due to the presence of various human-built structures such as culverts, channels, and drains. However, such events frequently occur in flat areas and urbanized areas with large areas of impermeable surfaces such as the South Lake Tahoe area.
History	According to the NOAA Storm Events Database, from January 1, 1950 to December 31, 2022, there were 23 flood events and 75 heavy rain events in the Greater Lake Tahoe Area zone.

	From 1953–current, the Federal Government made the following Major Disaster Declarations (DRs) and Emergency Declarations (EMs) for heavy rain, flood, and severe storm events for Placer, El Dorado, and/or Alpine counties: • 1964, Heavy Rains and Flooding (DR 183) • 1969, Severe Storms and Flooding (DR 253) • 1986, Severe Storms and Flooding (DR 758) • 1995, Severe Winter Storms, Flooding, Landslides, and Mudflows (DRs 1044 and 1046) • 1997, Severe Winter Storms, Flooding, Landslides, and Mudflows (DR 1155) • 2006, Severe Winter Storms, Flooding, Landslides, and Mudflows (DRs 1628 and 1646) • 2017, Severe Winter Storms, Flooding, and Mudslides (DRs 4301, 4305 and 4308) • 2019, Severe Winter Storms, Flooding, Landslides, and Mudflows (DR 4434) • 2022–2023, Severe Winter Storms, Flooding, Landslides, and Mudslides (DR 4683) • 2023, Severe Winter Storms, Flooding, Landslides, and Mudslides (EMs 3591 and 3592)
Extent / Severity	The magnitude of flooding that is used as the standard for floodplain management in the United States is a flood with a probability of occurrence of 1 percent in any given year. This flood is also known as the 100-year flood (i.e., the base flood). The 100-year flood (1 percent) and the 500-year flood (0.2 percent) are areas with high and moderate-low flood risks, respectively, and are identified on FEMA's Digital Flood Insurance Rate Maps (DFIRMs). As shown in Figure C-8, DFIRMs for Placer and El Dorado counties within the Lake Tahoe Basin identify 3.31 square miles (1.51 percent) and 0.84 square miles (0.56 percent) respectively with a 1 percent annual chance of flooding. Also, the DFIRMs for Placer and El Dorado counties identify 0.52 square miles (0.24 percent) and 0.05 square miles (0.03 percent) respectively with a 0.2 percent annual chance of flooding. DFIRMs are not available for Alpine County. DFIRMs aren't designed to account for flooding caused by intense rainfall. Therefore, these maps likely understate vulnerable areas prone to intense precipitation caused by climate change. According to California's Fourth Climate Change Assessment, Sierra Nevada Region Report (California Energy Commission, 2018), the amount of precipitation from the largest storms (maximum annual 3-day precipitation totals) is projected to increase by 5 percent to 30 percent from historical norms by the end of the century. In fact, a recently published mega-storm study (Science Advances, 2022) projects that "end-of-the-century storms will generate 200 percent to 400 percent more runoff in the Sierra Nevada due to extreme precipitation and more precipitation falling as rain, not snow." The VAIS details future flood hazard conditions in the Lake Tahoe Basin for two 30-year projections (2036 to 2065 and 2070 to 2099). The models show the maximum daily streamflow and runoff for six streams in the Lake Tahoe Basin. Figures C-9 and C-10 show the "possible magnitude of future changes in nearby watersheds" and, as such, show the potential for up to a 21 percent increase of maximum streamflow and runoff by the end of the century using model RCP4.5 (Figure C-9) and the potential for up to a 90 percent maximum streamflow and runoff by the end of the century using model RCP8.5 (Figure C-10). For the RCP4.5 scenario, there are 70.20 square miles (18.64 percent) of watersheds in the California side of the Lake Tahoe Basin that will potentially see an increase of 15 percent or more in maximum daily streamflow and runoff. The RCP8.5 models shows that 118.41 square miles (31.45 percent) of watersheds on in the California side of the Lake Tahoe Basin will potentially see an increase of 61 percent or greater in maximum daily streamflow and runoff.
Future Events	Floods can occur at any time in the Lake Tahoe Basin but are currently most common during annual winter storms packed with subtropical moisture. Based on historical norms, severe flooding is most likely to occur during strong El Niño events, which generally occur every 2 to 7 years. However, UCLA's Center for Climate Science reports that by year 2100 extreme wet years will occur 2.25 times more frequently than the 1895 to 2017 frequency rate of 4 times in every 100 years in Northern California (including the Lake Tahoe Basin). Additionally, according to the VAIS, climate projections for flooding show a modest increase in the intensity of extreme flood events by mid-century in the areas south and west of Lake Tahoe. If

	emissions aren't curbed by the end of the century, these models indicate that there may be a significant increase in these flood events.

Table 4-18: Flood Vulnerability

	Vulnerability
Planning Area	• As shown in Figure C-8, DFIRMs for Placer and El Dorado counties within the Lake Tahoe Basin identify 3.31 square miles (1.51 percent) and 0.84 square miles (0.56 percent) respectively with a 1 percent annual chance of flooding. Also, the DFIRMs for Placer and El Dorado counties identify 0.52 square miles (0.24 percent) and 0.05 square miles (0.03 percent) respectively with a 0.2 percent annual chance of flooding. • Carnelian Bay (pop. 565) and the South Lake Tahoe (pop. 21,304) are in the SFHA. Population growth and land development in and around existing population centers of Carnelian Bay and the City of South Lake Tahoe will be at greatest risk to flooding. • As noted above, DFIRMS likely understate flood risks as they don't consider warmer and more severe atmospheric river events. A simplified point location analysis shows that the South Lake Tahoe (pop. 21,304) and Tahoma (pop. 1,039) are in or near watersheds with increases of 15 percent or greater by the end of the century when modeled by the RCP4.5 scenario or in watersheds with expected streamflow changes of 61 percent or greater by the end of the century when modeled by the RCP8.5 scenario. In addition, according to the 2013 - 2014 ArkStorm@Tahoe Project, an extreme storm event could have the potential to flood the California-side of Lake Tahoe from the lake shoreline to SR 89 and nearly to US 50. This climate-induced event would have the potential to flood Kings Beach (pop. 2,826), Tahoe Vista (pop. 1,233), Carnelian Bay (pop. 565), Dollar Point (pop. 909), Sunnyside – Tahoe City (pop. 1,576), Tahoma (pop. 1,039), and the South Lake Tahoe (pop. 21,304).
TTD	• The proposed Homewood mobility hub is in a SFHA (1 percent annual chance flood). The proposed Sugar Pine and Meyers MH/TCs are in watersheds with expected streamflow increases of 15 percent or greater by the end of the century (due to climate change) when modeled by the RCP4.5 scenario. These proposed assets are also in watersheds with expected streamflow changes of 61 percent or greater by the end of the century when modeled by the RCP8.5 scenario. • Underserved and vulnerable transit riders including displaced workers that commute into Carnelian Bay and South Lake Tahoe, those that use and/or rely on transit on a regular basis in Carnelian Bay and the South Lake Tahoe, and those that may have disabilities, that live and/or work in Carnelian Bay and the South Lake Tahoe are at greatest risk to floods.
Tahoe RCD	• Johnson Meadow ($8,324,450) and Johnson Meadow signage and tools ($2,800) are located in a high-risk (1 percent annual chance) flood hazard area. Johnson Meadow ($8,324,450) is also located in a moderate risk (0.2 percent annual chance) flood hazard area. Meyers inspection station (($608,500), Shakori meteorological monitoring station ($4,000), Johnson Meadow ($8,324,450), and EC stormwater monitoring site ($16,000) are in watersheds with expected streamflow increases of 15 percent or greater by the end of the century (due to climate change) when modeled by the RCP4.5 scenario. These assets are also in watersheds with expected streamflow changes of 61 percent or greater by the end of the century when modeled by the RCP8.5 scenario. • People of color and others who have faced barriers to outdoor recreation may be at risk to temporary losing access or having limited access to Johnson Meadow due flooding.

Table 4-19: Potential Flood Impacts

	Impacts
Planning Area	• Riverine flooding, flash flooding, and localized flooding in the basin can cause major damage to open space, buildings, and infrastructure throughout the basin, but particularly in mapped SFHA such as Carnelian Bay (pop. 565) and the City of South Lake Tahoe (pop. 21,304). Population growth and land development within these communities will remain at risk of flood hazards. • As noted in Section 4.6, Flood, DFIRMs aren't designed to account for flooding caused by intense rainfall. These maps likely understate vulnerable areas prone to intense precipitation caused by climate change. Population growth and land development to the west and south of Lake Tahoe could also be at an increased risk of flooding due to extreme precipitation.
TTD	• Riverine and localized flooding could cause both damage and disruption to the Lake Tahoe Basin's transportation infrastructure. Flooding can cause short duration road closures that can create traffic jams for miles (VAIS). • During high flow flooding events, the structural integrity of roads, bridges, and culverts might be damaged, which could lead to extended duration road closures. Significant disruption impacts including transit reroutes, delays and cancellations could occur, likely impacting transit riders, including displaced workers that commute into the basin, other vulnerable populations that use and/or rely on transit on a regular basis, and riders that may have disabilities. • High flow flooding events could also jeopardize public safety for transit operators and transit riders, and in particular displaced workers that commute into the basin, other vulnerable populations that use transit on a regular basis, and riders that may have disabilities. This would be of particular concern for vulnerable populations in South Lake Tahoe or those trying to get to or from South Lake Tahoe (where there are 3.31 square miles of the SFHA). • In and around the City of South Lake Tahoe and Carnelian Bay, increased transit services to accommodate population growth (including vulnerable populations) and land development could be temporarily constrained by floodwaters.
Tahoe RCD	• Floodwaters and/or intense precipitation events could affect the integrity and performance of electrical equipment such as Tahoe RCD's meteorological stations and stormwater monitoring sites. • Flooding could cause uncontrolled runoff, which could erode streambanks, widen stream channels, damage public property, such as Johnson Meadow, as well as private property. • Flood damage may temporary close community open space, such as Johnson Meadow, and that may be of particular concern for vulnerable and underserved populations including people of color and others who already face barriers to outdoor recreation. • Flooding could cause pollution and clouded water in Lake Tahoe. • Population growth (including vulnerable populations) and land development in flood-prone areas shouldn't impact Tahoe RCD's current programs.

Table 4-20: Potential Climate-Driven Impacts on Floods

	Impacts
Planning Area	• Climate change causes warmer and more severe atmospheric river events in Northern California. Rising temperatures may cause more precipitation to fall as rain instead of snow, thereby increasing the likelihood of flooding downstream too. • Climate modeling for flooding shows a modest increase in the intensity of extreme flood events by mid-century in the areas in Kings Beach, Tahoe Vista, Carnelian Bay, Dollar Point, Sunnyside – Tahoe City, Tahoma, and the City of South Lake Tahoe, as well as to the south and west of Lake Tahoe. Therefore, population growth and land development in and around these population centers may be at increased risk of flooding.
TTD	• TTD has a few existing and proposed mobility hubs and transit centers including Sierra-at-Tahoe, Meyers and Palisades, that are in watersheds that may be at risk to extreme precipitation associated with climate change. Additionally, the structural integrity of roads, bridges, and culverts could be damaged from high velocity flooding events associated with extreme precipitation. This could lead to extended duration road closures. • Increased local and regional transit services to accommodate population growth and land development in climate-induced flood-prone areas, Kings Beach, Tahoe Vista, Carnelian Bay, Dollar Point, Sunnyside – Tahoe City, Tahoma, and the City of South Lake Tahoe, could be constrained by extended road closures due to flood events. These constraints could impact transit riders, including displaced workers that commute into the basin, other vulnerable populations that use and/or rely on transit on a regular basis, and riders that may have disabilities.
Tahoe RCD	• Climate change causes warmer and more severe atmospheric river events in Northern California. Rising temperatures may cause more precipitation to fall as rain instead of snow, thereby increasing the likelihood of flooding downstream too. Climate modeling for flooding shows a modest increase in the intensity of extreme flood events by mid-century in the areas south and west of Lake Tahoe. • Intense precipitation events could affect the integrity and performance of Tahoe RCD's electrical equipment such as meteorological stations and stormwater monitoring sites. It could also cause uncontrolled runoff, which could erode streambanks, widen stream channels, and damage public property, such as Johnson Meadow. • Damage caused by extreme precipitation events may temporary close community open space, such as Johnson Meadow, and that may be of particular concern for vulnerable and underserved populations including people of color and others who already face barriers to outdoor recreation. It could cause pollution and clouded water in Lake Tahoe. • Population growth (including vulnerable populations) and land development in climate-induced flood-prone areas, such as Kings Beach, Tahoe Vista, Carnelian Bay, Dollar Point, Sunnyside – Tahoe City, Tahoma, and the City of South Lake Tahoe, shouldn't impact Tahoe RCD's current programs.

4.7 LANDSLIDE

Table 4-21: Landslide Profile

Profile	Description
Nature	Landslide is a general term for the dislodging and fall of a mass of soil or rocks along a sloped surface or for the dislodged mass itself. The term is used for varying phenomena, including mudflows, mudslides, debris flows, rockfalls, rockslides, debris avalanches, debris slides, and slump-earth flows. Landslides may result from a wide range of combinations of natural rock, soil, or artificial fill. The susceptibility of hilly areas to landslides depends on variations in geology, topography, vegetation, and weather. Landslides may also occur because of indiscriminate development of sloping ground or the creation of cut-and-fill slopes in areas of unstable or inadequately stabilized geologic conditions. In California, landslides range from small, shallow landslides that may mobilize into rapidly moving deadly debris flows to larger, deep-seated landslides that are capable of moving entire houses and infrastructure downslope. Cliff collapses and cliff erosion are also concerns along the coast of Northern California and, more recently, debris flows from burned areas after wildfires.
Location	In 2011, CGS created a deep-seated landslide grip map to show the relative likelihood of deep-seated landslides in California. The map combines landslide inventory, geology, rock strength, slope, average annual rainfall, and layers with earthquake shaking potential to create classes of landslide susceptibility (Figure C-11). According to CGS, "these classes express the generalization that on very low slopes, landslide susceptibility is low even in weak materials, and that landslide susceptibility increases with slope and in weaker rocks. Very high landslide susceptibility, classes VIII, IX, and X, includes very steep slopes in hard rocks and moderate to very steep slopes in weak rocks." The areas that are most susceptible to landsliding are predominately in the northwestern and western side of the Lake Tahoe Basin but also in a smaller area along the southern portion of the basin.
History	According to the California Department of Conservation's Reported Landslide Database, Caltrans and California Highway Patrol have reported the following landslides in the Greater Lake Tahoe Area over the past 5 years: • May 28, 2018: Over 1 meter of rocks and mud-covered part of Alpine Meadows Road in Placer County. • December 2, 2019: Large boulders covered US 50 near Echo Summit in El Dorado County. • April 9, 2021: Large boulders covered US 50 near Echo Summit in El Dorado County. • October 24, 2021: Large boulders covered US 50 at post mile 66.8 in El Dorado County. • March 16, 2022: A car-sized boulder and several smaller boulders covered US 50 near Echo Summit in El Dorado County. In addition, the Federal Government has declared multiple DRs and EMs for mudslides and landslides associated with winter storms in Placer, El Dorado, and Alpine counties (including the Lake Tahoe Basin) over the past 30 years. They are: • 1995, Severe Winter Storms, Flooding, Landslides, and Mudflows (DRs 1044 and 1046) • 1997, Severe Winter Storms, Flooding, Landslides, and Mudflows (DR 1155) • 2006, Severe Winter Storms, Flooding, Landslides, and Mudflows (DRs 1628 and 1646) • 2017, Severe Winter Storms, Flooding, and Mudslides (DR 4301) • 2019, Severe Winter Storms, Flooding, Landslides, and Mudflows (DR 4434) • 2022 – 2023, Severe Winter Storms, Flooding, Landslides, and Mudslides (DR 4683) • 2023, Severe Winter Storms, Flooding, Landslides, and Mudslides (EMs 3591 and 3592)

Extent / Severity	Shallow landslides are generally those that are less than 10 to 15 feet deep. When shallow landslides are sufficiently wet, they may move rapidly and can be highly mobile over long distances. Deep-seated landslides are hundreds to thousands of feet long or wide and only move fractions of an inch per year; however, during heavy rainfall events, a landslide can move several yards a minute or faster. In these areas, rocks have been weakened through faulting and fracturing, uplift, and saturated soils due to heavy or prolonged rainfall. In addition, these slippages can be exacerbated by the temperature fluctuation, known as the freeze-thaw cycle, and by ongoing drought conditions, which cause soil-water repellency. As shown on Figure C-11, there are 73.66 square miles (19.45 percent) of land classified as classes VIII, IX, or X that are deep-seated, very high landslide susceptibility areas on the California side of the Lake Tahoe Basin.
Future Events	Shallow landslides can occur at any time during the winter but are more likely to happen when the ground is nearly saturated, which typically occurs after the first few storms in November and December. However, deep-seated landslides are generally triggered by deep infiltration of rainfall (which can take weeks or months to occur) and therefore tend to occur toward the end of the winter season in March or April. Every federally declared landslide event reported in Placer and El Dorado counties has followed a major winter storm/rain event; therefore, it is assumed that the probability of a future landslide event will be highly tied to winter storm/rain events. Based on historical occurrences, severe winter storm conditions are likely in the Lake Tahoe Basin every 2 to 7 years. However, an increase in the frequency of intense rainfall/precipitation due to climate change will mean that extreme wet years will occur 2.25 times more frequently than the 1895 to 2017 frequency rate of 4 times every 100 years while severe storm sequences will occur five times more frequently than the 1895 to 2017 frequency rate of one time every 200 years. As noted below, the mountains to the south and west of the Lake Tahoe Basin are projected to see the greatest increases of extreme precipitation and therefore likely increased frequency in landslides.

Table 4-22: Landslide Vulnerability

Vulnerability	
Planning Area	• As shown on Figure C-11, there are 73.66 square miles (19.45 percent) of land classified as classes VIII, IX, or X that are deep-seated, very high landslide susceptibility areas on the California side of the Lake Tahoe Basin. • Based on a simplified point analysis, the areas around Meeks Bay (pop. 985) and Emerald Bay State Park are in this hazard area. • Population growth and land development in and around Meeks Bay could be at risk of landslides. In areas in the northwestern and western side of the Lake Tahoe Basin that are already prone to landslide hazards, projected increases in the frequency and intensity of extreme precipitation events may increase the frequency of landslides (IVA). However, annual peak daily precipitation models for mid-century and end of the century also show that mountains west and south of Lake Tahoe, which include smaller mountainous unincorporated communities and ski resorts, will likely have the greatest projected annual peak daily precipitation and therefore also potential for increased landslide hazards.
TTD	• According to the IVA and as shown on Figure C-11, on the California side of the Lake Tahoe Basin, Highway 267 at Highway 28, Highway 89 at Highway 28, and Highway 89 and US 50 are most vulnerable to landslides. 1952 US 50/Al Tahoe Blvd (US Bank [$30,000]) and 2012 US 50/Johnson Blvd (Safeway [$30,000]) bus stops and the proposed Heavenly Resort – California and Meyers MH/TCs are all within 200 feet of a high (Class VIII, IX, or X) landslide susceptibility area.

	• The IVA projects that current landslide prone areas in the northwestern and western side of the Lake Tahoe Basin will likely increase in frequency due to extreme precipitation associated with climate change. • TTD critical assets in this hazard area are noted above. In addition, annual peak daily precipitation models for mid-century and end of the century also show that in mountains west and south of Lake Tahoe, where TTD has a few existing and proposed mobility hubs and transit centers including Sierra-at-Tahoe, Meyers and Palisades, could be prone to landsliding events. • Underserved and vulnerable transit riders including displaced workers that commute into the Lake Tahoe Basin, those that use and/or rely on transit on Highway 267 at Highway 28, Highway 89 at Highway 28, and Highway 89 and US 50, and those that may have disabilities are at greatest risk to landslides.
Tahoe RCD	• The fringe area of Johnson Meadow ($8,324,450) is in a high (Class VIII, IX, or X) landslide susceptibility area. The IVA projects that current landslide prone areas in the northwestern and western side of the Lake Tahoe Basin will likely increase in frequency due to extreme precipitation associated with climate change. Johnson Meadow is currently the only Tahoe RCD critical asset in this hazard area. In addition, annual peak daily precipitation models for mid-century and end of the century also show that in mountains west and south of Lake Tahoe, where Tahoe RCD has a few critical assets including the Shakori meteorological station and the EC stormwater monitoring site. • People of color and others who have faced barriers to outdoor recreation may be at risk to temporary losing access or having limited access to Johnson Meadow due to landslides.

Table 4-23: Potential Landslide Impacts

Impacts	
Planning Area	• People that live in landslide-prone areas such as Meeks Bay (pop. 985) and smaller unincorporated mountainous communities could be at risk of landsliding events. Landslides can damage buildings, including moving them off their foundations, impact critical infrastructure, including water, sewers, and roadways, and even cause trauma and death. • Population growth and land development in Meeks Bay as well as smaller unincorporated mountainous areas, could be risk to future landslide events.
TTD	• Landslides, debris flows, rockfalls, and other associated hazards could damage the structural integrity of roads, bridges, and culverts might be damaged, which could lead to extended duration road closures. Significant disruption impacts including transit reroutes, delays and cancellations could occur, likely impacting transit riders, including displaced workers that commute into the basin, other vulnerable populations that use and/or rely on transit on a regular basis, and riders that may have disabilities. • Landslides, debris flows, rockfalls, and other associated hazards could jeopardize public safety for transit operators and transit riders, and in particular displaced workers that commute into the basin, other vulnerable populations that use transit on a regular basis, and riders that may have disabilities. • Increased transit services in the northwestern and western side of the Lake Tahoe Basin to accommodate population growth (including vulnerable populations) and land development could be temporarily constrained by landslides.

Tahoe RCD	• Landslides, debris flows, rockfalls, and other associated hazards could damage Tahoe RCD's meteorological stations and stormwater monitoring sites. • Landslides, debris flows, rockfalls, and other associated hazards may temporary close community open space, such as Johnson Meadow, and that may be of particular concern for vulnerable and underserved populations including people of color and others who already face barriers to outdoor recreation. • Landslides could result in ecological disturbances such as forest destruction and grassland degradation. • In the northwestern and western side of the Lake Tahoe Basin, population growth (including vulnerable populations) and land development in mapped landslide hazard areas shouldn't impact Tahoe RCD's current programs.

Table 4-24: Potential Climate-Driven Impacts on Landslides

	Impacts
Planning Area	• Studies have shown that the impacts of climate change (extreme precipitation) on landslides include changes in the stability conditions, location, abundance, frequency, and type of landslides (USGS 2018). • The IVA projects that current landslide prone areas in the northwestern and western side of the Lake Tahoe Basin will likely increase in frequency due to extreme precipitation associated with climate change. • Additionally, annual peak daily precipitation models for mid-century and end of the century show that mountains west and south of Lake Tahoe, which include smaller mountainous unincorporated communities and ski resorts, will have the greatest projected annual peak daily precipitation and therefore also potential for increased landslide hazards. Therefore, population growth and land development in and around these smaller unincorporated communities may be at increased risk of landslides.
TTD	• Highway 267 at Highway 28, Highway 89 at Highway 28, and Highway 89 and US 50 will likely be at greater risk to landslides associated with extreme precipitation. This could lead to extended duration road closures. • As noted in Table 4-17, annual peak daily precipitation models for mid-century and end of the century also show that in mountains west and south of Lake Tahoe, where TTD has a few existing and proposed mobility hubs and transit centers including Sierra-at-Tahoe, Meyers and Palisades, may be at risk. These landsliding events could further also jeopardize public safety for transit operators and transit riders, and in particular displaced workers that commute into the basin, other vulnerable populations that use transit on a regular basis, and riders that may have disabilities. • Increased local and regional transit services to accommodate population growth and land development in the northwestern and western side of the Lake Tahoe Basin that are at increased risk to climate-induced landslides could be constrained by extended road closures due to landslide events. These constraints could impact transit riders, including displaced workers that commute into the basin, other vulnerable populations that use and/or rely on transit on a regular basis, and riders that may have disabilities.

Tahoe RCD	• Climate-induced landslides could affect the integrity and performance of Tahoe RCD's electrical equipment such as meteorological stations and stormwater monitoring sites. It could also damage streambanks and public property, such as Johnson Meadow. • Damage caused by climate-induced landslide events may temporary close community open space, such as Johnson Meadow, and that may be of particular concern for vulnerable and underserved populations including people of color and others who already face barriers to outdoor recreation. • Population growth (including vulnerable populations) and land development in climate-induced landslide areas in the northwestern and western side of the Lake Tahoe Basin shouldn't impact Tahoe RCD's current programs.

4.8 WILDFIRE

Table 4-25: Wildfire Profile

Profile	Description
Nature	Wildfires spread by consuming flammable vegetation. This type of fire often begins unnoticed, spreads quickly, and is usually signaled by dense smoke that may be visible from miles away. Wildfires can be caused by human activities (e.g., unattended burns, campfires, or off-road vehicles without spark-arresting mufflers) or by natural events such as lightning. Wildfires often occur in forests or other highly vegetated areas. In addition, wildfires can be classified as forest, urban, interface or intermix, and prescribed burns. The following three factors (topography, fuel, and weather) contribute significantly to wildfire behavior and can be used to identify wildfire hazard areas: • Topography describes slope increases, which influence wildfire spread rate increases. South-facing slopes are subject to more solar radiation than slopes facing other directions, so south-facing slopes tend to be drier and thereby intensify wildfire behavior. However, ridge tops may mark the end of wildfire spread because fire spreads more slowly (or may even be unable to spread) downhill. • Fuel refers to the type and condition of vegetation; fuel plays a significant role in wildfire spread. Certain plant types are more susceptible to burning or will burn with greater intensity. Dense or overgrown vegetation increases the amount of combustible material available as fire fuel (referred to as the "fuel load"). The living-to-dead plant matter ratio is also important. Certain climate changes may increase wildfire risk significantly during prolonged drought periods because the moisture content of both living and dead plant matter decreases. Both the horizontal and vertical fuel load continuity is also an important factor. • Weather is the most variable factor affecting wildfire behavior. Temperature, humidity, wind, and lightning can affect ignition opportunities and fire spread rate. Extreme weather (such as high temperatures and low humidity) can lead to extreme wildfire activity. Climate change increases the susceptibility of vegetation to ignition due to longer dry seasons. By contrast, cooling temperatures and higher humidities often signal reduced wildfire occurrence and easier containment. Wildfire frequency and severity sometimes result from other hazard impacts such as lightning, drought, and infestations. If not promptly controlled, wildfires may grow into an emergency or disaster. Even small fires can threaten lives and resources and destroy improved properties. In addition to affecting people, wildfires may severely affect livestock and pets. Such events may require emergency water/food, evacuation, and shelter. Indirect wildfire effects can be catastrophic. In addition to stripping the land of vegetation and destroying forest resources; large, intense fires can harm the soil, waterways, and the land itself. Soil exposed to intense heat may lose its capability to absorb moisture and support life. Exposed soils erode quickly and exacerbate river and stream siltation; thereby increasing flood potential, harming aquatic life, and degrading water quality. Vegetation-stripped lands are also more susceptible to increased debris flow hazards.
Location	According to VAIS, the current wildfire threat in the Lake Tahoe Basin is generally highest "within a few miles of the Lake Tahoe shoreline and along stream corridors, particularly in the Crystal Bay, Kings Beach, Emerald Bay, Fallen Leaf Lake, South Lake Tahoe, and Glenbrook areas and along Truckee River, Ward Creek, Upper Truckee River, and Tunnel Creek."
History	As shown on Figure C-12, the Greater Lake Tahoe Area has experienced 21 wildfires of greater than 5,000 acres since record keeping began nearly 100 years ago. The Federal Government has declared the following DRs for wildfires in Placer, El Dorado, or Alpine counties over the past 20 years:

	• 2002, Sierra Fire (DR 2463) • 2004, CA-Stevens Fire 08-8-2004 (DR 2541) • 2004, CA-Hollow Fire 07-14-2004 (DR 2532) • 2007, Angora Fire (DR 2700) • 2008, Gladding Fire (DR 2786) • 2009, 49 Fire (DR 2832) • 2014, Applegate Fire (DR 5082) • 2021, Caldor Fire (DRs 3571 and 5413) • 2021, River Fire (DR 5405) • 2021, Wildfires (DRs 4610 and 4619) • 2022, Mosquito Fire (DR 5453) One of the most destructive fires in the Lake Tahoe Basin in recent history was the Angora Fire (DR 2700). The Angora Fire was started near the North Upper Truckee Road subdivision near Angora Lakes, Fallen Leaf Lake, Echo Lake, and South Lake Tahoe by an illegal campfire on June 24, 2007. The fire burned 254 structures and 3,100 acres by the time it was contained on July 2, 2007.
Extent/ Severity	CAL FIRE's Fire Resource and Assessment Program (FRAP) provides vital data on California's forests and rangelands through a variety of mapping tools. The FRAP Fire Hazard Severity Zone (FHSZ) maps fire hazards based on factors such as fuel, terrain, and weather. The FHSZ areas are represented as Moderate, High, and Very High. The maps are divided into local responsibility areas (LRAs) and state responsibility areas (SRAs). LRAs generally include cities, cultivated agriculture lands, and portions of the desert. LRA fire protection is typically provided by city fire departments, fire protection districts, counties, and by CAL FIRE under contract to the local government. SRA is a legal term defining the area where the state has financial responsibility for wildfire protection. As shown on Figure C-13, there are 55.29 square miles (14.60 percent) on the California side of the Lake Tahoe Basin (excluding Alpine County) that are in a high or very high FHSV in the LRA and SRA. On the California side of the Lake Tahoe Basin, these areas include South Lake Tahoe and from Emerald Bay along the lakeshore all the way up to the Nevada border. It is important to note that the CAL FIRE FHSZ maps do not include FHSZs for Federal Responsibility Areas. Over the past few years, CAL FIRE has been creating a new FHSZ model to reflect areas susceptible to wildfire. The updated model considers new climate data and improved assessment modeling, such as fire intensity scores based on the most extreme fire weather at a given location, temperature, humidity, and wind speed. According to CAL FIRE, since 2007, very high FHSZ in the SRA have increased in El Dorado County by 22 percent, in Placer County by 3 percent and in Alpine County by 2 percent. In addition to CAL FIRE, the Council of Western State Foresters and the Western Forestry Leadership Coalition use a wildfire risk assessment tool, known as the West Wide Wildfire Risk Assessment, to identify wildfire risks. The assessment includes multiple inputs, including factors "relating to the probability of fire occurrence, fire behavior, the effectiveness of fire suppression, the difficulty of suppression, and the value of impacted areas." These inputs are combined to generate the Fire Threat Index (FTI), which identifies the likelihood of an acre burning. As shown on Figure C-14, there are 29.91 square miles (12.36 percent) on the California side of the Lake Tahoe Basin (excluding Alpine County) that are identified as having a high or very high FTI. There are an additional 7.91 square miles (2.14 percent) that are identified as having a extreme FTI.
Future Events	Based on historical occurrences, the Lake Tahoe Basin can expect to experience a wildfire of 5,000 acres or greater at least once every five years. However, according to UCLA's Center for Climate Science, climate probabilities for year 2100 in Northern California (including the Lake Tahoe Basin) show that extreme dry years will occur 1.8 times more frequently than the 1895 to 2017 frequency rate of one time every 100 years in Northern California. According to the VAIS, climate projections for future wildfire events include:

	• The average annual burned acreage in the Lake Tahoe Basin portion of El Dorado County is projected to remain about the same in mid-century and end of the century. However, the baseline level of wildfire threat is already high, very high or extreme throughout much of the county, so unchanged fire threat in the future is still elevated for many areas. • The average annual burn acreage in the Lake Tahoe Basin portion of Placer County is generally projected to increase in the western part and decrease in the northern part. The baseline level of wildfire threat is moderate or higher for roughly half of the county with the highest levels of fire hazard concentrated near Kings Beach and Tahoe Vista. • Climate projections show an increase in wildfire intensity in the mountains west and south of Lake Tahoe where several smaller unincorporated communities and ski resorts are located.

Table 4-26: Wildfire Vulnerability

Vulnerability	
Planning Area	• According to Figure C-13, there are 55.29 square miles (14.60 percent) on the California side of the Lake Tahoe Basin (excluding Alpine County) that are in a high or very high FHSV in the LRA and SRA. • Wildfire risk within the wildland urban interface is currently greatest within a few miles of the Lake Tahoe shoreline, including all of the region's population centers including Carnelian Bay (pop. 565), Dollar Point (909), Kings Beach (pop. 2,826), Meeks Bay (pop. 985), Sunnyside-Tahoe City (pop. 1,576), Tahoe Vista (pop.1,233), Tahoma (pop. 1,039), and South Lake Tahoe (pop. 21,304). • Like existing development, redevelopment and/or new development in and around existing population centers of these communities will be at risk of wildfire.

TTD	• According to the IVA and as shown on Figure C-13, on the California side of the Lake Tahoe Basin, Highway 267 at Highway 28, Highway 89 at Highway 28, and Highway 89 and US 50 are most vulnerable to very high to extreme wildfire risk. • The following bus stops with an estimated value of unknown to $30,000 each are located in high and very high FHSZs: 1952 US 50/Al Tahoe Blvd (US Bank),1959 US 50/Bigler Ave,1983 US 50/Lyons Ave (Middle School), 1985 US 50/Takela Dr (Bank of America), 2011 US 50/Rufus Allen Blvd (County Library), 2012 US 50/Johnson Blvd (Safeway), 2055 US 50/Wildwood Ave, 2085 South Y Transit Center, 2111 Stateline Transit Center, 4148 Spruce Ave/Herbert Ave, 4159 US 50/Tallac Ave (Visitor/Senior Center), 4168 Ski Run Blvd/Spruce Ave (Terry), 4214 Pioneer Trail/Shepherds Rd, 4217 Pioneer Trail/Aspenwald Rd, 4231 Pioneer Trail/Moss Rd, 4233 US 50/Pioneer Trail (Holiday Inn Express), 4356 Pioneer Trail/Moss Rd (7-11), 5004 US 50/Wildwood Ave, 5016 Pioneer Trail/Glen Dr, 5017 Ski Run Blvd/Willow Ave, and 5023 Al Tahoe/US 50 (LTUSD Offices). • 4042 South Ave/3rd St (Barton Hospital), 4052 3rd St (Tahoe Senior Plaza), 4173 US 50/ San Jose Ave (Lakeview Commons), 4215 US 50/Ski Run Blvd all have an estimated value of $100,000 and are located in high and very high FHSZs. 4159 US 50/Tallac Ave (Visitor/Senior Center) worth an estimated $250,000 is in a high and very high FHSZ as well. • In addition, 5006 US 50/Fairway Ave (Hotel Elevation) ($30,000) bus stop is within 200 feet of the high and very high FHSZs. • The proposed South Lake Tahoe cross-lake ferry terminal, proposed Harrison Ave., Meyers, and Sugar Pine MH/TCs, proposed Homewood mobility hub, and proposed Tahoma transit center are in high and very high FHSZs. The current Maintenance building and yard and the Lake Tahoe Community College mobility hub ($1,450,562) are also located in this hazard area. • TTD does not have any critical assets in the high or very FTI hazard areas. However, the proposed Heavenly Resort – California hub is located within the extreme FTI hazard area. • According to the VAIS, climate projections for wildfire vulnerability show an increase in wildfire intensity in the mountains west and south of Lake Tahoe where TTD has a few existing and proposed mobility hubs and transit centers including Sierra-at-Tahoe, Meyers and Palisades. • Underserved and vulnerable transit riders including those that use and/or rely on transit and those that may have disabilities could be at the greatest risk to wildfires throughout the California side of the Lake Tahoe Basin's population centers including Kings Beach, Tahoe Vista, Carnelian Bay, Dollar Point, Tahoma (pop. 1,039), Meeks Bay, and the City of South Lake Tahoe. In addition, displaced workers that rely on Highway 267 at Highway 28, Highway 89 at Highway 28, and Highway 89 and US 50 are also vulnerable to very high to extreme wildfire risk.

Tahoe RCD	• The Administration building ($996,000, Lake Forest launch ramp ($47,500), Meyers and Spooner Summit inspection stations ($608,500 each), Johnson Meadow ($8,324,450), Bellevue, EDYC, Hatchery, Shop, and Shakori meteorological monitoring stations ($4,000 each), and EC, Speedboat, Tahoma, TD, TV, and UT stormwater monitoring sites ($16,000 each) are in high and very high FHSZs. • Tahoe RCD does not have any critical assets in the high, very high or extreme FTI hazard areas. • According to the VAIS, climate projections for wildfire vulnerability show an increase in wildfire intensity in the mountains west and south of Lake Tahoe where Tahoe RCD has a few critical assets including the Shakori meteorological station ($4,000) and the EC stormwater monitoring site ($16,000). • People of color and others who have faced barriers to outdoor recreation may be at risk to temporary losing access or having limited access to Johnson Meadow due to wildfires. In addition, the elderly, low-income households, and people with medical problems or disabilities that Tahoe RCD services through its Fire Adaptive Communities Program are at risk to wildfires (particularly those living in high and very high FHSZs and/or very high or extreme FTI hazard areas.

Table 4-27: Potential Wildfire Impacts

Impacts	
Planning Area	• Wildfires can destroy the built environment, such as homes and businesses, and can cause trauma or death to people. Wildfire risk within the wildland urban interface of the Lake Tahoe Basin is currently greatest within a few miles of the shoreline as well as some smaller unincorporated mountainous communities. • As noted above, wildfire impacts can be catastrophic. In addition to stripping the land of vegetation and destroying forest resources, large, intense fires can harm the soil, waterways, and the land itself. Soil exposed to intense heat may lose its capability to absorb moisture and support life. Exposed soils can erode quickly and exacerbate river and stream siltation; thereby increasing flood potential, harming aquatic life, and degrading water quality. Vegetation-stripped lands can also be more susceptible to increased debris flow hazards. • Population growth and land development within a few miles of the Lake Tahoe shoreline (particularly Crystal Bay, Kings Beach, Emerald Bay, Fallen Leaf Lake, South Lake Tahoe, and Glenbrook areas) and along stream corridors, including and along Truckee River, Ward Creek, Upper Truckee River, and Tunnel Creek, will likely be at greater risk to wildfires.

TTD	• Wildfires could damage and/or block major highways (particularly SR 89 and US 50) and access to local roads, transit stops, and parking lots thereby resulting in transit delays, reroutes and cancellations. This would impact transit riders, including displaced workers that commute into the basin, other vulnerable populations that use transit on a regular basis, and riders that may have disabilities. This would be of particular concern for vulnerable populations within a few miles of the Lake Tahoe shoreline where wildfire risk in the wildland urban interface is greatest. • Wildfire smoke could severely reduce roadway visibility, thereby increasing public transit headways and evacuation times. This could be of particular concern for vulnerable populations that rely on public transit for evacuation. • Wildfires could change vegetation and soil chemistry so that when it eventually rains, it can increase the chance of infrastructure washout. • According to the VAIS, in rare cases wildfires could cause structural damage to roads, bridges and culverts. • Increased transit services to accommodate population growth (including vulnerable populations) and land development around the shoreline (particularly Crystal Bay, Kings Beach, Emerald Bay, Fallen Leaf Lake, South Lake Tahoe, and Glenbrook areas) as well as increased displaced workers from commuter communities, could be temporarily constrained by highway and road damage and/or closure due to wildfires.
Tahoe RCD	• Wildfires could destroy the built environment, such as homes and businesses. As noted above, wildfire risk within the wildland urban interface is greatest within a few miles of the Lake Tahoe shoreline. This could be of particular concern for vulnerable and underserved populations including the elderly, low-income households, and people with medical problems or disabilities as they may have difficulty making their homes fire safe, improving their defensible space and/or evacuating when needed. • Wildfires could result in ecological disturbances such as forest destruction and grassland degradation and intense wildfires could destroy the vegetation and root systems on slopes that serve the dual purpose of absorbing moisture and holding soil in place. • Wildfires, wildfire smoke and other associated wildfire hazards may temporary close community open space, such as Johnson Meadow, and that may be of particular concern for vulnerable and underserved populations including people of color and others who already face barriers to outdoor recreation. • Wildfires could destroy electrical equipment such as meteorological stations and stormwater monitoring sites. • Population growth and land development within a few miles of the Lake Tahoe shoreline (particularly Crystal Bay, Kings Beach, Emerald Bay, Fallen Leaf Lake, South Lake Tahoe, and Glenbrook areas) and along stream corridors, including and along Truckee River, Ward Creek, Upper Truckee River, and Tunnel Creek, could be at increased risk to wildfires. Population growth and land development in these fire-prone areas will likely result in additional demands on Tahoe RCD's Fire Adapted Communities Program. This could be of particular concern for vulnerable and underserved populations including the elderly, low-income households, and people with medical problems or disabilities as they may have difficulty making their homes fire safe, improving their defensible space and/or evacuating when needed.

Table 4-28: Potential Climate-Driven Impacts on Wildfires

	Impacts
Planning Area	• The average annual burned acreage in the Lake Tahoe Basin portion of El Dorado County is projected to remain about the same in mid-century and end of the century. • The average annual burn acreage in the Lake Tahoe Basin portion of Placer County is generally projected to increase in the western part and decrease in the northern part. • Climate projections show an increase in wildfire intensity in the mountains west and south of Lake Tahoe where several smaller unincorporated communities and ski resorts are located. • Population growth and land development in and around existing population centers will be at an elevated risk of climate-induced wildfires. In addition, growth in smaller unincorporated communities and ski areas in the mountains west and south of Lake Tahoe will be at an increased risk too.
TTD	• As noted in Section 4.8 Wildfire, TTD has several existing and proposed critical assets located in high and very high FHSZs. It is expected that these critical assets will continue to remain in an elevated fire threat due to climate-induced wildfires. In addition, according to the VAIS, climate projections for wildfire vulnerability show an increase in wildfire intensity in the mountains west and south of Lake Tahoe where TTD has a few existing and proposed mobility hubs and transit centers including Sierra-at-Tahoe, Meyers and Palisades. • Increased local and regional transit services to accommodate population growth (including vulnerable populations) and land development in population centers along the shoreline as well as displaced workers from commuter communities, could be constrained by reduced visibility, increased public transit headways and evacuation times, and infrastructure damage due to elevated and/or increased wildfire threats due to climate change.
Tahoe RCD	• As noted in Section 4.8 Wildfire, Tahoe RCD has several critical assets located in high and very high FHSZs. It is expected that these critical assets will continue to remain in an elevated fire threat due to climate change. In addition, according to the VAIS, climate projections for wildfire vulnerability show an increase in wildfire intensity in the mountains west and south of Lake Tahoe where Tahoe RCD has a few critical assets including the Shakori meteorological station and the EC stormwater monitoring site. • Population growth (particularly vulnerable populations) and development in elevated wildfire threat areas around the shoreline as well as within in the mountains west and south of Lake Tahoe, could result in additional demands on Tahoe RCD's Fire Adapted Communities Program.

4.9 WINTER STORM

Table 4-29: Winter Storm Profile

Profile	Description
Nature	In a winter storm event, snow, sleet, and/or freezing rain may be accompanied by high winds and cold temperatures. A winter storm can range from moderate snow over a few hours to blizzard conditions with blinding, wind-driven snow that lasts several days. Some winter storms may be large enough to affect several states, though others may affect only a single community. In more temperate continental climates such as California, these storms are not necessarily restricted to the winter season and may occur in the late autumn and early spring as well. Winter storms are also more likely to cause avalanches. According to the USFS, approximately 80 percent of all avalanches occur during and shortly after winter storms. Snow falling at a rate of 1 inch or more per hour increases avalanche danger. Winter storms that start with low temperatures and dry snow and are followed by rising temperatures and heavy, wet snow are more likely to cause avalanches as the dry snow cannot support the heavy, wet snow. In addition, sustained winds of 15 miles per hour (mph) or more increases avalanche danger on the leeward side of the mountain (away from the wind) because of heavy accumulation of snow caused by wind deposition.
Location	All of the Lake Tahoe Basin is susceptible to the hazards of a winter storm. As shown on Figure C-15, the higher elevations of the windward side (western side) of the Sierra Nevada are most susceptible to snowfall because of the orographic lifting that occurs as Pacific storms move from lower elevations in the west to higher elevations in the east. As shown on Figure C-16, avalanches are most common in areas with 30-to-45-degree slopes with peak snowpack. As noted in VAIS, El Dorado County contains the greatest number of avalanche slope hazard areas in the Lake Tahoe Basin.
History	According to the NOAA Storm Events Database for the Greater Lake Tahoe Area zone, the following events were recorded from January 1, 1950 to December 31, 2022: 19 winter storm events and three blizzard events. The database cannot handle large queries, so the query timeframe for heavy snow events was limited from January 1, 2012 to December 31, 2022. Over this 10-year period, 128 heavy snow events were recorded in the Greater Lake Tahoe Area. In addition, the database lists 14 recorded avalanche events for the Greater Lake Tahoe Area since 1996. The database does not go far enough back to include the most notable avalanche in the Lake Tahoe Basin in recent history: On March 31, 1982, several days into a late-season winter storm, a massive avalanche tore through the base area of Alpine Meadows Ski Area, resulting in seven deaths and causing millions of dollars of damage to the ski resort. Since 1995, the Federal Government has declared several DRs and EMs for winter storms in and around the Lake Tahoe Basin for Placer, El Dorado, and/or Alpine counties, including: • 1995, Severe Winter Storms, Flooding, Landslides, and Mudflows (DRs 1044 and 1046) • 1997, Severe Winter Storms, Flooding, Landslides, and Mudflows (DR 1155) • 2006, Severe Winter Storms, Flooding, Landslides, and Mudflows (DRs 1628 and 1646) • 2017, Severe Winter Storms, Flooding, and Mudslides (DRs 4301, 4305, and 4308) • 2019, Severe Winter Storms, Flooding, Landslides, and Mudflows (DR 4434) • 2022 – 2023, Severe Winter Storms, Flooding, Landslides, and Mudslides (DR 4683) • 2023, Severe Winter Storms, Flooding, Landslides, and Mudslides (EMs 3591 and 3592)
Extent / Severity	The National Weather Service winter storm warnings for the Lake Tahoe Basin are generally issued for heavy snow (1 to 2 inches per hour) and gale force winds (sustained winds or frequent gusts between 39 and 54 mph, with ridgetop winds sometimes reaching over 100 mph). Often, winter storm warnings also include an urban and small stream flood advisory for low-lying and poor drainage areas where the snow may turn quickly into freezing rain or rain. The NOAA Storm Events Database over the past 5 years (January 1, 2018 – December 13, 2023) shows that 19

	winter storm events in the Greater Lake Tahoe Area met this severity threshold. During the same time period, the National Weather Service declared 109 storm events that meet the above criteria for the entire Sierra Nevada region. In addition, avalanche warnings from the USFS Sierra Avalanche Center often accompany National Weather Service winter storm warnings, as several feet of new snow and strong winds often create dangerous avalanche conditions in the mountains. There are 24.42 square miles (0.06 percent) of steep slopes (30 to 45 degrees) within the California side of the Lake Tahoe Basin.
Future Events	All of the Lake Tahoe Basin is and will continue to be vulnerable to climate induced winter storms. According to UCLA's Center for Climate Science, climate probabilities in Northern California (including the Lake Tahoe Basin) by the year 2100 show more weather extremes, including: • Dry-to-wet whiplash will occur 1.25 times more frequently than the 1895 to 2017 frequency rate of four times every 100 years. • Extreme wet years will occur 2.25 times more frequently than the 1895 to 2017 frequency rate of four times every 100 years. • Severe storm sequences will occur five times more frequently than the 1895 to 2017 frequency rate of one every 200 years. In addition to more extreme weather events, Tahoe Environmental Research Center notes climate change effects on winters in the Lake Tahoe Basin by the 21st century will also include: • Less desirable snow conditions • Fewer days with below-freezing temperatures • Decreasing snowpack • Snowline rising to higher elevations • Low-to-no snow winters The Tahoe Environmental Research Center also states that Lake Tahoe Basin could experience episodic low-to-no snow (when more than half of a mountain basin experiences low-to-no snow for five consecutive years) as soon as the late 2040s and persistent low-to-no snow (when more than half of a mountain basin experiences low-to-no-snow 10 consecutive years) by the 2060s.

Table 4-30: Winter Storm Vulnerability

Vulnerability	
Planning Area	• All the Lake Tahoe Basin is vulnerable to winter storms. • While all of the Lake Tahoe Basin is vulnerable to winter storms, a simplified point location analysis shows that none of the more major towns, cities and communities on the California-side of the Lake Tahoe Basin are in an avalanche hazard area. Avalanche hazard slope areas do include roadways into and around the basin, including US 50 and SR 89, as well as smaller mountainous unincorporated communities and ski resorts. According to the IVA, climate models project a decline in the basin's maximum snowpack and therefore a reduction in the number, frequency and severity of slab avalanches. • However, extreme wet year events and severe storm sequences could lead to widespread avalanche activity in the mountains and large avalanches could occur in a variety of areas and elevations, likely putting smaller mountainous unincorporated communities and ski resorts at risk.

TTD	• All of TTD's critical assets are vulnerable to winter storms which generally include heavy snowfall and gale force winds. In addition, 1985 US 50/Takela Dr (Bank of America) ($30,000) and 2011 US 50/Rufus Allen Blvd (County Library) ($250,000) bus stops, the proposed Heavenly Resort – California mobility hub and the proposed Diamond Peak and Meyers MH/TC are in avalanche hazard slope zones. Climate models predict that extreme wet year events and severe storm sequences could lead to widespread avalanche activity in the mountains and large avalanches could occur in a variety of areas and elevations. TTD assets within the existing avalanche hazard slope areas would still likely be at greatest risk. • Displaced workers that use transit to commute into the Lake Tahoe Basin are at greatest risk to winter storm events.
Tahoe RCD	• All of Tahoe RCD's critical assets are vulnerable to winter storms which generally include heavy snowfall and gale force winds. The fringe area of Johnson Meadow ($8,324,450) and the Pasadena Outflow stormwater monitoring site ($16,000) are also in avalanche hazard slope zones. Climate models predict that extreme wet year events and severe storm sequences could lead to widespread avalanche activity in the mountains and large avalanches could occur in a variety of areas and elevations. A larger area of Johnson Meadow and the Pasadena Outflow stormwater monitoring site would likely be at greatest risk. • People of color and others who have faced barriers to outdoor recreation may be at risk to temporary losing access or having limited access to Johnson Meadow due to winter storms.

Table 4-31: Potential Winter Storm Impacts

	Impacts
Planning Area	• All of Lake Tahoe's population can be affected by a major winter storm. Major winter storms in the Sierras can last for several days and be accompanied by high winds; freezing rain or sleet; heavy snowfall; and cold temperatures. A storm may knock down trees and powerlines, cause roofs to collapse, and lead to dangerous driving conditions causing drivers to be stranded. • Population growth and land development in existing population centers along the shoreline will likely be less impacted by winter storms than those residing in commuter communities, smaller mountainous unincorporated communities, or ski resorts.
TTD	• Winter storms and in particular avalanches could damage and/or block major highways (particularly SR 89 and US 50) and access to local roads, transit stops, and parking lots thereby resulting in transit delays, reroutes and cancellations. This would impact transit riders, including displaced workers that commute into the basin, other vulnerable populations that use transit on a regular basis, and riders that may have disabilities. • Increased transit services to accommodate population growth and land development at ski resorts as well as displaced workers from commuter communities, could be temporarily constrained by highway and road damage and/or closure due to winter storms and/or avalanches.

Tahoe RCD	• Winter storms and in particular avalanches could damage and/or destroy Tahoe RCD's stormwater monitoring sites. • Winter storms and in particular avalanches may temporary close community open space, such as Johnson Meadow, and that may be of particular concern for vulnerable and underserved populations including people of color and others who already face barriers to outdoor recreation. • Winter storms could result in ecological disturbances such as forest destruction and grassland degradation. • Population growth (including vulnerable populations) and land development affected by winter storms shouldn't impact Tahoe RCD's current programs.

Table 4-32: Potential Climate-Driven Impacts on Winter Storms

Impacts	
Planning Area	• Climate models predict that extreme wet year events and severe storm sequences could lead to widespread avalanche activity in the mountains and large avalanches could occur in a variety of areas and elevations in the Sierra Nevada by the end of the century. However, in extreme dry years, climate-driven effects on winters in the region will also include less desirable snow conditions, fewer days with below-freezing temperatures, decreasing snowpack, snowline rising to higher elevations, and low-to-no snow winters (Energetics 2019). • Population growth and land development in and around smaller unincorporated communities and ski areas in the mountains could be at increased risk of winter storms and avalanche activity during extreme wet years.
TTD	• During extreme wet years, climate-induced winter storms and in particular avalanches could damage and/or block major highways (particularly SR 89 and US 50) and access to local roads, transit stops, and parking lots thereby resulting in transit delays, reroutes and cancellations. This would impact transit riders, including displaced workers that commute into the basin, other vulnerable populations that use transit on a regular basis, and riders that may have disabilities. • Increased transit services to accommodate population growth and land development in ski resorts as well as displaced workers from commuter communities, could be temporarily constrained by highway and road damage and/or closure due to severe winter storm sequences.
Tahoe RCD	• Winter storms during extreme wet years could affect the integrity and performance of Tahoe RCD's electrical equipment. It could also damage streambanks and public property, such as Johnson Meadow. • Damage caused by these extreme climate-driven storms may temporary close community open space, such as Johnson Meadow, and that may be of particular concern for vulnerable and underserved populations including people of color and others who already face barriers to outdoor recreation. • Population growth (including vulnerable populations) and land development in mountainous areas that are most likely to be impacted by severe winter storm sequences Lake Tahoe Basin shouldn't impact Tahoe RCD's current programs.

4.10 NATIONAL FLOOD INSURANCE PROGRAM – INSURED STRUCTURES

TTD and Tahoe RCD are not eligible to participate as local communities in the National Flood Insurance Program (NFIP), and as such, they do not have any NFIP-insured structures and do not have any Repetitive Loss properties. TTD and Tahoe RCD critical assets that are in the SFHA are addressed in Table 4-10 and include TTD's proposed Homewood mobility hub and Johnson Meadow and Johnson Meadow signage and tools. Johnson Meadow contains large areas of floodplain and Tahoe RCD purchased the property back in 2018 to protect wildlife habitat, including river, riparian, and montane meadow areas. Johnson Meadow signage and tools has not been repetitively damaged by floods.

5.0 MITIGATION STRATEGY

This section addresses Element C – Mitigation Strategy of the Local Mitigation Plan Regulation Checklist.

Element C: Mitigation Strategy	
C1.	Does the plan document each participant's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement 44 CFR § 201.6(c)(3))
C1-a.	Does the plan describe how the existing capabilities of each participant are available to support the mitigation strategy? Does this include a discussion of the existing building codes and land use and development ordinances or regulations?
C1-b.	Does the plan describe each participant's ability to expand and improve the identified capabilities to achieve mitigation?
C2.	Does the plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement 44 CFR § 201.6(c)(3)(ii))
C2-a.	Does the plan contain a narrative description or a table/list of their participation activities?
C3.	Does the plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement 44 CFR § 201.6(c)(3)(i))
C3.-a.	Does the plan include goals to reduce the risk from the hazards identified in the plan?
C4.	Does the plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement 44 CFR § 201.6(c)(3)(ii))
C4-a.	Does the plan include an analysis of a comprehensive range of actions/projects that each jurisdiction considered to reduce the impacts of hazards identified in the risk assessment?
C4-b.	Does the plan include one or more action(s) per jurisdiction for each of the hazards as identified within the plan's risk assessment?
C5.	Does the plan contain an action plan that describes how the actions identified will be prioritized (including a cost-benefit review), implemented, and administered by each jurisdiction? (Requirement 44 CFR § 201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))
C5-a.	Does the plan describe the criteria used for prioritizing actions?
C5-b.	Does the plan provide the position, office, department or agency responsible for implementing/administrating the identified mitigation actions, as well as potential funding sources and expected time frame?

5.1 AUTHORITIES, POLICIES, PROGRAMS, AND RESOURCES

Lists of TTD's and Tahoe RCD's existing authorities, policies, programs, and financial resources available for hazard mitigation are provided for the TTD and the Tahoe RCD in Appendix D (Tables D-1 through D-3) and Appendix E (Tables E-1 through E-3), respectively. Appendices D and E also identify each district's respective ability to expand and improve on its hazard mitigation capabilities, when possible (Table D-4 and Table E-4).

In California, the State delegates most local land use and development authorities and decisions to cities and counties (not districts), and therefore a discussion of existing building codes and land use development ordinances and regulations is not included in these capability assessments. However, in Lake Tahoe, the Tahoe Regional Planning Authority (TRPA) administers an overarching regional plan with land use

authority in accordance with the Bi-State Compact. The first Lake Tahoe Regional Plan was created in 1987 and focused on growth controls, development regulations and best environmental practices. The regional plan was updated again in 2012 and added more provisions around environmental redevelopment, sustainable development, and designated centers for concentrated development. The plan also provided incentives for property owners to restore sensitive lands or transfer development rights from sensitive lands and outlying properties to designated centers.

5.2 NATIONAL FLOOD INSURANCE PROGRAM PARTICIPATION

The NFIP aims to reduce the impact of flooding on residential and nonresidential buildings by providing insurance to property owners and encouraging communities to adopt and enforce floodplain management regulations. Participation in the NFIP is based on an agreement between local communities and the Federal Government. As noted previously, TTD and Tahoe RCD are not eligible to participate in the NFIP. Communities within the California side of the Lake Tahoe Basin that participate in the NFIP include Alpine County (NFIP entrance date: April 19, 1989 and current DIFRM date: pending November 16, 2023), El Dorado County (NFIP entrance date: April 9, 1986 and current DFIRM date: April 3, 2012), Placer County (NFIP entrance date: April 18, 1983 and current DFIRM date: November 2, 2018), and the South Lake Tahoe (NFIP entrance date: July 7, 1978 and DFIRM date: April 3, 2012).

5.3 MITIGATION GOALS

Mitigation goals are defined as general guidelines that explain what TTD and Tahoe RCD want to achieve in terms of hazard and loss prevention. Goal statements are typically long-range, policy-oriented statements representing a community-wide vision. The Tahoe Climate Resilience Action Strategy provided the basis for the goals for the 2023 HMP. The four goals are:

- Build sustainable recreation and transportation systems to prepare for/mitigate from hazards identified in this plan, including climate change, dam failure, drought, earthquake, flood, landslide, wildfire, and winter storm.
- Upgrade infrastructure and protect vulnerable communities from hazards identified in this plan, including climate change, dam failure, drought, earthquake, flood, landslide, wildfire, and winter storm.
- Reduce wildfire risk and build forest resilience.
- Increase watershed resilience and biodiversity.

5.4 DRAFT MITIGATION ACTION LIST

Mitigation actions help achieve the goals of the 2023 HMP. A list of recommended draft mitigation actions is provided for TTD in Appendix D (Table D-5) and for Tahoe RCD in Appendix E (Table E-5).

Projects listed include local planning, structure and infrastructure projects, natural systems protection, and educational and awareness programs. In addition, projects have been developed for preparedness, response and recovery activities. The draft mitigation actions are based on the plan's risk assessment, lessons learned from recent disasters, FEMA success stories and best management practices, FEMA job aids, local and regional plans and reports, and input from the advisory committee and other relevant practitioners.

For each mitigation action, an overview of the project, the hazards it addresses, the building and infrastructure it protects, the associated benefits and costs, and the project source are provided.

As required, at least one mitigation action has been developed to address each hazard profiled in this plan.

TTD mitigation action items are broken down as follows:

- Climate change mitigation actions # 3, 4 and 11

- Dam failure mitigation action # 11
- Drought mitigation actions # 4 and 11
- Earthquake mitigation actions # 3, 4, 10, and 11
- Flood mitigation actions # 3, 4, 10, and 11
- Landslide mitigation actions # 4 and 11
- Wildfire mitigation actions # 3, 4 and 11
- Winter storm mitigation actions # 3, 4 and 11

In addition, TTD has developed preparedness, response and recovery actions # 1, 2, 5, 6, 7, 8, and 9.

Tahoe RCD mitigation action items are broken down as follows:

- Climate change mitigation actions # 1 – 15
- Dam failure mitigation actions #1 and 14
- Drought mitigation actions # 1, 2, 10, 13, and 15
- Earthquake mitigation actions # 3 and 14
- Flood mitigation actions # 1, 2, 3, 4, 11, 12, 14, and 15
- Landslide mitigation actions # 3 and 14
- Wildfire mitigation actions # 3, 6, 7, 8, 9, 10, 13, and 14
- Winter storm mitigation actions # 3 and 14

5.5 FINALIZED MITIGATION ACTION PLAN

A finalized mitigation action plan is an itemized list of mitigation actions that each district hopes to put into practice to reduce its risks and vulnerabilities.

For the 2023 HMP, a two-tier "high and highest" prioritization process was created based on the following:

- Highest priority mitigation actions are (1) those that address hazards of immediate concern, have qualitative benefits, and have been identified in another planning document or have been identified as having a dedicated funding source.
- High mitigation actions are those that (1) address hazards that are not of immediate concern and/or (2) those that address hazards that are of immediate concern but do not have as many qualitative benefits, have not been identified in another planning document and/or do not have a dedicated funding source.

TTD and Tahoe RCD determined the hazards and threats of immediate concern based on the 2023 HMP's hazard profiles, risk assessments, and capability assessments, as follows:

- TTD: climate change, earthquake, flood, wildfire, and winter storm
- Tahoe RCD: climate change, drought, flood, wildfire, and winter storm

The results of the above prioritization process are provided in Appendix D (Table D-6) and Appendix E (Table E-6). For each mitigation action listed, potential funding sources, responsible departments or agencies, and implementation timelines have been identified.

6.0 PLAN MAINTENANCE

This section addresses Element D – Plan Maintenance of the Local Mitigation Plan Regulation Checklist.

Element D: Plan Maintenance	
D1.	Is there discussion of how each community will continue public participation in the plan maintenance process? (Requirement 44 CFR § 201.6(c)(4)(iii))
D1-a.	Does the plan describe how communities will continue to seek future public participation after the plan has been approved?
D2.	Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a five-year cycle)? (Requirement 44 CFR § 201.6(c)(4)(i))
D2-a.	Does the plan describe the process that will be followed to track the progress/status of the mitigation actions identified within the Mitigation Strategy, along with when this process will occur and who will be responsible for the process?
D2-b.	Does the plan describe the process that will be followed to evaluate the plan for effectiveness? This process must identify the criteria that will be used to evaluate the information in the plan, along with when this process will occur and who will be responsible
D2-c.	Does the plan describe the process that will be followed to update the plan, along with when this process will occur and who will be responsible for the process?
D3.	Does the plan describe a process by which each community will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement 44 CFR § 201.6(c)(4)(ii))
D3-a.	Does the plan describe the process the community will follow to integrate the ideas, information and strategy of the mitigation plan into other planning mechanisms?
D3-b.	Does the plan identify the planning mechanisms for each plan participant into which the ideas, information and strategy from the mitigation plan may be integrated?
D3-c.	For multi-jurisdictional plans, does the plan describe each participant's individual process for integrating information from the mitigation strategy into their identified planning mechanisms?

6.1 CONTINUED PUBLIC PARTICIPATION

A copy of the 2023 HMP will be available on both TTD's and Tahoe RCD's websites, along with contact information for the HMP project manager. Additionally, the HMP project manager will use the TTD website and utilize TTD and Tahoe RCD social media accounts to notify the public of, and seek input on, any changes or updates to the 2023 HMP, including the implementation of the mitigation action plans and the 2028 HMP kickoff. HMP project manager will also specifically reach out to agencies and organizations representing TTD and Tahoe RCD vulnerable communities to notify them of any changes or updates to the 2023 HMP as well as announcing the 2028 HMP kick-off.

6.2 PLAN EVALUATION PROCESS, UPDATE METHOD AND SCHEDULE

Every January, the HMP project manager will send out the Annual Review Tracker to the advisory committee and ask each of them to complete the form to ensure that the 2023 HMP is relevant and effective in achieving the plan's goal. Specifically, the Annual Review Tracker will document disasters that have occurred, TTD and Tahoe RCD assets that have been damaged, mitigation actions that have been implemented, new studies/reports that have been published, public outreach that has been conducted, and

changes made and/or that need to be made to the 2023 HMP. The HMP project manager will summarize the findings of the tracking sheet into Table 6-1 below.

In addition to the Annual Review Tracker, FEMA-funded mitigation projects as well as other mitigation projects will continue to be tracked and reviewed by each project lead using FEMA Mitigation Progress Report or other similar forms. The project leads will submit these progress summaries to the HMP project manager annually and the HMP project manager will attach them to the Annual Review Tracker (Table 6-1). The advisory committee will review the collated Annual Review Tracker and mitigation action progress summaries to determine if the actions undertaken each year are helping achieve the plan's mitigation goals.

The HMP project manager will kick off the 2028 HMP in January 2028 with the following activities:

- The HMP project manager will reconvene the advisory committee and update membership, including representation for underserved and vulnerable populations.
- The advisory committee will review Table 6-1, which provides annual summaries of the disasters that have occurred; new permanent information that has become available; implementation measures; and public outreach and response to determine the hazards and other related information to be included in the 2028 HMP.
- The HMP project manager will develop a new work plan.
- The HMP project manager—with support from the advisory committee—will begin the plan update process, which is expected to take up to 6 months.

Table 6-1: Annual Review Tracker

Review Period	Disasters That Occurred / Critical Assets Damaged	Mitigation Actions Implemented	New Relevant Studies/Reports to Include in 2028 HMP	Public Outreach Conducted	Changes Made to 2023 HMP and/or Changes Needed to be Made to the 2028 HMP
Review of 2024					
Review of 2025					
Review of 2026					
Review of 2027					

6.3 PLAN INTEGRATION

Identification of how the 2023 HMP will be integrated into both TTD-specific and Tahoe RCD-specific relevant plans and programs moving forward is also provided in Appendix D (Table D-7) and Appendix E (Table E-7).

7.0 PLAN UPDATE

This section addresses Element E – Plan Update of the Local Mitigation Plan Regulation Checklist.

Element E: Plan Update	
E1.	Was the plan revised to reflect changes in development? (Requirement 44 CFR § 201.6(d)(3))
E1-a.	Does the plan describe the changes in development that have occurred in hazard-prone areas that have increased or decreased each community's vulnerability since the previous plan was approved?
E2.	Was the plan revised to reflect changes in priorities and progress in local mitigation efforts? (Requirement 44 CFR § 201.6(d)(3))
E2-a.	Does the plan describe how it was revised due to changes in community priorities?
E2-b.	Does the plan include a status update for all mitigation actions identified in the previous mitigation plan?
E2-c.	Does the plan describe how jurisdictions integrated the mitigation plan, when appropriate, into other planning mechanisms?

The 2023 HMP is a new plan and not a plan update. Therefore, Element E is not addressed in the 2023 HMP.

8.0 PLAN ADOPTION

This section addresses Element F – Plan Adoption of the Local Mitigation Plan Regulation Checklist.

Element F: Plan Adoption	
F1.	For single-jurisdictional plans, has the governing body of the jurisdiction formally adopted the plan to be eligible for certain FEMA assistance? (Requirement 44 CFR § 201.6(c)(5))
F1-a.	Does the participant include documentation of adoption?
F2.	For multi-jurisdictional plans, has the governing body of each jurisdiction officially adopted the plan to be eligible for certain FEMA assistance? (Requirement 44 CFR § 201.6(c)(5))
F2-a.	Did each participant adopt the plan and provide documentation of that adoption?

8.1 FORMAL ADOPTION

The 2023 HMP was adopted by the TTD Board of Directors on X date and by the Tahoe RCD Board of Directions on X date.

8.2 MULTI-JURISDICTIONAL ADOPTION

A copy of the TTD adoption resolution and Tahoe RCD adoption resolution are kept on file with each respective district, Cal OES and FEMA Region IX.

APPENDIX A—HMP CHECKLIST

APPENDIX B—PLANNING PROCESS DOCUMENTS

APPENDIX C—FIGURES

APPENDIX D—TAHOE TRANSPORTATION DISTRICT

APPENDIX E—TAHOE RESOURCE CONSERVATION DISTRICT

APPENDIX F—MULTI-JURISDICTIONAL REQUIREMENTS

APPENDIX A—HMP CHECKLIST

Local Mitigation Plan Review Tool

Cover Page

The Local Mitigation Plan Review Tool (PRT) demonstrates how the local mitigation plan meets the regulation in 44 CFR § 201.6 and offers states and FEMA Mitigation Planners an opportunity to provide feedback to the local governments, including special districts.

1. The Multi-Jurisdictional Summary Sheet is a worksheet that is used to document how each jurisdiction met the requirements of the plan elements (Planning Process; Risk Assessment; Mitigation Strategy; Plan Maintenance; Plan Update; and Plan Adoption).
2. The Plan Review Checklist summarizes FEMA's evaluation of whether the plan has addressed all requirements.

For greater clarification of the elements in the Plan Review Checklist, please see Section 4 of this guide. Definitions of the terms and phrases used in the PRT can be found in Appendix E of this guide.

Plan Information	
Jurisdiction(s)	Tahoe Transportation District and Tahoe Resource Conservation District
Title of Plan	Tahoe Transportation District and Tahoe Resource Conservation District 2023 Hazard Mitigation Plan
New Plan or Update	New Plan
Single- or Multi-Jurisdiction	Multi-jurisdiction
Date of Plan	10/23/2023
Local Point of Contact	
Title	Judi Allen, Executive Assistant
Agency	Tahoe Transportation District
Address	P.O. Box 499 Zephyr Cove, NV 89448
Phone Number	775-589-5500
Email	jallen@tahoetransportation.org

Additional Point of Contact	
Title	Anna Davis, Senior Urban Planner
Agency	AECOM
Address	2020 L St, Sacramento, CA 95811
Phone Number	415-994-5157
Email	anna.davis@aecom.com

Review Information	
State Review	
State Reviewer(s) and Title	Click or tap here to enter text.
State Review Date	Click or tap to enter a date.
FEMA Review	
FEMA Reviewer(s) and Title	Click or tap here to enter text.
Date Received in FEMA Region	Click or tap to enter a date.
Plan Not Approved	Click or tap to enter a date.
Plan Approvable Pending Adoption	Click or tap to enter a date.
Plan Approved	Click or tap to enter a date.

Multi-Jurisdictional Summary Sheet

In the boxes for each element, mark if the element is met (Y) or not met (N).

#	Jurisdiction Name	A. Planning Process	B. Risk Assessment	C. Mitigation Strategy	D. Plan Maintenance	E. Plan Update	F. Plan Adoption	G. State Requirements
1	Tahoe Transportation District							
2	Tahoe Resource Conservation District							
3								
4								
5								
6								
7								
8								
9								
10								

Plan Review Checklist

The Plan Review Checklist is completed by FEMA. States and local governments are encouraged, but not required, to use the PRT as a checklist to ensure all requirements have been met prior to submitting the plan for review and approval. The purpose of the checklist is to identify the location of relevant or applicable content in the plan by element/sub-element and to determine if each requirement has been "met" or "not met." FEMA completes the "required revisions" summary at the bottom of each element to clearly explain the revisions that are required for plan approval. Required revisions must be explained for each plan sub-element that is "not met." Sub-elements in each summary should be referenced using the appropriate numbers (A1, B3, etc.), where applicable. Requirements for each element and sub-element are described in detail in Section 4: Local Plan Requirements of this guide.

Plan updates must include information from the current planning process.

If some elements of the plan do not require an update, due to minimal or no changes between updates, the plan must document the reasons for that.

Multi-jurisdictional elements must cover information unique to all participating jurisdictions.

Element A: Planning Process

Element A Requirements	Location in Plan (section and/or page number)	Met / Not Met
A1. Does the plan document the planning process, including how it was prepared and who was involved in the process for each jurisdiction? (Requirement 44 CFR § 201.6(c)(1))		
A1-a. Does the plan document how the plan was prepared, including the schedule or time frame and activities that made up the plan's development, as well as who was involved?	Section 2.1	Choose an item.
A1-b. Does the plan list the jurisdiction(s) participating in the plan that seek approval, and describe how they participated in the planning process?	Section 2.1	Choose an item.

Element A Requirements	Location in Plan (section and/or page number)	Met / Not Met
A2. Does the plan document an opportunity for neighboring communities, local and regional agencies involved in hazard mitigation activities, and agencies that have the authority to regulate development as well as businesses, academia, and other private and non-profit interests to be involved in the planning process? (Requirement 44 CFR § 201.6(b)(2))		
A2-a. Does the plan identify all stakeholders involved or given an opportunity to be involved in the planning process, and how each stakeholder was presented with this opportunity?	Section 2.2	Choose an item.
A3. Does the plan document how the public was involved in the planning process during the drafting stage and prior to plan approval? (Requirement 44 CFR § 201.6(b)(1))		
A3-a. Does the plan document how the public was given the opportunity to be involved in the planning process and how their feedback was included in the plan?	Section 2.3, Appendix B	Choose an item.
A4. Does the plan describe the review and incorporation of existing plans, studies, reports, and technical information? (Requirement 44 CFR § 201.6(b)(3))		
A4-a. Does the plan document what existing plans, studies, reports and technical information were reviewed for the development of the plan, as well as how they were incorporated into the document?	Section 2.4	Choose an item.
ELEMENT A REQUIRED REVISIONS		
Required Revision**:** Click or tap here to enter text.		

Element B: Risk Assessment

Element B Requirements	Location in Plan (section and/or page number)	Met / Not Met
B1. Does the plan include a description of the type, location, and extent of all natural hazards that can affect the jurisdiction? Does the plan also include information on previous occurrences of hazard events and on the probability of future hazard events? (Requirement 44 CFR § 201.6(c)(2)(i))		
B1-a. Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?	Overview: Section 4.1. identifies hazards addressed in this HMP. A description of each hazard is included in Sections 4.2-4.9 “nature”.	Choose an item.
B1-b. Does the plan include information on the location of each identified hazard?	Hazard location for each identified hazard is addressed in Sections 4.2 – 4.9 “location”.	Choose an item.
B1-c. Does the plan describe the extent for each identified hazard?	Extent for each identified hazard is addressed in Section 4.2 – 4.9 “extent/severity”.	Choose an item.
B1-d. Does the plan include the history of previous hazard events for each identified hazard?	Previous hazard events for each identified hazard addressed in Section 4.2 – 4.9 “history”.	Choose an item.

Element B Requirements	Location in Plan (section and/or page number)	Met / Not Met
B1-e. Does the plan include the probability of future events for each identified hazard? Does the plan describe the effects of future conditions, including climate change (e.g., long-term weather patterns, average temperature and sea levels), on the type, location and range of anticipated intensities of identified hazards?	Probability of future events for each identified hazard addressed in Section 4.2 – 4.9 "future events". Climate change impacts is also described in the "impact tables" for each hazard.	Choose an item.
B1-f. For participating jurisdictions in a multi-jurisdictional plan, does the plan describe any hazards that are unique to and/or vary from those affecting the overall planning area?	See Section 4.1., 2nd paragraph.	Choose an item.

Element B Requirements	Location in Plan (section and/or page number)	Met / Not Met
B2. Does the plan include a summary of the jurisdiction's vulnerability and the impacts on the community from the identified hazards? Does this summary also address NFIP-insured structures that have been repetitively damaged by floods? (Requirement 44 CFR § 201.6(c)(2)(ii))		
B2-a. Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards?	Overall summary of each district's vulnerability as well as the general public vulnerability to the identified hazards is addressed in Section 4.2 – 4.9 "vulnerability" tables. Please note: As addressed Section 3.3, Tahoe RCD does not have any current plans for future assets. As addressed in Section 3.1, the general population for the planning area is defined as are underserved and volunerable populations for each district.	Choose an item.

Element B Requirements	Location in Plan (section and/or page number)	Met / Not Met
B2-b. For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction?	Potential impacts of each of the identified hazards on each participating district as well as the general population is addressed in Section 4.2 – 4.9 "impact" tables. As addressed in Section 3.1, the general population for the planning area is defined as are underserved and volunerable populations for each district.	Choose an item.
B2-c. Does the plan address NFIP-insured structures within each jurisdiction that have been repetitively damaged by floods?	Section 4.10. TTD and Tahoe RCD are not eligible to participate as local communities in the NFIP, and as such, they do not have any NFIP-insured structures. TTD and Tahoe RCD critical assets that are located in the SFHA area identified in Section 4.6 and Section 4.10.	Choose an item.

ELEMENT B REQUIRED REVISIONS
Required Revision**:** Click or tap here to enter text.

Element C: Mitigation Strategy

Element C Requirements	Location in Plan (section and/or page number)	Met / Not Met
C1. Does the plan document each participant's existing authorities, policies, programs and resources and its ability to expand on and improve these existing policies and programs? (Requirement 44 CFR § 201.6(c)(3))		
C1-a. Does the plan describe how the existing capabilities of each participant are available to support the mitigation strategy? Does this include a discussion of the existing building codes and land use and development ordinances or regulations?	Appendix D: Tables D-1 through D-3 Appendix E: Tables E-1 through E-3 Note: As stated in Section 5.1, neither plan participant/district has the authority to have building codes or land use/development ordinances. Local agencies that have this capability have been identified, however.	Choose an item.
C1-b. Does the plan describe each participant's ability to expand and improve the identified capabilities to achieve mitigation?	Appendix D: Table D-4 Appendix E: Table E-4	Choose an item.
C2. Does the plan address each jurisdiction's participation in the NFIP and continued compliance with NFIP requirements, as appropriate? (Requirement 44 CFR § 201.6(c)(3)(ii))		
C2-a. Does the plan contain a narrative description or a table/list of their participation activities?	Not applicable. TTD and Tahoe RCD are not eligible to participate in the NFIP. However, NFIP participating communities located within the TTD – Tahoe RCD planning area are identified.	Choose an item.

Element C Requirements	Location in Plan (section and/or page number)	Met / Not Met
C3. Does the plan include goals to reduce/avoid long-term vulnerabilities to the identified hazards? (Requirement 44 CFR § 201.6(c)(3)(i))		
C3-a. Does the plan include goals to reduce the risk from the hazards identified in the plan?	Section 5.3	Choose an item.
C4. Does the plan identify and analyze a comprehensive range of specific mitigation actions and projects for each jurisdiction being considered to reduce the effects of hazards, with emphasis on new and existing buildings and infrastructure? (Requirement 44 CFR § 201.6(c)(3)(ii))		
C4-a. Does the plan include an analysis of a comprehensive range of actions/projects that each jurisdiction considered to reduce the impacts of hazards identified in the risk assessment?	Appendix D: Table D-5 Appendix E: Table E-5	Choose an item.
C4-b. Does the plan include one or more action(s) per jurisdiction for each of the hazards as identified within the plan's risk assessment?	Appendix D: Table D-5 Appendix E: Table E-5	Choose an item.
C5. Does the plan contain an action plan that describes how the actions identified will be prioritized (including a cost-benefit review), implemented, and administered by each jurisdiction? (Requirement 44 CFR § 201.6(c)(3)(iv)); (Requirement §201.6(c)(3)(iii))		
C5-a. Does the plan describe the criteria used for prioritizing actions?	Section 5.5	Choose an item.
C5-b. Does the plan provide the position, office, department or agency responsible for implementing/administrating the identified mitigation actions, as well as potential funding sources and expected time frame?	Appendix D: Table D-6 Appendix E: Table E-6	Choose an item.
ELEMENT C REQUIRED REVISIONS		
Required Revision**:** Click or tap here to enter text.		

Element D: Plan Maintenance

Element D Requirements	Location in Plan (section and/or page number)	Met / Not Met
D1. Is there discussion of how each community will continue public participation in the plan maintenance process? (Requirement 44 CFR § 201.6(c)(4)(iii))		
D1-a. Does the plan describe how communities will continue to seek future public participation after the plan has been approved?	Section 6.1	Choose an item.
D2. Is there a description of the method and schedule for keeping the plan current (monitoring, evaluating and updating the mitigation plan within a five-year cycle)? (Requirement 44 CFR § 201.6(c)(4)(i))		
D2-a. Does the plan describe the process that will be followed to track the progress/status of the mitigation actions identified within the Mitigation Strategy, along with when this process will occur and who will be responsible for the process?	Section 6.2	Choose an item.
D2-b. Does the plan describe the process that will be followed to evaluate the plan for effectiveness? This process must identify the criteria that will be used to evaluate the information in the plan, along with when this process will occur and who will be responsible.	Section 6.2	Choose an item.
D2-c. Does the plan describe the process that will be followed to update the plan, along with when this process will occur and who will be responsible for the process?	Section 6.2	Choose an item.
D3. Does the plan describe a process by which each community will integrate the requirements of the mitigation plan into other planning mechanisms, such as comprehensive or capital improvement plans, when appropriate? (Requirement 44 CFR § 201.6(c)(4)(ii))		
D3-a. Does the plan describe the process the community will follow to integrate the ideas, information and strategy of the mitigation plan into other planning mechanisms?	Appendix D: Table D-7 Appendix E: Table E-7	Choose an item.
D3-b. Does the plan identify the planning mechanisms for each plan participant into which the ideas, information and strategy from the mitigation plan may be integrated?	Appendix D: Table D-7 Appendix E: Table E-7	Choose an item.
D3-c. For multi-jurisdictional plans, does the plan describe each participant's individual process for integrating information from the mitigation strategy into their identified planning mechanisms?	Appendix D: Table D-7 Appendix E: Table E-7	Choose an item.

ELEMENT D REQUIRED REVISIONS
Required Revision: Click or tap here to enter text.

Element E: Plan Update

Element E Requirements	Location in Plan (section and/or page number)	Met / Not Met
E1. Was the plan revised to reflect changes in development? (Requirement 44 CFR § 201.6(d)(3))		
E1-a. Does the plan describe the changes in development that have occurred in hazard-prone areas that have increased or decreased each community's vulnerability since the previous plan was approved?	Not applicable	Choose an item.
E2. Was the plan revised to reflect changes in priorities and progress in local mitigation efforts? (Requirement 44 CFR § 201.6(d)(3))		
E2-a. Does the plan describe how it was revised due to changes in community priorities?	Not applicable	Choose an item.
E2-b. Does the plan include a status update for all mitigation actions identified in the previous mitigation plan?	Not applicable	Choose an item.
E2-c. Does the plan describe how jurisdictions integrated the mitigation plan, when appropriate, into other planning mechanisms?	Not applicable	Choose an item.

ELEMENT E REQUIRED REVISIONS
Required Revision: Click or tap here to enter text.

Element F: Plan Adoption

Element F Requirements	Location in Plan (section and/or page number)	Met / Not Met
F1. For single-jurisdictional plans, has the governing body of the jurisdiction formally adopted the plan to be eligible for certain FEMA assistance? (Requirement 44 CFR § 201.6(c)(5))		
F1-a. Does the participant include documentation of adoption?	To be completed pending FEMA approval	Choose an item.
F2. For multi-jurisdictional plans, has the governing body of each jurisdiction officially adopted the plan to be eligible for certain FEMA assistance? (Requirement 44 CFR § 201.6(c)(5))		
F2-a. Did each participant adopt the plan and provide documentation of that adoption?	To be completed pending FEMA approval	Choose an item.
ELEMENT F REQUIRED REVISIONS		
Required Revision**:** Click or tap here to enter text.		

Element G: High Hazard Potential Dams (Optional)

HHPD Requirements	Location in Plan (section and/or page number)	Met / Not Met
HHPD1. Did the plan describe the incorporation of existing plans, studies, reports and technical information for HHPDs?		
HHPD1-a. Does the plan describe how the local government worked with local dam owners and/or the state dam safety agency?	Click or tap here to enter text.	Choose an item.
HHPD1-b. Does the plan incorporate information shared by the state and/or local dam owners?	Click or tap here to enter text.	Choose an item.

HHPD Requirements	Location in Plan (section and/or page number)	Met / Not Met
HHPD2. Did the plan address HHPDs in the risk assessment?		
HHPD2-a. Does the plan describe the risks and vulnerabilities to and from HHPDs?	Click or tap here to enter text.	Choose an item.
HHPD2-b. Does the plan document the limitations and describe how to address deficiencies?	Click or tap here to enter text.	Choose an item.
HHPD3. Did the plan include mitigation goals to reduce long-term vulnerabilities from HHPDs?		
HHPD3-a. Does the plan address how to reduce vulnerabilities to and from HHPDs as part of its own goals or with other long-term strategies?	Click or tap here to enter text.	Choose an item.
HHPD3-b. Does the plan link proposed actions to reducing long-term vulnerabilities that are consistent with its goals?	Click or tap here to enter text.	Choose an item.
HHPD4-a. Did the plan include actions that address HHPDs and prioritize mitigation actions to reduce vulnerabilities from HHPDs?		
HHPD4-a. Does the plan describe specific actions to address HHPDs?	Click or tap here to enter text.	Choose an item.
HHPD4-b. Does the plan describe the criteria used to prioritize actions related to HHPDs?	Click or tap here to enter text.	Choose an item.
HHPD4-c. Does the plan identify the position, office, department or agency responsible for implementing and administering the action to mitigate hazards to or from HHPDs?	Click or tap here to enter text.	Choose an item.
HHPD Required Revisions		
Required Revision**:** Click or tap here to enter text.		

Element H: Additional State Requirements (Optional)

Element H Requirements	Location in Plan (section and/or page number)	Met / Not Met
This space is for the State to include additional requirements.		
Click or tap here to enter text.	Click or tap here to enter text.	Choose an item.

Plan Assessment

These comments can be used to help guide your annual/regularly scheduled updates and the next plan update.

Element A. Planning Process

Strengths

- [insert comments]

Opportunities for Improvement

- [insert comments]

Element B. Risk Assessment

Strengths

- [insert comments]

Opportunities for Improvement

- [insert comments]

Element C. Mitigation Strategy

Strengths

- [insert comments]

Opportunities for Improvement

- [insert comments]

Element D. Plan Maintenance

Strengths

- [insert comments]

Opportunities for Improvement

- [insert comments]

Element E. Plan Update

Strengths

- [insert comments]

Opportunities for Improvement

- [insert comments]

Element G. HHPD Requirements (Optional)

Strengths

- [insert comments]

Opportunities for Improvement

- [insert comments]

Element H. Additional State Requirements (Optional)

Strengths

- [insert comments]

Opportunities for Improvement

- [insert comments]

APPENDIX B—PLANNING PROCESS DOCUMENTS

Tahoe Basin Hazard Mitigation Plan

Danielle Hughes <dhughes@tahoetransportation.org>
Tue 12/6/2022 2:29 PM
Cc: dhughes <dhughes@tahoetransportation.org>

Good Afternoon,

The Tahoe Transportation District and Tahoe Resource Conservation District, in coordination with regional partners, are developing a Hazard Mitigation Plan (HMP). The purpose of this plan is to profile the natural and human-caused hazards in our area, building off previous local and regional efforts to determine the impacts of hazards on our multi-modal transportation system and land conservation efforts, and develop strategies to mitigate future disasters.

The planning process, a requirement of the Federal Emergency Management Agency (FEMA), which will include a public review period, is expected to occur over this winter and into early spring. Once approved by FEMA and adopted by both agencies, the Tahoe Transportation District and Tahoe Resource Conservation District will be eligible for certain types of federal funding to help create a more disaster resilient Lake Tahoe Basin. Because this plan is funded through the California Office of Emergency Services, certain requirements in the plan will only address the California side of the Lake Tahoe Basin. It is our hope that future updates of the plan will include the Nevada side of our communities.

If you would like to participate in our planning process, please contact me at the Tahoe Transportation District. You can also follow our progress on our Facebook page @TahoeTransportationDistrict.

If you would like to learn more about hazard mitigation planning, please visit: https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning

I will be sending out a follow-up email when our Public Draft HMP is available for review and comment.

Thank you,

Danielle Hughes
Capital Program Manager
Tahoe Transportation District
P.O. Box 499
Zephyr Cove, NV 89448
www.tahoetransportation.org
Direct: 775-557-4901
Cell: 530-721-1070
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dhughes@tahoetransportation.org

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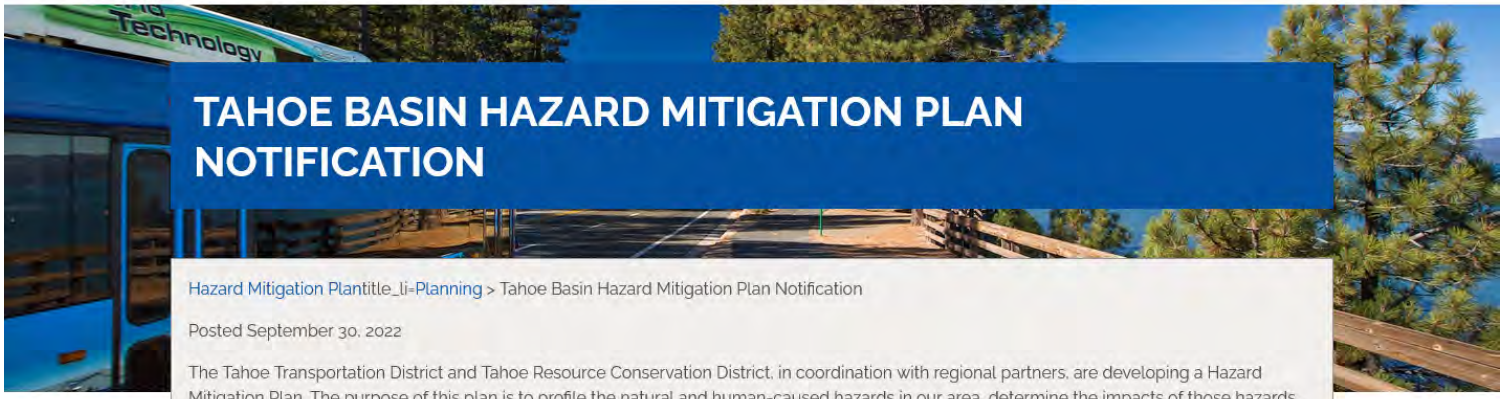
Connect
(775) 589-5500
info@tahoetransportation.org
P.O. Box 499
Zephyr Cove, NV 89448



TAHOE BASIN HAZARD MITIGATION PLAN NOTIFICATION

Hazard Mitigation Plantitle_li-Planning > Tahoe Basin Hazard Mitigation Plan Notification

Posted September 30, 2022

The Tahoe Transportation District and Tahoe Resource Conservation District, in coordination with regional partners, are developing a Hazard Mitigation Plan. The purpose of this plan is to profile the natural and human-caused hazards in our area, determine the impacts of those hazards on our multi-modal transportation system and land conservation efforts, and develop strategies to mitigate future disasters.

The planning process, a requirement of the Federal Emergency Management Agency (FEMA), will include a public review period, expected to occur this winter. Once approved by FEMA and adopted by both agencies, Tahoe Transportation District and Tahoe Resource Conservation District will be eligible for certain types of federal funding to help create a more disaster resilient Lake Tahoe Basin. Because this plan is funded through the California Office of Emergency Services, certain requirements in the plan will only address the California side of the Lake Tahoe Basin. It is our hope that future updates of the plan will include the Nevada side of our community. In the meantime, to learn more about hazard mitigation, please visit: https://www.fema.gov/emergency-managers/risk-management/hazard-mitigation-planning

Hazard Mitigation Plan, Planning Edit

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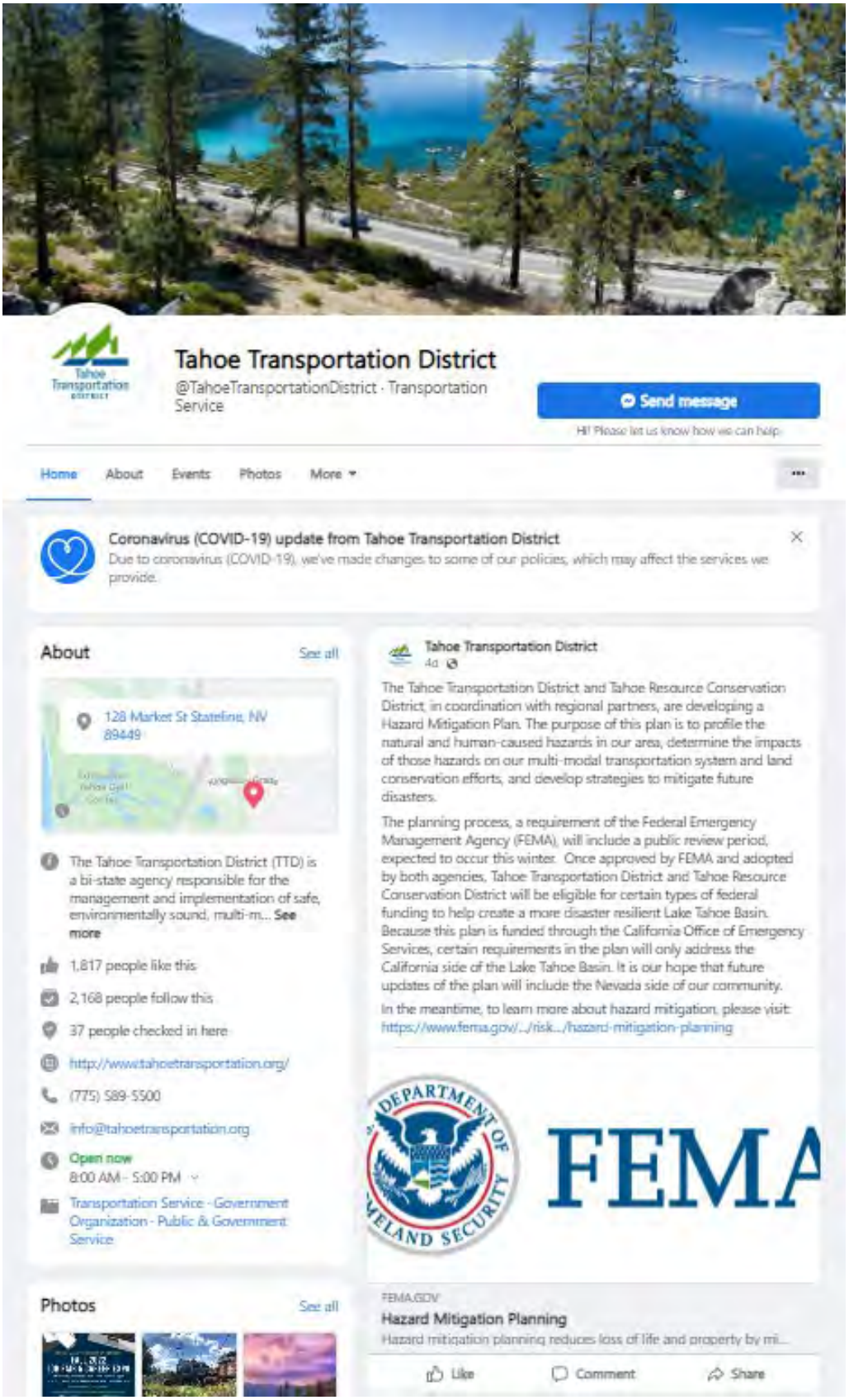
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Due to coronavirus (COVID-19), we've made changes to some of our policies, which may affect the services we provide.
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37 people checked in here
http://www.tahoetransportation.org/
(775) 589-5500
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Tahoe Transportation District
4d
The Tahoe Transportation District and Tahoe Resource Conservation District, in coordination with regional partners, are developing a Hazard Mitigation Plan. The purpose of this plan is to profile the natural and human-caused hazards in our area, determine the impacts of those hazards on our multi-modal transportation system and land conservation efforts, and develop strategies to mitigate future disasters.
The planning process, a requirement of the Federal Emergency Management Agency (FEMA), will include a public review period, expected to occur this winter. Once approved by FEMA and adopted by both agencies, Tahoe Transportation District and Tahoe Resource Conservation District will be eligible for certain types of federal funding to help create a more disaster resilient Lake Tahoe Basin. Because this plan is funded through the California Office of Emergency Services, certain requirements in the plan will only address the California side of the Lake Tahoe Basin. It is our hope that future updates of the plan will include the Nevada side of our community.
In the meantime, to learn more about hazard mitigation, please visit: https://www.fema.gov/.../risk.../hazard-mitigation-planning
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Tahoe Transportation District

PUBLIC DRAFT TAHOE BASIN HAZARD MITIGATION PLAN AVAILABLE FOR COMMENTS

Hazard Mitigation Plantitle_li=Planning > Public Draft Tahoe Basin Hazard Mitigation Plan Available for Comments

Posted October 3, 2023

The Tahoe Transportation District and Tahoe Resource Conservation District have developed a Hazard Mitigation Plan (HMP). An HMP is required by a federal law, known as the Disaster Mitigation Act of 2000 (DMA 2000), to receive certain types of FEMA grant funding.

The planning process took one year to complete. The plan addresses climate change, dam failure, drought, earthquake, flood, landslide, wildfire, and winter storm. For each hazard identified, short- and long-term strategies were developed to reduce or eliminate the hazard impact on each district. Strategies were developed using FEMA success stories and best management practices, FEMA job aids, local and regional plans and reports, and input from planning committee members and sustainability and transportation practitioners.

The plan was organized to follow FEMA's Local Mitigation Plan Regulation Checklist, which demonstrates how hazard mitigation plans meet the DMA 2000 regulations. A copy of the Regulation Checklist can be found here: https://www.fema.gov/sites/default/files/documents/fema_local-mitigation-planning-handbook_052023.pdf

The draft plan is available for review and comment until Monday, October 16. Click here to view the HMP.

Hazard Mitigation Plan, Planning

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Exhibit A

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(775) 589-5500
info@tahoetransportation.org
P.O. Box 499
Zephyr Cove, NV 89448


Public Draft
Tahoe Transportation District
Tahoe Resource Conservation District
2023 Hazard Mitigation Plan
Tahoe Transportation DISTRICT
TAHOE RESOURCE CONSERVATION DISTRICT
October 2023


tahoercd • Follow
tahoercd Tahoe Transportation District and Tahoe Resource Conservation District developed a Hazard Mitigation Plan (HMP). A HMP is required by a federal law, known as the Disaster Mitigation Act of 2000 (DMA 2000), to receive certain types of FEMA grant funding. The planning process took one year to complete. The plan addresses climate change, dam failure, drought, earthquake, flood, landslide, wildfire, and winter storm.
The draft plan is online and available for review and comment until Monday, October 16. It can be found here: https://www.tahoetransportation.org/news/.
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TTD and TRCD's Draft Public Hazard Mitigation Plan Released for Public Comment!

Judi Allen <jallen@tahoetransportation.org>

Tue 10/3/2023 11:34 AM

Hello,

The Tahoe Transportation District and Tahoe Resource Conservation District have completed their draft Hazard Mitigation Plan (HMP). A HMP is required by a federal law, known as the Disaster Mitigation Act of 2000 (DMA 2000), to receive certain types of FEMA grant funding.

The planning process took one year to complete. The plan addresses climate change, dam failure, drought, earthquake, flood, landslide, wildfire, and winter storm. For each hazard identified, short- and long-term strategies were developed to reduce or eliminate the hazard impact on each district. Strategies were developed using FEMA success stories and best management practices, FEMA job aids, local and regional plans and reports, and input from planning committee members and sustainability and transportation practitioners.

The plan was organized to follow FEMA's Local Mitigation Plan Regulation Checklist, which demonstrates how hazard mitigation plans meet the DMA 2000 regulations. A copy of the Regulation Checklist can be found here: https://www.fema.gov/sites/default/files/documents/fema_local-mitigation-planning-handbook_052023.pdf

The draft plan is on-line and available for review and comment until Monday, October 16. It can be found here: https://www.tahoetransportation.org/

If you have any questions and/or comments, please feel free to contact us.

Regards,

Judi Allen
Executive Assistant
Tahoe Transportation District
P.O. Box 499
Zephyr Cove, NV 89448
775/589-5502 - Direct
775/588-0917 – Fax
www.tahoetransportation.org

Table B-1: Stakeholders

Category	Organization	Contact
Neighboring communities	El Dorado County	Troy Morton, Sheriff's Lieutenant Brendan Ferry, Principal Planner Thea Graybill, Senior Planner John D'Agostini, Sheriff-Coroner-Public Administrator
	Placer County	Young Rodriguez, Emergency Services Coordinator Darrell Steinhauer, Captain-Tahoe Station Commander
	City of South Lake Tahoe	Jason Burke, Stormwater Program Manager Joe Irvin, City Manager David Stevenson, Police Chief Devin Middlebrook, Mayor John Dickinson, Airport Manager Jim Drennan, Fire Chief
State agencies	Caltrans *	David Dosanjh, Regional Planner Kevin Yount, Branch Chief
	Cal OES	Alex Knigge, Senior Project Manager
	California Highway Patrol*	Ashley Merchant, Tahoe Valley Division Officer
	California State Parks**	Rich Adams, Forester II
	California Tahoe Conservancy**	Nick Meyer, Land Management Program Supervisor
	CAL FIRE**	Mike Boyce, Battalion Chief
	Nevada Department of Emergency Management	Janell Woodward, State Hazard Mitigation Officer - Preparedness Section
	Nevada Department of Transportation*	James Whalen, Information Technology Manager II
Federal agencies	U.S. Forest Service - Lake Tahoe Basin Management Unit	Daniel Cressy, Landscape Architect Erik Walker, Forest Supervisor
	U.S. EPA Lake Tahoe Basin Coordinator	Dana Michels, Environmental Scientist

Table B-1: Stakeholders

Category	Organization	Contact
Agencies that have the authority to regulate development	Tahoe Regional Planning Agency	Michelle Gilkert, Transportation Planning Program Manager Dennis Zabaglo, Aquatic Invasive Species Program Manager Kimberly Chevallier, Chief Partnerships Officer / Deputy Executive Director Devin Middlebrook, Sustainability Program Manager
Local and regional agencies involved in hazard mitigation	Tahoe Environmental Improvement Program Working Group	Devin Middlebrook, Sustainability Program Manager
	Lake Tahoe Aquatic Invasive Species Coordinating Committee**	Dennis Zabaglo, Aquatic Invasive Species Program Manager (Tahoe Regional Planning Agency Mollie Hurt, Director of Programs (Tahoe RCD)
	Tahoe Fire and Fuels Team**	Isaac Powning, Division Chief Milan Yeates, Community Forestry Program Supervisor Lynn Nolan, Grants Coordinator Forest Shafer, State Coordinator
	Stormwater Quality Improvement Committee**	Dan Kikkert, Co-Chair Andrea Buxton, Co-Chair
	Upper Truckee River Watershed Advisory Committee**	Jen Greenberg, Environmental Planner
	Nearshore Working Group	Robert Larsen, unknown Dan Segan, unknown
	Lake Valley Fire Protection District**	Chad Stephen, Fire Chief
	Fallen Leaf Lake Fire**	Gary Gerren, Fire Chief
Representatives of businesses, academia, and other private sectors	South Tahoe Public Utility District	Nick Haven, Director
	Tahoe City Public Utility District	Sean Barclay, General Manager

Table B-1: Stakeholders

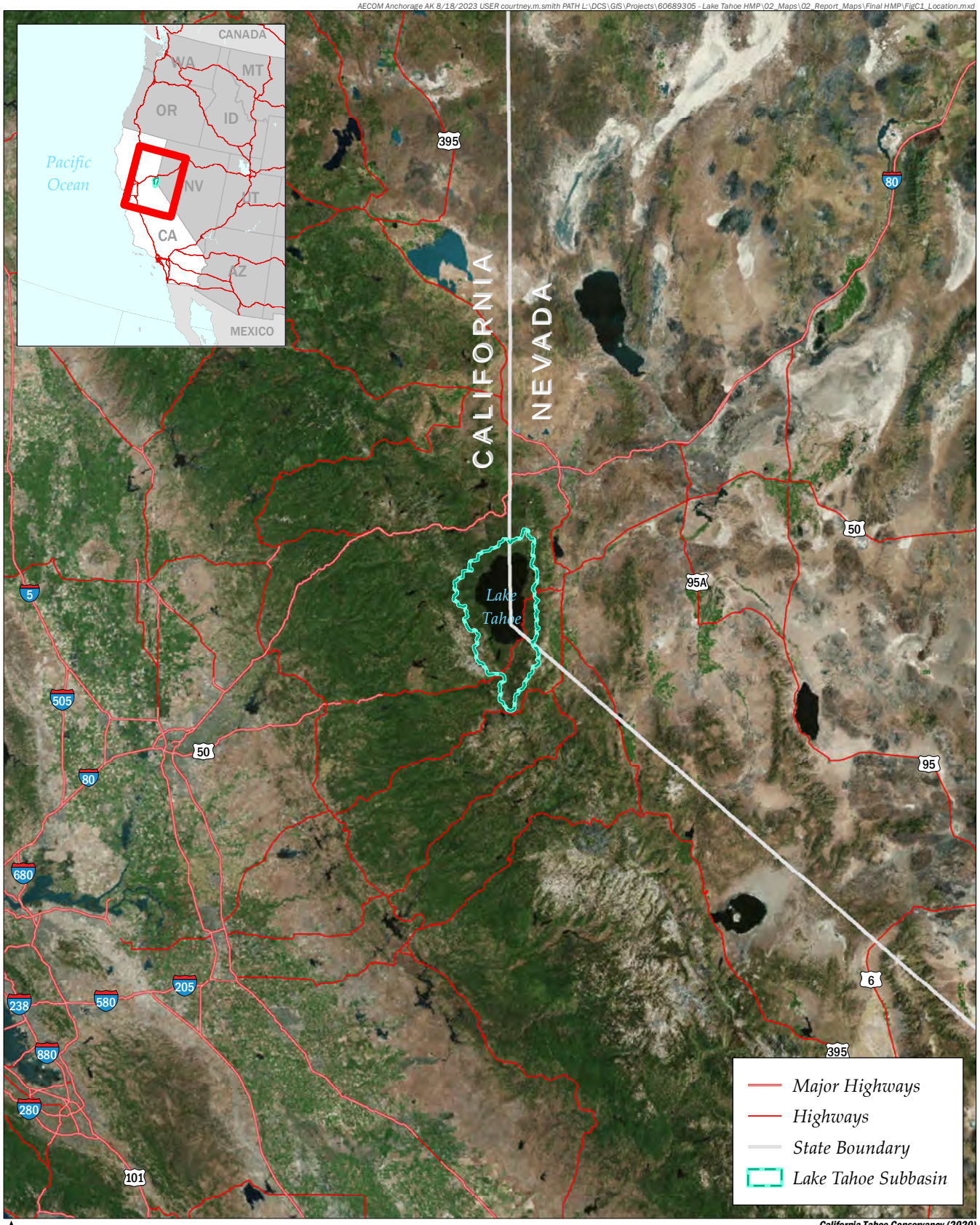
Category	Organization	Contact
	North Tahoe Public Utility District	Bradley Johnson, General Manager
	Liberty Utilities	General contact, unknown
	Southwest Gas	Christopher Ladeas, Project Manager
	South Tahoe Refuse	General contact, unknown
Other agencies, organizations, and special districts	Truckee / North Tahoe Transportation Management Association*	Julia Tohlen, Interim Executive Director
	South Shore Transportation Management Association*	Raymond Suarez, Executive Manager
	Tahoe Truckee Unified School District	Kerstin Kramer, Superintendent Chief Learning Officer
	Lake Tahoe Unified School District	Dr. Todd Cutler, Superintendent
	Coalition for Homeless	Carrie Chapman, Program Manager

Notes:
* TTD-specific stakeholders
** Tahoe RCD-specific stakeholders

Table B-2: Tahoe Area Coordinating Council for the Disabled

Organization	Contact
Placer Independent Resource Services	Aerius Franklin, Placer Independent Resource Services
Training Responsible Adults in Life Skills, TRAILS At The Lake	Amanda Lotter, Personal Assistant
Tahoe Immigration Law	Amber Reinholdt, Esq.
California Department of Rehabilitation	Charles Bowyer, Service Coordinator
ADVANCE	Charlotte Rosburg, Program Assistant
City of South Lake Tahoe Police Department	David Stevenson, Police Chief
Placer Independent Resources	Colleen Black, Case Manager II
Live Violence Free	Eanad Lott, Director of Operations and Client Services
People First	Gordon Bonar, Secretary
Alta Regional Center	Heather Coleman, Communication Service Specialist I
Tahoe Regional Planning Agency	Kira Smith, Senior Transportation Planner
Tahoe Community Integrations	Monique Migdol, Mental Health Counselor
PRIDE Industries	Sydni O'Niell, Job Developer
Special Olympics	Gordon Bonar, unknown
El Dorado County Health and Human Services	Unknown
St. Joseph Community Land Trust	Charlotte Rosburg, Office Manager / Motel to Housing Program Coordinator
TTD	Judi Allen, Executive Assistant

APPENDIX C—FIGURES



California Tahoe Conservancy (2020)
Basemap: Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

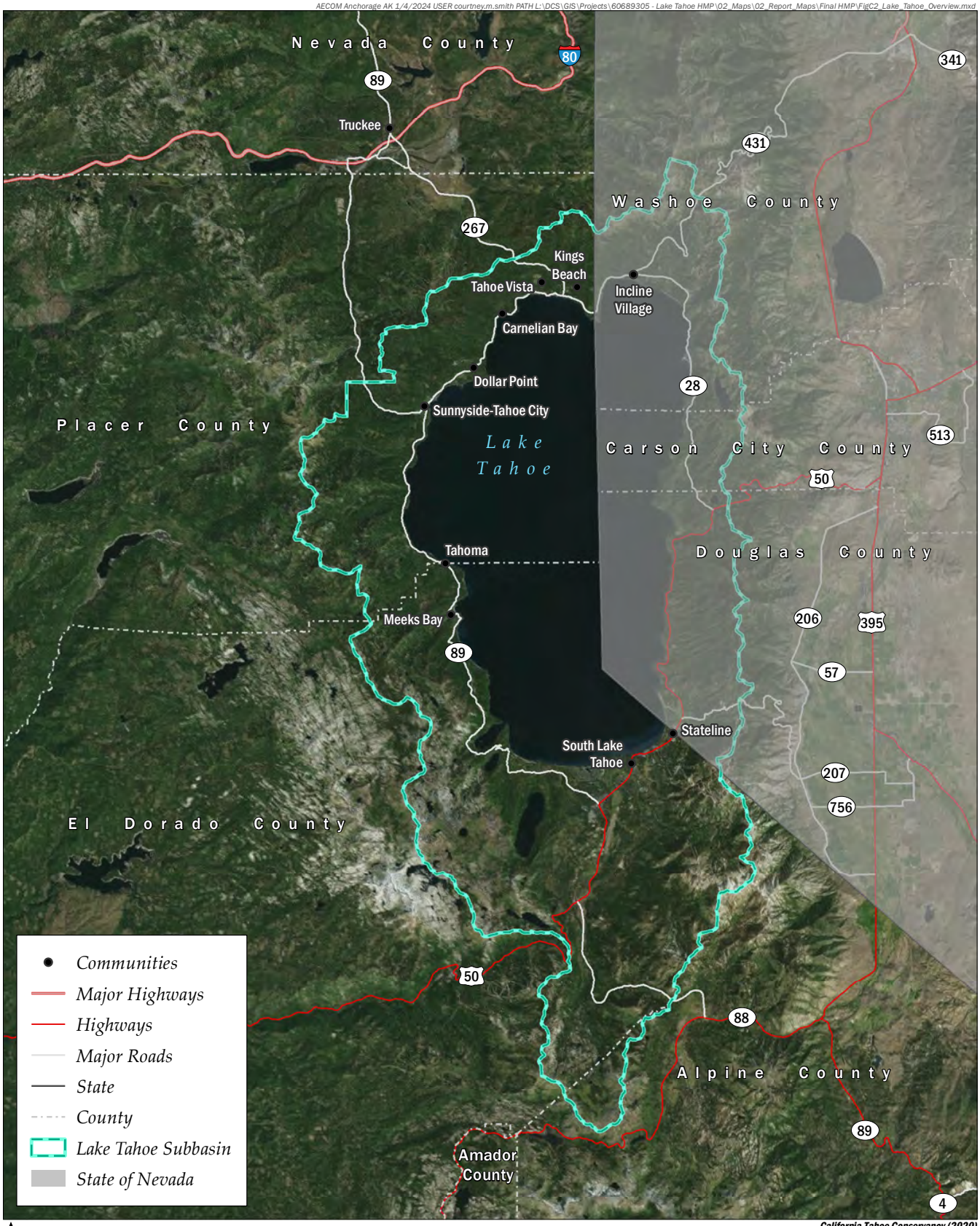
AECOM

Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

LOCATION

Figure C-1



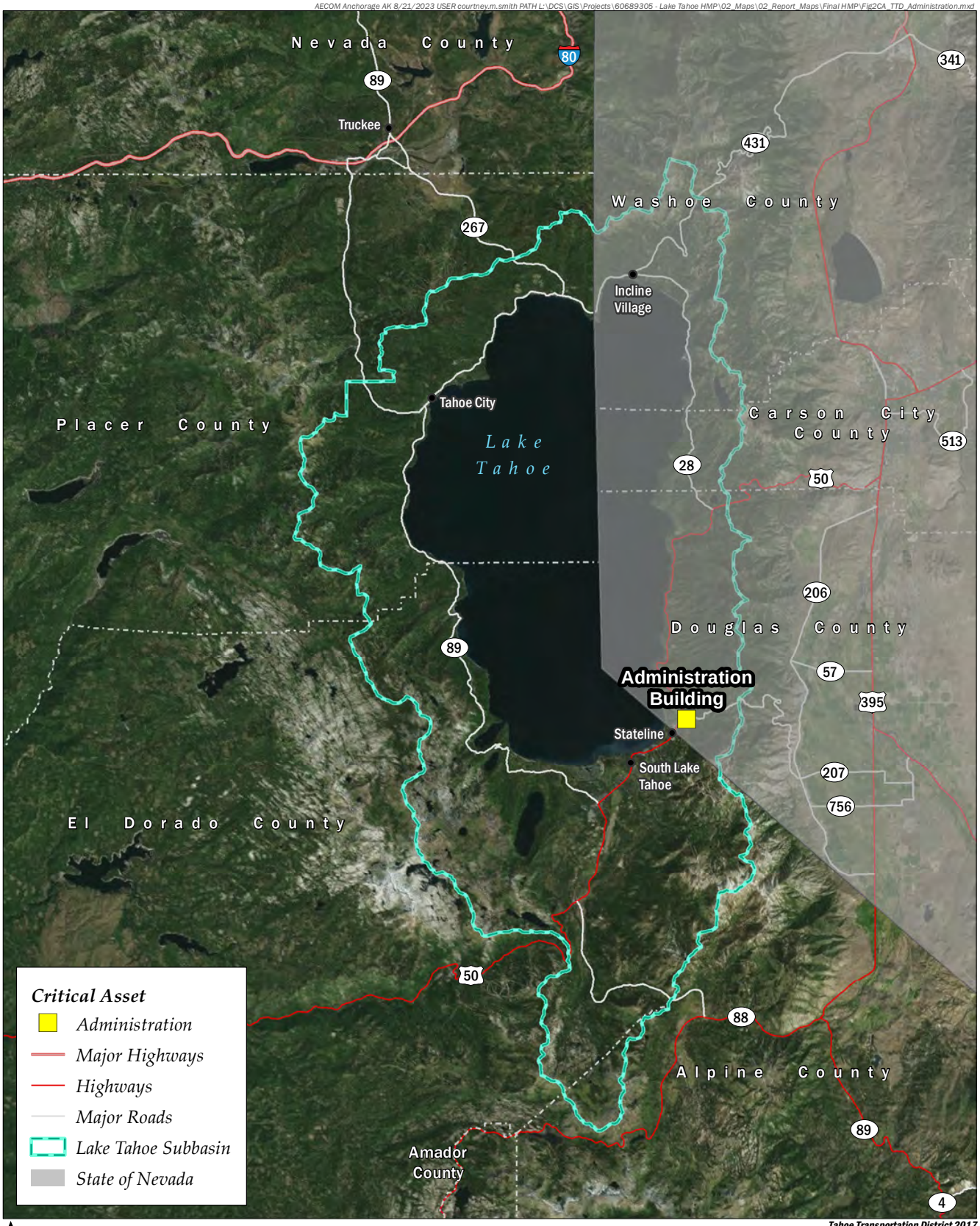
AECOM

Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

TAHOE TRANSPORTATION DISTRICT

Figure C-2



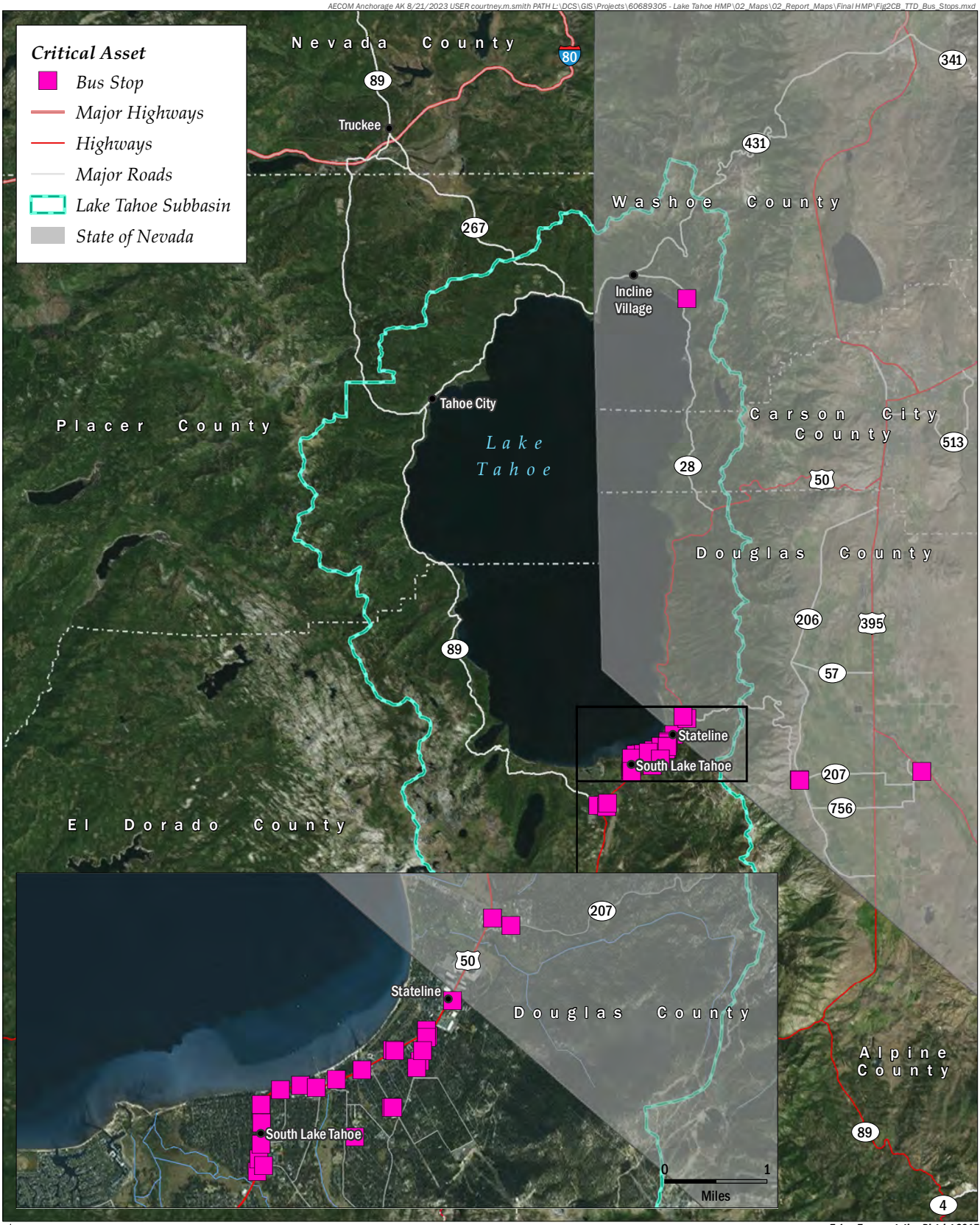
AECOM

Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

TAHOE TRANSPORTATION DISTRICT ADMINISTRATION

Figure 2C-A



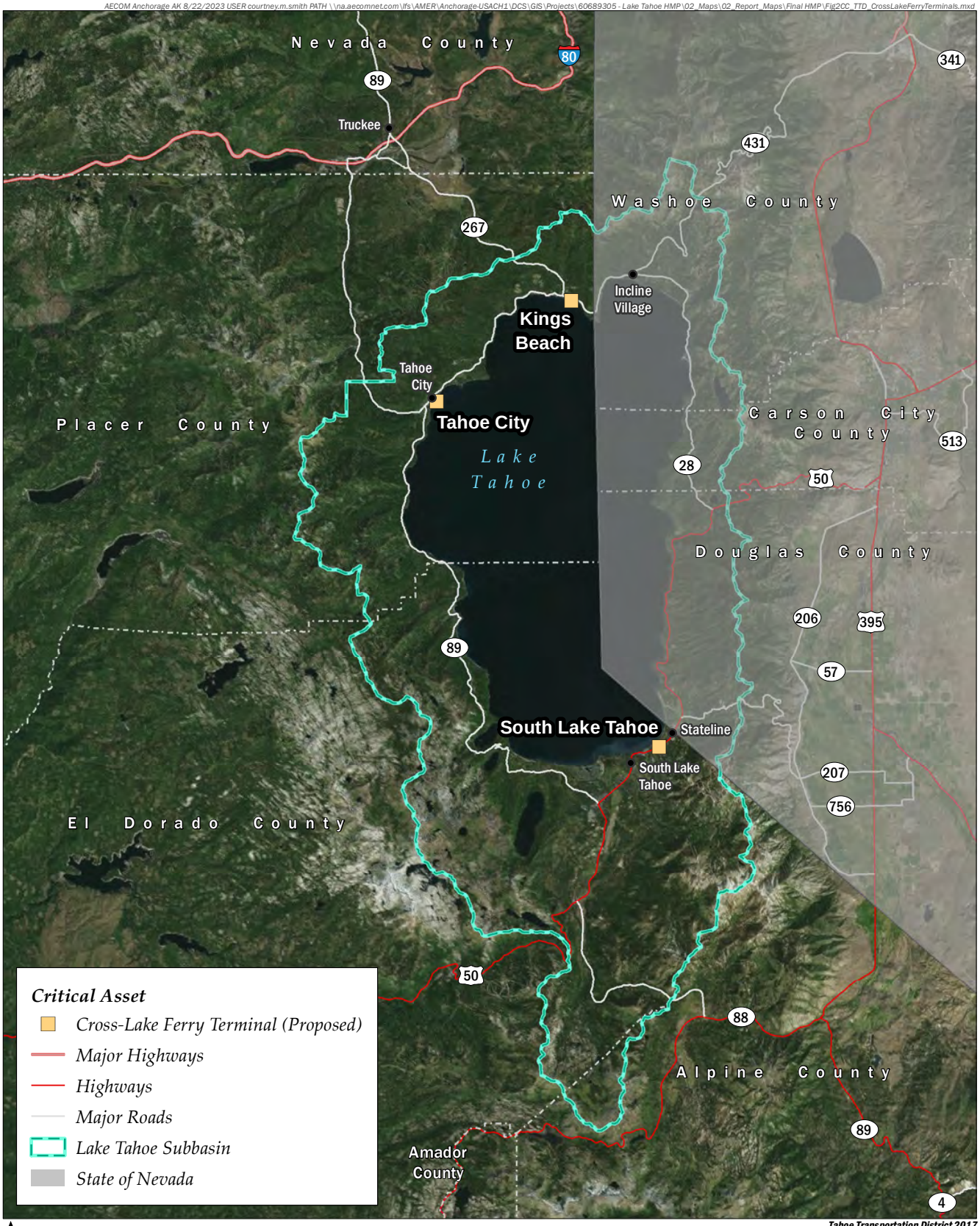
AECOM

Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

TAHOE TRANSPORTATION DISTRICT
BUS STOPS

Figure 2C-B

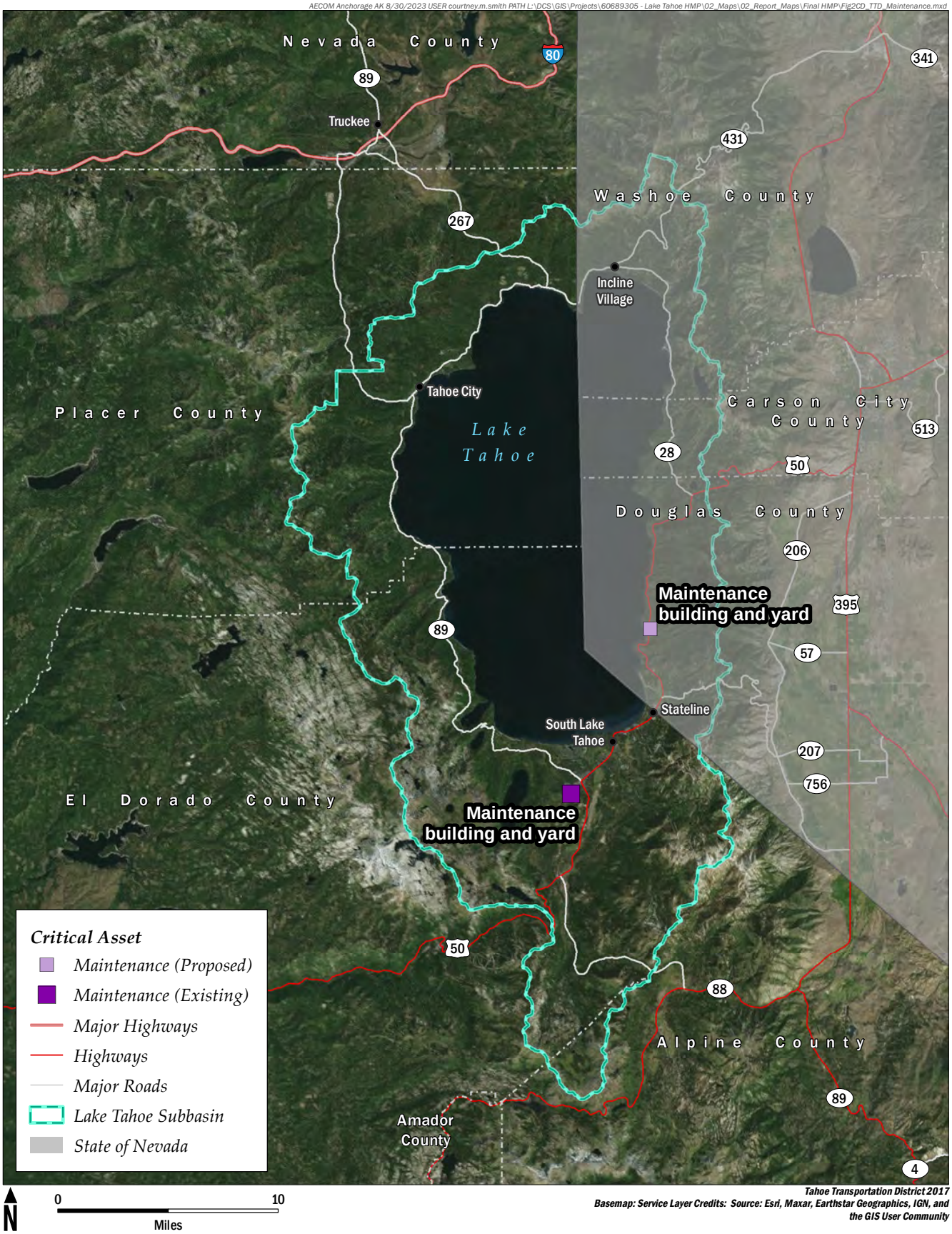


Tahoe Transportation District 2017
Basemap: Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

AECOM
Tahoe Transportation District
Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

TAHOE TRANSPORTATION DISTRICT
CROSS-LAKE FERRY TERMINALS

Figure 2C-C



AECOM

Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

TAHOE TRANSPORTATION DISTRICT MAINTENANCE

Figure 2C-D

AECOM Anchorage AK 8/30/2023 USER courtney.m.smith PATH L:\DCS\GIS\Projects\60689305 - Lake Tahoe HMP\02_Maps\02_Report_Maps\Final HMP\Fig2CE_TTD_MH_TC.mxd

Tahoe Transportation District 2017
Basemap: Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

AECOM

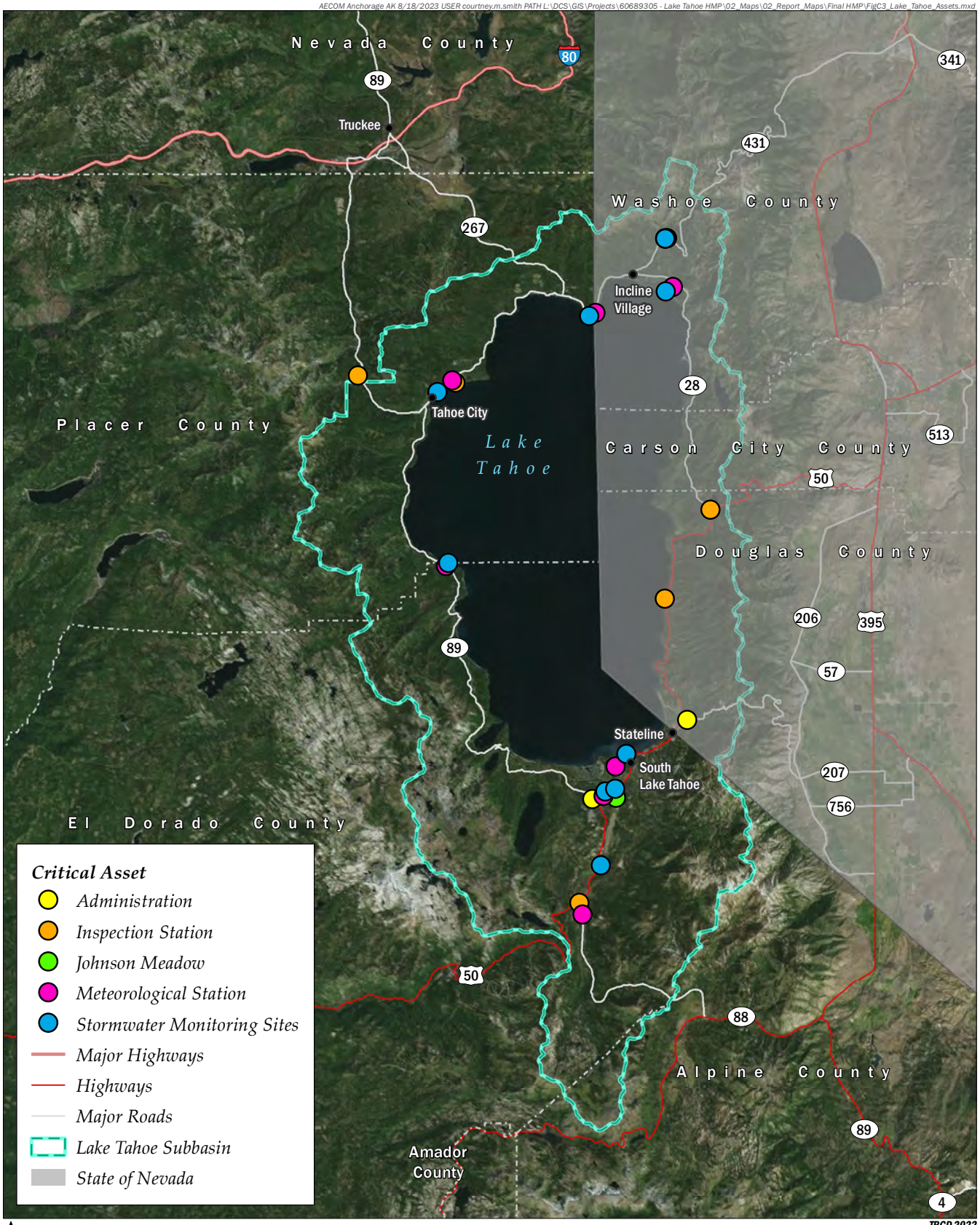
Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

TAHOE TRANSPORTATION DISTRICT
MOBILITY HUBS

Figure 2C-E

AECOM Anchorage AK 8/18/2023 USER courtney.m.smith PATH L:\DCS\GIS\Projects\60689305 - Lake Tahoe HMP\02_Maps\02_Report_Maps\Final HMP\FigC3_Lake_Tahoe_Assets.mxd



TRCD 2022
Basemap: Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

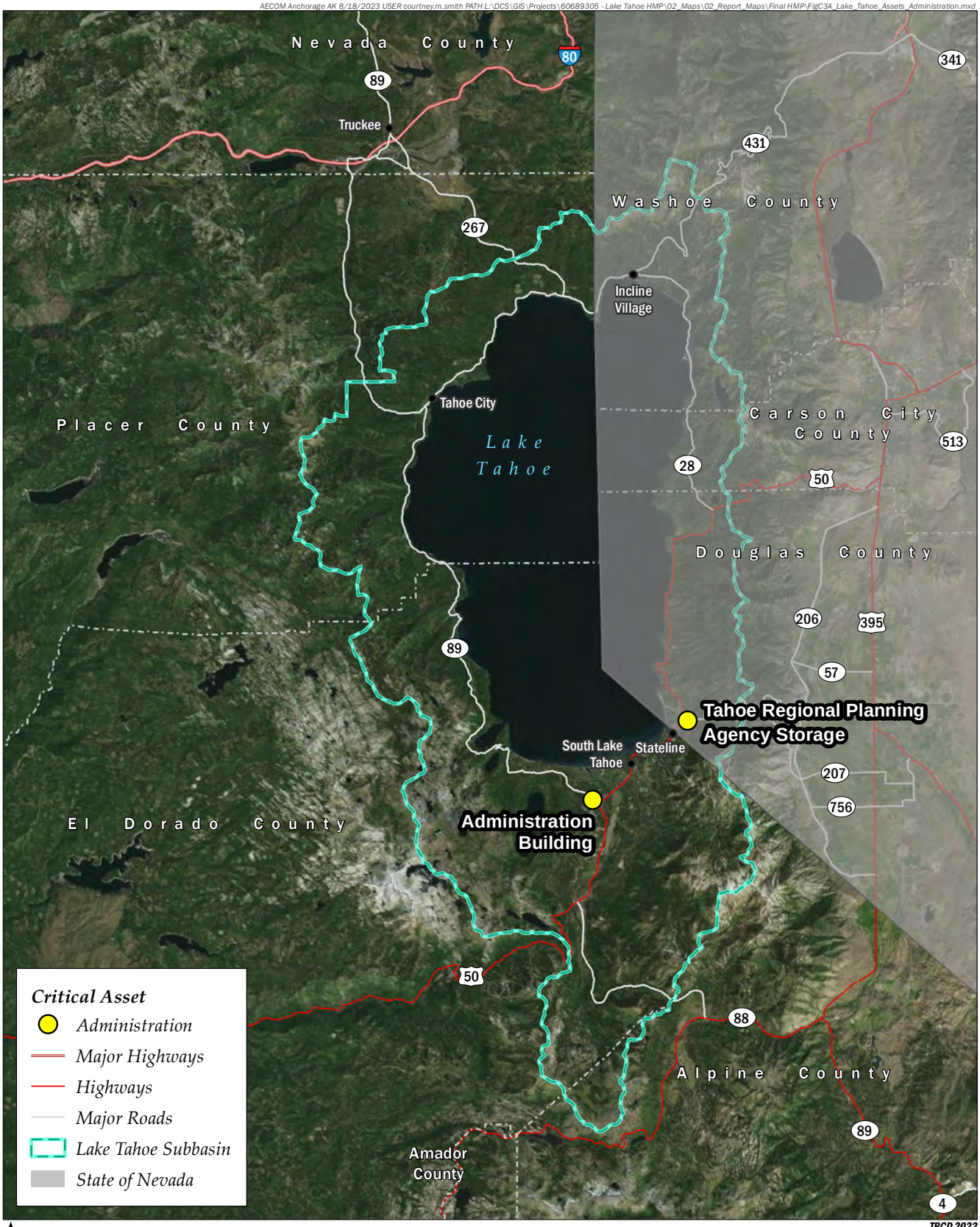
AECOM

Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

TAHOE RESOURCE CONSERVATION DISTRICT

Figure C-3



TRCD 2022
Basemap: Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

AECOM

Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

TAHOE RESOURCE CONSERVATION DISTRICT ADMINISTRATION

Figure C-3A

AECOM Anchorage AK 8/18/2023 USER courtney.m.smith PATH L:\DCS\GIS\Projects\60689305 - Lake Tahoe HMP\02_Maps\02_Report_Maps\Final HMP\FigC3B_Lake_Tahoe_Assets_InspStations.mxd

TRCD 2022
Basemap: Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

AECOM

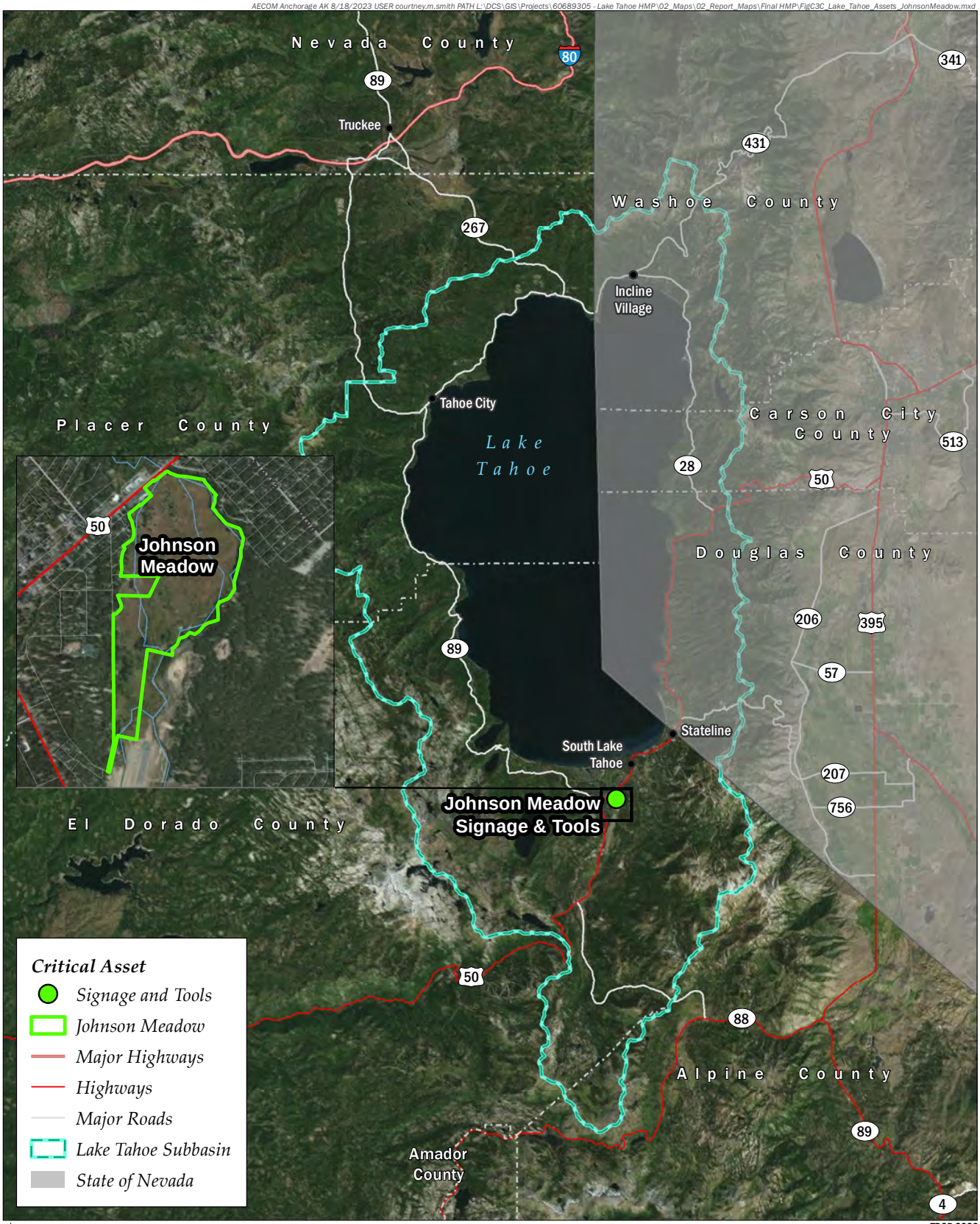
Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

TAHOE RESOURCE CONSERVATION DISTRICT INSPECTION STATIONS

Figure C-3B

AECOM Anchorage AK 8/18/2023 USER courtney.m.smith PATH L:\DCS\GIS\Projects\60689305 - Lake Tahoe HMP\02_Maps\02_Report_Maps\Final HMP\FigC3C_Lake_Tahoe_Assets_JohnsonMeadow.mxd



AECOM

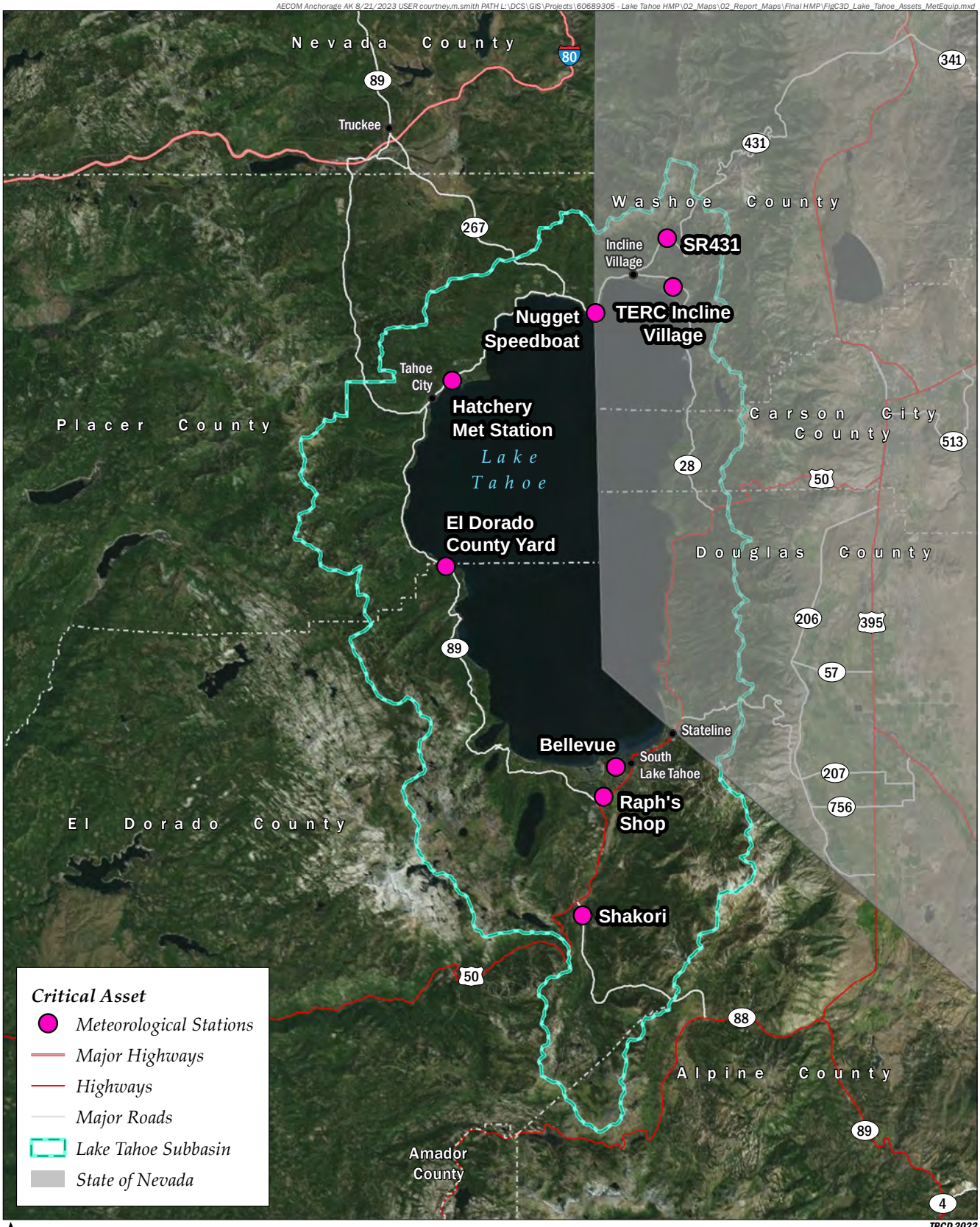
Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

TAHOE RESOURCE CONSERVATION DISTRICT
JOHNSON MEADOW

Figure C-3C

AECOM Anchorage AK 8/21/2023 USER courtney.m.smith PATH L:\DCS\GIS\Projects\60689305 - Lake Tahoe HMP\02_Maps\02_Report_Maps\Final HMP\FigC3D_Lake_Tahoe_Assets_MetEquip.mxd



TRCD 2022
Basemap: Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

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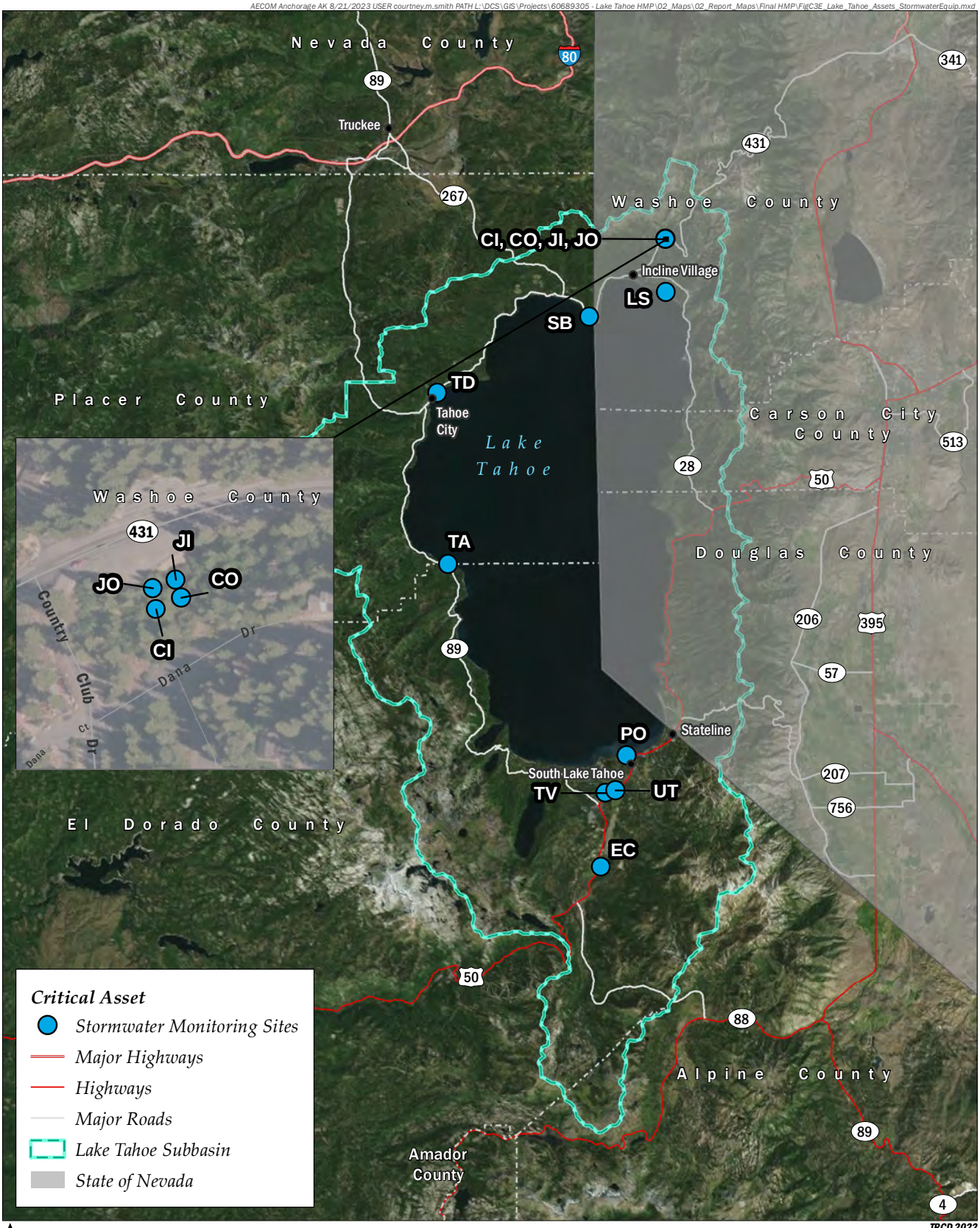
Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

TAHOE RESOURCE CONSERVATION DISTRICT METEOROLOGICAL MONITORING STATIONS

Figure C-3D



AECOM

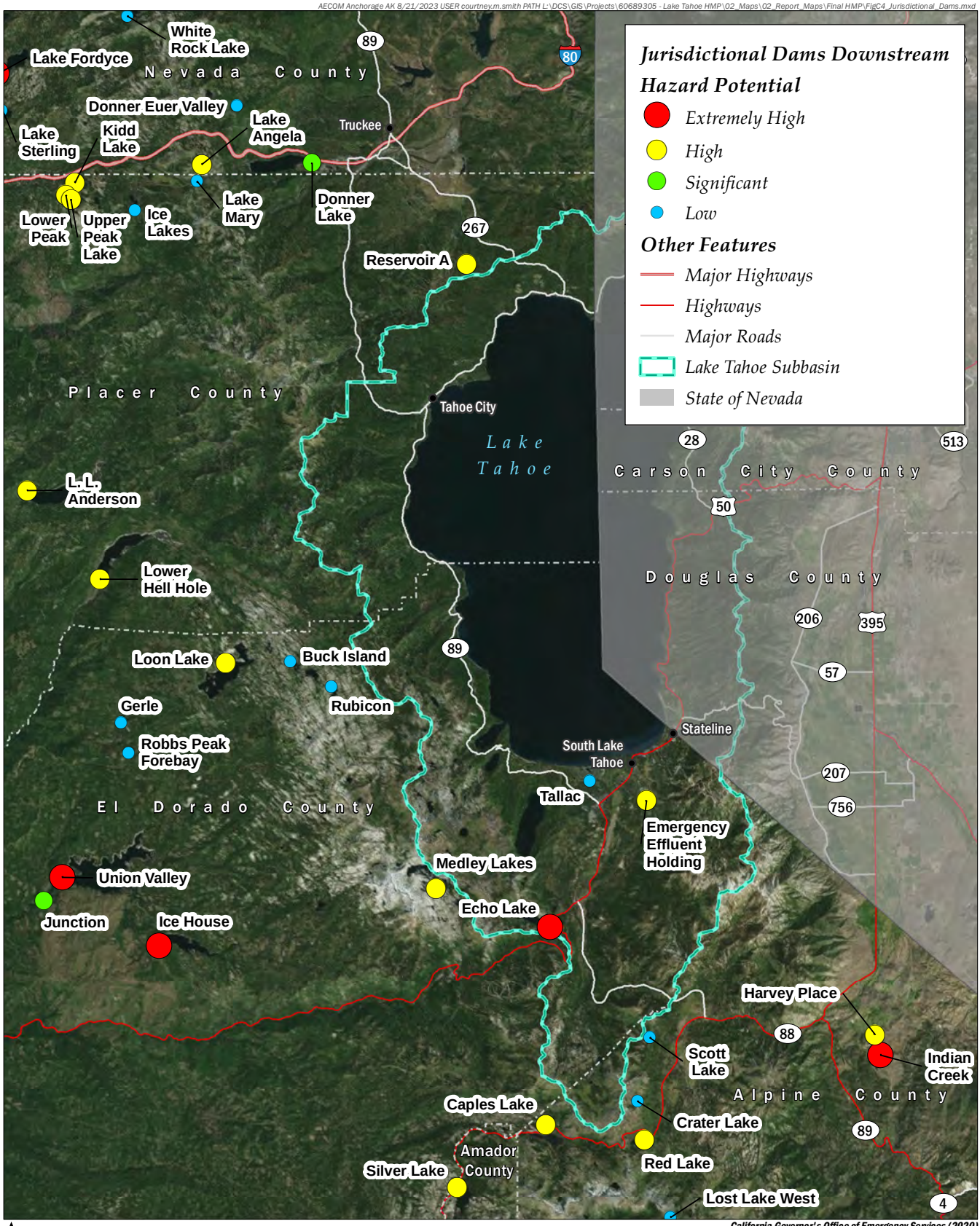
Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

TAHOE RESOURCE CONSERVATION DISTRICT STORMWATER MONITORING SITES

Figure C-3E

AECOM Anchorage AK 8/21/2023 USER courtney.m.smith PATH L:\DCS\GIS\Projects\60689305 - Lake Tahoe HMP\02_Maps\02_Report_Maps\Final HMP\FigC4_Jurisdictional_Dams.mxd



California Governor's Office of Emergency Services (2020)
Basemap: Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

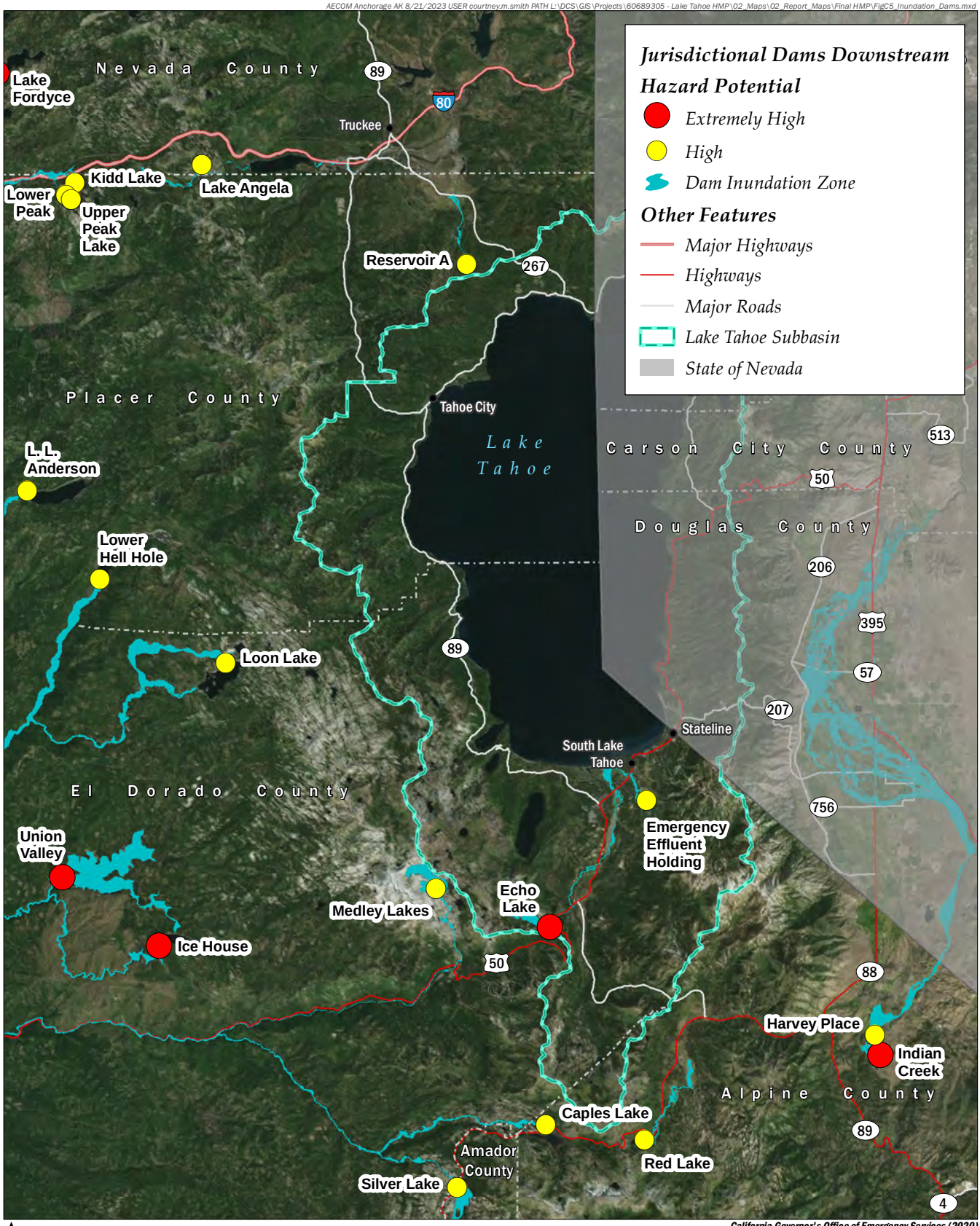
AECOM

Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

CALIFORNIA JURISDICTIONAL DAMS

Figure C-4



California Governor's Office of Emergency Services (2020)
California Department of Water Resources (2022)
Basemap: Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

AECOM

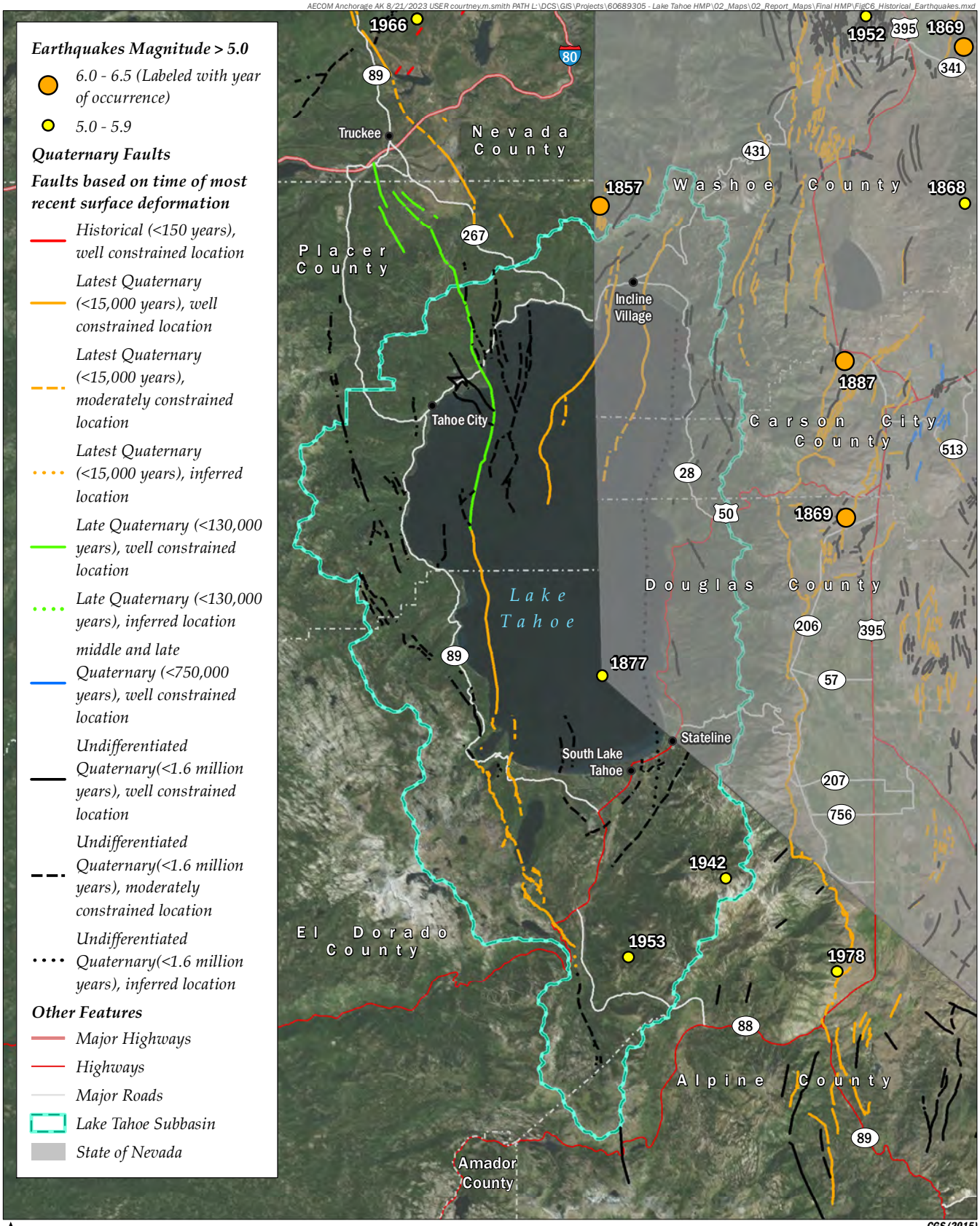
Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

DAM BREACH INUNDATION AREAS

Figure C-5

AECOM Anchorage AK 8/21/2023 USER courtney.m.smith PATH L:\DCS\GIS\Projects\60689305 - Lake Tahoe HMP\02_Maps\02_Report_Maps\Final HMP\FigC6_Historical_Earthquakes.mxd

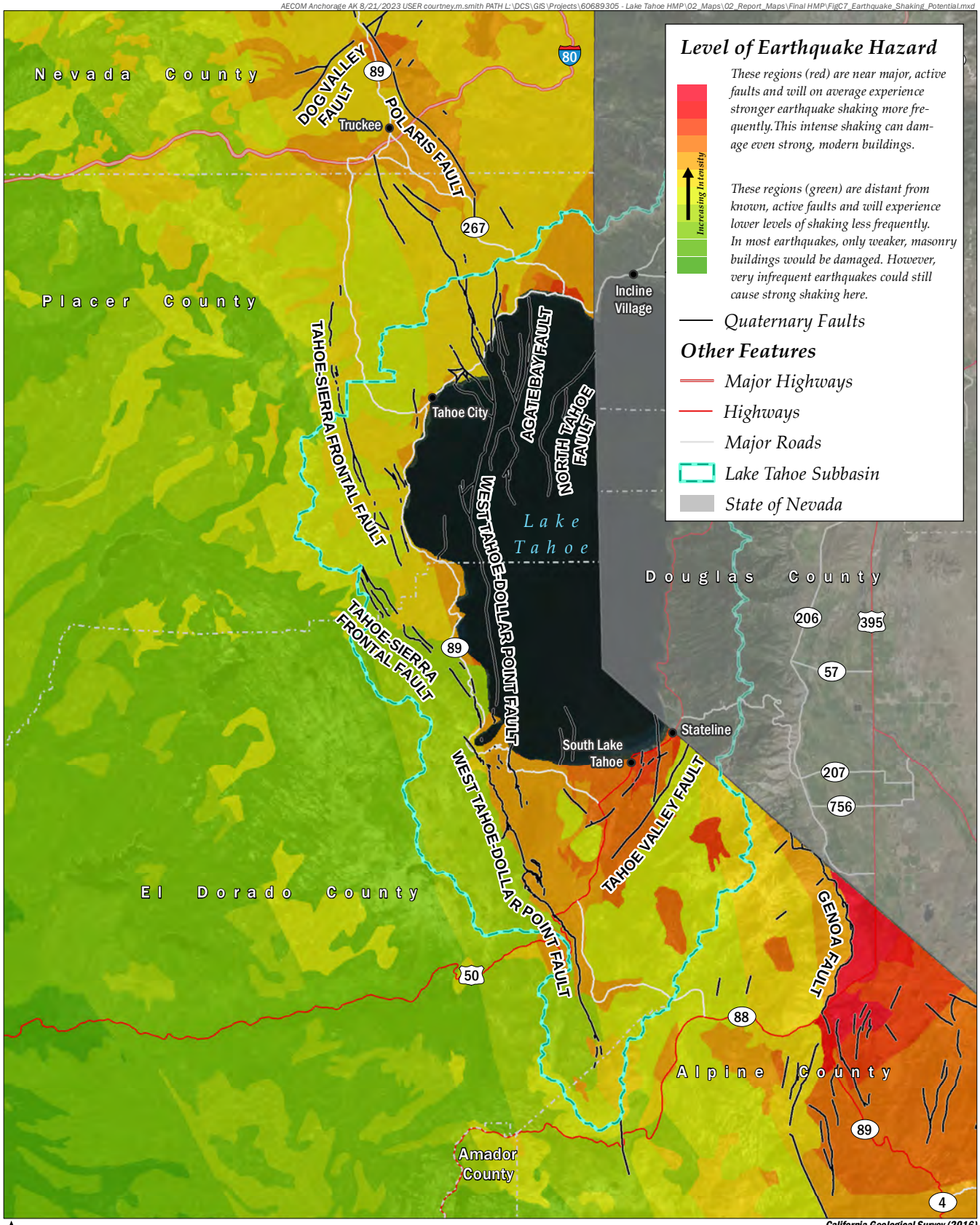


CGS (2015)
Basemap: Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

AECOM
Tahoe Transportation District
Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

HISTORICAL EARTHQUAKES (1769-2015)

Figure C-6



California Geological Survey (2016)
Basemap: Service Layer Credits: D. Branum, R. Chen, C. Wills (California Geological Survey); M. Petersen (United States Geological Survey).
Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

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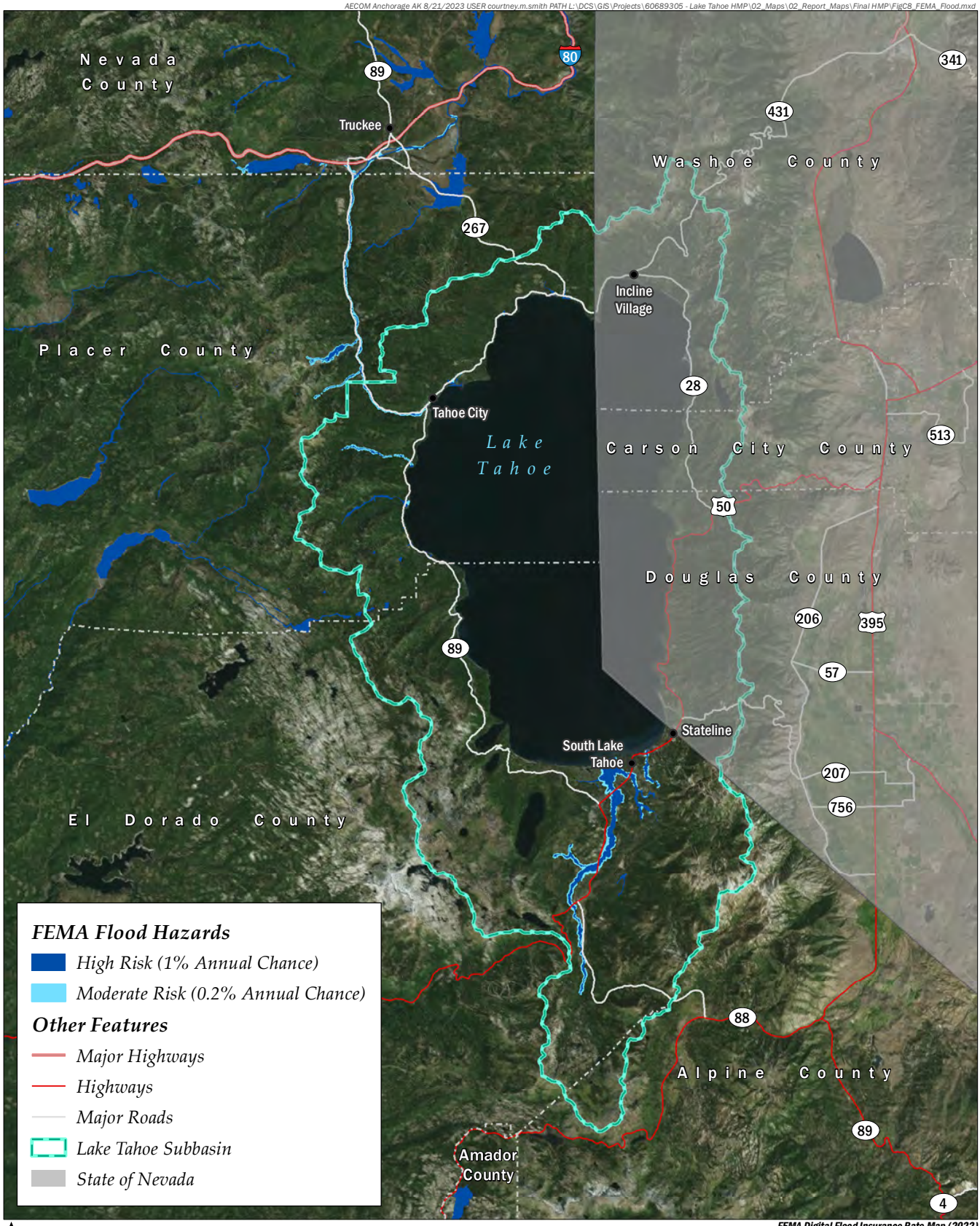
Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

EARTHQUAKE SHAKING POTENTIAL

Figure C-7



FEMA Digital Flood Insurance Rate Map (2022)
Basemap: Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

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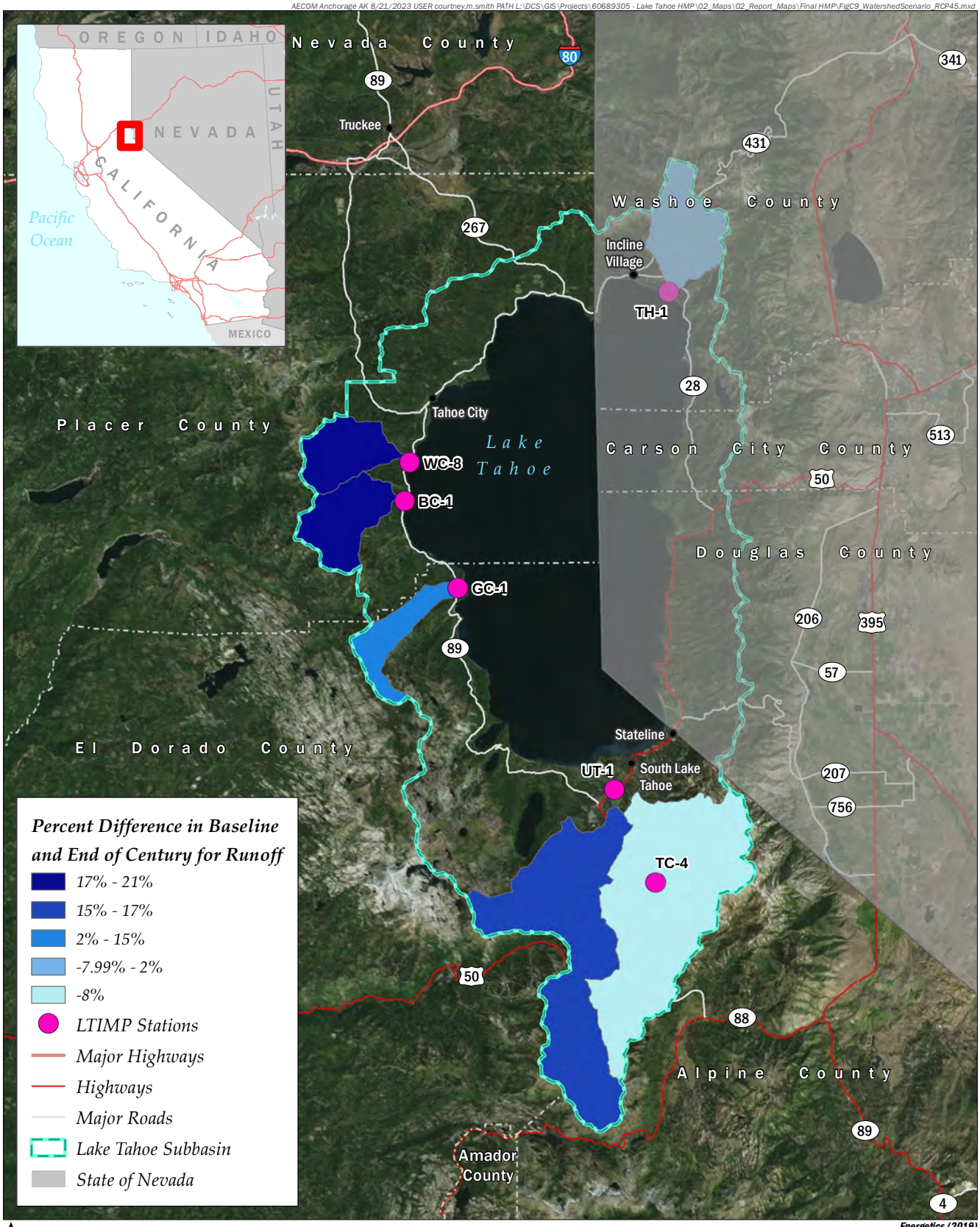
Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

SPECIAL FLOOD HAZARD AREA

Figure C-8



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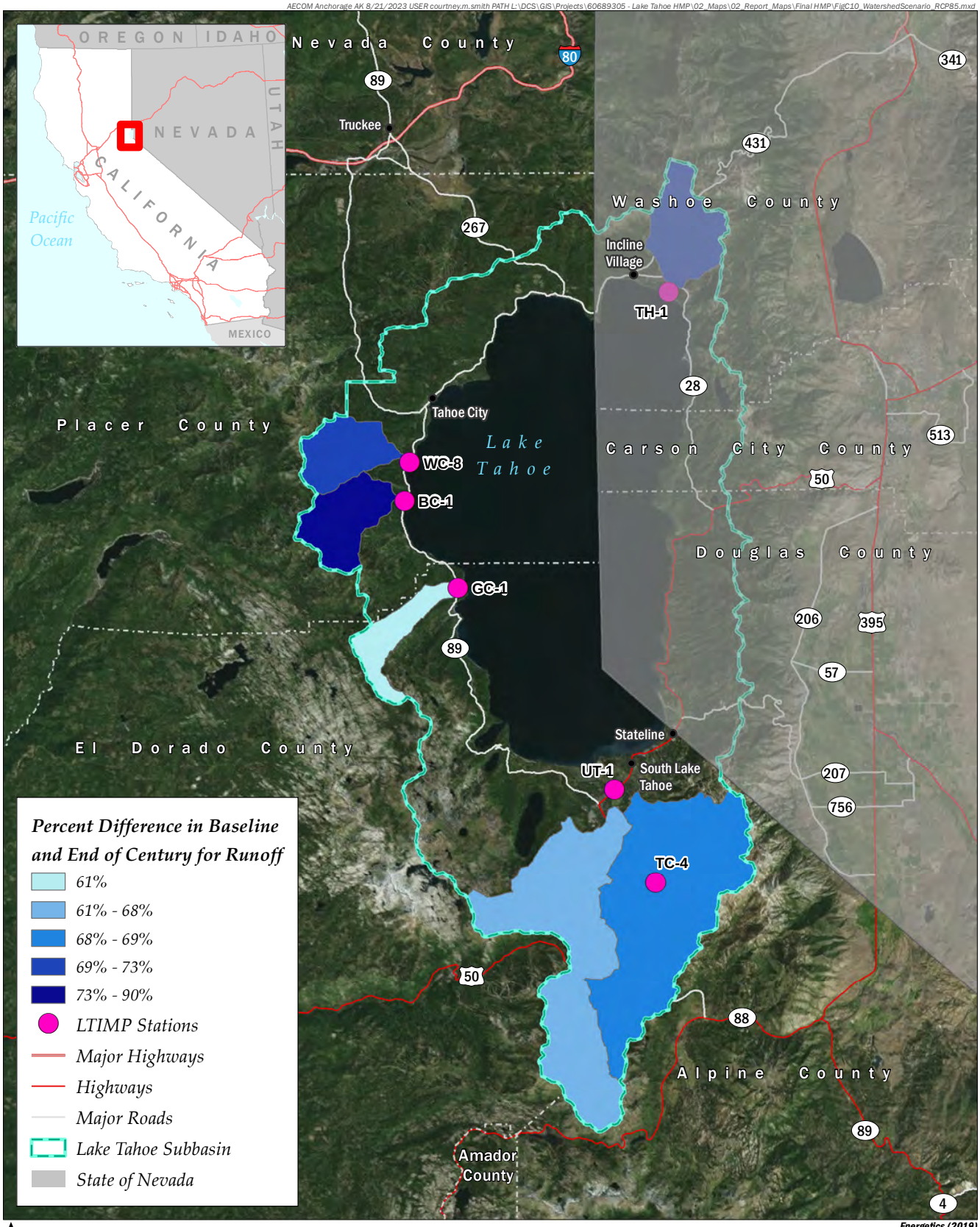
Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

POSSIBLE MAGNITUDE OF FUTURE CHANGES IN NEARBY WATERSHEDS RCP4.5 SCENARIO (2006-2035 TO 2070-2099)

Figure C-9



AECOM

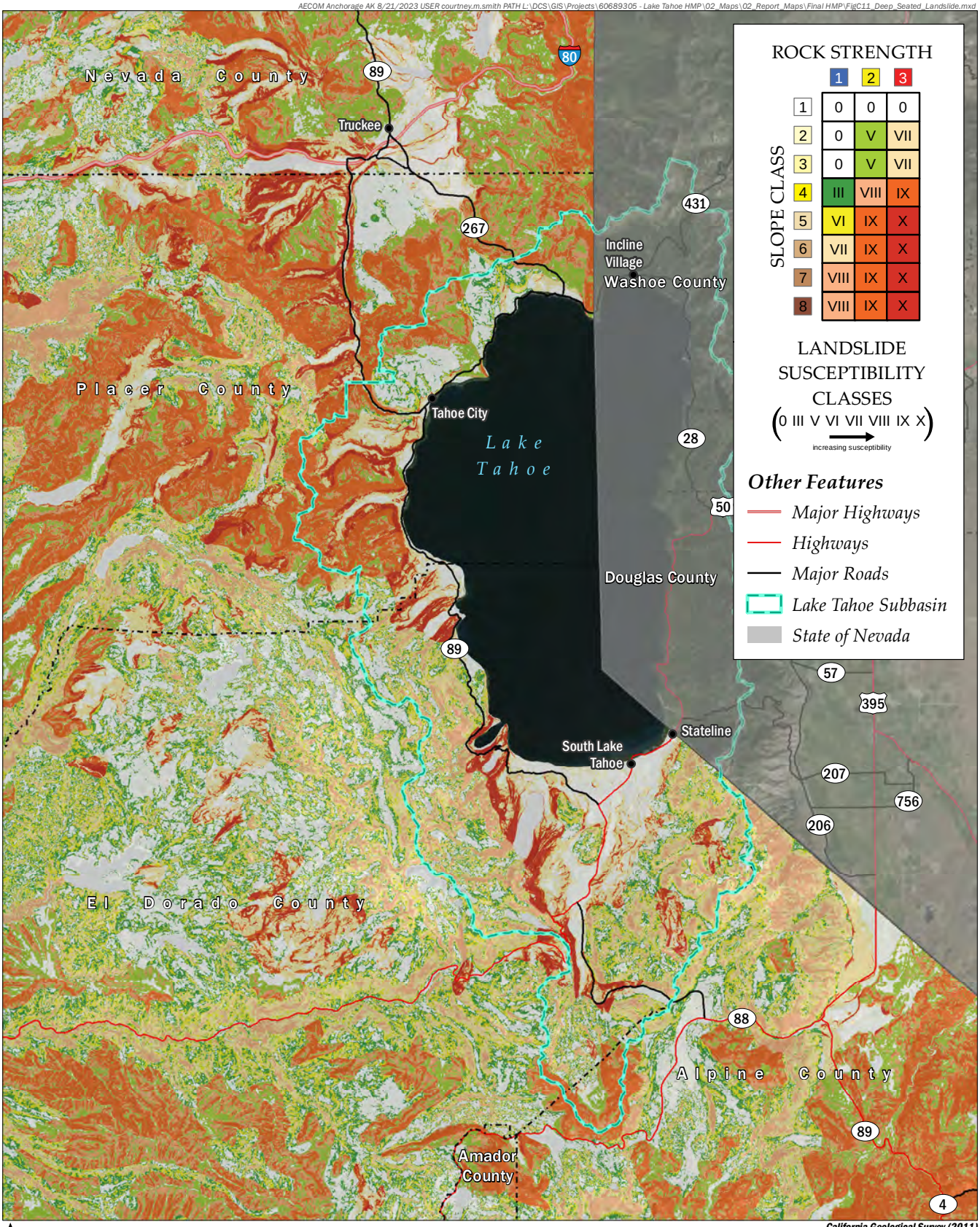
Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

POSSIBLE MAGNITUDE OF FUTURE CHANGES IN NEARBY WATERSHEDS RCP8.5 SCENARIO (2006-2035 TO 2070-2099)

Figure C-10

AECOM Anchorage AK 8/21/2023 USER courtney.m.smith PATH L:\DCS\GIS\Projects\60689305 - Lake Tahoe HMP\02_Maps\02_Report_Maps\Final HMP\FigC11_Deep_Seated_Landslide.mxd



California Geological Survey (2011)
Basemap: Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

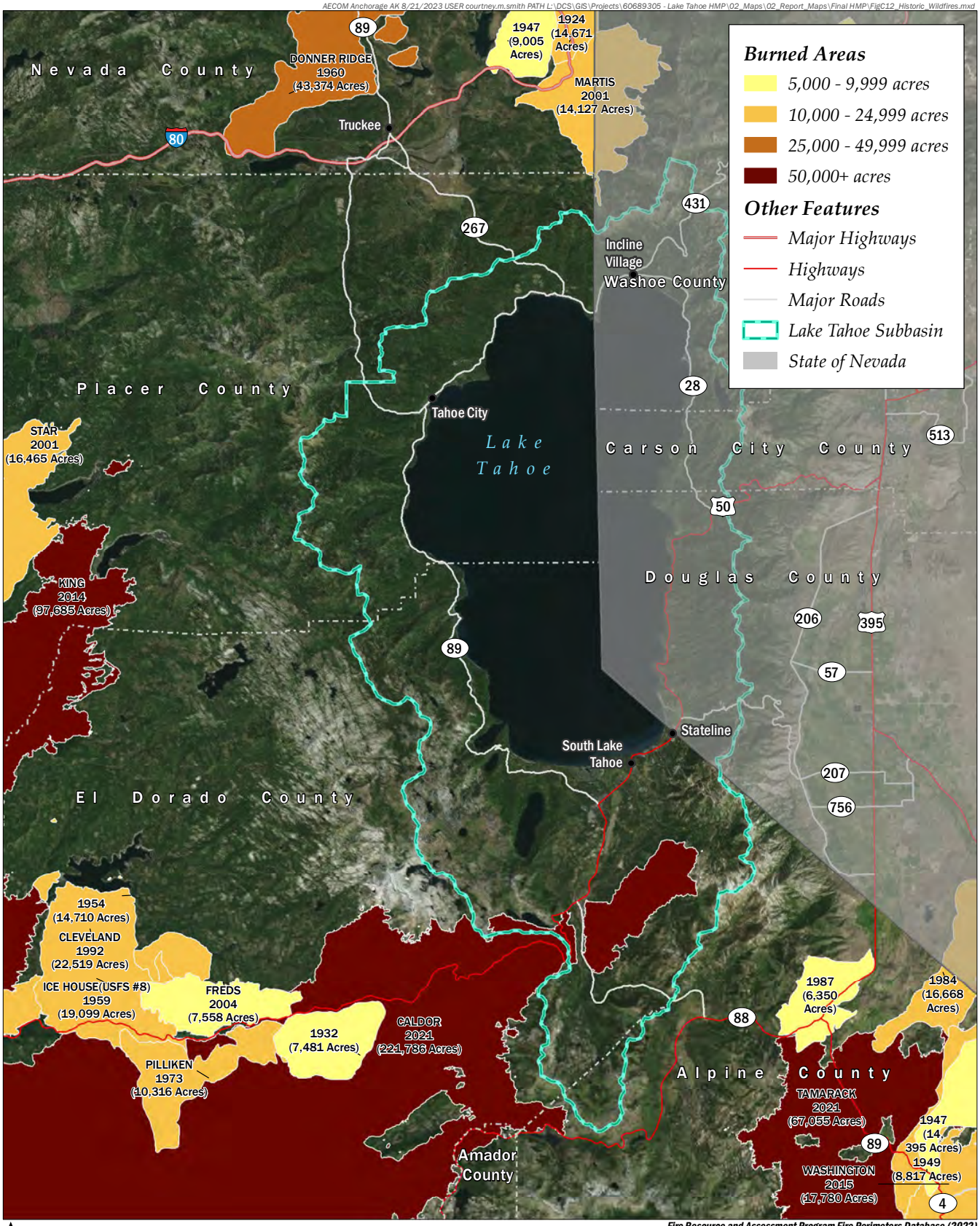
AECOM

Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

DEEP-SEATED LANDSLIDE SUSCEPTIBILITY

Figure C-11



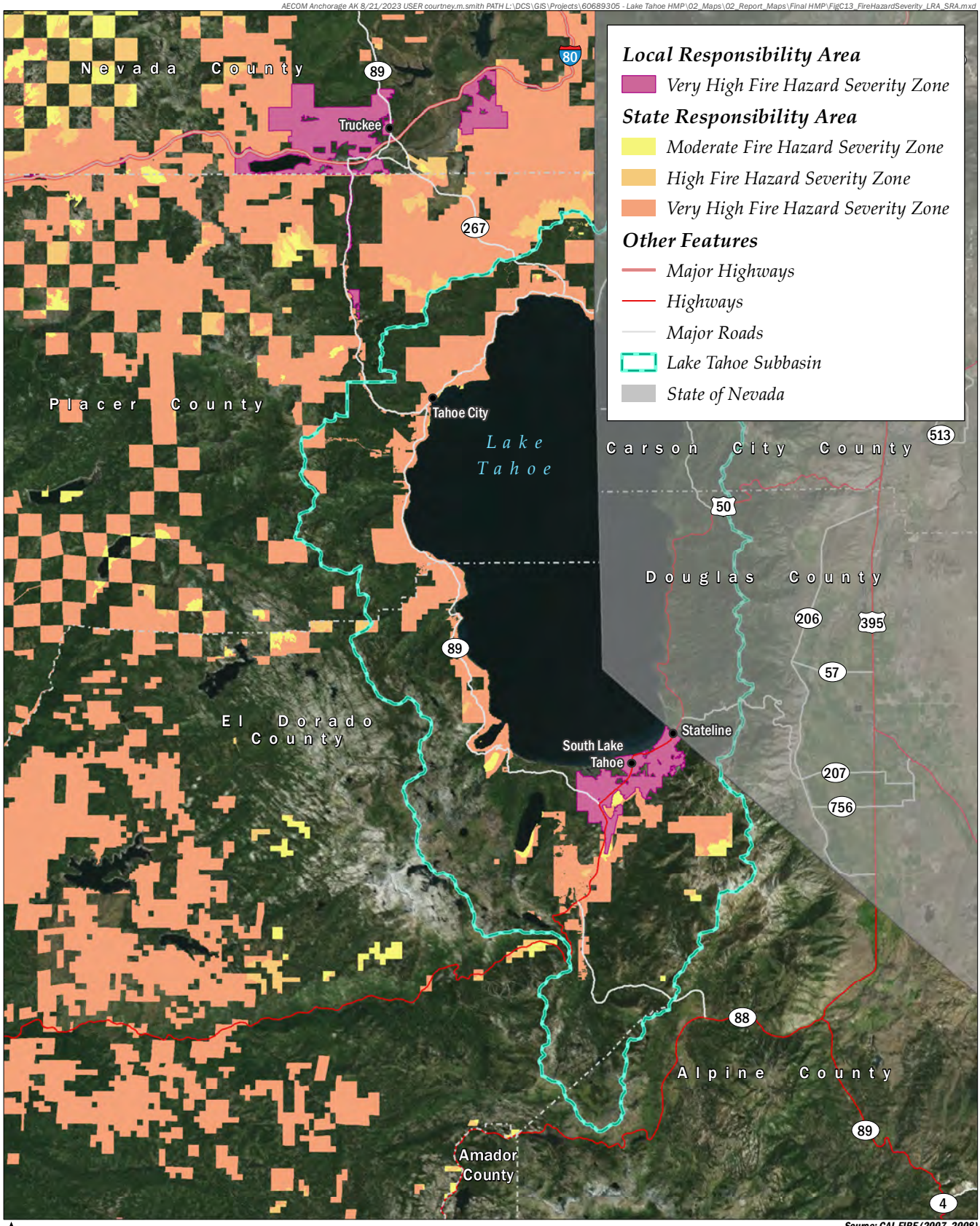
AECOM

Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

HISTORICAL WILDFIRES (1924-2021)

Figure C-12



Source: CAL FIRE (2007, 2008)
Basemap: Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

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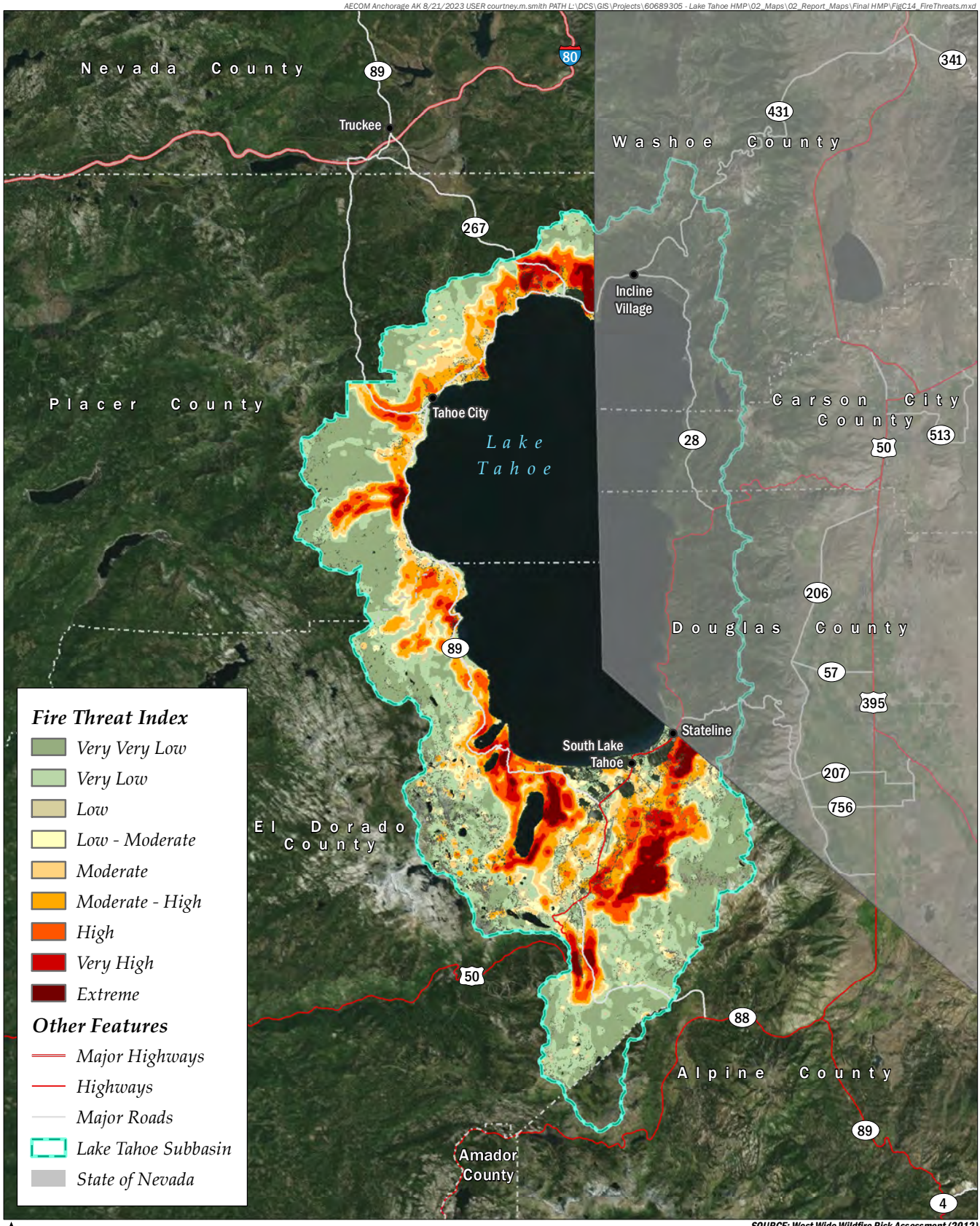
Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

FIRE HAZARD SEVERITY ZONES

Figure C-13

AECOM Anchorage AK 8/21/2023 USER courtney.m.smith PATH L:\DCS\GIS\Projects\60689305 - Lake Tahoe HMP\02_Maps\02_Report_Maps\Final HMP\FigC14_FireThreats.mxd



SOURCE: West Wide Wildfire Risk Assessment (2012)
Basemap: Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

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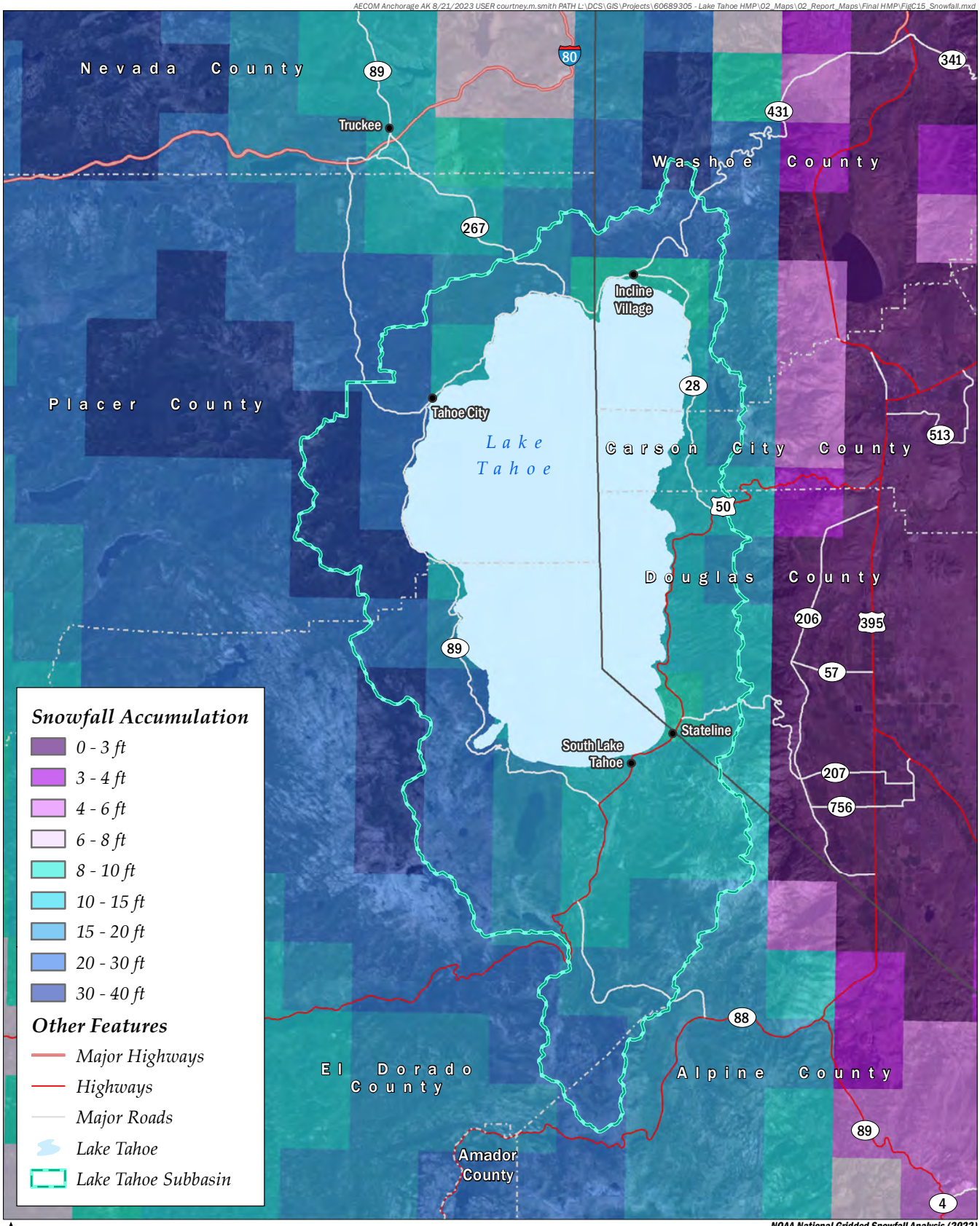
Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

FIRE THREATS

Figure C-14



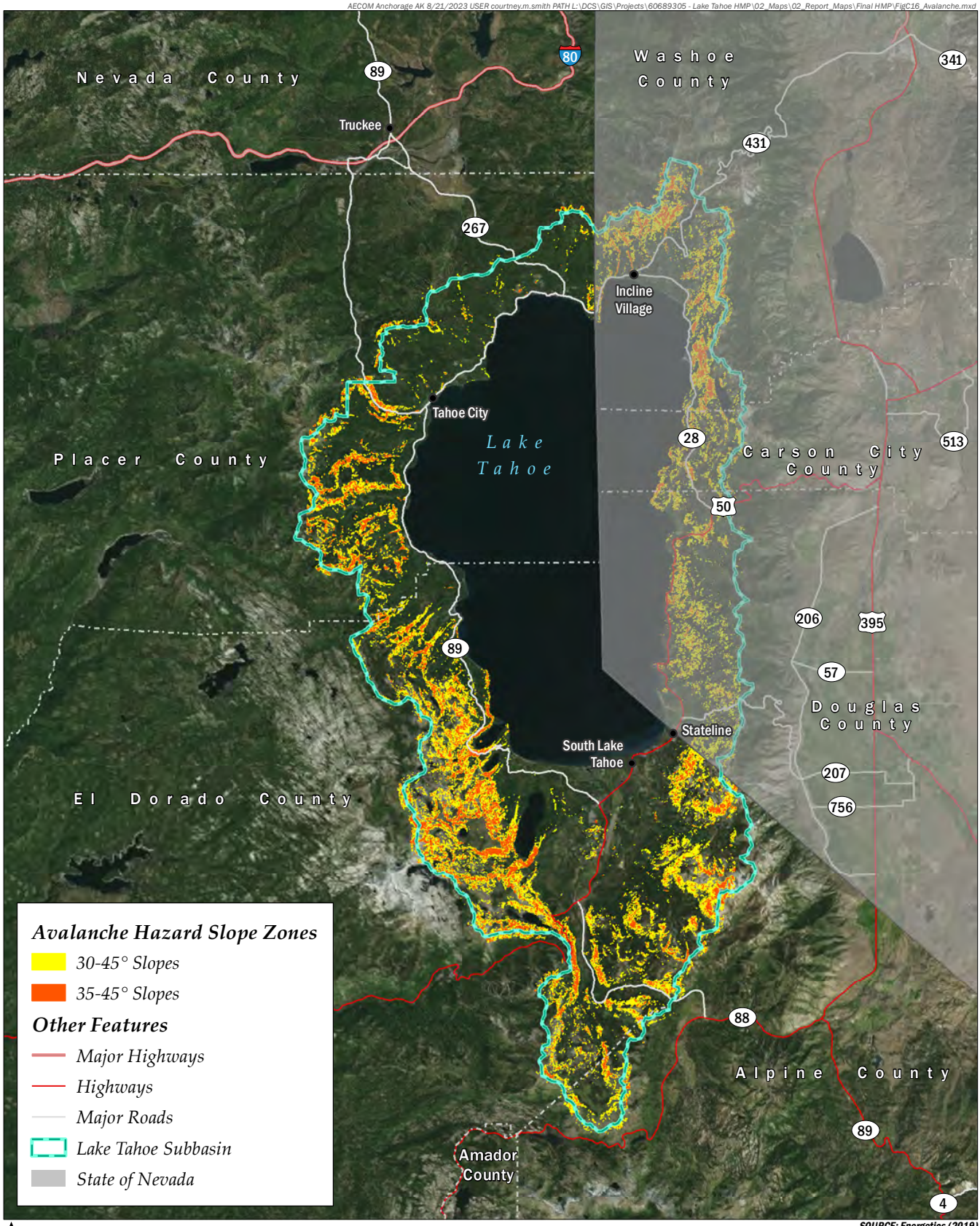
NOAA National Gridded Snowfall Analysis (2022)
Basemap: Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

AECOM
Tahoe Transportation District

ANNUAL SNOWFALL ACCUMULATION (2022 WATER YEAR)

Figure C-15

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan



SOURCE: Energetics (2019)
Basemap: Service Layer Credits: Source: Esri, Maxar, Earthstar Geographics, IGN, and the GIS User Community

AECOM

Tahoe Transportation District

Tahoe Transportation District - Tahoe Resource Conservation District Hazard Mitigation Plan

AVALANCHE HAZARD SLOPE ZONES

Figure C-16

APPENDIX D—TAHOE TRANSPORTATION DISTRICT

Table D-1: TTD—Human and Technical Resources for Hazard Mitigation

Program	Principal Activities Related to Hazard Mitigation
Management	TTD's Management Department plans, organizes, manages, and provides direction and oversight for the district's Internal Services, Capital Programs, and Operations Departments. It also directs, administers, and coordinates activities to support district policies, strategic goals, and objectives as established by management and the Board of Directors. It fosters relationships and coordinates with other TTD departments, government officials, outside agencies, and the public.
Capital Programs	The Capital Programs Department is responsible for TTD's capital improvement program (CIP) which includes the coordinating, contracting, managing, and administering of project and program activity that relate to improvements with waterborne transit, transit capital improvements, highways, streets and roads, bike and other multi-modal support infrastructure within the Tahoe Basin.
Operations	TTD's Operations Department manages the flow of the workplace, and the day-to-day operational activities of the district's transit services, including entering timekeeping and manifests, incident reports, completing surveys, and daily, weekly, and monthly reports from paratransit scheduling software and information systems; monitoring and updating fuel logs and records; and monitoring real time systems.
Transit Systems	Transit Systems Department oversees all transit efforts. The department's Chief Safety Officer allocates funds to transit safety programs (capital and operating), participates in root cause investigations, reviews route development for safety consideration, ensures compliance to include monitoring the industry for best practices, new regulations, and trainings.
Public Information	TTD's Public Information Officer responsible for the development of a pro-active and strategic communications plan, public relations, community outreach, and the growth and maintenance of media relations, as well as assisting with writing and production of TTD's newsletters, brochures, speeches, and other materials; content management of the TTD's website; implementing public outreach programs; undertaking research for a variety of public affairs projects; executing media relations responsibilities and responding to public information inquiries.

Table D-2: TTD—Financial Resources for Hazard Mitigation

Name	Purpose
Caltrans Transportation Development Act (TDA) – Local Transportation Fund (LTF) and State Transportation Assistance (STA)	The Mills-Alquist-Deddeh Act (SB 325), known as TDA, was enacted by the California Legislature to improve existing public transportation services and encourage regional transportation coordination by providing funding to transit and non-transit related purposes that comply with regional transportation plans. TDA established two funding sources – TDA and STA. LTF funds are derived from a ¼ cent of the general sales tax collected statewide. Each county receives the returns of these general sales tax revenues and then apportions the LTF funds within the country based on population. LTF can be used for local streets and roads and construction and maintenance. The STA funds are allocated tax revenue given by the State to planning agencies and other selected agencies. STA funding can only be used for transportation planning and mass transportation purposes and State law requires that 50 percent of STA funds be allocated according to population and 50 percent be allocated according to transit operator revenues from the previous year.
Caltrans Low Carbon Transit Operations Program (LCTOP)	The LCTOP is one of several programs that are part of the Transit, Affordable Housing, and Sustainable Communities Program established by the California Legislature in 2014 (SB 862). LCTOP provides operating and capital assistance for transit agencies to reduce GHG emissions and improve mobility, particularly in servicing disadvantaged communities. Transit agencies are awarded funds based on a noncompetitive, formula-based list prepared by the State Controller's Office and administered by Caltrans.
FEMA: Emergency Operations Center (EOC) Grant Program	The EOC Grant Program is an annual competitive pass-through grant program that is intended to improve emergency management and preparedness capabilities by "supporting flexible, sustainable, secure, strategically located, and fully interoperable emergency operations centers with a focus on addressing identified deficiencies and needs" to ensure the continuity of operations and continuity of government during and after any major disaster or emergency (FEMA, 2022). Mitigation staff are often present in an EOC during disaster or emergency response, and the EOC creates and maintains documentation for immediate or future mitigation opportunities.

FEMA Hazard Mitigation Assistance (HMA) Grants	The HMA grant program provides technical and financial assistance to help mitigate hazards through the following grants: Building Resilient Infrastructure and Communities (BRIC): BRIC is an annual competitive pass-through grant program that focuses on reducing the nation's risk by funding public infrastructure projects that increase a community's resilience before a disaster affects an area. BRIC was created in 2020 as part of the Disaster Recovery Reform Act of 2018 and replaces FEMA's legacy Pre-Disaster Mitigation grant program. BRIC funds a wide variety of mitigation activities, including microgrids, flood control, wetland restoration, community relocation / buyouts, seismic retrofits, and nature-based solutions. BRIC Direct Technical Assistance as a non-financial assistance grant program for: local hazard mitigation plan development initial support, identifying solutions for specific hazards, assisting with hazard mitigation project planning, requesting application development support, demonstrating cost-effectiveness of a BRIC sub application submission, and understanding hazard mitigation grant management. Hazard Mitigation Grant Program (HMGP): HMGP is pass-through grant program that supports pre- and post-disaster mitigation plans and projects for state and local agencies and federally recognized tribal governments. HMGP funding is authorized with a Presidential Major Disaster Declaration. A governor or tribal chief executive may request HMGP funding when submitting a disaster declaration. The amount of funding made available to the applicant is generally 15 percent of the total federal assistance amount provided for recovery from the Presidential Major Disaster Declaration.
FEMA National Exercise Program (NEP)	The FEMA NEP is the "primary national-level mechanism for validating national preparedness. As part of the National Preparedness System, the NEP is a key component in developing a culture of preparedness, empowering communities, and promoting resilience against threats and hazards Americans face (FEMA, 2023)." FEMA's National Exercise Division accepts exercise support requests for exercise planning, design, scenario development, conduct, and subject-matter expertise evaluation, material production, and/or facilitation for exercises, annually.
Federal Highway Administration Surface Transportation Block Grant (STBG) Programs	The STBG program provides "flexible funding that may be used by States and localities for projects to preserve and improve the conditions and performance on any Federal-aid highway, bridge and tunnel projects on any public road, pedestrian and bicycle infrastructure, and transit capital projects, including intercity bus terminals (Federal Highway Administration, 2023)." The program has recently been expanded to include ferry boats and terminals, vehicle-to-grid infrastructure, protective features to enhance resilience of an eligible transportation facility, and projects to enhance travel and tourism.
Federal Transit Administration (FTA) 5307 Urbanized Area Formula Funding Program	The Urbanized Area Formula Funding program makes federal resources available to urbanized areas and to governors for transit capital and operating assistance, and for transportation related planning in urbanized areas. Eligible activities for this grant program include planning, engineering, design and evaluation of transit projects and other technical transportation-related studies; capital investments in bus and bus-related activities, and capital investments in new and existing fixed guideway systems. TTD operates within a designated urbanized area and utilizes 5307 funds to support the preventative maintenance program, operations, and supplement TTD's capital projects where available.

FTA 5339 Bus and Bus Facilities Formula Program	The Grants for Buses and Bus Facilities program makes "Federal resources available to States and designated recipients to replace, rehabilitate and purchase buses and related equipment and to construct bus-related facilities including technological changes or innovations to modify low or no emission vehicles or facilities (FTA, 2023)." Funding is in the form formula allocations as well as competitive grants. Additionally, a sub-program provides competitive grants for bus and bus facility projects that support low and zero-emission vehicles.
FTA Standards Development for Bus Exportable Power Systems (BEPS) grant	The BEPS grant enables public transportation agencies, communities and states to "access resilient and flexible power options through bus fleet vehicles during major power disruptions" (FTA, 2023). The major goal of the program is to develop national interoperable BEPS standard so that different manufacturers' systems can use the same technology base and applications for BEPS solutions.
Tahoe Regional Planning Agency Rental Car Mitigation Fee	The Rental Car Mitigation Program was adopted by the Tahoe Regional Planning Agency Governing Board in 1993. The purpose of the program is to offset impacts of rental car use in the Tahoe region and mitigate vehicle miles traveled. Rental car businesses charge and collect the fee to those that rent or deliver rental cars to persons in the Tahoe region. Mitigation fees are remitted to the Tahoe Regional Planning Agency quarterly and then disbursed to TTD. The current fee is $5.75/day per rental car.
U.S. Department of Transportation (USDOT) Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation Program (PROTECT) Discretionary Grant Program	PROTECT Discretionary Grant Program "provides funding to ensure surface transportation resilience to natural hazards including climate change, sea level rise, flooding, extreme weather events, and other natural disasters through support of planning activities, resilience improvements, community resilience and evacuation routes, and at-risk coastal infrastructure (USDOT, 2023)." The program has two types of awards: planning grants and Competitive Resilience Improvement Grants.

Notes:
BEPS = Bus Exportable Power Systems
BRIC = Building Resilient Infrastructure and Communities
Caltrans = California Department of Transportation
FEMA = Federal Emergency Management Agency
HMA = Hazard Mitigation Assistance
FTA = Federal Transit Administration
NEP = National Exercise Program
PROTECT = Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation Program
STBG = Surface Transportation Block Grant
USDOT = U.S. Department of Transportation

Table D-3: TTD —Planning, Policy, Program, and Public Outreach Resources for Hazard Mitigation

Type	
Climate Adaptation Plan	The Tahoe Climate Adaptation Action Portfolio is a scientific assessment of the vulnerability of the Lake Tahoe, forests, and communities to climate change impacts (tahoe.ca.gov/climate-change) and identifies adaptation actions that are already being undertaken. The portfolio "purposefully focuses on adaptation" rather than mitigation.
Master Plan	Linking Tahoe: Lake Tahoe Basin TMP is an implementation plan developed to achieve the transportation policies of the Lake Tahoe Region.
Corridor Plan	The 2017 Linking Tahoe: Corridor Connection Plan was created to enhance the manageability of planning by dividing the Basin into six corridors. These corridors are based upon the land use patterns and commonality of issues and opportunities with north and south entry corridors. Projects, services, and policies were identified to address the unique needs of each corridor and then integrated across all corridors to create a unified, transportation system plan.
Regional Transportation Plan	The 2020 Regional Transportation Plan identifies a broad range of projects, programs, and strategies needed to comprehensively improve Tahoe's transportation system over the next 25 years and lays out funding priorities in the region. The plan outlines transportation projects that address climate change and growing risks to the safety, reliability, effectiveness, and sustainability of the Tahoe Basin and its transportation network.
Short Range Transportation Plan (SRTP)	The TTD SRTP guides TTD's goals, objectives, and policies of transit service within the Lake Tahoe Region over a 5-year period. The SRTP is developed within the context of the long-range transit plan, Linking Tahoe: Lake Tahoe TMP. The TMP is aimed at implementing a new vision for transit as "the vehicle for change in the Tahoe Region."
Public Outreach	As noted in Table D-1, TTD publishes newsletters, brochures and other materials; maintains a website including a "News and Blog" webpage; implements public outreach programs; undertakes research for a variety of public affairs projects; conducts bi-annual web-based surveys; and responds to public information inquiries. TTD maintains a Facebook page to announce TTD news. To directly reach out to transit riders, TTD uses "Swiftly." The rider alerts are pushed to Google maps and X, the social media platform formally known as Twitter. TTD is moving to Syncromatics to reach out to transit users. The information will still push to Google maps, but not X. With the Synchromatics infotainment systems on TTD's new fleet, instructions and notifications can be pushed out to the fleet while operating. TTD is installing infotainment screens at the Y Transit and Stateline Transit Centers to complement the existing screen at Lake Tahoe Community College transit center, which also receives these messages for dissemination to the public. TTD also uses the Transit App for notifications, as well as postings on the website. During the Caldor Fire and serious weather events, TTD proactively contacted paratransit passengers. In the days leading up to the Caldor evacuation, TTD received calls from concerned residents. TTD kept a spreadsheet of those callers so they could keep transit riders informed of any updates regarding the evacuation. Also, TTD exported its list of paratransit passengers from Ecolane and provided it to the City of South Lake Tahoe.

Table D-4: TTD—Ability to Improve On / Expand Resources

Capability	Type/Description	Expansion
Human and Technical	Mitigation Specialist	Appoint or assign someone within TTD to oversee hazard mitigation grant opportunities, such as notifying TTD of upcoming grant cycles, and spearheading Notice of Intents applications, grant applications, and grant management requirements.
Financial	HMA funding	Apply for HMA BRIC and/or HMGP grants as they become available for projects pre-identified in TTD plans and programs, including the 2023 HMP.
Planning, Policy and Public Outreach	Emergency Operations Plan	Develop an Emergency Operations Plan to assist TTD personnel who have key roles and responsibilities during an emergency response. The document would provide an overview of TTD's organization, policies, and approach to emergency management of an incident, including hazards discussed in the 2023 HMP. It would also provide targeted information, forms, and checklists to direct and support the activities of TTD staff participating in emergency response efforts.
Planning, Policy, Program, and Public Outreach	Continuity of Operations Plan	Develop a Continuity of Operations Plan to ensure that TTD can continue to perform its essential functions, provide essential services, and deliver core capabilities during a disruption to normal operations.
Planning, Policy, Program, and Public Outreach	Regional Evacuation Plan	Develop a Regional Evacuation Plan that contains strategies to coordinate regional transportation policies, infrastructure planning and response plans throughout the region in the event of an emergency evacuation.
Planning, Policy, Program, and Public Outreach	Tabletop exercises	Develop and conduct a tabletop exercise (or series of tabletop exercises) with relevant stakeholders focused on the regional transportation response to a winter storm and/or wildfire. Include the use of ferries for evacuation.
Planning, Policy, Program, and Public Outreach	Evacuation database	During the Caldor Fire evacuations, TTD relied on phone communications with South Lake Tahoe and two-way radio communication with operators to direct them to addresses to pick up residents. Towards the end of the evacuation, TTD was given access to a database that provided the name of the passenger and their address. TTD updated the database to indicate if the individual was picked up, if they refused transportation, or if they were not at the address when TTD arrived. In the future, TTD would benefit from access to a database like this prior to a mandatory evacuation. TTD could have the resident's information ahead of time and create a schedule for more organized evacuations.

Notes:
HMA = Hazard Mitigation Assistance, RCC = Regional Coordinating Council, TTD = Tahoe Transportation District

Table D-5: TTD—Draft Mitigation Action List

Mitigation Action 1	**Broadband and Communications Network Expansion**
Description	Bolster and expand the Lake Tahoe Basin's Intelligent Transportation Systems, broadband, and cellular communications network. It is important to have a resilient communications system (a community lifeline) before a disaster to broadcast warning and evacuation information, during a disaster and during extreme weather events to allow essential communication services to keep critical government, medical and emergency services, and communicating with the traveling public during and after these events as a way for people to connect to important resources, reach safe locations, declare their safety and telework, telemedicine, and participate in online education, if necessary. Consider upgrading the system to have an autonomous power supply, safer and more accessible equipment location, critical system backup, co-location with other utilities, and system monitoring too.
Hazard(s)	All
Building / Infrastructure	Existing and proposed
Benefits / Costs	Project will require funding to develop, install and operate. Project will also require regular maintenance and inspections.
Source	Vulnerability of California Roadways to Post-Wildfire Debris Flows (UCLA Institute of Transportation Studies, 2020), One Tahoe: A Transportation Funding Initiative (TTD, 2021), Guide to Expanding Mitigation (FEMA, 2021)
Mitigation Action 2	**Bus Exportable Power Systems (BEPS)**
Description	Purchase electric buses and during emergencies or disasters use them as mobile backup generators (i.e., BEPS) for critical facilities and other critical needs.
Hazard(s)	All
Building / Infrastructure	Proposed
Benefits / Costs	There are not enough generators when disasters hit. According to the BEPS program manager at University of Texas – Austin, "Transit agencies have a vast collection of raw horsepower in the form of their buses, along with a large supply of energy with their onsite diesel fuel stations. Tapping into this resource and outfitting transit buses with exportable power could provide a game-changing capability for emergency response power needs." Energy is considered a community lifeline.
Source	FTA, University of Texas – Austin
Mitigation Action 3	**Maintenance Building and Yard Mitigation**
Description	It is essential for critical facilities, including TTD's Maintenance building and yard, to remain functional during and after a disaster. As such, retrofit TTD's existing Maintenance building and yard and/or build TTD's proposed Maintenance building and yard to withstand various hazards identified for each building location. As noted in **Section 4**, the existing and proposed Maintenance building and yard are in earthquake, flood, wildfire, and winter storm hazard areas. They are also likely susceptible to climate change impacts such as extreme precipitation. Mitigation measures may include seismic retrofits, rooftop strengthening, elevated electrical equipment, backup power, and defensible space.

Hazard(s)	Climate change, earthquake, flood, wildfire, and winter storm
Building / Infrastructure	Existing and proposed
Benefits / Costs	Project will require funding to mitigate each critical facility. Critical facilities need regular maintenance, which helps the structure and building systems that make up the facility better withstand disasters. TTD may want to consider a capital improvement plan with five-year projections to plan for major repairs, and then establish a schedule for upgrades to help plan for and secure the necessary funding. Mass transit is considered a community lifeline.
Source	FEMA Recovery Advisory: CNMI RA-2
Mitigation Action 4	**Bus Stop, Mobility Hub, MB/TC, and Transit Center Mitigation**
Description	It is essential for critical assets to remain functional before, during and after a disaster. As such, retrofit and/or build bus stops, mobility hubs, MH/TC, and/or transit centers to withstand a variety of hazards. As noted in **Section 4**, the existing and proposed bus stops, mobility hubs, MB/TC, and transit centers are in earthquake, flood, landslides, wildfire, and winter storm hazard areas. They are also susceptible to climate change and drought impacts. They are not located in dam failure inundation areas. Mitigation measures may include cool pavement, greening of critical assets, seismic retrofits and rooftop strengthening, elevated electrical equipment and backup power, and defensible space.
Hazard(s)	Climate change, drought, earthquake, flood, landslide, wildfire, and winter storm
Project Type	Structure and infrastructure
Building / Infrastructure	Existing and proposed
Benefits / Costs	Project will require funding to mitigate each critical facility. In addition, critical facilities need regular maintenance, which helps the structure and building systems that make up the facility better withstand disasters. TTD may want to consider a capital improvement plan with five-year projections to plan for repairs, and then establish a schedule for ongoing maintenance and facility upgrades to help plan for and secure the necessary funding. Mass transit is considered a community lifeline. The highly utilized 2085 South Y Transit Center and 2111 Stateline Transit Center are both located in high earthquake shaking hazard areas and high-very high FHSZs.
Source	FEMA Recovery Advisory: CNMI RA-2
Mitigation Action 5	**Emergency Operations Plan**
Description	Develop an Emergency Operations Plan to assist TTD personnel who have key roles and responsibilities during an emergency response. The document would provide an overview of TTD's organization, policies, and approach to emergency management of an incident. It would also provide targeted information, forms, and checklists to direct and support the activities of TTD staff participating in emergency response efforts.
Hazard(s)	All
Building / Infrastructure	Not applicable
Benefits / Costs	Project will require initial funding to develop plan according to national/state standards. Once developed, the document should undergo periodic review and maintenance.

Source	Comprehensive Preparedness Guide 101 Version 3 (FEMA, 2021), Tahoe Regional Transportation Plan: Policy 3.4: Support emergency preparedness and response planning, including the development of regional evacuation plans (TRPA, 2020)
Mitigation Action 6	**Continuity of Operations Plan**
Description	Develop a Continuity of Operations Plan to ensure that TTD can continue to perform its essential functions, provide essential services, and deliver core capabilities during a disruption to normal operations.
Hazard(s)	All
Project Type	Resiliency
Building / Infrastructure	Not applicable
Benefits / Costs	Project will require initial funding to develop plan according to national/state standards. Once developed, the document should undergo periodic review and maintenance.
Source	Continuity Guidance Circular (FEMA, 2018)
Mitigation Action 7	**Coordinated Transportation Management Center**
Description	Create a transportation management center (TMC) to receive and disseminate real-time information to and from passengers, transit vehicles, field staff including transit staff and traffic enforcement staff, and partner transportation agencies within and beyond the Lake Tahoe Basin. The TMC will also serve other functions including maintenance support, a training facility for transportation management personnel, resource center for transportation data, and a department operations center in the event of an emergency.
Hazard(s)	Dam failure, earthquake, flood, landslide, wildfire, and winter storm
Building / Infrastructure	Proposed
Benefits / Costs	Traditionally, a TMC is located in a physical building. It may be part of a single agency or a multi-agency facility and managed by operators and emergency responders. However, newer communication, computing, and software technology advances may make a virtual TMC possible. There are a number of considerations to determine if a physical, virtual or hybrid TMC is suitable, including facilities, operations and maintenance costs, and hardware and software systems and web-based applications.
Source	Tahoe Regional Transportation Plan: Page 68 (TRPA, 2020)
Mitigation Action 8	**Regional Evacuation Plan & Database**
Description	Develop a Regional Evacuation Plan that contains strategies to coordinate regional transportation policies, infrastructure planning and response plans throughout the region in the event of an emergency evacuation. Particular attention should be given to, and additional strategies should be made for vulnerable populations that rely on public transit for evacuation. In addition, develop a database to input passenger names and contact information including physical address. The database should include fields to indicate if the individual was picked up, if they refused transportation, or if they were not at the address when transit arrived.
Hazard(s)	Dam failure, earthquake, flood, landslide, wildfire, and winter storm

Building / Infrastructure	Not applicable
Benefits / Costs	Project will require initial funding to develop plan according to national/state standards. Once developed, the document should undergo periodic review and maintenance.
Source	Tahoe Regional Transportation Plan: Policy 3.4: Support emergency preparedness and response planning, including the development of regional evacuation plans (TRPA, 2020), Boulder Transportation Master Plan (2019), Regional Mass Transportation & Evacuation Plan (Bay Area UASI, 2011)
Mitigation Action 9	**Tabletop Exercises**
Description	Develop and conduct a tabletop exercise (or series of tabletop exercises) with relevant stakeholders focused on the regional transportation response to a dam failure, earthquake, flood, landslide, wildfire, and/or winter storm event.
Hazard(s)	Dam failure, earthquake, flood, landslide, wildfire, and winter storm
Building / Infrastructure	Not applicable
Benefits / Costs	Exercises help build preparedness for threats and hazards by providing a low-risk, cost-effective environment to test and validate plans, policies, procedures and capabilities, and identify resource requirements, capability gaps, strengths, areas for improvement, and potential best practices. Project will require funding to develop, put on, and hotwash the tabletop exercises.
Source	Homeland Security Exercise and Evaluation Program, U.S. Department of Homeland Security (2020)
Mitigation Action 10	**Critical Facilities Mitigation in Additional Flood Hazard Areas**
Description	TTD may have critical facilities that are in potential / additional flood hazard areas, such as pluvial flooding areas (due to extreme precipitation) and lakeshore flooding areas (due to tsunami/seiche waves). Use existing reports/studies and/or LiDAR data to identify areas that are prone to extreme precipitation and/or expected tsunami/seiche wave inundation. Determine TTD critical assets at risk and mitigate through measures such as vertical elevation and protective structures.
Hazard(s)	Climate change (extreme precipitation), flood, and earthquake (tsunami)
Building / Infrastructure	Existing and proposed
Benefits / Costs	Project will require funding to identify hazards and critical facilities at risk. This can be done in-house and/or by a consultant. The cost of mitigating an existing and/or proposed critical facility will depend on the mitigation effort. In addition, critical facilities need regular maintenance, which helps the structure and building systems that make up the facility better withstand disasters. TTD may want to consider a capital improvement plan with five-year projections to plan for repairs, and then establish a schedule for ongoing maintenance and facility upgrades to help plan for and secure the necessary funding. Mass transit is considered a community lifeline.
Source	TTD
Mitigation Action 11	**Additional Hazard Mapping and Vulnerability Analysis**
Description	Acquire missing hazard mapping datasets (dam failure, earthquake, flood, landslide, and wildfire) for the Nevada side of the Lake Tahoe Basin. Using the newly acquired

	hazard data, along with the existing Nevada data for watersheds, snowfall and avalanche, conduct a vulnerability analysis for TTD critical facilities located on the Nevada side of the Lake Tahoe Basin. Consider implementing Mitigation Action #4 measures for TTD critical facilities that are identified as being located in hazard areas.
Hazard(s)	Dam failure, earthquake, flood, landslide, wildfire for missing hazard mapping All hazards for vulnerability analysis
Building / Infrastructure	Existing and proposed
Benefits / Costs	Project will require time and effort to acquire pre-existing hazard mapping datasets and conduct a vulnerability analysis to determine which TTD critical facilities are in hazard areas. GIS datasets can be acquired from the Nevada Department of Emergency Management, MyHAZARDS – Nevada, USGS, and FEMA. A work can be done in-house and/or by a consultant. Mass transit is considered a community lifeline.
Source	AECOM

Notes:
BEPS = Bus Exportable Power Systems
FEMA = Federal Emergency Management Agency
FTA = Federal Transit Administration
TMC = transportation management center
TTD = Tahoe Transportation District

Table D-6: TTD—Finalized Mitigation Action Plan

No.	Project Name	Priority	Potential Funding Source	Responsibility	Timing
1	Broadband and Communications Network Expansion	High	BRIC	Management / Capital Programs	1–5 years
2	Bus Exportable Power Systems (BEPS)	High	STBG, 5339 Bus and Bus Facilities Formula Program, PROTECT Discretionary Grant Program	Management / Capital Programs	1–5 years
3	Maintenance Building and Yard Mitigation	Highest	BRIC / HMGP	Management / Capital Programs	1–3 years
4	Bus Stop, Mobility Hub, MB/TC, and Transit Center Mitigation	Highest	BRIC / HMGP	Management / Capital Programs	1–5 years
5	Emergency Operations Plan	Highest	BRIC / HMGP	Transit Systems	1–3 years
6	Continuity of Operations Plan	Highest	National Continuity Programs	Transit Systems	1–3 years
7	Coordinated Transportation Management Center	High	EOC Grant Program	Transit Systems	5+ years
8	Regional Evacuation Plan & Database	Highest	PROTECT Discretionary Grant Program	Transit Systems	1–3 years
9	Tabletop Exercises	Highest	NEP	Transit Systems	1–3 years
10	Critical Facilities Mitigation in Additional Flood Hazard Areas	High	BRIC / HMGP, PROTECT Discretionary Grant Program	Management / Capital Programs	1–5 years
11	Additional Hazard Mapping and Vulnerability Analysis	High	PROTECT Discretionary Grant Program	Management / Capital Programs	1–5 years

Notes:
BRIC = Building Resilient Infrastructure and Communities
EOC = Emergency Operations Center
FEMA = Federal Emergency Management Agency
HMGP = Hazard Mitigation Grant Program
NEP = National Exercise Program
PROTECT = Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation Program
STBG = Surface Transportation Block Grant

Table D-7: TTD—Integration of 2023 HMP

HMP Section	Existing Plan/Policy/Program	Process / Timeframe
Section 4 – Risk Assessment	Coordinated Human Services Transportation Plan (CHSTP) (TTD, 2019)	The CHSTP is designed to gather input and cooperation of local transit agencies, social service agencies, community agencies, and the public. The plan offers strategies for meeting local needs as determined collectively through participation in the Regional Coordinating Council (RCC). The RCC provides an opportunity for groups that may not typically meet to discuss transportation needs and ways to improve access throughout the region. The RCC includes representatives from health and human service agencies, transportation providers, non-profit agencies, and other community groups. TTD should present the 2023 HMP's risk assessment to the RCC to consider for inclusion in the CHSTP next update, which should occur in 2024. Additionally, TTD should also use the 2023 HMP's risk assessment to help the RCC determine/refine the role of public transit in evacuation planning.
Section 5 and Appendix D – Mitigation Strategy	Tahoe Transportation District Short Range Transit Plan (TTD, 2017)	The SRTP's 5-year vision focuses on establishing a solid foundation upon which an improved transit system can grow. The 2023 HMP's mitigation strategy supports this growth through mitigation and resilience-focused strategies. As such, TTD should incorporate the 2023 HMP mitigation strategy (goals and actions) into the Future Mitigation Strategies section of the SRTP during the next SRTP update (which is currently ongoing).

Notes:
CHSTP = Coordinated Human Services Transportation Plan
RCC = Regional Coordinating Council
TTD = Tahoe Transportation District

APPENDIX E—TAHOE RESOURCE CONSERVATION DISTRICT

Table E-1: Tahoe RCD—Human and Technical Resources for Hazard Mitigation

Program	Principal Activities Related to Hazard Mitigation
Administration and Operations	Administration and Operations consists of an Executive Director, Director of Finance and Administration, Director of Programs, Human Resources and Grants Manager, and Bookkeeper and Office Coordinator. Administration and Operations is in charge of daily operations of the Tahoe RCD, including financial management, strategic planning, budgeting, legal affairs, and human resource needs.
Aquatic Invasive Species Program	The AIS Program consists of an AIS Program Manager, AIS Prevention Coordinator, three AIS Watercraft Inspection Site Supervisors, AIS Outreach Coordinator, and AIS Control Coordinator. The AIS Program works to prevent the introduction of new invasive species, educate the public on AIS, control existing populations of AIS, and monitor for new populations around Lake Tahoe.
Fire Adaptive Communities Program	The Fire Adaptive Communities Program consists of a Fire Adaptive Communities Program Manager, Fire Adaptive Communities Program Coordinator and a CWPP Coordinator. Tahoe RCD works with local fire districts, public land management agencies and neighborhoods to manage the Tahoe Network of Fire Adapted Communities.
Restoration and Land Management Program	The Restoration and Land Management Program consists of a Restoration and Land Management Program Manager, TCP Program Manager, TCP Program Assistant, TCP Environmental Technician and Land Steward, and TCP Land Steward. Tahoe RCD works with communities, land managers, private landowners, and other local and regional partners to plan, consult on, and implement innovative restoration projects around the Lake Tahoe Basin.
Stormwater Program	The Stormwater Program consists of a Stormwater and Environmental Services Program Manager and a Stormwater Program GIS Specialist. Tahoe RCD manages the Regional Stormwater Monitoring Program.

Notes:
AIS = Aquatic Invasive Species
CWPP = Community Wildfire Protection Plan
GIS = Geographic Information System
Tahoe RCD = Tahoe Resource Conservation District
TCP = Tahoe Conservation Partnership

Table E-2: Tahoe RCD—Financial Resources for Hazard Mitigation

Name	Purpose
California Department of Conservation Regional Forest and Fire Capacity Program (RFFC)	The RFFC makes available block grants to support regional leadership to "build local and regional capacity and develop, prioritize, and implement strategies and projects that create fire adapted communities and landscapes by improving ecosystem health, community wildfire preparedness, and fire resilience." RFFC block grants support partner capacity, project readiness, implementation of demonstration projects, and regional priority planning to achieve landscape-level and community wildfire resilience. In August 2022, the California Tahoe Conservancy awarded a $406,500 RFFC block grant to the Tahoe RCD to update critical plans, including pre-attack wildfire plans and the Lake Tahoe Basin Community Wildfire Protection Plan (CWPP) to reduce wildfire dangers in the Greater Lake Tahoe Area.
California Department of Fish and Wildlife (CDFW) Watershed Restoration Grant Program	Starting in FY 22–23, CDFW will have over $200 million dedicated to restoration, including funding for grants for new initiatives under Nature Based Solutions, Drought and Climate resiliency. CDFW will accept proposals on a continual basis to fund hazard-related projects that (1) address urgent degrading water and habitat conditions due to climate change impacts and (2) restore mountain meadows and non-coastal wetlands.
CAL FIRE Forest Health Grant Program	The Forest Health Grant Program provides financial assistance for forest restoration projects that restore forest resilience from catastrophic disturbance. Eligible activities include forest fuels reduction, fire reintroduction, reforestation, and utilization of forest biomass. Funding for 2023 will be up to $120 million with an additional $50 million available for post-fire reforestation.
CAL FIRE Wildfire Prevention Grants Program	The Wildfire Prevention Grants Program offers financial assistance for local projects in and near fire-threatened communities that focus on increasing the protection of people, structures, and communities. Qualified activities include hazardous fuels reduction, wildfire prevention planning, and wildfire prevention education with an emphasis on improving public health and safety while reducing greenhouse gas emissions. Funding for 2023 will be up to $120 million.
CAL FIRE Wildfire Resilience Program	The Wildfire Resilience Program block grants provide technical and financial assistance to forestland owners to conduct forest restoration or management activities on their properties. Projects should prioritize funding forest improvement practices, including (but not limited to) tree and brush thinning, tree release, pruning, site preparation and tree planting, follow-up work to support tree growth, and/or slash disposal. This grant opportunity will not fund prescribed fire but will fund burning of piles for slash disposal. Wildfire Resilience block grant applicants are limited to counties, resource conservation districts, special districts, and non-profit organizations that have the capacity to deliver a forestry-based technical and financial assistance program to non-industrial forest landowners.

California Tahoe Conservancy (CTC)	CTC is a state agency established in 1985 that "leads California's efforts to restore and enhance the extraordinary natural and recreational resources of the Lake Tahoe Basin." CTC works collaboratively with its federal, tribal, State, local, and private partners to achieve its mission. CTC uses its funding to accomplish its mission and Strategic Plan, which includes (1) steward conservancy lands and protect basin communities from wildfire, (2) restore the resilience of basin forests and watersheds and (3) foster basinwide climate change adaptation and sustainable communities. CTC offers five grant categories, including acquisition grants, planning grants, implementation grants, monitoring grants, and technical assistance grants.
California Water Boards Stormwater Grant Program (SWGP)	The purpose of the SWGP is to "use of storm water and dry weather runoff as a resource to maximize water supply, water quality, flood management, environmental, and other community benefits within the watershed." SWGP grants in the amount of $250,000 to $10 million are awarded to multi-benefit stormwater management projects. Tahoe RCD received a $212,598.10 SWGP grant to prepare a Storm Water Resource Plan (SWRP) for the Tahoe-Sierra Region.
El Dorado and Placer County Property Tax Increment	Tahoe RCD receives a modest share of the property tax increment from parcels within the district's service area (El Dorado and Placer Counties) that amounts to approximately $135,000 to $162,000 annually. Tahoe RCD receives an average of 0.1144 percent from the parcels within El Dorado County and 0.1130 percent from the parcels within Placer County.

FEMA HMA Grants	The HMA grant program provides technical and financial assistance to help mitigate hazards through the following grants: BRIC: BRIC is an annual competitive pass-through grant program that focuses on reducing the nation's risk by funding public infrastructure projects that increase a community's resilience before a disaster affects an area. BRIC was created in 2020 as part of the Disaster Recovery Reform Act of 2018 and replaces FEMA's legacy Pre-Disaster Mitigation grant program. BRIC funds a wide variety of mitigation activities, including microgrids, flood control, wetland restoration, community relocation/buyouts, seismic retrofits, and nature-based solutions. BRIC Direct Technical Assistance as a non-financial assistance grant program for: local hazard mitigation plan development initial support, identifying solutions for specific hazards, assisting with hazard mitigation project planning, requesting application development support, demonstrating cost-effectiveness of a BRIC sub-application submission, and understanding hazard mitigation grant management. HMGP: HMGP is pass-through grant program that supports pre- and post-disaster mitigation plans and projects for state and local agencies and federally recognized tribal governments. HMGP funding is authorized with a Presidential Major Disaster Declaration. A governor or tribal chief executive may request HMGP funding when submitting a disaster declaration. The amount of funding made available to the applicant is generally 15 percent of the total federal assistance amount provided for recovery from the Presidential Major Disaster Declaration. HMGP–Post-Fire: HMGP Post-Fire is a pass-through grant program that provides funding for state and local agencies and federally recognized tribal governments to reduce wildfire risks. Funded projects include (but are not limited to) defensible space initiatives, ignition-resistant construction, hazardous fuels reduction, erosion control measures, slope failure prevention measures, and flash flooding prevention. HMGP–Post-Fire grants are available to eligible states and territories that receive Fire Management Assistance declarations and to federally recognized tribal governments that have land burned within a designated area. A Post-Fire Presidential Disaster Declaration is not required to activate funding. Funding amounts are determined by FEMA and are based on a national aggregate calculation of historical Fire Management Assistance Grant declarations over the past 10 years.
Natural Resources Conservation Service Watershed Programs	The Natural Resources Conservation Service Watershed Programs provide technical and financial assistance to help implement conservation practices that address watershed resource concerns through the following grant programs: Emergency Watershed Protection Program: The Emergency Watershed Protection Program offers technical and financial assistance to help relieve imminent threats to life and property caused by floods, fires, windstorms, and other natural disasters that impair a watershed. Emergency Watershed Protection Program grants are available to local agencies, conservation districts, federally recognized tribal governments, and interested public and private landowners that have a sponsor. Watershed Protection and Flood Prevention Program: The Watershed Protection and Flood Prevention Program provides technical and financial assistance to help plan and implement watershed programs, including flood prevention. It is available to state and local agencies and federally recognized tribal governments and for watersheds that are 250,000 acres and smaller.

Parasol Tahoe Community Foundation	The Parasol Tahoe Community Foundation was founded in 1996 as a non-profit that is dedicated to supporting the Tahoe region. Its initiatives include fire safety and fire prevention, affordable housing, economic resiliency, and sustainable tourism. In 2019, the Parasol Tahoe Community Foundation awarded Tahoe RCD a grant of $18,057 to enhance wildfire suppression capabilities on the Nevada side of Lake Tahoe. This donation has resulted in expansion of strategic and tactical wildfire pre-attack plans covering the entire Lake Tahoe Basin.
Sierra Nevada Conservancy Watershed Improvement Program	The Sierra Nevada Conservancy is a state agency established through bi-partisan legislation to "initiate, encourage, and support efforts that improve the environmental, economic, and social well-being of California's Sierra Nevada-Cascade region, its communities, and the people of California." The Sierra Nevada Conservancy's Watershed Improvement Program funds projects that restore, protect, and enhance watersheds and communities in California's Sierra Nevada-Cascade region. These grants are awarded through grant programs under four regional goals: Forest & Watershed Health, Strategic Land Conservation, Vibrant Recreation & Tourism, and Resilient Communities.
Tahoe Fund	The Tahoe Fund was founded in 2010 as a non-profit in both California and Nevada. The goal of the fund is to become a major source of private funding for environmental projects around the Lake Tahoe Basin. In 2019, the Tahoe Fund launched the Smartest Forest Fund (with a goal of $5 million) to seek funding for and invest in promising new ideas and pilot projects around forest health. The Smart Forest Fund awarded Tahoe RCD with a grant for Community Hardening & Resident Preparedness to "revamp" its community hardening and preparedness programs.
Tahoe Truckee Community Foundation (TTCF)	TTCF is a philanthropic organization dedicated to improving the lives and environment in the North Tahoe area. Since 1998, the TTCF has "played key role in identifying and addressing the needs of their region and responding with resources and solutions." TTCF has four impact areas: family strengthening, forest health, housing, and impact investing. TTCF works with donors, nonprofits, community partners, local governments, and funders from outside the region to steward donor gifts into the community through annual grant cycles, community initiatives, and the strengthening of nonprofit organizations. Tahoe RCD received funding from TTCF to develop the Fire Adapted Community Neighborhood Leader Training Video in both Spanish and English.
Truckee River Fund	Truckee Meadows Water Authority (TMWA) established the Truckee River Fund in 2004. The purpose of the fund as stated in the fund agreement is that it "shall be used exclusively for projects that protect and enhance water quality or water resources of the Truckee River, or its watershed." In addition, the fund provides TMWA with a vehicle for responding to the numerous requests from outside groups and organizations that are involved in promoting and improving the health of the Truckee River System and watershed, thus benefiting the primary water source for the community and, in the long run, benefiting TMWA customers. In 2015, Tahoe RCD was awarded a $112,000 grant from the Truckee River Fund for aquatic invasive species prevention and control. In 2014, Tahoe RCD was also awarded a grant from the Truckee River Fund in the amount of $49,000 to prepare baseline maps delineating aquatic invasive species and trash along the Truckee River corridor.

U.S. Forest Service: Community Wildfire Defense Grant	The Community Wildfire Defense Grant, funded through the Bipartisan Infrastructure Law, is intended to help at-risk local communities and tribes reduce the risk against wildfire. The grant provides funding for two types of projects: the development and revision of community wildfire protection plan (CWPP) and the implementation of projects described in CWPP that were written less than 10 years ago. Priority is given to at-risk communities in an area identified as having high or very high wildfire hazard potential, are low-income, and/or have been impacted by a severe disaster.

Notes:
BRIC =
CAL FIRE = California Department of Forestry and Fire Protection
CDFW = California Department of Fish and Wildlife
CTC = California Tahoe Conservancy
CWPP = community wildfire protection plan
FEMA = Federal Emergency Management Agency
HMA = Hazard Mitigation Assistance
HMGP = Hazard Mitigation Grant Program
RFFC = Regional Forest and Fire Capacity Program
SWGP = Stormwater Grant Program
SWRP = Storm Water Resource Plan
Tahoe RCD = Tahoe Resource Conservation District
TMWA = Truckee Meadows Water Authority
TTCF = Tahoe Truckee Community Foundation

Table E-3: Tahoe RCD—Planning, Policy, Program, and Public Outreach Resources for Hazard Mitigation

Type	Description
Strategic Plans	The Strategic Plan 2021–2023 (Tahoe RCD, 2020) highlights new strategies and opportunities that address the impacts of urban runoff, invasive species, climate change, wildfire awareness, restoration, and other critical environmental concerns of the basin.
Stormwater Plans	Senate Bill 985 (SB 985), the Storm Water Management Planning Act of 2014, requires a SWRP as a condition of receiving grant funds for storm water and dry weather runoff capture projects from any bond approved by California voters after January 2014. The intent of SB 985 is to encourage the use of storm water and dry weather runoff as a resource to maximize water supply, water quality, flood management, environmental, and other community benefits within the watershed. In 2018, Tahoe RCD completed a SWRP for the Tahoe-Sierra Region. The plan was developed to address the SWRP Guidelines which focuses on watershed-based approaches to stormwater management. Tahoe RCD is the lead agency in the adaptive management (tracking and reporting performance, synthesize findings, recommending adjustments, and adopting and implementing adjustments) of the SWRP.
Aquatic Invasive Species Programs*	Tahoe RCD's Prevention Program conducts watercraft inspections and outreach "Take Care" campaigns. Additional information is provided on Tahoe RCD's website which includes publications and links on watercraft inspection programs, lakewide control of aquatic invasive plants, and target invasive fish control programs. Specific control activities remove existing invasive species while monitoring activities look for new invasive species populations.
Fire Adapted Communities Programs*	As a member of the Tahoe Fire and Fuels Team, Tahoe RCD collaborates with local fire districts, public land management agencies, and neighborhoods to manage the Tahoe Network of Fire Adapted Communities (Tahoe Network). The Tahoe Network strives to prepare people and property for wildfire by coordinating efforts on a neighborhood scale. The Tahoe Network connects residents to fire protection districts and public land management agencies to create defensible space and ember awareness; educates residents through the Tahoe Living With Fire website, publications and workshops; and empowers neighborhoods to work together with neighborhood leaders to prepare for wildfire.
Stormwater Programs*	Tahoe RCD manages the Regional Stormwater Monitoring Program for the Lake Tahoe Basin. The program is designed to monitor urban stormwater at select locations in the Tahoe Basin for nutrients and sediments. There are seven jurisdictions around the lake that must comply with stormwater management regulations to reduce pollutant loading to the lake. Data collected by Regional Stormwater Monitoring Program is also used to assess the cumulative effect of environmental improvement projects and better management practices on stormwater quality. Tahoe RCD posts collaborative planning documents, annual status, trends reports, and efficiency studies on stormwater treatment methods on its website.

Restoration and Land Management Programs*	Through a Joint Powers Agreement, Tahoe RCD has been providing the California Tahoe Conservancy with field crews and specialists to assist with the management of their lands for over 25 years. Through this agreement, both agencies collaboratively manage approximately 4,700 parcels totaling nearly 6,500 acres on the California-side of the Lake Tahoe Basin. Tahoe RCD crew work includes forest habitat enhancement and hazardous fuel reduction, resource protection and restoration, streambank stabilization and monitoring, property inspection and maintenance, and aquatic invasive species management. Tahoe RCD restoration and land management program reaches out to the public through its email newsletters, public workshops, public webinars, to name a few.
Environmental Services Programs	Tahoe RCD conducts wildlife, vegetation, and habitat surveys on lands associated with fuel reduction projects, and forestry, wetland, and riparian restoration projects. Additionally, Tahoe RCD conducts geomorphic surveys before and after implementation of restoration projects.

Notes:
SWRP = Storm Water Resource Plan
Tahoe RCD = Tahoe Resource Conservation District
* public outreach resources included

Table E-4: Tahoe RCD—Ability to Improve On / Expand Resources

Capability	Type/Description	Expansion
Human and Technical	Executive Director / Board	Continue to build relationships and work on long term, ongoing agreements/partnerships with Tahoe Fire and Fuels Teams, Watershed Improvement Program, TCP, and the Regional Stormwater Board Monitoring Program.
Human and Technical	Mitigation Grant Specialist	Appoint or assign someone within Tahoe RCD to oversee HMA mitigation grant opportunities, including notifying Tahoe RCD of upcoming grant cycles, and spearheading Notice of Intents applications, grant applications, and grant management requirements.
Financial	HMA funding	Apply for HMA funding as it becomes available for projects pre-identified in Tahoe RCD plans and programs, including the 2023 HMP.
Planning, Policy, Program, and Public Outreach	Website and social media	Post the approved and adopted 2023 HMP to the Tahoe RCD website's "Documents and Links" page and include contact information.
Planning, Policy, Program, and Public Outreach	Tahoe Network of Fire Adapted Communities	Reach new demographics – engage with school-age children, non-English speaking communities, long-term renters, and visitors in outreach efforts.

Notes:
HMA = Hazard Mitigation Assistance
Tahoe RCD = Tahoe Resource Conservation District
TCP = Tahoe Conservation Partnership

Table E-5: Tahoe RCD—Draft Mitigation Action List

Mitigation Action 1	**Johnson Meadow Wetland and Stream Restoration Project**
Description	Restore Johnson Meadow along the Upper Truckee River, which includes over 200 acres of meadow and riparian habitat. The project will remove conifers that are encroaching on meadows and aspen stands. The restoration will increase soil moisture retention, sequester carbon, and protect habitat that provides refuge for diverse species under climate change, and include a long-term monitoring plan.
Hazard(s)	Climate change, dam failure, drought, and flood
Building / Infrastructure	Existing and future
Benefits / Costs	Project has been pre-identified in a detailed list of adaptation actions in the Tahoe Climate Adaption Action Portfolio (2C. Adaptation Actions, page 19). Project will accommodate increased flooding, withstand prolonged drought, and serve as climate refuges for native species. FEMA RVIII has previously determined the apparent efficacy of a similar type of project. Project will require funds/personnel to actively restore and monitor restoration work.
Source	Tahoe Climate Adaptation Action Portfolio (CTC and TTD, 2021), 2020 Ninemile Creek Mitigation Pre-Disaster Mitigation Project
Mitigation Action 2	**Polaris Creek Restoration Project**
Description	Plan, fund, and implement wetland and stream restoration projects on along Polaris Creek that can accommodate increased flooding, withstand prolonged drought, and serve as climate refuges for native species. The restoration of Polaris Creek and Wetland and the preservation of the recreational amenities of Pomin Park will benefit all of the Lake Tahoe community including vulnerable and underserved populations, including people of color and others who have faced barriers to outdoor recreation.
Hazard(s)	Climate change, drought, and flood
Building / Infrastructure	Existing and future
Benefits / Costs	Project has been pre-identified as a “high-priority” project in a detailed list of adaptation actions in the Tahoe Climate Adaption Action Portfolio (2C. Adaptation Actions, page 19). Project will accommodate increased flooding, withstand prolonged drought, and serve as climate refuges for native species. FEMA RVIII has previously determined the apparent efficacy of a similar type of project. Project will require funds/personnel to actively restore and monitor restoration work.
Source	Tahoe Climate Adaptation Action Portfolio (CTC and TTD, 2021), 2020 Ninemile Creek Mitigation Pre-Disaster Mitigation Project
Mitigation Action 3	**Stormwater Monitoring Station Back-up Power Source**
Description	Tahoe RCD manages the Regional Stormwater Monitoring Program which monitors urban stormwater runoff entering the lake for nutrients and sediments. There are a multitude of technical difficulties that can be encountered with stormwater monitoring,

	including power failure due to hazardous conditions which can result in data gaps. Although all Tahoe RCD stormwater monitoring stations are equipped with solar panels to recharge batteries, some stations do not have enough sun exposure to keep batteries continuously charged (especially during winter), and during periods of extended cloud cover or snow blockage and subsequent decrease in solar recharge, all stations are subject to power failure.
Hazard(s)	Climate change, earthquake, landslide, flood, wildfire, and winter storm
Building / Infrastructure	Existing
Benefits / Costs	Project will require funds/personnel to purchase, install and maintain the back-up power source.
Source	Annual Stormwater Monitoring Report WY21 (Tahoe RCD, 2022)
Mitigation Action 4	**Regional Landscape Conservation Measures for Lake Tahoe 1**
Description	Regional Landscape Conservation program for the Tahoe RCD includes technical assistance for implementing erosion control, native and fire-wise landscaping, fertilizer management, invasive weed management, and water conservation measures including water harvesting technologies. Educational materials and stewardship opportunities will be used to provide assistance to the California side of the Lake Tahoe Basin. Additionally, this project will work cooperatively and complementary to the South Tahoe Public Utility District's Regional Water Conservation Project and is intended to increase water conservation efforts in the region.
Hazard(s)	Climate change, flood, and winter storm
Building / Infrastructure	Existing
Benefits / Costs	Project has been pre-identified as a ranked project in the 2018 Stormwater Resource Plan: Tahoe-Sierra Region (Appendix E and Appendix F). Project has been pre-identified as a ranked project in the 2014 Tahoe Sierra Integrated Regional Water Management Plan.
Source	2018 Stormwater Resource Plan: Tahoe-Sierra Region (Tahoe RCD, 2018), Tahoe Sierra Integrated Regional Water Management Plan (STPUD, 2014)
Mitigation Action 5	**Diverse Aquatic Plant Control Techniques**
Description	Enhance the integrated aquatic invasive species management program that uses a combination of control methods, such as mechanical and physical control. Remove aquatic invasive species from aquatic habitats in the Lake Tahoe Basin, subsequently improving water quality conditions in wetlands, tributaries, marinas, and embayments.
Hazard(s)	Climate change
Building / Infrastructure	Existing
Benefits / Costs	Project will require continual ecosystem evaluation in order to weigh the pros and cons of each management method and combination, and measure effectiveness of habitat restoration in lake, river, creek, and pond aquatic ecosystems.
Source	2021–2023 Strategic Plan (Tahoe RCD, 2020)
Mitigation Action 6	**Defensible Space Assistance Program**

Description	Develop a program that is designed to assist homeowners that need to create a defensible space of 100 feet around their homes, and are not able to do so because of physical, economic, or other barriers. Each homeowner would need to apply for the program Services would include brush and tree trimming/thinning, dead tree removal, if funding permits and is applicable, raking of dead leaves and pine needles, chipping of removed vegetation, on-site education about effective defensible space, initial one-day defensible space clean up.
Hazard(s)	Climate change and wildfire
Building / Infrastructure	Existing
Benefits / Costs	Project will require funds/personnel to develop program, conduct public outreach, manage the program, and to carry-out defensible space work.
Source	Fire Safe Council of San Diego County
Mitigation Action 7	**Fire Adapted Communities Expansion / Wildfire Education**
Description	Through the Tahoe Network, continue to host Wildfire Home Retrofit Workshops for regional and national experts to present home hardening techniques. Expand program to reach new demographics – engage with school-age children, non-English speaking communities, long-term renters, and visitors in outreach efforts. Develop guides and materials to distribute at workshops.
Hazard(s)	Climate change and wildfire
Building / Infrastructure	Existing
Benefits / Costs	Project has been pre-identified in a detailed list of adaptation actions in the Tahoe Climate Adaption Action Portfolio (5C. Wildfire Education Adaptation Actions, page 49). Project will require funds/personnel to develop and host workshops and develop and print guides and materials. Once the workshop program is developed it can be used repeatedly.
Source	2021–2023 Strategic Plan (Tahoe RCD, 2020), Tahoe Climate Adaptation Action Portfolio (CTC and TTD, 2021)
Mitigation Action 8	**Structural Hardening Assessments**
Description	Through the Tahoe Network, (1) identify project areas in which structural hardening assessments will occur, (2) conduct community outreach and engagement to identify approximately eligible property owners and conduct property pre-inspections, (3) complete assessments for eligible and interested property owners, (4) provide cost-share incentives (i.e.: 75 percent cash-match incentives up to $20,000) to residents for structural hardening or, as an alternative option, have the Tahoe Network directly implement the structural hardening strategy.
Hazard(s)	Climate change and wildfire
Building / Infrastructure	Existing
Benefits / Costs	Project has been pre-identified in the 2021–2023 Strategic Plan. Retrofitting existing homes can have substantial costs, but components (roof, exterior wall and deck), project scope/costs can be prioritized based on neighborhood context or fire severity zone (Headwater Economics, 2018).

	FEMA RIX has previously determined the apparent efficacy of this type of project. Project will require funds/personnel to identify project areas, conduct community outreach, develop assessments, assess properties and, in some instances, harden properties.
Source	2021–2023 Strategic Plan (Tahoe RCD, 2020), 2021 Wildfire Resilience Sonoma County BRIC Project, 2021 Nevada County and Fire Safe Council of Nevada County BRIC Project
Mitigation Action 9	**Defensible Space Assessments**
Description	Through the Tahoe Network, (1) identify project areas in which defensible space assessments will occur, (2) conduct community outreach and engagement to identify approximately eligible property owners and conduct property pre-inspections, (3) complete assessments for eligible and interested property owners, (4) provide cost-share incentives (i.e.: 75 percent cash-match incentives up to $6,000) to residents for vegetation management or, as an alternative option, have the Tahoe Network implement selected vegetation management strategy.
Hazard(s)	Climate change and wildfire
Building / Infrastructure	Existing
Benefits / Costs	Homeowners benefit from defensible space on their properties and the benefits extend to others as well. When a homeowner maintains defensible space, their home is less likely to ignite other nearby structures, overwhelm firefighters, and threaten surrounding communities from wildfires (California Local Analyst's Office Report, 2021). California Public Resource Code 4291 and local fire codes already require property owners in high to extreme fire severity zones to maintain defensible space around all structures. However, there can be several barriers to achieving high compliance, including lack of resources in the form of time and money. FEMA RIX has previously determined the apparent efficacy of this type of project. Project will require funds/personnel to identify project areas, conduct community outreach, develop assessments, assess properties and, in some instances, remove vegetation.
Source	2021 Wildfire Resilience Sonoma County BRIC Project, 2021 Nevada County and Fire Safe Council of Nevada County BRIC Project
Mitigation Action 10	**Dead or Dying Tree Removal Program**
Description	Remove standing dead or dying trees on private properties within the Lake Tahoe Basin to mitigate wildfire risk. Properties and trees to be identified through surveys. Hand and mechanical methods may be used.
Hazard(s)	Climate change, drought, and wildfire
Building / Infrastructure	Existing
Benefits / Costs	Project will expand safe zones by reducing occurrence of crown fire. Project will need to include avoidance and minimization measures to limit the potential for adverse impacts to resources and community members, such as noise and air quality. FEMA RIX has previously determined the apparent efficacy of this type of project. Project will require funds/personnel to survey properties and trees and also to hand/mechanical remove trees. Mechanical thinning is generally more cost effective

	than hand thinning for removal of large trees (trees greater than 16 inches diameter). Hand thinning is generally limited to the removal of trees less than 16 inches diameter on steeper slopes, and in sensitive areas.
Source	Town of Paradise Wildfire Mitigation Fact Sheet (FEMA, 2022)
Mitigation Action 11	**Micro Stormwater Infiltration Systems for the Lake Tahoe Basin**
Description	Recent analysis of LiDAR data and other remotely sensed data in Incline Village, South Lake Tahoe, and Tahoma has identified a potential to develop stormwater detention and infiltration areas based on small-scale patterns of land topography. This information makes it possible to identify the volume of Micro Stormwater Infiltration Systems achievable by small and simple modifications to existing depressions in the landscape. Micro Stormwater Infiltration Systems have the potential to infiltrate urban stormwater and reduce flooding. This project aims to build on results from previously analyzed LiDAR data and stormwater infrastructure to determine hydrologic connectivity and identify areas that could be used to increase stormwater infiltration.
Hazard(s)	Climate change and flood
Building / Infrastructure	Existing and future
Benefits / Costs	Project has been pre-identified as a ranked project in the 2014 Tahoe Sierra Integrated Regional Water Management Plan.
Source	Tahoe Sierra Integrated Regional Water Management Plan (STPUD, 2014)
Mitigation Action 12	**Innovative Best Management Practices and Retrofits to Improve Climate Change Resilience**
Description	Modify and/or replace existing stormwater system infrastructure in the Lake Tahoe Basin to increase stormwater retention, conveyance, and groundwater infiltration capacity by employing nature-based solutions.
Hazard(s)	Climate change and flood
Building / Infrastructure	Existing
Benefits / Costs	Objective has been identified as a top priority in the 2023 Total Maximum Daily Load Annual Strategy. Project aims to implement stormwater projects to enhance infiltration and treatment of stormwater to improve climate change resiliency. The project will require coordination with state and local jurisdictions in the Lake Tahoe Basin. Project builds on results of an assessment of existing urban stormwater infrastructure performance under projected future climate conditions and research on emerging technologies for better stormwater management.
Source	2023 Total Maximum Daily Load Annual Strategy (Nevada Division of Environmental Protection and Lahontan Regional Water Quality Control Board, December 2022)
Mitigation Action 13	**Long-Range Fire Detection Camera Installation Project**
Description	Installation of long-range fire detection cameras. Cameras will alert emergency officials of potential wildfires by constantly surveying the Lake Tahoe Basin for smoke and fire in order to prevent the loss of life, property, and economic damage. Project will coordinate to install high-definition cameras, mounted on strategically-selected, high elevation towers capable of detecting smoke and fire from as far away as 60 miles

	during the day and 150 miles at night using infrared technology. Once a wildfire is detected, the system will email or text data and images to CAL FIRE dispatch centers.
Hazard(s)	Climate change, drought, and wildfire
Building / Infrastructure	Existing and future
Benefits / Costs	Project will enable emergency personnel to send life-saving evacuation warnings to residents and mobilize firefighting resources to critical locations to fight, contain, and stop the fire's spread. Project will require funds/personnel to develop program, coordinate resources, conduct public outreach and manage the program. FEMA RIX has previously determined the apparent efficacy of this type of project.
Source	FEMA Grants California Governor's Office of Emergency Services and Sonoma County $2 million for Wildfire Detection System (Feb 2020)
Mitigation Action 14	**Additional Hazard Mapping and Vulnerability Analysis**
Description	Acquire missing hazard mapping datasets (dam failure, earthquake, flood, landslide, and wildfire) for the Nevada side of the Lake Tahoe Basin. Using the newly acquired hazard data, along with the existing Nevada data for watersheds, snowfall and avalanche, conduct a vulnerability analysis for Tahoe RCD critical facilities. Consider implementing Mitigation Action #4 measures for facilities identified in the vulnerability analysis as being in hazard areas.
Hazard(s)	Dam failure, earthquake, flood, landslide, wildfire for missing hazard mapping All hazards for vulnerability analysis
Building / Infrastructure	Existing
Benefits / Costs	Project will require time and effort to acquire pre-existing hazard mapping datasets and conduct a vulnerability analysis to determine which TTD critical facilities are in hazard areas. GIS datasets can be acquired from the Nevada Department of Emergency Management, MyHAZARDS – Nevada, USGS, and FEMA. This work can be done in-house and/or by a consultant.
Source	AECOM
Mitigation Action 15	**Upper Truckee River Project Partnership**
Description	Explore potential future partnership with the City of South Lake Tahoe to restore the Airport Reach of the Upper Truckee River. The Upper Truckee River watershed is the largest watershed in the Lake Tahoe Basin and has the highest annual sediment loads of all the tributaries to Lake Tahoe. According to the Bureau of Land Management (BLM), benefits for similar projects have included: increased groundwater elevation and increased plant available water which provides desired habitat for several wildlife species; improved aquatic habitat conditions from increased pool depth and increased pool frequency; increased streambank vegetation and stream shade; and increased streambank stability/less bank erosion due to increased vegetation.
Hazard(s)	Climate change, drought, and flood
Building / Infrastructure	Existing and future

Benefits / Costs	Project will accommodate increased flooding, withstand prolonged drought, and serve as climate refuges for native species. FEMA RVIII has previously determined the apparent efficacy of a similar type of project. Project will require funds/personnel to actively restore and monitor restoration work.
Source	Tahoe RCD, BLM Upper Truckee River Reach 5 Restoration and Utility Relocation Project

Notes:
BLM = Bureau of Land Management
BRIC = Building Resilient Infrastructure and Communities
FEMA = Federal Emergency Management Agency
Tahoe RCD = Tahoe Resource Conservation District

Table E-6: Tahoe RCD—Finalized Mitigation Action Plan

No.	Project Name	Priority Ranking	Potential Funding Source	Program Lead	Project Implementation
1	Johnson Meadow Wetland and Stream Restoration Project	Highest Priority	BRIC / HMGP, Sierra Nevada Conservancy Watershed Improvement Program	Restoration and Land Management Program Manager and TRCD Director of Programs	2–3 years
2	Polaris Creek Restoration Project	High Priority	BRIC / HMGP, Sierra Nevada Conservancy Watershed Improvement Program	Restoration and Land Management Program Manager and TRCD Director of Programs	2–3 years
3	Stormwater Monitoring Station Back-up Power Source	Highest Priority	BRIC / HMGP	Stormwater Program Manager and TRCD Director of Programs	1–2 years
4	Regional Landscape Conservation Measures for Lake Tahoe 1	High Priority	BRIC / HMGP	Restoration and Land Management Program Manager and TRCD Director of Programs	2–3 years
5	Diverse Aquatic Plant Control Techniques	High Priority	BRIC / HMGP	Aquatic Invasive Species Program Manager and TRCD Director of Programs	2–3 years
6	Defensible Space Assistance Program	Highest Priority	BRIC / HMGP, Community Wildfire Defense Grant, CAL FIRE Wildfire Prevention Grants Program	Fire Adaptive Communities Program Manager and TRCD Director of Programs	2–3 years
7	Fire Adapted Communities Expansion / Wildfire Education	Highest Priority	BRIC / HMGP, Community Wildfire Defense Grant, CAL FIRE Wildfire Prevention Grants Program	Fire Adaptive Communities Program Manager and TRCD Director of Programs	2–3 years
8	Structural Hardening Assessments	Highest Priority	BRIC / HMGP, Community Wildfire Defense Grant, CAL FIRE Wildfire Prevention Grants Program	Fire Adaptive Communities Program Manager and TRCD Director of Programs	2–3 years

9	Defensible Space Assessments	Highest Priority	BRIC / HMGP, Community Wildfire Defense Grant, CAL FIRE Wildfire Prevention Grants Program	Fire Adaptive Communities Program Manager and TRCD Director of Programs	2–3 years
10	Dead or Dying Tree Removal Program	Highest Priority	BRIC / HMGP, Community Wildfire Defense Grant, CAL FIRE Wildfire Resilience Program	Fire Adaptive Communities Program Manager and TRCD Director of Programs	2–3 years
11	Micro Stormwater Infiltration Systems for the Lake Tahoe Basin	Highest Priority	BRIC / HMGP, California Water Boards Stormwater Grant Program	Stormwater Program Manager and TRCD Director of Programs	1–2 years
12	Innovative Best Management Practices and Retrofits to Improve Climate Change Resilience	Highest Priority	BRIC / HMGP, California Water Boards Stormwater Grant Program	Stormwater Program Manager and TRCD Director of Programs	1–2 years
13	Long-Range Fire Detection Camera Installation Project	Highest Priority	BRIC / HMGP	Fire Adaptive Communities Program Manager and TRCD Director of Programs	1–2 years
14	Additional Hazard Mapping and Vulnerability Analysis	High	Tahoe Fund	Administration and Operations Manager and TRCD Director of Programs	1–3 years

Notes:
BRIC = Building Resilient Infrastructure and Communities
CAL FIRE = California Department of Forestry and Fire Protection
HMGP = Hazard Mitigation Grant Program

Table E-7: Tahoe RCD—Integration of 2023 HMP

HMP Section	Existing Plan/Policy/Program	Process / Timeframe
Section 4 – Risk Assessment and Section 5 and Appendix E – Mitigation Strategy	Tahoe Network of Fire Adapted Communities	Use the wildfire GIS information in the 2023 HMP, including the FHSZ and West Wide Wildfire Risk Assessment, to continue to educate communities around Lake Tahoe about wildfire risks. Wildfire mapping can be used in the program's various virtual events, workshops, and digital outreach. In addition, collaborate with local fire districts, public land management agencies, and neighborhoods to implement structural hardening assessments, defensible space assessments, and the dead or dying tree removal program.
Section 5 and Appendix E – Mitigation Strategy	Tahoe RCD Strategic Plan	During the next Strategic Plan update (2024–2026), highlight new the new goals and actions identified in the 2023 HMP's mitigation strategy.
Section 5 and Appendix E – Mitigation Strategy	Living with Fire website	Update the Living with Fire website with any new mitigation programs as programs are announced and/or implemented (and identified in the 2023 HMP).

Notes:
HMP = Hazard Mitigation Plan
Tahoe RCD = Tahoe Resource Conservation District

APPENDIX F—MULTI-JURISDICTIONAL REQUIREMENTS

1.0 ELEMENT A: PLANNING PROCESS

Element A: Planning Process	
A1-b.	Does the plan list the jurisdiction(s) participating in the plan that seek approval, and describe how they participated in the planning process?
A2-a.	Does the plan identify all stakeholders involved or given an opportunity to be involved in the planning process, and how each stakeholder was presented with this opportunity?
A3-a.	Does the plan document how the public was given the opportunity to be involved in the planning process and how their feedback was included in the plan?

1.1 REQUIREMENT A1-B.

Section 2.1, Overview of the 2023 HMP Planning Process, identifies TTD and Tahoe RCD as plan participants that seeking plan approval. Tahoe RCD's Executive Director and Tahoe RCD's Director of Programs participated on the advisory committee. Their involvement in the planning process is described in Table 2-1: HMP Timeline and Table 2-2: Advisory Committee.

1.2 REQUIREMENT A2-A.

Section 2.2, Opportunities for Stakeholders, describes the stakeholders invited to and involved in the planning process. The HMP project manager served as the point of contact for the entire project, including stakeholder involvement. On October 6, 2022, the HMP project manager developed an initial list of stakeholders for both TTD and Tahoe RCD and reached out to the Tahoe RCD advisory committee members via email for input. Tahoe RCD added law enforcement agencies, local utilities, and the Tahoe Environmental Improvement Program Working Group to the draft list.

On behalf of the advisory committee, the HMP project manager reached out to all the stakeholders via email (Appendix B) about the 2023 HMP and invited them to participate in the planning process on December 6, 2022. On December 7, 2022, El Dorado County requested to be added to any future mailing lists regarding the 2023 HMP (the stakeholder was included in future correspondence).

The HMP project manager reached out to the stakeholders for TTD and Tahoe RCD again via email on October 2, 2023, inviting them to review and provide comments on the Public Draft HMP (Appendix B). On October 16, 2023, the City of South Lake Tahoe provided comments. The comments were directed at the public involvement process and review and incorporation of existing plans and reports. The consultant responded to the comments on October 17, 2023, noting the public involvement process requirement can be achieved in various ways such as social media campaigns and websites and that relevant plans and reports reviewed for this plan focused on plan participant documents as well as plans and reports that are regional in nature.

Stakeholder agencies for the entire planning area as well as specifically for Tahoe RCD are listed in Section 2.2. Additional information about each stakeholder is provided in Appendix B, Table B-1.

1.3 REQUIREMENT A3-A.

Section 2.3, Public Involvement, describes the public outreach efforts during the drafting of the plan and during the public draft review period. Because TTD served as the HMP project manager, initially public outreach was spearheaded by TTD (for the plan kick-off announcement), as this was a common and accepted practice under the previous planning regulations (when this planning effort commenced).

However, as the regulations changed during the planning process, Tahoe RCD led their own public outreach during the public comment period.

The following public outreach was conducted:

- September 30, 2022: TTD announced the 2023 HMP kickoff for both districts on their website and social media. Contact information for the HMP project manager as well as a comment section was provided on both platforms. In addition, a link to provide more information about the DMA 2000 as well as local hazard mitigation planning was provided. One public comment was received on TTD's website on October 8, 2022, requesting to be notified of the release of the public draft. This member of the public was sent a copy of the Public Draft HMP during the public comment period. In addition, the TTD Facebook post received one "share" and the Tahoe RCD Instagram post received five "likes" during the public comment period.
- October 3, 2023: Tahoe RCD and TTD announced the Public Draft and two-week public comment period on TTD's website and both districts social media. The Public Draft HMP, contact information for the HMP project manager and a comment section was provided on the TTD website. Each agency received a few emoticon responses but no comments.

Links to TTD's website and Facebook page as well as Tahoe RCD's Instagram are provided below (screenshots are provided in Appendix B):

- Website: https://www.tahoetransportation.org/tahoe-basin-hazard-mitigation-plan-notification/
- Facebook: https://www.facebook.com/TahoeTransportationDistrict/
- Instagram: https://www.instagram.com/tahoercd/

As described in Table E-4 – Tahoe RCD—Ability to Improve On / Expand Resources, Appendix E, Tahoe RCD will post the adopted and approved 2023 HMP along with contact information on Tahoe RCD website's "Documents and Links" page. Additionally, at the direction of the HMP project manager, Tahoe RCD will use its social media accounts and reach out to vulnerable population stakeholders to notify the public of, and seek input on, any changes or updates to the 2023 HMP.

2.0 ELEMENT B – RISK ASSESSMENT

Element B: Risk Assessment	
B1-a.	Does the plan describe all natural hazards that can affect the jurisdiction(s) in the planning area, and does it provide the rationale if omitting any natural hazards that are commonly recognized to affect the jurisdiction(s) in the planning area?
B1-f.	For participating jurisdictions in a multi-jurisdictional plan, does the plan describe any hazards that are unique to and/or vary from those affecting the overall planning area?
B2-a.	Does the plan provide an overall summary of each jurisdiction's vulnerability to the identified hazards?
B2-b.	For each participating jurisdiction, does the plan describe the potential impacts of each of the identified hazards on each participating jurisdiction?
B2-c.	Does the plan address NFIP-insured structures within each jurisdiction that have been repetitively damaged by floods?

2.1 REQUIREMENT B1-A.

As addressed in Section 4.1, Hazard Identification, Summary of Vulnerability, and Potential Impacts, hazards that are commonly recognized to affect the planning area were determined based on recent disaster declarations in the area (drought, flood, landslide, wildfire, and winter storm); known probabilities and vulnerabilities based on previous events (earthquake); and regional, State, and federal plans and reports (climate change and dam failure). Based on this analysis, the advisory committee determined that eight natural hazards to include in the 2023 HMP: climate change, dam failure, drought, earthquake, landslide, wildfire, and winter storm.

2.2 REQUIREMENT B1-F.

Both TTD and Tahoe RCD work throughout the Lake Tahoe Basin, and therefore there are no hazards that are unique to either one of them or that vary from those affecting the overall planning area.

2.3 REQUIREMENT B2-A.

The overall vulnerability summaries for Tahoe RCD's critical assets and at-risk population are addressed in Tables 4-2, 4-6, 4-6, 4-10, 4-14, 4-18, 4-22, 4-26, and 4-30.

2.4 REQUIREMENT B2-B.

The potential impacts of each hazard on TTD's critical assets and at-risk population are addressed in Tables 4-3, 4-7, 4-11, 4-15, 4-19, 4-23, 4-27, and 4-31.

The potential climate driven impacts of each hazard on TTD's critical assets, at-risk population, and future growth and development are addressed in Tables 4-4, 4-8, 4-12, 4-16, 4-20, 4-24, 4-28, and 4-31.

2.5 REQUIREMENT B2-C.

As noted in Section 4.10, National Flood Insurance Program – Insured Structures, Tahoe RCD is not eligible to participate as local community in the National Flood Insurance Program (NFIP), and as such, they do not have any NFIP-insured structures and do not have any Repetitive Loss properties. Tahoe RCD critical assets that are in the SFHA are addressed in Table 4-10 and include Johnson Meadow and Johnson Meadow signage and tools. Johnson Meadow contains large areas of floodplain and Tahoe RCD purchased the

property back in 2018 to protect wildlife habitat, including river, riparian, and montane meadow areas. Johnson Meadow signage and tools has not been repetitively damaged by floods.

3.0 ELEMENT C – MITIGATION STRATEGY

Element C: Mitigation Strategy	
C1-a.	Does the plan describe how the existing capabilities of each participant are available to support the mitigation strategy? Does this include a discussion of the existing building codes and land use and development ordinances or regulations?
C1-b.	Does the plan describe each participant's ability to expand and improve the identified capabilities to achieve mitigation?
C2-a.	Does the plan contain a narrative description or a table/list of their participation activities?
C4-b.	Does the plan include one or more action(s) per jurisdiction for each of the hazards as identified within the plan's risk assessment?

3.1 REQUIREMENT C1-A.

Tahoe RCD's existing authorities, policies, programs, and financial resources available for hazard mitigation are provided Appendix E (Tables E 1 through E-3): Table E-1: Tahoe RCD—Human and Technical Resources for Hazard Mitigation, Table E-2: Tahoe RCD—Financial Resources for Hazard Mitigation, and Table E-3: Tahoe RCD—Planning, Policy, Program, and Public Outreach Resources for Hazard Mitigation. Note: public outreach is discussed within Table E-3's Aquatic Invasive Species Programs, Fire Adapted Communities Programs, Stormwater Programs, and Restoration and Land Management Programs.

As noted in Section 5.1, Authorities, Policies, Programs, and Resources, in California, the State delegates most local land use and development authorities and decisions to cities and counties (not districts), and therefore a discussion of existing building codes and land use development ordinances and regulations is not included in these capability assessments. However, in Lake Tahoe, the TRPA administers an overarching regional plan with land use authority in accordance with the Bi-State Compact. The first Lake Tahoe Regional Plan was created in 1987 and focused on growth controls, development regulations and best environmental practices. The regional plan was updated again in 2012 and added more provisions around environmental redevelopment, sustainable development, and designated centers for concentrated development. The plan also provided incentives for property owners to restore sensitive lands or transfer development rights from sensitive lands and outlying properties to designated centers.

3.2 REQUIREMENT C1-B.

Appendix E, Table E-4, describes Tahoe RCD's ability to expand and improve the identified capabilities to achieve mitigation including continuing to build relationships with other agencies and organizations interested in or involved in mitigation, appointing or assigning someone within Tahoe RCD to oversee HMA mitigation grant opportunities, applying to HMA funding, and reaching new demographics for the Fire Adapted Communities program.

3.3 REQUIREMENT C2-A.

As noted in Section 5.2, National Flood Insurance Program, Tahoe RCD is not eligible to participate in the NFIP. Communities within the California side of the Lake Tahoe Basin that participate in the NFIP

include Alpine County (NFIP entrance date: April 19, 1989 and current DIFRM date: pending November 16, 2023), El Dorado County (NFIP entrance date: April 9, 1986 and current DFIRM date: April 3, 2012), Placer County (NFIP entrance date: April 18, 1983 and current DFIRM date: November 2, 2018), and the City of South Lake Tahoe (NFIP entrance date: July 7, 1978 and DFIRM date: April 3, 2012).

3.4 REQUIREMENT C4-B.

A list of recommended draft mitigation actions is provided for Tahoe RCD in Appendix E (Table E-5). Tahoe RCD mitigation action items are broken down as follows:

- Climate change mitigation actions # 1 – 15
- Dam failure mitigation actions #1 and 14
- Drought mitigation actions # 1, 2, 10, 13, and 15
- Earthquake mitigation actions # 3 and 14
- Flood mitigation actions # 1, 2, 3, 4, 11, 12, 14, and 15
- Landslide mitigation actions # 3 and 14
- Wildfire mitigation actions # 3, 6, 7, 8, 9, 10, 13, and 14
- Winter storm mitigation actions # 3 and 14

4.0 ELEMENT D – PLAN MAINTENANCE

Element D: Plan Maintenance	
D3-c.	For multi-jurisdictional plans, does the plan describe each participant's individual process for integrating information from the mitigation strategy into their identified planning mechanisms?

4.1 REQUIREMENT D3-C.

D3-c: Appendix E, Table E-7, identifies how Tahoe RCD will integrate information from the mitigation strategy into their identified planning mechanisms including through the Tahoe Network of Fire Adapted Communities program, Tahoe RCD Strategic Plan, and Living with Fire website.

5.0 ELEMENT E: PLAN UPDATE

Element E: Plan Update	
E1-a.	E1-a. Does the plan describe the changes in development that have occurred in hazard-prone areas that have increased or decreased each community's vulnerability since the previous plan was approved?
E2-a.	Does the plan describe how it was revised due to changes in community priorities?
E2-b.	Does the plan include a status update for all mitigation actions identified in the previous mitigation plan?
E2-c.	Does the plan describe how jurisdictions integrated the mitigation plan, when appropriate, into other planning mechanisms?

5.1 REQUIREMENTS E1-A, E2-A, AND E2C.

E1-a, E2-a, E2-b, and E2-c: As noted in Section 7, Plan Update, the 2023 HMP is a new plan and not a plan update. Therefore, Element E is not addressed in the 2023 HMP.

Tahoe Transportation DISTRICT

Connecting our communities

MEMORANDUM

Date: March 27, 2024

To: Tahoe Transportation District (TTD) Board of Directors

From: TTD Staff, George Fink, Transit System Program Manager

Subject: Authorize the District Manager to Negotiate and Execute a Contract for the Purchase of One Four-Wheel Drive Toyota Tundra Hybrid and Associated Modifications and Equipment Not to Exceed $78,000

Action Requested:
It is requested the Board authorize the District Manager to negotiate and execute a contract for the purchase of one (1) four-wheel drive Toyota Tundra Hybrid and associated modifications and equipment not to exceed $78,000.

Fiscal Analysis:
All expenditures associated with this item for the fiscal year are in the approved FY24 budget for vehicle purchases. Funding for this purchase is accommodated through both a Nevada Department of Transportation (NDOT) §5339 grant and through California Transportation Development Act (TDA) funds.

Work Program Impact:
All work associated with this effort is captured under respective elements of the approved FY24 Work Program with corresponding allotted staff time as part of transit operations. This project aligns with Strategic Goal SG-3: Increase the connectivity and reliability of a regional multi-modal transit system around the Basin.

Background:
Periodically, TTD must replace non-revenue vehicles that have reached or exceeded their useful life. TTD staff have identified a need to replace a non-revenue vehicle for transit operations. Vehicle 1001 is a 2014 Chevrolet Equinox with over 100,000 miles. Typically, non-revenue vehicles are replaced after five years in concurrence with TTD's adopted Transit Asset Management (TAM) Plan. However, the Equinox continued to perform well past its useful life. Within the last few years, wear and tear on the vehicle has degraded its utility, comfort, and serviceability. Funding was identified in NDOT 5339 FY23 capital grant and programmed for this purpose.

Discussion:
Operations staff requested the small Equinox be replaced with a full size, four wheel drive pick-up truck to enhance the flexibility of the vehicle and accommodate larger and/or soiled items. Staff identified a full-size, four wheel drive pick-up truck with the cleanest practical propulsion technology.

GF/ja AGENDA ITEM: VIII.C.

Due to the old and obsolete electrical infrastructure at TTD's leased Shop Street corporation yard, a fully electric vehicle is not practical as charging would have to be accomplished offsite at a retail charger. A gasoline-electric hybrid drive is the least polluting and cleanest practical propulsion technology.

Staff received two quotes for a full-size hybrid four wheel drive pick-up truck. One from Carson City Toyota in the amount of $76,825.17. The other from Capitol Ford in the amount of $85,017.75. Staff queried but did not receive a quote from Michael Hohl Chevrolet or Carson City Dodge.

Staff is recommending that TTD purchase the Toyota Tundra from Carson City Toyota as the best value for TTD.

Staff will complete the preparation of a full procurement package and finalize all pricing details. The vehicle and accessories are priced at $74,530.17, with an added Toyota Extended Warranty of 7 years/100,000 miles with a zero deductible for an additional $2,295.00. The total price of the vehicle, accessories, and extended warranty is quoted at $76,825.17. Staff is recommending a not-to-exceed amount of $78,000 to accommodate any minor fluctuations in configurations and/or fees.

The Toyota Tundra is manufactured at Toyota Motor Manufacturing, San Antonio, Texas, (TMMTX). The engine parts are assembled at Toyota Motor Manufacturing, Alabama (TMMAL).

Additional Information:
If you have any questions or comments regarding this item, please contact George Fink at (775) 589-5325 or gfink@tahoetransportation.org.

Attachment:
A. Draft Purchase Order Agreement

GF/ja AGENDA ITEM: VIII.C.

PURCHASE ORDER AGREEMENT
P.O. # _____

This Purchase Order Agreement ("Purchase Agreement") is made and entered into on this _____ day of April, 2024 (the "Effective Date") by and between Carson City Toyota ("Vendor"), and Tahoe Transportation District, a bi-state special purpose district created by the Tahoe Regional Planning Compact ("District"). District and Vendor are sometimes referred to hereinafter individually as "Party" and collectively as "Parties."

RECITALS

A. District has sought, by small purchase procedures, the goods defined and described more particularly in Section 1 of this Purchase Agreement.

B. Vendor submitted a quote for the goods sought by District, and was selected by the District to provide those goods.

C. District now desires to purchase the goods from Vendor pursuant to the terms and conditions of this Purchase Agreement.

OPERATIVE PROVISIONS

NOW, THEREFORE, in consideration of the faithful performance of the terms and conditions set forth in this Purchase Agreement, the Parties hereto agree as follows:

1. **PURCHASE OF GOODS**. The District agrees to purchase, and Vendor agrees to sell, the goods ("Goods") described in Exhibit "A" hereto and incorporated herein by this reference. There shall be no substitution of Goods without the prior written authorization of the District.

2. **DELIVERY**. The Goods must be shipped and must arrive at the destination specified in this section by [DATE] ("Required Delivery Date"). Any failure by the Vendor to meet the Required Delivery Date will constitute a material default of this Purchase Agreement and the District may cancel any Goods not delivered in a timely manner without liability. The Vendor must notify the District immediately if the Vendor reasonably believes the Vendor will not be able to meet the Required Delivery Date for any reason and provide the District with a schedule that the Vendor reasonably believes it will be able to meet. It is within the District's discretion whether it will accept the revised schedule. All Goods shall be delivered to the following location, unless otherwise specified by the District:

Carson City Toyota
2590 S. Carson Street
Carson City, NV 89701

3. **PURCHASE PRICE**. The purchase price for the Goods shall be Seventy-Six Thousand, Eight Hundred Twenty-Five dollars and Seventeen cents ($76,825.17). An invoice must be mailed to the District at the P.O. Box 499, Zephyr Cove, NV 89448 no later than the 5th day after receipt and acceptance of the Goods. Invoice must contain the Purchase Order number, description of Goods, unit price, quantities billed, and extended totals. District is a tax-exempt entity. District will issue payment within thirty (30) days of receipt of the Goods listed in the invoice.

4. **CANCELLATION AND TERMINATION**.

a. Either party may terminate this Agreement for cause as follows:

i. The party electing to terminate shall give the other party written notice of termination at least five (5) days prior to the termination date, setting forth very specifically the grounds for termination, the specific provisions of the Agreement that have been violated, and a full statement of the facts surrounding the violation(s).

ii. If the terminated party so elects, the Parties shall meet promptly and make good faith efforts to resolve the violation(s) in a mutually agreeable way.

iii. If any such violation(s) cannot be resolved by the Parties at such meeting, or at any mutually agreed extension(s) of such meeting, the termination shall proceed.

iv. If the violation(s) have not been resolved, the terminating party may proceed with termination, and with retaining other person(s) or entities to provide services, if the terminating party is the District.

b. Either party may terminate the Agreement at any time without cause upon at least thirty (30) days prior written notice to the other party. In the event of any such termination by District, Vendor shall be paid for Goods actually delivered through the date of termination.

5. **DELIVERY; RISK OF LOSS**. All orders will be F.O.B. destination, if not otherwise specified. Risk of loss or damage to the Goods must remain with the Vendor until the Goods have been delivered to and accepted by the District. All Goods and Services will be received by the District subject to its right of inspection, rejection, and revocation of acceptance under the Uniform Commercial Code. The District will be allowed a reasonable period of time to inspect the Goods and to notify Vendor of any nonconformance with the terms and conditions of the specifications. The District may reject any Goods that do not conform to the terms and conditions of this Purchase Agreement. Any Goods rejected may be returned to the Vendor at the Vendor's risk and expense.

6. **PACKING AND SHIPPING**. Deliveries must be made as specified, without charge, for boxing, crating or storage unless otherwise specified in writing by District. Goods must be suitably packed to secure lowest transportation costs and, in accordance with the requirements of common carriers, in a manner to assure against damage from weather or transportation. The District's purchase order number must be plainly marked on all invoices, packages and shipping orders. Packing lists specifying the quantity, description, and purchase order number must accompany each box or packing shipment. The District's count or weight will be final and conclusive on

shipments not accompanied by packing lists. Shipments for two or more destinations when so directed by the District will be shipped in separate boxes or containers for each destination, at no charge.

7. **WARRANTY**. The Vendor warrants that all Goods will conform to applicable specifications, drawings, description, and samples, and will be merchantable, of good workmanship in material, and free from defect. Unless manufactured pursuant to detailed design furnished by the District, the Vendor assumes design responsibility and warrants the Goods to be free from design defect and suitable for the purposes intended by the District, and that such Goods if installed by the Vendor shall conform to applicable specifications. The Vendor's warranties, together with its service guarantees, must run to the District and its customers or users of the Goods and must not be deemed exclusive. The District's inspection, approval, acceptance, use of, and payment for all or any part of the Goods must in no way affect its warranty rights whether or not a breach of warranty had become evident in time.

8. **CHANGES**. The District has the right, by written notice, to change the quantity or specifications of the Goods ordered and the terms of shipment or packaging of Goods. Upon receipt of any notice, the Vendor will proceed promptly to make the changes in accordance with the terms of the notice. If any change causes an increase or decrease in the cost or performance or in the time required for performance, an equitable adjustment must be negotiated promptly and the contract modified in writing accordingly. The Vendor must deliver to the District as promptly as possible, and in any event within 30 days after receipt of change notice, a statement showing the effect of any change in the delivery dates and prices; the statement must be supplemented within 30 days by detailed specification of the amount of the price adjustment and supporting cost figures. The Vendor's failure to submit the statements within the time limits stated will constitute its consent to perform the change without increase in price, without claim for material rendered obsolete and without change in delivery schedules.

9. **NONDISCRIMINATION CLAUSE**: Vendor shall not discriminate, in any way, against any person on the basis of race, color, religious creed, national origin, ancestry, sex, age, physical handicap, medical condition or marital status in connection with or related to the performance of this Purchase Agreement.

10. **INDEMNITY**. Except as to the sole negligence, active negligence or willful misconduct of the District, Vendor shall indemnify and hold the District, and its employees, officers, managers, agents and council members, harmless from any and all loss, damage, claim for damage, liability, expense or cost, including attorneys' fees, which arises out of, or is related to, or is in any manner connected with the Goods provided pursuant this Purchase Agreement and/or the performance of work, activities, operations or duties of Vendor, or anyone employed by or working under Vendor, and from all claims by anyone employed by or working under Vendor for services rendered to Vendor in the performance of this Purchase Agreement, notwithstanding that the District may have benefited from their services. This indemnification provision shall apply to any acts or omissions, willful misconduct or negligent conduct, whether active

or passive, on the part of Vendor or of anyone employed by or working under Vendor. The parties expressly agree that any payment, attorneys' fees, costs or expense that the District incurs or makes to or on behalf of an injured employee under the District's self-administered workers' compensation is included as a loss, expense or cost for the purposes of this Section, and that this Section shall survive the expiration or early termination of the Agreement.

11. **DUTY TO DEFEND**. Vendor agrees, at its cost and expense, to promptly defend the District and the District's employees, officers, managers, agents and council members (collectively the "Parties to be defended") from and against any and all claims, allegations, lawsuits or other legal proceedings which arise out of, or are related to, or are in any manner connected with: (i) the Goods provided pursuant this Purchase Agreement; (ii) allegations that the Goods are defective in manufacture or design; (iii) any patent related to the Goods and (iv) the work, activities, operations, or duties of Vendor, or of anyone employed by or working under the Vendor, or (2) any breach of this Agreement by Vendor. This duty to defend shall apply whether or not such claims, allegations, lawsuits or proceedings have merit or are meritless, or which involve claims or allegations that any of the Parties to be defended were actively, passively or concurrently negligent, or which otherwise assert that the parties to be defended are responsible, in whole or in part, for any loss, damage or injury. Vendor agrees to provide this defense immediately upon written notice from the District, and with well qualified, adequately insured and experienced legal counsel acceptable to the District.

12. **INTERPRETATION**. The terms of this Purchase Agreement should be construed in accordance with the meaning of the language used and should not be construed for or against either party by reason of the authorship of this Purchase Agreement or any other rule of construction that might otherwise apply.

13. **GOVERNING LAW; JURISDICTION**. In the event of litigation between the Parties, venue in state trial courts shall lie exclusively in the County of El Dorado, California where the dispute arises from Goods delivered in California, or shall lie exclusively in the County of Douglas, Nevada where the dispute arises from Goods delivered in Nevada. In the event of litigation in a U.S. District Court, venue shall lie exclusively in the Eastern District of California for Goods delivered in California, or in the District of Nevada for Goods delivered in Nevada.

14. **NONTRANSFERABILITY**. The Vendor may not transfer or assign this Purchase Agreement, without the prior written approval of the District, which may be withheld in his/her sole discretion.

15. **ARTWORK, DESIGNS ETC**. If the Goods are to be produced by Vendor in accordance with designs, drawings or blueprints furnished by District, Vendor shall return same to District upon completion or cancellation of this Purchase Agreement. Such designs and the like shall not be used by Vendor in the production of materials for any third party without District's written consent. Such designs and the like involve valuable property rights of District and shall be held confidential by Vendor.

16. **COMPLIANCE WITH APPLICABLE LAW**. Vendor agrees to comply with all applicable federal, state and local law in connection with the performance of this Purchase Agreement, including the payment of prevailing wage when required.

17. **INTEGRATION; AMENDMENT**. This Purchase Agreement represents the entire understanding of the District and the Vendor as to those matters contained herein. No prior oral or written understanding will be of any force or effect with respect to the terms of this Purchase Agreement. The Purchase Agreement may not be modified except by Change Order or Addendum to Purchase Agreement.

18. **WAIVER**. The waiver of any term, condition or provision hereof shall not be construed to be a waiver of any other such term, condition or provision, nor shall such waiver be deemed a waiver of a subsequent breach of the same term, condition or provision.

19. **FEDERAL TERMS**. District will be using money received from the federal government to pay all or a part of the purchase price for the Goods. The federal government requires certain clauses to be included in contracts where federal money will be used in the contract. Vendor agrees to adhere to the federally-required provisions included in Exhibit "B" hereto and incorporated herein by reference. If there is a conflict between any provision in Exhibit "B" and the body of this Agreement, Exhibit "B" shall control. In addition, the Federal Highway Administration's Required Contract Clauses for Federal Aid Construction Projects (FHWA Form 1273, revised May 1, 2012; https://www.fhwa.dot.gov/programadmin/contracts/1273/1273.pdf) is incorporated by reference herein.

[SIGNATURE PAGE FOLLOWS]

IN WITNESS WHEREOF, District and Vendor have executed this Agreement as of the Effective Date.

"DISTRICT"
TAHOE TRANSPORTATION DISTRICT

_____
Carl Hasty, District Manager

ATTEST:

_____
Judi Allen, Clerk of the Board

"VENDOR"
CARSON CITY TOYOTA

By: _____

Name:_____

Title:_____

EXHIBIT "A"

GOODS

B.

TOYOTA

Carson City Toyota
2590 South Carson Street
Carson City NV 89701
775-882-8211

2024 Tundra i-FORCE MAX

Tundra 1794 Edition

Model: 2024 Tundra 1794 Edition i-FORCE MAX 3.4-Liter Turbo V6 4-Wheel Drive 8423A
VIN: 5TFMC5DB1RX070192
Stock: 68808
Engine: i-FORCE MAX V6 Hybrid Engine
Transmission: 10-Speed Electronically Controlled automatic Transmission with intelligence (ECT-i) and sequential shift mode

EXTERIOR
Blueprint

INTERIOR
Saddle Tan Leather-trimmed

PRICE

Base MSRP *	$69,405.00
Factory Installed Packages & Accessories	$600.00
Delivery Processing and Handling	$1,850.00
Total Suggested Retail Price	$71,855.00

FUEL ECONOMY

20 MPG Combined City/Hwy
19 MPG City
22 MPG Highway

INSTALLED PACKAGES & ACCESSORIES

50 State Emissions	FIO	$0.00
Head-Up Display 10-in. color Head-Up Display (HUD).	FIO	$600.00
1794 Edition Grade Package 1794 Edition Grade Package—includes all content included as standard equipment.	FIO	$0.00
PVM + BSM Outer Mirrors Heated power outside mirrors (chrome) with blind spot mirrors, Panoramic View Monitor (PVM), and LED turn signals.	FIO	$0.00
Total Optional Equipment		$600.00
Vehicle Base Model		$69,405.00
Delivery Processing and Handling		$1,850.00

PRICE INCLUDES 2 YEARS OR 25,000 MILE SERVICE MAINTENANCE AT NO CHARGE

FEATURES

Mechanical & Performance

- Ignition System: Conventional 12V starter
- Intake: Twin turbochargers with electric wastegate valve actuators and water-cooled intercooler
- Towing: Class-IV towing hitch receiver and wiring harness with 7-pin/4-pin connector
- Towing: Trailer Backup Guide system with Straight Path Assist (SPA)
- Fuel System: D-4ST direct-injection and port-injection fuel system
- Valvetrain: 24-valve DOHC aluminum cylinder heads with Dual Variable Valve Timing with intelligence (VVT-i); 3445 c.c. aluminum engine block, 85.5 x 100 (mm.) bore x stroke, 10.4:1 compression ratio
- Towing: Integrated Trailer Brake Controller (ITBC) with Multi-

CARSON CITY TOYOTA
CAMPAGNI AUTO GROUP
2590 S. CARSON ST. CARSON CITY, NV 89701 CARSONCITYTOYOTA.COM 775-882-8211

March 20th ,2024

Please accept this Quote for
One 2024 Toyota Tundra 1794 Edition Crew Max 4x4
Hybrid/Gas
Model 8423
Color Blueprint

Price	$ 70,855.00
State Title Fee	$ 28.25
Total	$ 70,883.25
Bed Mat	$ 179.00
4 Steel Wheels with tire sensor	$ 1,074.92
TRD skid Plate Installed	$ 749.00
Aftermarket Lumber Rack Installed	$ 445.00
Black Weather Guard	$ 1.199.00
Toyota Extended Warranty	$ 2,295.00
Total	$ 76,825.17

* 7 year or 100,000-mile Toyota factory extended warranty with a zero deductible
* No factory incentives at this time
* Delivered to Reno, Nv.

Thank you for your business,

Dana Whaley

EXHIBIT "B"
FEDERAL PROVISIONS

1. Incorporation of FTA Terms - The following provisions include, in part, certain Standard Terms and Conditions required by DOT, whether or not expressly set forth in the preceding contract provisions. All contractual provisions required by DOT, as set forth in FTA Circular 4220.1F are hereby incorporated by reference. Anything to the contrary herein notwithstanding, all FTA mandated terms shall be deemed to control in the event of a conflict with other provisions contained in this Agreement. The Contractor shall not perform any act, fail to perform any act, or refuse to comply with any District requests which would cause District to be in violation of the FTA terms and conditions.

2. Access to Records. The following access to records requirements apply to this Agreement:
    a. Where the District is the FTA Recipient or a subgrantee of the FTA Recipient in accordance with 49 C. F. R. 18.36(i), the Contractor agrees to provide the District, the FTA Administrator, the Comptroller General of the United States or any of their authorized representatives access to any books, documents, papers and records of the Contractor which are directly pertinent to this contract for the purposes of making audits, examinations, excerpts and transcriptions. Contractor also agrees, pursuant to 49 C. F. R. 633.17 to provide the FTA Administrator or his authorized representatives including any PMO Contractor access to Contractor's records and construction sites pertaining to a major capital project, defined at 49 U.S.C. 5302(a)1, which is receiving federal financial assistance through the programs described at 49 U.S.C. 5307, 5309 or 5311.
    b. The Contractor agrees to permit any of the foregoing parties to reproduce by any means whatsoever or to copy excerpts and transcriptions as reasonably needed.
    c. The Contractor agrees to maintain all books, records, accounts and reports required under this contract for a period of not less than three years after the date of termination or expiration of this contract, except in the event of litigation or settlement of claims arising from the performance of this contract, in which case Contractor agrees to maintain same until the District, the FTA Administrator, the Comptroller General, or any of their duly authorized representatives, have disposed of all such litigation, appeals, claims or exceptions related thereto. Reference 49 CFR 18.39(i)(11).

3. Civil Rights.
    a. *Nondiscrimination* - In accordance with Title VI of the Civil Rights Act, as amended, 42 U.S.C. § 2000d, section 303 of the Age Discrimination Act of 1975, as amended, 42 U.S.C. § 6102, section 202 of the Americans with Disabilities Act of 1990, 42 U.S.C. § 12132, and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees that it will not discriminate against any

employee or applicant for employment because of race, color, creed, national origin, sex, age, or disability. In addition, the Contractor agrees to comply with applicable Federal implementing regulations and other implementing requirements FTA may issue.

b. *Equal Employment Opportunity* - The following equal employment opportunity requirements apply to the Agreement:
    i. Race, Color, Creed, National Origin, Sex - In accordance with Title VII of the Civil Rights Act, as amended, 42 U.S.C. § 2000e, and Federal transit laws at 49 U.S.C. § 5332, the Contractor agrees to comply with all applicable equal employment opportunity requirements of U.S. Department of Labor (U.S. DOL) regulations, "Office of Federal Contract Compliance Programs, Equal Employment Opportunity, Department of Labor," 41 C.F.R. Parts 60 et seq ., (which implement Executive Order No. 11246, "Equal Employment Opportunity," as amended by Executive Order No. 11375, "Amending Executive Order 11246 Relating to Equal Employment Opportunity," 42 U.S.C. § 2000e note), and with any applicable Federal statutes, executive orders, regulations, and Federal policies that may in the future affect construction activities undertaken in the course of the Project. The Contractor agrees to take affirmative action to ensure that applicants are employed, and that employees are treated during employment, without regard to their race, color, creed, national origin, sex, or age. Such action shall include, but not be limited to, the following: employment, upgrading, demotion or transfer, recruitment or recruitment advertising, layoff or termination; rates of pay or other forms of compensation; and selection for training, including apprenticeship. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.
    ii. Age - In accordance with section 4 of the Age Discrimination in Employment Act of 1967, as amended, 29 U.S.C. § § 623 and Federal transit law at 49 U.S.C. § 5332, the Contractor agrees to refrain from discrimination against present and prospective employees for reason of age. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.
    iii. Disabilities - In accordance with section 102 of the Americans with Disabilities Act, as amended, 42 U.S.C. § 12112, the Contractor agrees that it will comply with the requirements of U.S. Equal Employment Opportunity Commission, "Regulations to Implement the Equal Employment Provisions of the Americans with Disabilities Act," 29 C.F.R. Part 1630, pertaining to employment of persons with disabilities. In addition, the Contractor agrees to comply with any implementing requirements FTA may issue.

c. The Contractor also agrees to include these requirements in each subcontract financed in whole or in part with Federal assistance provided by FTA, modified only if necessary to identify the affected parties.

4. Disadvantaged Business Enterprises.
   a. This Agreement is subject to the requirements of Title 49, Code of Federal Regulations, Part 26, Participation by Disadvantaged Business Enterprises in Department of Transportation Financial Assistance Programs. The national goal for participation of Disadvantaged Business Enterprises (DBE) is 10%. The District's overall goal for DBE participation is 2.1%. A separate goal has not been established for this procurement.
   b. The Contractor shall not discriminate on the basis of race, color, national origin, or sex in the performance of this Agreement. The Contractor shall carry out applicable requirements of 49 CFR Part 26 in the award and administration of this DOT-assisted contract. Failure by the Contractor to carry out these requirements is a material breach of this Agreement, which may result in the termination of this Agreement or such other remedy as District deems appropriate. Each subcontract the contractor signs with a subcontractor must include the assurance in this paragraph (see 49 CFR 26.13(b)).
   c. [Contractor will be required to report its DBE participation obtained through race-neutral means throughout the period of performance of this Agreement.
   d. Contractor is required to pay its subcontractors performing work related to this Agreement for satisfactory performance of that work no later than 30 days after the Contractor's receipt of payment for that work from the District. In addition, the Contractor [may not hold retainage from its subcontractors.
   e. The Contractor must promptly notify District whenever a DBE subcontractor performing work related to this Agreement is terminated or fails to complete its work, and must make good faith efforts to engage another DBE subcontractor to perform at least the same amount of work. The Contractor may not terminate any DBE subcontractor and perform that work through its own forces or those of an affiliate without prior written consent of District.

5. Energy Conservation - The Contractor agrees to comply with mandatory standards and policies relating to energy efficiency which are contained in the state energy conservation plan issued in compliance with the Energy Policy and Conservation Act.

6. Federal Changes – Contractor shall at all times comply with all applicable FTA regulations, policies, procedures and directives, including without limitation those listed directly or by reference in the Master Agreement between District and FTA, as they may be amended or promulgated from time to time during the term of this contract. Contractor's failure to so comply shall constitute a material breach of this Agreement.

7. No Obligation By The Federal Government
    a. The District and Contractor acknowledge and agree that, notwithstanding any concurrence by the Federal Government in or approval of the solicitation or award of the Agreement, absent the express written consent by the Federal Government, the Federal Government is not a party to this Agreement and shall not be subject to any obligations or liabilities to the District, Contractor, or any other party (whether or not a party to that Agreement) pertaining to any matter resulting from the Agreement.
    b. The Contractor agrees to include the above clause in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clause shall not be modified, except to identify the subcontractor who will be subject to its provisions.

8. Program Fraud and False or Fraudulent Statements or Related Acts.
    a. The Contractor acknowledges that the provisions of the Program Fraud Civil Remedies Act of 1986, as amended, 31 U.S.C. § § 3801 et seq. and U.S. DOT regulations, "Program Fraud Civil Remedies," 49 C.F.R. Part 31, apply to its actions pertaining to this Project. Upon execution of the Agreement, the Contractor certifies or affirms the truthfulness and accuracy of any statement it has made, it makes, it may make, or causes to be made, pertaining to the Agreement or the FTA assisted project for which the Services are being performed. In addition to other penalties that may be applicable, the Contractor further acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification, the Federal Government reserves the right to impose the penalties of the Program Fraud Civil Remedies Act of 1986 on the Contractor to the extent the Federal Government deems appropriate.
    b. The Contractor also acknowledges that if it makes, or causes to be made, a false, fictitious, or fraudulent claim, statement, submission, or certification to the Federal Government under a contract connected with a project that is financed in whole or in part with Federal assistance originally awarded by FTA under the authority of 49 U.S.C. § 5307, the Government reserves the right to impose the penalties of 18 U.S.C. § 1001 and 49 U.S.C. § 5307(n)(1) on the Contractor, to the extent the Federal Government deems appropriate.
    c. The Contractor agrees to include the above two clauses in each subcontract financed in whole or in part with Federal assistance provided by FTA. It is further agreed that the clauses shall not be modified, except to identify the subcontractor who will be subject to the provisions.

9. Notification to FTA; Flow Down Requirement – If a current or prospective legal matter that may affect the Federal Government emerges, the Recipient must promptly notify the FTA Chief Counsel and FTA Regional Counsel for the Region in which the Recipient is located. The Recipient must include a similar notification requirement in its Third-Party Agreements and must require each Third Party

Participant to include an equivalent provision in its sub agreements at every tier, for any agreement that is a "covered transaction" according to 2 C.F.R. §§ 180.220 and 1200.220.

(1) The types of legal matters that require notification include, but are not limited to, a major dispute, breach, default, litigation, or naming the Federal Government as a party to litigation or a legal disagreement in any forum for any reason.

(2) Matters that may affect the Federal Government include, but are not limited to, the Federal Government's interests in the Award, the accompanying Underlying Agreement, and any Amendments thereto, or the Federal Government's administration or enforcement of federal laws, regulations, and requirements.

(3) *Additional Notice to U.S. DOT Inspector General*. The Recipient must promptly notify the U.S. DOT Inspector General in addition to the FTA Chief Counsel or Regional Counsel for the Region in which the Recipient is located, if the Recipient has knowledge of potential fraud, waste, or abuse occurring on a Project receiving assistance from FTA. The notification provision applies if a person has or may have submitted a false claim under the False Claims Act, 31 U.S.C. § 3729, et seq., or has or may have committed a criminal or civil violation of law pertaining to such matters as fraud, conflict of interest, bid rigging, misappropriation or embezzlement, bribery, gratuity, or similar misconduct involving federal assistance. This responsibility occurs whether the Project is subject to this Agreement or another agreement between the Recipient and FTA, or an agreement involving a principal, officer, employee, agent, or Third-Party Participant of the Recipient. It also applies to subcontractors at any tier. Knowledge, as used in this paragraph, includes, but is not limited to, knowledge of a criminal or civil investigation by a Federal, state, or local law enforcement or other investigative agency, a criminal indictment or civil complaint, or probable cause that could support a criminal indictment, or any other credible information in the possession of the Recipient. In this paragraph, "promptly" means to refer information without delay and without change. This notification provision applies to all divisions of the Recipient, including divisions tasked with law enforcement or investigatory functions.

10. Seat Belt Use. The Recipient agrees to implement Executive Order No. 13043, "Increasing Seat Belt Use in the United States," April 16, 1997, 23 U.S.C. § 402 note, (62 Fed. Reg. 19217), by: (1) Adopting and promoting on-the-job seat belt use policies and programs for its employees and other personnel that operate company-owned vehicles, company-rented vehicles, or personally operated vehicles; and

    (2) Including a "Seat Belt Use" provision in each third party agreement related to the Award.

11. Distracted Driving, Including Text Messaging While Driving – The Recipient agrees to comply with: (1) Executive Order No. 13513, "Federal Leadership on

Reducing Text Messaging While Driving," October 1, 2009, 23 U.S.C. § 402 note, (74 Fed. Reg. 51225);

(2) U.S. DOT Order 3902.10, "Text Messaging While Driving," December 30, 2009; and

(3) The following U.S. DOT Special Provision pertaining to Distracted Driving: (i) *Safety*. The Recipient agrees to adopt and enforce workplace safety policies to decrease crashes caused by distracted drivers, including policies to ban text messaging while using an electronic device supplied by an employer, and driving a vehicle the driver owns or rents, a vehicle Recipient owns, leases, or rents, or a privately-owned vehicle when on official business in connection with the Award, or when performing any work for or on behalf of the Award;

(ii) *Recipient Size*. The Recipient agrees to conduct workplace safety initiatives in a manner commensurate with its size, such as establishing new rules and programs to prohibit text messaging while driving, re-evaluating the existing programs to prohibit text messaging while driving, and providing education, awareness, and other outreach to employees about the safety risks associated with texting while driving; and

(iii) *Extension of Provision*. The Recipient agrees to include the preceding Special Provision of section 34(b)(3)(i) – (ii) of this Master Agreement in its third party agreements, and encourage its Third Party Participants to comply with this Special Provision, and include this Special Provision in each third party sub agreement at each tier supported with federal assistance.

12. Suspension and Debarment
    a. This Agreement is a covered transaction for purposes of 49 CFR Part 29. As such, the Contractor is required to verify that none of the Contractor, its principals, as defined at 49 CFR 29.995, or affiliates, as defined at 49 CFR 29.905, are excluded or disqualified as defined at 49 CFR 29.940 and 29.945.
    b. The Contractor is required to comply with 49 CFR 29, Subpart C and must include the requirement to comply with 49 CFR 29, Subpart C in any lower tier covered transaction it enters into.
    c. By signing this Agreement, the Contractor certifies as follows: The certification in this clause is a material representation of fact relied upon by District. If it is later determined that the Contractor knowingly rendered an erroneous certification, in addition to remedies available to District, the Federal Government may pursue available remedies, including but not limited to suspension and/or debarment. The Contractor agrees to comply with the requirements of 49 CFR 29, Subpart C while this offer is valid and throughout the term of this Agreement. The Contractor further agrees to include a provision requiring such compliance in its lower tier covered transactions.

Tahoe Transportation DISTRICT

Connecting our communities

MEMORANDUM

Date: March 27, 2024

To: Tahoe Transportation District (TTD) Board of Directors

From: TTD Staff – Joanie Schmitt, CFO

Subject: Review and Discussion of TTD's Five-Year Budget Revenues and Expenses Projections for Fiscal Year 2025 through Fiscal Year 2029 as They Relate to Current and Future Operations and Decision Making

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Action Requested:
It is requested the Board review and discuss TTD's five-year budget projections for fiscal year 2025 through fiscal year 2029 (FY25-FY29) (Attachment A) as they relate to transit, capital projects, short and mid-term strategic goals, and needed actions.

Fiscal Analysis:
The General Fund is projecting a 5.7% gain of $36,202 for FY25 and then larger gains for FY26 through FY29, predicated on receiving a budgetary amount of $670,000 annually from the State of California. California budget support for TTD's General Fund would allow TTD to reduce the Transit Operations Fund administrative support and allocate more of the District Manager and Deputy District Manager personnel costs to the General Fund. If California budget support is unsuccessful, Staff suggest reinstating the administrative support (ICAP) from the transit operations fund to bring an increase to the General Fund balance targeting four percent (4%) of total expenses.

The Capital Improvement Program (CIP) Fund is projecting a modest gain resulting from interest earned on project advances of $770 for FY25. CIP, including Transit Capital Program, revenue sources are based on grant reimbursement, meaning the expense is incurred, paid, and then submitted for reimbursement, netting the CIP fund balance increase/decrease of $0.

Transit Operations five-year budgets are based on current service; along with adding Route 50 thirty-minute headways, based on meeting staffing requirements, maintaining current funding levels for FY25 through FY27, and with California SB125 funding of $500,000 for both FY25 and FY26. The thirty-minute headways has been a request of transit interests at the south shore and proposed for the adopted solution in the Short-Range Transit Plan (SRTP). Staff currently project cash flow issues in FY27 and cash shortages of $3 million for FY28 and $3.3 million in FY29.

Currently, TTD is expending a little more than two annual Federal Transit Administration (FTA) 5307 allocations, averaging $1.5 million for operations and administrative expenses per year. Under this increased service scenario, it will grow to three annual allocations in FY27. The $6 million of CARES and ARP revenues (now exhausted) allowed TTD to save the FTA 5307 annual allocations during COVID. TTD has been successful in receiving Congestion Management Air Quality (CMAQ) funding

that was converted to FTA Section 5307 urban funds; again delaying transit funding issues, which are now forecasted for FY28.

To compound cash flow matters, FTA typically does not issue the allocation amounts until a full federal fiscal year budget has been passed. With Continuing Resolutions being the norm versus the exception, current expectations are TTD will be notified in the last quarter of our fiscal year of the allocation amounts. Applications are then submitted with the funds being available in June or July. So, the entire allocation will be drawn down at once. Annual Transit Development Act (TDA) funding from California is typically received beginning in February with final payments received in October of the following fiscal year. The unrestricted reserve is currently at $2.5 million, which is needed for three months cash flow for transit operations and for maintaining the set aside to meet Self Insurance Retention targets.

For transit operations, the budget projections show an unsustainable transit service situation, similar to pre-Covid operating projections. In short costs, continue to rise, especially with desired service levels, yet revenues are not increasing. To stay in line with TTD's policy of not spending more than what is available, changes will need to be implemented. Choices include maintaining current one-hour headways and deferring the issue a little further in the future; arrive at some near term additional revenue solutions; future service reductions; or some combination of these solutions, if not other ideas. This reality has significant bearing on the SRTP, and with current discussions with South Tahoe stakeholders on the future of transit service and what is desired in terms of service and service providers. Aspirations and sustained revenue streams do not line up at this time. The topic should be part of the Board's short and mid-term goal discussion as it is a key element to establishing sustained transit service capability.

Five-year budgets are somewhat deceptive, as Other Funding Sources and Depreciation can result in a reader losing perspective on the projected increase/decrease to the fund balance. A Transit Operations cash flow report (Attachment B) is provided to help guide a clearer understanding of what's happening between revenues and expenses.

On another operations matter, the Parking Systems (PS) Fund records the financial activity resulting from parking facilities along the Nevada SR28 corridor. This revenue, less operating expenses and administrative and overhead fees, is reserved for the long-term maintenance and capital improvements of the facilities and bike path throughout the corridor. TTD is expecting to add four additional parking lots between FY26 and FY28: Chimney Beach, North Parking Lot, Secret Harbor, and Spooner Mobility Hub. Each lot will require multiple parking meters that will be purchased and depreciated over the life of the meter (five years). Staff have budgeted for the purchase of a four-wheel or all-wheel drive vehicle, along with a license plate reader that will be mounted on the vehicle to enforce non-compliance parking. These assets will be funded with proceeds from the parking lots adjacent to the old Ponderosa at 66% and Chimney Beach at 34% in FY26. Shared costs of the operational lots will be split which include personnel (Parking Ambassadors), fuel, and insurance. The Spooner Mobility Hub is expected to be open in FY26. However, Staff do not feel it will be cost effective to enforce non-compliance, until all lots are operational and there is transit service throughout the corridor, which is anticipated in FY28. Potential winter operations for the Spooner Mobility Hub will be determined by US Forest Service, depending on their winter recreational plan. Staff assumed winter operations for the mobility hub will be on-line in FY26 and operated by a concessionaire.

The program continues to generate reserves for future capital needs like slurry sealing the bike trail, as well as sealing and striping of the parking lots. The SR28 Corridor Management Team has reviewed these five-year budgets and are now vetting operational costs. It should be noted that the SR28 Corridor Management Team also reviewed the FY25 PS Budget and recommended approval.

Background:
Budgets are an estimation of revenue and expenses over a specific future period that is re-evaluated on a periodic basis. Budgets are beneficial for several reasons, but mainly to ensure that TTD can meet commitments, obligations, and anticipated needs in a strategic, fiscally sound matter, along with preparing for emergencies.

Discussion:
General Fund –
The main assumption for the General Fund is projecting the State of California will budgetarily contribute $670,000 annually, beginning in FY26. TTD has been successful in securing $330,000 annually from the State of Nevada via TRPA's biennial budget request (which TTD is assuming will continue). So, in a like manner, TTD will request TRPA to increase their annual California request by $670,000 bringing a one-third, two-thirds balance between states.

Other assumptions include Local Revenues will be received at the current funding levels for FY25 and then reduced to only Douglas County's contribution thereafter.

Administrative Fee Revenues will increase as SR 28 corridor parking lots come on-line.

Personnel costs, using TTD's salary table, include a 4% COLA increase to the table in FY28. More hours are forecasted for the General Fund beginning in FY28.

Most expenses are projected to increase annually between three percent (3%) and seven percent (7%). A few expenses have one-time additions, for example, a website refresh and Board facilitations in Professional Services.

Administrative Support received from the Transit Operations fund will be reduced to $250,000 annually during FY25 through FY27, then reduced to $0 for FY28 and FY29.

CIP Fund –
TTD's Capital Improvement Program (CIP) consists of two programs, Projects and Transit Capital. FY25's budget is presented in the FY25 work program and Staff will give a five-year presentation on the CIP projects program to the Board in June.

The CIP Transit Capital program budgets show the funding sources and equipment projected to be purchased during the next five years. It should be noted that many of the expenses result from several years of aggregated allocations for the purchases. Staff frequently analyzes the list and may add, subtract, and/or delay purchases due to redefined priorities.

Transit equipment purchased in the CIP fund gets transferred (Capital Outlays) to the Transit Operations Fund. Equipment is recorded as a Fixed Asset (anything over $5,000 with a life of over a year) and depreciated over the life of the asset or as an expense Equipment Under $5,000. Capital Outlay is considered an additional revenue source for the Transit Operations Fund.

The Gillig bus purchase of eight buses will be received in FY25 and not split between FY24 and FY25 as presented in February's budget amendment II.

Transit Fund -
The Transit Operations Fund five-year budgets assume the following:

The salary table projecting a 4% COLA increase in FY28.

Personnel costs include five additional Bus Operator positions, increasing bus operator hours to 58,389 for FY25 versus 38,015 budgeted in FY24. Staff are projecting current service plus 30-minute headways for Route 50, provided recruitment goals can be obtained and all projected funding levels remain the same.

Expenses are projected to increase annually between three and ten percent (3% and 10%), except for Administrative Support Fees holding steady at $250,000 and Miscellaneous / Contingency at $50,000 annually.

TTD will continue to receive $1.9 million in TDA funding annually.

Parking System (PS) Fund-
The Parking Systems Fund five-year budgets assume the following:

Meter Revenue is collected between March and November.

Rates for both the Meters (12%) and Non-Compliance ($5,000) will increase every three years due to rising costs.

Most expenses are projected to increase 3.5% annually, fuel increases 5% annually, and personnel costs increase based on TTD's grade and step table.

Slurry seal and striping on parking lots will be scheduled every two to three years.

The path will be slurry sealed every five years.

Additional Information:
If you have any questions or comments regarding this item, please contact Joanie Schmitt at (775) 589-5507 or jschmitt@tahoetransportation.org.

Attachment:
A. TTD Five-Year Budgets including Transit Operations (TO) Cash Flow

Tahoe Transportation District
General Fund Budgets
FY25 - FY29

	FY25	FY26	FY27	FY28	FY29
General Fund Revenues					
State Revenues	330,000	1,000,000	1,000,000	1,000,000	1,000,000
Local Revenues	175,000	50,000	50,000	50,000	50,000
Administrative Fees	49,554	102,000	120,500	158,560	172,948
RCMF	85,000	85,000	85,000	85,000	85,000
Other Revenues	34,500	36,000	39,000	37,000	35,000
Total General Fund Revenues	674,054	1,273,000	1,294,500	1,330,560	1,342,948
General Fund Expenses					
Personnel	587,903	613,331	640,245	761,926	782,238
Administrative Support	(301,709)	(300,000)	(300,000)	(50,000)	(50,000)
Professional Services	97,385	120,950	140,020	119,320	123,860
Other	254,273	239,358	246,808	256,628	268,858
Total General Fund Expenses	637,852	673,639	727,073	1,087,874	1,124,956
Increase / (Decrease) to Fund Balance	**36,202**	**599,361**	**567,427**	**242,686**	**217,992**

Tahoe Transportation District
Capital Improvement Program Budgets
Transit Capital Only
FY25 - FY29

	FY25	FY26	FY27	FY28	FY29
CIP - Transit Capital Revenues					
FTA 5339	7,040,792	178,211	197,300	208,000	45,400
FTA 5310	70,570	0	0	0	0
TDA (Other Funding Source)	878,230	1,800	25,200	140,000	7,600
SB 125 (Predicated on Receiving Funds)	51,544	1,438,456	1,490,000	0	0
Total CIP Transit Capital Revenues	8,041,136	1,618,467	1,712,500	348,000	53,000
CIP - Transit Capital Expenses					
Rolling Stock (Buses, Passenger Vans, Non-Revenue Vehicle)	7,719,295	1,588,456	1,490,000	100,000	0
Facility Improvements (Bus Stops)	127,000	0	0	0	0
Equipment (Includes Skid Steer, Bus Wash Systems, Shelters, Lifts, Bear Boxes, etc.)	194,841	30,011	222,500	248,000	53,000
Total CIP Transit Capital Expenses	8,041,136	1,618,467	1,712,500	348,000	53,000
Increase / (Decrease) to CIP Fund Balance	**0**	**0**	**0**	**0**	**0**

Tahoe Transportation District
Transit Operations Fund Budget
FY25 - FY29

	FY25	FY26	FY27	FY28	FY29
TO Revenues					
FTA Grants	5,919,379	6,354,988	7,035,835	4,940,754	4,779,009
TDA	1,900,000	1,900,000	1,900,000	1,900,000	1,900,000
CA SB 125	500,000	500,000	0	0	0
Low Carbon Transit Operations Program	279,000	0	279,000	0	279,000
Other Revenue	127,620	110,120	95,120	95,120	97,620
Total TO Revenue	8,725,999	8,865,108	9,309,955	6,935,874	7,055,629
TO Expenses					
Personnel	5,612,468	5,854,921	6,078,979	6,521,581	6,769,051
Other Operating Expenses, incl. depreciation	4,056,959	4,445,541	4,779,879	4,901,636	5,140,050
Total TO Expenses	9,669,427	10,300,462	10,858,858	11,423,217	11,909,101
Other Funding Sources					
Transfers Out (Grant Match)	976,147	215,000	215,000	215,000	215,000
Capital Outlay In (Mainly Fixed Assets)	(7,961,842)	(1,609,467)	(1,710,250)	(345,750)	(53,000)
Total Other Funding Sources	(6,985,695)	(1,394,467)	(1,495,250)	(130,750)	162,000
Increase / (Decrease) to TO Fund Balance	**6,042,267**	**(40,887)**	**(53,653)**	**(4,356,593)**	**(5,015,472)**

Tahoe Transportation District
Parking Systems Budgets
FY25 - FY29

All Parking	**FY25**	**FY26**	**FY27**	**FY28**	**FY29**
	Ponderosa Only	**Add Chimney and SMH**	**Add North Parking Lot**	**Add Secret Harbor**	
Revenues					
Non-Compliance	40,000	79,800	94,800	154,800	172,376
Operations	469,542	834,199	1,004,199	1,324,799	1,437,103
Winter Ops	0	120,000	120,000	120,000	120,000
Total Revenues	509,542	1,033,999	1,218,999	1,599,599	1,729,479
Expenses					
Non-Compliance	59,995	137,706	154,328	198,007	204,464
Operations	289,285	479,691	510,465	1,039,880	1,009,191
Total Expenses	349,280	617,397	664,793	1,237,887	1,213,655
Total Increase / (Decrease)	**160,262**	**416,602**	**554,206**	**361,712**	**515,824**

Tahoe Transportation District
Transit Operations
5-Year Cash Flow Projections
FY25 - FY29

Cash Reconciliation	**FY25**	**FY26**	**FY27**	**FY28**	**FY29**
Cash In - TO Revenues	8,725,999	8,865,108	9,309,955	6,935,874	7,055,629
Cash Out					
Total TO Operating Expenses	9,669,427	10,300,462	10,858,858	11,423,217	11,909,101
Add back Depreciation,Warranties and Equip <$5K (Transferred from CIP)	(1,220,528)	(1,496,591)	(1,764,023)	(1,710,810)	(1,787,504)
Transfers (Grant Match)	976,147	215,000	215,000	215,000	215,000
Total Cash Out	9,425,046	9,018,871	9,309,835	9,927,407	10,336,597
Increase / (Decrease) to Cash prior to Prior Year Restrictions	(699,047)	(153,763)	120	(2,991,533)	(3,280,968)
Prior FY22 and FY24 TDA Cash held as Restricted	726,667	168,883	0	0	0
Increase / (Decrease) to Cash	**27,620**	**15,120**	**120**	**(2,991,533)**	**(3,280,968)**

Cash Flow Needs $2.3 Million (3 Months and Self Insurance Retention)
Unrestricted $2.7 Million

Tahoe Transportation DISTRICT

Connecting our communities

MEMORANDUM

Date: March 27, 2024

To: Tahoe Transportation District (TTD) Board of Directors

From: TTD Staff – Joanie Schmitt, CFO

Subject: Review, Discussion, and Approval of the Fiscal Year 2025 Proposed Budget and Work Program

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Action Requested:
It is requested the Board hear the item, discuss the Fiscal Year 2025 (FY25) proposed budgets based on the work program and approve both.

Fiscal Analysis:
The fiscal analysis for the salary comparability item is the basis for the proposed budget for personnel. The balance of the proposed budget addresses operational revenues and expenditures related to Transit Operations (TO), Capital Improvement Projects (CIP), Parking Systems (PS), and the General Fund accounts.

The FY25 proposed budget (Attachment A) totals $19,584,169 in expenses and $25,823,670 in expected revenue.

The following is a recap of FY25 Increase / (Decrease) by Fund

General	$36,202
CIP (Reimb Grant Program)	$770
Transit Operations	$6,042,267
Parking System	$160,262
Government Fund Account	($15,000)
(Reconciling Item to the Governmental Accounts)	

The PS budget was developed with the SR 28 Corridor Management Team (CMT). The CMT has recommended approval of the budget to TTD's Board of Directors. Expenses are projected to total $349,280 for both the Point of Sale (POS) and Non-Compliance programs. Estimated costs to be incurred under POS include operations and maintenance of the parking lots and trail.

Work Program Analysis:
The work program containing the work elements for FY25 can be found in Attachment B. The personnel and hours have been adjusted in the FY25 budget at 62 full-time (39 represented and 23 non-represented). There are a total of 17 part-time and extra-board employees (9 non-

represented part-time and 8 represented extra-board) for a total of 79 at 146,345 work hours for the fiscal year.

The initial appropriation of hours is budgeted as follows and is subject to change if additional funding is received.

Work Element 1	2,984
Work Element 2	6,725
Work Element 3	6,105
Work Element 4	127,104
Work Element 5	499
Work Element 6	2,928
Total Hours for FY25:	146,345

Background:
Staff develops an annual budget to bring to the Board for adoption. The budget is based on the anticipated work program with projected hours, anticipated professional services and contracts, operational projections and anticipated revenues. The budget is developed in accordance with TTD's financial policies, summarized as follows:

Budgeting Policy:

- TTD shall maintain a structurally balanced budget, where revenues equal or exceed expenditures.
- TTD shall prepare an annual budget that is presented to the Board for adoption 60 days prior to the beginning of the fiscal year.
- Budgets will be prepared in accordance with generally accepted accounting principles, using the modified accrual basis of accounting for the governmental funds and full accrual basis of accounting for the proprietary fund(s).
- The level of budgetary control (the level at which expenditures cannot legally exceed the appropriated amount) is established at the fund level.
- The Chief Financial Officer (CFO) shall submit regular operating reports to TTD's Finance Committee, comparing actual revenues and expenditures with budgeted revenues and expenditures.
- Board approval is required for budget revisions that affect the total appropriations of each fund.
- Appropriations lapse at the end of the fiscal year unless they are re-appropriated through the formal budget process.

Discussion:
For FY25, TO has budgeted for twenty-five full-time bus operators and eight extra-board operators for a total of 58,389 hours by utilizing a California SB125 grant. The budget is based on current service, plus 30-minute headways on Route 50. This is predicated on staffing levels being met and maintaining funding revenues. TTD continues to recruit licensed operators, as well as non-CDL operators and provide CDL training for them. TTD has consistently been meeting scheduled services.

On the CIP side, the work program focuses mostly on the SR 28 Corridor projects, Regional Revenue development, the facility site assessment for the Maintenance and Admin facility, US 50 Community Revitalization Project, the Zero Emission Fleet Conversion Plan; Intelligent Sensor Integration Project, and transit capital purchases. All eligible costs incurred, including personnel, will be reimbursed from Federal grants and local match.

The status of the General Fund has begun stabilizing, with the inclusion of $330,000 annually from the State of Nevada biennial budget for FY24 and FY25. Local efforts are budgeted to continue in FY25 at the same funding levels. Costs that can be directly charged to other programs will continue. The 10 percent reimbursement for the Indirect Costs Allocation Plan (ICAP) will continue to be received from the Capital Improvement Program fund and has been discounted to $250,000 from the Transit Fund.

Unfortunately, the state of California has not included a two-thirds match to the Nevada funds for the second year due to budget deficits. TTD will continue pursuing, with TRPA's assistance, $670,000 annual budgetary revenue from the state of California, targeted to begin in FY26. This will result in TTD's General Fund receiving $1 million annually between the two states.

Upon a recommendation of adoption from the Finance and Personnel Committee, Staff is requesting adoption of the FY25 budget and work program.

Additional Information:
If you have any questions or comments regarding this item, please contact Joanie Schmitt at (775) 589-5507 or jschmitt@tahoetransportation.org.

Attachments:
A. Proposed FY25 Work Program Outline
B. Proposed FY25 Budget

Tahoe Transportation District
Proposed FY25 Budget
By Fund Type

	TOTAL	GENERAL	CIP	TO	Parking System (PS)	GFA
Revenues						
Federal Grants	$ 20,341,708	$ -	$ 14,422,329	$ 5,919,379	$ -	$ -
State / Local	4,620,413	505,000	1,346,413	2,769,000		
Contributions	166,051	21,500	144,551			
General Revenues	86,120	86,000		120		
Charges for Services	555,096	49,554		10,000	495,542	
Special Items	54,282	12,000	782	27,500	14,000	
TOTAL REVENUES	**$ 25,823,670**	**$ 674,054**	**$ 15,914,075**	**$ 8,725,999**	**$ 509,542**	**$ -**
Expenses						
Personnel	$ 6,794,085	$ 587,903	$ 499,818	$ 5,612,468	$ 93,896	$ -
Admin Support (ICAP)		(301,709)	51,709	250,000		
Contracts	8,329,710		8,217,660		112,050	
Fuel	446,000			446,000		
Other Operating	2,775,448	334,452	174,629	2,123,033	143,334	15,000
Depreciation & Disposal of Fixed Assets and Warranties	1,143,147			1,143,147		
Capital Outlay	77,381			77,381		
Taxes and Interest*	18,398	1,000		17,398		
TOTAL EXPENSES	**$ 19,584,169**	**$ 621,646**	**$ 8,943,816**	**$ 9,669,427**	**$ 349,280**	**$ 15,000**
Other Funding Sources						
In (Revenues)	$ (8,954,195)	$ -	$ (992,353)	$ (7,961,842)	$ -	$ -
Out (Expenses)	8,954,195	16,206	7,961,842	976,147		
TOTAL OTHER FUNDING SOURCES	$ -	$ 16,206	$ 6,969,489	$ (6,985,695)	$ -	$ -
Increase / (Decrease) to Fund Balance	**$ 6,239,501**	**$ 36,202**	**$ 770**	**$ 6,042,267**	**$ 160,262**	**$ (15,000)**

*** Interest is included in the upcoming TO Detail under Operating Expenses**

Tahoe Transportation District
Proposed FY25 Budget
Personnel Costs

FY 25 Budget	General Fund	US 50	Rec Travel	Stateline to Stateline Bikeway (Parking Lots)	Facility Plan	Intelligent Sensor Integration	TO Capital Program	CIP Total
PERSONNEL								
Salaries & Wages	$ 389,026	$ 39,276	$ 25,278	$ 175,240	$ 73,097	$ 11,046	$ 3,001	$ 326,938
Admin/Vac/Sick	58,130	6,393	4,115	28,528	11,900	1,798	489	53,223
Medicare	6,483	662	426	2,955	1,232	186	51	5,512
SUTA	1,323	135	87	601	254	38	10	1,125
ETT	7	1	1	3	1	0	0	6
Nationwide - SSRP	33,541	3,426	2,205	15,284	6,376	963	262	28,516
FICA	1,729	177	114	788	328	50	13	1,470
Nationwide - Retirement	16,770	1,712	1,102	7,643	3,188	482	131	14,258
Health Insurance	60,080	6,136	3,949	27,375	11,420	1,726	469	51,075
Dental Insurance	3,522	360	232	1,605	669	101	27	2,994
Life/STD Insurance	1,062	109	69	484	202	31	8	903
Vision Care Insurance	662	68	44	302	125	19	5	563
Workers Compensation	15,568	1,590	1,023	7,094	2,960	447	121	13,235
Total Personnel	$ 587,903	$ 60,045	$ 38,645	$ 267,902	$ 111,752	$ 16,887	$ 4,587	$ 499,818

FY 25 Budget	TO	Parking Systems	TOTAL
PERSONNEL			
Salaries & Wages	$ 3,662,039	$ 72,862	$ 4,450,865
Admin/Vac/Sick	582,736	4,393	698,482
Medicare	61,547	1,121	74,663
SUTA	14,512	508	17,468
ETT	504		517
Nationwide - SSRP	113,127	2,354	177,538
FICA	175,501	2,965	181,665
Nationwide - Retirement	97,396	1,176	129,600
Health Insurance	502,757	4,213	618,125
Dental Insurance	12,375	247	19,138
Life/STD Insurance	3,974	74	6,013
Vision Care Insurance	2,495	46	3,766
Workers Compensation	383,505	3,937	416,245
Total Personnel	$ 5,612,468	$ 93,896	$ 6,794,085

Baseline Assumptions

Represented employees:
Currently negotiating with the Union on a new CBA
Details/changes to follow once both sides are in agreement

Non-Represented employees are budgeted to receive a one step increase if eligible, using the Modified Salary Table

Renewal of part-time Civil Engineer, 1040 Hours, $104/hour, no fringe benefits
Wage outside Salary Table - Same terms as FY24 (1 PT)

Represented employees health insurance calculated six months at current rates and six months with 6% increase

Non-Represented employees health insurance calculated five months at current rates and seven months with an 18% increase

Tahoe Transportation District
Proposed FY25 Budget
General Fund

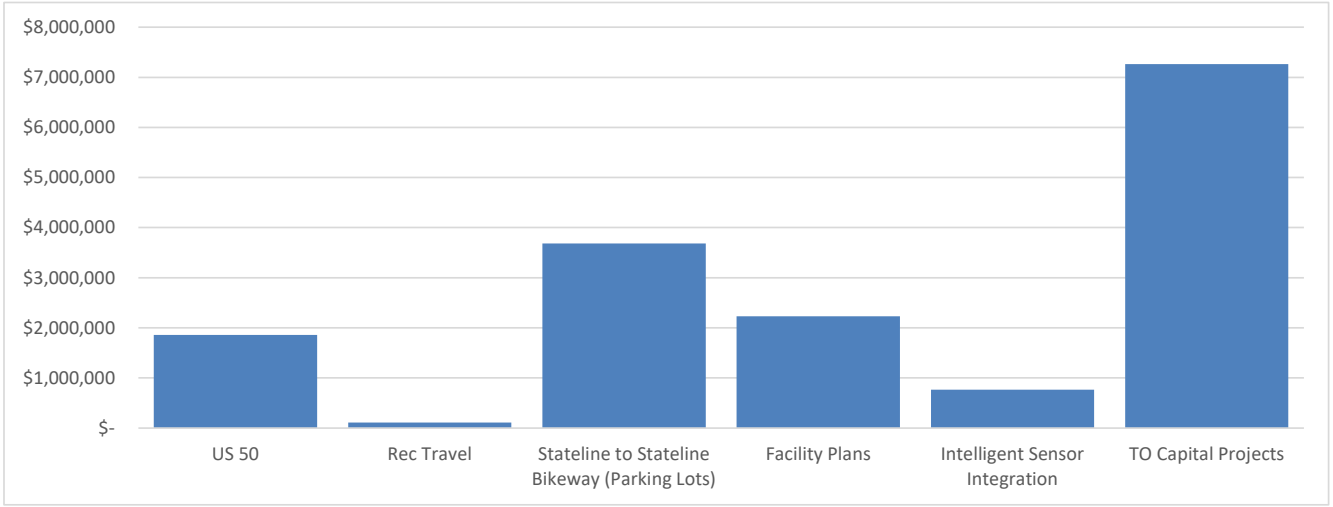
Revenues			**Notes**
State / Local			
Nevada	$	330,000	
Douglas County		50,000	
Washoe County		37,500	
Placer County		52,500	
El Dorado County		30,000	
Carson City		5,000	
Total State / Local Revenue	$	505,000	
Contributions			
STPUD	$	21,500	
General Revenues			
Rental Car Mitigation Fees	$	85,000	
Miscellaneous		1,000	
Total General Revenues	$	86,000	
Charges for Services			
Administrative Fees	$	49,554	10% of PS revenues
Special Items			
Interest Revenue	$	12,000	Interest on savings
Total Revenues	**$**	**674,054**	
Expenses			
Personnel	$	587,903	
Admin Support Fees		(301,709)	Transit Ops $250,000, CIP $51,709
Other Operating Expenses			
Professional Services		34,475	Infinity (IT) $6,000, Wildcreek (financial software) $7,000, High Sierra (copiers) $1,500, background checks $675, Axiom (timekeeping) $3,600, NV work comp $800, Esmart (W2's) $500, misc $14,400
Legal		25,000	
Audit		37,910	
Facility Rent		49,200	TRPA (incl. utilities) $45,600, storage unit $2,100, meeting rooms $1,500
Telephone		15,846	
Supplies		28,300	TRPA $17,100, HR supplies $250, Other $950, Computer Equipment $10,000
Insurance		39,240	ERMA (ELPI) $30,000, Crime $1,200, Cyber $8,040

Tahoe Transportation District
Proposed FY25 Budget
General Fund

Other Operating Expenses Continued			
Advertising & Public Relations		1,500	
Reproduction & Printing		750	
Postage		425	
Dues, Subscriptions & Publications		21,006	
Transit Management - No Shore		20,000	
Training		6,500	
Travel		11,100	Airfare $3,650, per diem $5,500, auto $1,950 (includes 2 trips to DC)
Bank Fees		3,200	
Events		1,500	
Repairs & Maintenance		15,000	NV office front entrance remodel
Miscellaneous Expenses		23,500	Board Members mandatory NV Workers Comp $3,500, contingency $20,000
Total Other Operating Expenses	$	334,452	
Taxes and Interest			
Interest		1,000	LOC Interest
Total Taxes and Interest	$	1,000	
Total Expenses	**$**	**621,646**	
Other Funding Sources - Revenues			
Revenues			
Transfers (In) Revenue	$	-	
Transfers (Out) Expense		16,206	Match for NDOT Rec Travel and Corridor Coordination grants
Total Other Financing Sources	**$**	**16,206**	
Total Expenses and Other Funding Sources	**$**	**637,852**	
Increase /(Decrease) to Fund Balance	**$**	**36,202**	

Tahoe Transportation District
Proposed FY25 Budget
Capital Improvement Program

Funding Source	Total	US 50	Rec Travel	Stateline to Stateline Bikeway (Parking Lots)	Facility Plans	Intelligent Sensor Integration	TO Capital Projects
Revenues							
Federal Grants							
Surface Transportation Block Grant	$ 4,443,240	$ 1,149,489	$ 112,544	$ 2,921,698	$ 259,509		
Highway Infrastructure Program (HIP)	345,655	345,655					
Congestion Mitigation and Air Quality	362,719	362,719					
Infrastructure	90,177			90,177			
Transportation Alternatives Program	490,449			490,449			
US Department of Transportation	768,023					768,023	
US Department of Fish & Wildlife	73,567				73,567		
FTA 5339	7,777,929				737,137		7,040,792
FTA 5310	70,570						70,570
State / Local							
California Sustainable Transportation Planning	105,201				105,201		
California SB125 - Transit and Rapid Rail Pgm	1,091,743				1,040,199		51,544
Washoe County	35,810			35,810			
Douglas County	13,659				13,659		
TDA - State of Good Repair	100,000						100,000
Contributions							
Contributions/Grant Match	144,551			144,551			
Special Item							
Interest on Advances	782			422	360		
Total Capital Grants & Contributions	**$ 15,914,075**	**$ 1,857,863**	**$ 112,544**	**$ 3,683,107**	**$ 2,229,632**	**$ 768,023**	**$ 7,262,906**
	100.00%	11.67%	0.71%	23.14%	14.01%	4.83%	45.64%



Tahoe Transportation District
Proposed FY25 Budget
Capital Improvement Program

	Total	US 50	Rec Travel	Stateline to Stateline Bikeway (Parking Lots)	Facility Plans	Intelligent Sensor Integration	TO Capital Projects
Expenses							
Operating							
Personnel	$ 499,818	$ 60,045	$ 38,645	$ 267,902	$ 111,752	$ 16,887	$ 4,587
Admin Support (ICAP)	51,709	7,722	3,865	26,328	11,226	2,111	457
Contract Services	8,217,660	1,737,978	75,957	3,377,687	2,282,744	743,294	
Professional Services	74,003	21,003					53,000
Other Operating Expenses							
Legal Services	38,382	8,424		11,541	16,917		1,500
Reproduction & Printing	5,397	5,397					
Rent Meeting Room	3,517	1,317		2,200			
Supplies	3,815	665		1,650		1,500	
Advertising / Outreach	14,112	5,512		4,600	4,000		
License & Permits	5,750						5,750
Postage	1,000	1,000					
Training	6,662	1,662					5,000
Travel - Per Diem	9,594	2,788				1,606	5,200
Travel - Airfare	8,992	3,292				2,500	3,200
Travel - Auto	3,393	1,058		1,060	550	125	600
Bank Fees	12				12		
Total Operating Expenses	**$ 8,943,816**	**$ 1,857,863**	**$ 118,467**	**$ 3,692,968**	**$ 2,427,201**	**$ 768,023**	**$ 79,294**
Capital Outlay							
Over $5000	$ 7,884,461	$ -	$ -	$ -	$ -	$ -	$ 7,884,461
Under $5000	77,381						77,381
Reimb Capital Expenses	(7,961,842)						(7,961,842)
Total Capital Outlay	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**	**$ -**
Other Financing Sources (Rev) Exp							
Transfer (In) Out	$ (992,353)	$ -	$ (5,923)	$ (10,283)	$ (197,917)		$ (778,230)
Capital Outlay (In) Out	7,961,842						7,961,842
Total Other Financing Sources	**$ 6,969,489**	**$ -**	**$ (5,923)**	**$ (10,283)**	**$ (197,917)**	**$ -**	**$ 7,183,612**
Total Expenses, Outlay and Other Financing Sources	**$ 15,913,305**	**$ 1,857,863**	**$ 112,544**	**$ 3,682,685**	**$ 2,229,284**	**$ 768,023**	**$ 7,262,906**
Increase / (Decrease) to Fund Balance	$ 770	$ -	$ -	$ 422	$ 348	$ -	$ -

Tahoe Transportation District
Proposed FY25 Budget
Transit Capital Purchases and Transfers

Transit Capital Purchases		Funding Source Detail	Transfer to TO
Four Gillig Hybrid Buses		3,757,956	**3,753,956**
FTA 5339 C - FY23	C8.4	3,400,000	
FTA 5310 - FY17-19	C10.2	35,187	
* FY22 TDA	C8.4	317,225	
** FY25 TDA	C8.4	5,544	
Four Gillig Diesel Bus Purchases (Final Installment)		2,463,444	**2,459,444**
NDOT 5339	C12C	2,080,800	
FTA 5310 - FY23	C10.4	35,383	
* FY22 TDA	C12C	90,415	
* FY24 TDA	C12C	33,710	
** FY25 TDA	C12C	223,136	
Six AWD or 4WD Passenger Vans		821,832	**817,332**
NDOT 5339	C12C	520,200	
FTA 5339 UZA - FY19	C8.9.3	118,509	
FTA 5339 UZA - FY21	C8.9.5	91,323	
* FY24 TDA	C12C	71,000	
** FY25 TDA	C12C	20,800	
Two EV Passenger Vans		624,519	**622,269**
FTA 5339 UZA - FY17	C8.9.1	24,519	
FTA 5339 C - FY19	C8.3	600,000	
Support Equipment - Skid Steer		110,000	**110,000**
FTA 5339 UZA - FY19	C8.9.3	49,460	
FY25 State of Good Repair	C8.9.3	60,540	
Misc Equp - TBD		39,460	**39,460**
FY25 State of Good Repair	C8.9.5	39,460	
Total CIP for Transit and Transfer		**$ 8,041,136**	**$ 7,961,842**

Transit Capital Purchases	Funding Source Detail	Transfer to TO
Four Bus Stop Improvements	82,000	**82,000**
NDOT 5339	65,600	
* FY24 TDA	16,400	
*** EV Equipment FTA 5339 C - FY22	50,750	**45,000**
Bus Stop Sign Replacement	45,000	
Licensing (Syncromatics) IVR-SMS	5,750	
*** Equipment FTA 5339 UZA - FY21	17,381	**17,381**
Three Bear Boxes	5,400	
Shelter Lighting	7,500	
LED Screen and Enclosure	1,500	
Misc Equipment	2,981	
*** EV Equipment FTA 5339 C - FY18	22,250	**15,000**
Insulated Tools	22,250	
EV Microtransit Vans	51,544	0
SB-125	51,544	

***	Transfer to Expense Under $5K	$ 77,381
	Transfer to Fixed Assets	$ 7,884,461
	Total Transfer of Capital Outlay from CIP fund to TO fund	$ 7,961,842

*	Transfers from Transit Ops Restricted (TDA Grant Match)	$ 528,750
**	Transfers from Transit Ops FY25 (TDA Grant Match)	$ 249,480
		$ 778,230

Tahoe Transportation District
Proposed FY25 Budget
Transit Operations Fund

		Operations	
Revenues			
Federal Grants			
FTA 5311	$	1,196,991	Rural - Operations, Administrative, Preventive Maintenance (PM) Expenses
FTA 5307		3,693,438	Urban - Operations, Administrative, Preventive Maintenance (PM) Expenses
FTA 5307 Originally from Congestion Mitigation Air Quality		1,000,000	Urban - Operations & Administrative Expenses
FTA 5310		28,950	Urban - Americans Disability Act - Operation Expenses
Total Federal Grants	$	5,919,379	
State/ Local Funding			
NV State Parks	$	85,000	SR28 summer service
El Dorado County		5,000	Balance of FY24 allocation
TDA - LTF		1,200,000	FY25 final estimates expected by October 2024
TDA - STA		700,000	FY25 final estimates expected by October 2024
CA SB 125		500,000	Microtransit
Low Carbon Transit Operations Program (LCTOP)		279,000	CA program funding every other year
Total State Funding	$	2,769,000	
General Revenues			
Miscellaneous	$	120	
Charges for Services			
Farebox Revenue	$	-	FY25 zero fares
Electrification Credits		10,000	Electrification credit applied to Farebox Recovery
Pass Sales			FY25 zero fares
Total Charges for Services	$	10,000	
Special Items			
Sale of Fixed Asset	$	2,500	
Interest Revenue		25,000	Interest on savings account
Total Special Items	$	27,500	
TOTAL REVENUES	**$**	**8,725,999**	
Operating Expenses			
Personnel	$	5,612,468	
Admin Support (ICAP)	$	250,000	
Fuel - Diesel	$	400,000	Anticipating 30 minute headways
Utility - Electrification		46,000	
Total Fuel/Utility	$	446,000	

Tahoe Transportation District
Proposed FY25 Budget
Transit Operations Fund

		Operations	
Other Operating Expenses, excl Depreciation & Warranties			
Repair and Maintenance	$	559,860	See TO Supplemental Schedule for Detail
Insurance		350,000	
Professional Services		255,250	See TO Supplemental Schedule for Detail
Facility Rent		208,496	Shop St $48,000, CSLT transit centers $147,973, copier $3,300, Middle Elementary School parking lot $8,723, meeting room $500
Facility Utilities		121,000	
Telephone		57,500	
Sales Tax on Fuel		700	
Reproduction & Printing		2,000	
Supplies		62,500	Includes $7,500 for computer equipment
Uniforms		14,250	
Postage		1,500	
Advertising & Public Relations		100,000	$75K Short Range Transit Plan, $25K recruitment
License & Permits		1,500	
Dues, Subscriptions and Publications		1,500	
Subscriptions - Software		37,000	See TO Supplemental Schedule for Detail
Subscriptions - Software Amortization & Interest		162,761	See TO Supplemental Schedule for Detail
* Subscriptions - Software **Interest**		**17,398**	See TO Supplemental Schedule for Detail
Legal Services		30,000	
Travel and Training		57,716	
Bank Fees		7,000	
Events		7,500	
EE Compensated Absences		35,000	
Miscellaneous Expenses		50,000	$5,000 misc expenses, $45,000 contingency
Total Other Operating Prior to Depreciation and Warranty	$	2,140,431	
Depreciation, Warranties and Disposal of Capital Assets	$	1,143,147	
Capital Outlay			
Equipment under $5000	$	77,381	
Other Funding Sources - Revenues			
Capital (In) Out	$	(7,961,842)	See CIP Transit Ops Detail
Transfers (In) Out		976,147	TDA for Capital TO equipment match $778,230, Facility Plan match $197,917
	$	(6,985,695)	
Total Expenses, Outlay and Other Funding Sources	$	2,683,732	
Increase / (Decrease) to Fund Balance	**$**	**6,042,267**	

Tahoe Transportation District
Proposed FY25 Budget
Transit Operations Supplemental Schedule

Repairs & Maintenance	
Maintenance Work Orders	181,000
Outside Contractor	225,000
Off-site Tire Service	15,000
Fluids & Oils	30,000
Consumables	32,000
Delivery	7,000
Core Taxes	60
Other	15,000
Equipment Rental	2,500
Equipment under $5K	30,000
Passenger Amenities	16,000
Write Off	5,000
Write Off from Inventory Sales	2,500
Parts Auction Revenue	(1,200)
Total Repairs & Maintenance	**$ 559,860**

Professional Services	
IT Support	59,122
Misc - Contingency	50,000
Uniform Services	19,075
Snow Removal	15,000
Radio Support	14,128
Lift Repairs	10,965
Short Range Transit Plan	10,000
On Demand Integration (one-time) FY25 only	10,000
Drug Testing	6,281
Background Checks	6,135
Septic Pumping/ Services	6,090
ESE Restrooms	5,800
Timekeeping Support	5,763
Overhead Doors - Shop Street	5,250
ESE Fence Rental Installation	4,200
Bio Hazard Material Pick Up	4,173
Water at Shop St	2,750
Employee Pull Notices	2,640
Copier Repair	2,522
Fire Alarm Monitoring	2,500
Pressure Washer Up-Keep	2,500
Snowblower Repairs	2,500
SREC Trade Fees	2,500
DMV Physicals	1,949
Translation Services	1,135
AC Repairs at Shop Street	1,050
Printing Design	1,050
Scrap Fees	172
Total Professional Services	**$ 255,250**

Software Subscriptions	
Non-Rev Vehicle Maint Tracking Software	4,668
Urban Solar Software - Bus Stop Lighting	10,260
Website Support	7,500
Office 365	6,978
Adobe Licenses	1,176
Domains & Websites	417
Memberships	282
Video Surveillance Subscriptions	435
Payroll Software Licensing	2,957
Anti-Virus Software	1,924
Backup Software	403
Total Software Subscriptions	**$ 37,000**

Amortization & Interest Software Subscriptions	
Transit Mgmt Information System Software, incl training	$ 50,004
Run-Cutting and Bid Development Software Support	36,400
Synchromatics Software	54,396
Paratransit Software	6,759
Transit App Support	9,600
On Demand Micro Integration (on-going support)	18,000
GTFS Integration	5,000
Total Software Subscriptions	**$ 180,159**

Cost per Revenue Hour	
Total Operating (Excl Deprec/Warranties)	8,448,899
Less	
NV State Parks	(85,000)
Electrification Credit Farebox Replacement	(10,000)
Net Expense	8,353,899
Total Revenue Hours	36,544
Total Cost per Rev Mile	**$ 228.60**

Tahoe Transportation District
Proposed FY25 Budget
Parking Management Systems

	Parking Systems Total	Parking Systems Operations	Parking Systems Non Compliance
Revenues			
Charges for Services			
Parking Revenue	$ 455,542	$ 455,542	$ -
Non - Compliance Revenue	40,000		40,000
Total Charges for Services	$ 495,542	$ 455,542	$ 40,000
Special Items			
Interest Revenue	$ 14,000	$ 14,000	$ -
TOTAL REVENUES	**$ 509,542**	**$ 469,542**	**$ 40,000**
Expenses			
Personnel	$ 93,896	$ 48,596	$ 45,300
Contracts	$ 112,050	$ 112,050	$ -
Other Operating			
Professional Services	$ 51,980	$ 46,935	$ 5,045
Legal Services	6,000	3,000	3,000
Telephone	2,000	1,000	1,000
Supplies	2,000	1,000	1,000
License & Permits	200	100	100
Subscriptions	600	300	300
Repairs & Maintenance	2,500	2,500	
Admin Fees	49,554	45,554	4,000
Travel - Auto	500	250	250
Bank Fees / CC Fees	28,000	28,000	
Misc Fees	0		
Total Other Operating	$ 143,334	$ 128,639	$ 14,695
Depreciation and Disposals	$ -	$ -	$ -
TOTAL EXPENSES	**$ 349,280**	**$ 289,285**	**$ 59,995**
Increase /(Decrease) to Fund Balance	**$ 160,262**	**$ 180,257**	**$ (19,995)**

Tahoe Transportation District
Proposed FY25 Budget
Governmental Fund Assets

	GFA Total
Revenues	$ -
Expenses	
EE Compensated Absences	$ 15,000
Depreciation	0
Total Expenses	$ 15,000
Increase / (Decrease) to Fund Balance	**$ (15,000)**

Tahoe Transportation District
Proposed FY25 Budget
By Work Element

WE	Total	General	CIP	Transit Ops	PS	GFA	Hours
1	$ 231,521	$ 231,521	$ -	$ -	$ -	$ -	2,984
2	$ 814,445	634,715		179,730		15,000	6,725
3	$ 8,974,908	14,812	8,746,055	214,041			6,105
4	$ 18,334,149	41,210	8,041,136	10,251,803			127,104
5	$ 135,770	17,303	118,467				499
6	$ 349,280				349,280		2,928
Total	**$ 28,840,073**	**$ 939,561**	**$ 16,905,658**	**$ 10,645,574**	**$ 349,280**	**$ 15,000**	**146,345**
		(1)	(2)	(3)		(4)	

Based on Budgets by Fund (Cover Page)

(1) General Fund Total Expenses (excluding Admin Support) plus Other Funding Sources Expenses

(2) CIP Fund Total Expenses plus Other Funding Sources Expenses

(3) TO Fund Total Expenses plus Other Funding Sources Expense

(4) GFA is a reconciling item on the Governmental Funds (General and CIP) financial statements

EE Breakouts	**Hours**
Represented EE's - 39 Full-time	89,475
Represented EE's - 0 Part-time/8 X-Board	2,600
Non-Represented EE's - 23 Full-time	49,000
Non-Represented EE's - 9 Part-time	5,270
Total Employee Hours	146,345

Total Employees	
Full-time	62
Part-time and X-Board	17
Total	79

FISCAL YEAR 2025 (FY 25) WORK ELEMENTS

WORK ELEMENT 1: TTD ADMINISTRATION AND OUTREACH

1.1 – Board Relations, Policy Meetings, Community Relations
1.2 – Work Program and Budget Development and Management
1.3 – Report/Coordinate with TMPO, State DOTs, FTA, FHWA, Local/Regional Transportation Organizations

WORK ELEMENT 2: PROGRAM MANAGEMENT FOR PROJECTS AND SERVICES

2.2 – Capital Improvement Program Development and Management
2.5 – Fiscal Administration and Controls, Risk Management, Record Keeping
2.7 – Human Resources

WORK ELEMENT 3: TTD PROJECT DEVELOPMENT AND IMPLEMENTATION

3.1 – US 50/South Shore Community Revitalization Project
3.3 – Nevada Stateline to Stateline Bikeway Project
- 3.3.2 – North Demo – Phase II (North Lot Parking)
- 3.3.3 – Central Corridor - Phase III
  - 3.3.3A – Chimney Beach to Secret Harbor
  - 3.3.3B – Sand Harbor to Thunderbird Cove
- 3.3.5 – Crystal Bay to Incline Village Trail

3.4 – SR 89 Fanny Bridge Community Revitalization Project
3.6 – Other Projects
- 3.6.2 – Zero Emissions Fleet Plan
- 3.6.3 – EV Infrastructure

3.11 – Transit Corp Yard Facility Project
- 3.11.1 – Transit Corp Yard Improvements

3.16 – Corridors
- 3.16.3 – SR28 Corridor Coordination

3.17 – Mobility Hubs
- 3.17.1 – Incline Village Mobility Hub Project
- 3.17.2 – Spooner Mobility Hub/EIS Station

3.18 –Transportation Resiliency Infrastructure
- 3.18.5 – Communication/Technology Infrastructure (SMART)

WORK ELEMENT 4: TTD TRANSIT SERVICE AND ASSET MANAGEMENT

4.3 – Manage TTD Assets and Procurement Process
4.7 – Transit System Administration

WORK ELEMENT 5: CAPACITY DEVELOPMENT FOR PROJECTS AND TRANSIT SERVICE

5.1 – State and Local Revenue Development for Transportation Program
- 5.1.2 – State and Local Revenue Development

5.2 – Legislative/ Association Coordination/ Development/ Outreach
5.4 – Tahoe Basin Corridor
- 5.4.1 – Trans-Sierra

WORK ELEMENT 6: TTD PARKING SYSTEMS/FACILITIES OPERATIONS

6.1 – Park Tahoe
- 6.1.1 – Parking Systems
- 6.1.2 – Non-Compliance

** numbering gaps due to completed or inactive projects being removed from list

Tahoe Transportation DISTRICT

Connecting our communities

MEMORANDUM

Date: March 27, 2024

To: Tahoe Transportation District (TTD) Board of Directors

From: TTD Staff – Carl Hasty, District Manager

Subject: Facilitated Strategic Board Work Session II for Short and Mid-Term Priorities to Complete Transit Multi-Modal Connectivity within the Greater Tahoe-Truckee Region from the I-80 to the US 50 Corridors

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Action Requested:
It is requested the Board participate in the second strategic work session related to the Board's direction from the December meeting to work with TRPA and transportation agencies to bring back to the Board a concept for a facilitated discussion vetting a short and mid-term priority outcome. The work addresses a sub-component of the Regional Transportation Plan (RTP) update to be supported by the TTD and Tahoe Regional Planning Agency (TRPA) Boards and associated actions.

Fiscal Analysis:
Funding for staff and consultant time for this work comes from funding for the Short-Range Transit Plan; funding for recreation travel demand, also known by regional revenue; and some general funds.

Work Program Analysis:
Staff's existing work on projects and transit, including studies that are underway for facilities, fleet, and smart technology lend themselves to this topic and are addressed in the work program. In addition, work towards regional revenue is also pertinent and in the work program. Finally, Staff will be participating in TRPA's RTP update effort, which was started in January.

Background:
At the December meeting, the Board discussion included:

1) A review and recap of the adopted strategic goals of TTD, and the status of the committees objectives relevant to the goals;
2) A three to five year strategic objective for TTD aligning with the outcome of the Short Range Transit Plan upcoming decision; and
3) A five to fifteen year strategic goal, targeting the implementation of a transit multi-modal network connecting the region with both the I-80 and US 50 corridors and across the Lake that can become a center piece objective in the next RTP.

CH/ja AGENDA ITEM: IX.C.

The Board heard and discussed a strategic system implementation outcome that would provide the transit multi-modal connection through a series of capital and transit service improvements connecting the greater Tahoe and Truckee region between the I-80 and US 50 corridors. The discussion also centered around the fact that such an outcome will require enough regional consensus to make it possible. And that the leadership support of TTD's and TRPA's Boards to such a mid-term endeavor will be a powerful start to mobilizing regional consensus and implementation, much as what happened with the first generation of the Environmental Improvement Program. An appropriate regional consensus will enable the alignment that is necessary to secure funding, align critical players for implementation, align legislative agendas and efforts to garner the tools and funding support to benefit the Lake, and to focus on key regional elements. The outcome of implementing such a connectivity initiative will provide the greatest benefit to many of the management issues that have been of much discussion of late, such as the management of visitation while still providing access, not overwhelming the region with vehicles, begin management of road congestion, address climate and social equity access, etc.

Staff was directed to bring back to the Board the connectivity concept with enough details to vet for further refinement and to continue to work with TRPA staff and other transportation agency partners through Tahoe Transportation Implementation Committee (TTIC) to address:

1) A short-term and mid-term set of regional priority projects and services
2) Associated cost estimates
3) Preliminary benefit estimates
4) Necessary funding and potential funding opportunities
5) Implementation framework and governance proposal regarding implementation
6) Prospective next steps for Board and Staff

Discussion:
At the February Board meeting, a progressive installment was held to review work to date and TTD's and TRPA's roles, and discuss a refined schedule and opportunity to work with the TRPA Board. In this month's facilitated work session, the Board will see and be able to discuss more details of both the short and mid-term proposal regarding capital projects and transit services and relevant influential factors that are important to implementation efforts.

Additional Information:
If you have any questions or comments regarding this item, please Carl Hasty at (775) 589-5501 or chasty@tahoetransportation.org.

Attachments:
A. Session Agenda
B. Current Facilitation Schedule

Tahoe Transportation District
Transit Initiative 2024

Agenda for TTD Board Session
April 3, 2024

90 minute session

Goals

- Review updated list of key transportation projects in the 2024 Initiative
- Plan a process for discussing funding elements and fundraising strategy prior to August 2024

#	Time	Topic + Objective
1	0:00	Overview of transit projects in 2024 Transit Initiative - Key elements - Rough prioritization and sequence
2	0:20	TTD – Develop a general funding strategy - Evaluating a net estimate - Breaking down the net estimate to component parts - Examining foreseeable funding sources - Description of a funding strategy with general roles and responsibilities
3	1:00	Coordination with TRPA and other partners prior to 2024 Tahoe Summit
4	1:20	Next steps
5	1:30	Adjourn.3.2024

WORKPLAN OUTLINE

January

- Agree on process to coordinate Initiative and RTP update
- Refine list of projects in the Initiative (TTD)

February

- Feb 7: TTD Board
  - Agree on basic outline of process to coordinate Initiative and RTP Update
- Develop initial project list and cost estimate in time for TTIC review (TTD)

March

- TTIC Meeting: review project list, cost estimate
- Working Group: Refine cost scenarios
- Ongoing coordination: Staffs, TRPA Transportation Committee, Boards

April

- Working Group: Refine potential funding scenarios and identify funding "gap"
- Ongoing coordination: Staffs, TRPA Transportation Committee, Boards
- TTD Board:
  - presentation on draft Initiative (projects, costs, gap)
  - TRPA Transportation Committee joins a session

May

- TTIC Meeting: review draft Initiative (list, cost, benefits)
- Begin analysis of funding scenarios/strategies
- Ongoing coordination

June

- Joint session TTD – TRPA: Endorse Initiative

July

- TTIC Meeting – ?
- Prepare promotional materials for Initiative
- Coordinate roles and responsibilities for Summit

August 2024 – Lake Tahoe Summit

- Transportation specific session at Summit?
- Present Transit Initiative and next steps for RTP update

Tahoe Transportation DISTRICT

Connecting our communities

MEMORANDUM

Date: March 27, 2024

To: Tahoe Transportation District (TTD) Board of Directors

From: TTD Staff

Subject: Discussion and Possible Action to Amend Section 4.1.1 of TTD's Policies and Procedures Manual Returning the Regularly Scheduled Board Meetings to the First Wednesday of Every Month at 3:00 P.M. Beginning May 1, 2024

Action Requested:
Staff requests the Board discuss and possibly approve an amendment to Section 4.1 of TTD's Policies and Procedures Manual returning the current every other month regularly scheduled Board meetings to the first Wednesday of every month at 3:00 p.m. beginning May 1, 2024.

Background:
At the January 5, 2022 Board meeting, the Board approved an amendment to Section 4.1 of TTD's Policies and Procedures Manual changing the regularly scheduled Board meeting to every other month at 3:00 p.m., with the Finance and Personnel and Regional Partnerships and Communication Committees meeting prior to the Board meeting. The Program Implementation Committee meetings are held the opposite months of the Board meetings.

Discussion:
At the February Board meeting, Chair Hill suggested a return to the monthly Board meetings schedule to assist in more timely discussion and regular rhythm of Board and staff interaction on transportation and TTD business. The item was requested for the Board to be able to discuss further and act.

Staff recommends the Board amend Section 4.1.1 of the Policies and Procedures Manual to return to regular monthly meetings. The Finance and Personnel Committee will continue to meet prior to the Board meeting on the regular Board meeting date, as will the Program Implementation and Regional Partnerships and Communication Committee meetings when business requires a meeting to be held.

The amendment is as follows:

4.0 BOARD AND COMMITTEE MEETINGS

4.1 Date And Time Of Meetings

4.1.1 Regular Meetings. Regular meetings of the Board shall be held on the *first Wednesday of every month beginning May 2024 at 3:00 p.m*. The

CH/ja AGENDA ITEM: IX.D.

location of regular meetings shall, to the extent practicable, alternate monthly between the North Shore and the South Shore.

4.1.2 Special and Emergency Meetings. Special and emergency meetings of the Board may be called at any time by the District Manager, the Chair, or by the Board.

4.1.3 Committee Meetings. Meetings of committees shall be held prior to regular meetings of the Board as determined by the District Manager.

Additional Information:

If you have any questions or comments regarding this item, please contact Carl Hasty at (775) 589-5501 or chasty@tahoetransportation.org.

CH/ja AGENDA ITEM: IX.D.

TAHOE REGIONAL PLANNING AGENCY

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PO Box 5310
Stateline, NV 89449-5310

Location
128 Market Street
Stateline, NV 89449

Contact
Phone: 775-588-4547
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MEMORANDUM

Date: March 27, 2024

To: Tahoe Transportation Commission

From: TRPA Transportation Staff

Subject: Conduct a Public Hearing and Recommend Approval of the Draft Fiscal Year 2024/25 Tahoe Regional Planning Agency/Tahoe Metropolitan Planning Organization Transportation Planning Overall Work Program to the Tahoe Metropolitan Planning Organization Governing Board

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Action Requested:
It is requested the Tahoe Transportation Commission conduct a public hearing, provide comments on the draft Fiscal Year 2024/25 (FY25) Tahoe Regional Planning Agency (TRPA)Tahoe Metropolitan Planning Organization (TMPO) Transportation Planning Overall Work Program (OWP) and recommend approval to the TMPO Governing Board.

Project Description/Background:
Federal regulations (Title 23, Sec. 450.314) require each Metropolitan Planning Organization (MPO) to prepare an annual program of work that identifies transportation planning priorities to be carried out by the MPO during the 2025 fiscal year (July 1, 2024 through June 30, 2025). The detailed description of the transportation planning activities in the OWP serves as the budget and direction for the expenditure of various Federal and State transportation planning funds. The primary revenue sources for OWP planning and administration is provided by the Federal Highways Administration and the Federal Transit Administration. These funds are awarded to TRPA acting as the designated MPO to fulfill core planning activities required by Title 23 Section 450 of the US Code of Federal Regulations. The OWP also forms the basis for inclusion of the transportation planning functions of the agency into the overall TRPA annual work program and budget.

Discussion:
A minimum 30-day public comment period is required for the draft FY25 OWP. The public comment period was initiated on March 8, 2024 and comments on the draft document are requested by April 8, 2024. All comments received will be considered and incorporated in the draft FY25 OWP. Staff is seeking a recommendation of approval to the TMPO Governing Board for their approval at the April 24, 2024 Governing Board meeting. The draft FY25 OWP and subsequent final document is available on the TRPA Transportation Program web page at http://www.trpa.gov/transportation/ and under Work Program on the home page.

Contact Information:
If you have any questions or comments regarding this item, please contact Michelle Glickert, at mglickert@trpa.gov or 775-589-5204.

Attachments:
A. Executive Summary TMPO FY25 Transportation Planning Overall Work Program
B. Draft TMPO FY25 Transportation Planning Overall Work Program

MG/ja

AGENDA ITEM: XI.A.

Lake Tahoe Transportation Planning
Draft Overall Work Program - FY 2024/25

March 2024

OWP Executive Summary

Introduction

The Overall Work Program (OWP) defines the continuing, comprehensive, and coordinated regional transportation planning process for the Lake Tahoe Basin. It establishes transportation, air quality, and other regional planning objectives and associated funding for Fiscal Year 2024/25. The OWP also serves as a management tool for the Tahoe Regional Planning Agency (TRPA), serving as the Tahoe Metropolitan Planning Organization (TMPO), through the identification of work elements containing tasks and products to be provided during the year, including Federal and State mandated transportation planning requirements and other regional transportation planning activities.

Work Elements

The OWP is organized by *functional areas* and **work elements (WE)** combining similar activities and products in one place. Below is a list of the work elements with a brief description of each and budgets, which include staff time and direct costs for contracts and purchases:

Outreach and Administration

WE 101 – Overall Work Program Administration - $153,721

This work element contains the administrative activities to support the Lake Tahoe transportation program, including budgets, work program development and tracking, and professional staff development. Staff time is 90% of the WE budget.

WE 102 – Transportation Development Act - $55,735

The Transportation Development Act (TDA) is a major source of regional transit operating funding from California. This work element outlines the administration and management of the TDA funding coming into the Lake Tahoe Region, including the annual Unmet Transit Needs Report and an audit of the TDA administration. Staff time is 87% of the WE budget.

WE 103 – Public Outreach and Coordination - $297,927

Public outreach and collaboration with partners are key to TRPA's success. This work element includes activities to support a transparent, educational, and effective regional transportation planning process as the TMPO. The element also includes specific public outreach and agency collaboration efforts. This year will be focused on the development of the 2025 Regional Transportation Plan and Sustainable Communities Strategy (RTP/SCS) along with TMPO Board, TRPA Transportation Committee and Tahoe Transportation Commission support, tribal government consultation, and environmental justice activities. Staff time is 80% of the WE budget.

Regional Intermodal Planning

WE 104.1 – Regional Transportation Plan Maintenance & Coordination - $454,434

This sub work element contains a variety of transportation planning activities that focus on the maintenance of the 2020 RTP/SCS and development of the 2025 RTP/SCS. Development of the RTP/SCS will include analysis of travel patterns, transportation improvement strategies, developing a project list and financial element for the plan, environmental analysis and gathering feedback from the public and stakeholders. Working with the Tahoe Transportation Implementation Collaborative and the TRPA Transportation Committee as the steering Committee for the RTP/SCS via regular check-ins are included. Staff time is 56% of the WE budget.

WE 104.2 – Complete Streets, Modal Planning and Programs - $269,242

This work element contains a variety of transportation planning activities that includes the execution of programs, including transportation demand management, complete streets and corridor planning, transit planning support including updates to the Tahoe Transportation District and Placer County Truckee Tahoe Area Regional Transportation Short Range Transit Plans, and development of new regional transit services, policies and goals for the RTP. Staff time is 70% of the WE budget.

WE 105 – Transportation Data Management and Forecasting - $330,592

This work element includes regional transportation data collection and modeling efforts to support transportation data needs of staff, partners, and the general public**.** This element also includes maintenance and updates as needed to the TRPA travel demand model and various transportation data sets for the 2025 RTP/SCS and to address TRPA, Federal, and State requirements. These activities are coordinated by the TRPA Research and Analysis Program. Staff time is 53% of the WE budget.

Tracking and Financial Management

WE 106 – Project Tracking and Financial Management - $302,104

This work element supports the financial management activities related to federal and state funded transportation projects in the Region. Tracking of new federal funding sources and support to local implementation partners. This element includes the required administration of transportation funding allocated by the TMPO, updates and maintenance of the Federal Transportation Improvement Program, and maintenance of the 2024 Regional Transportation Improvement Program. Staff time is 100% of the WE budget.

Regional Coordination

WE 107 – Performance-Based Planning - $80,692

This work element supports the continual development of TMPO's performance-based planning framework that directly supports monitoring the performance of the RTP/SCS Strategy and new goals and policies of the Regional Plan. Refinements to the biennial RTP/SCS Transportation Performance Report as needed and integration with TRPA's performance management system, including the development, tracking, and reporting on TRPA, State, and Federal transportation performance measures. Staff time is 100% of the WE budget.

WE 108 – Sustainable Communities Planning No staff time is built into this WE.

WE 108.6 $112,647

This sub work element highlights the development of a final 2024 Electric Vehicle Readiness Plan, gathering travel behavior data and evaluating parking management programs, planned and future, to support the 2025 RTP/SCS.

WE 108.7 $184,966

This sub work element highlights evaluations of transportation technology to optimize mobility and reliability to help address congestion and visitation in preparation for larger system management and operations recommendations plan.

WE 108.8 $184,966

This sub work element is needed to complete the system management and operations recommendations plan building from 108.7 that will be folded into the 2025 RTP/SCS.

Contact: Michelle Glickert
Principal Transportation Planner
Transportation Planning Program Manager
775-589-5204 mglickert@trpa.gov

TAHOE REGIONAL PLANNING AGENCY

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MEMORANDUM

Date: March 27, 2024

To: Tahoe Transportation Commission

From: TRPA/TMPO Staff

Subject: Conduct a Public Hearing and Recommend Adoption of the 2024 Public Participation Plan to the Tahoe Metropolitan Planning Organization Governing Board for Tahoe Metropolitan Planning Organization Planning and Programming Actions

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Action Requested:
It is requested the Tahoe Transportation Commission (TTC) conduct a public hearing, provide comments on the draft 2024 Public Participation Plan, and recommend approval of the plan to the Tahoe Metropolitan Planning Organization (TMPO) Governing Board.

Project Description/Background:
The Tahoe Regional Planning Agency (TRPA), serving as the Metropolitan Planning Organization (MPO) for the Lake Tahoe Region, has updated its Public Participation Plan to ensure public involvement and opportunities for engagement are the foundation of the transportation planning processes. Per Title 23, CFR Part 450.316, MPOs must develop and use a public participation plan that defines a protocol for providing opportunities for all parties to comment and be involved in the transportation planning process. The plan outlines strategies for continuing, comprehensive, and coordinated transportation planning processes that considers all transportation modes, provides a forum for public input, and supports social and economic vitality. The Public Participation Plan must be updated and adopted prior to development of the Regional Transportation Plan (RTP).

The updated Public Participation Plan includes new equity-based engagement policies that were endorsed by the TRPA Governing Board through the Transportation Equity Study in 2023. The new policies provide guidance to improve TRPA's public outreach and engagement with a focus on targeting efforts towards underrepresented and underserved populations while ensuring community engagement processes are not burdensome. The new policies also set standards for TRPA and agencies receiving funds through the MPO to commit to allocating a minimum of 30 percent of all outreach efforts to socio-economically disadvantaged populations and Community Priority Zones.

In addition to the new policies, the 2024 Public Participation Plan summarizes outreach efforts conducted by TRPA staff in 2020, 2021, 2022, and 2023, including an assessment of performance measures and targets set in the 2019 Public Participation Plan. As TRPA moves to a greater focus on quality engagement over quantity, including allocating more resources towards place-based engagement, bilingual engagement, and reaching transportation disadvantaged populations, the updated Public Participation Plan shifts away from target setting. TRPA will continue to track outreach

activities and will summarize outreach achievements on the following metrics in future updates of the plan:

- **Metric 1:** Total number of public participants reached through proactive outreach.
- **Metric 2:** Total number of public participants reached through quantitative methods.
- **Metric 3:** Distribution of public participants who are full-time residents, seasonal residents, visitors, and commuters.
- **Metric 4:** Total number of primarily Spanish-speaking residents reached through proactive and quantitative outreach methods.
- **Metric 5:** Distribution of outreach activities targeted towards identified transportation disadvantaged populations or within Community Priority Zones.
    - **Target:** Ensure that a minimum of 30% of outreach activities are targeted towards transportation disadvantaged populations or Community Priority Zones.
- **Metric 6:** Distribution of in-person, virtual, and hybrid engagement activities.

Tracking these metrics will enable TRPA to assess yearly outreach tactics and adjust accordingly to best meet the needs of Lake Tahoe's communities.

The draft 2024 Public Participation Plan is available for review at: https://www.trpa.gov/wp-content/uploads/2024-Public-Participation-Plan-DRAFT-Feb.-24.pdf

Public Comment:
The draft Public Participation Plan was released on February 20, 2024 for a 45-day public comment period that will close on April 5, 2024. Public comments will be considered and incorporated into the final Public Participation Plan prior to adoption.

Regional Plan Compliance:
The 2024 Public Participation Plan complies with all requirements of federal funding recipients and is consistent with the TRPA Regional Plan and supports goals and policies to implement the Regional Plan. The plan also supports the objectives of the Regional Transportation Plan and associated goals and policies.

Contact Information:
For questions regarding this agenda item, please contact Kira Richardson at (775) 589-5236 or krichardson@trpa.gov.

KR/ja AGENDA ITEM: XI.B.