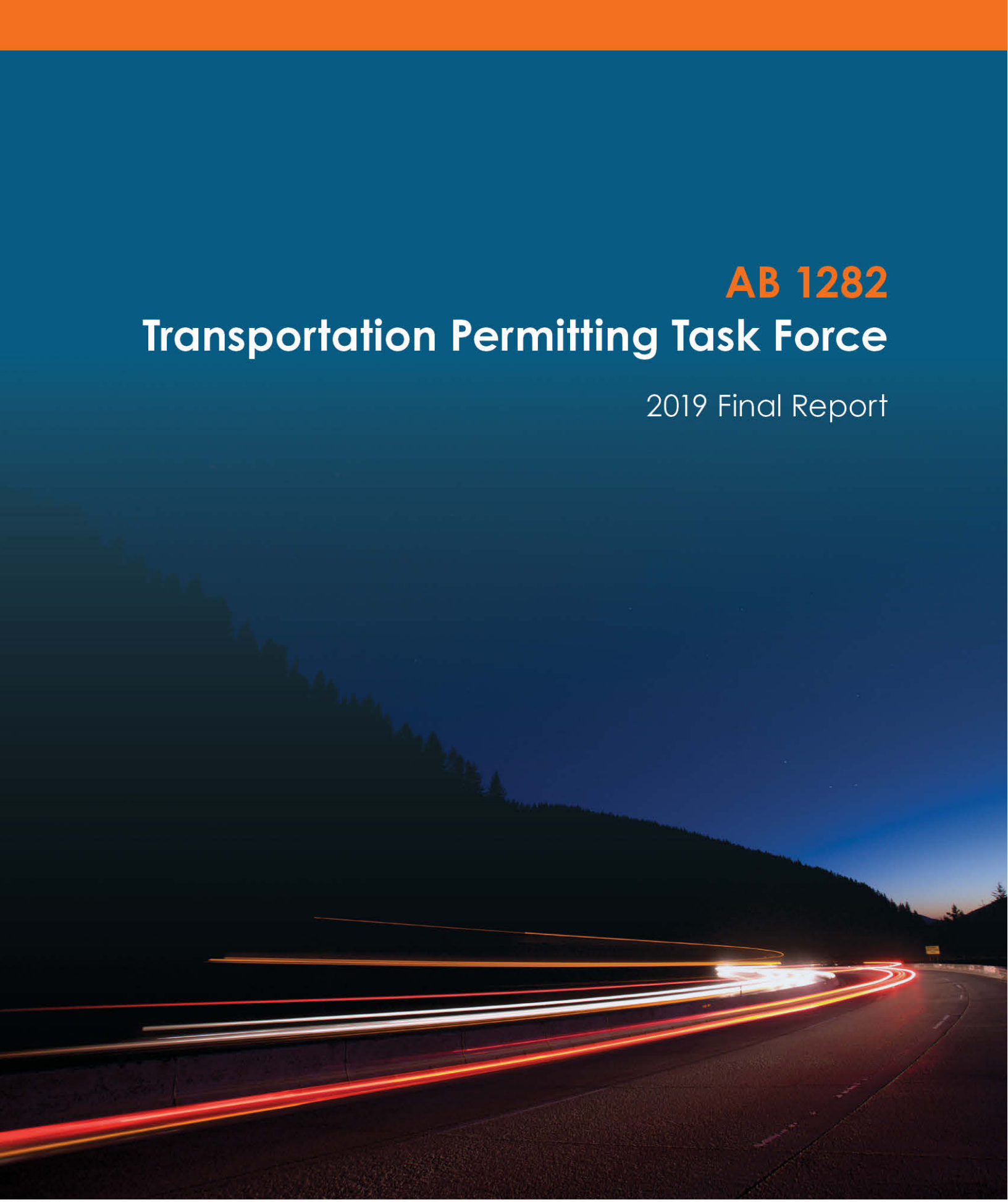
AB 1282
Transportation Permitting Task Force

2019 Final Report



CalSTA

CalEPA
California Environmental Protection Agency

California natural resources Agency

AB 1282 Transportation Permitting Task Force
2019 Final Report

June 2020

Dear Transportation and Environmental Stakeholders:

With the increased transportation funding from the 2017 Senate Bill 1 Road Repair and Accountability Act (SB 1), efficiencies in transportation project delivery became more important than ever. SB 1 is a historic opportunity for agencies at state, regional, and local levels to significantly invest in California's transportation infrastructure.

In addition, our transportation investments must successfully integrate statewide goals of enhanced mobility and environmental protection. To ensure this, Assembly Bill 1282 of 2017 required the creation of a Transportation Permitting Task Force. The Task Force's mission is to explore ways to improve the efficiency and effectiveness of permitting for transportation projects while protecting our state's natural, historic, and cultural resources.

The California State Transportation Agency, the California Natural Resources Agency, and the California Environmental Protection Agency executed a Tri-Agency Partnership Agreement in 2018 and recruited 10 transportation and permitting agencies at the state, local, and regional levels from throughout California to participate on the Task Force. Over nearly two years, agency representatives came together in a working group to fulfill the goals and objectives established by AB 1282.

The Working Group identified where agencies face similar and differing challenges, discussed how regulations are implemented differently among agencies, and looked for solutions to the problem areas they identified. The team analyzed sources of permitting delays and developed ways to accelerate permitting and improve environmental outcomes. We investigated effective early engagement through transportation staff liaisons programs and created an early coordination process framework. We selected pilot projects to identify best practices and analyzed the potential to take full advantage of advance mitigation.

The Task Force collaboration resulted in recommendations to accelerate much-needed transportation infrastructure projects while furthering the missions of both transportation and environmental protection agencies. This report documents our findings and recommendations as of December 2019, and the work will continue as we rebuild and sustain California's transportation infrastructure with the SB 1 program.

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List of Abbreviated Terms

Term	Description
%C&A	percent complete and accurate
AB	Assembly Bill
AB 1282	Assembly Bill 1282
ABC	Accelerated bridge construction
AMMs	avoidance and minimization measures
AMA	Advance Mitigation Account
AMP	Advance Mitigation Program
CalSTA	California State Transportation Agency
Caltrans	California Department of Transportation
CCC	California Coastal Commission
CDFW	California Department of Fish and Wildlife
CDP	Coastal Development Permit
CE	categorical exemption
CEQA	California Environmental Quality Act
CHSRA	California High-Speed Rail Authority
CMGC	Construction Manager/General Contractor
CWA	Clean Water Act
Draft ED	draft environmental document
EPIMS	Environmental Permitting Information Management System
IPT	Integrated Planning Team
ITP	Incidental Take Permit
LCPs	local coastal programs
LT	lead time
MCA	Mitigation Credit Agreement
MOUs	memoranda of understanding
Natural Resources	California Natural Resources Agency
NEPA	National Environmental Policy Act
OCTA	Orange County Transportation Authority
PDT	Project Development Team
PES	preliminary environmental study
PID	project initiation document
PT	processing time
PT/LT ratio	lead time to processing time ratio
PYs	person-years
RCIS	Resource Conservation Investment Strategy
Regional Boards	Regional Water Quality Control Boards
SAMI	Statewide Advance Mitigation Initiative
SANDAG	San Diego Association of Governments
SB 1	2017 Senate Bill 1 Road Repair and Accountability Act
SHOPP	State Highway Operation and Protection Program
State Water Board	State Water Resources Control Board
STEVE	Standard Tracking and Exchange Vehicle for Environmental

Term	Description
STIP	State Transportation Improvement Program
Task Force	Transportation Permitting Task Force
USACE	U.S. Army Corps of Engineers
WQC	Water Quality Certification

Executive Summary

Transportation Permitting Task Force

The Transportation Permitting Task Force, formed as a result of Assembly Bill 1282 (Mullin, 2017) (Appendix A), brought together transportation and permitting agencies to collaboratively address statewide transportation permitting challenges. The Senate Bill 1 Road Repair and Accountability Act of 2017 (SB 1) boosted state transportation infrastructure funding to historic levels in California, with an aggressive program to deliver transportation improvement projects across the state and gave rise to the Task Force's mandate under AB 1282 to address state permitting and project delivery processes.

By 2027 under the SB 1 program, the California Department of Transportation is slated to deliver a multitude of projects across the state, including repair or replacement of 55,000 culverts or drains and 500 bridges.

AB 1282 established the Transportation Permitting Task Force with the statutory goals to:

- Develop a process for early engagement of all parties in development of transportation projects to reduce permit processing time.
- Establish reasonable deadlines for permit approvals.
- Provide for greater certainty of permit approval requirements.

Additionally, the legislation requires the Secretary of Transportation, by December 1, 2019, to prepare and submit a report of findings to the legislature, to include the following:

- Results of analysis of permitting processes, including where delays are likely to occur.
- Analysis of utilization of transportation-funded staff positions in permitting agencies.
- Development of a structured coordination process for early engagement.
- Analysis of resources needed at permitting agencies to implement the coordination process.
- Identification of any legislative or regulatory issues that need to be addressed to implement the recommendations.

The AB 1282 Task Force consists of representatives from 13 California transportation and permitting agencies, led by the Secretaries of the California State Transportation Agency, the California Natural Resources Agency, and the California Environmental Protection Agency. The three Agency Secretaries signed a Tri-Agency Partnership Agreement (Appendix B) in August 2018, committing to expedite the completion of transportation projects while also protecting the State's environment, and committing to work collaboratively and more efficiently.

Guided by AB 1282 and the Tri Agency Partnership Agreement, the Task Force focused their review on the following areas, which are documented in this report:

- Overall goals and desired outcomes (Section 1).

- Permitting analysis to identify causes of delay, and review of pilot projects to distill best practices, learn lessons, and test solutions (Section 2).
- Analysis of transportation-funded positions at permitting agencies (Section 3).
- Structured coordination process for early engagement and assessment of supporting recommendations to execute the process (Section 4).
- Advance mitigation options for improving project permitting (Section 5).
- Recommendations to address challenges, pinch points, and other causes of delay to improve project delivery (Section 6).
- A change management framework for implementation going forward (Section 7).

As noted above, one of the requirements of AB 1282 is to analyze the resource levels needed at the permitting agencies to implement the structured coordination process for early engagement. A pilot project to assess staff levels needed at permitting agencies to fully participate in the structured process for early coordination will be developed as part of Recommendation 2.6, described in Section 6 of this report.

Transportation-Funded Liaisons Program: An investment that results in considerable capital cost savings

- *Programs with staff liaisons saw benefits of dedicated staff to process highway and rail project permits, better understanding of permit requirements, lower staff turnover, and reduced delay with more consistency in meeting delivery milestones.*
- *Avoiding a one-month delay on a $10 million project would save about $27,000 and avoiding a one-year delay would save $324,000.*

Throughout these process evaluations and analyses, the participants identified where agencies faced similar and differing challenges, discussed how regulations are implemented differently among agencies, and looked for effective solutions. In many instances, the Task Force found that the multiple review processes were yielding the same issues and potential solutions, demonstrating the potential impact that streamlining efforts could have across all participating agencies.

The Task Force also examined the benefits and costs of the transportation-funded staff liaison positions to project delivery. Transportation-funded staff liaison arrangements enable transportation agencies to place dedicated staff with specialized skills in assessing transportation impacts at permitting agencies. Improvements will be developed by the Task Force to achieve time efficiencies and cost savings. Metrics for evaluating the California Department of Transportation (Caltrans) staff liaisons program will be developed and refined to demonstrate time and cost savings and will be compared to the current average times for permit application acceptance and permit issuance.

Saving time in the project delivery phases prior to the start of construction can avoid substantial construction cost escalations. Based on current escalation rates, avoiding a one-month permitting delay on a $10 million project would save about $27,000, and avoiding a

one-year delay would save $324,000. On a larger $1 billion project, a one-year time savings would avoid costs of over $32 million.

SB 1 is expected to double construction dollars for projects and result in a workload increase for Caltrans starting in fiscal year 2019-2020. These increases in funding and workload are expected to result in a corresponding increase in transportation projects that require environmental permitting. It is anticipated that local transportation agencies will also experience an increase in environmental permitting needs. This report provides recommendations for the current staff liaison program to improve the processes and partnerships for early engagement, expand the program to include additional regions of the state, meet the expected increase in workload, allow staff liaisons to participate in advance mitigation program efforts and in early and ongoing coordination, and support participation in implementing recommended improvements identified through the AB 1282 effort.

These recommendations are consistent with ongoing efforts to renew and update the interagency agreements for the staff liaisons program. Further discussion of this strategy can be found in Section 3 of this report.

The California Permit Streamlining Act and California Fish and Game Code established set timeframes for agencies to review permit applications and issue permit decisions, as described in Section 3 of this report. The Task Force analyzed permit processing timelines from the Caltrans Standard Tracking and Exchange Vehicle for Environmental (STEVE) database. They found that although the average timeframes for processing permits were close to the established regulatory timeframes, many projects still experienced much longer processing times. The Task Force determined that if all project permitting could be accomplished within the established regulatory timeframes, that performance would represent a considerable time savings over current practice. Implementing the recommendations described in this report would support permitting and transportation agencies in meeting the established regulatory timelines.

The permitting analysis showed the Task Force that mitigation is one of the main topics that cuts across all of the delay cause areas (unclear understanding of requirements, lack of coordination, ineffective design change management, need for updated procedures and guidance, staffing and workload, etc.). Challenges in mitigation concept planning, mitigation design, land acquisition for mitigation, and mitigation implementation and monitoring all create delays and inefficiencies in transportation project delivery.

Historically, transportation agencies have implemented mitigation on a project-by-project basis once funding is approved for the final stages of a project and environmental permits are obtained. More recently, many local transportation agencies and Caltrans have begun to look at advance mitigation as a streamlined option, and agencies are in varying stages of developing comprehensive advance mitigation programs. The Caltrans Advance Mitigation Program (AMP) is an example of such a program.

Benefits of advance mitigation that align with the objectives of AB1282 include:

- Creating opportunity for early coordination with permitting agencies and local transportation partners.
- Creating efficiencies in transportation project development.
- Fostering collaboration on conservation priorities or objectives within an area at the planning level to inform mitigation investments for advance mitigation projects as well as typical transportation mitigation delivery.
- More holistic mitigation that should yield more successful and meaningful conservation outcomes.
- Making long-range planning information available to private mitigation providers, which may stimulate the mitigation banking market and allow mitigation providers to leverage state advance mitigation investments.

Advance mitigation is a revolutionary strategy and key approach for streamlining the delivery of transportation programs in California.

In recognition of the potential for this approach, the Task Force:

- *Analyzed the current status of advance mitigation programs.*
- *Developed recommendations to remove obstacles and allow California to take advantage of advance mitigation programs to the fullest extent possible.*

Advance mitigation is an approach to accomplishing the dual objectives of transportation project permitting and enhancing environmental outcomes. Until recently, funding mechanisms to facilitate this approach did not exist. Although the passage of SB 1 created the funding program to allow development of the AMP, challenges still exist to realizing the benefits and taking full advantage of advance mitigation to deliver a sustainable transportation system for California. The Task Force therefore recommends a number of solutions to remove obstacles and address challenges in implementing advance mitigation.

Sections 5 and 6 of this report provide additional discussion of advance mitigation options for accelerating project delivery and improving environmental outcomes.

Summary of Recommendations to Improve Project Delivery

The final set of recommendations to address causes of delay in permitting and improve project delivery result from the permitting analysis, which identified timeframes and delay causes for each step of the project delivery process and for various types of permits.

Recommendation 1: Clarity of Regulatory and Permit Requirements

- Improve cross-agency understanding of regulatory and permitting requirements.
- Develop consistent, detailed permitting process tools, guidance and timelines to improve clarity of permit application requirements.

Recommendation 2: Strengthen Interagency Coordination

- Issue directives from executive management at each agency that require implementation of early and ongoing interagency coordination processes across programs.
- Incorporate environmental concerns into transportation agency corridor and asset management guidelines.
- Define a structured process for early engagement and coordination (Section 4 of this report).
- Explore opportunities for early coordination between participating transportation and permitting agencies.
- Improve communications strategies to prevent and resolve conflicts.
- Analyze resource levels through a pilot project to assess staff levels needed at permitting agencies for them to fully participate in the structured process for early engagement and coordination.

Recommendation 3: Improve Project Planning and Delivery

- Promote use of construction manager/general contractors, where appropriate, to reduce potential changes to project design after permits and certifications are issued.
- Evaluate a project delivery milestone to ensure permit information is developed on time.
- Implement a process for record keeping to document action items and discussions.
- Develop improved data management strategies.
- Incorporate environmental constraints into project design.
- Update Caltrans Planning zero-based budget to adjust early project planning resources in the PID/PES phase.
- Optimize the existing context-sensitive solutions program.
- Develop clear guidance and procedures for emergency projects, including emergency roadway openings and permanent restoration efforts.
- Create a compendium of preferred design options.
- Develop incentives for innovative design solutions.
- Expand use of permitting tools that support project-specific flexibility within the agencies.
- Allow state and federal transportation funds to go beyond historical mitigation limitations by including a "net environmental benefit" or "multi-beneficial" criteria provision as part of the project objectives or "purpose and need."

Recommendation 4: Effective Procedures, Policies, and Guidance

- Emphasize the importance of environmental outcomes and garner commitment at leadership levels.

- Optimize the transportation-funded interagency liaison program (Section 3 of this report).
- Include and prioritize long-term environmental considerations, including maintenance-cost avoidance, in economic analyses of projects.
- Develop and implement programmatic approaches for efficient permit processing.
- Delegate approval authority for certain project requests where legal and appropriate, and make use of available administrative processes that can provide more efficient regulatory approvals.
- Consolidate fully protected species under the California Endangered Species Act.
- Clarify financial assurance agreements.
- Implement mitigation by pursuing strategic restoration opportunities, including advance mitigation (Sections 5 and 6 of this report).

Recommendation 5: Ensure Suitable and Sufficient Staffing

- Improve opportunities for cross-agency and cross-functional training.
- Collect, document and disseminate lessons learned from select projects.
- Provide opportunities to research new science and apply it to transportation projects.
- Improve recruitment, hiring, and retention practices.
- Develop guidance and promote utilization of retired annuitants.
- Support travel to participate in relevant training and conferences for career enhancement.
- Develop metrics for evaluating the staff liaisons program going forward to demonstrate time and cost savings compared to the current (baseline) average times for permit application acceptance and permit issuance.

Recommendation 6: Optimize Advance Mitigation Strategies

- Improve tools and options to align agency requirements in implementing advance mitigation.
- Establish crediting framework for projects that result in fish passage and wildlife connectivity and other environmental improvements.
- Update mitigation bank policies and practices to accommodate advance mitigation purchases.
- Establish programmatic solutions with planned advance mitigation investments.

Legislative and Regulatory Considerations

AB 1282 states that the Task Force shall prepare a report of findings that includes "Legislative or regulatory issues, if any that need to be addressed to implement the process developed pursuant to subdivision (b)."

Subdivision (b) refers to the structured coordination process for early engagement (Section 4 of this report). This report includes six items under Recommendations 4 and 6 that would likely require legislative action:

1) 4.5. Delegate approval authority for certain project requests where legal and appropriate, and make use of available administrative processes that can provide more efficient regulatory approvals in certain circumstances.
2) 4.6. Consolidate fully protected species under the California Endangered Species Act.
3) 4.7. Update the Streets and Highways Code to allow use of financial assurances conventionally required of other types of applicants. Update the California Fish and Game Code and its implementing rules to allow for alternatives to financial assurance. Provide additional transportation funds for compensatory mitigation/financial assurances.
4) 4.8. Identify strategic partnerships with other public and private entities conducting restoration activities to develop additional mitigation opportunities, such as in-lieu fee programs.
5) 6.1. Allow CDFW to participate in in-lieu fee programs to align with federal wetland mitigation regulations.
6) 6.2. Work with all permitting agencies, including U.S. Fish and Wildlife Service, National Marine Fisheries Service, and the U.S. Army Corps of Engineers to develop a crediting framework for fish passage and wildlife connectivity that would provide credits for permit-required mitigation. Currently no more than 25 percent of the funds in the Caltrans AMA may be allocated for this purpose.

Six items under Recommendations 1, 3, and 4 would likely need changes in regulations:

1) 1.2. Establish consistent permitting agency submittal requirements for a uniform basic permit application with baseline information such as general project location figures and maps, project description, and expanded wetland delineation guidance that would be acceptable to all permitting agencies.
2) 3.11. Investigate use of a "supplemental work area" beyond the actual footprint of the transportation project, and define the associated maximum impact and incidental take.

3) 3.11. Develop a permit deviation process to more efficiently address minor project changes in a way that precludes the need for a permit amendment, such as the State Water Board's Section 401 Certification Deviation Process.

4) 4.4. Develop new or update existing programmatic solutions for routine, repetitive projects that pose minimal risk to the environment, such as Master Streambed Alteration Agreements and General Waste Discharge Requirements for simple culverts.

5) 4.8. Identify strategic partnerships with other public and private entities conducting restoration activities to develop additional mitigation opportunities.

6) 4.8 Expand the use of mitigation ratio strategies for specific resource issues, such as the USACE mitigation calculator, to be used and accepted across agencies as allowable.

Beyond Recommendations

The Task Force recognizes that the work of implementing a number of recommendations is already underway. More complex recommendations, however, will involve developing and testing tools, job aids, training, and changes to policy or regulations.

With the establishment of the AB 1282 Task Force and Tri-Agency Partnership Agreement, the organizational framework is in place to continue collaboration and implementation of the recommendations to improve permitting and deliver timely transportation projects while also protecting the State's environment.

Section 1. Introduction

Background on the Transportation Permitting Task Force

With the passage of the Road Repair and Accountability Act of 2017 pursuant to Senate Bill 1 (SB 1), which boosted transportation infrastructure funding in California to historic levels, efficiencies in project delivery became more important than ever. SB 1 is expected to increase the workload at Caltrans beginning in fiscal year 2019-2020. These increases in funding and workload are expected to result in correspondingly more transportation projects that require environmental permitting. It is anticipated that local transportation agencies will also experience an increase in environmental permitting needs. Recognizing that the environmental permitting process represents a crucial effort for both transportation agencies and the resources agencies that must engage with them on projects, the State Legislature passed Assembly Bill (AB) 1282, which added Section 155.7 to the Streets and Highways Code and created the Transportation Permitting Task Force (Task Force) (Appendix A). The mission of the Task Force is to explore ways to improve the efficiency and effectiveness of permitting for transportation projects while protecting our state's natural, historic, and cultural resources.

AB 1282 Transportation Permitting Task Force Members

- *California Natural Resources Agency*
- *California State Transportation Agency*
- *California Environmental Protection Agency*
- *California Transportation Commission*
- *California Department of Transportation*
- *California Department of Fish and Wildlife*
- *State Water Resources Control Board*
- *Regional Water Quality Control Boards*
- *California Coastal Commission*
- *California High-Speed Rail Authority*
- *San Mateo Transportation Authority*
- *Los Angeles Metropolitan Transportation Authority*
- *Rural Counties Task Force*

The California State Transportation Agency (CalSTA) and the California Natural Resources Agency (Natural Resources) convened the Task Force in April 2018, and the California Environmental Protection Agency joined soon after. The three agencies signed the Tri-Agency Partnership Agreement in August 2018 (Appendix B). As outlined in the agreement, the three agencies share a commitment to:

…expedite the completion of transportation projects while also protecting the state's environment and natural, historic, and cultural resources…and commit to working collaboratively to develop efficiencies within transportation and environmental processes.

In all, 13 diverse California transportation and permitting agencies from state, local, and regional jurisdictions were tasked with analyzing existing project delivery and permitting

processes and developing recommendations for improvement. By November 2018, they had initiated multi-departmental partnership agreements, established a process and criteria for identifying pilot projects, and developed and approved a work plan for 2019. These first-year milestones were documented in the Task Force's 2018 Interim Report. Work proceeded through 2019 on developing recommended solutions to address identified challenges, pinch points, and other causes of delay in the permitting process. Implementation work is ongoing and will continue beyond 2019.

AB 1282 Overall Goals and Desired Outcomes

The AB 1282 legislation identified a set of overall goals and desired outcomes that guide the Task Force towards improving both transportation project delivery and environmental outcomes.

AB 1282 Tri-Agency Partnership Agreement Goals and Desired Outcomes

- *Promote early engagement*
- *Reduce permit processing time*
- *Provide greater certainty of permit approval requirements*
- *Improve effectiveness of permitting process outcomes*
- *Improve environmental outcomes*
- *Improve predictability and management of the project development process, thus reducing project delivery costs*

Promote Early Engagement

Improving efficiency and effectiveness begins with early engagement that increases communication and fosters partnership between transportation and state permitting agencies. The Task Force analyzed existing coordination through all phases of project delivery to develop an optimal process for early engagement of all parties. Findings and recommendations related to this strategy are reported in Sections 4 and 6 of this report.

Reduce Permit Processing Time

With the objective of establishing and committing participants to reasonable deadlines for permit approvals, the Task Force analyzed existing permit process timelines and identified points in the process that cause delay, promote inefficiencies, or reduce effectiveness. The Task Force conducted thorough and detailed process reviews for several types of permits common to transportation projects. They then identified a set of pilot projects, grouping them into Types 1, 2, and 3 in ascending order of permitting complexity. For each pilot type, they gathered information from the project teams as an additional method for identifying challenges, inefficiencies, causes of delay, lessons learned, and best practices throughout the planning, development, environmental review, permitting, and delivery phases of projects. Pilot projects will also provide forums to field test preliminary tools and strategies that are part of more complex recommendations during the implementation phase. This testing will provide insight into overall procedures and processes, and results of the testing will serve to refine the implementation of those recommendations. Findings and recommendations from the

permitting delay analysis are reported in Sections 2 and 6 of this report. Information about the pilot projects is presented in Section 6.

Provide Greater Certainty of Permit Approval Requirements

In addition to early engagement, a structured process for ongoing coordination throughout all phases of project delivery results in greater certainty that transportation projects comply with all resource protection requirements. Involving permitting agency staff early in project development helps them understand the purpose of proposed projects, participate in evaluating alternatives for designing approvable projects that avoid and minimize impacts, and assist in the early development of proposals for mitigating unavoidable impacts. The California Department of Transportation (Caltrans), the California High-Speed Rail Authority (CHSRA), and regional and local transportation agencies can then collaborate to develop appropriate protective measures and incorporate them into project planning, design, and environmental review. This kind of ongoing coordination—for both simple and complex projects—enables sponsors of transportation projects to submit complete information on permit applications, which then allows permitting agencies to process and issue permits with minimal delay.

Furthermore, the Task Force examined existing transportation-funded agency liaison positions supported by Caltrans and CHSRA at various State agencies, and the costs and benefits these resources bring to transportation programs. The analysis found that ongoing coordination through those positions achieves greater certainty of permit approvals. Findings are reported in Sections 2 and 3 of this report.

Improve Effectiveness of Permitting Process Outcomes

Improved outcomes start with improved processes and coordination. A lack of early agreement on desired outcomes for the project design, construction methods, and permit conditions can lead to costly amendments, project delays, ineffective transportation solutions, and suboptimal environmental outcomes. The Task Force recommends establishing better tools and processes to make early and ongoing coordination between transportation agencies and permitting agencies easier and more effective, resulting in better-designed, more context-sensitive transportation infrastructure. A structured coordination plan for effective early engagement is presented in Section 4 of this report.

Improve Environmental Outcomes

A lack of effective early coordination in the planning, design, and development of transportation projects means permitting agencies do not have the opportunity to provide input on how to incorporate impact avoidance approaches or environmental improvement measures into the project design and mitigation concepts until later stages of project development. Considering environmentally sensitive design solutions and mitigation needs up front in project planning and design pays off in reduced permit processing time and greater certainty with budget forecasting and expectations for permit approvals, along with improved environmental outcomes. That reality is why the Task Force members, at their first meeting in April of 2018, agreed that a priority would be articulating the goal of improving environmental outcomes in the Tri-Agency Partnership Agreement and as part of the desired outcomes of the AB 1282 effort. The Task Force recommends securing improved environmental outcomes and developing acceptable environmental protection measures early in the first stages of the project delivery process.

Implementing advance mitigation is one key strategy for addressing challenges in transportation permitting processes. Advance mitigation can now be applied in a variety of highway, rail, and transit projects in both urban and rural settings. Many local transportation agencies, along with Caltrans and CHSRA, are developing comprehensive mitigation programs. The Caltrans Advance Mitigation Program (AMP) is an example of one such program that is designed to accelerate transportation project delivery, enhance communication with stakeholders and resource permitting agencies, and support better environmental outcomes. The Task Force's recommendations for addressing early engagement of all parties and advance mitigation options are reported in Sections 4 and 5 of this report.

Improve Predictability and Management of Project Development Process to Reduce Delivery Time and Costs

In the analysis of existing project delivery and permitting processes, the Task Force found that clearly understanding permitting agency requirements and developing acceptable environmental protection measures early in the project delivery process help avoid the schedule and budget disruption that often occurs if postponed to later project stages. Late changes can result in the need for project re-design and rework of environmental analyses. With permitting requirements well understood, project features, best management practices, and other measures that avoid impacts can be designed into projects and accounted for up front, rather than during the permit application and approval stage. This approach provides more predictability for the permit application phase of project delivery, results in greater efficiency by reducing rework, and crucially, improves environmental outcomes. Findings and recommendations related to improving predictability and management of the project development process are reported in Sections 2, 3, 4, 5, and 6 of this report.

Task Force Objectives

The Task Force meets quarterly, and the working group and subgroups (focused on specific policy and analysis tasks in the work plan) meet at least monthly. Senior managers from each partner agency comprise the working group that developed the work plan, and the subgroups conducted much of the work including engaging experts; conducting research and analysis; and developing recommendations on policies, projects, procedural guidance, tools, training, and resources. The work plan guided the analysis that informed the development of strategies and solutions that were then prioritized and developed into fully vetted recommendations. The work plan addressed each of the following specific objectives for analysis and development of solutions.

Key Task Force Objectives

- *Identify challenges by reviewing the overall project delivery process, analyzing coordination and permitting processes, and studying pilot projects.*
- *Review agency agreements and resource levels.*
- *Develop a structured process for early coordination*
- *Recommend strategies and solutions to address identified challenges and causes of delay.*
- *Consider advance mitigation options.*

Analysis of Existing Processes and Resources

- Analyze existing coordination processes, and develop a process of early engagement for all parties.
- Analyze existing project delivery and permitting processes, and identify points in the process that cause delay, promote inefficiencies, or reduce effectiveness.
- Analyze existing permit process timelines, and establish and commit to reasonable deadlines for permit approvals, consistent with existing statutes and regulations.
- Review pilot projects to identify challenges, pinch points, and other causes of delay; best practices; and lessons learned.
- Identify existing personnel positions supported by Caltrans and CHSRA and resourced to various State agencies, and the costs and benefits that these resources bring to transportation programs.

Development of Recommendations

- Provide recommendations for improving the permitting process and environmental outcomes.
- Develop a structured coordination process for early engagement of all parties.
- Identify advance mitigation options for improving the permitting process and environmental outcomes.
- Identify pilot projects in which to implement and refine coordination and other strategies and solutions.

Section 2. Permitting Analysis

Analysis Approach

The Task Force first conducted an overall review of the entire project delivery process for highway and high-speed rail projects. That information focused the efforts of the permitting analysis on three types of permits that are common among transportation projects and offer the greatest opportunity to reduce delays in project delivery. The three types of permit processes that received detailed review were:

- Clean Water Act (CWA) Section 401 Water Quality Certification (WQC) – process review workshops conducted in January 2019.
- California Coastal Act Coastal Development Permit (CDP) – process review workshops conducted in May 2019.
- California Fish and Game Code Section 2081 Incidental Take Permit (ITP) – Process review workshops conducted in April 2019.

State Permitting Agencies with Authority over Three Common Permit Processes

- *WQC – State Water Board/Regional Water Quality Control Boards*
- *CDP – California Coastal Commission (and local governments with certified Local Coastal Programs)*
- *ITP – California Department of Fish and Wildlife*

A structured approach (Figure 1) was used to evaluate the current state of the three commonly required permits. Evaluation included identifying stakeholders; conducting background research; and undertaking a rigorous analysis of existing permit processes to identify challenges, pinch points, and other causes of delay.

The Lean Six Sigma Approach to Process Improvement

- ***Lean:*** *Improve efficiency by eliminating waste/delay*
- ***Six Sigma:*** *Improve quality by eliminating process variation*

In addition to the permit process reviews conducted in 2018 and 2019 for the three common types of permits, the permitting analysis subgroup incorporated results from two other ongoing interagency improvement efforts with the California Department of Fish and Wildlife (CDFW) and the California Coastal Commission (CCC) to leverage best practices and lessons learned from those process reviews. Caltrans and CDFW recently completed a Lean Six Sigma project that started in 2015 and focused on applications for 1600 permits. Lean Six Sigma is a collaborative method to improve performance systematically. It combines two very powerful methodologies into a single, integrated approach to process improvement. *Lean:* Improving efficiencies by eliminating waste/delay through the process. *Six Sigma:* Improving quality and reducing defects by eliminating process variation. The combined set of tools and techniques comprise a data-driven, stepwise structure that leads to effective and lasting change.

The AB 1282 Permitting Analysis Subgroup reviewed the 1600 permit Lean Six Sigma initiative to identify and leverage insights from that effort into the 2019 permit process review. In addition, Caltrans and the CCC have been conducting partnering sessions, analyzing transportation infrastructure planning and delivery and the coastal development permit process, and implementing improvements as part of their Integrated Planning Team (IPT) effort over the past few years. Implementation activities resulting from both of those process reviews are ongoing. Where relevant, insights from those process reviews were incorporated into the AB 1282 workshops on permitting analysis and recommendation development to capture lessons learned and build upon this ongoing work.

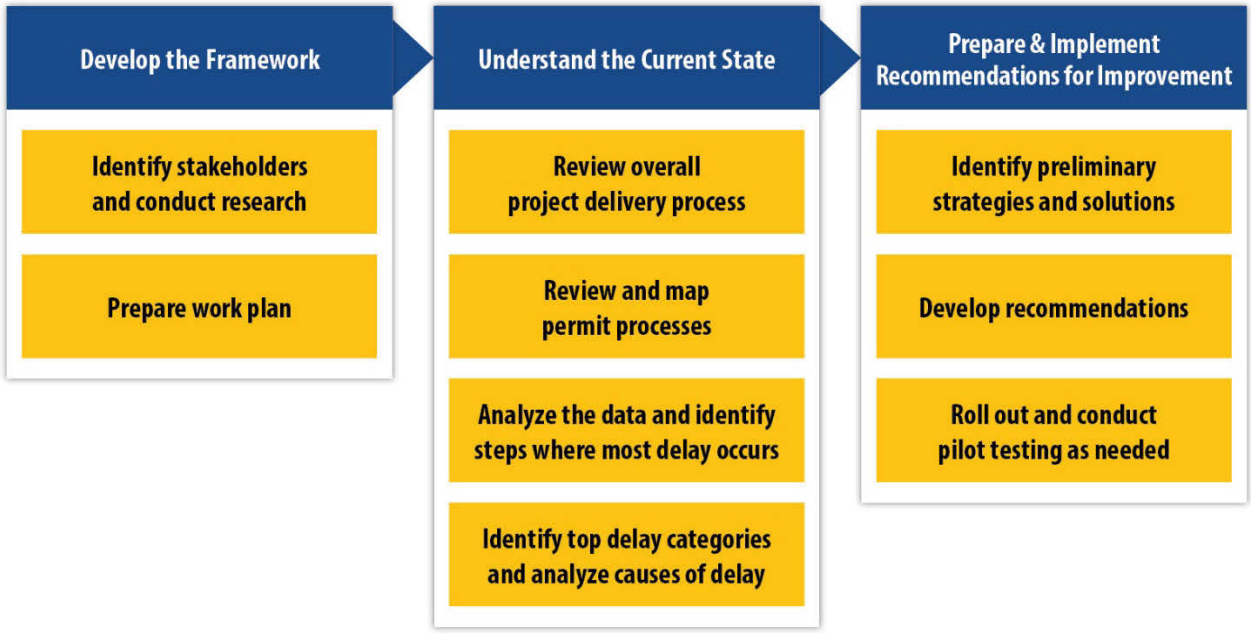


Figure 1. Approach for Conducting Permitting Analysis and Developing Recommendations

For the WQC, CDP, and ITP, the Task Force assembled teams of Lean Six Sigma and regulatory permitting experts for each permit type to evaluate these existing permitting processes in detail within the context of the entire project delivery process. The permit applicants (transportation project sponsors) and the permitting agencies were identified as the key stakeholders. Multiple districts and regions of each agency were included on the teams. Extensive research was conducted to acquire a baseline understanding of the permit process and prior Lean Six Sigma efforts before conducting onsite process review workshops in 2018 and 2019.

Each team engaged in multiple onsite workshops with various transportation and permitting agencies across California to understand the current state of permit processes and identify where delays are most likely to occur. Each stakeholder identified a team of agency subject matter experts who participated in onsite process mapping workshops. The teams of permitting experts mapped processes for a medium-complexity project, as defined by the

AB 1282 Working Group, generally characterized by the level of environmental documentation needed and as having multiple environmental resource challenges and permits required.

During each process mapping workshop, attendees identified current issues associated with each step in the permit processes. Issues ranged from unique office-related problems to ineffective communication and project management. Since the goal of this study was to determine specifically where *delays* occur in the processes, only issues categorized as delays were analyzed further. *Delays* are defined as any wait state within the process that impedes the start of the next process step.

Medium-Complexity Project Criteria

- *Requires compensatory mitigation.*
- *Requires in-water work and dewatering during construction.*
- *Seasonal restrictions apply.*
- *Restoration of temporary impacts.*
- *Project is located within state and federal jurisdictional boundaries.*
- *Project limitations based on location.*
- *May require an initial study and/or mitigated negative declaration or an environmental impact report pursuant to the California Environmental Quality Act.*
- *May have state and federally listed threatened or endangered species.*

The permitting analysis team participated in 27 workshops and identified more than 1,200 issues and opportunities for improvement. The permit analyses for each of the permit processes identified points at which delays are most likely to occur and where opportunities exist for improvements to reduce permit processing time, promote early engagement, ensure greater certainty of permit approval requirements, and improve environmental outcomes.

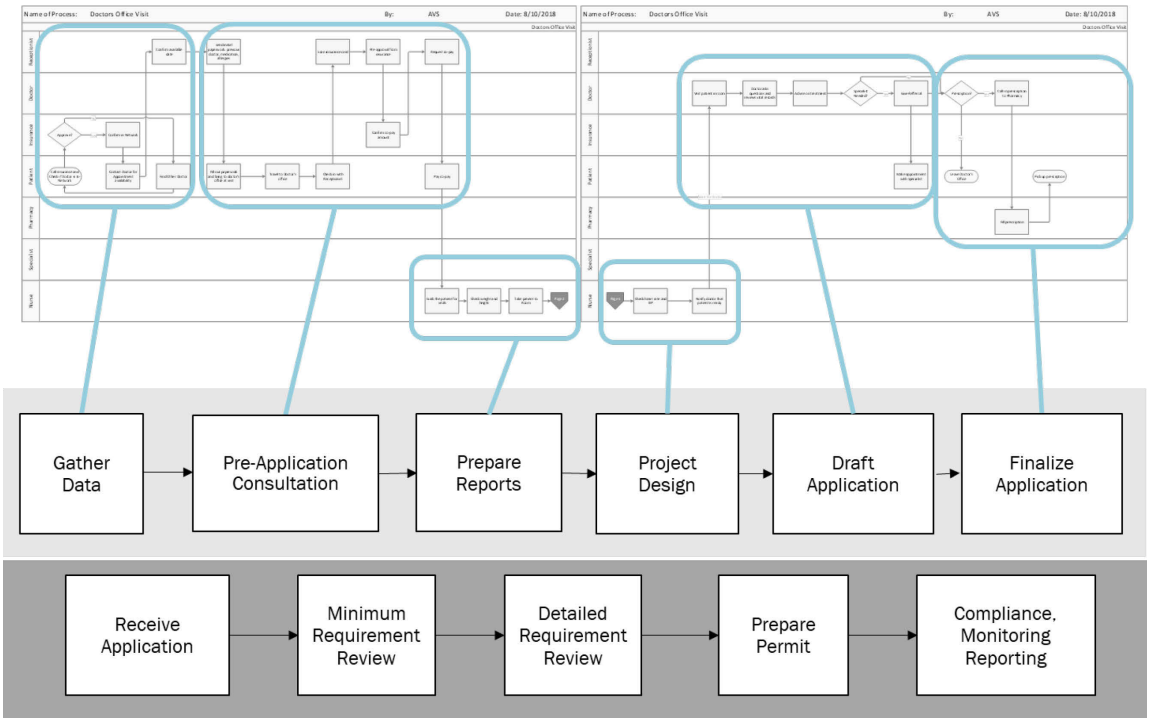
After the process-mapping workshops, the Permitting Analysis Subgroup used value stream mapping to analyze process times, lead (wait) times, and inadequate quality levels (as measured by percent complete and accurate) in the workflow. Figure 2 illustrates how the value stream mapping steps were created for the permitting processes. The steps in the upper, lightly shaded row represent the transportation project applicant's steps, and the steps in the dark shaded row below that represent the permitting agency's steps. In all, 11 value stream mapping steps were derived from the WQC, CDP, and ITP process maps.

Challenges, Pinch Points, and Other Causes of Delay

The majority of WQC, CDP, and ITP process steps are similar, with the exceptions of Steps 9 and 10. Table 1 provides a summary of high-level steps for each of these permit processes.

As denoted with bold italics in Table 1, of the 11 steps, Steps 2, 5, 8, 9, 10, and 11 showed the highest level of agreement among stakeholders as primary causes for significant delay. These steps are pre-application coordination, draft application, permit application

minimum requirements review, permit application detailed review/technical analysis, public hearing, and compliance monitoring and reporting.



Light gray row (top): Applicant process
Dark gray row (bottom): Permitting Agency process

Figure 2. Identification of Value Stream Mapping Steps from Permit Process Map

Table 1. High-Level Permit Process Steps by Permit Type

Step	WQC	CDP	ITP
1	Gather data	Gather data	Gather data
2	***Pre-application/Request coordination***	***Pre-application/Request coordination***	***Pre-application/Request coordination***
3	Prepare reports	Prepare reports	Prepare reports
4	Project design	Project design	Project design
5	***Draft application/request***	Draft application/request	Draft application/request
6	Finalize application/request	Finalize application/request	Finalize application/request
7	Receive application/request	Receive application/request	Receive application/request
8	***Application minimum requirements review***	***Application minimum requirements review***	***Application minimum requirements review***
9	***Application detailed review***	***Application technical analysis***	***Application detailed review***

Step	WQC	CDP	ITP
10	Prepare certification/ permit/permission	***Public Hearing/Permit Decision***	Prepare certification/ permit/permission
11	Compliance monitoring and reporting	Compliance monitoring and reporting	***Compliance monitoring and reporting***

Bold italics = *highest level of agreement among stakeholders as primary causes for significant delay.*

Among the steps noted above, six types of delay were found to be most common. These types of delays were further categorized as pinch points, rework, process variation, or other. Those categories are defined as follows.

- ***Pinch point:*** Also known as a bottleneck, a situation in which multiple processes, actions, and/or reviews compete for the same resources.
- ***Rework:*** A situation in which multiple attempts are made to satisfy a requirement.
- ***Process variation:*** A situation in which process steps, requirements, and/or expectations are inconsistent.
- ***Other:*** Situations that do not fit any of the other three categories.

Section 401 WQC Process Delay Classifications

Pinch Point Delays accounted for 23% of delays in the CWA 401 WQC process (Figure 3). These include:

- Staffing levels at the Regional Boards are insufficient to process current workload, and contribute to staff's inability to conduct completeness reviews within the 30-day timeframe.
- Response times between the applicant and permitting agency are long.
- Caltrans' internal process for obtaining checks to pay for permit fees is lengthy and may take 2 to 4 weeks to obtain a check to include with the application.
- No Caltrans project milestone is in place to finalize design and solidify information.
- Project timeframes often do not allow sufficient time for pre-application consultation.

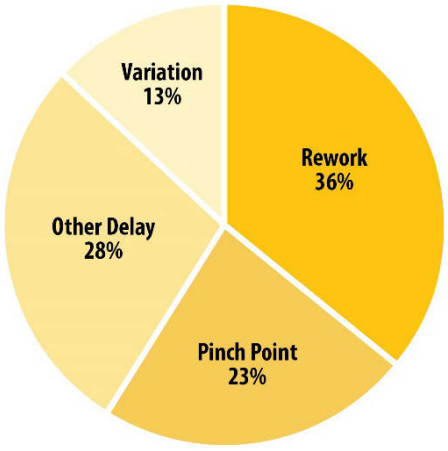


Figure 3. WQC Delay Categories by Percentage

Rework Delays accounted for the majority of delays in the CWA 401 WQC process at 36%. These include:

- Design changes that occur after the application is submitted (this was the most common issue identified).

- Insufficient or missing information submitted with application.
- Construction drawings that are missing or incomplete.
- Misunderstanding of the requirements to achieve a complete application determination.
- Project description is unclear.
- Boxes left blank on application.
- Fee not submitted with the application.
- Wrong application form is submitted.
- Disagreement between applicant and permitting agency about the level of environmental review and corresponding document required pursuant to the California Environmental Quality Act (CEQA).

Process Variation Delays accounted for 13% of process delays. These include:

- Lack of agreement on definition/purpose of early engagement.
- Application submittal requirements differ among water quality permitting regions.
- Inconsistent Caltrans Project Development Team review meetings.
- Unclear definitions of terminology.

Other Delays accounted for 28% of process delays. These include:

- The Caltrans Standard Tracking and Exchange Vehicle for Environmental (STEVE) database is complex and not user-friendly.
- Data is inconsistently entered and not reliable (all databases).
- Confusing permit fee schedules.
- Concern over feasibility of mitigation requirements.
- Frequent changes in Caltrans' project delivery priorities.

CDP Process Delay Classifications

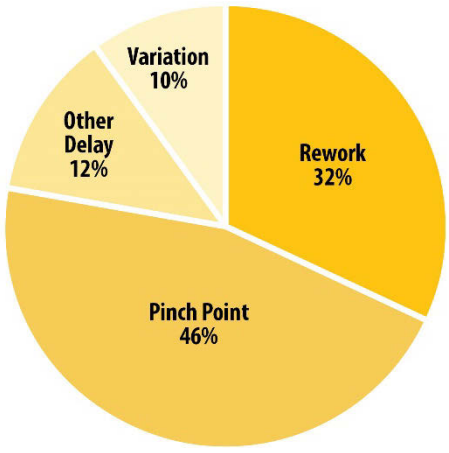


Figure 4. CDP Delay Categories by Percentage

Pinch Point Delays accounted for the majority of delays for the CDP process at 46% (Figure 4). These include:

- Caltrans, CCC, and local governments with local coastal programs (LCPs) have high staff turnover rates, resulting in inconsistency in available, trained staff to perform their respective job functions.
- CCC is understaffed, leading to delays in communication and timelines. This includes limited technical expert positions, which causes delays due to workload. For example, CCC retains only three fulltime biologists to review all projects across the state.

- Due to limited availability of geographically convenient CCC hearings in a given calendar year and the occasional lapse by transportation agencies to plan for those hearings, the extensive wait time to secure a space on the hearing calendar can delay project timelines.

Rework Delays accounted for 32% of the process delays. These include:

- Additional conditions may be required prior to issuing a permit or prior to construction. These conditions may result in significant project redesign and/or a permit amendment, causing a delay in the start of construction.
- If changes to project design occur after coordination with CCC, Caltrans may need to reopen mitigation discussions, resulting in delays.
- The appeal process, while rare for Caltrans applications, can add 6 months to 1 year to the CDP process time, affecting project deadlines.
- Early coordination does not occur consistently among agencies. When coordination is lacking, critical project components (e.g., design elements, proposed construction methods, required studies, and mitigation) are not agreed upon prior to submitting application, often resulting in incomplete applications and rework.

Process Variation Delays accounted for 10% of the process delays. These include:

- Because they are tailored to local conditions, LCPs are not standardized in their approach to processing CDP applications. This variation sometimes requires additional attention by Caltrans and the CCC to navigate the differences, and can delay the permit and appeal processes.
- Caltrans districts are inconsistent in their approach to early coordination. Districts vary on when they engage (e.g., differing design completion percentages) and the frequency with which they do so.
- In the case of an emergency, CCC may issue an emergency CDP to authorize Caltrans to react quickly. However, Caltrans and CCC are not always aligned on the definition of emergency and the subsequent required permitting and mitigation actions that are required once an emergency situation has been temporarily addressed.
- The amount and types of mitigation required pursuant to the California Coastal Act are often different from the mitigation provided to comply with CEQA or other state resource protection laws. As a result, the CCC may require greater mitigation for a particular project impact (e.g., public coastal access) than other permitting agencies. This has sometimes led to the perception by some Caltrans staff that mitigation requirements for coastal resources may be subjectively based.

Other Delays accounted for 12% of the process delays. These include:

- Misalignment between CCC and Caltrans regarding which studies (e.g., sea-level rise, wave run-up) are required before a permit can be issued, and the required

contents of such studies. Performing these studies can be time consuming and affect the overall project timeline if not initiated early in the process.

- Acquiring property for mitigation can be difficult in some regions due to the lack of available real estate in the coastal zone. Inability to secure right-of-way can also result in delay.

ITP Process Delay Classifications

Pinch Point Delays accounted for 33% of delays for the ITP process (Figure 5). These include:

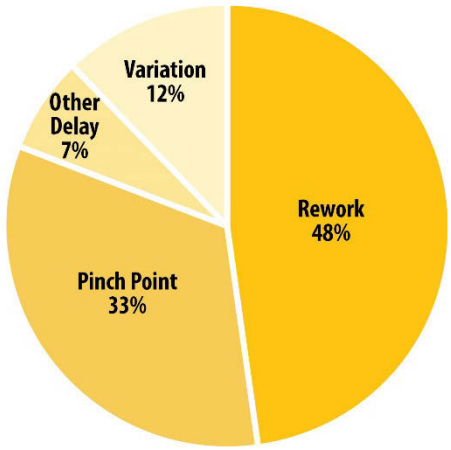


Figure 5. ITP Delay Categories by Percentage

- High staff turnover rates at Caltrans and CDFW that result in inconsistent availability of trained resources to perform their respective job functions.
- Large workloads for Caltrans and CDFW staff that stretch the limits of the resources available to create and review permit documents.
- Occasional urgent requests from Caltrans to CDFW in order to meet a project schedule. These requests cause delays in other CDFW work because staff prioritizes the Caltrans request.
- Caltrans biologists must wait until the design has reached a sufficient level of completion before investigating mitigation needs or coordinating with CDFW. As a result, the Caltrans biologist may have to expedite mitigation discussions to ensure that the permit application is submitted and maintain project deadline.

Rework Delays accounted for the majority of delays for the ITP process at 48%. These include:

- Frequent technical disagreements between Caltrans and CDFW about the level of environmental review and documentation needed, or the details of mitigation. These disagreements lead to multiple back-and-forth discussions, resulting in rework to project design and/or permit application as the details are refined and agreed upon.
- Caltrans, or the construction contractor, sometimes revises project designs after consulting with CDFW. Depending on the extent, these changes may require permit amendments, which creates delays in the project timeline.
- Caltrans sometimes reaches out to CDFW for consultation after project designs are near completion. Delaying coordination until this stage often results in rework of the project design to accommodate CDFW mitigation requirements.

- Caltrans staff sometimes misunderstand the requirements of a complete permit application, resulting in multiple incomplete applications and subsequent rework.

Process Variation Delays accounted for 12% of the process delays. These include:

- No formal early engagement process is shared among the agencies. Each Caltrans project team takes its own approach based on their relationship with regional CDFW staff and the district's own internal practices.
- Some CDFW regions coordinate with Caltrans to develop suitable avoidance, minimization, and mitigation measures, while others provide mitigation conditions without Caltrans' input. This variation in procedure can confound prior planning efforts by Caltrans and lead to unexpected delays.
- Mitigation options differ by region, depending on availability of suitable habitat. These differences can make it difficult to anticipate proper mitigation, leading to delays.
- Multiple permitting agencies are involved in issuing permits for transportation projects, many with unique, and some with conflicting, requirements. For example, mitigation requirements for water quality permits may have different specifications or focus than for incidental take permits. It is often difficult for the permit applicant to successfully reconcile the requirements of various agencies without delaying the process.

Other Delays accounted for 7% of the process delays. These include:

- Caltrans sometimes disagrees with CDFW's authority involving ITP conditions to protect habitat in addition to the individual species. This extends the discussion of mitigation between the agencies, leading to schedule delays.
- CDFW can require an ITP as a condition of another permit (e.g., for a 1600 permit). As a result, Caltrans will initiate the ITP process much later in the project timeline, delaying the project overall.

Timeline for Existing Permitting Processes

After conducting process mapping workshops with stakeholders, the Permitting Analysis Subgroup used value stream mapping to analyze process timelines for each permit type. For each step in the process, the value stream mapping analysis identified lead (wait) time (LT), processing time (PT), and inadequate quality levels as measured by the percent complete and accurate (%C&A) of application submittals.

For each permit type, data was collected and averaged from selected representative Caltrans districts and permitting agency regional boards or regions. The permit processes were divided into 11 steps and the LT, PT, and %C&A were calculated for each step to quantitatively represent how long each step takes and where in the process the greatest opportunities exist to reduce delay. In addition, a lead time to processing time ratio (PT/LT

ratio) was calculated for each step. The PT/LT ratio is a measurement of efficiency. A low ratio means it takes a long time to do relatively little work.

Of the 11 steps, the first six represent the Caltrans application preparation phase and Steps 7 through 10 represent the permitting agency's processing of the permit application. Note that both agencies participate in Step 3, the pre-application consultation step, and Step 11, compliance monitoring and reporting. Table 2 shows the general sequence of process steps evaluated in the timeline analysis.

Table 2. Sequence of Steps Evaluated in the Value Stream Mapping Timeline Analysis for Each Permit Type

Step	Caltrans Application Preparation Steps	Permitting Agency Application Processing Steps
1	Gather data	
2	Pre-application/Request coordination	Pre-application/Request coordination
3	Prepare reports	
4	Project design	
5	Draft application/request	
6	Finalize application/request	
7		Receive application/request
8		Application minimum requirements review
9		Application detail review
10		Prepare certification/ issue permit
11	Compliance monitoring/reporting	Compliance monitoring/reporting

Results of Section 401 WQC Value Stream Mapping/Timeline Analysis

Analysis of the Section 401 WQC value stream mapping revealed that from a Caltrans perspective, Steps 3 and 4 represent the longest lead times for the process. In addition, the PT/LT ratio for Step 4 was very low, indicating that the process step is very inefficient. A viable opportunity exists for Caltrans to improve the efficiency of Steps 3 and 4 by removing delays and wait states between process steps during those project phases. The value stream mapping also indicates that *project design changes made after the submission of permit applications is a major source of delay and rework* during Steps 8, 9, and 10. Caltrans has an opportunity to focus on minimizing the need for design changes after submission of permit applications. Improvements in overall speed and efficiency for the WQC process are possible by focusing on Steps 2, 8, and 9.

Steps Where the Most Delay Occurs in 401 Permit Process

Caltrans

- *Step 3 – Prepare reports*
- *Step 4 – Project design*
- *Steps 8, 9, and 10 – Due to late project design changes and rework during these steps*

Regional Water Quality Control Board

- *Step 2 – Pre-application coordination*
- *Step 8 – Application minimum requirements review*
- *Step 9 – Application detail review*

Results of CDP Value Stream Mapping/Timeline Analysis

Steps Where the Most Delay Occurs in CDP Process

Caltrans

- *Step 4 – Project design*
- *Steps 8, 9, and 11 – Due to late project design changes and rework during these steps*

California Coastal Commission

- *Step 2 – Pre-application coordination*
- *Step 9 – Application detail review*

Analysis of the CDP value stream mapping showed that Step 4 represents the longest lead time for Caltrans. Similar to the WQC value stream mapping results, the CDP value stream mapping revealed that *project design changes made after the submission of permit applications are a major source of delay and rework* during Steps 8, 9, and 11. From the CCC's perspective, Steps 2 and 9 represent the longest lead times in the process, at 941 and 160 days respectively. There is a large difference between the average times quoted by Caltrans staff and those cited by CCC staff for the pre-application consultation step, although much of this may be due to a different interpretation of the term "pre-application" during the interviews. Caltrans has significant opportunity to reduce lead times during Step 2 by examining when to enter into pre-application consultation with the CCC and local governments with LCPs. The two agencies would benefit from examining this step together to understand where key changes should be made in timing, communication, and project management.

Section 2081 ITP Value Stream Mapping/Timeline Analysis

Steps Where the Most Delay Occurs in ITP Process

Caltrans

- *Step 1 – Gather data*
- *Step 2 – Pre-application coordination*
- *Step 3 – Prepare reports*
- *Step 4 – Project design*
- *Steps 8, 9, and 10 – Due to late project design changes and rework during these steps*

California Department of Fish and Wildlife

- *Step 2 – Pre-application coordination*
- *Step 8 – Application minimum requirements review*

Analysis of the ITP value stream mapping revealed that Steps 1, 2, 3, and 4 all have significant lead times compared to other steps in the workflow for Caltrans. In addition, the PT/LT ratios for Steps 1 and 3 are relatively low, indicating that these steps are inefficient. As part of the ITP application effort during Step 1, gather data, Caltrans often performs seasonal site surveys over a period of several months and often years, due to the study requirements for ITPs. While it may be unrealistic to greatly reduce the lengthy lead time for Step 1, it should still be considered a viable opportunity for future improvement.

Step 3 was also noted as a major source of delays in the delay analysis, and Caltrans could prioritize improvements for Step 3 to reduce the lead time and improve the quality of the pre-application consultation. Similar to the WQC and CDP processing times, *project design changes made after submission of the ITP applications are a major source of delay and rework* during Steps 8, 9, and 10.

For CDFW, the longest lead time occurs in Step 2, which begins when Caltrans first notifies CDFW of the project and concludes when a permit application is received. CDFW would benefit from partnering more closely with Caltrans during this period to ensure effective and efficient communication and collaboration to eliminate permit application defects. The lowest %C&A occurred at Steps 2 and 8, indicating that Caltrans lacks a clear understanding of CDFW requirements for this permit.

Delay Cause Analysis

The primary, or root, cause of process delays must be identified before they can be effectively removed. The Permitting Analysis Subgroup employed a root-cause analysis technique to systematically identify the primary causes of delay at each step in the permitting process so that effective solutions could be generated. In a facilitated root-cause analysis workshop, subject matter experts from Caltrans, CDFW, CCC, and the State Water Board identified the primary causes for each of the six top delay areas. The permitting analysis team also held a special meeting with representatives of Caltrans Design and Planning Divisions to capture their perspectives.

Once the list of fundamental delay causes were developed, the Permitting Analysis Subgroup sorted similar or related causes into four or five sets of underlying root causes for each of the six delay cause areas as follows:

Top Six Categories of Causes of Delay across All Permit Processes

- *Unclear understanding of permit requirements*
- *Ineffective early coordination*
- *Ineffective project planning/ program management*
- *Need for updated procedures, policies, and guidance*
- *Increased/high workload demand*
- *Uncoordinated design change management*

- Unclear understanding of permit requirements
  - Perceived complexity of measures and terminology
  - Need for more structured process
  - Need for interagency training opportunities
  - Unresolved disagreements between agencies
  - Perception of changing and/or varying requirements
- Ineffective early coordination
  - Lack of coordination during early project design
  - Lack of structured processes
  - Communication challenges (meeting response times, information requests)
  - Lack of incentive, priority, trust
- Ineffective project planning/program management
  - Lack of environmental design information and coordination process
  - Challenges with asset management approach
  - Challenges with mitigation planning
  - Challenges with scheduling and change management
- Need for updated procedures, policies, and guidance
  - Insufficient knowledge of cross-agency processes
  - Failure to prioritize environmental considerations in project design
  - Need for guidance development
  - Need for proper delegation of signature authority
  - Need for interagency memoranda of understanding (MOUs)
- Increased/high workload demand
  - Need for job tools and training opportunities
  - Compensation parity and other staff retention issues
  - Hiring challenges and obstacles
- Uncoordinated project design change management

- Insufficient guidance, priority, and lack of resources in the early (project initiation document [PID]) phase of project delivery
- Fear of causing a slip in the project delivery schedule
- Inconsistency of priorities and incentives with environmental considerations
- Gaps in awareness and lack of cross-functional training

It is clear that several root causes are common among more than one category of delay. In other words, addressing any of the root causes could lead to improved performance in several areas of transportation project delivery.

Each of the root causes was then ranked by its probability of occurrence and contribution to overall delay. The team rated the primary causes with highest probability of occurrence (rare, uncommon, or common) and contribution to delay (minor, moderate, or major) and organized them into 21 collectively exhaustive key problem statements. The top delay causes were then grouped into six main categories as the basis for generating solutions. The completion of the root-cause analysis was the last step in the permitting analysis to develop a clear understanding of current conditions and provide the foundation for developing recommendations for improvement. The process for developing preliminary solutions and final recommendations is presented in Section 6, *Recommendations*.

Section 3. Personnel Positions Funded by Transportation Agencies at Permitting Agencies

Background

AB 1282 states that the Task Force shall prepare a report of findings to the State Legislature that shall include analysis of:

- *The utilization of existing positions in the various state resource agencies currently supported by transportation funds, including analysis of the benefits of those positions to the state's transportation programs relative to their costs.*
- *Resource levels needed at the resource agencies to implement the process developed pursuant to subdivision (b).*

Subdivision (b) refers to the Task Force's development of:

> *…a structured coordination process for early engagement of all parties in the development of transportation projects to reduce permit processing time, establish reasonable deadlines for permit approvals, and provide for greater certainty of permit approval requirements.*

The benefits of early coordination include faster processing timelines for permits and other agreements, fewer conflicting permit conditions among permitting agencies, fewer unknowns associated with conditions in permits and other agreements, and fostering the incorporation of resource protection mandates and sustainability principals into the design of transportation projects. The importance of communicating as early as possible in a project's timeline is recognized, but permitting agency staff are rarely funded to participate in this early engagement. Failing to fund staff hampers efforts to prioritize early coordination that will guide project programming, design, and implementation, and risks incurring higher costs and longer delivery schedules.

This section of the report presents an analysis of the staff liaison positions funded by Caltrans and CHSRA. It provides background information on some of the challenges that led to the need to create the liaison program, benefits of the program, analysis of the utilization and costs of existing liaison positions at various State agencies, and recommendations.

Analysis Approach

The AB 1282 Task Force convened a technical subgroup to the Working Group to conduct the analysis of transportation-funded staff liaison positions at State permitting agencies. The subgroup comprised representatives from Caltrans, CHSRA, CDFW, the State Water Board, and Regional Board – Region 1 North Coast. The subgroup also reached out to other agencies, such as the CCC, as needed, to obtain input in conducting the analysis.

The subgroup's approach for analyzing existing conditions included researching and analyzing:

- The issues identified that resulted in the need for these interagency agreements.
- The benefits these staff liaisons bring to transportation programs and lessons learned from having the staff liaison positions in place, and to what extent they have been effective in addressing the issues.
- The number of agreements and identification of the agencies participating in those agreements and the timeframe and number of years each agreement has been in place.
- The nature, number, and location of personnel positions (State permitting agency liaisons) supported by transportation funds.
- The costs of funding and executing the current agreements.
- The changes in demands on staff liaisons' workload, including workload increases expected as projects move forward under the SB 1 program and implementing a structured coordination process for early engagement.

Identified Challenges and Program Benefits

Issues that Resulted in the Need for Liaison Positions

The idea of funding positions for enhanced services at permitting agencies grew out of a major effort by Caltrans in the late 1990s and early 2000s to improve poor environmental delivery performance. Performance in meeting environmental document delivery milestones had fallen to under 40 percent year to year, causing significant delays in project delivery. Causes included inadequate permitting agency staff resources to fully participate in environmental review processes; insufficient development of project alternatives responsive to resource protection mandates; incomplete technical studies to initiate permitting processes; late attention to project mitigation requirements; consequent higher rates of project rework and permit denials; and, triggering of lengthy and costly project appeals and litigation. The effort to find solutions involved surveys of Caltrans' environmental and other managers across the state, consultation with California Transportation Commission staff and partner agencies, and the review of permitting agency relationships by special ombudsman Vice Admiral Leahy in the Caltrans Director's Office. This review led to a series of innovations that are evolving to this day, including stable funding of positions at the permitting agencies and enhanced interaction between Caltrans district directors and permitting agency managers. Those innovations resulted in dramatically improved environmental delivery; Caltrans has consistently met and exceeded the original goal of 80 percent environmental document delivery performance.

Although an increase in the environmental delivery performance from 40 to 80 percent is substantial, there is still much room for additional improvement, and the transportation-funded liaisons program is one area that was evaluated as an important solution. The risk level is high where permits are a critical path item for project delivery and can lead to

delays and increased costs. Employing agency liaisons to participate in early coordination, issue permits, and assist with amendments is a primary strategy for mitigating this risk.

Overall Challenges and Benefits of Interagency Agreements for Staff Liaisons

Challenges encountered without agency liaison agreements include:

- Long permit processing times.
- Regional inconsistencies in how regulations are interpreted or what materials are required to process a permit.
- Limited opportunities for effective communication due to a lack of a single focal point or point of contact.
- Turnover rate of non-liaison staff.
- Permitting agency staff with limited knowledge of transportation project processes.
- Lack of dedicated specialty staff at agencies, such as hydraulic engineers and biologists to work on high priority issues such as mitigation proposals, fish passage projects, and wildlife corridors.
- Lack of agency staff time to participate effectively in advance pre-project planning and statewide policy issues, such as advance mitigation or general permitting.
- Few to no opportunities for early engagement.
- Limited flexibility in project prioritization given the press of competing project review requests.
- Lack of advance cross-agency coordination that would allow for a more efficient overall permitting process (i.e., no coordination with Caltrans throughout project planning and development processes).
- Increase in CDFW Operational Law Letters, which can lead to re-submittal of applications, new fees, and project delivery schedule delays.
- Difficulties in organizing interagency meetings across multiple agencies and maintaining consensus among agency staff.
- Lack of consistent contact persons (liaisons) at Caltrans for permitting agency staff to reach out to makes interactions particularly difficult, due to the specialized nature of Caltrans positions and large size of most Caltrans districts.

To date, the benefits realized where staff liaisons are in place include:

- Support for Caltrans to consistently meet or exceed the goal of 80 percent environmental document delivery milestones.
- Agreed-upon performance measures and improved understanding of regulatory requirements that result in more complete applications and better-streamlined permit and agreement processing times.
- Expedited agency review of Caltrans' work.
- Opportunities to build relationships and trust and improved communication from working with more consistent points of contact involved in the permitting process.

- Lower staff turnover rate and retention of experienced staff who are familiar with transportation projects and processes.
- Improved understanding of requirements under resource protection mandates and greater consistency of reviews.
- Support for early engagement, such as for the Caltrans AMP and the Statewide Advance Mitigation Initiative (SAMI) effort.
- Support for statewide coordination and partnering, such as the AB1282 effort, the Lean Six Sigma California Fish and Game Code Section 1600 Notifications process improvements, fish passage remediation, and the CCC/Caltrans *Plan for Improved Interagency Partnering*.
- Access to specialized permitting agency staff to assist with finding workable solutions to complex projects and related efforts, which enhances opportunities for interagency coordination across multiple permitting agencies, a primary goal of the AB 1282 effort.
- Dedicated staff at permitting agencies with specialized skills in assessing transportation impacts.
- Reduction in the number of last-minute requests for expedited permits toward the end of the fiscal year, resulting in an overall reduction in project delays.
- Consistency across districts/regions (same reviewers, same process) while still allowing for appropriate flexibility to reflect geographic differences.
- More context-sensitive avoidance and minimization measures and best management practices incorporated into transportation projects.
- Improved understanding of mitigation and monitoring expectations.
- Opportunities to enhance and maintain permitting agency institutional knowledge of transportation plans, projects, and impacts occurring within their regions.

Existing Interagency Agreements with Caltrans

Caltrans currently has interagency agreements for staff liaison positions with the following State agencies:

- CCC
- CDFW
- Regional Boards – Region 1 (North Coast) and Region 2 (San Francisco Bay)

Caltrans Headquarters Division of Environmental Analysis currently has interagency agreements with CCC and CDFW. Caltrans Central Region District 6 has an interagency agreement with Region 4 of CDFW, and Caltrans North Region and District 4 have interagency agreements with Regional Boards 1 and 2. All of these interagency agreements have established liaison positions to help Caltrans efficiently and effectively deliver programmed projects for the benefit of the traveling public. These agreements are typically valid for a period of three to five years. For fiscal year 2018-2019, Caltrans funded a total of 19.65 person-years (PYs) within CCC, CDFW, and Regional Boards, as shown in Table 3.

Table 3. Caltrans-Funded Liaison Positions by State Permitting Agency

Agency	Number of Staff Liaison Positions (in Person Years by Select Fiscal Year)						
	2005-2006	2012-2013	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019
CCC	3	5	5	5.5	5.5	5.5	6.5
CDFW	5	7	8	10.05	11.05	12.05	11.15[a]
Regional Boards	0	0	0	2	2	2	2[b]
Totals	**8**	**12**	**13**	**17.55**	**18.55**	**19.55**	**19.65**

[a] *Additional staffing needs are being evaluated in several CDFW Regions and CCC (totals only include current staffing levels).*
[b] *Caltrans North Region is currently working with Region 1/North Coast Regional Water Quality Control Board to execute a new contract through fiscal year 2021-2022.*

Table 4 shows the locations of Caltrans-funded staff liaisons across all three permitting agencies.

Table 4. Caltrans-Funded Liaison Positions by State Permitting Agency Location

Agency	Location	Number of Positions (PYs)[a]
CCC	Statewide	6.5
CDFW	R1 – Northern	2
CDFW	R2 – North Central	1
CDFW	R3 – Bay Delta	1
CDFW	R4 – Central Region	1
CDFW	R5 – South Coast	2
CDFW	R6 – Inland Deserts	1
CDFW	Headquarters	2
CDFW	Managerial and Administrative Support	1.2
Regional Boards	Region 1 – North Coast	1
Regional Boards	Region 2 – San Francisco Bay	1

[a] *Numbers have been rounded.*

Funding for these positions is directed by agency agreements for enhanced project consultation services, enabling Caltrans and the permitting agencies to address issues timely and more effectively, therefore accelerating the environmental review and permit process. The estimated costs for all Caltrans-funded positions for the current fiscal and recent past fiscal years are shown in Table 5.

Table 5. Caltrans Cost of Staff Liaison Positions by Fiscal Year and Permitting Agency

Agency	Costs for Staff Liaison Positions by Fiscal Year (in thousands of dollars)[a]							
	2005-2006	2012-2013	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
CCC	$375	$864	$864	$1,004	$1,091	$1,109	$1,390	$1,000
CDFW	$375	$848	$1,093	$1,801	$1,876	$1,950	$2,600 [b]	$2,900
Regional Boards	0	0	0	$45	$90	$90	$90 [c]	$280
State Water Board	0	0	0	0	0	0	0	2,000
Totals	**$750**	**$1,712**	**$1,957**	**$2,850**	**$3,057**	**$3,149**	**$4,080** [b]	**$6,180**

[a] *Numbers have been rounded.*
[b] *Additional staffing needs are being evaluated in several CDFW Regions (totals only include current staffing levels as of 2019).*
[c] *Caltrans North Region is currently working with Region 1 – North Coast Regional Water Quality Control Board to execute a new contract through fiscal year 2021-2022.*

Caltrans Assessment of Existing and Future Workload

Caltrans began tracking permit-related information through the STEVE database in 2011. Table 6 shows the average number of permits obtained from each agency by permit type over the last seven years, beginning with fiscal year 2012-2013.

Table 6. Number of Permits Obtained by Caltrans from Each Agency Beginning with Fiscal Year 2012-2013 [a]

Agency and Permit	Average Number per Fiscal Year, Beginning with Fiscal Year 2012–2013	Future Fiscal Years [c]
CCC		
Coastal Development Permits (CDP) and Amendments	8	10–16
Local Coastal Programs (LCP) and Amendments	2	3–4
CDP Exemptions	6	10–12
CDP Waivers [b]	1	1–2
Total	**17**	**24–34**
CDFW		
Section 1600 Agreements and Amendments	92	110–184
Section 2080.1 Consistency Determinations and Amendments	1	1–2

Agency and Permit	Average Number per Fiscal Year, Beginning with Fiscal Year 2012–2013	Future Fiscal Years [c]
Section 2081 Incidental Take Permits and Amendments	13	16–26
Total	**106**	**127–212**
Regions 1 and 2 Water Quality Control Boards		
Section 401 Water Quality Certifications and Waste Discharge Requirements and Amendments	21	25–42
Total	**21**	**25–42**

[a] *Based on Caltrans STEVE Database.*
[b] *Reported number low as several projects approved through the waiver process appear in CDP list above because they were submitted as CDP applications.*
[c] *Range is based on an expected workload increase and a doubling of project construction dollars.*

The needs for fiscal year 2019-2020 and beyond are expected to increase based on an increased workload and a doubling of dollars for construction projects from SB 1 transportation funding, agency participation in the AB 1282 effort (including implementation of the structured coordination process for early engagement), and the implementation of Caltrans' AMP and SAMI.

It is anticipated that the number of permits Caltrans will need from each agency will increase beginning with fiscal year 2019-2020, due to the projected increase in project workload associated with SB 1 funding—$26 billion will be targeted to state transportation infrastructure. This funding includes $15 billion for state highway improvements and $4 billion to fix or replace bridges, culverts, and drainage systems. By 2027, Caltrans is slated to repair or replace 17,000 miles of pavement; 55,000 culverts or drains; 7,700 signals, signs, and sensors; and 500 bridges. In addition, SB 1 created the Caltrans AMP, which will manage $120 million in advance mitigation projects, some of which will require permitting agency permits. This growth in funding to rebuild California's transportation infrastructure to meet the needs of the twenty-first century, the associated complexity of additional efforts, and the demand for greater innovation substantially increase Caltrans' need to engage and partner with permitting agencies.

Cost Benefits to Caltrans Project Delivery

Interagency agreements for staff liaison positions provide cost efficiency benefits to transportation project delivery. The permits received under these interagency agreements allow transportation projects to progress to the construction phase. As an example, Table 7 shows the expended construction capital associated with the CDFW permits issued under the interagency agreement with CDFW for staff liaisons positions by fiscal year. For the six years shown, $8.7 billion in construction capital was successfully delivered for $10.2 million in expenditures. In other words, the cost of the interagency agreements with CDFW for these six fiscal years was merely 0.12 percent of the construction capital delivered with the assistance these agreements provided.

Investments in the interagency liaisons program has proven to achieve huge savings in capital construction costs by reducing delays in project delivery.

Table 7. Caltrans Expended Construction Capital Associated with Permits/Actions Issued by California Department of Fish and Wildlife per Fiscal Year

Fiscal Year	Costs for Staff Liaison Positions (in thousands of dollars)	Expended Construction Capital (in thousands of dollars)
2012-2013	$800	$3,600,000[a]
2014-2015	$1,100	$800,000
2015-2016	$1,800	$1,200,000
2016-2017	$1,900	$1,900,000
2017-2018	$1,900	$800,000
2018-2019	$2,600	$400,000
Total	**$10,100**	**$8,700,000**

[a] *Fiscal Year 2012-2013 includes expended construction capital for the East Span San Francisco-Oakland Bay Bridge Project (associated with CDFW Section 2081 permit amendment).*

Recommendations for Improving the Caltrans Staff Liaisons Program

Interagency agreements for staff liaison positions that are currently under review for renewal or execution are being developed with the recommendations from the AB 1282 effort in mind. As part of that review, specific scopes of work and associated budgets are also being developed. Caltrans reviews contracts for staff liaisons each year to determine the need for adjustments or amendments. This annual review process will facilitate any future adjustments or amendments needed to implement recommendations presented in this report.

The Task Force identified several potential improvements to the current staff liaison program. These improvements are described in Section 6, Recommendations 2.4 and 4.2.

Performance Measures for Monitoring Future Success

The existing interagency agreement performance measures will be reevaluated and will likely be updated to align with the improvements recommended by the AB 1282 effort. Improvements will be developed by both Caltrans and permitting agencies to achieve time efficiencies and cost savings. Metrics for evaluating the Caltrans staff liaisons program going forward will be developed and refined to demonstrate time and cost savings and will be compared to the current (baseline) average times for permit application acceptance and permit issuance.

Existing Interagency Agreements with the California High-Speed Rail Authority

The CHSRA currently has interagency agreements with permitting agencies CDFW and State Water Board to support implementation of the California High-Speed Train Project, as shown in Tables 8 and 9. Total PYs for 2019-2020 are 11.5.

Table 8. CHSRA-Funded Liaison Positions by State Permitting Agency

Agency	Number of Staff Liaison Positions (in Person Years by Fiscal Year) [a]					
	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
CDFW	2.7	8.7	10.2	10.7	9.7	9.9
State Water Board	N/A	N/A	1.6	1.6	1.6	1.6
Totals	**2.7**	**8.7**	**11.8**	**12.3**	**11.3**	**11.5**

[a] *Numbers have been rounded.*

Table 9. CHSRA Cost of Staff Liaison Positions by Fiscal Year and State Permitting Agency

Agency	Costs for Staff Liaison Positions by Fiscal Year (in thousands) [a]					
	2014-2015	2015-2016	2016-2017	2017-2018	2018-2019	2019-2020
CDFW	$35	$285	$1,400	$1,100	$1,200	*$1,100* [b]
State Water Board	$0	$0	$30	$100	*$400* [b]	*$400* [b]
Totals	**$35**	**$285**	**$1,430**	**$1,200**	***$1,600*** [b]	***$1,500*** [b]

[a] *Numbers have been rounded.*
[b] *Estimated values.*

Existing Workload

Table 10 shows the average number of permits CHSRA obtained from each agency beginning with fiscal year 2014-2015 and the number of each permit type for fiscal year 2018-2019.

Table 10. Number of Permits Obtained by CHSRA from Each Agency Beginning with Fiscal Year 2014-2015

Agency and Permit	Average Number per Fiscal Year, Beginning with 2014-2015	Fiscal Year 2018-2019
CDFW		
Section 1600 Master Agreements	14	28
Section 1600 Subnotifications	28	4
Section 2080.1 Consistency Determinations	N/A	N/A
Section 2081 Incidental Take Permits and/or ITP Amendments	6	15
State Water Board/Regional Boards		
Section 401 Water Quality Certifications	8	2

Performance Measures

Key performance measures under the current CDFW contract include having qualified and dedicated staff assigned who are available to communicate with contractor, project construction manager, or program staff regarding all aspects of permit compliance and permitting items pertaining to the Section 2081 ITP and 1600 Master Agreements.

The CHSRA is developing new performance metrics and reporting forms for use with CDFW in the new agreement. Previous issues arose when CHSRA staff did not understand unclear CDFW reporting content requirements. The addition of a dedicated administrative analyst and the development of clear, simple forms is expected to make reporting and tracking more efficient.

CHSRA Staff Liaisons Program Challenges and Benefits

The primary challenge in fulfilling the objectives of the interagency agreements is in meeting review time commitments. The rate of construction has increased for California High-Speed Train Project Construction Package 2/3 and Construction Package 4 during the last two fiscal years. During the last fiscal year, to support project construction, CHSRA submitted a high volume of permit amendment applications to the State agencies. Although the interagency agreements fund a sufficient number of dedicated staff, agency review cycles often exceeded the review times established in the interagency agreements. This workload will continue to increase. The California High-Speed Train Construction Packages planned within the next two to five years for the remainder of the Central Valley Project sections and Northern California will further increase the workload of the permitting agencies as environmental documents are released for public review, permit applications and amendments to those applications are submitted, and construction gets underway.

In other respects, the interagency agreement provides the CHSRA elevated importance within the agency, providing a forum to address issues and concerns and greater responsiveness to meeting requests.

Recommendations for Improvement to the CHSRA Staff Liaisons Program

The CHSRA is developing a new agreement with CDFW and identified several potential improvements to the current staff liaison program:

- Increase funding to remedy the deficiencies in coverage in the current staff liaison program by adding a dedicated GIS person and a dedicated analyst for contract administration and reporting.
- Increase funding to meet the expected increase in workload due to future new construction packages for the project.
- Increase funding for senior-level staff liaison participation, which is expected to reduce the amount of time needed to review initial permits.
- Provide for flexibility in interagency agreements. This would enable shifts in funding and prioritization to adapt to changes in workload levels and issues that emerge later in project delivery, such as the need for species trapping and relocation plans as a preconstruction permit condition and other environmental compliance measures during construction.
- Support implementation of other recommended process improvements identified through the AB 1282 effort.

During 2018, the Working Group discussed the expected increases to the workload for staff liaisons resourced under the interagency agreements for the California High-Speed Train project. To begin to address this, CHSRA developed working relationships at the executive and staff levels with CDFW and the State Water Board. CHSRA is reviewing existing and developing new interagency agreements that will include the recommended improvements.

Establishing Reasonable Deadlines for Permit Processing

As noted in the discussion above, one of the key benefits of the transportation-funded staff liaisons program is the improved timeliness in processing permit applications and issuing permit decisions. It also provides a forum and capacity for permitting agencies and project applicants to discuss any deficiencies and address any remedies needed to ensure applications submitted are complete and sufficient. The California Permit Streamlining Act and California Fish and Game Code established set timeframes for agencies to review permit applications and to make a decision on a permit once the application is determined to be complete.

The Task Force analyzed permit processing timelines from the Caltrans STEVE database. They found that although the average timeframes for processing permits were close to the established regulatory timeframes, many projects still experienced much longer processing times. The Task Force determined that if all project permitting could be accomplished within the established regulatory timeframes, that performance would represent a considerable time savings over current practice. Table 11 shows the regulatory timeframes by permit type. The AB 1282 Working Group recommends a semi-annual reporting to the Task Force on performance in meeting the regulatory timeframes. They also discussed the possibility of establishing more aggressive permit processing time goals as part of the implementation phase, once other tools, processes, resources, and recommendations are put in place (see Section 6).

Table 11. Regulatory Timeframes for Processing Permit Applications

Agency and Permit	Maximum Timeframe for Application Review for Completeness [a]	Maximum Timeframe for Decision on Permit [b]	Additional Process Time Agreed to by Both Parties	Total
CCC				
Coastal Development Permits (CDP)	30	180	90	180–270
Local Coastal Programs (LCP)	30	180	90	180–270
CDP Exemptions	30	1–14 [c]	NA	1–14
CDP Waivers	30	30–180 [c]	NA	30–180
CDFW				
Section 1600 Agreements	30	60	NA	60
Section 2080.1 Consistency Determinations	NA	30 [c]	NA	30
Section 2081 Incidental Take Permits	30	Determine during testing phase of AB 1282	Determine during testing phase of AB 1282	Determine during testing phase of AB 1282
Regional Water Quality Control Boards				
Section 401 Water Quality Certifications and Waste Discharge Requirements	30	180	NA	180

[a] *Timeframe based on the California Permit Streamlining Act. The "review for completeness" 30-day timeframe clock restarts with each re-submittal.*
[b] *After application determined complete.*
[c] *After complete information package received.*

Section 4. Structured Coordination Process for Early Engagement

Background

AB 1282 states that the Task Force shall develop:

> ***A structured coordination process for early engagement of all parties in the development of transportation projects to reduce permit processing time, establish reasonable deadlines for permit approvals, and provide for greater certainty of permit approval requirements.***

The purpose of a structured coordination process for early engagement is to establish a framework for effective early cooperation among participating transportation and permitting agencies in the development of transportation projects and to support permit approval times consistent with the Permit Streamlining Act. The Permit Streamlining Act established reasonable timelines and deadlines to expedite government agency review of proposed projects. Specifically, permitting agencies have 30 days to review an application for completeness.

Why the Need for Early Coordination?

AB 1282 recognized the importance of participation and collaboration early in the process of developing transportation projects, and the need for a *structured process* to ensure successful and effective coordination. Indeed, the results of the permitting analysis (presented in Section 2) demonstrate that a lack of early coordination, or ineffective early coordination, has been a primary contributor to delays in transportation project delivery.

A primary obstacle to early coordination between transportation applicants and permitting agencies has been the low level of staff and resources allocated to the early planning (PID/PES) phase of project delivery. This deficiency strictly limits the amount of coordination that can occur. The lack of early coordination, however, has resulted in costly redesign and rework at the later permitting phase becoming standard practice, building inefficiency into the process.

A number of foundational decisions regarding a project's design, evaluation and development of project alternatives occur in the PID/PES phase. The trajectory of any given project is set in many ways during this phase, including the project purpose and need, preliminary scope, estimated mitigation needs, schedule, and costs. Information gathered about the project during the planning phase includes traffic studies, lists of sensitive species, and characterization of other context considerations and constraints. The value stream mapping conducted as part of the permitting analysis (Section 2) demonstrated that this phase is a critical period where coordination with permitting agencies could substantially improve the likelihood of expeditious reviews when the final proposed project is submitted for permit approvals.

Initiation of preliminary project design and preparation of the environmental document(s) follows the planning phase. Early in this next phase of project delivery is another key time to involve permitting agencies to identify potential fatal flaws or refinements to the project. Participating during the scoping of technical studies and the environmental document will provide permitting agencies opportunities to raise potential concerns and recommend solutions to those concerns. This is also a key period to begin public involvement.

Getting input from permitting agencies and the public on the scope and content of technical studies is important for both the development of the environmental document and information needed to support permit applications. Studies cover a wide range of topics: sensitive species and habitats, wetland delineations, geotechnical testing, hydrological characterizations, visual resources, agricultural lands and uses, noise and bioacoustics studies, community impact assessments, public access implications, cultural resources, wave run-up and sea level rise analyses, and more. Traditionally, permitting agencies have not been carefully engaged during the environmental review phase; they may not see technical studies until a permit application is submitted at the end of the process, after the final environmental document has already been approved. In many instances, the studies necessary for filing permit applications, such as conceptual mitigation proposals, are overlooked and not produced or adequately developed during the critical early stages. This can lead to a finding of incomplete information for an application filing or to additional permit conditions, stalling the overall project delivery process.

> ***Shifting focused exchanges between transportation and permitting agencies away from the later phases of the project delivery process, and toward the project initiation/analysis/early design phases, represents an important change for delivering quality transportation projects in California.***

Engaging permitting agencies during the planning and environmental review period signifies a substantial new workload for these entities; however, it also represents a potentially considerable reduction of the time and resources required later in the process to evaluate and process proposed projects for permits. Successful early coordination can help avoid conflicts over designs and environmental documentation and minimize the need for costly rework of the project design in order to meet regulatory standards and requirements. In addition, involving permitting agencies during the early phases is essential to ensure that positive environmental outcomes are successfully built into projects from the beginning. Developing and implementing a structured framework is the vehicle for improving the effectiveness of early coordination.

Successful Early Coordination Leads to Timely Permit Processing

While it takes more time and effort up front to execute an effective coordination strategy early in the project delivery process, the payoff is realized later with a smoother regulatory permitting process that avoids surprises in permit conditions and costly delays in capital

construction. Meaningful information exchanges and responses critical for realizing the beneficial outcomes of successful early coordination include:

- A clear understanding of permit requirements among all parties.
- Timely flow of information and decisions among all parties.
- Opportunity for the various permitting agencies to collaborate on projects to resolve any conflicts or perceived inconsistencies in requirements.
- Reduction or elimination of rework and other causes of delay.
- Technical studies and environmental documents that contain sufficient information necessary to support permit applications and issuance of permits.
- Support for the shared goal of expediting the completion of all types of necessary transportation projects while also protecting the state's environment and natural, historic, and cultural resources.

What is Considered Early?

Delivering transportation infrastructure is a long-term activity that starts with the broader transportation planning process and continues through planning and delivery of individual projects (Figure 6). The state's program for transportation infrastructure planning consists of the following plans and programs:

- State Transportation Improvement Program (STIP).
- State Highway Operation and Protection Program (SHOPP).
- Regional transportation plans.
- Local transportation plans.
- California Active Transportation Plan.
- California State Rail Plan.
- Interregional Transportation Strategic Plan.
- California Freight Mobility Plan.
- California Aviation System Plan, Statewide Transit Strategic Plan.
- California Bicycle and Pedestrian Plan.
- Caltrans District System Management Plans.

A very early point of engagement allows permitting agencies to provide input, prior to individual project planning, on concepts, concerns, and solutions to issues surrounding regional-level planning.

The majority of those plans contain lists of individual programmed projects to align capital improvement investments with the needs of the state. Pre-project planning occurs at the regional level and includes a process to solicit public and stakeholder input. This is a very early point of engagement that allows permitting agencies to provide input on concepts and concerns surrounding regional-level planning. The new Caltrans AMP described in Section 5 and ongoing SAMI efforts are examples of innovative pre-project planning that focuses on delivering mitigation in advance of the transportation project delivery phase.)

The *California Transportation Plan 2050* is the State's long-range transportation plan. That plan creates a vision and serves as a framework to articulate strategic goals, policies, and

recommendations to improve multimodal mobility and accessibility, help improve housing, and combat climate change through greenhouse gas reduction and adaptation planning strategies. Regional planning creates the vision and framework to articulate the range of projects identified in a particular section of the state. The planning process takes into account economic, demographic, environmental, technological, behavioral, and policy needs to determine the need for and sequence of projects. Early engagement of permitting agencies at this early stage of transportation program planning can yield better planning decisions that ultimately lead to smoother permitting processes for individual projects.

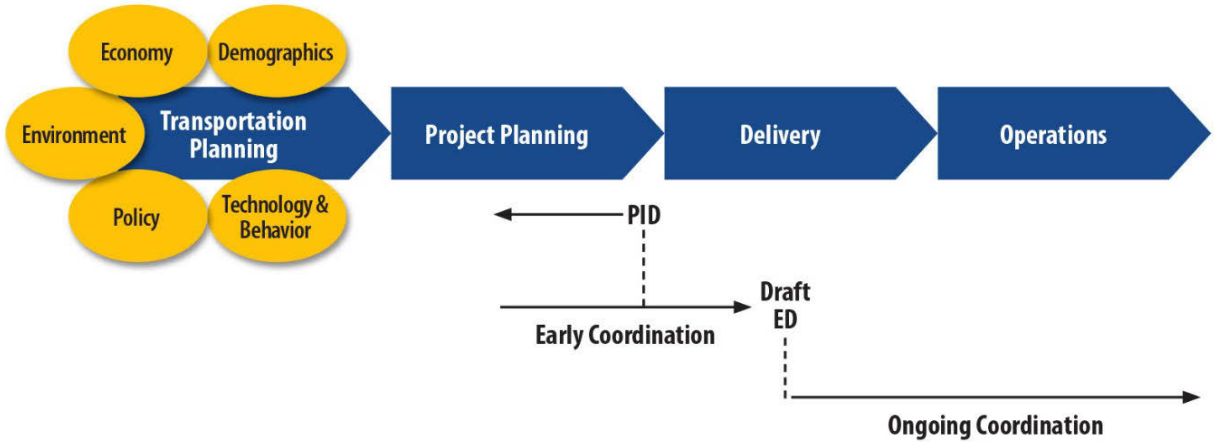


Figure 6. Transportation Infrastructure Planning and Project Delivery Flow

For the purposes of this structured coordination process for early engagement, we define early coordination as starting with the planning of an individual project early in the project delivery phase, as shown above in Figure 6. Early coordination is defined as taking place from the planning/scoping phase of a project (e.g., Caltrans PID or local preliminary environmental study [PES] process) phase through the completion of the draft environmental document (Draft ED) or prior to issuance of a CEQA categorical exemption (CE), as shown in Figure 7.

Figure 7. Transportation Project Delivery Phases

What Types of Projects Trigger the Need for Early Coordination?

The first step for a transportation agency to determine whether a project requires early coordination is to assess whether the project requires any permits and whether it is a simple, medium-complexity, or mega-complex project. The following criteria provide general guidelines for determining the complexity of a project and its permitting and state environmental review requirements.

Projects categorized as simple generally:

- Can be grouped into similar sub-project types that reduce time and resources necessary for permitting.
- Do not require compensatory mitigation (for example, projects not located within wetlands or riparian zones).
- Do not have listed or other sensitive species present, including those listed under the California Endangered Species Act or federal Endangered Species Act.
- Allow site restoration to be fully satisfied within the project construction timeframe.
- Allow construction to be completed within a dry season or when water is not present.
- Include proposed construction techniques and design features that render insignificant any potential impact of the development on public access and coastal resources.
- Do not have a substantial risk of adverse impact on coastal public access, environmentally sensitive habitats, wetlands, scenic public views, coastal water quality, or agricultural lands.
- Involve straightforward, non-complex, and/or programmatic permitting processes.

Projects categorized as medium complexity may:

- Face impending permitting or project deadlines or challenges to resolve.
- Require a CEQA environmental document, such as an initial study, negative declaration, mitigated declaration, or environmental impact report, or may qualify under a CE.
- Require compensatory mitigation.
- Require construction in water or when water is present.
- Have sensitive habitats or listed or other sensitive species present, including those listed under the California Endangered Species Act or federal Endangered Species Act.
- Affect sensitive resources or lands as defined by the California Coastal Act.

Projects categorized as mega-complex are characterized as:

- Complex, unique, and/or long term (5 to 20 or more years from planning to construction).
- Large multimodal transportation projects.
- Involve most Caltrans or CHSRA divisions' participation in permitting.

- Examples of mega-complex projects include the San Diego Interstate 5 North Coast Corridor Project, the San Francisco Bay Bridge East Span, the State Route 24 Caldecott Tunnel Project, and large projects that span multiple jurisdictions.

Transportation agencies should work with permitting agencies to develop templates for the minimum project information that should be supplied to guide consultations and make initial assessments regarding the jurisdiction and complexity of projects. The decision chart in Figure 8 outlines how to assess project and permitting complexity and determine need for early engagement with permitting agencies.

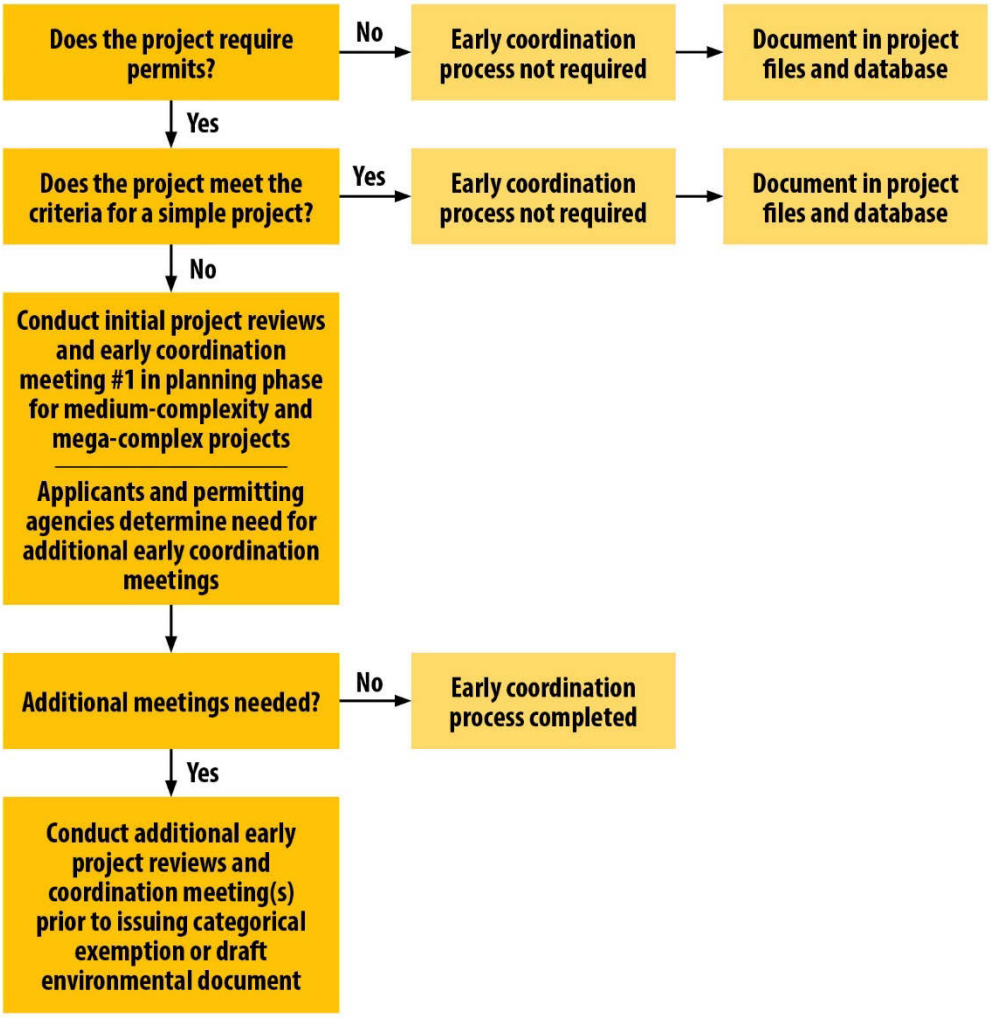


Figure 8. Decision Chart to Determine Applicability of Structured Process for Early Coordination

As shown in the decision flow chart above, if a project does not need permits and/or if it meets the criteria for a simple project, the early coordination process is optional. In these

cases, the transportation project proponent simply documents that rationale in the project files and notes it in the project tracking data base

For all other projects, the structured coordination process starts in the planning phase with a meeting and initial project review by each permitting agency with potential jurisdiction. The need for additional early coordination meetings is discussed at this first meeting. The project applicant and permitting agencies continue to coordinate as appropriate depending on the complexity of the project and permitting requirements. Additional aspects of the early coordination framework are described below.

What are the Requirements for Early Coordination?

The early coordination framework for transportation projects emphasizes the importance of applicant and permitting agencies sharing and reviewing specific information at key stages of project development, analyzing and applying the results to the project design alternatives for meeting the project purpose and need, and fostering an efficient procedure for documenting all permitting agencies' requirements for a project. Documenting decisions and other results of coordination activities will provide greater certainty of efficient permit approvals and ultimately a repeatable process that will reduce processing time. It also sets the stage for ongoing coordination throughout subsequent phases of the project delivery process.

Once the transportation agency establishes that the structured process for early coordination is applicable to a project, the next step is to define the early coordination strategy, starting with a meeting during the planning/scoping phase of the project (e.g., PID or PES phase). At this meeting, the parties will develop the early coordination strategy that determines the number and timing of future meetings and check-ins with the permitting agencies and the expectations of project information to be reviewed at each stage. It is anticipated that one or two additional meetings after the first would occur prior to release of the Draft ED or issuance of the CE (Figure 9).

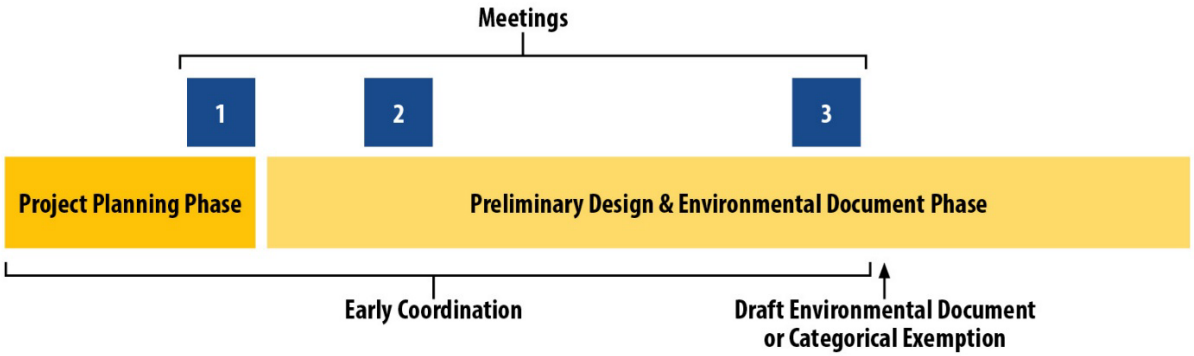


Figure 9. Timing of Early Coordination Meetings

Fewer than three meetings may be sufficient for simpler projects. More than three meetings may be necessary for projects with more complex permitting issues. Factors such as the number of permits required, number of agencies and jurisdictions involved, number of species affected, technical studies required, and geographic location will shape the number, type, and timing of meetings and reviews that may be needed.

Early Coordination for Simple Projects with Permitting Requirements. Simpler projects with non-complex permitting may not require early coordination, although some form of initial coordination may help identify or avoid project sites that are actually more complex than initially anticipated from an environmental permitting standpoint. For simple projects meeting the criteria listed above, the early coordination process is optional. It should be noted that just because a project qualifies under a CEQA CE does not mean it meets the definition of a simple project. Projects subject to a CE can also require permits, and the nature and complexity of those permits must be assessed to determine if the project also meets the other criteria for a simple project. After the transportation agency develops the minimum project information for permitting agency review (e.g., location, preliminary project description, other basic information), the transportation project applicant and the permitting agencies should have an early coordination email communication, telephone call, or meeting to assess whether the permitting processes will be straightforward, follow a programmatic approach, or be complex enough to warrant further coordination.

Early Coordination for Medium-Complexity Projects. Medium-complexity projects require an early coordination meeting and initial project review during the PID or PES phase. During that first meeting in the planning phase, the participating transportation and permitting agencies will determine together whether additional coordination meetings are needed. Early coordination may consist of only the one meeting during the planning phase, or the participants may agree that one or two (or more) additional meetings during the preliminary design and environmental review (Caltrans PA&ED) phase are needed. The transportation project proponent and the staff liaisons of the permitting agencies involved would agree on the desired number of early coordination meetings to be held prior to release of the Draft ED. More than three meetings and project reviews may be prudent depending upon the complexity of the project and factors such as the number of permits required, number of permitting agencies and jurisdictions involved, number of species affected, technical studies required, and geographic location. Ideally, all meetings would have a representative from each involved agency, so that all permitting agencies can collaborate and work at the same time toward agreement on alternatives, impact avoidance and minimization, and early estimates of possible requirements for compensatory mitigation.

Early Coordination for Mega-Complex Projects. These projects are complicated enough to warrant a formal comprehensive coordination plan that accounts for all project aspects and phases, such as MOUs with multiple partner agencies, multiple strategy meetings for each affected resource, community outreach, and more. The guidance in this document is

intended to serve as a starting point for developing early and ongoing coordination plans for mega-complex projects. These types of projects may also trigger the need for an MOU under the National Environmental Policy Act (NEPA) and Section 404 of the Clean Water Act that can also be used as a framework for State permitting agency coordination.

What Needs to Happen Prior to Early Coordination Meetings?

The effect of the approach outlined above is to position the review of project information by permitting agencies to earlier phases of the project delivery process, before significant time and money are invested in one approach to a project design that may be problematic for permitting. However, mere attendance at meetings does not ensure effective coordination. Activities between meetings may include preparing agendas and project contact lists; reviewing draft purpose and need statements, project plans, and alternatives descriptions; discussing initial impact characterizations; synthesizing results of database and literature searches; developing lists of applicable best management practices; preparing and reviewing various draft technical studies; and drafting and reviewing mitigation concept plans. For each meeting to be productive, all parties must commit to providing and reviewing materials in advance of the next meeting.

What Needs to Happen During Early Coordination Meetings?

*Achieving agreement on, and successful execution of, the early coordination strategy for a project is a **joint responsibility** between the transportation project applicant and the permitting agencies.*

Ownership. The permit applicant should initiate and facilitate early coordination meetings. The transportation agency project manager is the owner of this task, and could delegate responsibility for carrying out the work (such as initiating contact, scheduling meetings, preparing agendas and handouts, preparing and distributing meeting notes, and following up on action items) to the permit coordinator or other environmental staff, as needed. It is important to note, however, that these meetings constitute an integral element of the interagency partnership agreement among the Transportation Permitting Task Force agencies to develop a structured coordination process for early engagement. To that extent, the transportation project proponent and the permitting agencies jointly own the overall strategy and responsibility for success of early coordination.

Recording and Monitoring. Document meeting minutes, action items, and preliminary permitting agency requirements for the project record. For key decisions that may require permitting agency management approval, the team will identify an action item and a need for documentation (e.g., early mitigation letters). Important decisions and milestones should also be documented in the project files and environmental process tracking databases (e.g., Caltrans' STEVE database).

Best Practices. Using best practices for engagement will maximize effectiveness of early coordination meetings. Meeting preparation and follow-up are critical aspects of coordination. Ensure that all participants are provided adequate information for the desired meeting goals well in advance so that they may be prepared for the meeting, and to respect everyone's time. Best practices include:

- Send out meeting agendas, background materials, and any appropriate worksheets to support discussion items for participants to review before the meeting.
- Identify studies that can be structured to cover multiple permitting agencies' needs.
- Schedule meetings concurrently or sequentially on the same day for projects of similar geography, schedule, or features, to achieve travel and time efficiencies.
- Develop meeting agendas using the guidance for meeting attendees and discussion items below.

Purpose of Meeting #1. This meeting should be held during the PID or PES phase of the project. It is the first time the permitting agencies would formally engage in discussing the project. Its purpose is to introduce the project team and agency representatives, and identify potential resource impacts; preliminary strategies for avoidance, minimization, and compensatory mitigation; and the anticipated number of early coordination meetings required.

Meeting #1 Attendees:

- Applicant project manager.
- Applicant design team representative.
- Applicant permit coordinator.
- Applicant environmental representative(s).
- Permitting agency liaisons (for each permitting agency).
- Other representatives from permitting agencies as needed.

Meeting #1 Inputs/Outputs and Discussion Items:

- Project team member roles and contact information.
- Preliminary project objectives, purpose, and need.
- Preliminary project description and alternatives.
- Resources of concern and preliminary list of permits required and jurisdictions.
- Design considerations and construction methods to avoid and minimize resource impacts.
- Preliminary list of surveys and technical studies needed and identification of any additional studies the permitting agencies will need to review the project.
- Initial determination of level or type of environmental document.
- Preliminary project schedule and construction seasons.
- Number of future early coordination meetings and need for field visit(s).
- Meeting summary notes documenting the items above, including action items and persons responsible.

Purpose of Meeting #2. The purpose of the second meeting is to review any changes to the project since the first meeting, determine if permitting requirements have changed or if greater project design details raise new questions about permitting requirements, and identify possible ways to incorporate avoidance and minimization measures into project design. This is also the time to further discuss the strategies for compensatory mitigation. Meeting #2 should be held early in the preliminary design and environmental document phase, ideally after public scoping and project description revisions, but before completion of field surveys and technical studies.

Meeting #2 Attendees:

- Applicant project manager.
- Applicant design team representative.
- Applicant permit coordinator.
- Applicant environmental representative(s).
- Permitting agency liaisons (for each permitting agency).
- Other representatives from permitting agencies as needed.

Meeting #2 Inputs/Outputs and Discussion Items:

- Report on action items and follow up from prior early coordination meeting.
- Changes and updates to project objectives, purpose, and need.
- Changes and updates to project description, technical studies, and alternatives.
- Relevant public and agency scoping comments and resources of concern.
- Updates on design considerations and construction methods to avoid and minimize resource impacts.
- Changes and updates on permit requirements.
- Data and information needs.
- Any updates to the list of surveys and technical studies needed/completed to support the environmental document and permitting.
- Confirmation of type or level of environmental document.
- Project schedule and consideration of local community workshops.
- Meeting summary notes documenting the items above, including action items and persons responsible.

Purpose of Meeting #3. The purpose of this meeting is to review changes to the project since the prior meeting, discuss possible need for permitting agency review of any technical studies prior to issuing the CE or release of the Draft ED, confirm the schedule for release of the Draft ED, confirm and agree upon permitting requirements including permit fees, and confirm that avoidance and minimization measures have been incorporated into the project design to the extent feasible. This meeting should be held after results of surveys are available and technical studies have been drafted or completed, but before release of the Draft ED.

Meeting #3 Attendees:

- Applicant project manager.
- Applicant design team representative.
- Other representatives from the design team as needed (e.g., hydrologist, landscape architect).
- Applicant permit coordinator.
- Applicant environmental representative(s).
- Permitting agency liaisons (for each permitting agency).
- Other representatives from permitting agencies as needed.

Meeting #3 Inputs/Outputs and Discussion Items:

- Report on action items and follow up from prior early coordination meetings.
- Changes and updates to project description and alternatives.
- Results of surveys and preliminary conclusions of draft technical studies.
- Updates on design considerations and construction methods to avoid and minimize resource impacts.
- Changes and updates on permit requirements.
- Need for permitting agency review of any draft technical studies.
- Project schedule update and consideration of local community workshops.
- Meeting summary notes documenting the items above, including action items and persons responsible.

Other Improvement Activities Needed to Implement the Early Coordination Process

To support the successful development and implementation of a new structured early coordination process, the following activities must first be executed statewide. Additional information regarding these activities can be found in Section 6 of this report.

1. Develop the details of the overall early coordination strategy presented in this section, to include a series of information exchanges and interagency meetings from the outset of project planning and initiation. (Recommendation 2.4)
2. Update Caltrans Planning zero-based budgeting to adjust PID/PES phase resources. (Recommendation 3.6)
3. Develop job aids, such as templates, checklists, annotated outlines, flow charts, and procedures to improve understanding of permit processes and all requirements. (Recommendation 1.2)
4. Conduct pilot testing for the structured process for early coordination. Make adjustments to the process prior to rolling out statewide. Roll out and monitor the new process to ensure compliance and performance statewide. As part of pilot

project testing, assess staff levels needed at permitting agencies to fully participate in the structured process for early coordination. (Recommendations 2.3 and 2.6)

5. Design a process for added permitting agency involvement in the planning phase, and begin developing mitigation approaches as soon as impacts have been estimated. (Recommendation 2.3)
6. Have permitting agency staff set aside specific office hours for consultations to ensure expertise is available to permit applicants during predictable periods. (Recommendation 2.5)
7. Develop and publish an interagency liaison directory with contact information and agency jurisdiction maps to be displayed on transportation agency websites. (Recommendation 4.2)
8. Include time during the PID/PES phase to accommodate full consideration of environmental outcomes in a project's design. (Recommendation 4.1)
9. Explore and implement opportunities to mimic and tailor the federal NEPA 404 MOU process, which includes milestones and concurrence steps, at the state level, on appropriate projects to guide and record early coordination efforts between transportation and permitting agencies. (Recommendation 2.3)
10. Reassess the existing Caltrans and CHSRA project delivery phases/scheduling process, and identify where key milestones for cross-agency involvement are needed to promote more efficient projects and better environmental outcomes. (Recommendation 3.2)
11. Delegate approval authority for certain project decisions (where legal and appropriate) to the front-line staff in an effort to improve overall efficiency. (Recommendation 4.5)
12. Develop and implement a dispute avoidance and resolution process. Agencies will agree on progressive resolution processes, beginning with a search for addressing conflicts at the lowest appropriate staff levels and elevating to progressively higher staff levels as needed. (Recommendation 2.5)
13. Develop and introduce training for transportation agency staff to understand regulatory and permit requirements. Increase training for permitting agency staff to ensure a predictable level of knowledge and competency on permit and regulatory requirements. (Recommendation 1.1)
14. Update permit requirements to include transportation technical studies (such as the natural environment study), to provide additional environmental resource analyses and better inform regulatory permit decisions. (Recommendation 2.3)
15. Develop a method to ensure that engineering design staff are provided with critical environmental constraint information early in the project design process. (Recommendation 2.3)

16. Develop flow charts or checklist tools to categorize project complexity, based on project features, environmental resources that may be affected, level of environmental document, and number and type of permits required. (Recommendation 2.3)

Section 6, *Recommendations,* presents additional recommendations related to interagency coordination during the development of transportation plans and ongoing coordination on projects beyond the early phases. It also offers advice on associated topics such as coordinating executive leadership on workload priorities, dispute resolution, process improvement monitoring, and training.

Benefits of a Structured Early Coordination Process

Early coordination between transportation and permitting agencies is a critical step for improving the project delivery process. Performing this step effectively strengthens the likelihood of a smooth and efficient permitting process. To successfully realize this outcome, early coordination must be a priority for project managers and technical specialists in all participating agencies. Further, it is equally essential that this effort receive support from executive leaders.

Implementing a structured framework for early engagement will not only ensure early coordination occurs, but will also remove current obstacles and provide a process and tools to ensure early coordination is carried out effectively as a regular part of project delivery.

It is important to also note that a successful new structured early coordination process must account for the implications associated with addressing new and emerging issues, such as climate change challenges, in the transportation project delivery process. Decisions around planning, design, delivery, and operation of projects require that transportation and permitting agencies consider such things as the projected greater intensity of storms, flooding, and landslides, effects of elevated temperatures and wildfire frequency, and increasing hazards along the coast such as rising sea levels.

Investments in early coordination and permitting delays could result in savings in capital construction costs:

- *A one-month time savings in permitting translates to an average capital cost savings of $27,000 for a $10 million highway project.*
- *A large $1 billion project that achieves a one-year time savings results in capital cost savings of $32 million.*

The rationale behind developing a structured early coordination process is compelling. As the results in Section 2, *Permitting Analysis,* show, without a structured process, coordination with permitting agencies does not normally occur early on. Where permits are on the critical path for project delivery, each day of delay in issuing permits also delays construction. Construction season or window restrictions that limit work to certain months to protect particular species or resources can exacerbate the delay; missing a construction season may delay the project to the

following year. A one- or two-month delay in permits can delay the start of construction for an entire year.

In such situations, time really is money; saving time in the project delivery phases prior to the start of construction can avoid substantial construction cost escalations. The rate of escalation is part of the approved funding estimate when projects are programmed, to capture future increases in material and labor costs. The current escalation rate approved for programming in the 2020 SHOPP is 3.2 percent. Based on the current escalation rate, avoiding a one-month permitting delay on a $10 million project would save about $27,000, and avoiding a one-year delay would save $324,000. While not every project would be expected to achieve a one-month savings, some projects have the potential to achieve even greater savings. On a large $1 billion project, a one-year time savings would avoid costs of over $32 million. Moreover, potential for cost savings by reducing permitting delays caused by inadequate early coordination will have greater significance considering the anticipated increase in workload stemming from the SB 1 program.

Section 5. Advance Mitigation Options for Improving Transportation Project Permitting

The permitting analysis results showed the Task Force that mitigation is one of the main topics that cuts across all of the delay cause areas (unclear understanding of requirements, lack of coordination, ineffective design change management, need for updated procedures and guidance, staffing and workload, etc.). Challenges in mitigation concept planning, mitigation design, land acquisition for mitigation, and mitigation implementation and monitoring create delays and inefficiencies in transportation project delivery.

Transportation agencies have sought ways to plan ahead for anticipated required mitigation associated with environmental permits and consultations. Historically, transportation agencies have implemented mitigation on a project-by-project basis once funding is approved for the final stages of a project and environmental permits are obtained. Advance mitigation presents an innovative opportunity for many transportation projects, with potentially significant reductions of time and costs associated with providing necessary mitigation. It can be applied in highway, rail, and transit projects in both urban and rural areas. Many local transportation agencies, as well as Caltrans and CHSRA, have begun investigating this option and are implementing or developing comprehensive advance mitigation programs.

Caltrans Advance Mitigation Program

The Caltrans AMP is an example of such a mitigation program. SB 1 established the AMP and tasks Caltrans to oversee the program administration, planning, delivery, implementation, and tracking. Under SB 103 (Committee on Budget and Fiscal Review, Chapter 95, Statutes of 2017), Caltrans is required to report on the extent to which STIP and SHOPP projects benefit from this new business practice and any advance mitigation funded by the Advance Mitigation Account.

Advance mitigation is an opportunity for both transportation and permitting agencies to achieve the dual objectives of streamlining permitting processes and protecting our state's natural resources.

Regional needs assessments will help identify specific desired environmental goals for each geographic region.

The goal of the AMP is to meet Caltrans and local transportation agencies' mitigation needs related to STIP and SHOPP transportation mitigation to the extent funding allows. The objectives of the Caltrans AMP include:

- Supporting better environmental outcomes.
- Accelerating transportation project delivery.
- Enhancing Caltrans communication with CDFW, other permitting agencies, and stakeholders.

To support these objectives, Caltrans is coordinating with permitting agency partners in developing statewide and regional advance mitigation needs assessments to identify long-term transportation mitigation needs and begin the project initiation process to scope advance mitigation projects. Prior to the creation of the AMP, Caltrans was (and continues to be) involved in the interagency SAMI, which was formalized in 2011.

Planning and scoping for advance mitigation projects will begin as soon as the formal guidelines are published (scheduled for late 2019). Once advance mitigation projects are delivered, transportation projects can use the mitigation and reimburse the Advance Mitigation Account, utilizing what will be a total of $120 million in the revolving account. As the Advance Mitigation Account is reimbursed, scoping and planning for new advance mitigation projects will begin.

Currently and separate from the Advance Mitigation Account, over $40 million in advance mitigation projects funded by the SHOPP are in various stages of planning and implementation. These are serving as good pilots to inform the AMP account future projects.

Under SB 1, Caltrans advance mitigation projects can consist of authorized activities pursuant to Streets and Highways Code 800.6(a), summarized below.

1. Purchase, or fund the purchase of, credits from an existing mitigation bank, conservation bank, or in-lieu fee program approved by one or more permitting agencies.
2. Establish, or fund the establishment of, credits by establishing a mitigation bank, conservation bank, or in-lieu fee program in accordance with applicable state and federal standards.
3. Pay, or fund payment of, mitigation fees or other costs or payments associated with coverage of transportation projects under a Natural Community Conservation Plan or a Habitat Conservation Plan.
4. Where an RCIS has been approved by CDFW pursuant to Regional Conservation Investment Strategies Program Guidelines, Caltrans may:
    - Enter into, or fund the preparation of, a Mitigation Credit Agreement (MCA) with CDFW; purchase credits from an established MCA; or implement, or fund the implementation of, conservation actions and habitat enhancement actions, as needed to generate mitigation credits pursuant to an MCA
    - Acquire, restore, manage, monitor, enhance, and preserve lands, waterways, aquatic resources, or fisheries, or fund the acquisition, restoration, management, monitoring, enhancement, and preservation of lands, waterways, aquatic resources, or fisheries that would measurably advance a conservation objective specified in an RCIS, while offsetting anticipated transportation improvement impacts

5. If it is demonstrated that (1) through (4) are not feasible, implement or fund other forms of advance mitigation, including permittee responsible mitigation, in accordance with a programmatic mitigation plan pursuant to Streets and Highways Code 800.9, which states "the department, pursuant to this article and for the purpose of implementing the Advance Mitigation Program, may develop a programmatic mitigation plan pursuant to Section 169 of Title 23 of the United States Code to address the potential environmental impacts of future transportation projects for the purpose of required mitigation approved by federal, state, and local agencies. The programmatic mitigation plans shall include, to the maximum extent practicable, the information required for regional conservation investment strategies."

California High Speed Rail Authority Advance Mitigation Efforts

To foster a better permitting process and promote faster and more cost-efficient delivery of the California High-Speed Train Project, the CHSRA is pursuing a regional mitigation strategy. The objectives of this mitigation strategy include:

- Offset unavoidable project impacts to natural resources through the conservation and enhancement of larger, higher-value ecological areas and their linkages.
- Focus on opportunities to contribute to regional conservation.
- Achieve wide-ranging and significant conservation benefits.

The CHSRA is pursuing regional mitigation solutions because a number of advantages accrue to this approach when compared to localized project-by-project mitigation. More importantly, when mitigation selection is guided by regional conservation priorities informed by input from CHSRA staff, permitting agencies, conservation scientists and experts, interested stakeholders, and affected communities, mitigation can yield higher quality habitat connectivity, larger preserves, and better conservation outcomes.

To support these objectives, the CHSRA collaborates early in the planning process with interested agencies, local governments, communities, and non-governmental organizations, and aligns plans with statewide natural resource priorities. A primary challenge to implementing early or advance mitigation lies with the uncertainty in obtaining assurances from permitting agencies that the natural resources secured and conserved for mitigation in advance of project-specific environmental review will ultimately be acceptable. Other current challenges are funding and changes in the land acquisition market.

Local and Regional Transportation Agency Advance Mitigation Efforts

Other examples of transportation agency efforts toward advance mitigation include:

- San Diego Association of Governments (SANDAG) TransNet program. An extension of the TransNet program includes an $850 million environmental mitigation program

to offset the impacts of future transportation improvements while at the same time reducing overall costs and accelerating project delivery.

- Orange County Transportation Authority (OCTA) OC Go (Measure M2) Environmental Mitigation Program allocates funds to acquire land and fund habitat restoration projects to offset the environmental impacts of OC Go freeway projects. This program participates in a long-term Natural Community Conservation Plan and Habitat Conservation Plan with CDFW and U.S. Fish and Wildlife Service, respectively.
- Resource Conservation Districts of Santa Cruz County Early Mitigation Planning project is an effort to bring transportation planners together with permitting agencies to select, plan, and construct mitigation projects for transportation improvements in the very early stages of the project delivery process, in a more streamlined and more cost-effective manner compared to the traditional mitigation planning and implementation approach.

Benefits of Advance Mitigation

Many benefits of advance mitigation support the AB 1282 objectives of early coordination, reducing permit processing time, establishing reasonable deadlines for permit approvals, and providing for greater certainty of permit approval requirements. Benefits of advance mitigation include:

- Creating opportunities for early coordination with permitting agency partners, local transportation partners, and other interested parties by:
    - Developing an established procedure for permitting agency input regarding mitigation throughout the transportation planning and project delivery processes, with established review periods.
    - Reducing potential for back and forth on acceptability of mitigation during permitting, thanks to early coordination.
- Creating efficiencies in transportation project development by:
    - Implementing mitigation ahead of when it is typically done, saving both time and cost.
    - Developing and executing batch agreements.
    - Negotiating credit or mitigation cost with bulk purchases or bid process.
    - Taking the tasks associated with the mitigation planning and implementation process, as agreed to by the agency partners, out of the transportation project's scope and simplifying it to an internal transaction within the transportation agency.
    - Accelerating project delivery by having mitigation in the ground and successful prior to when the transportation project needs it.

- *Advance mitigation purchases can save money by purchasing credits early before prices increase and by bundling the credits into one larger purchase for a discounted per-credit price.*
- *Advance mitigation programs also achieve savings from faster project delivery.*

    - Meeting mitigation success criteria prior to permitting, which may result in lower ratios due to lowered risk of unsuccessful mitigation.

- Fostering collaboration on regional and localized conservation priorities or objectives within an area at the planning level to inform mitigation investments for advance mitigation projects as well as typical transportation mitigation delivery.
- More holistic mitigation that should yield more successful and meaningful mitigation for conservation.
- Making long-range planning information available to private mitigation providers, which may stimulate the mitigation banking market and allow mitigation providers to leverage state advance mitigation investments.
- Providing opportunities for the public and non-governmental organizations to review and comment on regional mitigation needs assessments well before any mitigation projects are identified.

A number of strategies are recommended to address challenges and support development and future success in implementing advance mitigation for transportation projects in California. See Recommendation 6 in Section 6 of this report.

Section 6. Recommendations for Improvement

The final step of the Task Force's mandate was to develop a set of practical recommendations to improve the transportation permitting processes in ways that would meet the needs of both project applicants and permitting agencies.

Approach to Developing Recommendations

As described in the previous sections of this report, the Task Force conducted robust analyses of current conditions to determine areas for improvement and support the development of recommendations. The Task Force analyzed:

- Project delivery and permitting processes
- Best practices and lessons learned from pilot projects
- Transportation-funded personnel positions at permitting agencies
- Early engagement approaches

In 27 workshops, the team identified more than 1,200 opportunities for improvement.

The multiple review processes revealed that many of the same problems and potential solutions arose from multiple sources and analyses, demonstrating the potential impact that streamlining efforts could have across the board. Each of these analyses resulted in recommendations for improvement or preliminary solutions that fed into the workshop forums where participants fully vetted them and developed the final recommendations.

As noted in Section 2, the analysis of permitting processes was conducted through a series of facilitated workshops with transportation and permitting agency experts. In 27 workshops, the team identified more than 1,200 opportunities for improvement. A recommendations development team comprising many of the same experts who participated in the permitting analysis also participated in a series of workshops to compile 125 preliminary solutions and prioritize and consolidate them into a clear, fully developed set of recommendations. The 125 solutions were scored against five weighted criteria: effectiveness, time to implement, ease of implementation, cost to implement, and improved environmental outcomes.

Criteria	Weight
Time to Implement	*1*
Ease of Implementation	*2*
• *Number of agencies affected* • *Availability of technology/equipment* • *Public involvement/buy-in* • *New regulations or legislation* • *Adoptability/commitment*	
Cost to Implement	*1*
• *Number of staff resources* • *Number of agencies* • *Technology/equipment cost*	
Effectiveness	*3*
• *Ability to eliminate root cause*	
Improved Environmental Outcomes	*2*

The team members scored the potential solutions against the criteria, then further categorized them based on effectiveness, outcome, and ease of implementation, resulting in 39 individual recommendations and strategies across six recommendation categories. These are presented below with a problem/issue statement, shared vision, and suggested actions to implement each recommendation.

Recommendation 1. Clarity of Regulatory and Permit Requirements

Problem/Issue

Analysis of the permitting process indicates that permit applications are often deemed incomplete or erroneous because the project was not designed to incorporate applicable regulatory requirements or because the applicant lacked a thorough understanding of what was necessary to complete an application. Complicated measures, inconsistent terminology, inadequate training, staff turnover, regional variations in requirements, and inadequate procedural guidance all contribute to delays in processing permits. Simplification, accessibility, education, and process structure improvements can greatly reduce these delays.

Shared Vision

- Transportation agencies integrate resource protection and enhancement mandates as part of the project planning and delivery phases to ensure consistency with permitting agency policies and permit requirements.
- Permitting agencies' requirements are clear, accessible, and generally harmonized such that the applicant knows early in the process what the requirements are for each agency and for each project.

Recommendations

1.1 Improve cross-agency understanding of regulatory and permitting requirements and processes.

- Provide statewide requirement guidance for each permitting agency that allows for appropriate project variation and flexibility.
- Develop a framework for project handover when transitioning from departing to replacement staff to document and capture discussions, decisions, and future needs.
- Increase training for transportation agency staff so they more consistently prepare complete application packages that will improve efficiency of review and processing time.
- Increase training for permitting agency staff to ensure adequate knowledge of permit and regulatory requirements and understanding of transportation project delivery process.
- Develop lists or a database of past projects of various types that were successful in efficiently completing the permit processes.
- Ensure that transportation plans and projects incorporate California's adopted statewide climate change adaptation guidance, including continuing updates to reflect best available science. As of 2019, these adopted guidance documents include:
    - The California Natural Resources Agency's *Safeguarding California Plan: 2018 Update*
    - The Ocean Protection Council's *State of California Sea-Level Rise Guidance 2018 Update*
    - The California Coastal Commission's *Sea Level Rise Policy Guidance 2018 Update*
    - Office of Planning and Research's *Planning and Investing for a Resilient California: A Guidebook for State Agencies*
- Consider establishing an interagency working group to expand and harmonize general guidance for climate change analyses to be used when obtaining all environmental resource permits.
- Develop a process for posting recently issued permits for reference by the general public (see California Coastal Commission's process as an example).

1.2 Develop consistent, detailed permitting process tools, guidance, and timelines to improve clarity of permit application requirements.

- Develop templates, checklists, annotated outlines, flow charts, and procedures to improve understanding of permit processes and requirements. Harmonize permit requirements where appropriate to increase regional consistency (may require regulatory actions). To the extent appropriate, consider including a

performance component that measures the success of each process implemented. Use as an example the materials developed for the Caltrans-CDFW Lean Six Sigma effort involving the California Fish and Game Code Section 1600 Notification Process (e.g., pre-application checklist).

- Provide external review of existing agency permit information resources to assess the clarity and usefulness to the applicant (i.e., solicit an outside technical writer, or beta-test with users to test clarity of guidance explaining permit and regulatory language).
- Provide a glossary of regulatory language and frequently asked questions with definitions for commonly misunderstood terms. Share these tools across agencies, especially those without liaison programs.
- Permitting agencies should facilitate implementation of electronic submittal formats for permit applications. When submitting hard copy application documents to a permitting agency, also include content in digital format to ease searches, reviews, and filing (for example, future versions of CDFW's Environmental Permitting Information system or "EPIMS").
- Early in project planning meetings, applicants should identify the most comprehensive or restrictive permitting agency requirements (e.g., Coastal Development Permit requirements for wetland mitigation, public coastal access provisions) and leverage compliance to fully or partially address requirements of other agencies.
- Applicants should provide "cross-walks" within permit applications that direct permitting agencies to the required permit information (e.g., the permit application should include the citation and page number pointing to where required information can be found in an attached report). Additionally, develop information syntheses to clearly demonstrate consistency with each regulatory requirement.
- Applicants should include transportation technical studies, such as the Natural Environment Study, with permit applications to provide additional environmental resource analysis and to better inform regulatory permit decisions.
- Establish consistent permitting agency submittal requirements for a uniform basic permit application with baseline information such as general project location figures and maps, project description, and expanded wetland delineation guidance that would be acceptable to all permitting agencies. The uniform portion of the application would be accompanied with additional required agency-specific information. Uniform basic requirements will help the applicant meet all applicable agency statutory requirements and baseline expectations for technical studies and data.

Recommendation 2. Strengthen Interagency Coordination

Problem/Issue

Analysis of the permitting process indicates that a source of numerous process delays is ineffective project coordination among agencies. Often, decisions are made regarding project planning, design, construction methods, environmental impacts, and mitigation strategies without the knowledge and early counsel of the applicable stakeholders and permitting agencies. Inadequate staffing levels, conflicting priorities, underdeveloped process structures, schedule pressures, and ineffective communication all contribute to delays in permit processing. With proper funding, improved processes, communication protocols, and management engagement, these delays can be greatly reduced.

Shared Vision

- Both transportation and permitting agencies deliver effective coordination throughout project planning, design, and permitting processes.
- Cross-agency issues are quickly identified and efficiently resolved at the lowest level possible.
- Reviews of similar past projects are shared between permitting and transportation agency staff while discussions and iterative decisions made throughout project planning and development are recorded.
- An atmosphere of mutual trust and cooperation exists within and among agencies, including established relationships at staff and executive levels.
- Early and ongoing communication between transportation agency project teams and permitting agency staff ensures adequate technical coverage and sufficient time for project reviews.

Recommendations

2.1 Executive management at each agency issues directives that require implementation of early and ongoing interagency coordination processes across programs.

The level of change required for early and ongoing coordination among agencies is significant and complex. Success will require a strong vision and message of commitment from each of the executive-level leaders. Leadership alignment on the priority and criticality of early and on-going coordination is essential for establishing an atmosphere of cooperation and trust across all agencies. Key leaders will set the example for the type of cross-agency partnering needed to develop and deliver sustainable mobility.

2.2 *Incorporate environmental concerns into transportation agency corridor and asset management guidelines.*

- Incorporate resource management mandates into corridor management plans.
- Assemble cross-agency teams or expand on existing teams.
- Add an environmental outcomes category to Caltrans' asset management scoring sheet, to include:
    - Remediation of environmental impacts from existing facilities (e.g., issues associated with wildlife corridors, fish passage, wetlands fill).
    - Integration of environmentally-protective attributes into project designs.
    - Incorporation of sustainability and climate change adaptation features into the overall project.

2.3 *Define a structured process for early engagement and ongoing coordination.*

- Implement strategies for early engagement (such as provided in Section 4 of this report) as well as ongoing coordination between transportation and permitting agencies during the Caltrans PID and PA&ED phases of the project development process. Provide for productive and iterative interagency exchanges over the course of the planning, design, and delivery of projects as information is developed.
- Investigate methods to allow for more detailed early discussions about mitigation approaches and property selection (e.g., possible interagency confidentiality agreements).
- Strategies should include a series of interagency meetings from the outset of project planning and development to discuss:
    - Environmental setting, transportation needs, and permitting jurisdictions.
    - Multi-agency site visits as appropriate for discussion of regulatory requirements, concerns, and suggestions with a goal to identify conflicting perspectives or requirements, thereby promoting timely identification of possible solutions.
    - Suggestions for incorporating multimodal and positive environmental outcome goals into the project objectives and purpose and need.
    - Flow charts or check lists to categorize project complexity (simple, medium-complexity, mega-complex) early in the project design phase; as appropriate, include a site visit as part of this vetting process.
    - Early identification of applicable regulatory requirements.
    - Possible fatal flaws relative to the project proposal's consistency with resource protection mandates.
    - Incorporating regulatory requirements (such as mitigation needs) into programming estimates for project funding.

  - The range of alternatives that should be considered to avoid or minimize impacts and meet the project objectives and purpose and need in a context-sensitive manner.
  - Overall project schedules and sequencing of activities.
  - Any disagreement on permitting agency mitigation requirements for unavoidable impacts.
  - Opportunities for communicating and addressing issues with the design teams assigned to the project.
  - The permitting agencies' information needs (including specialized studies) that should be developed during either the project planning/initiation or the environmental analysis phase to inform project scope, alternative evaluations, design, and permitting requirements.
  - Factoring information needs, along with the potential for resource impacts, into the determination of environmental document level.

- Explore opportunities to hold joint (transportation agencies and permitting agencies) public workshops or other avenues to gain input on projects and address feedback.
- When jointly-listed species are implicated, strategies should provide for coordination with U.S. Fish and Wildlife Service, National Marine Fisheries Service, and CDFW together at the same time, to maximize the possibility of receiving a consistency determination from CDFW. This strategy of meeting with all involved agencies simultaneously was also identified during review of the pilot projects (including review of the San Diego Interstate-5 North Coast Corridor program and the Dr. Fine Bridge Project) as a recommended best practice.
- When dredge or fill activities are implicated, strategies should provide for coordination with U.S. Army Corps of Engineers (USACE) and the State Water Board or Regional Boards, together at the same time, to maximize the possibility of receiving a 404 permit and 401 certification. Similar to the item above, this idea of coordinating with state and federal permitting agencies together was identified as a best practice during the review of pilot projects by the San Diego Interstate 5 North Coast Corridor program team.
- Collaborate across agencies to improve understanding of definitions under applicable mandates and expand or refine resource characterizations (e.g., within general project areas, potential watershed profiles).
- For more complex projects, explore opportunities to mimic and tailor the NEPA 404 MOU process, which includes milestones and concurrence steps, at the state level, to guide and record early coordination efforts between transportation and permitting agencies. The San Diego Interstate 5 North Coast Corridor program of projects successfully employed this approach by informally extending the NEPA 404 process to local and State agencies. Templates and other job aids to facilitate this process can be developed from examples used for the Interstate 5 North Coast Corridor program.

- Expand use of pre-application meetings with permitting agencies when sufficient information is developed to begin completing permit applications for select projects. At these meetings, review sufficiency of existing information and identify any gaps that may need to be filled for the permitting agency to be able to deem the application package complete.
- Include more permitting agency involvement in the Caltrans PID phase and begin developing mitigation approaches as soon as impacts have been estimated. Work with permitting agencies early to get their input on ways to incorporate habitat and other mitigation needs into the proposed project objectives and purpose and need, so that project funding and design alternatives will tier from that.
- Make transportation technical studies, such as the Natural Environment Study, available to reviewing agencies to provide additional environmental resource analysis and better inform regulatory permit decisions.
- Ensure that Design staff are provided with critical environmental constraint information early in the design process (include schedule for check-ins, site visits, etc. at key project milestones).
- Caltrans should leverage CEQA analyses to meet other regulatory requirements by taking actions to ensure that:
    - Environmental reviews encompass a full picture of corridor features, such as culverts, in the CEQA document (CE, negative declaration, or environmental impact report) to avoid unforeseen changes that result in amendments or additional CEQA analysis.
    - All technical studies and other subject area information that will be required to file permit applications to meet agency requirements are developed in tandem with the CEQA analysis and are applied to the evaluation of project alternatives.
- Identify agency permitting requirements that are not addressed by CEQA analyses (e.g., public coastal access or agricultural land protection requirements of the California Coastal Act), and ensure that design staff are provided with this constraint information early in the design process.
- Assess the existing Caltrans project phases/scheduling process and identify key milestones for cross-agency involvement to promote more efficient projects and better environmental outcomes.

2.4 *Explore opportunities for early coordination between participating transportation and permitting agencies.*

Explore and pursue all potential avenues to achieve early and ongoing coordination between transportation and permitting agency staff. Options include:

- Shift funds saved by reducing project delays into early coordination activities that help realize those savings.

- Conduct new assessments of the value stream that early coordination provides.

2.5 Improve communication strategies to prevent and resolve conflicts.

- Create cross-agency communication strategies aimed at conflict prevention and resolution.
    - Leadership should support professional and respectful communication between staff, relying on factual information and mutual valuation of each agency's mandates as a basic foundation to successfully approaching public service responsibilities.
    - Support collaborative work efforts to address issues consistent with State laws and address potential problems as early as possible, seeking to minimize unproductive time and costs associated with unresolved conflict.
    - Planning and project areas of disagreement should be addressed through staff-to-staff engagement to the greatest extent possible. Transportation and permitting agency liaisons should be invited to facilitate dispute resolution before elevating to higher management.
    - Agencies should agree on progressive resolution processes, beginning with a search for addressing conflicts that may arise at the lowest appropriate staff levels and elevating to progressively higher staff levels when needed to prevent conflicts from languishing.
    - Consider the inclusion of an interagency mediation body such as an ombudsman to facilitate mutually acceptable solutions to elevated disputes between agencies.
- Explore having cross-agency leaders meet on a regular basis (using CHSRA and CDFW as an example).
- Establish regular standing interagency coordination meetings to review ongoing studies, plans, projects, and other activities, including milestones, schedules, opportunities for providing input, and responses to previous comments.
- Have agency staff set aside certain office hours for consultations to ensure expertise is available to permittees during predictable periods. (Refer to the Lean Six Sigma results for the California Fish and Game Code Section 1600 Notification process.)
- Explore potential benefits of directly connecting attorneys across agencies to resolve legal or legislative disagreements.
- Ensure Outlook calendars are visible across state agencies to enable efficient schedule sharing. Work with Caltrans and resources agencies' technology divisions to allow sharing of Outlook calendars for purposes of efficiently scheduling meetings and other events.
- Strengthen partnerships between agencies. Incorporate the following into existing and pending interagency partnership agreements:

- Recognize common goals between transportation and permitting agencies. Evaluate potential partnership agreements at Department level.
- Promote regular communication among senior staff to foster understanding and develop relationships among partner agencies. This also can provide a venue for resolving any lingering issues that could not be resolved at the staff-to-staff level.
- Establish a practice of conducting a lessons-learned review following completion of both successful and challenging projects. Use historical projects to model new ones.
- Establish regular meetings between permitting agency senior and executive management to promote consistency across agencies and regions.
- Establish cross-agency meeting protocols and targets to discuss priorities, resolve issues, and communicate project, permitting, and policy information.

2.6 *Analyze resource levels needed for permitting agency participation in the structured coordination process for early engagement*

One of the requirements of AB 1282 is the analysis of the resources needed at permitting agencies to implement the structured coordination process for early engagement described in Section 4 of this report. A pilot project will be developed to assess staff levels needed at permitting agencies to fully participate in the structured process for early coordination.

Recommendation 3. Improve Project Planning and Delivery

Problem/Issue

Analysis of the permitting process indicates that delays often occur due to project planning and delivery challenges. Issues associated with scheduling, absence of adequate design standards for addressing various environmental conditions, and asset management challenges all contribute to delays. By revising planning and communication processes and tools, such delays can be reduced significantly.

Shared Vision

- Flexible permitting approaches consistent with resource protection mandates and criteria-driven requirements are employed to achieve adaptability in design and avoid or minimize project change requests.
- Transportation agencies prioritize environmentally sensitive designs compliant with resource protection statutes.
- Transportation agencies conduct fiscal analysis of life-cycle project costs and savings.
- Tools for facilitating delivery of early mitigation efforts are expanded and agreement exists on validity of tools across agencies.

- Transportation projects are delivered on time with continuous environmental improvement built into designs and all environmental commitments met.

Recommendations

3.1 Promote use of Construction Manager General Contractors.

The Construction Manager/General Contractor (CMGC) Program is an innovative delivery method that allows transportation agencies to engage a construction manager to provide input during the design process. This process is authorized by Public Contract Code 6701, which requires an interim and final report to assess the effectiveness of the program. Streets and Highways Code allows regional transportation agencies to employ this method as well. For more complex projects as appropriate, consistently bring in a construction expert during the project design phase when needed to eliminate or reduce potential changes to project design after permits and certifications are issued. Increase awareness and use of CMGC by educating stakeholders about potential benefits.

While CMGC is a great approach for larger projects, simple and medium-complexity projects would not need this level of design support. Most of the recommendations that involve improving the clarity of the permit requirements and early coordination will ensure that the permitting requirements are understood early and included in the project design—reducing design rework. In addition, emphasis on the PID development process will enable designers to more fully vet the design ahead of time, reducing the number of design changes later in the process. Finally, the use of design templates and best practice models will help ensure that previously successful construction methods are repeated on similar project types.

3.2 Add a project delivery milestone to ensure permit information is developed on time.

- Evaluate the implementation of a new Caltrans project delivery milestone just prior to permit application submission to ensure that the Caltrans Project Development Team (PDT) has supplied all the information needed to prepare and submit permit applications.
- Optimize best practice of supporting a permit coordinator position in each Caltrans district. The permit coordinator would be responsible for ensuring that project delivery milestones are met, coordination agreements are followed, and important decisions are documented throughout the life of a project. In addition, consider establishing a specific liaison with CCC staff within each applicable Caltrans district.

3.3 *Implement process for record keeping to document action items and discussions.*

Develop a regular consultation and record keeping system that documents iterative decisions, agreements, and action items. The purpose of this system would be to track decisions/agreements and ensure implementation from early planning stages (project scoping and programming), through environmental document and permitting phases, to project implementation and monitoring (i.e., compliance demonstration).

3.4 *Develop improved data management strategies.*

- Explore development of shared data platforms for permit applications and related documentation that support agency decision-making and administrative record. This platform would ensure the development of consistent information (e.g., GIS mapping), uniform data requirements, and tracking of changes. The platform would reduce disagreement between agencies regarding impacts analysis, avoid or minimize project delays, and streamline mitigation compliance approvals.
- Develop a digital application process to cut down on lead time, facilitate submission of complete information, and increase permit process transparency. Explore developing an online, interactive permit application, similar to the State Water Board's Section 401 Water Quality Certification application that is currently being beta tested, and future versions of CDFW's Environmental Permitting Information Management System (EPIMS).

3.5 *Incorporate environmental constraints into project design.*

- Develop a subgroup consisting of transportation agency staff (including divisions of Planning, Design, Project Management, and Environmental) and permitting agency staff to review the existing project design process and identify where improvements could be made to benefit future permitting needs of the project. Improvements would include ensuring that environmental constraints (such as in-water work windows) and other environmental considerations are incorporated early in the project design process.
- Develop a process and vehicle for capturing lessons learned to provide examples of how to incorporate environmental considerations early in project development and the associated benefits.

3.6 *Update Caltrans Planning zero-based budget*

Review the current zero-based budget process with Caltrans Division of Transportation Planning and modify the process to consider inclusion of staff resourcing for early engagement with permitting agencies. The process review would investigate where and when a cost/benefit analysis would show that increasing resources allocated to the PID phase of project delivery would ultimately

benefit the permitting approval timeline. The level of resourcing needed to accomplish successful early engagement with permitting agencies would be scalable to the complexity of the project.

3.7 *Optimize existing Context-Sensitive Solutions Program.*

Optimize the Context-Sensitive Solutions Program and expand the application of context-sensitive design principals through enhanced planning and project management coordination and public outreach.

3.8 *Develop clear guidance and procedures for emergency projects, including emergency roadway openings and permanent restoration efforts.*

Improve the efficiency of procedures during emergencies, including emergency openings and permanent restoration.

- Obtain clarity on federal procedure for emergency projects. Establish a new procedure for federally funded emergency expenditures to be consistent with State permitting agency mandates. Permitting needs to be clearly handled through this process, recognizing that immediate responses that receive emergency permits must be followed up with permit applications for the longer-term repair activities.
- Coordinate with agencies throughout the emergency process, from emergency roadway opening to permanent restoration, so that the process is seamless and includes interagency consultations.
- Develop a lessons-learned database specific to emergency projects.
- Explore developing Caltrans' guidance on preferred approaches in specific locales where storm damage emergencies chronically occur (see, for example, District 4's Marin State Route 1 Repair Guidelines).
- Look for solutions that can be scaled up for projects within sensitive areas such as the coastal zone or habitat for listed species. Large-scale solutions for sensitive resources may require greater coordination with permitting agencies.

3.9 *Create a compendium of preferred design options.*

- Create a compendium of design options and best design practices for different types of projects on which all agencies can agree as to the general design, understanding that some projects may stray from these options. An example would include *Bridge Rails and Barriers: A Reference Guide for Transportation Projects in the Coastal Zone*, prepared by Caltrans and the CCC.
- Develop a list of design elements and corresponding mitigation that support best-practice environmental considerations in project design. The list would comprise a menu with substitute options, to allow for swapping of various components. Design templates would be developed through cross-agency workshops. Permitting agencies would be consulted when revisions to the list are

necessary. An example list would include the designs for fish passage solutions (e.g., bridge in a box) where the bridge foundations were included in those solutions to reduce project costs.

3.10 Develop incentives for innovative design solutions.

- Develop guidance on determining life-cycle project costs to demonstrate that innovative design can lead to lower overall project costs, especially related to mitigation and permitting.
- Develop guidance and direction on the availability of existing incentives for innovative design including, but not limited to:
    - FHWA
    - Wildlife Conservation Board
    - Accelerated bridge construction (ABC) or jack-n-slide bridges

3.11 Expand use of permitting tools that support project-specific flexibility within the agencies.

- *Evaluate expanding use of early mitigation letter for CHSRA*. Expand use of an Early Mitigation Letter as a statewide approach that provides a simple and efficient process specific to transportation projects (and possibly other linear infrastructure) for getting feedback from permitting agencies regarding the suitability and potential value of specific properties for mitigation.
- *Investigate Supplemental Work Area.* Investigate use of a supplemental work area beyond the actual project footprint; define associated maximum impact and incidental take. This approach allows a flexible footprint for temporary, specifically defined measures during construction; it would be necessary to ensure that sensitive resource areas and their required buffers would continue to be protected. This approach may be useful in large, complex projects where means and method may vary greatly but permits must be obtained. Work with agencies upfront on this technique, and resource accordingly for staff rework. Over-mitigating may be a challenge associated with this approach, although it may be ideal where advance mitigation is available.
- Develop a permit deviation process to more efficiently address minor project changes in a way that precludes the need for a permit amendment, such as the State Water Board's Section 401 Certification Deviation Process.
- *Expand the use of restoration, enhancement, and preservation work on public lands* to increase mitigation opportunities (e.g., expand the durability agreement between CDFW and the Bureau of Land Management to extend to all agencies). A tested model for this approach is also available from the San Diego Interstate 5 North Coast Corridor program. The project team recommends this approach for complex projects with a large mitigation component, recognizing the value of readily available mitigation for streamlining future transportation

projects in the San Diego Interstate 5 North Coast Corridor program and reducing the risk of increasing mitigation costs.

3.12 Explore including a "net environmental benefit" or "multi-benefit" provision as part of the transportation project objectives and purpose and need. On a case-by-case basis, determine that the transportation project is larger in scope and includes improved environmental outcomes.

Develop a team of stakeholders, including the public, local communities, and permitting agencies, to collaborate on mutual benefits of the project. For example, in the case of the San Diego Interstate 5 North Coast Corridor Project, the region funded scope above and beyond the minimum required mitigation, the benefits of which gave stakeholders a vested interest in the success and timely delivery of the project.

Recommendation 4. Effective Procedures, Policies, and Guidance

Problem/Issue

Analysis of the permitting process indicates that lack of guidance and ineffective processes are common causes for delays. Insufficient or unclear guidance creates misunderstandings and later rework, while outdated or ineffective procedures can present hurdles to the permitting process that take time to resolve. These delays can be reduced significantly by simplifying guidance on regulations and requirements, exploring ways to use common language and terminology, providing dedicated agency liaisons, and improving training on policies and procedures.

Shared Vision

- Transportation and permitting agencies have a shared understanding of regulatory requirements.
- Transportation and permitting agencies coordinate to achieve the common goals of promoting sustainable transportation and improved environmental outcomes.
- Relevant permitting agencies are included in the project delivery process to align requirements during planning.

Recommendations

4.1 Emphasize the importance of environmental outcomes at the leadership level.

Recognition and support for environmental outcomes will enhance process efficiency while improving environmental outcomes by reducing the potential for

transportation and permitting agencies to work at cross-purposes. The following actions are recommended to improve this proposed alignment.

- Make positive environmental outcomes part of the Director's Performance Plan for Caltrans and CHSRA.
- Issue Caltrans and CHSRA Director's Directives to emphasize the importance of environmental outcomes and the need for coordinated support of cross-agency mandates.
- Expand the time provided in the PID stage for early consideration of environmental outcomes, and thereby reduce permitting process time requirements.
- Provide staff training to support the emphasis on environmental outcomes throughout all phases of project development, and define expectations at each stage of development.

4.2 Optimize the interagency liaison program.

Moving environmental considerations to the earlier stages of the transportation planning, analysis, and design processes will improve overall cycle time and reduce rework requests at Caltrans; these actions, however, may affect workload at the permitting agencies. To ensure adequate staffing, the use of liaisons at permitting agencies should be optimized.

- Evaluate existing agreements with agency partners to identify potential improvements that could increase permitting efficiencies.
- Evaluate funding for all staff liaison programs to meet the expected increase in workload due to SB 1.
- Evaluate the expansion of the current CDFW staff liaison program in additional regions.
- Evaluate funding to support staff liaison participation in fish passage remediation, AMP and SAMI efforts, and process improvement/efficiency efforts.
- Use liaison contracts to fund agency participation in early coordination during project initiation and through the CEQA review process.
- Use liaison contracts to fund review and agreement on mitigation properties that could be used for permit-related mitigation needs.
- Maintain an interagency liaison directory with contact information and agency maps to be displayed on transportation agency websites.
- Develop an efficient method to communicate project priorities to permitting agencies.
- Allow flexibility in interagency agreements to shift funding and prioritization to adapt to changes in workload levels and emerging issues, such as mitigation banking reviews and response to climate change.
- Establish an ongoing interagency coordination process to describe the mission and policies of each permitting agency, clearly outline similarities and

differences, and identify similar permit requirements among permitting agencies. Develop guidelines for common application and submittal requirements when appropriate.

- Create business rules for effective dissemination of information between headquarters, districts, and permitting agency liaisons.

4.3 *Include and prioritize long-term environmental considerations, including maintenance cost-avoidance, in economic analyses of projects.*

The following actions are recommended.

- Factor in mitigation requirements and lifetime operations and maintenance costs when designing projects.
- Perform holistic cost analysis, including time savings from streamlined permit issuance and resilience to, or avoidance of, climate change impacts, during project development and implementation.
- Assign an economic value to protecting environmental services and savings on long-term management.
- Define and communicate a strategy for including long-term maintenance costs in project development.

4.4 *Develop and implement programmatic approaches for efficient permit processing.*

- Develop a compendium of construction and site management practices that have proven effective in past projects.
- Develop a library of past permit conditions for Caltrans and CHSRA transportation projects that have proven effective and easily understood by both applicant and permit writer. Consider the Lake and Streambed Alteration Agreement shopping list process that was developed to improve implementation of Section 1600 of the California Fish and Game Code, as an example. Share the list across agencies to enhance understanding and consistency.
- Develop new or update existing programmatic solutions for routine, repetitive projects that pose minimal risk to the environment, such as Master Streambed Alteration Agreements and General Waste Discharge Requirements for Type 1 Culverts.

4.5 *Delegate approval authority for certain project requests where legal and appropriate, and make use of available administrative processes that can provide more efficient regulatory approvals in certain circumstances.*

Current rules and regulations provide that some approvals may be delegated to lower levels of management. Approvals for routine or low-risk requests can be

expedited by delegating to the lowest effective levels of the organization. Implement delegation of approvals by clearly defining a "routine request" and appropriately training regulatory staff. In addition, administrative processes such as waivers also can expedite reviews of projects that have been appropriately designed consistent with permitting agency mandates.

4.6 Consolidate fully protected species under the California Endangered Species Act.

Retire both the fully protected (animal) and rare (plant) status designations. Instead, apply the appropriate threatened, rare, or endangered designation under the California Endangered Species Act to these species. This will allow permitting of take, regulatory oversight, and mitigation opportunities for applicants with projects where these species are located.

4.7 Clarify financial assurance agreements.

The California Endangered Species Act and implementing rules require financial assurance from applicants to ensure that planned mitigation will be successfully implemented. Caltrans, CHSRA, and other transportation agencies frequently are prevented from providing financial assurance due to statutory limitations in the Streets and Highways Code. This causes delays while alternative solutions are developed on a project-by-project basis. A legislative change may be required to increase flexibility for one or both agencies. Such legislation could include the following:

- Additional transportation funds for compensatory mitigation/financial assurances
- Changes to the Streets and Highways Code to allow use of financial assurances conventionally required of other types of applicants.
- Changes to the California Fish and Game Code and its implementing rules to allow for alternatives to financial assurance.

4.8 Implement mitigation through pursuit of strategic restoration opportunities, including advance mitigation.

Transportation agencies should work with permitting agencies to expand opportunities for developing strategic habitat mitigation strategies and plans that accomplish the following:

- Evaluate needs and establish priorities for restoration activities. Consider the Freshwater Conservation Blueprint for California and the Southern California Wetlands Recovery Program as examples and opportunities.
- Explore potential workshops on mitigation needs, obstacles and delays between the California Transportation Commission and applicable agencies
- Expand on advance mitigation efforts to complement strategic plans. Include consideration of all advance mitigation options, such as mitigation banks, SAMI,

Caltrans' AMP, regional advance mitigation planning, Resource Conservation Investment Strategy (RCIS), and others. See Recommendation 6 for additional detail on advance mitigation approach and recommendations.

- Provide for the creation and restoration of habitat in larger destroyed or degraded areas that can provide more meaningful and contiguous habitat, rather than individual "postage stamp" mitigation efforts with generally marginal ecological value.
- Identify strategic partnerships with other public and private entities conducting restoration activities to develop additional mitigation opportunities such as in-lieu fee programs.
- Expand the use of mitigation ratio strategies for specific resource issues, such as the USACE mitigation calculator, to be used and accepted across other permitting agencies as allowable. This recommendation was also identified during review of pilot projects by the San Diego Interstate 5 North Coast Corridor team. The team noted the value in proactively pursuing restoration opportunities as a means to provide a "net benefit" to a region's natural resources, to streamline delivery of future transportation projects in the same region, and to reduce the risk of cost increase due to difficulty finding and acquiring lands suitable for mitigation, especially for more complex projects.

Recommendation 5. Ensure Suitable and Sufficient Staffing

Problem/Issue

Analysis of the permitting process indicates that delays (process bottlenecks) are often attributable to a lack of available and trained personnel. Underlying causes for this lack of trained staff point to the hiring process, retention issues, compensation, high workloads, training challenges, and a perceived lack of career advancement opportunities. By improving levels of training, funding, and career satisfaction, personnel turnover and the associated process interruptions they cause can be reduced significantly.

Shared Vision

- Transportation and permitting agencies are sufficiently staffed and trained with best-in-class expertise to accommodate future workload expectations.
- Transportation and permitting agencies are properly trained in interagency requirements and policy.
- Transportation and permitting agency staff are trained in conflict resolution and collaboration skills.
- Transportation and permitting agencies retain talent and the positions are considered a top career choice across the state.

Recommendations

5.1 Improve opportunities for cross-agency and cross-functional training.

Improve opportunities for cross-agency and cross-functional training to develop a highly competent staff base.

- Provide practical intra- and interagency training on the permit application process, requirements, and regulations that staff will be required to complete periodically, as determined necessary.
- Provide environmental best practices training and education for design engineers. Include education regarding designs that have contributed to more streamlined permitting in past applications and alternative context-sensitive approaches for meeting project objectives and purpose and need.
- Provide onboarding training and guidance to all new employees.
- Explore opportunities for cross-agency team building and partnering.
- Promote participation of interagency liaisons at trainings and track attendance. Liaison staff can take advantage of existing trainings (such as Environmental Academy, Design Construction Maintenance, etc.).
- Create joint training classes with multiple agencies, such as the Caltrans-CCC training.
- Support development of leadership, teamwork, problem solving, flexibility, and other skills that promote successful early and ongoing coordination efforts.
    - Take advantage of existing opportunities for training within each agency. Increase awareness and participation in existing training specific to each agency (such as True Colors, other leadership training).
    - Contract with colleges/universities and other educational institutions to deliver conflict resolution training.
    - Develop focused training on soft skills at all staff levels: communication, teambuilding, conflict resolution, time management, and meeting management.

5.2 Collect, document, and disseminate lessons learned from select projects.

In order to improve the permitting process, lessons learned, pinch points and other causes of delay, and opportunities for improved environmental outcomes should be gathered from projects.

- Conduct periodic interviews with all staff involved in the permitting process to gather information regarding successes and failures. Focus particularly on collecting potential solutions. Conduct interviews at specific project milestones: for example, at Ready to List, research would capture lessons learned during the permitting process; at construction contract acceptance, the process would capture lessons learned during construction.

- Develop a library of lessons learned, both successes and failures.
- Present a periodic summary of lessons learned to the Task Force/Working Group.

5.3 *Provide opportunities to research new science and its applicability to transportation projects*

Promote continuing education to ensure that transportation agency and permit agency staff have access to and incorporate the best available science.

- Leverage existing resources for research, including Caltrans Division of Research, Innovation and System Information, National Cooperative Highway Research Program, and State Planning and Research (FHWA funding).
- Task agency headquarters staff to participate in research development.
- Promote linkages with California's university and state college systems to increase the focus of research and graduate student programs on current and emerging sustainable transportation and resource protection issues that challenge transportation and permitting agency practitioners.
- Present research topics and results to the AB 1282 Working Group on a periodic basis. Request Task Force support on important issues (e.g., letters of support).

5.4 *Improve recruitment, hiring, and retention practices.*

Implement improvements in recruitment, hiring, and retention practices to develop and maintain an experienced, highly qualified staff base.

- Develop and implement equitable pay structures that account for cost of living differences in some geographic areas of the state, for environmental professionals at both transportation and permitting agencies.
- Promote availability of existing benefits (such as flexible work schedules, payment of professional membership dues, etc.) specific to each agency and bargaining unit.
- Investigate expanding promotional paths, such as job classification range expansion and development of non-supervisory senior positions.
- Investigate ways to better recruit staff with strong skill sets needed by transportation and permitting agencies.
- Develop a staff recruitment program. Pool resources for a joint-agency staff recruitment effort. Utilize existing resources (such as Texas A&M job board) for job opening outreach.
- Investigate intra- and interagency job rotation (job swap/job shadow).
- Include strong communication, conflict resolution, team building, and related aptitudes within the desired skill set during staff recruitment efforts.
    - Develop methods to recruit and hire staff with interest and skills to participate in the project planning, design, and permitting processes.
    - Develop methods to query for soft skills in a well-developed duty statement, as allowable by State Personnel Board, bargaining unit, and agency

requirements. Within the Knowledge, Skills, and Abilities section of the duty statement, include language on the skills being sought—conflict resolution, negotiation, collaboration, etc.

5.5 Develop guidance and promote utilization of retired annuitants.

Hiring retired annuitants is a cost-effective way to retain experience and hire personnel with a specialized skill set on a limited basis. Develop or disseminate information on benefits, limitations, and process for hiring retired annuitants.

5.6 Support allowing travel to participate in relevant training and conferences for career enhancement.

In recent years, authorization for training opportunities for state employees, including attendance at conferences, has been reduced. In some cases, attendance at events that are specifically focused on agency training has been denied because the training title included the term "conference." However, attending conferences is a critical opportunity for staff to ensure they have the most up-to-date information on science and policy issues. Consider actions to promote staff training, including issuing new guidance allowing greater flexibility for staff to attend professional conferences as appropriate.

5.7 Develop metrics for evaluating the staff liaisons program going forward to demonstrate time and cost savings.

New metrics will be developed for use in evaluating the staff liaisons program going forward. Metrics will be established for demonstrating time and cost savings compared to the current (baseline) average times for permit application acceptance and permit issuance.

Recommendation 6. Optimize Advance Mitigation Strategies

Problem/Issue

Analysis of the permitting process indicates that one of the main contributors to process delays is mitigation. Underlying causes include challenges in mitigation concept planning and design, land acquisition for mitigation sites, and mitigation implementation and monitoring.

Shared Vision

- Transportation agencies use advance mitigation as a regular part of project planning, design and permitting.
- Current obstacles to fully implementing advance mitigation as a strategy to support project permitting are removed.

- Advance mitigation is fully available as an approach to streamline permit approvals and improve environmental outcomes.
- Desired environmental outcomes are prioritized and met for each geographic region, and mitigation options are expanded to include fish passage and wildlife connectivity

Recommendations

6.1 Improve tools and options to align agency requirements in implementing advance mitigation.

Alignment of permitting agencies on the various implementing instruments or agreements can be difficult and pose a risk for permittees when making advance mitigation investments. Harmonizing mitigation design and investments with anticipated requirements and instruments is a desired outcome of advance mitigation that would be more efficient and reduce risk. Since the various mitigation instruments do not always align well with one another or may require the project proponent to enter into multiple agreements or instruments to meet advance mitigation needs for the same resource, it is recommended that CDFW be allowed to participate in in-lieu fee programs to align with federal wetland mitigation regulations. Similarly, other State agencies could recognize the RCIS MCAs to meet their own regulatory requirements, allowing additional alignment for implementing mitigation.

6.2 Establish crediting framework for projects that result in fish passage and wildlife connectivity and other environmental improvements.

- Work with all permitting agencies, including U.S. Fish and Wildlife Service, National Marine Fisheries Service, and the U.S. Army Corps of Engineers to develop a crediting framework for fish passage and wildlife connectivity that would provide credits for mitigation required for permits. Legislative change is necessary to fully develop this concept, as currently no more than 25 percent of the funds in the Caltrans AMA may be allocated for this purpose.
- Establish crediting framework for other proactive projects to improve water quality, scenic resources, passive public access, and other assets on the state highway system. Beyond advance mitigation, this framework could apply to simple and medium-complexity projects that may involve multiple culverts, where including fish or wildlife passage at key locations could meet the mitigation requirements for other culverts covered in a Section 1600 Lake and Streambed Alteration Agreement or other mitigation requirements. Allowing out-of-kind or off-site improvements could make those solutions more fiscally feasible.

6.3 *Update mitigation bank policies and practices to accommodate advance mitigation purchases.*

- Permitting agencies should evaluate current regulations, policies, and practices to see how they could be modernized, updated, or legislatively modified to clarify how advance mitigation procedures may need to be done differently or how they fit within existing processes. For example, existing mitigation bank enabling instruments were not written with advance mitigation purchases in mind. Guidance for future bank development should accommodate an easy revision process for established bankers to accommodate advance mitigation purchases.

6.4 *Establish programmatic solutions with planned advance mitigation investments.*

- Establish programmatic agreements or batched permits/consultations in coordination with planned advance mitigation investments to streamline transportation project delivery.

Legislative and Regulatory Considerations

AB 1282 states that the Task Force shall prepare a report of findings that includes:

> ***Legislative or regulatory issues, if any that need to be addressed to implement the process developed pursuant to subdivision (b).***

Subdivision (b) refers to the structured coordination process for early engagement (Section 4 of this report). The recommendations development team analyzed all Task Force recommendations to determine which may need legislative changes and/or changes in regulations in order to move forward with full implementation. Six items under Recommendations 4 and 6 would likely need legislative action:

1) 4.5. Delegate approval authority for certain project requests where legal and appropriate, and make use of available administrative processes that can provide more efficient regulatory approvals in certain circumstances.
2) 4.6. Consolidate fully protected species under the California Endangered Species Act.
3) 4.7. Update the Streets and Highways Code to allow use of financial assurances conventionally required of other types of applicants. Update the California Fish and Game Code and its implementing rules to allow for alternatives to financial assurance. Provide additional transportation funds for compensatory mitigation/financial assurances.
4) 4.8. Identify strategic partnerships with other public and private entities conducting restoration activities to develop additional mitigation opportunities, such as in-lieu fee programs.

5) 6.1. Allow CDFW to participate in in-lieu fee programs to align with federal wetland mitigation regulations.

6) 6.2. Work with all permitting agencies, including U.S. Fish and Wildlife Service, National Marine Fisheries Service, and the U.S. Army Corps of Engineers to develop a crediting framework for fish passage and wildlife connectivity that would provide credits for permit-required mitigation. Currently no more than 25 percent of the funds in the Caltrans AMA may be allocated for this purpose.

Six items under Recommendations 1, 3, and 4 would likely need changes in regulations:

1) 1.2. Establish consistent permitting agency submittal requirements for a uniform basic permit application with baseline information such as general project location figures and maps, project description, and expanded wetland delineation guidance that would be acceptable to all permitting agencies.

2) 3.11. Investigate use of a "supplemental work area" beyond the actual footprint of the transportation project, and define the associated maximum impact and incidental take.

3) 3.11. Develop a permit deviation process to more efficiently address minor project changes in a way that precludes the need for a permit amendment, such as the State Water Board's Section 401 Certification Deviation Process.

4) 4.4. Develop new or update existing programmatic solutions for routine, repetitive projects that pose minimal risk to the environment, such as Master Streambed Alteration Agreements and General Waste Discharge Requirements for simple culverts.

5) 4.8. Identify strategic partnerships with other public and provide entities conducting restoration activities to develop additional mitigation opportunities.

6) 4.8 Expand the use of mitigation ratio strategies for specific resource issues, such as the USACE mitigation calculator, to be used and accepted across agencies as allowable.

Pilot Projects/Testing Solutions

In addition to legislative and regulatory considerations, testing will be an important part of implementation and rollout of some of the new policies, processes, tools, and training. Some recommendations include strategies and products that can be rolled out with little or no testing. Others may require testing at a project or district/regional level. The implementation plan (described in Section 7) will include a list of the components of each recommendation that may need a test phase as part of rollout. Pilot projects will be identified as testing grounds as each component or strategy is ready for a beta test phase. Pilot projects could include those tapped for the permitting analysis work presented in Section 2 of this report, or

other projects, depending on the timing of rollout and status of projects in the project delivery process.

Section 7. Change Management Framework and Implementation

A Change Management Framework to Realize the Shared Vision

The development of recommendations was a collaborative process involving staff-, management-, and executive-level representatives from the participating transportation and permitting agencies, departments, and boards. The recommendations are improvements that represent how the AB 1282 Task Force and Working Group members envision the new project delivery and permitting processes working.

Although the vision is inspiring and energizing, implementing many of the improvement recommendations made in this report will be a complex task. Indeed, it is a change initiative that will involve many tasks over several years and result in a transformation of how we carry out the work of delivering transportation projects in California. Responsibility and accountability for implementation will vary among the transportation applicants and various permitting agencies. These changes will include stages for communicating, testing, and rollout. Additionally, the Task Force recognizes that the agencies involved with making these process improvements will deal with the competing objectives of continuing to meet current workload demands through existing processes while attempting to change business practices and uphold the commitments made under the AB 1282 legislation and corresponding Tri-Agency Partnership Agreement.

The work of implementing a number of the recommendations can be started right away, and some actions are already underway. More complex recommendations, however, will involve developing and testing new procedures, tools, job aids, and training, and even changes to policy or regulations.

While work is starting on the simpler recommendations, work also needs to start on assembling and activating a structured change management framework to ensure success of the entire AB 1282 initiative. That effort will include identifying and engaging strong facilitative leadership for change and leveraging the Tri-Agency Partnership relationships as the foundation.

Realizing the intended outcomes of AB 1282 and sustaining these changes will require a structured implementation framework and plan that is:

- Fully owned and supported by those in authority (i.e., the Task Force member agencies, boards, commissions, and departments).
- Fully understood, developed, and supported by those responsible for implementation.
- Resourced appropriately.

A balance of people, process, and tools is needed for successful rollout and implementation. To accomplish the goals of AB 1282 and implement the recommended

improvements, the change management framework will be a balanced system investing equally in the people and the processes and tools. The framework will provide guidance, governance, and support throughout the duration of the change. The vision is to provide adequately trained and dedicated staff to help develop and implement the new processes that this report recommends. Senior leadership empowers the champions and change agents by providing authority, tools, and resources, as well as a healthy environment where creativity and achievement flourish. Leadership roles also include removing obstacles, approving performance metrics and process indicators, monitoring progress, and facilitating adjustments to the implementation plan based on progress as measured by the metrics and key process indicators. In addition, leadership will communicate widely the status of the overall program.

Change Management Stepwise Approach

The approach to developing the change management framework and implementation plan consists of five steps:

1. Lead the change
2. Create the shared need and vison
3. Mobilize commitment
4. Advertise and celebrate successes
5. Monitor progress

Lead the Change. The first step in establishing the framework is to identify the sponsor(s) for the AB 1282 implementation initiative. The sponsor has the authority and resources to drive a successful and timely initiative across the interagency teams. Leading the change will involve leveraging the AB 1282 Task Force alliance among the secretaries of CalSTA, the California Natural Resources Agency, and the California Environmental Protection Agency as the oversight body for the change initiative. It is likely that this will also include further amplification of interagency agreements to expand the alliance between transportation and environmental permitting agencies and achieve the desired outcomes of AB 1282.

State agencies will need to employ a "change the business/run the business" model to maintain a dual perspective of assigning resources and priorities to meet today's challenges while proactively working toward the future vision. *Running the business* means delivering today's projects using the means the agency has at hand. *Changing the business* means taking on initiatives that improve work processes, documents, and tools to implement those changed processes, and providing necessary training to perform the new processes. This ongoing dual perspective is a requirement for successfully implementing any large-scale improvement initiative.

Create the Shared Need and Vision. Part of the change management plan will include developing a set of communication vehicles that demonstrate the critical need for this change initiative. AB 1282 provides a systematic way to meet the challenge of delivering the SB 1 transportation infrastructure program for California in a new way. The rationale for implementing AB 1282 recommendations will be succinctly and clearly articulated, demonstrating the compelling need for permitting efficiency and improved environmental outcomes. The reasons for and benefits of change will be communicated and instilled within each organization. A vision that makes the need for change and the benefits of change obvious can energize the change.

Mobilize Commitment. For the AB 1282 vision to become a reality, we must engender a strong commitment, starting with the executive levels of each agency and their leadership teams. This requires "sponsorship" from the highest level, as well as a combination of change initiative champions and change agents across the agencies.

Sponsors support, authorize, provide budget, legitimize, and demonstrate ownership of the change initiative. They also reinforce their personal commitment through their own visible, active behavior. Assigned change champions who believe in the change drive commitment, assign resources, and influence alignment at the mid-management level. Change agents are managers and staff of the transportation and permitting agencies who are assigned specific responsibilities to promote and implement the recommendations at the tactical level.

Advertise Successes. Once change is started, it is critical that it endures as learnings are transferred throughout the organization. The AB 1282 process changes will be integrated with other key quality and process improvement initiatives; early successes will be encouraged and advertised to build continued momentum.

Monitor Progress. To ensure progress is real, the implementation framework will also include milestones or benchmarks and key process indicators and performance metrics to track progress and ensure accountability. Regular leadership review sessions will be critical to monitor progress and make any needed adjustments to the plan to achieve the intended outcomes.

Implementation Plan

The AB 1282 Task Force, chaired by the Secretary of CalSTA, will sponsor and lead the continuing AB 1282 Change Initiative, working in partnership with the Secretaries of the California Natural Resources and California Environmental Protection Agencies. It is envisioned that each agency will identify a deputy director/career executive assignment–level lead to act as the AB 1282 change champion for that agency. Depending on the nature of various activities, additional partnership agreements with the CCC and State and Regional Water Boards may also be necessary. Existing interagency alliances (such as Caltrans and the CCC's Integrated Planning Team's *Plan for Improved Agency Partnering*

and Partnership Agreement [2017] and Caltrans and CDFW's interagency agreements for the SAMI and 1600 Lean Six Sigma projects) are well suited for facilitating the implementation of a significant number of the recommendations.

The change agents will be accountable for implementing and reporting progress on implementation of the recommended improvements. The change agents will work with an implementation team within their respective agencies, commensurate with the depth and level of activity required. Collectively, the change agents will lead the cross-agency organization through the step change process described above. It is recommended that the AB 1282 Task Force Working Group be charged as the cross-agency implementation team.

It will be important that the implementation plan allows for flexibility in prioritizing and carrying out the details of the recommendations. Adjustments may be needed based on changes in progress, programs, priorities, and circumstances. Regular AB 1282 program checkpoints will be scheduled with the Task Force to ensure the program stays on track and to make any needed adjustments to realize the intended benefits.

The Task Force recognizes that capacity is a serious challenge for all of the participating agencies, and change is a serious challenge for state bureaucracies. For these reasons, the first actions to be taken should include:

- Mobilize the AB 1282 Task Force, change champions, and change agents to develop and execute the Change Management Framework/Implementation Plan.
- Establish regular AB 1282 change management leadership forums and calendar.

Success of the work in the next phase depends on the parties to the Tri-Agency Partnership Agreement ensuring the continued engagement of their departments and boards in meeting the goals of the Transportation Permitting Task Force. Indeed, the timely delivery of the SB 1 program depends on successfully integrating the statewide goals of enhanced mobility and environmental protection.

Appendix A
Text of Assembly Bill 1282

Assembly Bill No. 1282

CHAPTER 643

An act to add Section 155.7 to the Streets and Highways Code, relating to transportation.

[Approved by Governor October 10, 2017. Filed with Secretary of State October 10, 2017.]

LEGISLATIVE COUNSEL'S DIGEST

AB 1282, Mullin. Transportation Permitting Task Force.

Existing law establishes the Department of Transportation and the California Transportation Commission and provides that the department has full possession and control of all state highways and all property and rights in property acquired for state highway purposes and authorizes and directs the department to lay out and construct all state highways between the termini designated by law and on the locations as determined by the commission.

This bill would require, by April 1, 2018, the Secretary of Transportation, in consultation with the Secretary of the Natural Resources Agency, to establish a Transportation Permitting Task Force consisting of representatives from specified entities to develop a process for early engagement for all parties in the development of transportation projects, establish reasonable deadlines for permit approvals, and provide for greater certainty of permit approval requirements. The bill would require the Secretary of Transportation, by December 1, 2019, to prepare and submit to the relevant policy and fiscal committees of the Legislature a report of findings based on the efforts of the task force.

The people of the State of California do enact as follows:

SECTION 1. Section 155.7 is added to the Streets and Highways Code, to read:

155.7. (a) On or before April 1, 2018, the Secretary of Transportation, in consultation with the Secretary of the Natural Resources Agency, shall establish a Transportation Permitting Taskforce consisting of the following members:

(1) The Secretary of Transportation or his or her designee.

(2) The Secretary of the Natural Resources Agency or his or her designee.

(3) The Chair of the California Transportation Commission or his or her designee.

(4) Representatives from the following:

(A) Department of Transportation.

(B) Department of Fish and Wildlife.
(C) The State Water Resources Control Board.
(D) Regional water quality control boards.
(E) The California Coastal Commission.
(F) Other relevant state or public entities.

(b) The taskforce shall develop a structured coordination process for early engagement of all parties in the development of transportation projects to reduce permit processing time, establish reasonable deadlines for permit approvals, and provide for greater certainty of permit approval requirements.

(c) (1) On or before December 1, 2019, the Secretary of Transportation shall prepare and submit to the appropriate policy and fiscal committees of the Legislature, pursuant to Section 9795 of the Government Code, a report of findings based on the efforts of the taskforce. The report shall include, but is not limited to, a detail analysis of the following issues:

(A) The existing permitting process for transportation projects in California, including a discussion of the points in the process where delays are most likely to occur.

(B) The utilization of existing positions in the various state resource agencies currently supported by transportation funds, including an analysis of the benefits of those positions to the state's transportation programs relative to their costs.

(C) The process developed pursuant to subdivision (b).

(D) Resource levels needed at the resource agencies to implement the process developed pursuant to subdivision (b).

(E) Legislative or regulatory issues, if any, that need to be addressed to implement the process developed pursuant to subdivision (b).

(2) Pursuant to Section 10231.5 of the Government Code, this subdivision shall be inoperative on December 1, 2023.

O

Appendix B
Tri-Agency Partnership Agreement

PARTNERSHIP AGREEMENT

among

CALIFORNIA NATURAL RESOURCES AGENCY,

CALIFORNIA ENVIRONMENTAL PROTECTION AGENCY,

and

CALIFORNIA STATE TRANSPORTATION AGENCY

This Partnership Agreement is entered into by and between the California Natural Resources Agency (Natural Resources), California Environmental Protection Agency (CalEPA), and the California State Transportation Agency (CalSTA) (collectively referred to as the "Parties") to ensure the timely development of beneficial transportation improvements in California while also protecting the State's environment and its natural, historic and cultural resources.

WHEREAS, in 2001, CalEPA, Natural Resources, and CalSTA (formerly part of the Business, Transportation and Housing Agency) entered into a Partnership Agreement to identify program areas in which additional cooperation would more successfully integrate statewide goals of enhanced mobility and environmental protection; and

WHEREAS, in 2009, the California Department of Transportation completed a comprehensive review and summary of the permits, agreements, and approvals required by federal, state, and local jurisdictions, for transportation projects in California; and

WHEREAS, in 2017, the Legislature passed and the governor signed Senate Bill 1, which invests $54 billion over the next decade to fix roads, freeways and bridges in communities across California and puts more dollars toward transit and safety; and

WHEREAS, in 2017, the Legislature passed and the Governor signed Assembly Bill (AB) 1282, which added Sectioned 155.7 to the Streets and Highways Code; and

WHEREAS, Section 155.7 of the Streets and Highways Code requires the establishment of a Transportation Permitting Task Force to develop a structured coordination process for early engagement for all parties in the development of transportation projects to reduce permit process time, establish reasonable deadlines for permit approvals, and provide for greater certainty of permit approval requirements; and

WHEREAS, the Parties intend to assure the engagement of their departments and boards in meeting the goals of the Transportation Permitting Task Force;

WHEREAS, the Parties understand the fiscal and staff resources are critical to the success of the Transportation Permitting Task Force and SB 1 projects;

THEREFORE, in consideration of the mutual benefits to be derived for the Parties, the public, stakeholders, and the environment, the Parties agree as follows:

I. PURPOSE and OBJECTIVE

The purpose of this Agreement is to facilitate and formalize collaboration between the Parties in support of the mutual goals defined in Section III of this Agreement.

The Parties' objective is to ensure the timely development of beneficial transportation improvements that keep California's transportation infrastructure in a state of good repair, to invest in a multimodal transportation systems to address growth in California communities and economy, and to protect or restore the State's environment and its natural, historic, and cultural resources.

The Parties recognize the priorities of livable communities, the principles of environmental justice, regional planning, cultural and natural resource conservation, and protection of the environment.

II. AUTHORITY

This Agreement is authorized by Government Code sections 13975 through 13984 relating to the general duties and powers of CalSTA and the Secretary of CalSTA, Government Code section 12800 relating to the general duties and powers of CalEPA and the Secretary of CalEPA, and relating to the general duties and powers of Natural Resources and the Secretary of Natural Resources, and the provisions of Streets and Highways Code sections 155.7 establishing and setting forth the duties of the Transportation Permitting Task Force.

III. MUTUAL GOALS

The secretaries of CalSTA, Natural Resources, and CalEPA intend, through this Agreement, to:

A. Provide leadership and guidance to the Transportation Permitting Task Force to develop a structured coordination process for early engagement of all parties in the development of transportation projects to reduce permit processing time, establish reasonable deadlines for permit approvals, and provide for greater certainty of permit approval requirements, as set forth in Streets and Highways Code, section 155.7.

B. Support the shared goal of expediting the completion of transportation projects while also protecting the state's environment and natural, historic, and cultural resources.

C. Work collaboratively to develop efficiencies within the transportation planning and environmental processes, including early and continuing consultation to determine the type, nature and extent of environmental studies that are required, and by developing environmental baselines for transportation projects.

D. Engage in concerted, cooperative, and collaborative relationships among their respective agency programs to identify and share transportation and environmental priorities.

E. Encourage the early and continuous participation of state, federal and local agencies, public interest groups, and individual members of the public throughout the planning and regulatory approval process for local land use planning, resource conservation planning, transportation planning, project development, and regulatory approval processes.

F. Ensure compliance with all applicable environmental laws, rules and regulations, permits, and policies while establishing reasonable deadlines for permit approvals, and providing for greater certainty of permit approval requirements.

G. Ensure availability and application of the appropriate level of staff resources to support the Transportation Permitting Task Force, its working group, and its technical committees.

IV. COMMITMENTS

In the spirit of cooperation and collaboration, and with the mutual understanding that this should be a flexible Agreement, the Parties commit to the following:

A. To hold quarterly meetings of the Transportation Permitting Task Force established by Streets and Highways Code, section 155.7, subdivision (a).

B. To create the Transportation Permitting Working Group consisting of representatives from each of the Transportation Permitting Task Force members' organizations. The Transportation Permitting Working Group will meet at least monthly to prepare recommendations and support the Transportation Permitting Task Force.

C. To oversee and assure development of the Transportation Permitting Task Force Work Plans and deliverables, to include:

Streets and Highways Code Section	Transportation Permitting Task Force Goal	Transportation Permitting Task Force Work Plan Deliverables [1]*
Section 155.7(b)	Develop a structured coordination process for early engagement for all parties in development of transportation projects	Develop a high-level partnership agreement between CalSTA, Natural Resources, and CalEPA to support the work of the Transportation Permitting Task Force Develop interagency agreements between the Transportation Permitting Task Force agencies to develop a structure coordination process. Develop interim recommendations to inform upcoming budget processes, including recommendations for additional staff for enhanced coordination between departments, if needed
Section 155.7(b)	Establish reasonable deadlines for permit approvals	Identify and coordinate pilot projects and priority projects to develop a process for early engagement, develop reasonable deadlines for permit approvals.
Section 155.7(b)	Provide for greater certainty of permit approval requirements	Provide a detail analysis of existing for transportation projects including a discussion of the points in the process where delays are most likely to occur. Provide for greater certainty of permit approval requirements. Develop advanced mitigation options, including mitigation banks for wetlands impacts.
Section 155.7(c)(1)	On or before December 1, 2019, prepare and submit to the appropriate policy and fiscal committees of the Legislature, a report of findings based on the efforts of the task force	Prepare a 2018 Interim Report Develop a 2019 Work Plan, including the outline of the report to the Legislature Prepare a Final Transportation Permitting Task Force Report for the Legislature

D. Ensure the timely development and completion of deliverables in the 2019 Work Plan and completion and delivery to the Legislature of the Final Transportation Permitting Task Force Report by December 2019.

[1] Transportation Permitting Task Force Work Plan Deliverables may accomplish multiple goals. This chart correlates each deliverable with its primary goal only.

V. TERMS OF AGREEMENT

This agreement is effective upon the date of the last signatory and will remain in effect unless and until modified or terminated by mutual agreement of the Parties.

VI. SIGNATURES

Brian C. Annis, Secretary
California State Transportation Agency

9-30-2018
Date

John Laird, Secretary
California Natural Resources Agency

8-30-2018
Date

Matthew Rodriquez, Secretary
California Environmental Protection Agency

8-30-2018
Date