TAHOE REGIONAL PLANNING AGENCY

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STAFF REPORT

Date: April 15, 2026

To: TRPA Transportation Committee

From: TRPA Staff

Subject: Initial Briefing of the Transportation Resilience Improvement Plan and the Transportation Systems Management & Operations Plan

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Summary and Staff Recommendation:
Two of the key components of the Transportation Strategic Priority Work Plan and the Metropolitan Planning Agency Overall Work Plan are the Transportation Systems Management & Operations Plan (Aka. Transportation Technology Plan) and the Transportation Resilience Improvement Plan and Regional Emergency Communications and Transportation Strategy. This is an informational agenda item that will introduce and provide an overview of these two projects. No action is necessary.

Project Description/Background:
Transportation Resiliency Improvement Plan and Regional Emergency Communications and Transportation Strategy

In July 2024, The Tahoe Regional Planning Agency was awarded a planning grant through the federal Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) program. This grant is awarded through the Federal Highways Administration (FHWA) under the Bipartisan Infrastructure Law (BIL). The funding provides support to states, metropolitan planning organizations (MPOs), local governments, special purpose districts, Tribal governments, and federal land management agencies (FLMAs) to ensure surface transportation resilience to natural hazards including wildfire, sea/large lake 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.

Through this project, TRPA, regional partners, and a consultant team will:

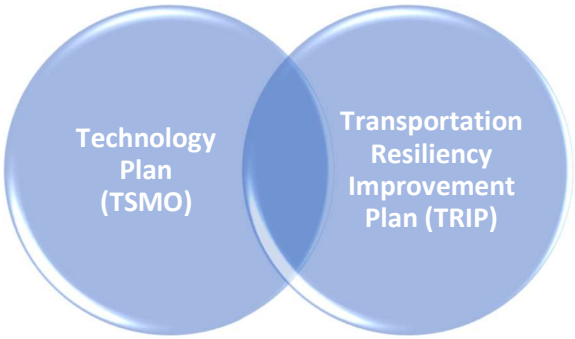
1. Review all state, local, and regional hazard mitigation and resiliency plans and conduct an audit of responses to historic hazards and emergency events, including, but not limited to, response and evacuation to the Angora Fire (2007), Caldor Fire (2021), Tamarack Fire (2021), and the regional response to past major winter storms.
2. Conduct community and stakeholder outreach, including facilitated workshops, meetings, and engagement efforts.
3. Develop a Transportation Resilience Improvement Plan (TRIP) in accordance with 23 U.S.C. Section 176(e) to outline strategies and actions to enhance the resilience of the transportation system in the face of wildfires, extreme winter weather events, and other emergencies.

Develop a Regional Emergency Communications and Transportation Strategy for the Lake Tahoe Basin to identify intelligent transportation systems (ITS) needs and facilitate coordination of multi-jurisdictional emergency services to protect residents, visitors, and local assets in the event of wildfire, extreme weather, or other emergency incidents. This task will be informed by the ITS plan and Transportation Systems Management and Operations (TSMO) plan being developed concurrently. (See Attachment A.)

Transportation Systems Management & Operations (TSMO) Plan

TRPA last completed a full technology plan in 2015, called the Tahoe Basin Intelligent Transportation Systems (ITS) Strategic Plan. Since this plan, technology has evolved significantly, and a comprehensive update is needed to reassess the existing conditions and develop a set of integrated strategies to optimize the performance of the transportation system. Rather than focusing solely on ITS, this new plan will take a broader and more holistic approach through a Transportation Systems Management & Operations (TSMO) framework. The TSMO approach applies multimodal transportation strategies and technologies intended to maximize network efficiency, safety, and reliability, while emphasizing optimization of existing infrastructure over expansion – a critical consideration given the Tahoe region's environmental constraints and TRPA's commitment to reduce dependency on the automobile. (See Attachment B.)

The information sheets contained in Attachments A and B provide information on the TSMO and TRIP projects, including background on the scopes of work and outcomes, consultant teams, and general schedules for these two projects. The two projects are interrelated and will be coordinated as depicted below.



Both consultant teams will be working together to conduct interviews, prepare background information, etc. Where the projects overlap (e.g., traffic management for major events or for emergencies), the recommendations form the plans will be coordinated and complementary. At key points during these planning processes staff will provide this committee and the Governing Board updates on these projects.

Staff Contact:
For questions regarding this agenda item, please contact Rebecca Cremeen, Senior Planner, at (775) 589-5214 or rcremeen@trpa.gov and Rachael Shaw, Associate Transportation Planner, at (775) 589-5267 or rshaw@trpa.gov.

Public Comment:
Written comments received by 4 p.m. the day before a scheduled public meeting may, as appropriate, be distributed to TRPA Staff, decision makers, and posted in advance of the meeting. Later submissions may be retained as part of the meeting record and may be posted or made available after the meeting as appropriate. Please note that not all submissions will necessarily be distributed to the Governing Board or posted to TRPA's website. Materials that are not related to a meeting agenda item are voluminous or raise legal concerns regarding online posting (for example, third-party copyright issues) may instead be referenced on TRPA's website rather than reposted in full, retained as part of the meeting record, and made available for public inspection or otherwise handled consistent with applicable law and TRPA procedures. Comments may be submitted by email (publiccomment@trpa.gov), mail, fax, or by in-person drop off.

Attachment:
A. Tahoe Resilience Improvement Plan information sheet
B. Transportation Systems Management and Operations Plan information sheet

Attachment A
Tahoe Resilience Improvement Plan information sheet

PROTECT

Tahoe Resilience Improvement Plan & Transportation Communications Strategy

The PROTECT Plan includes a regional resiliency planning effort and communications and transportation strategy led by the Tahoe Regional Planning Agency (TRPA). This plan focuses on strengthening the transportation system's resilience to extreme-weather events, including snow emergencies, flooding, and landslides. This is not an evacuation plan. Instead, the plan will identify risks, vulnerabilities, and long-term strategies and investments to support safer, more reliable transportation systems, including improvements to support emergency response and evacuation when needed. The Promoting Resilient Operations for Transformative, Efficient, and Cost-saving Transportation (PROTECT) Program provides federal funding for the plan.

KEY OBJECTIVES

- Improve system resilience to natural hazards & climate impacts
- Enhance coordination across agencies & jurisdictions
- Identify critical transportation vulnerabilities
- Develop long-term resilience strategies & priority projects
- Support improved communication & coordination during emergency events

MILESTONES & DELIVERABLES

Stakeholder Engagement
- Public Outreach Plan, interviews, workshops, and agency coordination

Response Audit
- Analysis of past emergency events
- Audit report and performance measures

Tahoe Resilience Improvement Plan (TRIP)
- Vulnerability assessment and mapping tool
- Prioritized projects and final plan

Communications and Transportation Strategy
- Communications & ITS assessment informed by TSMO
- Coordination strategies and resource inventory
- Final strategy

SCHEDULE

Spring – Summer 2026
Stakeholder engagement & data collection

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Fall 2026 - Spring 2027
Analysis & plan development

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Mid-Late 2027
Draft plan & strategy

→

Late 2027
Final plan completed

ICF has extensive expertise in resilience planning, transportation systems, and emergency coordination supporting state DOTs, MPOs, & multi-jurisdictional regions.

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TRANSPORTATION COMMITTEE
AGENDA ITEM NO. 5.E

TAHOE REGIONAL PLANNING AGENCY

Attachment B
Transportation Systems Management and Operations Plan information sheet

The TSMO Plan

Transportation Systems Management & Operations (TSMO) Plan

The Tahoe Basin TSMO Plan is a regional planning effort led by the Tahoe Regional Planning Agency that focuses on actively managing and operating the transportation system to improve safety, reliability, and efficiency. This includes, but is not limited to, signal operations and traffic management, incident and emergency response coordination, traveler information systems, work zone and event management, and the use of data and technology to support real-time decision-making. It also includes how agencies coordinate across jurisdictions, align policies and priorities, use performance data to guide decisions, and organize staff and resources to support day-to-day operations. This plan will improve how the transportation system works using coordination, data, and technology.

KEY OBJECTIVES

- Optimize existing transportation system
- Improve coordination across agencies
- Deliver an implementation-ready plan
- Enhance real-time response, safety, and reliability
- Strengthen future funding opportunities

MILESTONES & DELIVERABLES

Planning and Engagement
- Stakeholder outreach and public engagement plan

Existing Conditions Inventory
- Inventory of infrastructure, system, and operations

Needs Assessment
- Identifies key strengths, gaps, and opportunities
- Stakeholder workshop using FHWA's Capability Maturity Model framework

TSMO Framework Development
- Regional strategies, coordination approach, and programmatic elements.

Implementation Plan
- Priority actions, strategy bundles, and feasibility assessments on a corridor level
- Complete TSMO Plan with implementation roadmap

SCHEDULE

Spring – Summer 2026
Stakeholder engagement & data collection

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Summer - Fall 2026
Needs assessment & framework development

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Fall - Spring 2027
Draft implementation plan development

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Summer 2027
Final plan completed

Parametrix
citizen ENGINEERS

Parametrix and Citizen Engineers have extensive experience developing TSMO plans for regional agencies, with expertise in multi-jurisdictional coordination, ITS, and data-driven operations.

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TRANSPORTATION COMMITTEE
AGENDA ITEM NO. 5.B

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