



**TRANSPORTATION, WATER &
INFRASTRUCTURE COMMITTEE**

August 11, 2016

1:00 P.M.

651 Pine Street, Room 101, Martinez

Supervisor Mary N. Piepho, Chair
Supervisor Candace Andersen, Vice Chair

Agenda Items:	Items may be taken out of order based on the business of the day and preference of the Committee
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1. Introductions
2. Public comment on any item under the jurisdiction of the Committee and not on this agenda (speakers may be limited to three minutes).
3. **Administrative Items, if applicable.** (John Cunningham, Department of Conservation and Development)
4. **REVIEW record of meeting for July 14, 2016, Transportation, Water and infrastructure Committee Meeting.** This record was prepared pursuant to the Better Government Ordinance 95-6, Article 25-205 (d) of the Contra Costa County Ordinance Code. Any handouts or printed copies of testimony distributed at the meeting will be attached to this meeting record. (John Cunningham, Department of Conservation and Development).
5. **AUTHORIZE the Public Works Director, on behalf of the County, to submit grant applications to Caltrans for the Highway Safety Improvement Program (HSIP) Cycle 8 funding cycle.**(Angela Villar, Department of Public Works)
6. **CONSIDER report summarizing the Pipeline Safety Trust Report and staff reports in response to the recommendations, and DIRECT staff to submit the full report to the Board of Supervisors for consideration.**(Carrie Ricci, Department of Public Works, and John Cunningham, Department of Conservation and Development)
7. **CONSIDER report on Local, State, and Federal Transportation Related Legislative Issues and take ACTION as appropriate including CONSIDERATION of specific recommendations in the report above.** (John Cunningham, Department of Conservation and Development)
8. **COMMUNICATION/News Clippings**

9. **Adjourn to next meeting date, currently scheduled for ****PLEASE NOTE DIFFERENT TIME SCHEDULED FOR NEXT TWIC MEETING****, Tuesday, September 6, 2016, at ****2:00**** p.m.**

The Transportation, Water & Infrastructure Committee (TWIC) will provide reasonable accommodations for persons with disabilities planning to attend TWIC meetings. Contact the staff person listed below at least 72 hours before the meeting.

Any disclosable public records related to an open session item on a regular meeting agenda and distributed by the County to a majority of members of the TWIC less than 96 hours prior to that meeting are available for public inspection at the County Department of Conservation and Development, 30 Muir Road, Martinez during normal business hours.

Public comment may be submitted via electronic mail on agenda items at least one full work day prior to the published meeting time.

For Additional Information Contact:

John Cunningham, Committee Staff
Phone (925) 674-7833, Fax (925) 674-7250
john.cunningham@dcd.cccounty.us

Glossary of Acronyms, Abbreviations, and other Terms (in alphabetical order): Contra Costa County has a policy of making limited use of acronyms, abbreviations, and industry-specific language in meetings of its Board of Supervisors and Committees. Following is a list of commonly used abbreviations that may appear in presentations and written materials at meetings of the Transportation, Water and Infrastructure Committee:

AB Assembly Bill	HOT High-Occupancy/Toll
ABAG Association of Bay Area Governments	HOV High-Occupancy-Vehicle
ACA Assembly Constitutional Amendment	HSD Contra Costa County Health Services Department
ADA Americans with Disabilities Act of 1990	HUD United States Department of Housing and Urban Development
ALUC Airport Land Use Commission	IPM Integrated Pest Management
AOB Area of Benefit	ISO Industrial Safety Ordinance
BAAQMD Bay Area Air Quality Management District	JPA/JEPA Joint (Exercise of) Powers Authority or Agreement
BART Bay Area Rapid Transit District	Lamorinda Lafayette-Moraga-Orinda Area
BATA Bay Area Toll Authority	LAFCo Local Agency Formation Commission
BCDC Bay Conservation & Development Commission	LCC League of California Cities
BDCP Bay-Delta Conservation Plan	LTMS Long-Term Management Strategy
BGO Better Government Ordinance (Contra Costa County)	MAC Municipal Advisory Council
BOS Board of Supervisors	MAF Million Acre Feet (of water)
CALTRANS California Department of Transportation	MBE Minority Business Enterprise
CalWIN California Works Information Network	MOA Memorandum of Agreement
CalWORKS California Work Opportunity and Responsibility to Kids	MOE Maintenance of Effort
CAER Community Awareness Emergency Response	MOU Memorandum of Understanding
CAO County Administrative Officer or Office	MTC Metropolitan Transportation Commission
CCTA Contra Costa Transportation Authority	NACo National Association of Counties
CCWD Contra Costa Water District	NEPA National Environmental Protection Act
CDBG Community Development Block Grant	OES-EOC Office of Emergency Services-Emergency Operations Center
CEQA California Environmental Quality Act	PDA Priority Development Area
CFS Cubic Feet per Second (of water)	PWD Contra Costa County Public Works Department
CPI Consumer Price Index	RCRC Regional Council of Rural Counties
CSA County Service Area	RDA Redevelopment Agency or Area
CSAC California State Association of Counties	RFI Request For Information
CTC California Transportation Commission	RFP Request For Proposals
DCC Delta Counties Coalition	RFQ Request For Qualifications
DCD Contra Costa County Dept. of Conservation & Development	SB Senate Bill
DPC Delta Protection Commission	SBE Small Business Enterprise
DSC Delta Stewardship Council	SR2S Safe Routes to Schools
DWR California Department of Water Resources	STIP State Transportation Improvement Program
EBMUD East Bay Municipal Utility District	SWAT Southwest Area Transportation Committee
EIR Environmental Impact Report (a state requirement)	TRANSPAC Transportation Partnership & Cooperation (Central)
EIS Environmental Impact Statement (a federal requirement)	TRANSPLAN Transportation Planning Committee (East County)
EPA Environmental Protection Agency	TWIC Transportation, Water and Infrastructure Committee
FAA Federal Aviation Administration	USACE United States Army Corps of Engineers
FEMA Federal Emergency Management Agency	WBE Women-Owned Business Enterprise
FTE Full Time Equivalent	WCCTAC West Contra Costa Transportation Advisory Committee
FY Fiscal Year	WETA Water Emergency Transportation Authority
GHAD Geologic Hazard Abatement District	WRDA Water Resources Development Act
GIS Geographic Information System	
HBRR Highway Bridge Replacement and Rehabilitation	



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

3.

Meeting Date: 08/11/2016

Subject: Administrative Items, if applicable.

Department: Conservation & Development

Referral No.: N/A

Referral Name: N/A

Presenter: John Cunningham, DCD

Contact: John Cunningham
(925)674-7833

Referral History:

This is an Administrative Item of the Committee.

Referral Update:

Staff will review any items related to the conduct of Committee business.

Recommendation(s)/Next Step(s):

CONSIDER Administrative items and Take ACTION as appropriate.

Fiscal Impact (if any):

N/A

Attachments

No file(s) attached.



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

4.

Meeting Date: 08/11/2016
Subject: REVIEW record of meeting for July 14, 2016, Transportation, Water and Infrastructure Meeting.
Department: Conservation & Development
Referral No.: N/A
Referral Name: N/A
Presenter: John Cunningham, DCD **Contact:** John Cunningham
(925)674-7833

Referral History:

County Ordinance (Better Government Ordinance 95-6, Article 25-205, [d]) requires that each County Body keep a record of its meetings. Though the record need not be verbatim, it must accurately reflect the agenda and the decisions made in the meeting.

Referral Update:

Any handouts or printed copies of testimony distributed at the meeting will be attached to this meeting record. Links to the agenda and minutes will be available at the TWI Committee web page: <http://www.cccounty.us/4327/Transportation-Water-Infrastructure>

Recommendation(s)/Next Step(s):

Staff recommends approval of the attached Record of Action for the July 14, 2016, Committee Meeting with any necessary corrections.

Fiscal Impact (if any):

N/A

Attachments

07-14-16 TWIC Mtg Sign-In Sheet
July 2016 TWIC Minutes
HANDOUTS - CRIPP Changes

Transportation, Water and Infrastructure Committee Meeting
July 14, 2016
SIGN-IN SHEET

Signing in is voluntary. You may attend this meeting without signing in. (If front is filled, please use back.)

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DRAFT



TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

July 14, 2016

1:00 P.M.

651 Pine Street, Room 101, Martinez

Supervisor Mary N. Piepho, Chair
Supervisor Candace Andersen, Vice Chair

Agenda Items:

Items may be taken out of order based on the business of the day and preference of the Committee

Present: Mary N. Piepho, Chair
Candace Andersen, Vice Chair
Attendees: Stephen Kowalewski, CCC Public Works Department
Tanya Drlik, CCC IPM Coordinator

1. Introductions

Please see attached sign-in sheet, hand-outs and "Attendees" section, above.

2. Public comment on any item under the jurisdiction of the Committee and not on this agenda (speakers may be limited to three minutes).

No public comment.

3. CONSIDER Administrative items and Take ACTION as appropriate.

4. Staff recommends approval of the attached Record of Action for the June 9, 2016, Committee Meeting with any necessary corrections.

The Committee unanimously approved the June 8, 2016 Meeting Record.

5. ACCEPT Integrated Pest Management report, and take ACTION as appropriate.

The Committee received the report and directed staff to bring the report to the full Board of Supervisors and return in December with a regular update on the program.

6. ACCEPT the Capital Road Improvement and Preservation Program (CRIPP) for fiscal years 2015/2016 to 2021/2022 and RECOMMEND the Board of Supervisors fix a public hearing for approval of the CRIPP.

The Committee unanimously accepted the staff recommendation.

7. CONSIDER report on Local, Regional, State, and Federal Transportation Related Legislative Issues and take ACTION as appropriate including CONSIDERATION of any specific recommendations in the report above.

The Committee received the report and DIRECTED staff to report back on the status of: 1) AB 1697(Bonilla): Alternative and Renewable Fuel and Vehicle Technology, and 2) CCTA Transportation Expenditure Plan polling.

8. RECEIVE communication and DIRECT staff as appropriate.

The Committee received the communication, 6/16/16 letter from Supervisor Andersen to Contra Costa County's State Legislative Delegation re: AB 1611/SB 839 (California Endangered Species Act Permit Application Fees), and DIRECTED staff to report back on the status of the legislation and fees.

9. Adjourn to next meeting date, currently scheduled for Thursday, August 11, 2016 at 1:00 p.m.

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Public comment may be submitted via electronic mail on agenda items at least one full work day prior to the published meeting time.

John Cunningham, Committee Staff

SUMMARY

On May 19, 1989, the Board of Supervisors adopted the Capital Road Improvement Policy to guide the development and continuation of the Capital Road Improvement & Preservation Program (CRIPP). On April 17, 1990, the Board of Supervisors approved the first CRIPP. This CRIPP is updated every other year during the odd years (i.e. 2015, 2017, 2019). The 2015/2016 CRIPP summarizes the County's road improvement projects for the next seven years (Fiscal Years 2015/16 through 2021/22). The CRIPP conforms to the Congestion Management Plan, which is also a seven-year planning document.

It should be noted that the CRIPP is a programming document that, once approved, will provide a strategic plan and a schedule for the Public Works Director to program the engineering work on these projects. Approval of the CRIPP by the Board does not automatically approve each individual project listed in the CRIPP. Each project in the CRIPP must undergo its own individual engineering feasibility analysis and environmental assessment and be consistent with County policies, design guidelines, regional planning documents, whenever feasible, and other policies as may be adopted by the County from time to time. These considerations include an assessment of opportunities for Green Infrastructure and Complete Streets elements. Some projects may have cost increases and/or project scope changes after thorough environmental studies. The CRIPP, therefore, is expected to change as we learn more about each project.

State Gas Tax is the largest source of revenue for the County's capital road program. It is also a primary funding source used by the County to leverage grant funds. The County has seen a significant reduction in the amount of State Gas Tax it receives to operate and maintain our local unincorporated road network. This impact is reflected in the 2015 CRIPP. To address the Gas Tax revenue reduction, the County is deploying a project delay strategy that delays the construction of several projects for one to two years in anticipation that the State Legislature will agree on a transportation funding fix. However, if the State Legislature fails to take effective action within the two year window, the County will likely need to indefinitely delay several projects and lose the already secured grant funds associated with those projects. These changes will need to be reflected in future CRIPP updates.

The CRIPP is organized in two components. Section I shows capital outlays and revenues for each of the County's primary road-related revenue sources over the next seven years. Section II contains the project descriptions for each individual project identified in Section I. The tables showing the anticipated capital outlays for each individual project are included with the individual project descriptions, giving the user of the CRIPP a complete picture of each project all in one place in the document.

Section I shows the anticipated revenue and fund expenditures for all road-related funding sources for the next seven years. There is a table for each funding source, showing the estimated expenditures broken down by project, the year when the expenditure is expected to occur, and the projected yearly revenue for the fund. Projects with multiple funding sources are listed under more than one funding source.

Section II provides detailed information on each of the projects that are programmed to receive funding in the next seven years. The information provided for each project includes a project name, project location, purpose and need, a brief project description, source of funding, the Supervisor District, and the anticipated expenditure plan. Projects awaiting fund allocation (underfunded) are listed in Section III. Projects are organized alphabetically.

INTRODUCTION AND BACKGROUND

The Capital Road Improvement & Preservation Program (CRIPP) is a programming document for the funding of capital road improvement projects within Contra Costa County. It includes estimated project costs, funding source information, and scheduling information for known potential projects within the next seven fiscal years. It also includes revenue projections and a summary of estimated project-related expenditures for each funding source.

Approval of the CRIPP by the Board of Supervisors does not automatically approve each individual project listed in the CRIPP. Each project in the CRIPP is subject to a separate public review, engineering feasibility analysis, and environmental assessment and whenever feasible, be consistent with County policies, design guidelines, and regional planning documents and other policies as may be adopted by the County. This includes an assessment of opportunities for Green Infrastructure and Complete Streets elements. Some projects may have cost increases and/or project scope changes after these elements are evaluated in more detail. All these things are considered before the Board of Supervisors will consider final approval of the project.

As more information is gathered about a project, the Public Works Department may determine that the project will cost more than originally estimated for reasons not known at this time. In such a case the Public Works Department will study various alternatives to find a solution to the funding shortfall. The Public Works Department will adjust subsequent CRIPPs to reflect any changes in project scope or cost.

The project costs in the CRIPP are for the current year. The CRIPP does not escalate the project costs for future inflation. A large portion of the funding programmed in the CRIPP is from fees associated with the Area of Benefit (AOB) programs, which are adjusted yearly to provide for inflation. Since the ongoing Area of Benefit program inflates the majority of the revenue in the CRIPP, and since the CRIPP is updated every two years, the added complication and expense of inflating revenue and construction costs in the CRIPP is not justified. Anyone using this document, as a planning device, should adjust the project costs as appropriate.

HISTORY OF THE CRIPP

The CRIPP was established by Resolution 89/306 under the County Road Improvement Policy (attached as Appendix A). The Policy was authorized by Government Code Section 66002 and is required under the Growth Management Element of the Contra Costa Transportation and Growth Management Program Ordinance approved by the voters in November 1988 (Measure C-88). Measure C-88 required that each participating local agency develop a five-year CRIPP to meet and/or maintain traffic service and performance standards. In 1991, the CRIPP was expanded to cover seven years to conform to the Congestion Management Plan, and in 1992 the CRIPP update was changed to a biennial schedule.

THE 2015 CRIPP

Pursuant to the County Road Improvement Policy, this 2015 CRIPP schedules road improvement projects for fiscal years 2015/2016 through 2021/2022 and balances the estimated project costs with the projected revenues.

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Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

5.

Meeting Date: 08/11/2016

Subject: Highway Safety Improvement Project (HSIP) Cycle 8 grant applications

Submitted For: Julia R. Bueren, Public Works Director/Chief Engineer

Department: Public Works

Referral No.: 2

Referral Name: REVIEW applications for transportation, water and infrastructure grants to be prepared by the Public Works and Conservation and Development Departments.

Presenter: Angela Villar, Department of Public Works

Contact: Angela Villar
(925)313-2016

Referral History:

The TWIC typically reviews and authorizes State and Federal Grant submittals.

Referral Update:

The Public Works Department has historically submitted grant applications for the Highway Safety Improvement Program (HSIP). On May 9, 2016, Caltrans announced the Call for Projects for Cycle 8 of HSIP. HSIP is a core federal-aid program to the States for the purpose of achieving a significant reduction in fatalities and serious injuries on all public roads. HSIP focuses on infrastructure projects with nationally recognized crash reduction factors (CRFs) and must be identified on the basis of crash history.

Examples of eligible type of projects may include, but are not limited to, the following list:

- Intersection safety improvement
- Pavement and shoulder widening
- Installation of rumble strips or another warning devices
- Installation of a skid-resistant surface
- Improvement for bicycle or pedestrian safety
- Elimination of hazards at a railway-highway crossing
- Traffic calming feature
- Elimination of a roadside obstacle
- Highway signage and pavement markings
- Traffic control or other warning device
- Installation of guardrails, barriers, and crash attenuators

HSIP emphasizes identifying low cost safety projects that can be designed and constructed expeditiously. Projects should not require the acquisition of significant rights of way, nor should they require extensive environmental review and mitigation.

Also, typical road projects, such as shoulder widening and curve realignment projects, are required to show an incremental approach of lower cost improvements that have been installed and have not proved to be effective before higher cost improvements will be considered for funding. The minimum request for federal funds is \$100,000 per application, with a maximum total request amount from any one agency set at \$10 million.

Project selection is awarded solely on the benefit/cost (B/C) ratio calculated for each project based on the value of benefits calculated from the volume and severity of injuries that have occurred within a project's limits and the cost of the proposed project improvements. The minimum B/C ratio to be considered in the selection process for Cycle 8 is 3.5.

Public Works Staff utilized the California Statewide Integrated Traffic Records System (SWITRS) maintained by the California Highway Patrol (CHP) to identify the list of roadway segments and intersections within unincorporated Contra Costa County with the highest number of collisions.

The County roadways with the highest volume of collisions within the most recent five years data available, from 1/1/2010-12/31/2014 are identified below:

1. Kirker Pass Road
2. Vasco Road
3. Marsh Creek Road
4. San Pablo Dam Road
5. Highland Road
6. Byron Highway
7. Hess Road
8. Camino Tassajara
9. Deer Valley Road

The County intersections with the highest volume of collisions within the most recent five years data available, from 1/1/2010-12/31/2014 are identified below:

1. Bailey Road/Canal Road
2. San Pablo Dam Road/Appian Way
3. Treat Boulevard/Oak Road
4. Treat Boulevard/Jones Road
5. Vasco Road/Camino Diablo
6. Willow Pass Road/Bailey Road
7. Treat Boulevard/Cherry Lane
8. Willow Pass Road/Port Chicago Highway
9. Byron Highway/Camino Diablo
10. Evora Road/Willow Pass Road

The CHP collision reports were reviewed to determine the typical cause of collisions and potential countermeasures. Many of the roadways and intersections listed already have funding identified for projects to address safety improvements. Staff utilized the collision data, requests from the community, and discussions with the County Traffic Engineer to evaluate potential safety improvement projects that would compete well for funding.

Funding Set-asides:

In Cycle 8, Caltrans has set aside funds for two new funding set-asides. Applications for funding set-asides do not require collision data or a benefit/cost ratio calculation. The two new funding set-aside categories are:

1. Guardrail Upgrades Set-aside (\$600,000 maximum per agency)
2. Crosswalk Enhancements at unsignalized locations and/or pedestrian countdown heads at signalized intersections (\$250,000 maximum per agency)

Project Recommendations:

The Public Works Department recommends the following five projects (in no particular priority order) as candidates for Cycle 8 of HSIP funding, based upon collision history and initial project scoping:

1. Crosswalk Enhancements (Funding Set-aside)

The purpose of this project is to construct pedestrian crosswalk enhancements to improve pedestrian safety and increase driver awareness at existing uncontrolled crosswalks. Without a stop sign or traffic signal, drivers tend to travel at higher speeds and pose a safety concern for pedestrians at uncontrolled crosswalks. Improvements include installation of Rectangular Rapid Flash Beacons (RRFBs) and Americans with Disabilities Act (ADA) curb ramps, where feasible.

Two locations were selected based on crosswalk location, traffic volumes, pedestrian volumes, community requests, and discussions with the County Traffic Engineer:

- Olympic Boulevard crossing near Bridgefield Road, unincorporated Walnut Creek (Supervisory District 2)
- Walden Road crossing near Westcliffe Lane, unincorporated Walnut Creek (Supervisory District 4)

2. Marsh Creek Road Guardrail Upgrades (Funding Set-aside) (Supervisory District 3 & 4)

This project is located along Marsh Creek Road from the Clayton City Limits to Camino Diablo. The project proposes to replace the end treatments of existing guardrail to improve safety by reducing injury severity of drivers who veer off the roadway. Guardrail is typically installed in locations where the terrain is steep and where running off the roadway is likely to lead to serious injury.

The new Flared Energy Absorbing Terminal (FLEAT) end treatments are designed to absorb the impact and direct errant vehicles back towards the traveled way, reducing the injury severity of vehicles hitting the guardrail. Marsh Creek Road was selected based on the high traffic volume, speed, collision history, and number of existing guardrail.

3. Danville Blvd/Orchard Court Complete Streets Improvements (Supervisory District 2)

Through an extensive community outreach effort with the Alamo Municipal Advisory Council, this project aims at improving safety and mobility for all users through the downtown corridor along Danville Blvd between Jackson Way and Stone Valley Road. The project proposes to install a roundabout at the Danville Blvd/Orchard Court intersection. The project also includes curb & sidewalk reconstruction, striping reconfiguration, drainage improvements and community enhancements. Consistent with complete streets policies, this project would assure that the transportation corridor is accessible for all modes and all users with an emphasis on a pedestrian and bicycle friendly environment and ADA access.

4. San Pablo Dam Road Traffic Safety Improvements (Supervisory District 1)

The purpose of this project is to improve safety along San Pablo Dam Road between Richmond City Limits and Bear Creek Road. Four fatal collisions occurred in 2015 along this segment of San Pablo Dam Road. The project proposes to install centerline rumble strips to reduce collisions caused by crossing over the centerline of the roadway. The project will also look at replacing existing regulatory and warning signs with high reflectivity signs to increase visibility at night and upgrading existing guardrail end treatments to reduce injury severity.

5. Byron Highway/Byer Road Intersection Improvements (Supervisory District 3)

This project is located along Byron Highway near Byer Road, adjacent to Excelsior Middle School, Byron Area (Supervisory District 3). The project proposes to widen the roadway to provide a left-turn pocket from southbound Byron Highway onto eastbound Byer Road and make access improvements along Byron Highway to facilitate school traffic entering/exiting Excelsior Middle School on Byron Highway. Roadway widening is expected along the east side of Byron Highway along the school frontage. County staff has met with the Byron Union School District and they are supportive of the project.

Next Steps:

If authorized to proceed, staff will prepare the grant application packages. If during project research prior to the application deadline, staff discovers a critical constraint that would result in the project being cost prohibitive or will not meet the eligibility requirements of the funding program, staff will hold the application for further study to increase project readiness for the following grant cycle.

Recommendation(s)/Next Step(s):

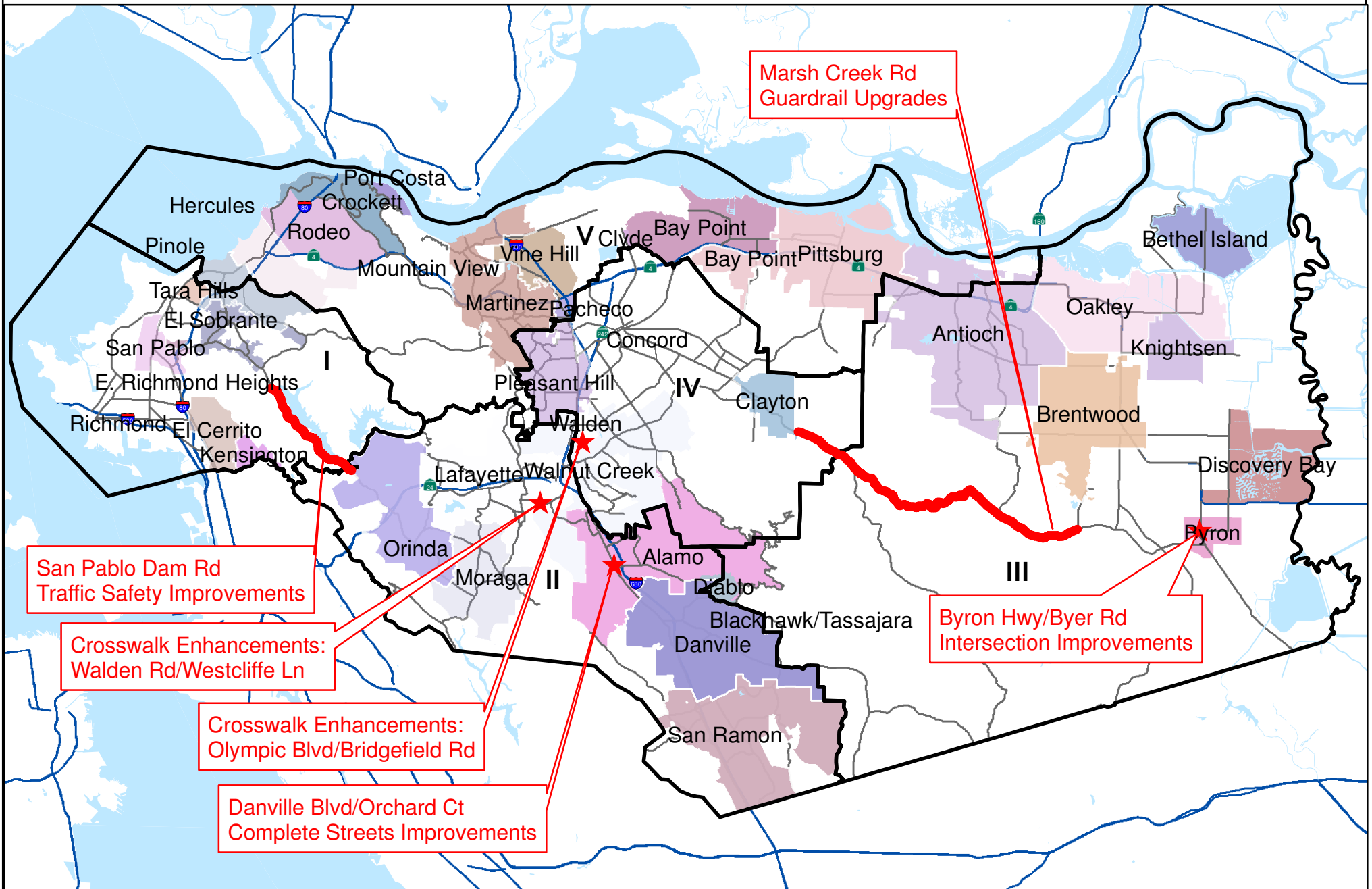
AUTHORIZE the Public Works Director, on behalf of the County, to submit grant applications to Caltrans for the Highway Safety Improvement Program (HSIP) Cycle 8 funding cycle.

Fiscal Impact (if any):

The applications for HSIP funds require up to a 10% local match, as well as funds to cover federally ineligible project costs. Any funding received from an HSIP grant would be combined with other funds, such as Measure J, Area of Benefit funds, other grants, or local road funds. The projects recommended for submittal are in the cost range of \$250,000 to \$4,000,000. For each of these projects, Public Works will apply for the unfunded project costs, up to \$10,000,000, which is the maximum amount HSIP will award to any single agency.

Attachments

HSIP Map





Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

6.

Meeting Date: 08/11/2016

Subject: CONSIDER report summarizing the Pipeline Safety Trust Report and DIRECT staff to submit the full report to the Board of Supervisors for consideration

Submitted For: Julia R. Bueren, Public Works Director/Chief Engineer

Department: Public Works

Referral No.: 15

Referral Name: Monitor the Iron Horse Corridor Program

Presenter: Carrie Ricci, PWD and John Cunningham, DCD **Contact:** Carrie Ricci (925)313-2235 and John Cunningham (925)674-7833

Referral History:

The Alamo Improvement Association (AIA) was awarded a Technical Assistance Grant by the Pipeline and Hazardous Materials Safety Administration, a division of the U.S. Department of Transportation. The grant included pipeline safety public outreach and education, and training for local first responders, and outreach regarding the 811 Call Before You Dig Program. The grant period was from October 2014 through September 2015.

AIA contracted with the Pipeline Safety Trust in 2015 to provide services intended to educate and inform the community about hazardous liquid pipelines and pipeline safety. The contract included presentation at two community workshops in June 2015 and the production of a report. The report, Pipeline Safety in Alamo, and surrounding areas within Contra Costa County, California (the Report) is attached as Appendix A and includes a summary of the work completed and recommendations.

The Hazardous Materials Commission reviewed the Report at their January 2016 and April 2016 meetings. The Planning and Policy Development Committee of the Hazardous Materials Commission reviewed the Report and recommendations at their October 2015, December 2015, January 2016 and February 2016 meetings.

At the January 2016 meeting, the Commission agreed that 7 of the recommendations contained in the report merit further consideration by the Board of Supervisors. Michael Kent, Executive Assistant to the Hazardous Materials Commission summarized the Hazardous Materials Commission's discussion and the recommendations at the Transportation, Water and Infrastructure (TWIC) Committee Meeting on April 14, 2016. The April 14, 2016 TWIC report is attached as Appendix B.

At the April 14, 2016 TWIC meeting, staff from the Departments of Conservation and Development and Public Works were directed to review the recommendations and report on how they could be implemented within the County. On May 23, 2016 staff from Conservation and Development, Public Works, the Office of Emergency Services, Health Services, Contra Costa County Fire Protection District and San Ramon Valley Fire District met to discuss the recommendations, what is currently being performed and any additional steps that can be taken to improve in these areas.

Staff reported back to TWIC on June 9, 2016. The June 9, 2016 TWIC report is attached as Appendix C. At that meeting staff were directed to bring a comprehensive report back to TWIC with an update on how we are implementing the recommendations of the Pipeline Safety Report, what we're currently doing or have planned for each of the recommendations, and what other Counties with hazardous materials pipelines are doing regarding land use restrictions for pipelines located near congregate facilities.

Referral Update:

Below are the recommendations from the Report's Executive Summary, what the County currently does and what additional steps can be taken.

The Federal Pipelines and Hazardous Materials Safety Administration (PHMSA) Could:

- Make information about a pipeline's High Consequence Area designation easily available to the public.
- Adopt regulations to implement the National Transportation Safety Board (NTSB) recommendations regarding needed improvements to the Integrity Management requirements for both gas and hazardous liquid pipelines.
- Adopt stronger regulations requiring automated valves consistent with the NTSB recommendations.
- Adopt stronger regulations that require better leak detection systems in hazardous liquid pipelines that could affect high consequence areas, and provide a clear performance standard for computational pipeline monitoring systems.

Response: When the County has an opportunity to provide input on state and federal legislation, the County may take a position and provide comments to the appropriate agency. The Public Works Department sent the report to PHMSA on August 2, 2016 for their review and consideration.

The State of California Could:

- Enforce excavation damage prevention laws. Currently authority is held with the Attorney General's office, but there is not adequate staffing or resources to respond to notifications of alleged violations or to investigate. Other agencies respond on a fragmented basis depending on the damaged utility involved.
- Work with the California Department of Education (CDE) on ways to implement CDE's suggestions for reducing the probability of a pipeline product release on schools, and reducing the severity and consequences of pipeline releases on schools.

Response: When the County has an opportunity to provide input on state and federal legislation, the County may take a position and provide comments to the appropriate agency. The Public Works Department sent the report to the State Attorney General and Department of Education on August 2, 2016, for their review and consideration.

The California Office of the State Fire Marshal Could:

- Make their maps, incident and inspection information accessible to the public by posting it online.
- Make information about a pipeline's High Consequence Area designation easily available to the public.
- Adopt regulations to implement the NTSB recommendations regarding needed improvements to the Integrity Management requirements that apply to intrastate hazardous liquid pipelines.
- Adopt stronger regulations for intrastate pipelines requiring automated valves that apply to hazardous liquid pipelines along the lines of the NTSB recommendations.
- Adopt stronger regulations for intrastate pipelines that require better leak detection systems in high consequence areas, and that provide a clear performance standard for computational pipeline monitoring systems.

Response: The Public Works Department sent the report to the Office of the State Fire Marshal on August 2, 2016 for their review and consideration.

The California Department of Education Could:

- Expand School Site Pipeline Risk Analysis and the Potential Pipeline Hazard Mitigation/Management guidance in coordination with emergency response agencies to offer help for schools that already exist in close proximity to pipelines. Lead coordination efforts among the myriad of agencies that offer crisis planning assistance to schools, and suggest minimum information that should be included in these plans regarding pipelines.

Response: The Public Works Department sent the report to the California Department of Education on August 2, 2016 for their review and consideration.

The Contra Costa Board of Supervisors Could:

- Ensure the single staff point-of-contact for citizens with concerns about multiple utility issues and right of way questions has technical training on safety concerns, adequate resources to conduct regular and broad community outreach (especially along the Iron Horse Trail Corridor), and resources to work in close coordination with other related departments and advisory groups.

Response: The Public Works Department has a single staff contact [\[1\]](#) for the corridor who is the Iron Horse Corridor Manager. The Corridor Manager works with the utilities, County Survey staff and property owners to address right of way questions. The Corridor Manager interacts with other departments to address corridor concerns and attends advisory committee meetings, as needed to share information with the community. The Department has contacts with all of the utilities and the State Fire Marshal so they can provide expertise, as needed. The Iron Horse Corridor utility contacts are posted on the Iron Horse Corridor website.

[\[1\] http://www.co.contra-costa.ca.us/413/Iron-Horse-Corridor](http://www.co.contra-costa.ca.us/413/Iron-Horse-Corridor)

- Request appropriate staff conduct an analysis of all congregate facilities located in close proximity to transmission pipelines. Work with other emergency response agencies to develop a list of resources for emergency and evacuation planning expertise for congregate facilities near pipelines that include potential hazards from a pipeline incident, and mitigation strategies for those hazard based on site-specific consideration.

Response: The Fire District and Health Services will work with Community Awareness and Emergency Response (CAER) to develop a fact sheet to send to the congregate facilities that describes what to consider regarding pipelines when they're developing their emergency plans. The term congregate will need to be further defined to determine what facilities would receive this information. San Ramon Valley Fire Protection District has an evacuation video developed for this type of scenario that has been promoted to surrounding jurisdictions.

- Consider adding goals and policies regarding pipelines to the General Plan, and amending Contra Costa County Zoning Code 82.2.010 so that all gas and hazardous liquid transmission pipelines would be subject to land use regulations. Consider additional ordinances pertaining to zoning and land use that are proposed for construction, replacement, modification, or abandonment.

Response: The Land Use, Transportation and Circulation, Open Space, and Safety elements of the County General Plan contain references to pipelines that transport hazardous materials. The Land Use and Safety elements also contain policies, though they are few and their nature is more suggestive than directive. Because the County does not always have jurisdiction over pipeline projects, amending the General Plan to add goals and policies pertaining directly to pipeline development may have limited value. However, adding policies addressing the relationship of other land uses to pipelines could be useful. Examples of such policies could include, but not be limited to:

- Discouraging placement of uses and facilities which primarily house or serve vulnerable or sensitive populations (elderly, ill, children, etc.) within X feet of a hazardous materials pipeline right-of-way.
- Requiring deed notifications for all newly subdivided lots within X feet of a hazardous materials pipeline right-of-way.
- Encouraging new buildings to be located away from hazardous materials pipeline rights-of-way when such design flexibility exists on the project site.

Ordinance Code Section 82-2.010 currently states that pipelines are exempt from the County's zoning regulations. However, on May 24, 2016, the Board of Supervisors adopted an amendment to Section 82-2.010 clarifying that pipelines are subject to Ordinance Code Chapter 84-63, Land Use Permits for Development Projects Involving Hazardous Waste or Hazardous Materials. The amendment becomes effective 30 days after adoption. Staff believes the Ordinance Code provides for proper review of pipelines and sees no compelling need for additional regulation of pipeline construction, replacement, modification, or abandonment. Statutory exemptions exist for replacement/modification of pipelines and often these activities take place under order from a federal or state agency. Pursuant to Chapter 84-63, pipeline projects located more than 300 feet from residential or commercial properties are not "development projects" and therefore do not require a land use permit. If a pipeline is located within 300 feet of such properties and has a hazard score [\[2\]](#) of 80 or higher, then a land use permit is required and an environmental review will be performed. The Transportation Risk component of the hazard scoring rates pipelines as the preferred method for transporting hazardous materials relative to truck, rail, and marine vessel. Discouraging pipeline development through unnecessary regulation could have the unintended consequence of incentivizing the use of less safe transportation methods, especially since increasing the frequency of truck, rail or vessel deliveries typical would not require a County review.

[2] The hazard score is calculated pursuant to Ordinance Code Section 84-63.1004 and represents a project-specific risk assessment based on the following factors (possible points for each factor are indicated in parentheses): Transportation Risk (0-10); Community Risk – Distance from Receptor (1-30); Community Risk – Type of Receptor (4-7); Facility Risk – Size of Project (Total Amount Change in Tons; 0-30); Facility Risk – Size of Project (Percentage Change; 0-6); and Hazard Category of Material or Waste (1-3).

- Adopt clear policies and deterrents regarding preventing encroachments including review of setback variances by municipal advisory councils or committees and department staff, so that properties and vegetation along utility corridors do not encroach on pipelines.

Response: The County has clear policies that prevent encroachments. Property owners and contractors are required to apply for a permit to access and/or perform work in the Iron Horse Corridor. The Public Works Department is looking into different methods to communicate this information to property owners adjacent to the Iron Horse Corridor, such as informational letters that remind residents of the corridor property lines, utilities in the corridor and the requirement to call Underground Service Alert when digging. Other possibilities include Board of Supervisors email communication and markers in the corridor designating the property line in various locations. The County and cities along the corridor have setback requirements in place. Utilities companies, specifically Kinder Morgan routinely clears vegetation over their easement. When property owners apply for a setback variance the application may go to the appropriate municipal advisory committee for review and a recommendation.

- Work in coordination with pipeline operators to develop a technical advisory body that can review the integrity management plans (similar to the Santa Barbara County System Safety Reliability Review Committee) and other technical assessments of the pipelines in order to cultivate informed technical expertise in the county and increase public trust and awareness.

Response: The Hazardous Materials Commission discussed this recommendation and did not support it.

The Contra Costa County Department of Conservation and Development Could:

- Consider adding goals and policies regarding pipelines to the General Plan, and amending Contra Costa County Zoning Code 82-2.010 so that all gas and hazardous liquid transmission pipelines would be subject to (and not exempt from) the General and Land Use District regulations (divisions 82 and 84). Consider additional ordinance(s) pertaining to zoning and land use permitting for hazardous liquid pipelines and possibly also intrastate gas transmission pipelines that are proposed for construction, replacement, modification, or abandonment.

Response: See response to the same recommendation under Board of Supervisors recommendations.

- Review all development applications for opportunities to improve existing ingress/egress where currently limited, and where possible, include conditions on approvals to improve connectivity and avoid exacerbation of access problems.

Response: The Contra Costa County Fire Protection District and San Ramon Valley Fire District review development applications to determine based on the size of the development whether a second access is required. Access requirements are determined by the Contra Costa County Fire Code.

The Contra Costa County Health Services Department Could:

- Expand the scope of the Hazardous Materials Ombudsman and the Hazardous Materials Commission regarding pipelines to provide an ongoing review of pipeline operators' emergency plans and an active role in possible county efforts regarding additional coordinated technical review of pipeline integrity management planning.

Response: The Hazardous Materials Commission discussed this recommendation and did not support it.

The Contra Costa County Public Works Department Could:

- Plan emergency evacuation ingress/egress for areas in Alamo west of Danville Boulevard and the Iron Horse Corridor where a single east-west pipeline crossing road is the only access for numerous homes and facilities (e.g., Hemme Road, Camille Road) with the goal of creating public accessibility across these 'dead-end' neighborhoods that necessitate crossing the pipeline to access any services.

Response: The San Ramon Valley Fire Protection District is in the preliminary phase of developing evacuation maps for neighborhoods on the west side of the trail in the Danville area. They have requested feedback from the Danville Police Department and will look at the Alamo area next. The information will be incorporated into a mailer and is anticipated to be sent to residents in fiscal year 2016-17. In some emergency situations, Shelter in Place may be the most appropriate option.

- Ensure the county has complete and accurate records of corridor and right of way locations and widths. Continue to coordinate with Kinder Morgan and other utilities on resolution of encroachments into pipeline rights of way.

Response: The County has current maps that show property lines and utility easements. Staff continues to work with the utilities and property owners to address encroachments.

The Contra Costa County Office of Public Education and Local School Districts Could:

- Expand emergency preparedness resources to include information about pipelines and pipeline-specific risks. Assist individual schools in developing crisis plans and emergency preparedness plans that include pipelines on the emergency maps and assess how ingress/egress may be affected by a pipeline incident.

Response: As stated in the previous response, CAER will include pipeline information in the next update to the Model Emergency Plan for Schools which can be used to prepare school site specific emergency preparedness plans.

The Contra Costa County Community Awareness and Emergency Response (CAER) Group Could:

- Include specific reference to oil and gas pipeline in the list of potential hazards listed in the hazard assessment in the next update to the Model Emergency Plan for Schools.

Response: CAER will address this in the next update to the Model Emergency Plan for Schools.

Pipeline Operators Could:

- Reach out to the schools along pipeline easements and offer to provide technical assistance assessing pipeline risks and evacuation strategies given possible incidents that could occur in close proximity to the schools.
- Consistently undertake assessments of existing Right of Way encroachments to determine whether there are safety implications. Coordinate with Contra Costa County to resolve encroachments with neighboring property owners.
- Become members of the Contra Costa County Community Awareness and Emergency Response Group, and participate consistently in quarterly meetings and responses.
- Contract for an independent technical seismic vulnerability study on HCA pipelines affected by potentially active faults to feed into the pipeline risk analysis, and make the study available to the public.
- Work in coordination with the Board of Supervisors to develop a technical advisory body that can review the integrity management plan (similar to the Santa Barbara County System Safety Reliability Review Committee) and other technical assessments of the pipelines in order to cultivate informed technical expertise in the county and increase public trust and awareness. *As stated in the TWIC report dated April 14, 2016, the Hazardous Materials Commission did not support this recommendation.*

Response: The Public Works Department sent the report on August 2, 2016 to all of the pipeline operators that have franchise agreements with Contra Costa County for their review and consideration.

Local Fire Districts Could:

- Designate a single point-of-contact to coordinate with pipeline operators, familiarize themselves with the operators' emergency response and spill response plans, know the facilities where people congregate (schools, churches, hospitals, nursing facilities, etc.) in close proximity to the pipeline, and be involved with any emergency planning done by those facilities.

Response: The local Fire Districts will coordinate pipeline operators as determined by each local agency, to exchange information regarding emergency response plans. Local Fire Districts will support facilities located in close proximity to the pipeline with emergency planning resources when requested by the facility administrator.

At the June TWIC meeting the Committee directed staff to research how other Counties are restricting or managing pipelines. Below is a sample of policies from Sonoma, Solano, San Joaquin, Kern, and Sacramento Counties:

Sonoma County:

1. County Zoning Ordinance section 29-7– requires a consolidated permit to store or handle hazardous materials. Consolidated permits issued pursuant to this chapter shall be valid for 3 years. Facilities must submit updated information and fees annually.
2. General Plan Public Facilities and services element, Policy PF-2T – Review proposals for new transmission lines or acquisition of easements for new transmission lines for consistency with GP. Request wherever feasible that such facilities not be located within

designated community separators or biotic resource areas. Give priority to the use of existing utility corridors over new ones.

3. General Plan Open Space and Resource Conservation Element – Review and condition proposed natural gas wells through use permit process.

Solano County:

1. County Zoning Ordinance Section 28.78.20 (B) (8) Pipeline... inside of R.O.W. - Public utility, electric, gas, water, oil, and telephone transmission and distribution lines shall be permitted in any district without the necessity of first obtaining a use permit; provided, that maps showing proposed routes of such heights and right-of-way widths, shall be submitted to the Planning Commission, and routes mutually acceptable to the Planning Commission and utility agencies concerned shall be determined in writing prior to acquisition of any rights-of-way. Each transmission line route proposal submitted in accordance herewith shall be accompanied by a fee or fees as may be set by the Board of Supervisors by resolution pursuant to Section 11-111 of this Code. No part of such fee shall be refundable.
2. County Zoning Ordinance Section 28.78.20 (B) (9) Pipeline... outside of R.O.W. - All utility accessory uses and structures for transmission or distribution of electricity, gas, water, oil, gasoline, telephone, television or other utility services may be permitted in any district. Utility accessory uses and structures include, but are not limited to, compression, drying, regeneration stations, substations, or pumping stations.
3. County General Plan Resources Element, Policy RSP-55 – Require responsible extraction, storage and transportation of natural gas resources that minimize impacts on the environment.

San Joaquin County:

1. Zoning Ordinance Section 9-1155.2(b) Location for Underground Facilities - Underground distribution facilities for public utilities shall be located in a public right-of-way or public utility easement. No public utility distribution facilities shall be located outside a public right-of-way or public utility easement except in providing service to the parcel on which they are located.
2. General Plan Vol 3, Ch. 2. Section D, pages 35-36 – Policies on oil and natural gas lines – Concerns over the hazardous nature of the product being transported require pipeline systems be constantly monitored and accessible. Major pipelines, particularly pumped systems, require periodic control centers which function as monitoring stations as well as flow regulation and service access points. Physical access to the system is assured through dedicated R.O.W. and visual inspection of the system over difficult terrain is accomplished by aerial patrolling....A major source of natural gas within the county is in the form of several local gas fields. Pipes conveying gas after odorizing and dehydration at source vary from 4"-12" in diameter. The operation of these fields is undertaken by private concerns with PG&E contracting to buy and distribute... The design and operation guidelines of such systems is subject to conformity with CPUC General Order #112D.

Kern County:

1. County Ordinance Chapter 19.98 – Oil and Gas Production – Oil and gas activities in the County are divided into 5 tier areas.

- Tier 1 Area is defined as all areas in which oil and gas activity is the primary land use. The existing well and activity densities preclude almost all other uses except for passive uses such as grazing.
- Tier 2 Area is defined as all areas that are classified exclusive agriculture (A) or limited agriculture (A-1) districts, have agriculture as the primary surface land use, and are not included in Tier 1.
- Tier 3 Area is defined as other areas not within a Tier 1 Area that are located in one (1) of the following zone districts: Natural resources, recreational forestry, light industrial, medium industrial, heavy industrial, floodplain primary, drilling island, petroleum extraction combining districts
- Tier 4 Area is defined as areas not within Tier 1, 2, or 3, that include at least one (1) of the following zone districts: estate, low/med/high density residential, commercial zoning districts, mobile home park
- Tier 5 are areas including all current and future specific plan boundaries either adopted with a Special Planning (SP) District or which include specific provisions for oil and gas operations. Oil or gas exploration and production activities would be allowed with a conditional use permit or as permitted by the regulations contained within the adopted specific plan in Tier 5 areas.

Ministerial permits for tiers 1,2,3, 5 available after applying for oil and gas conformity review or minor activity review (applies only to first 3,647 new well permits in a calendar year, 3,648th such permit requires conditional use permit)

Conditional use permit required for tier 4.

*Pipelines subject to Minor activity review, no conditional use permit required

Sacramento County:

1. County Zoning Ordinance Section 301-13 – If not otherwise authorized as a permitted or conditional use... in this code, the project planning commission may, after public hearings..., permit a public utility or public service use as a conditional use in any zone if the commission determines that the use is necessary for the public health, convenience, safety, or public welfare.
2. County Zoning Ordinance Section 301-19 – Oil and/or gas sites proposed to be developed on either industrial or agriculturally zoned land shall not be located within 1000 feet of the boundary of property zoned for residential, interim residential, interim estate, or recreational purposes. Additionally, no proposed oil and/or gas well site shall be located within 300 feet of a structure used for human habitation.
3. General Plan Public Facilities Element Policy PF-112 – New natural gas wells are subject to permitting process as regulated by the State Conservation Department, Division of Oil, Gas, and Geothermal resources, as well as Sacramento County Zoning Code 301-19
4. General Plan Public Facilities Element Policy PF-113 – Route new gas mains within existing railway and electric transmission corridors, along collector roads and, whenever possible, within existing easements. If not feasible, gas mains shall be placed as close to easements as possible.

[1] <http://www.co.contra-costa.ca.us/413/Iron-Horse-Corridor>

[2] The hazard score is calculated pursuant to Ordinance Code Section 84-63.1004 and represents a project-specific risk assessment based on the following factors (possible points for each factor are indicated in parentheses): Transportation Risk (0-10); Community Risk – Distance from Receptor (1-30); Community Risk – Type of Receptor (4-7); Facility Risk – Size of Project (Total Amount Change in Tons; 0-30); Facility Risk – Size of Project (Percentage Change; 0-6); and Hazard Category of Material or Waste (1-3).

Recommendation(s)/Next Step(s):

CONSIDER report summarizing the Pipeline Safety Trust Report and staff reports in response to the recommendations, and DIRECT staff to submit the full report to the Board of Supervisors for consideration.

Fiscal Impact (if any):

No fiscal impact.

Attachments

Appendix A

Appendix B

Appendix C

Pipeline Safety in Alamo, and surrounding areas within Contra Costa County, California



Pipeline Safety Report to the Alamo Improvement Association

Produced by the Pipeline Safety Trust
September 2015

Appendix A

ACKNOWLEDGEMENTS

The Alamo Improvement Association (AIA) sponsored this report through a Community Technical Assistance Grant they received from the U.S. Department of Transportation's Pipeline and Hazardous Materials Safety Administration. **Roger Smith**, AIA President, was the driving force behind this project; and **Aron DeFarrari**, Board Member, offered valuable feedback.

Multiple Contra Costa County staff members were helpful in the writing of this report, and we appreciate their input and cooperation. **Michael Kent**, Hazardous Materials Ombudsman, was invaluable in connecting us with others in the community and providing information. **Jennifer Quallick**, Field Representative to Supervisor Anderson, was also very helpful.

Together, the four people mentioned above gave countless hours as part of the AIA Technical Assistance Grant for pipeline safety, ad-hoc working group, and we thank them all for their dedication.

Numerous county, state, and federal agency employees, and pipeline operator staff members, spent time giving us information used in this report, and we appreciate their willingness to help.

The Pipeline Safety Trust promotes pipeline safety through education and advocacy, increased access to information, and partnerships with residents, safety advocates, government, and industry, resulting in safer communities and a healthier environment.

The work of the Pipeline Safety Trust would not be possible without the guidance and diligent work of the following people:

Trust Board of Directors

Lois Epstein – President (Anchorage, Alaska)

Sara Gosman – Vice President (Fayetteville, Arkansas)

Bruce Brabec – Treasurer (Bonaire, Netherlands Antilles)

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Jeffrey Insko (Rochester, Michigan)

Trust Staff

Carl Weimer – Executive Director

Rebecca Craven – Program Director

Samya Lutz – Outreach Coordinator

Chris Coffin – Administrative Assistant/
Webmaster/Graphic Design

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Appendix A

LIST OF ACRONYMS

AIA – Alamo Improvement Association

ASV – Automatic Shutoff Valve

CAER – Community Awareness and Emergency Response

CalEPA – California Environmental Protection Agency

CAO – Corrective Action Order

CATS – Community Assistance and Technical Services, PHMSA Pipeline Safety outreach staff

CCC – Contra Costa County

CDE – California Department of Education

CPUC – California Public Utilities Commission

CUPA – Certified Unified Program Agency, as authorized under CalEPA

DCD – Contra Costa County Department of Conservation and Development

EFRD – Emergency Flow Restricting Devices, or valves

EPA – Environmental Protection Agency

FERC – Federal Energy Regulatory Commission

HCA – High Consequence Area

HL – Hazardous Liquid

HSD – Contra Costa County Health Services Department

IHC – Iron Horse Corridor

LS – Line Segment, specifying a number that identifies a specific segment of a pipeline

NTSB – National Transportation Safety Board

OSFM – California Office of the State Fire Marshal

OSPR – California Department of Wildlife, Office of Spill Prevention and Response

PHMSA – U.S. Department of Transportation, Pipeline and Hazardous Materials Safety Administration

PST – Pipeline Safety Trust, also referred to in this report as “the Trust”

RCV – Remote Control Valve

SFPP – Santa Fe Pacific Pipeline system that is operated by Kinder Morgan

TAG – PHMSA Community Technical Assistance Grant

Appendix A

EXECUTIVE SUMMARY

The Pipeline Safety Trust reviewed Contra Costa County hazardous liquid pipelines, with a particular focus on the Alamo area and the Iron Horse Corridor. In this report, we provide general information on pipeline regulations and risks, as well as more detailed information on concerns of particular interest to the Alamo community.

We make a number of recommendations interspersed throughout the report and summarized here that in our opinion – if adopted by the various agencies and stakeholder groups mentioned – would make pipelines in Contra Costa County even safer.

These recommendations are organized under the agency or group to which they are directed. We have purposefully not prioritized our recommendations, as implementation may be affected by any number of factors including budgets and workloads of the agencies involved. All our recommendations are summarized here:

The Federal Pipelines and Hazardous Materials Safety Administration Could:

- Make information about a pipeline's High Consequence Area designation easily available to the public.
- Adopt regulations to implement the NTSB recommendations regarding needed improvements to the Integrity Management requirements for both gas and hazardous liquid pipelines.
- Adopt stronger regulations requiring automated valves consistent with the NTSB recommendations.
- Adopt stronger regulations that require better leak detection systems in hazardous liquid pipelines that could affect high consequence areas, and provide a clear performance standard for computational pipeline monitoring systems.

The State of California Could:

- Enforce excavation damage prevention laws. Currently authority is held with the Attorney General's office, but there is not adequate staffing or resources to respond to notifications of alleged violations or to investigate. Other agencies respond on a fragmented basis depending on the damaged utility involved.
- Work with the California Department of Education (CDE) on ways to implement CDE's suggestions for reducing the probability of a pipeline product release on schools, and reducing the severity and consequences of pipeline releases on schools.

The California Office of the State Fire Marshal Could:

- Make their maps, incident and inspection information accessible to the public by posting it online.
- Make information about a pipeline's High Consequence Area designation easily available to the public.

- Adopt regulations to implement the NTSB recommendations regarding needed improvements to the Integrity Management requirements that apply to intrastate hazardous liquid pipelines.
- Adopt stronger regulations for intrastate pipelines requiring automated valves that apply to hazardous liquid pipelines along the lines of the NTSB recommendations.
- Adopt stronger regulations for intrastate pipelines that require better leak detection systems in high consequence areas, and that provide a clear performance standard for computational pipeline monitoring systems.

The California Department of Education Could:

- Expand School Site Pipeline Risk Analysis and the Potential Pipeline Hazard Mitigation/Management guidance in coordination with emergency response agencies to offer help for schools that already exist in close proximity to pipelines. Lead coordination efforts among the myriad of agencies that offer crisis planning assistance to schools, and suggest minimum information that should be included in these plans regarding pipelines.

The Contra Costa Board of Supervisors Could:

- Ensure the single staff point-of-contact for citizens (especially along the Iron Horse Corridor) with concerns about multiple utility issues and right of way questions has technical training on safety concerns, adequate resources to conduct regular and broad community outreach, and resources to work in close coordination with other related departments and advisory groups.
- Request appropriate staff conduct an analysis of all congregate facilities (i.e. schools, recreation facilities, hospitals, nursing facilities, etc.) located in close proximity to transmission pipelines; Work with other emergency response agencies to develop a list of resources for emergency and evacuation planning expertise for congregate facilities near pipelines that can include potential hazards from a pipeline incident, and mitigation strategies for those hazards based on site-specific considerations.
- Consider adding goals and policies regarding pipelines to the General Plan, and amending Contra Costa County Zoning Code 82-2.010 so that all gas and hazardous liquid transmission pipelines would be subject to (and not exempt from) the General and Land Use District regulations (divisions 82 and 84). Consider additional ordinance(s) pertaining to zoning and land use permitting for hazardous liquid pipelines and possibly also intrastate gas transmission pipelines that are proposed for construction, replacement, modification, or abandonment.

- Adopt clear policies and deterrents regarding preventing encroachment including the review of setback variances by municipal advisory councils or committees and department staff so that properties and vegetation along utility corridors do not encroach on pipelines.
- Work in coordination with pipeline operators to develop a technical advisory body that can review the integrity management plans (similar to the Santa Barbara County System Safety Reliability Review Committee) and other technical assessments of the pipelines in order to cultivate informed technical expertise in the county and increase public trust and awareness.

The Contra Costa County Department of Conservation and Development Could:

- Consider adding goals and policies regarding pipelines to the General Plan, and amending Contra Costa County Zoning Code 82-2.010 so that all gas and hazardous liquid transmission pipelines would be subject to (and not exempt from) the General and Land Use District regulations (divisions 82 and 84). Consider additional ordinance(s) pertaining to zoning and land use permitting for hazardous liquid pipelines and possibly also intrastate gas transmission pipelines that are proposed for construction, replacement, modification, or abandonment.
- Review all development applications for opportunities to improve existing ingress/egress where currently limited, and where possible, include conditions on approvals to improve connectivity and avoid exacerbation of access problems.

The Contra Costa County Health Services Department Could:

- Expand the scope of the Hazardous Materials Ombudsman and the Hazardous Materials Commission regarding pipelines to provide an ongoing review of pipeline operators' emergency plans and an active role in possible county efforts regarding additional coordinated technical review of pipeline integrity management planning.

The Contra Costa County Public Works Department Could:

- Plan emergency evacuation ingress/egress for areas in Alamo west of Danville Boulevard and the Iron Horse Corridor where a single east-west pipeline-crossing road is the only access for numerous homes and facilities (e.g., Hemme Road, Camille Road) with the goal of creating public accessibility across these 'dead-end' neighborhoods that necessitate crossing the pipeline to access any services.
- Ensure the county has complete and accurate records of corridor and right of way locations and widths. Continue to coordinate with Kinder Morgan and other utilities on resolution of encroachments into pipeline rights of way.

The Contra Costa County Office of Public Education & Local School Districts Could:

- Expand emergency preparedness resources to include information about pipelines and pipeline-specific risks. Assist individual schools in developing crisis plans and emergency preparedness plans that include pipelines on the emergency maps and assess how ingress/egress may be affected by a pipeline incident.

The Contra Costa County Community Awareness and Emergency Response (CAER) Group Could:

- Include specific reference to oil and gas pipelines in the list of potential hazards listed in the hazard assessment in the next update to the Model Emergency Plan for Schools.

Pipeline Operators Could:

- Reach out to the schools along pipeline easements and offer to provide technical assistance assessing pipeline risks and evacuation strategies given possible incidents that could occur in close proximity to the schools.
- Consistently undertake assessments of existing Right of Way encroachments to determine whether there are safety implications. Coordinate with Contra Costa County to resolve encroachments with neighboring property owners.
- Become members of the Contra Costa County Community Awareness and Emergency Response Group, and participate consistently in quarterly meetings and responses.
- Contract for an independent technical seismic vulnerability study on HCA pipelines affected by potentially active faults to feed into the pipeline risk analysis, and make the study available to the public.
- Work in coordination with the Board of Supervisors to develop a technical advisory body that can review the integrity management plan (similar to the Santa Barbara County System Safety Reliability Review Committee) and other technical assessments of the pipelines in order to cultivate informed technical expertise in the county and increase public trust and awareness.

Local Fire Districts Could:

- Designate a single point-of-contact to coordinate with pipeline operators, familiarize themselves with the operators' emergency response and spill response plans, know the facilities where people congregate (schools, churches, hospitals, nursing facilities, etc.) in close proximity to the pipeline, and be involved with any emergency planning done by those facilities.

INTRODUCTION

Background

Contra Costa County has over 1 million people and covers approximately 805 square miles. The city of Martinez is the county seat, and one of nineteen incorporated cities within the county. Oil refineries operate along the western and northern coastlines: Phillips 66, Chevron, Shell Oil, and Tesoro, with associated petroleum storage and transportation infrastructure. Most of the hazardous liquid pipelines in the county transport product to or from a storage facility or refinery.

A Board of Supervisors governs the County, with representatives elected from five districts; the Alamo area is part of District II, and is unincorporated with about 15,000 residents. The homeowners association – the Alamo Improvement Association – is quite active, with an elected board and committees. In addition, the Alamo Municipal Advisory Council serves a formalized role with the county as an advisory body to the Board of Supervisors and the County planning agency, providing review and recommendations for a variety of activities that impact the Alamo area.

One of the areas of particular interest to the Alamo community is the Iron Horse Corridor. This is an historic rail corridor managed as a regional multiuse trail that runs roughly north-south from Concord in northern Contra Costa County to beyond the Alameda County line to the south, cutting Contra Costa County roughly in half and traversing the county for about 20 miles. Utilities and private infrastructure also run along the corridor, including a refined oil pipeline referred to as the San Jose line that is part of the Kinder Morgan Santa Fe Pacific Pipeline (SFPP) system. Conversations in the Alamo community precipitated a renewed interest in this pipeline, and prompted the Alamo Improvement Association (AIA) to seek technical assistance and commission this report on pipeline safety.

Purpose and Scope of Report

The Alamo Improvement Association (AIA) contracted with the Pipeline Safety Trust in February 2015 to provide services intended to educate and inform the community about hazardous liquid pipelines and pipeline safety. That included presentations at two community workshops in June 2015, as well as the production of this report.



Hazardous Liquid Pipeline Safety Workshop held on June 3, 2015 in Alamo, CA

The funding for these services came from a Community Technical Assistance Grant (TAG) awarded by the Pipeline and Hazardous Materials Safety Administration (PHMSA), a division of the U.S. Department of Transportation. AIA applied for this grant in the spring of 2014 to include pipeline safety public outreach and education, as well as training for local first responders, and outreach regarding the national 811 Call Before You Dig program. The grant period ran from October 2014 – September 2015. Roger

Smith, President of the Alamo Improvement Association was the primary point of contact for the TAG award and contract for services with the Trust.

From January through August 2015, Pipeline Safety Trust staff participated in periodic conference calls with two representatives of the Alamo Improvement Association, a field representative in Contra Costa County District II Supervisor Anderson's office, and the Hazardous Materials Ombudsman within the Contra Costa County Health Services Department. This ad-hoc group was highly engaged with planning the two hazardous liquid pipeline safety workshops that took place in June,¹ and continued to be involved through the report process. Pipeline Safety Trust staff also engaged in one-on-one conversations with these same individuals as well as others from Contra Costa County Departments of Health Services, Public Works, Conservation and Development; local emergency services; California State offices of the Fire Marshal and the Office of Spill Prevention and Response; Kinder Morgan; and from the federal Pipeline and Hazardous Materials Safety Administration.

AIA asked the Trust to report broadly on pipeline issues affecting the entire county as well as the role of federal and state agencies, and to focus in on issues specific to petroleum pipelines and particularly the pipeline concerns of people in the Alamo area. All the data shown in charts or graphs in this report is from PHMSA as of August 2015, unless otherwise noted.

1 The second of these two public forums was captured on video by CCTV, and is available to watch here: http://contra-costa.granicus.com/MediaPlayer.php?publish_id=935921b6-0eea-11e5-b5ce-00219ba2f017

PIPELINE BASICS AND TECHNICAL ISSUES

What kinds of pipelines are in Contra Costa County?

There are three main types of pipelines in Contra Costa County, and it is important to understand what the different types are since they have different safety considerations and are regulated by different agencies under different rules.

The three main types are:

Hazardous Liquid Lines: These are the lines that move crude oil to the local refineries and then move refined products (gasoline, jet fuel, diesel, etc.) from the refineries to other markets.

Natural Gas Transmission Lines: These are the relatively larger, higher-pressure pipelines that move gas from production or storage to where the gas is distributed to our homes and businesses. They operate at pressures in the range of 300 to over 1500 pounds per square inch.

Natural Gas Distribution Lines: A distribution line is a relative small, lower pressure pipeline used to supply natural gas directly to our homes and businesses. A distribution line is located in a network of piping located downstream of a natural gas transmission line. The “city gate” is where a transmission system feeds into a lower pressure distribution system. Gas distribution pipelines comprise by far the most mileage of pipes; they carry odorized gas (with the characteristic smell of rotten eggs) throughout urban areas.

Two other important distinctions are **interstate pipelines** compared to **intrastate pipelines**. **Interstate** pipelines are typically longer transmission pipelines that cross state lines; **intrastate** pipelines are transmission pipelines that lie wholly within a single state.²

² State lines are not the sole determiner for the inter/intrastate distinction. For details see 49 CFR 195, Appendix A.

Where are the pipelines in Contra Costa County?

The US has over 2.6 million miles of pipelines. Most of these (approximately 92%) carry gas – predominantly natural gas – and the rest (approximately 8%) carry hazardous liquids. Hazardous liquid and natural gas pipelines are governed by separate regulations. Whether and how pipelines are regulated also depends on what product is carried and where the pipeline is located.

Regulated Pipeline Mileage - U.S. and California		
Miles of Pipelines	U.S.	California
Gas Transmission & Gathering	319,350	11,861
Gas Distribution	2,167,270	200,262
Hazardous Liquid	198,778	7,139
Total	2,685,398	219,262
<i>Data from PHMSA as of 8/5/2015</i>		

There are over 4,000 miles of natural gas pipelines in Contra Costa County, 260 miles of which are transmission lines, and the rest are distribution lines and services.³ All the natural gas distribution pipelines are operated by Pacific Gas & Electric under the jurisdiction of the California Public Utility Commission.

Hazardous liquid (HL) transmission pipelines in Contra Costa County total close to 500 miles.⁴ Roughly two-thirds of the HL pipelines carry refined products, and about one-third carry crude oil.

³ Data on gas pipeline mileage is from the California Public Utilities Commission (July 2015).

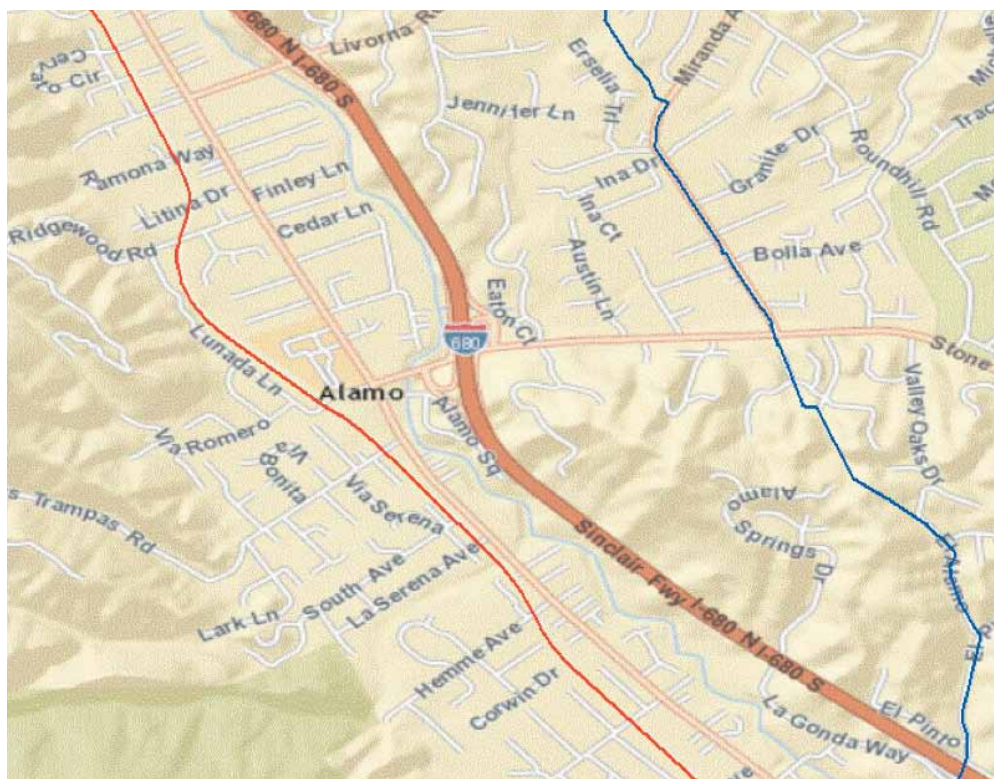
⁴ Data on HL pipeline mileage in Contra Costa County from OSFM staff, and does not include empty or abandoned lines.

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The map below from the National Pipeline Mapping System⁵ shows the general location of the hazardous liquid (red) and the gas transmission (blue) pipelines in Contra Costa County.



Anyone can access these maps to see where hazardous liquid and gas transmission pipelines run through their community. The map below shows the two main pipelines running through the Alamo area – the Kinder Morgan San Jose Line in red and the PG&E natural gas line in blue. The “public viewer” for the maps is available online at: <https://www.npms.phmsa.dot.gov/PublicViewer/>.



⁵ <https://www.npms.phmsa.dot.gov/PublicViewer/>

The system takes practice to navigate, but once a person figures it out it is possible to zoom in to get an idea of where these types of pipelines are generally located and some basic information about the pipelines themselves. While these types of maps can provide a general idea of where pipelines are located they should never be used as an indication of where it might be safe to dig. The One Call system is the only way to identify the exact location of a pipeline, and is discussed in more detail later in this report.

Details about the San Jose Pipeline

AIA is particularly interested in the Kinder Morgan SFPP pipeline, especially the portion of that pipeline that runs for nearly 20 miles along the Iron Horse Corridor in central Contra Costa County; this segment of the SFPP system is also called the “San Jose line” or LS-16 (line segment 16). This line carries refined oil products and is the focus of this report because of its location along the Iron Horse Corridor from Concord south through Alamo to the Contra Costa – Alameda county line and beyond to San Jose. LS-16 is ten inches in diameter and classified as an intrastate pipeline, meaning it is regulated by the Office of the State Fire Marshal under a certification from PHMSA, and it operates under a rate structure approved by the California Public Utilities Commission (CPUC). The San Jose line is subject to federal regulations with regard to integrity management (discussed elsewhere in this report) as a release from the line could affect a high consequence area.

The San Jose line delivers petroleum products from a pump station in Concord to the Kinder Morgan San Jose terminal – a total of 51.4 miles – and was installed in the mid-1960s, with portions of the pipe replaced through the decades as a result of maintenance activities. The maximum allowable operating pressure on the San Jose line is 1310 pounds per square inch gauge (psig), and the typical operating pressure at the originating Concord station is 1165 psig (operating pressure varies by elevation and distance from pump stations). The line throughput is generally about 4483 barrels per hour.⁶

There are five valves along the length of this line segment that serve to further isolate sections of the pipeline in the event of a release, located on average every 10 miles.⁷ These valves include three manual gate valves and two motor operated remote control valves. There are no automatic shut-off valves on this line.

The original easement for this pipeline was between SFPP and the South Pacific Railroad, and existed at the time the county acquired the right-of-way from the Railroad in the 1980s.

⁶ Information about the San Jose line (LS-16) was gleaned from the following sources: PHMSA accident report database; OSFM pipeline failure investigation report; OSFM review of KM Integrity Management Program; PHMSA 5-2005-5025H case files; and presentation by KM Operations Manager June 2015.

⁷ The distance is greater than 10 miles in some places, with original placement impacted by topography and elevation.

Who regulates pipeline safety?

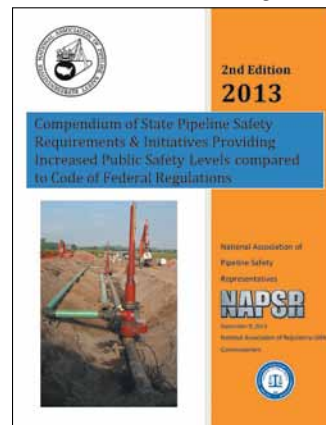
Federal Oversight

Ultimately the U.S. Congress has responsibility for setting the framework under which pipeline safety regulations operate in the country. The U.S. Department of Transportation through the Pipeline and Hazardous Materials Safety Administration (PHMSA) is primarily responsible for issuing and enforcing the minimum pipeline safety regulations. Most of these regulations are performance-based. For example, pipeline operators are required by the federal regulations to operate and repair pipelines in a safe manner so as to prevent damage to persons or property, but the way in which they do so is generally not spelled out prescriptively. This allows pipeline operators to prioritize pipeline inspections and repairs in areas with higher populations or higher risk factors, but it also makes the regulations ambiguous and challenging to enforce.

State Oversight

The federal pipeline safety laws allow for states to accept the responsibility to regulate, inspect, and enforce safety rules over intrastate pipelines within their borders under an annual certification from PHMSA. If a state receives such intrastate authority they can set regulations that are more stringent than those PHMSA sets as long as the state rules do not conflict with the federal regulations. PHMSA also can enter into an agreement with the state pipeline regulator to carry out inspections on interstate pipelines. Local governments are not allowed to create rules to regulate the operational safety of pipelines, though they may have involvement in spill response, routing and siting issues, and franchise or easement agreements.

California has authority for intrastate pipelines, which is carried out through the Office of the State Fire Marshal (OSFM) for hazardous liquid pipelines, and through the California Public Utilities Commission (CPUC) for natural gas pipelines. The OSFM also had authority to act as an interstate agent for PHMSA on hazardous liquid interstate pipelines through 2012, but ended that agreement to focus better on the intrastate pipelines due to an inability to retain enough qualified inspectors on staff. The California State Legislature is currently working to address this pay scale problem.⁸



NAPSAR Compendium of State Pipeline Safety Requirements & Initiatives (2013). See <http://www.napsr.org/compendium>.

California has adopted both hazardous liquid and natural gas pipeline regulations that are more stringent than the federal minimum regulations for the intrastate pipelines. Some of those stronger hazardous liquid rules include better information sharing, incident reporting, and planning outreach to fire departments; more frequent pipeline inspections or testing, additional pressure testing requirements in certain situations including for

⁸ See SB-295 Pipeline safety: inspections (2015-2016).

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pipelines that have experienced certain kinds of leaks; better protection of pipeline easements from encroachment; and an internal comprehensive database and mapping system.⁹

City and County Governmental Powers

For the most part the federal pipeline safety law precludes local government from adopting any regulation that requires a pipeline operator to take any action regarding the safe operation of a pipeline. There is nothing in state or federal law that restricts a local government's ability to ask for increased safety measures as part of their negotiations regarding the use of public rights-of-way or other public property. While local government may not be able to require or enforce such measures, cities nationwide have been able to obtain increased safety measures through such voluntary requests, especially when such safety measures are well thought out, supported by the public, and do not conflict with federal or state regulations. One area in which local government has considerable ability to increase pipeline safety is through their land use and zoning authority. Details of this option are discussed in the Land Use Planning section later in this report.

How much risk is there from the pipelines in Contra Costa County?

Risk is one of those things that one person cannot really define for another, since each person thinks about risks in their own personal way. While some feel that skydiving is a risk worth taking, others won't even go up in the airplane. In other words it is not possible for us to say whether the pipelines in Contra Costa County are safe enough. All we can do is to try to provide enough information so individuals can make that decision on their own, and then work with others in their community to set policies based on the beliefs of as many people as possible.

Risk is made up of two different factors both of which need to be carefully considered when deciding how risky an activity is. Those factors are the probability that an event will occur (chance a pipeline will rupture or leak), and the possible consequences if it does.

Probability

First let's take a look at some of the publicly available data to try to get a sense of the probability of a hazardous liquid pipeline incident occurring in Contra Costa County or along the Iron Horse Corridor.

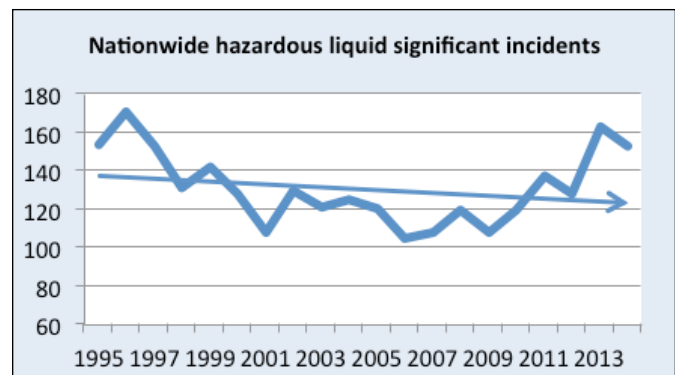
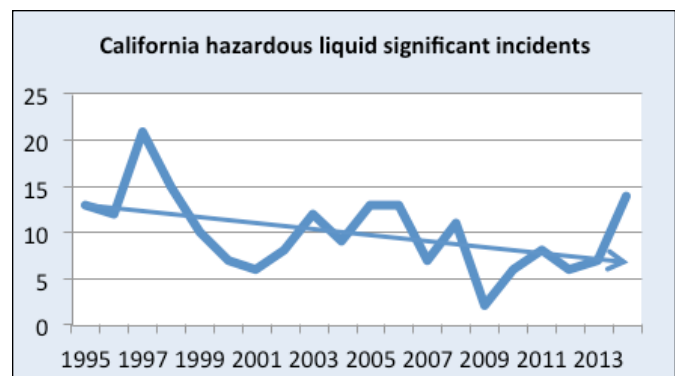
PHMSA maintains a publicly accessible database of reported pipeline incidents.¹⁰ Hazardous liquid pipeline operators are required to file an incident report when there is a release that results in any of the following:

1. death or injury requiring hospitalization;
2. estimated property damage exceeding \$50,000;
3. an unintentional explosion or fire; or
4. a release of 5 gallons or more off of company property

or the pipeline right-of-way or causing water pollution, or a release of 5 barrels (210 gallons) or more confined to company property or pipeline right-of-way and not causing water pollution.¹¹

A subset of all these reported incidents are considered 'significant' if they result in items 1, 2, or 3 above or result in the release of 50 barrels (2,100 gallons) or more of hazardous liquids. A further subset of 'serious' incidents are those that result in a death or injury requiring hospitalization.¹²

Here are two graphs that show the numbers of significant incidents each year both throughout the U.S. and in California. As you can see in both cases the number of incidents is relatively small, and the overall trend is a decreasing number of incidents. The troubling part of these graphs is that in both cases over the past 6-8 years this trend seems to be turning around and the numbers of significant incidents are increasing.



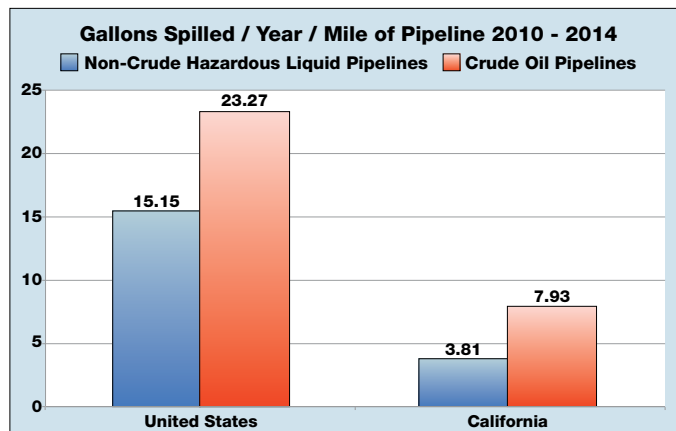
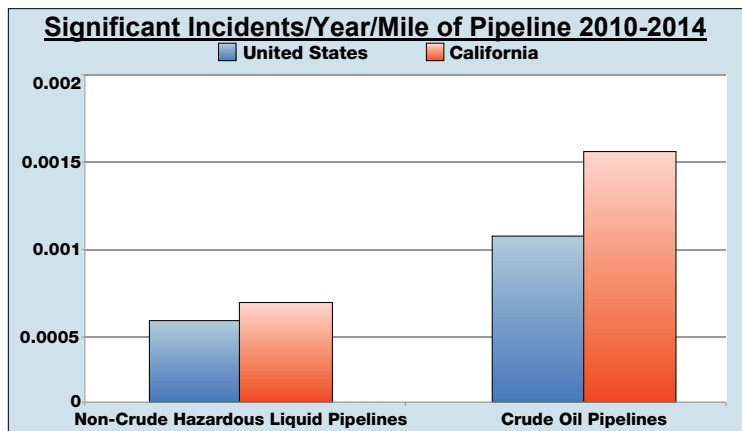
But raw numbers of incidents is a pretty rough way of looking at probability because the number of miles of pipelines changes, and the different types of products the pipelines carry have different failure rates. If we take the mileage of pipelines into consideration, and break the type of products these hazardous liquid pipelines carry down into the two main types – crude oil and other products – we start to get a more refined look at probabilities. The following graph shows that crude oil pipelines have a higher incident rate than product pipelines, and that both types of pipelines have a higher incident rate in California than in the rest of the country.

11 See 49 CFR § 195.50 and 195.52 for hazardous liquid accident reporting requirements.

12 For a complete description of these categories for all pipelines, see <http://www.phmsa.dot.gov/pipeline/library/datastatistics/pipelineincidenttrends>

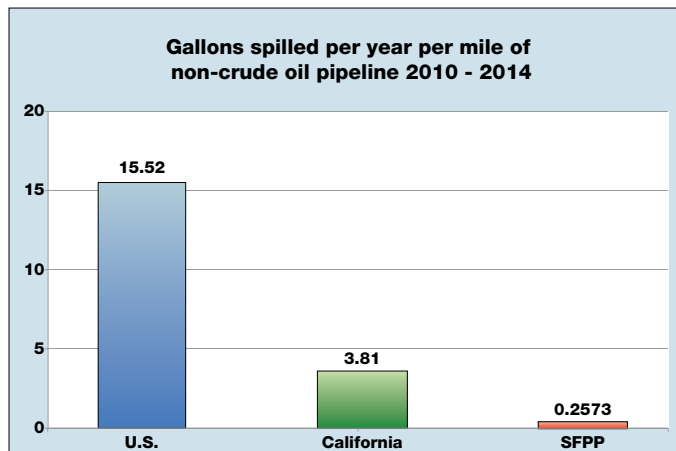
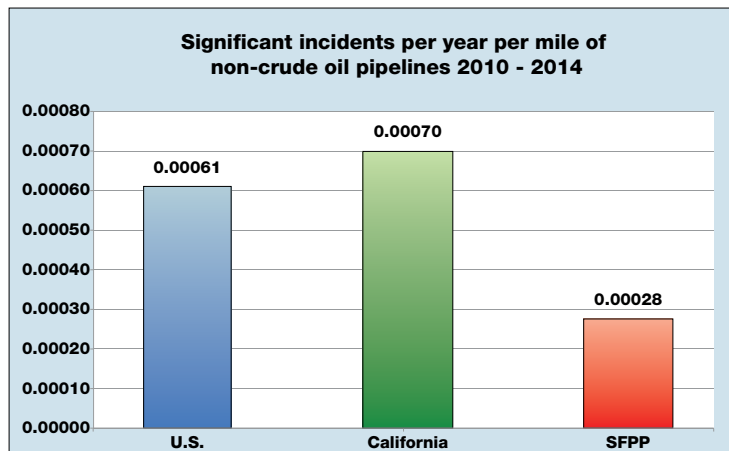
9 California GOV Code § 51010 et. seq.

10 See <http://www.phmsa.dot.gov/pipeline/library/data-stats> for both online pipeline incident data and downloadable files.



Incident rate alone does not really portray the consequence of an incident very well, so we also compare the *amount spilled* per incident per mile of pipe (see bar graph on upper right), which makes California's higher rate of incidents look quite different. As you can see what this shows us is that while California may have more incidents per mile of pipeline than the national average, the amount spilled is considerably less than the national average.

It is also possible to use these same rates to look at how individual pipeline companies compare to national averages. For instance, in the following graphs we compare the incident rate per mile of similar pipeline and gallons spilled nationally and in California with the rate of failures and gallons spilled that have occurred on the entire Kinder Morgan SFPP system, a portion of which runs along the Iron Horse Corridor.



As can be seen from these graphs over the past five years the Kinder Morgan SFPP pipeline system has had fewer incidents and spilled far fewer gallons of product than other comparable pipelines throughout the U.S. and in California. SFPP is one of a number of pipeline systems in Contra Costa County, so trying to determine the probability of an incident within the county requires looking beyond the SFPP numbers. If we take the SFPP 5-year average incident rate as one bound (0.00028), and the California 5-year average incident rate as another bound (0.00070), we can use those together with the roughly 350 miles of non-crude hazardous pipelines in the county to estimate the likely frequency of incidents on these pipelines. Currently it could be expected that a significant incident would occur somewhere between once every 4 years (CA average) to once every 10 years (SFPP average).

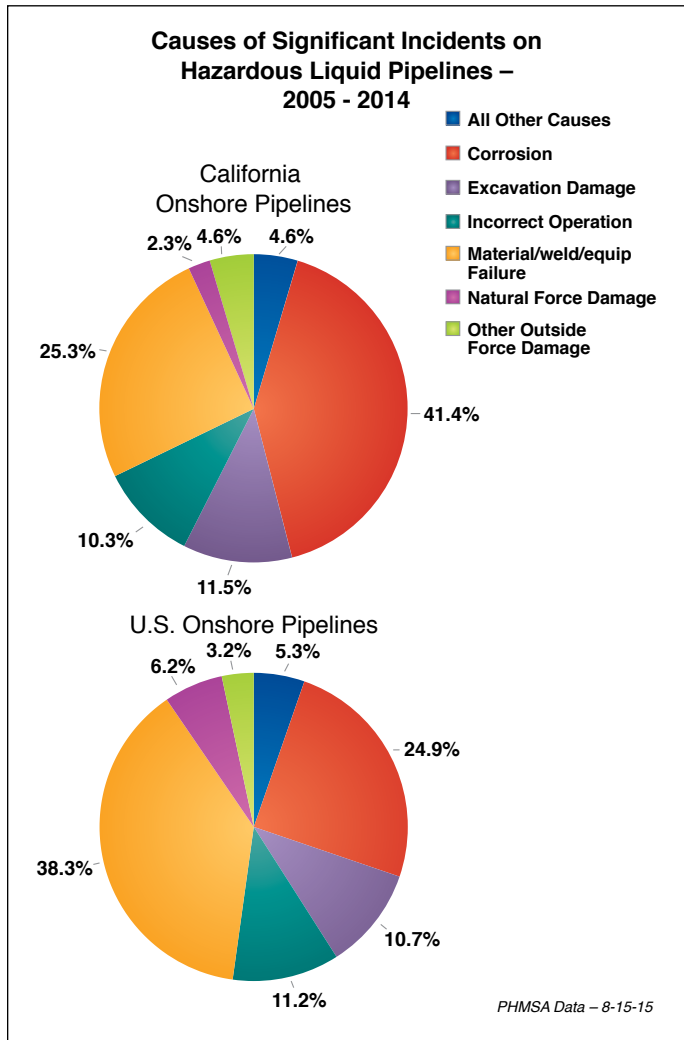
In Appendix D we have provided a list of all reported incidents in Contra Costa County, and from a look at that list it is clear that the frequency of significant incidents occurring in the county is higher than should be expected from these statistics. In the past five years alone there have been five significant incidents on these types of non-crude liquid pipelines in the County. One possible explanation for this higher rate is the high number of facilities processing fuel in the county. Such facilities are associated with pipelines, and therefore incidents related to the facilities also are incorporated with the pipeline incident statistics. These facilities have very high numbers of fittings, valves, and other appurtenances that tend to have higher failure rates, and often these failures are more contained on company owned property and do not affect the public and private rights-of-way through which longer pipelines travel.¹³

One other data set that provides some information about probability of failures is the cause of such failures. Following is a chart that shows the causes of significant incidents both nationally and in California. California hazardous liquid pipeline incidents appear

¹³ OSFM also maintains PHMSA incident data that they further separate for certain public presentations. For example, they may present only incidents occurring on the pipeline right-of-way and leave out those that occur within associated facilities; or they may remove data that includes idled or abandoned pipelines. OSFM does not provide these internal statistics to the public.

to be more frequently caused by corrosion when compared to those across the US as a whole. Corrosion is the dominant cause of pipeline incidents in California, followed by Material/Weld/Equipment failure. Both of these causes together lead to nearly two-thirds of all hazardous liquid pipeline incidents in both California (67%) and the U.S. as a whole (63%).

These charts and graphs should provide some measure of the probability of a pipeline incident happening and some of



Example of a Potential Impact Radius of a pipeline incident shown on an aerial map (assumes the pipeline rupture occurs at the center of the circle)

tell you that the consequences are huge. So what are the possible consequences of pipeline failures, and how can they be quantified?

Consequences

For natural gas pipelines it is fairly easy to predict the impact zone around a pipeline failure that explodes. There is a formula used in the federal regulations, based on the size and pressure of the pipeline that predicts the “potential impact radius,” and that radius is then used to define some elements of the regulations. The picture in the previous column shows how that radius might appear on a particular pipeline.

For hazardous liquid pipelines predicting the consequence area is much more difficult because of the different products involved and because the products may flow long distances



based on the terrain and whether they reach water. While each pipeline operator is required to do an analysis of whether a leak along any section of the pipeline could affect a high

consequence area, that information is not shared with the public. The best that the public can do is to look at their own area and compare that with the consequences of past liquid failures.



The National Transportation Safety Board investigates many of the most significant incidents and the reports of their investigations can be found at: <http://www.nts.gov/investigations/AccidentReports/Pages/pipeline.aspx>.

We can also look at pictures like the ones above to see what can happen in the unlikely event that a hazardous liquid pipeline fails in a particular area.

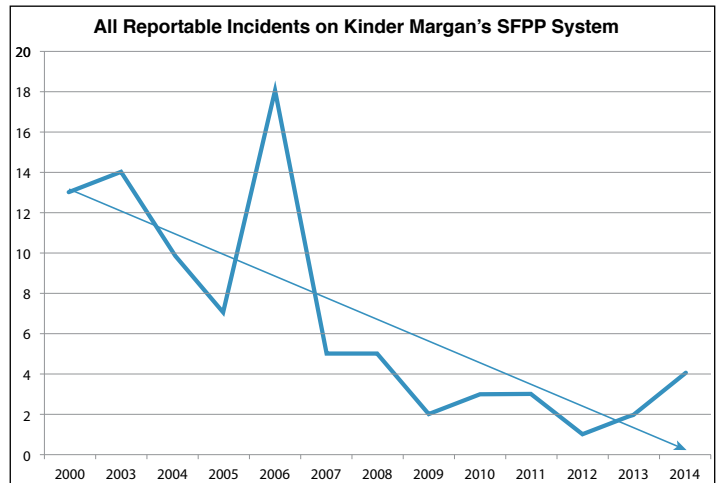
Past Incidents on the San Jose Line

An incident occurred on the SFPP, San Jose line (LS-16) in Walnut Creek on November 9, 2004, in which five workers were killed and four others significantly injured from a pipeline rupture and explosion. Property damage was sustained nearby including a two-story structure that burned. The pipeline ruptured when it was struck by excavation equipment operating as part of a water supply

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expansion project. The gasoline released from the pipeline was soon after ignited by welders also working on the new water supply pipeline. According to the OSFM Pipeline Failure Investigation Report, several contributing factors led up to the excavator bucket striking the pipeline, including “inadequate line locating, inadequate project safety oversight and communication, and failure to follow the one-call law” (page 14).¹⁴ OSFM made recommendations to Kinder Morgan that included improvements to the way in which employees observe and respond to one-call excavation notifications, and modifications to the company’s Operator Qualification Program related to line locating and excavation notifications.

PHMSA issued a Corrective Action Order (CAO) for Kinder Morgan in 2005 with respect to its entire Pacific Operations unit of hazardous liquid pipeline systems, covering 3,900 miles across six states, and including the SFPP pipeline system and the San Jose line. The CAO was in response to eight accidents within the previous 16 months that released petroleum products into or near high consequence areas. Seven of the eight occurred in California, and two within Contra Costa County: the November 9, 2004 incident mentioned above on LS-16, and a November 7, 2004 incident in Martinez that occurred on LS-47. PHMSA called out “a widespread failure of Kinder Morgan to adequately detect and address the effects of outside force damage and corrosion” (page 2), and ordered the operator to take immediate corrective actions with respect to all Pacific Operations unit hazardous liquid pipeline systems.¹⁵ PHMSA subsequently replaced the CAO with a 14-page Consent Agreement entered into on April 4, 2006 by both parties. The Consent Agreement also delineated specific actions to be taken by Kinder Morgan to improve its pipeline operations and integrity management and to be completed within ten years. On May 11, 2015, PHMSA issued a closure letter to Kinder Morgan, stating that all the required action had been completed and the terms of the Agreement were satisfied, thereby closing the case.¹⁶ In the next column is a graph that shows all reportable incidents on the Kinder Morgan SFPP system including the San Jose Pipeline that runs through Contra Costa County during the period that this corrective action order covered. This graph appears to support that the actions that Kinder Morgan took as part



of the consent decree have helped reduce the number of incidents on this line.

Pipeline Construction, Operations and Maintenance

Many of the pipelines in place today were constructed before regulations existed for pipelines. Some of the current regulations have to do with ongoing operations and maintenance, and apply to both existing and new lines. Existing ‘grandfathered’ pipelines built prior to 1979 for hazardous liquid lines, or prior to 1968 for gas pipelines, may not have been constructed according to the current regulations. What are pipeline operators required to do to maintain safe pipelines? In this section, we go through basic information, and dive more deeply into some technical issues about which the Alamo community expressed particular concern.

Construction

The construction phase of pipeline installation is a critically important time to ensure the long-term integrity of the pipeline. Transmission pipelines are most commonly made of steel, and the pipes are fabricated and inspected to meet industry and government safety standards. Differing soil conditions and geographic or population characteristics of the pipeline route will dictate different requirements for pipe size, strength, wall thickness and coating material. Hazardous liquid pipelines must be buried between 18 and 48 inches below the surface, depending on location and soil properties. The prescribed depth must be adhered to at the time of burial, but regulations do not require it to be maintained over time. Operators must use qualified welders, and most welds on the pipe are evaluated and inspected in the field; a proper weld is stronger than the pipe itself.

Corrosion Protection

Corrosion is a serious issue for all steel pipelines. Without corrosion protection every steel pipe will eventually deteriorate, weaken, and become unsafe. With proper corrosion protection, steel pipelines can remain safely operating for many decades. Pipeline operators use three common methods to control corrosion:

¹⁴ California Office of the State Fire Marshal. Pipeline Failure Investigation Report, Form-11. Kinder Morgan Energy Partners, LS-16 rupture in Walnut Creek, 9 November 2004.

¹⁵ U.S. Department of Transportation, PHMSA Office of Pipeline Safety. Corrective Action Order re: case No. 5-2005-5025H, August 24, 2005.

¹⁶ Multiple technical documents were required to be submitted to PHMSA in accordance with the Consent Agreement, however these are not publicly available. Requests for information through Freedom of Information Act (FOIA) requests (<http://www.phmsa.dot.gov/about/foia>) take many months for PHMSA to respond, and even when documents are received they often contain many redactions. Therefore the public is left with having little to go on to verify how PHMSA has followed through and been given adequate assurances that each item in the Consent Agreement has been completed.

- Pipeline coatings and linings defend against corrosion by protecting the bare steel from coming in direct contact with corrosive conditions.
- Corrosion inhibitors are substances that may be added to the commodity running through the pipe to decrease the rate of attack of internal corrosion.
- Cathodic protection (CP) systems use direct electrical current to counteract the normal external corrosion that occurs due to soil and moisture conditions. On new pipelines, CP can help prevent corrosion from starting; on existing pipelines, CP can stop existing corrosion from getting worse.



Cathodic protection test point along the Iron Horse Corridor

These corrosion control methods may all be used at the same time; pipeline engineers must carefully consider the specific operating conditions, and pipeline and commodity characteristics to maintain the necessary corrosion protection for each particular pipeline segment.

High Consequence Areas and Integrity Management

Hazardous liquid pipelines that could affect High Consequence Areas (HCAs), which include high population areas, certain drinking water sources, or some ecologically sensitive areas, must prepare integrity management plans and adhere to stricter rules than pipelines outside of such HCAs.¹⁷ For example, pipelines that could affect an HCA have to be physically inspected by the pipeline company on a regular basis, whereas pipelines that could not affect an HCA never are required to be inspected. Currently about 43% of all hazardous liquid pipelines in the U.S. and 68% in California could affect HCAs and fall under these requirements.

Operators subject to integrity management must do a risk analysis of the segments of the pipeline that could affect HCAs, and then implement a plan to inspect and maintain that pipeline segment using methods appropriate to the specific risk factors impacting the pipeline. The minimum re-inspection interval for hazardous liquid pipelines is every five years; the integrity management plan and risk analysis may indicate certain pipelines or pipeline segments need to be re-inspected more frequently. The most commonly performed inspections are done with internal in-line

inspection devices referred to as ‘smart pigs’ that record problems such as corrosion, dents, and gouges as they move through the pipeline. The inspections are typically performed by a third party contractor that also interprets the inspection results, and submits both the results and their interpretation to the pipeline operator in the form of a report. Federal and OSFM regulators may review these internal inspection reports during their own regulatory inspections of a pipeline operator.

Information about which pipeline segments are and are not within HCAs is not easily publicly available. However, it does appear that the vast majority of hazardous liquid pipelines in Contra Costa County are covered under the stricter integrity management rules that apply to the hazardous liquid pipelines that could affect an HCA. The portion of the San Jose line within the county is operating under these rules.

The development and implementation of the Integrity Management Program in the last decade represented a major improvement in risk analysis and ongoing testing and maintenance of pipelines that fall under those requirements. However, with nearly a decade of performance data under the new rules numerous shortcomings in the current Integrity Management Program have been identified by a variety of groups including both PHMSA and the National Transportation Safety Board (NTSB). The NTSB recently released a report¹⁸ that made numerous recommendations for improving Gas Transmission Integrity Management to make it clearer exactly what pipeline operators are required to do. PHMSA appears to be working on some of these improvements for both gas and hazardous liquid pipelines through various inquiries and rule makings, but as of this report no new or proposed rules have been released for public review.

RECOMMENDATION TO OFFICE OF THE STATE FIRE MARSHAL AND PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION: Adopt regulations to implement NTSB recommendations regarding needed improvements to the Integrity Management requirements.

RECOMMENDATION TO OFFICE OF THE STATE FIRE MARSHAL AND PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION: Make information about a pipeline’s HCA designation easily available to the public.

Valves

Valves must be installed along the pipeline to control the flow “at locations along the pipeline system that will minimize damage or pollution from accidental discharge, as appropriate for the terrain in open country, for offshore

¹⁷ See 49 CFR § 195.450 and references therein for the definition of a high consequence area, and 49 CFR § 195.452 for the regulations concerning pipeline integrity management in high consequence areas.

¹⁸ Safety Study: Integrity Management of Gas Transmission Pipelines in High Consequence Areas, NTSB, 1/27/2015 <http://www.nts.gov/safety/safety-studies/Documents/SS1501.pdf>

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areas, or for populated areas” (49 CFR § 195.260(c)).¹⁹ Valves must also be “installed in a location that is accessible to authorized employees and that is protected from damage or tampering” (49 CFR § 195.258(a)). Valves must be maintained in good working order at all times, and fully inspected and tested at least twice each year to ensure they are functioning properly.²⁰

Some valves have to be operated manually by pipeline personnel, some valves can be operated remotely from a control room, and some valves are designed to operate automatically if certain conditions occur on the pipeline. If a pipeline should fail, how quickly the valves can be closed and the distance between the valves are two of the main determinants for how much fuel is released. PHMSA has concluded that whether an operator should install automatic shutoff valves or remote control valves (operated from a far-away control room) in newly constructed or fully replaced pipelines needs to be evaluated on a case-by-case basis.²¹ Existing pipeline operators subject to integrity management rules must evaluate the type and location of valves as part of their risk assessment.²²

Pipelines that operate according to integrity management (due to their location affecting an HCA) have an additional requirement to take measures to prevent and mitigate the consequences of a pipeline failure. Actions to enhance public safety or environmental protection may be warranted based on a risk analysis of the pipeline segment, and could include installing Emergency Flow Restricting Devices (EFRDs) – additional valves – on the pipeline. In determining whether an EFRD is needed, “... an operator must, at least, consider the following factors – the swiftness of leak detection and pipeline shutdown capabilities, the type of commodity carried, the rate of potential leakage, the volume that can be released, topography or pipeline profile, the potential for ignition, proximity to power sources, location of nearest response personnel, specific terrain between the pipeline segment and the high consequence area, and benefits expected by reducing the spill size” (49 CFR § 195.452(i)(4)). Beyond the specific requirements for valves at certain water crossings and pump stations, etc., noted above, the regulations give the operator wide latitude in determining the necessity and location of additional valves.

Nineteen years ago an Edison, New Jersey accident occurred and it took two and a half hours to shut off the flow of gas

¹⁹ Valves must also be installed in proximity to pipeline facilities and appurtenances, and on both sides of certain water crossings and drinking water reservoirs. See 49 CFR § 195.260 for details.

²⁰ See 49 CFR § 195.420. This section also contains language about the need for operators to protect valves from unauthorized operation and vandalism, which PHMSA views as doing more than simply chaining and locking the valves.

²¹ U.S. Dept of Transportation, Pipeline and Hazardous Materials Safety Administration (2012). Studies for the Requirements of Automatic and Remotely Controlled Shutoff Valves on Hazardous Liquids and Natural Gas Pipelines with Respect to Public and Environmental Safety (ORNL/TM-2012/411). Prepared by Oak Ridge National Laboratory, managed by UT-Battelle for the U.S. Dept of Energy.

²² See 49 CFR § 195.452(i)(1) and (4).

that fed the fireball due to the lack of a remotely controlled shut off valve. After the 2010 San Bruno tragedy where it took the pipeline operator over an hour and a half to drive to and close a manual valve the NTSB recommended that PHMSA “**Amend Title 49 Code of Federal Regulations 192.935(c) to directly require that automatic shutoff valves or remote control valves in high consequence areas and in class 3 and 4 locations be installed and spaced at intervals that consider the factors listed in that regulation.**” Most recently the spill of at least 20,000 gallons of crude oil into the ocean near Santa Barbara has again reiterated the need for new rules regarding these types of valves to help limit the damage from pipeline failures. PHMSA conducted a study²³ that in 2012 found “**installing ASVs and RCVs in pipelines can be an effective strategy for mitigating potential consequences of unintended releases because decreasing the total volume of the release reduces overall impacts on the public and to the environment.**” PHMSA is working on rule makings that may address this issue, but as of this report no new or proposed rules have been released for public review.

San Jose Pipeline Valves

Alamo community members have expressed concerns about the type, spacing, vulnerability and maintenance of the San Jose pipeline valves (or EFRDs) along the Iron Horse Corridor. Until recently, a manual valve was exposed above ground with no protection except a chain; that valve was enclosed within a fence following a vandalism incident in June 2015, but the example serves to justify the community concerns about vulnerability and safety. The community also has concerns about the potential volume released if a hazardous liquid spill were to occur, and the degree to which the valves will minimize the spill volume.

The OSFM inspection report discussed earlier describes the Kinder Morgan integrity management and risk

assessment process, some of which focuses on this type of detailed analysis. A key piece of the risk assessment that analyzes EFRDs is the operator’s Preventive and Mitigative Measures analysis performed in order to determine what threats exist on a pipeline, and if additional measures should be implemented to manage those threats. The Preventive and Mitigative Measures analysis may or may not determine the need for an additional Engineering Analysis focused on valves, depending on many factors affecting the pipeline: pipeline segment characteristics, proximity to an HCA, time to detect and isolate a leak, location of nearest response personnel, risk assessment results, and desired capabilities and improvements. An



Manual valve inside protective cage in Alamo along Iron Horse Corridor

²³ Oak Ridge National Laboratory, October 31, 2012, http://www.phmsa.dot.gov/pv_obj_cache/pv_obj_id_2C1A725B08C5F72F305689E943053A96232AB200/filename/Final%20Valve_Study.pdf

initial Leak Detection System Analysis is completed on each pipeline, determining the maximum potential release volume.²⁴

Kinder Morgan evaluated the need for modification to existing valves on the San Jose line in 2010, and considered the following factors: swiftness of leak detection and pipeline shutdown capabilities; type of commodity carried; rate of potential leakage; volume that can be released; topography or pipeline profile; potential for ignition; proximity to power sources; location of nearest response personnel; specific terrain between the pipeline segment and the high consequence area; and benefits expected by reducing the spill size. The San Jose line has an existing computerized leak detection system that uses line balance, flow deviation, volume balance, thermal monitoring, and volume in and out to alert control room staff to potential leaks. After consideration of these factors, Kinder Morgan determined the existing valves and leak detection system exceeded their requirement that a 15-minute response time and isolation of a leak could be assured on the San Jose line.²⁵

Kinder Morgan's evaluation necessarily included many assumptions. These are not spelled out in the analysis, but would include such things as how quickly an employee could physically arrive at and close a manual valve, how quickly an operator could install temporary plugs or other means to stop the flow out of the pipe, and how quickly any remote personnel could make a correct decision based on computerized information to shut the pipeline down in the event of a rupture; as well as factors that determine in their eyes what the risks are and what level of risk is acceptable. These assumptions are not transparent to the public, but depending on what is assumed, the outcome of the analysis could vary widely. The assumptions are also necessary to carry out the regulation-required risk analysis and come to conclusions; regulations that require this type of behind-the-scenes decision-making process and lack prescriptive requirements are called performance-based regulations, and they often leave gray areas for the public because we often cannot know what went into the assumptions and decision-making.

Unfortunately, like the implementation of most risk- or performance-based regulations, this Kinder Morgan valve and leak detection analysis does little to eliminate the gray area on this issue. The regulations leave the consideration and determination to each operator in the context of an integrity management plan the public will never see. While the public may not be allowed to see the information used to make risk calculations, the public can make rough calculations of the impacts from a spill based on available information.

²⁴ This detailed technical analysis on leak detection that informs the pipeline operator's risk assessment is not available to the public.

²⁵ See page 12 of the OSFM inspection report dated June 2014 for detailed discussion of the San Jose line/LS-16. The report does not clarify how long of a segment of the pipeline would be isolated in this time - that is, it is not clear whether the operator could close the two closest valves on either side of a failure in that time frame, or just two valves at some unspecified distance. Given the time required to get staff to a manual valve and get it closed, a 15 minute time to isolation appears to be very optimistic.

For example, the size of the pipeline means that it holds a little more than 21,000 gallons of product per mile of pipe. If the pipeline should rupture, most all of the product between the rupture site and the next valve that is at a higher elevation than the rupture would drain out between the valves regardless of how quickly the pipeline was shut down or valves were closed, unless the operator is able to install emergency plugs or hot taps very quickly. If the valves are 10 miles apart that could mean that more than 200,000 gallons could be released if the rupture is at the lowest point in that stretch. This figure does not include any additional product continuing to be pushed through the line if valve closing or shut-off is delayed. So Kinder Morgan as part of their risk analysis must have concluded that with the small chance that the pipeline will actually rupture, and their response capabilities, this is an acceptable risk. If they had not come to that conclusion they would have been required to install more valves to decrease the distance and potential spill volume. If informed people in the community were given the same information would they come to the same acceptable risk conclusion? Currently there is no opportunity for the public to review these risk analyses, or to comment on the level of risk to which they are being exposed.

RECOMMENDATION TO CONTRA COSTA COUNTY BOARD OF SUPERVISORS: Work in coordination with pipeline operators to develop a technical advisory body that can review the integrity management plans (similar to the Santa Barbara County System Safety Reliability Review Committee) and other technical assessments of the pipelines in order to cultivate informed technical expertise in the county and increase public trust and awareness.

RECOMMENDATION TO OFFICE OF THE STATE FIRE MARSHAL AND PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION: Adopt stronger regulations requiring automated valves along the lines of the NTSB recommendations.

Pipeline Monitoring and Leak Detection

A supervisory control and data acquisition (SCADA) system is a pipeline computer system designed to gather information such as flow rate through the pipeline, operational status, pressure, and temperature readings. This information allows operators to know what is happening along the pipeline during normal operations, and allows for quicker reactions to equipment malfunctions, failures and releases. Some SCADA systems also incorporate the ability to remotely operate certain equipment, including compressors, pump stations, and valves; allowing operators in a control center to adjust flow rates in the pipeline as well as to isolate certain sections of a pipeline. Many SCADA systems also include leak detection systems – called computational pipeline monitoring (CPM) programs – based on the pressure and mass balance in the pipelines. Unfortunately, remote computerized systems are not yet capable of identifying most leaks; PHMSA data from 2010-present show that only about

11% of U.S. hazardous liquid pipeline significant incidents were initially detected by SCADA or CPM; and that number drops to 2% when looking only at California hazardous liquid pipeline significant incidents in the same timeframe. On-the-ground personnel working for the pipeline operator (as employees or contractors) are the ones most likely to initially identify an incident, but the public and first responders from the local communities are also likely to be the first to identify a significant incident (18% of the time in the U.S.; 25% of the time in California).²⁶

In the Pipeline Safety, Regulatory Certainty, and Job Creation Act of 2011, Congress asked the Secretary of Transportation to provide a report within one year on the technical limitations of current leak detection systems, the practicability of developing standards for the capabilities of leak detection systems, and the costs and benefits of requiring pipeline operators to use such systems. PHMSA completed an in-depth study²⁷ of leak detection systems in December of 2013. That study found that for hazardous liquid pipelines:

- Emergency responders or a member of the public were currently the most likely means of discovering a pipeline release.
- “There is no technical reason why several different leak detection methods cannot be implemented at the same time. In fact, a basic engineering robustness principle calls for at least two methods that rely on entirely separate physical principles.”
- “External sensors have the potential to deliver sensitivity and time to detection far ahead of any internal system.”

PHMSA has been working on a rule making that may address this leak detection issue for nearly five years now, but as of this report no new or proposed rules have been released for public review.

RECOMMENDATION TO OFFICE OF THE STATE FIRE MARSHAL AND PIPELINE AND HAZARDOUS MATERIALS SAFETY ADMINISTRATION: Adopt stronger regulations that require better leak detection systems in high consequence areas, and that provide a clear performance standard for computational pipeline monitoring systems.

Alamo Technical Pipeline Safety Concerns

Community members raised concerns about a number of specific issues related to pipeline safety on the San Jose pipeline. Pipeline Safety Trust staff also noticed some issues during their visit. This section details technical issues that warrant particular attention.



The San Jose line inside protective sleeve traveling above ground across a seasonal stream along the Iron Horse Corridor.

Earthquakes – In 2007, the United States Geological Survey collaborated with William Lettis & Associates on a technical report analyzing Northern Calaveras Fault data.²⁸ This fault bisects Contra Costa County, and is not the only fault impacting ground movement in the area. Residents are concerned that hazardous liquid pipelines are properly protected in the event of an earthquake.

Hazardous Liquid pipeline operators subject to integrity management are required to consider many threats in the risk assessment that is part of their integrity management plan. A number of these pertain to earthquakes and ground movement, though earthquake risk is not mentioned in the regulations as something that requires its own analysis and mitigation. Earthquakes are listed as one factor for an operator to consider in determining whether a pipeline is likely to affect a high consequence area (and therefore be subject to integrity management at all);²⁹ but for pipelines already clearly affecting a high consequence area (as is the pipeline through Alamo), earthquakes are only included in the context of the broader risk assessment required. For example, in determining the schedule to use in regularly assessing a pipeline segment, geotechnical hazards must be considered;³⁰ and PHMSA offers further guidance on risk factors that should be considered in the frequency of assessment, including “location related to potential ground movement...”³¹ but the regulations do not specify how they are considered, any technical specifications to use when considering their risk, or specific ways to mitigate that risk. When PHMSA inspectors review a California operator’s risk assessment,

²⁶ See PHMSA Incident Reports. Percentages based on PST analysis of PHMSA HL 2002-2009 and 2010-present incident data files (as of Aug 3, 2015).

²⁷ Kiefner & Associates, Inc., Leak Detection Study, December 10, 2012, http://www.phmsa.dot.gov/pv_obj_cache/pv_obj_id_4A77C7A89CAA18E285898295888E3DB9C5924400/filename/Leak%20Detection%20Study.pdf

²⁸ Kelson, Keith I. and Sundermann, Sean T. Digital compilation of Northern Calaveras Fault Data for the Northern California Map Database: Collaborative Research with William Lettis & Associates, Inc., and the U.S. Geological Survey. October 2007.

²⁹ See 49 CFR § 195 Appendix C I.B.(12)

³⁰ See 49 CFR § 195.452(e).

³¹ See 49 CFR § 195, Appendix C. II.A.(11)

they would expect to see seismic-related activity (ground movement, unstable soils, landslides, etc.) listed as a threat, and if not, they would dig deeper.³² In the 2011 updates to the federal pipeline safety laws, Congress specifically included “seismicity of the area” as one threat that a pipeline operator must consider when evaluating threats to a pipeline segment under Parts 192 and 195 of Title 49.³³

We saw no evidence in our review of the OSFM report on Kinder Morgan’s integrity management program that earthquakes factored in to their risk assessment. They did list one action item for most of the intrastate pipelines in the county including the San Jose line that relates to earthquake activity (“monitor wash outs and unstable slopes”), and there may be more listed in the integrity management plan of the operator that is not available for the public to view.

Pipelines worldwide have generally performed relatively well in past earthquakes,³⁴ and ‘natural force damage’ (the cause category under which earthquake-related pipeline failures would fall) is the cause of relatively few pipeline failures nationwide (7%) and in California (2%).³⁵ However both old and new pipelines can sustain damage from earthquakes that is “typically concentrated in areas of unstable soils with permanent ground deformation (PGD) and/or liquefaction, including at river crossings and landslides,” according to an *Earthquake Risk Study for Oregon’s Critical Energy Infrastructure Hub* submitted in 2012.³⁶ A technical handbook on seismic risk analysis stresses the importance of estimating the extent of permanent ground deformation in assessment of pipeline system vulnerability: “In particular, adequate knowledge of site-specific soil and groundwater conditions is critical to the success of the design and installation of pipelines, as well as in predicting its anticipated performance under field conditions” (page 692).³⁷

Both the technical handbook and the Oregon report list options for mitigation measures to improve the performance of a pipeline. The categories of mitigation measures as summarized by the handbook are: “(a) avoid the hazard by relocation; (b) isolate the pipeline from the hazard; (c) accommodate the hazard by strengthening the pipeline or increasing the flexibility; and (d) mitigate the hazard using ground improvement” (page 702). The Oregon study states mitigation options as: “soil improvement, increasing the load

carrying capacity of the pipe system, reducing the friction between the pipe and soil, relocating the pipe, anchors to prevent uplift from buoyant forces, or special pipe joints or fittings that allow greater joint deflection, extension, or compression” (Page 84).

Seismic vulnerability studies can be conducted on pipelines or pipeline segments to assess pipeline performance and suggest mitigation measures appropriate to the specific situation. We found no evidence that Kinder Morgan or any other operator has conducted such a study related to the pipelines in Contra Costa County.

RECOMMENDATION TO PIPELINE OPERATORS:
Contract for an independent technical seismic vulnerability study on HCA pipelines affected by potentially active faults to feed into the pipeline risk analysis, and make the study available to the public.

Iron Horse Corridor Above-Ground Stream Crossings – In two places along the Iron Horse Corridor in Alamo, the San Jose line spans seasonal streams above-ground. (see photo on page 19) Community members have raised concerns about the adequacy of the span supports, potential vulnerability of these spans and the overall safety of these crossings.

Both the above-ground pipeline spans contain a metal sleeve over the pipeline itself, and it is this sleeve that is secured to the supporting infrastructure. These types of above-ground pipeline spans are fairly common, though there are many different types of supportive infrastructure that can secure the pipeline in these situations. One additional concern with supported above-ground spans is the erosion that can occur on either side, potentially increasing the length of the unsupported portion of the span. Some different types of above-ground supports are depicted in the accompanying photos.



Examples of other pipelines crossing stream areas in California and Washington States.

32 Correspondence with PHMSA Pipeline Safety Western Region Office CATS staff, August 2015.

33 Section 29, Pipeline Safety, Regulatory Certainty and Job Creation Act of 2011.

34 Wang, Yumei, Bartlett, Steven F., and Miles, Scott B. *Earthquake Risk Study for Oregon’s Critical Energy Infrastructure Hub* (Final Report to Oregon Department of Energy & Oregon Public Utility Commission). Oregon Department of Geology and Mineral Industries, August 2012.

35 See PHMSA data shown in graphs earlier in report entitled “Causes of HL Significant Incidents.”

36 Wang, et. al. IBID (Page 82).

37 Honegger, D.G. and Wijewickreme, D. (2013). Seismic risk assessment for oil and gas pipelines. In Tesfamariam, S., Goda, K. (Eds.), *Handbook of Seismic Risk Analysis and Management of Civil Infrastructure Systems* (pages 682-715). Cambridge: Woodhead Publishing Limited, 2013.

Land Use Planning and Pipelines

For the siting of nearly all new pipelines, the pipeline company decides on a general route they prefer for their pipeline, and possibly some alternative routes. Once they feel fairly confident with the feasibility of their chosen route, the more formal process with various government agencies begins. That process is not consistent for various types of pipelines, but varies greatly based on the type of pipeline and where it is to run.

Example of California local authority for new and replaced pipelines: Santa Barbara County

Santa Barbara County requires pipeline operators to submit a Development Plan permit for new and replaced pipelines, often in conjunction with a Conditional Use Permit (if located in the Coastal Zone and impacting environmentally sensitive areas).¹ The permit review process includes analysis of submitted information (maps, mitigation measures, emergency response plan, etc.) against standards, and requires specific findings as well as an Environmental Impact Review in accordance with the California Environmental Quality Act (CEQA).² Pipeline operators with existing lines may need to obtain a grading permit prior to digs that expose pipe,³ and operators with a development permit on file submit results of any anomaly digs to the county. Santa Barbara County is unique in their use of a System Safety Reliability Review Committee⁴ made up primarily of technical staff who work in collaboration with pipeline operators (and other oil and gas facility operators) to review project information and operations.

1 See Santa Barbara County Land Use & Development Code, Article 35.5.

2 See CA Public Resource Code § 21000 et. seq.

3 See Santa Barbara Grading Code (Chapter 14).

4 For more information on the System Safety Reliability Review Committee, including committee makeup, minutes, and agendas, see <http://www.sbcountyplanning.org/energy/permits/ssrrc.asp>.

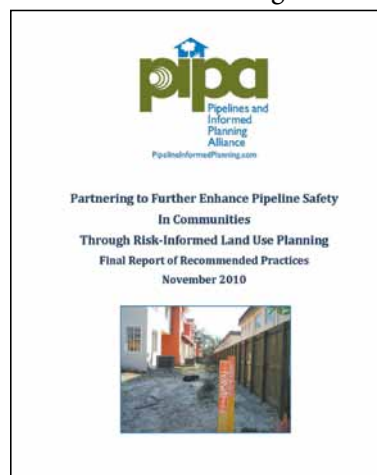
Interstate natural gas pipeline companies must apply to the Federal Energy Regulatory Commission (FERC) for construction and route approval.

There is no comprehensive federal permitting process for the routing of hazardous liquid pipelines or of intrastate natural gas pipelines. Assuming the pipeline is wholly within the U.S., the responsibility for approval of the pipeline route falls on the individual states. Since California does not have a statute at the time of this writing that addresses pipeline routing and siting, the responsibility falls to the regular land use authority of local governments along the pipeline route, some of which exercise this authority, and others do not.

Local governments can also coordinate and regulate new development near existing pipelines with their land use authority. Many pipelines existed prior to development, and

housing density has increased in many areas near pipelines that once were predominantly undeveloped rural areas. Local governments can enact regulations governing the type of buildings and construction that can occur near existing pipelines, requiring consultation with the pipeline operator, establishing setbacks or enacting a variety of other land use permit requirements.

In 2010, PHMSA published the final report of the Pipelines and Informed Planning Alliance (PIPA), a three-year effort

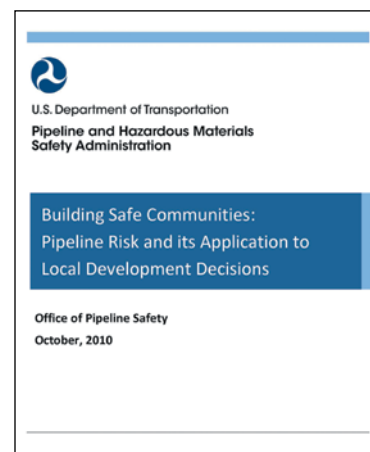


to provide information and recommendations on the types of tools local governments can use to regulate new development near existing pipelines. Forty-three recommended practices are contained in the report, and twenty-nine of them speak specifically to local governments about things they can do to encourage safety near transmission

pipelines. Recommendations stress: the need to have a relationship with local pipeline operators that includes open communication, incorporating the existence of pipelines into planning processes and infrastructure projects, and the importance of safe excavation practices. One example of a specific recommendation is the use of consultation areas or zones that require early consultation among stakeholders when any development is proposed within a specified distance from a transmission pipeline. All recommendations and associated documents can be found through the PIPA link at: <http://primis.phmsa.dot.gov/comm/pipa/LandUsePlanning.htm>.

Contra Costa County local government agencies also have a role to play in pipeline safety and oversight. Federal and state regulations generally preclude local governments from adopting any regulations that require a pipeline operator to take any actions regarding the safe operation of a pipeline. That said, pipeline operators might willingly enter into development

agreements or mitigation agreements that include additional safety aspects in certain situations, in response to local conditions. There are things that local governments do that are not precluded, such as negotiated rights-of-way agreements, spill and emergency preparations and response, or land use and zoning provisions. Contra Costa County agencies are actively involved in some of these areas, and minimally involved in others.



Right-of-way Franchise and Easement Agreements

Easements and franchise agreements specify information about the access the pipeline operator has to land that is owned by private parties or government entities. They are typically negotiated agreements in exchange for payment, and lay out allowed and disallowed activities for the pipeline operator and the landowner within the area covered by the agreement. The area covered may be narrow or wide, depending on the pipeline and the context at the time the agreement was signed.

When a pipeline goes through county-owned public property or public rights-of-way, Contra Costa County Public Works Department has authority over the granting of franchise or easement agreements. Agreements between the county and pipeline operator must proceed in accordance with the Pipeline Franchise Ordinance.³⁸ Ordinances that establish regulations for granting these franchise agreements have been in place since 1964, with amendments in 1992 and 2013. As of this writing, the public works department staff is working to get all existing franchise agreements updated to be consistent with the most recent ordinance. The pipeline franchise ordinance covers the unincorporated portions of the county, and individual cities negotiate easements and franchise agreements according to their own ordinances or policies.

There are examples from around the country where local governments through these franchise agreements have been able to obtain safety improvements and greater liability insurance and indemnification than is required by state or federal rules.³⁹

The Iron Horse Corridor – Multiple Uses

Some pipelines were in place prior to the first county franchise ordinance and operate according to easements that were already in place. This is the situation with most of the Kinder Morgan SFPP- San Jose line along the Iron Horse Corridor, which was constructed in the mid-1960s during the time that the Southern Pacific Railroad owned and operated rail lines.

The entire Iron Horse Corridor right-of-way varies from about 30 to 100 feet in width along the route, and contains numerous utilities and facilities through easements, license agreements, and leases, including the easement for the SFPP - San Jose pipeline, which only covers a portion of the corridor right of way. Because of the history of the San Jose line and the Iron Horse Corridor, much of the land through



Multiple utilities exist in the Iron Horse Corridor

which the pipeline travels is public and not private land, so the predominance of the easement area is covered by a single agreement between the pipeline operator and the county, rather than many individual easements between the pipeline operator and private property owners. That easement agreement specifies the property involved (generally a strip of land 10 feet wide, specifically described in the easement documents), and the right of the operator to construct, reconstruct, renew, maintain and operate the pipeline and appurtenances on the easement.⁴⁰

Landowners have in the past encroached onto the Iron Horse Corridor with fence lines, landscaping, and other property improvements. This type of activity presents a potential safety threat to the pipeline and is against the law.

The Elder California Pipeline Safety Act of 1981 specifies in § 51014.6:

“(a) Effective January 1, 1987, no person, other than the pipeline operator, shall do any of the following with respect to any pipeline easement:

(1) Build, erect, or create a structure or improvement within the pipeline easement or permit the building, erection, or creation thereof.

(2) Build, erect, or create a structure, fence, wall, or obstruction adjacent to any pipeline easement which would prevent complete and unimpaired surface access to the easement, or permit the building, erection, or creation thereof.

(b) No shrubbery or shielding shall be installed on the pipeline easement. This subdivision does not prevent the revegetation of any landscape disturbed within a pipeline easement as a result of constructing the pipeline and does not prevent the holder of the underlying fee interest or the holder’s tenant from planning and harvesting seasonal agricultural crops on a pipeline easement.

(c) This section does not prohibit a pipeline operator from performing any necessary activities within a pipeline easement, including, but not limited to, the construction, replacement, relocation, repair, or operation of the pipeline.”

Numerous other utilities share the right-of-way with the hazardous liquid pipeline. Operators install utility lines according to specific standards that specify vertical and horizontal separation distances that vary depending on the type of utility.⁴¹ Colocation of energy transmission systems within designated energy ROWs is common, but may result in some interference between the systems or other hazards that would not exist except for the physical proximity of the two transmission systems.

40 There are gaps in the easement and memoranda documentation the Trust was able to acquire from the county and Kinder Morgan. We don’t know if this reflects missing documentation or uncertainty about the pipeline right-of-way, but recommend there be a complete set of documentation describing the right-of-way and property affected that is available to the public.

41 See 49 CFR § 195.250; also see operator guidelines for additional specifics on horizontal and vertical separation distances.

38 Governed by Contra Costa County Code, Title 10, Chapter 1004-2.

39 See examples of these franchise agreements at: <http://pstrust.org/about-pipelines1/local-governments/franchise-agreements/>

Encroachments into the Iron Horse Corridor may or may not encroach into the portion of the corridor over which Kinder Morgan or other utilities hold an easement. Assessing and remedying these encroachments will require coordination among all parties with ownership interests in the corridor.

The community is involved in the management of the corridor, and has numerous public participation opportunities with regard to planning its use.⁴² Keeping the pipeline and pipeline safety in mind during these public discussions can serve to remind nearby residents that the Iron Horse Corridor needs to be respected as a protective buffer for the utilities within it, as well as enjoyed for its recreational offerings.

RECOMMENDATION TO CONTRA COSTA COUNTY BOARD OF SUPERVISORS: Adopt clear policies and deterrents regarding preventing encroachment including the review of setback variances by municipal advisory councils or committees and department staff, so that properties and vegetation along utility corridors do not encroach on pipelines. Ensure the single staff point-of-contact for citizens with concerns about multiple utility issues and right of way questions has technical training on safety concerns, adequate resources to conduct regular and broad community outreach (especially along the Iron Horse Corridor), and resources to work in close coordination with other related departments and advisory groups.

RECOMMENDATION TO CONTRA COSTA COUNTY PUBLIC WORKS: Ensure county has complete and accurate records of corridor and right of way locations. Continue to coordinate with Kinder Morgan and other utilities on resolution of encroachments into pipeline Rights of Way.

RECOMMENDATION TO PIPELINE OPERATORS: Consistently undertake assessments of existing Right of Way encroachments to determine whether there are safety implications. Coordinate with Contra Costa County Public Works to resolve encroachments with neighboring property owners.

Land Use and Zoning Provisions

Land use and zoning authority in the unincorporated portions of the county lies within Contra Costa County Department of Conservation and Development (DCD)

⁴² The East Bay Regional Park District covering Alameda and Contra Costa Counties manages the Iron Horse Trail (with an elected board of directors and an appointed advisory committee), and the Contra Costa County Board of Supervisors appoints an IHC Advisory Committee with representation from communities along the corridor. The IHC Advisory Committee has embarked on various projects that have involved additional public input opportunities, including the creation of the Management Program and its Landscape Element in 2000.

jurisdiction. The county does not address pipelines in the General Plan goals or policies. Apart from limited involvement with certain high-hazard proposals (as rated by Hazardous Materials Program staff), the county does not review pipelines under their land use authority. They have a specific exemption for pipelines and other utilities stating:

The use of land for rights-of-way for the construction, maintenance and repair of public utilities and publicly owned utilities and for privately owned pipelines for the transportation of oil, gas, water, and other substances transportable by pipelines, is not regulated or restricted by Divisions 82 and 84. Accessory and appurtenant structures forming a part of public utilities, publicly owned utilities and pipelines are not regulated or restricted by Divisions 82 and 84, except for setback regulations. (Contra Costa County Zoning Code § 82-2.010)

Divisions 82 and 84 referred to in the above citation are, respectively, the General Regulations and Land Use Districts divisions of the County Zoning Code.⁴³

There are examples in California of other counties that do not exempt privately owned transmission pipelines from land use regulations (see sidebar on Santa Barbara County on page 21). Using land use and zoning authority to require permits for HL pipeline construction, replacement, modification, or abandonment may allow a local government to conduct California Environmental Quality Act (CEQA) review if warranted, and negotiate conditions and mitigation requirements with certain permits.

RECOMMENDATION TO CONTRA COSTA COUNTY BOARD OF SUPERVISORS AND DEPARTMENT OF CONSERVATION AND DEVELOPMENT: Consider adding goals and policies to the General Plan,⁴⁴ and amending Contra Costa County Zoning Code 82-2.010 so that all privately owned pipelines and appurtenant structures are not exempt, but rather only privately owned gas distribution pipelines under 12" in diameter are exempt from the General and Land Use District regulations (divisions 82 and 84).⁴⁵ Consider additional ordinance(s) pertaining to zoning and land use permitting for hazardous liquid pipelines and possibly also intrastate gas transmission pipelines that are proposed for construction, replacement, modification, or abandonment.

⁴³ See https://www.municode.com/library/ca/contracosta/codes/ordinance_code?nodeId=TIT8ZO

⁴⁴ See the Trust's Local Government Guide to Pipelines for specific suggestions about what kind of General Plan (also called Comprehensive Plan) language may be used relating to pipelines and pipeline safety.

⁴⁵ Language can be written specifically to exempt most distribution pipelines. For example, "only gas distribution pipelines under 12" in diameter or under an operating pressure of 80 psig are exempt from the zoning code provisions."

Damage Prevention and Public Awareness Programs

A nationwide utility locator system is available for free in every state, to anyone planning hand or machine excavation, in order to prevent damage to pipelines and other utilities. By calling 811 at least two working days before digging, a utility locator will come identify and mark buried utilities, including cables and pipelines for fuel, water and sewer. This is a requirement by law in California (see GOV Code § 4216 et. seq.) with civil penalties associated with noncompliance, yet California lacks enforcement for this law.⁴⁶ Pipeline operators must participate in this program. In communities that do not have other types of consultation zones or setback regulations, the “One-Call ticket” (as operators refer to the resulting notification from someone calling 811) is likely to be the first notice the pipeline operator has that someone is intending to dig close to their pipeline. Kinder Morgan has a robust damage prevention program, with membership in the Common Ground Alliance, staff training, and staff encouraged to actively follow up on any observed violations.

Pipeline operators also are required by federal law to have a Public Awareness Program.⁴⁷ This program must describe what the operator does to inform the public of the presence of the pipeline and potential hazards, and how they do it. For instance, the operator must identify and communicate with local emergency personnel, government officials, school districts, businesses, and the public, and tell them specific things such as how to recognize pipeline location markers, what kind of precautions they should take, what kind of properties the commodity being transported in the pipeline has, and how to recognize and respond to a pipeline emergency.

RECOMMENDATION TO THE STATE OF CALIFORNIA: Enforce excavation damage prevention laws. Currently authority is held with the Attorney General’s office, but there is not adequate staffing or resources to respond to notifications of alleged violations or to investigate. Other agencies respond on a fragmented basis depending on the damaged utility involved.

Local Opportunities for Public Involvement, Education and Awareness

The Contra Costa County Hazardous Materials Ombudsman is a useful single point of contact for information regarding hazardous materials including pipelines; part of the ombudsman’s role is to help people in the county be good advocates for themselves by providing information. The public can also attend Hazardous

⁴⁶ California is one of a few states without enforcement for excavation damage prevention – see PHMSA 2014 state damage prevention program characterization.

⁴⁷ For hazardous liquid pipelines, see 49 CFR § 195.440; for gas pipelines, see 49 CFR § 192.616.

Materials Commission meetings or apply to be one of the 13 members (some of these are public seats).

All of the agencies discussed in this report also provide additional information on their websites (those addresses are listed in Appendix A).

The county also has a Community Awareness and Emergency Response (CAER) group, which is a non-profit public benefit corporation of public emergency response agencies, local government officials and facilities and businesses that use, store, handle, produce or transport hazardous materials. All of these entities can be members of CAER; membership is voluntary, and while most of the waterfront industrial facility operators are members, Kinder Morgan is not. CAER works to actively enhance public health and safety, and includes public representatives on its board of directors. CAER efforts focus on the waterfront areas from Richmond to Antioch where industrial facilities are concentrated but their expertise and public outreach model also support inland areas of county affected by hazardous materials transport through pipelines.

The Contra Costa County Board of Supervisors raised questions and concerns about Kinder Morgan intrastate pipelines in a letter to OSFM dated March 11, 2014. In response to this letter, OSFM staff inspected the Kinder Morgan Integrity Management Program related to their intrastate pipelines in Contra Costa County (including the San Jose line / LS-16) in June 2014. This inspection included a review of integrity management procedures, inspections, and associated repairs for the eleven Kinder Morgan intrastate pipelines operating in Contra Costa County, and resulted in a report submitted to the county in the spring of 2015 that details the process Kinder Morgan undergoes to ensure the integrity of these lines. The county has this information, but having this information is not the same as having a clear process and expertise in place to analyze it and make recommendations in coordination with the operators and OSFM.

RECOMMENDATION TO OFFICE OF THE STATE FIRE MARSHAL: Make information – maps, incident and inspection information – accessible to the public by posting it online.

RECOMMENDATIONS TO PIPELINE OPERATORS: Participate as members in CAER with consistent attendance at quarterly meetings by appropriate management staff. Work in coordination with the Board of Supervisors and appropriate county departments to develop a technical advisory body that can review the integrity management plan (similar to the Santa Barbara County System Safety Reliability Review Committee) and other technical assessments of the pipeline in order to cultivate informed technical expertise in the county and increase public trust and awareness.

Emergency Response, Spill Response & Prevention

Oil spill prevention and emergency response authority differs depending on what area the spill is likely to affect (coastal or inland), whether it is part of a larger facility (e.g., a refinery), and what part of the process is the focus (prevention, preparedness, environmental spill response, or emergency assistance to communities). When a spill occurs, many state, federal and local agencies work together under a 'unified command' structure on clean-up and response.

Hazardous liquid pipeline spill response agencies in California

The U.S. EPA has authority to direct cleanup and rehabilitation of areas affected by spills of hazardous liquid releases. The U.S. EPA can also bring actions for civil penalties under the Oil Pollution Act against operators for each barrel of oil where releases have entered navigable waters, as defined under the Clean Water Act. Additional recovery is available to the state and federal governments for damages done to natural resources by a spill.

The California Department of Fish and Wildlife, Office of Spill Prevention and Response (OSPR) also exercises jurisdiction over oil spills. This authority was expanded greatly in 2014 to cover all state surface waters at risk of oil spills from any source, including pipelines and production facilities.⁴⁸ The development of the regulations for this expanded statutory authority is underway as of this writing, with OSPR coordinating with local, state and federal government along with industry and non-governmental organizations to do so. OSPR requires operators to submit spill response plans for approval, and conducts spill drills (they are authorized to conduct both announced and unannounced drills). Operator spill response plans for pipelines that could effect marine waters are currently posted on the OSPR website, and presumably similar plans will be made available to the public in the future for those operators with pipelines that could effect any waters of the state once the new regulations are completed and implemented.

The California Environmental Protection Agency (CalEPA) regulates hazardous waste and materials through a Unified Program that incorporates a number of local and regional Certified Unified Program Agencies (CUPAs) for implementation, of which the Contra Costa County Health Services Department is one. In general, CUPAs are most interested in facilities handling hazardous waste and materials, and not focused at all on the transportation of those materials. However if an incident occurs and hazardous materials spill, a local CUPA will be involved in the response to that spill, whether it comes from a facility or a pipeline. More information about the CUPA role is included in the following section focused on Contra Costa County.

All pipeline operators are required to have an emergency response plan, and to share that plan with local first responders. The plan should contain detailed information about what the pipelines hold, and how pipeline company personnel and emergency response agencies such as fire and sheriff or police departments will implement pre-planned responses in case of an emergency. PHMSA assesses the written procedures contained in these plans during their inspections of interstate operators, and OSFM reviews portions of the plans during their standard inspections (once every five years) for intrastate pipelines, but operators are not required to submit these plans to either PHMSA or OSFM.

Operators that fall under the jurisdiction of the federal Oil Pollution Act, whose pipelines may significantly harm water bodies if there were to be a release of oil or a refined product, must also prepare a facility response plan, sometimes called a spill response plan, to outline how a release from the facility will be responded to and where response resources will be stored near the pipeline and where staff and contractors will be responding from. These plans must meet the requirements of federal law and regulations and be approved by PHMSA.⁴⁹

Pipeline accident investigations occur separately from the spill clean-up and response. The National Transportation Safety Board conducts accident investigations of some of the most significant pipeline incidents. PHMSA may conduct a pipeline failure investigation on a pipeline within its jurisdiction, depending on the cause or failure mode, the severity of the consequences, and the history of the pipeline system. OSFM conducts its own investigations, in accordance with Section 13107.5 of the California Health and Safety Code. Other agencies may also conduct investigations, including the California Department of Industrial Relations, Division of Occupational Safety and Health, or a local Certified Unified Program Agency.

Following the May 2015 spill onto Refugio Beach near Santa Barbara, additional changes were proposed to California laws to increase the usage of automatic shut-off systems and improve leak detection technology on hazardous liquid lines, as well as to improve the response times to begin clean up efforts by allowing local fishing boats to be trained as spill responders. At the time of this publication, it was not yet certain whether either of these bills would pass.

Contra Costa County Spill and Emergency Preparations and Response

Contra Costa County Health Services Department (HSD) is designated as a Certified Unified Program Agency (CUPA), and their Hazardous Materials Program has been involved in protecting the community from hazardous materials releases for well over two decades. The state and county rules governing hazardous materials apply very little to pipelines, as the state hazardous materials law specifically exempts the *transportation* of hazardous materials.⁵⁰ However once hazardous materials are released from a pipeline, they are no longer considered

⁴⁸ Senate Bill 861 authorized the expansion and provided the additional statutory and regulatory authority, for the prevention, preparedness and response activities in the new inland areas of responsibility. See also Cal. GOV Code § 8670.

⁴⁹ See 49 C.F.R. Part 194.

⁵⁰ Specific authority given to the HSD as a CUPA is described in CA HS Code, § 25404 and § 25531 et. seq.; the Contra Costa County Industrial Safety Ordinance is found in CCC Code, Title 4, Chapter 450.

to be part of the transportation system. In concert with these rules, the Hazardous Materials Program concerns itself with all storage and processing of hazardous materials (including at water treatment facilities, refineries, and the like), but pipelines mainly draw their attention once the hazardous materials are no longer part of the transportation system, i.e., there is an incident where oil is spilled. All releases of hazardous materials (including pipeline releases) are reported on by the Hazardous Materials Program, and available on the department's website.⁵¹

The Health Services Department has a designated staff Hazardous Materials Ombudsman whose job is to respond to questions and concerns from the public, as well as independently and impartially conduct investigations, solve problems, and make recommendations regarding the program. The Department also supports the Hazardous Materials Commission, a group consisting of 13 appointed members representing a diversity of stakeholders. The Commission is tasked with advising the Board of Supervisors on hazardous materials planning, management, and implementation, while obtaining broad public input and working to build consensus.⁵² The Health Services Department incorporate concerns with pipelines along with facilities as part of a broad focus on protecting the community from dangers of hazardous materials.

Contra Costa County is highly populated, and many people live and work in close proximity to the pipelines in the region. A dozen schools are located in very close proximity to the Kinder Morgan pipeline along the section of the Iron Horse Corridor from Concord to San Ramon. While individual schools have emergency or crisis plans in place, we did not see mention of the unique hazard presented by proximity to the pipeline if a pipeline incident were to occur. The California Department of Education (CDE) offers useful guidance to Local Educational Agencies (i.e. school districts and other related entities) in siting new facilities; one piece of this guidance is their "Guidance Protocol for School Site Pipeline Risk Analysis" which is a tool to aid Local Educational Agencies and the CDE in evaluating the suitability of new school sites located near pipelines as defined in the regulations.⁵³ CDE also offers guidance under their "Potential Pipeline Hazard Mitigation/Management" heading, including suggestions for reducing the probability of a pipeline product release and for reducing the severity of consequences of pipeline releases on schools.⁵⁴

These resources could be expanded to offer mitigation and modernization recommendations for existing schools in proximity to pipelines, looking at evacuation routes, coordination with local first responders and pipeline operators, and education of individual school staff using resources such as the School Pipeline Safety Partnership offered by the Danielle

Dawn Smalley Foundation.⁵⁵ In addition, the Contra Costa County Office of Public Education maintains online resources on emergency preparedness,⁵⁶ and the Contra Costa County CAER has a *Model Emergency Plan for Schools*,⁵⁷ both of which can be used as additional resources when developing a comprehensive emergency or crisis plan. These resources do not specifically mention the potential hazards of oil and gas pipelines as something to learn about and pay attention to, or as a potential risk for which to plan and develop mitigation measures, though they do provide helpful guidance for the important process of emergency planning.

At a minimum, those agencies who help schools develop safety plans should coordinate with one another (E.G. school districts, the CA Department of Education, county Office of Public Education, and CAER) and suggest each crisis plan include the following information about pipelines:

- Where is the pipeline? (include it in any maps, and specify distance from school facilities)
- What pipeline markers look like.
- Name of pipeline operator, product transported, and both emergency and non-emergency contact information for a pipeline operator representative.
- How and where to evacuate in a pipeline emergency, including routes that avoid pipelines and pipeline rights-of-way.
- Overview of the indications of a pipeline emergency.

At least one of the schools adjacent to the Iron Horse Corridor and Kinder Morgan pipeline has no access to emergency services or evacuation except via a single road that crosses the pipeline. Rancho Romero Elementary School is located in Alamo, and can only be reached via Hemme Road off of Danville Boulevard by crossing over the pipeline. In the unlikely event that a pipeline incident occurs adjacent to the school in such a way as to block the Hemme Road access, numerous problems could arise, as all road access to and from the school would be blocked. All emergency services are on the other side of the pipeline; the current relocation site listed in the school's crisis plan is the Creekside Community Church, also on the other side of the pipeline. The pipeline is not depicted on the emergency map for the school, and is not mentioned in the safety plan where ingress/egress is discussed, or anywhere else in the crisis plan.

There may be a timely opportunity to work with developers to address the issue of school and neighborhood connectivity in conjunction with current plans for development in this area. Every effort should be made to create publicly accessible access across these 'dead-end' neighborhoods that necessitate crossing the pipeline to access any services.⁵⁸

55 See <http://smalleyfnd.org/services/pipeline-education/schools>

56 See http://www.cccoe.k12.ca.us/about/resources_emergency.html

57 See http://www.cococaer.org/prepare_plans_school.html

58 The Trust has seen the "Ball Estate" development plan that is currently under review and includes possible gated emergency vehicle access in this area via a private Ironwood Place connector. Contra Costa County should ensure that any emergency vehicle access is sufficient in width and access to have unimpeded passing emergency vehicles and whatever other needs may be requested by the Fire Department.

51 As of this writing, website access to the reports had been suspended pending HSD website's realignment with the CA Environmental Reporting System, but will soon be available again through links here: <http://cchealth.org/hazmat/incident-response.php>.

52 See <http://cchealth.org/hazmat/hmc/>

53 See <http://www.cde.ca.gov/ls/fa/sf/protocol07.asp>

54 See <http://www.cde.ca.gov/ls/fa/sf/mitigation.asp>

As mentioned earlier, resources exist for school emergency planning. In addition, assistance or funding may be available from those same agencies or the pipeline operator to receive specialized technical assistance to assess the pipeline risks and offer suggested mitigation and evacuation strategies pertinent to the specific school situation.

Two fire districts cover the central region of the county that includes the Iron Horse Corridor: the Contra Costa County Fire Protection District, and the San Ramon Valley Fire Protection District. As mentioned previously, pipeline operators are required to have both an emergency response plan, and a public awareness plan, and to have a designated liaison and make information available to local first responders such as fire departments and sheriff or police departments. Because of the workload and turnover in most fire districts, it is difficult to have a single point-of-contact who is familiar with the pipeline, the operator and the emergency response plan. While pipeline operators invite district personnel to annual training events, it is up to the district to prioritize planning for a pipeline emergency.

RECOMMENDATION TO CONTRA COSTA COUNTY HEALTH SERVICES DEPARTMENT: Expand the scope of the Hazardous Materials Ombudsman and the Hazardous Materials Commission to provide an ongoing review of pipeline operators' emergency plans and possible county efforts regarding additional coordinated technical review of pipeline integrity planning.

RECOMMENDATION TO THE STATE OF CALIFORNIA: Work with the California Department of Education (CDE) on ways to implement CDE's suggestions for reducing the probability of a pipeline product release on schools, and reducing the consequences of pipeline releases on schools.⁵⁹

RECOMMENDATION TO CONTRA COSTA COUNTY BOARD OF SUPERVISORS: Request appropriate staff conduct an analysis of all congregate facilities (i.e. schools, recreation facilities, hospitals, nursing facilities, etc.) located in close proximity to transmission pipelines; Work with other emergency response agencies to develop a list of resources for emergency and evacuation planning expertise for congregate facilities near pipelines that can include potential hazards from a pipeline incident, and mitigation strategies for those hazards based on site-specific considerations.

RECOMMENDATION TO CONTRA COSTA COUNTY PUBLIC WORKS: Plan emergency evacuation ingress/egress for areas in Alamo west of Danville Boulevard and the Iron Horse Corridor where a single east-west pipeline-crossing road is the only access for numerous homes and facilities (e.g. Hemme

Road, Camille Road) with the goal of creating public accessibility across these 'dead-end' neighborhoods that necessitate crossing the pipeline to access any services.

RECOMMENDATION TO CONTRA COSTA COUNTY Department of Conservation and Development: Review all development applications for opportunities to improve existing ingress/egress where currently limited, and where possible, include conditions on approvals to improve connectivity and avoid exacerbation of access problems.

RECOMMENDATION TO DEPARTMENT OF EDUCATION: Expand School Site Pipeline Risk Analysis and the Potential Pipeline Hazard Mitigation/Management guidance in coordination with emergency response agencies to offer help for schools that already exist in close proximity to pipelines. Lead coordination efforts among the myriad of agencies that offer crisis planning assistance to schools, and suggest minimum information that should be included in these plans regarding pipelines.

RECOMMENDATION TO CONTRA COSTA COUNTY OFFICE OF PUBLIC EDUCATION AND SCHOOL DISTRICTS: Expand emergency preparedness resources to include information about pipelines and pipeline-specific risks. Assist individual schools in developing crisis plans and emergency preparedness plans that include pipelines on the emergency maps and assess how ingress/egress may be affected by a pipeline incident.

RECOMMENDATION TO CONTRA COSTA COUNTY CAER: Include specific reference to oil and gas pipelines in the list of potential hazards listed in the hazard assessment in the next update to the *Model Emergency Plan for Schools*.

RECOMMENDATION TO PIPELINE OPERATORS: Reach out to the schools along the pipeline easement and offer to provide technical assistance assessing pipeline risks and evacuation strategies given possible incidents that could occur in close proximity to the schools.

RECOMMENDATION TO FIRE DISTRICTS: Designate a single point-of-contact to coordinate with pipeline operators, familiarize themselves with the operators' emergency response and spill response plans, know the facilities where people congregate (schools, churches, hospitals, nursing facilities, etc.) in close proximity to the pipeline, be involved with any emergency planning done by those facilities, and advise County DCD and PW on sufficiency of proposed ingress/egress for new developments in areas where there is currently single access that crosses the San Jose line.

⁵⁹ See CDE's Potential Pipeline Hazard Mitigation/Management website at <http://www.cde.ca.gov/ls/fa/sf/mitigation.asp>

Appendix A

APPENDICES

Appendix A. Agency listing and Resources for more information

Appendix B. Community education meetings

Appendix C. Additional information reviewed for report

Appendix D. All Reported Incidents in Contra Costa County

Appendix E. All Reported Incidents on Kinder Morgan's SFPP Pipeline System

Appendix A

Appendix A. Agency listing and resources for more information

Alamo Improvement Association: www.alamoca.org

CA Dept of Education, Guidance Protocol - School Site Pipeline Risk: www.cde.ca.gov/ls/fa/sf/protocol07.asp

CA Office of the State Fire Marshal, Pipeline Safety Division: osfm.fire.ca.gov/pipeline/pipeline.php

CA Dept of Fish & Wildlife, Office of Spill Response and Prevention: www.wildlife.ca.gov/OSPR

CA Environmental Protection Agency, Unified Program: www.calepa.ca.gov/CUPA/

Contra Costa County Board of Supervisors: www.cccounty.us/193/Board-of-Supervisors

Contra Costa County Department of Conservation and Development: www.cccounty.us/dcd

Contra Costa County Health Services Department, Hazardous Materials Programs: cchealth.org/hazmat/

Contra Costa County Public Works Department, Transportation Engineering Division

Iron Horse Corridor Management: www.co.contra-costa.ca.us/413/Iron-Horse-Corridor

Franchise Administration: www.contracosta.ca.gov/475/Franchise-Administration

Contra Costa County Office of Education, Crisis Planning & Emergency Preparedness:

www.cccoe.k12.ca.us/about/resources_emergency.html

Contra Costa County Community Awareness & Emergency Response (CAER): www.cococaer.org

Danielle Dawn Smalley Foundation, Pipeline Safety and Awareness Training for Schools:

smalleyfnd.org/services/pipeline-education/schools

Federal Pipeline Safety Regulations: www.ecfr.gov/ecfrbrowse/Title49/49CISubchapD.tpl

National Transportation Safety Board: www.nts.gov

Pipeline Safety Trust website: pstrust.org

Landowner's Guide to Pipelines: pstrust.org/log

Local Government Guide to Pipelines: pstrust.org/lgg

Online "SafePipelines" discussion group: groups.yahoo.com/neo/groups/safepipelines

U.S. Dept of Transportation, Pipeline and Hazardous Materials Safety Administration

Incident and Annual Pipeline Data: phmsa.dot.gov/pipeline/library/data-stats

National Pipeline Mapping System: www.npms.phmsa.dot.gov/PublicViewer

Office of Pipeline Safety: phmsa.dot.gov/pipeline

Pipelines and Informed Planning Alliance: primis.phmsa.dot.gov/comm/pipa/landuseplanning.htm

Appendix B. Community education meetings

The Alamo Improvement Association and the Contra Costa County Hazardous Materials Commission jointly sponsored two hazardous liquid pipeline safety workshops in June of 2015, with funding from the PHMSA Community Technical Assistance Grant received by the Alamo Improvement Association. Michael Kent, Hazardous Materials Ombudsman, moderated the meetings, and the following four individuals presented information and slides to the group:

- Carl Weimer, Executive Director of the Pipeline Safety Trust
- Bob Gorham, Division Chief of Pipeline Safety, Office of the State Fire Marshal
- Pete Murphy, Operations Manager at Kinder Morgan
- Carry Ricci, Customer Services Coordinator at Contra Costa County Public Works Department

The Pipeline Safety Trust hosts a webpage with all the presentations available for download: <http://pstrust.org/trust-initiatives-programs/work-in-other-communities/alamo/>. In addition, the second workshop was captured on video by CCTV, and is available to watch here: http://contra-costa.granicus.com/MediaPlayer.php?publish_id=935921b6-0eea-11e5-b5ce-00219ba2f017.

The workshops were held in Alamo and Martinez, with advertising and press coverage in the preceding month. About 70 people attended the June 3rd workshop in Alamo, and about 45 attended the June 6th workshop in Martinez. Three Pipeline Safety Trust staff worked along side the members of the Alamo Improvement Association Technical Assistance Grant, ad-hoc working group to prepare for and carry out these workshops. Audience members submitted written questions throughout the meeting, which were then asked by the moderator to the panelists during a question and answer period at the end of the meeting. This report focuses on questions of concern to local citizens, including those submitted at the workshops or by email to members of the ad-hoc working group.

CONTRA COSTA COUNTY PIPELINE SAFETY



- ❖ What types of petroleum pipelines are in Contra Costa County?
- ❖ Who is responsible for the pipelines in Contra Costa?
- ❖ What are the risks associated with our pipelines?
- ❖ How can you help keep your community safe from pipeline risks?
- ❖ Get your questions answered by private and public agencies that deal with petroleum pipelines.

Learn About Pipeline Safety in Contra Costa

WHEN: Saturday, June 6, 2015, 10:00AM
WHERE : 651 Pine Street, Martinez, CA 94553
Board of Supervisors Chambers

WHO: California State Fire Marshal's Office, Contra Costa County Hazardous Materials Commission, Kinder Morgan Pipeline Owner/Operator, Pipeline Safety Trust, Alamo Improvement Association

Learn more at: www.alamoca.org

HAZARDOUS LIQUID PIPELINE SAFETY WORKSHOP AGENDA

June 3, 2015, 6:30 – 8:30 PM in Alamo
Creekside Community Church (1350 Danville Blvd)

June 6, 2015, 10 AM – 12 PM in Martinez
County Administration Building, Board of Supervisors Chambers (651 Pine St)

Facilitated by Pipeline Safety Trust staff, and Contra Costa County Hazardous Materials Ombudsman Michael Kent

Introductions (10 Minutes)

Agency, Kinder Morgan, and Pipeline Safety Trust staff

Why care about pipeline safety? Pipelines 101 (20 minutes)

Pipeline Safety Trust staff

Kinder Morgan Presentation (20 Minutes)

Pete Murphy, Operations Manager, Kinder Morgan

Fire Marshal Presentation (20 Minutes)

Bob Gorham, Division Chief, Pipeline Safety, CA Office of the State Fire Marshal

Increasing Safety - Pipeline Safety Trust Staff, Michael Kent, & Carrie Ricci (15 Minutes)

Communications

County involvement – Public Works & Hazardous Materials Advisory Board

Facilitated Question & Answer Panel – Michael Kent, facilitator (30 Minutes)

Closing (5 Minutes) AIA - Roger Smith

MEETING SPONSORS:



**Contra Costa County
Hazardous Materials
Commission**

**Pipeline Safety
TRUST**
Credible. Independent. In the public interest.

PARTICIPATING STAKEHOLDERS:



KINDER MORGAN

 **Pipeline and Hazardous
Materials Safety Administration**

Appendix C. Additional information reviewed for report

- City of Richmond, Pipeline Franchise Ordinance 27-10 (2010). Online: www.ci.richmond.ca.us/ArchiveCenter/ViewFile/Item/3143.
- Contra Costa County Code (including Industrial Safety Ordinance, and Zoning Ordinance). Online: www.municode.com/library/ca/contra_costa_county/codes/ordinance_code.
- Contra Costa County, Flood Control & Water Conservation District – PG&E 1994 Easement for 24 inch gas pipeline.
- Contra Costa County General Plan (2014). Online: www.co.contra-costa.ca.us/4732/General-Plan.
- Contra Costa County Health Services, Hazardous Materials Program – Incident report ConocoPhillips pipeline (vandalism) in Byron 2011 Aug 27 – includes Environmental Site Assessment Report.
- Contra Costa County Health Services, Hazardous Materials Program – Incident report ConocoPhillips pipeline (corrosion) at MOTC (Marine Ocean Terminal Concord, formerly Naval Weapons Station) 2011 Nov 7.
- Contra Costa County Health Services memo (Randy Sawyer) to Contra Costa County Board of Supervisors re: Nov 7, 2014 ConocoPhillips pipeline leak in Concord (crude).
- Contra Costa County Iron Horse Corridor Management Program Landscape Element (2000). Online: www.co.contra-costa.ca.us/2579/Landscape-Element.
- Contra Costa County Pipeline Franchise Ordinance 2013-19 & Fee Resolution (2013). Online: <http://pstrust.org/wp-content/uploads/2015/04/Pipeline-Franchise-FINALweb-09172013.pdf>.
- Contra Costa County Public Works memo to Contra Costa County Board of Supervisors recommending requesting the Office of the State Fire Marshal report of Kinder Morgan Integrity Management program review. Approved by Board of Supervisors (2015 Jan 6).
- Honegger, D.G. and Wijewickreme, D. (2013). Seismic risk assessment for oil and gas pipelines. In Tesfamariam, S., Goda, K. (Eds.), Handbook of Seismic Risk Analysis and Management of Civil Infrastructure Systems (pages 682-715). Cambridge: Woodhead Publishing Limited, 2013.
- Kelson, Keith I. and Sundermann, Sean T (2007). Digital compilation of Northern Calaveras Fault Data for the Northern California Map Database: Collaborative Research with William Lettis & Associates, Inc., and the U.S. Geological Survey. Online: earthquake.usgs.gov/research/external/reports/05HQGR0023.pdf
- National Association of Pipeline Safety Representatives (2013). Compendium of State Pipeline Safety Requirements and Initiatives Providing Increased Public Safety Levels compared to Code of Federal Regulations – second edition. Online: www.napsr.org/Pages/Comp2013.aspx.
- Office of the State Fire Marshal Pipeline Failure Investigation Report, 2004 Nov 9 Walnut Creek Kinder Morgan incident.
- Office of the State Fire Marshal report on review of Kinder Morgan Integrity Management Program for pipelines in Contra Costa County (2014 June 2).
- Office of the State Fire Marshal PowerPoint presentation re: Kinder Morgan Integrity Management Program (2014 Dec 4). Online: 64.166.146.155/docs/2015/BOS/20150106_514/20327_ContraCostaCounty2014.pdf.
- Office of the State Fire Marshal letter (Bob Gorham) to Contra Costa County Board of Supervisors re: Kinder Morgan inspection/audit (2014 May 8).
- PHMSA corrective action order 2005 Aug 24 re: Kinder Morgan Pacific Operations (CAO 5-2005-5025H).
- PHMSA consent agreement 2006 March 29 re: Kinder Morgan Pacific Operations (CPF 5-2005-5025H). Online: primis.phmsa.dot.gov/comm/reports/enforce/documents/520055025H/CPF_NO_5_2005-5025H.pdf.
- PHMSA closure of consent agreement 2015 May 11 re: Kinder Morgan Pacific Operations (CPF 5-2005-5025H). Online: primis.phmsa.dot.gov/comm/reports/enforce/documents/520055025H/520055025H_closure%20letter_05112015.pdf.
- Pipeline and Informed Planning Alliance (2010). Partnering to Further Enhance Pipeline Safety in Communities through Risk-Informed Land Use Planning Final Report of Recommended Practices. Online: primis.phmsa.dot.gov/comm/publications/pipa/pipa-report-final-20101117.pdf
- Southern Pacific Transportation Company – Southern Pacific Pipe Lines, Inc. 1979 Easement (for Concord-San Jose pipeline).
- Southern Pacific Railroad – Santa Fe Pacific Pipelines 1994 Amended Easement (for Concord-San Jose pipeline, references original easement from June 5, 1970 that was not found).

- U.S. Dept of Transportation, Pipeline and Hazardous Materials Safety Administration (2012). Studies for the Requirements of Automatic and Remotely Controlled Shutoff Valves on Hazardous Liquids and Natural Gas Pipelines with Respect to Public and Environmental Safety (ORNL/TM-2012/411). Prepared by Oak Ridge National Laboratory, managed by UT-Battelle for the U.S. Dept of Energy. Online: www.phmsa.dot.gov/pv_obj_cache/pv_obj_id_2C1A725B08C5F72F305689E943053A96232AB200/filename/Final%20Valve_Study.pdf
- Wang, Yumei, Bartlett, Steven F., and Miles, Scott B (2012). Earthquake Risk Study for Oregon's Critical Energy Infrastructure Hub (Final Report to Oregon Department of Energy & Oregon Public Utility Commission). Oregon Department of Geology and Mineral Industries. Online: www.oregongeology.org/sub/earthquakes/cei-hub-report.pdf

Appendix D. All Reported Incidents in Contra Costa County

All Reported Incidents in Contra Costa County - 2002 to present (as of 4/1/15)

Significant Incidents are highlighted in yellow

Significant	Date	Name	City	Commodity spilled	Gallons spilled	Fatalities	Injuries	Property damage	Cause
Yes	1/8/2002	Sfpp, lp	Concord	Gasoline	168	0	0	\$183,180	Other
Yes	3/31/2002	Sfpp, lp	Richmond	Diesel fuel	3,360	0	0	\$230,290	Material and/or weld failures
No	4/21/2002	Sfpp, lp	Concord	Diesel fuel	546	0	0	\$9,639	Incorrect operation
Yes	6/21/2002	Pacific gas & electric co	Concord	Natural gas	N/a	0	0	\$151,000	Damage by outside forces
No	7/4/2002	Equilon pipeline co	Concord	Crude oil	10	0	0	\$7,508	Material and/or weld failures
No	8/14/2002	Sfpp, lp	Concord	Gasoline/diesel fuel	126	0	0	\$9,119	Equipment
Yes	9/7/2002	Sfpp, lp	Richmond	Gasoline	1,260	0	0	\$262,750	Material and/or weld failures
No	10/15/02	Venoco, inc	Pittsburg	Natural gas	N/a	0	0	\$24,000	Excavation damage
No	3/29/2003	Sfpp, lp	Concord	Turbine fuel	20	0	0	\$10,859	Equipment
Yes	4/1/2003	Sfpp, lp	Concord	Gasoline	22,260	0	0	\$162,287	Material and/or weld failures
Yes	4/14/2003	Sfpp, lp	Concord	Transmix	30,450	0	0	\$1,390,073	Corrosion
No	5/30/2003	Sfpp, lp	Concord	Gasoline	60	0	0	\$230	Incorrect operation
No	9/8/2003	Sfpp, lp	Concord	Turbine fuel	20	0	0	\$667	Incorrect operation
Yes	11/11/2003	Pacific gas & electric co	Walnut creek	Natural gas	N/a	0	0	\$750,000	Other
No	9/28/2004	Sfpp, lp	Concord	Gasoline/distillate mixture	126	0	0	\$54,202	Material and/or weld failures
Yes	11/7/2004	Sfpp I.P.	Martinez	Jet fuel	12,558	0	0	\$139,130	Excavation damage
Yes	11/9/2004	Sfpp I.P.	Walnut creek	Gasoline	23,688	5	3	\$734,449	Excavation damage
Yes	4/30/2006	Sfpp I.P.	Concord	Gasoline	3,234	0	0	\$499,493	Material and/or weld failures
No	6/5/06	Venoco inc.	Pittsburg	Natural gas	N/a	0	0	\$70,000	Corrosion
No	6/19/06	Pacific gas & electric co	Pittsburg	Natural gas	N/a	0	0	\$65,200	Excavation damage
Yes	9/8/2007	Pacific atlantic terminals llc	Martinez	Gasoline/reformate	7,056	0	0	\$547,084	Incorrect operation
No	3/5/2008	Pacific atlantic terminals llc	Martinez	Gasoline	10	0	0	\$3,908	Other
Yes	5/23/2008	Sfpp, lp	Richmond	Gasoline	168	0	0	\$114,815	Corrosion
No	6/24/2008	Pacific atlantic terminals llc	Martinez	Hydrotest water/oil mixture	21	0	0	\$64,712	Material and/or weld failures
No	11/5/2009	Plains marketing, I.P.	Martinez	Diesel fuel	168	0	0	\$34,800	Corrosion
Yes	8/23/2011	Sfpp, lp	Brentwood	Refined product	1,596	0	0	\$410,000	Equipment failure
Yes	8/27/2011	Conocophillips	Byron	Crude oil	2,352	0	0	\$1,275,040	Excavation damage

Appendix A

Yes	11/7/2011	Conocophillips	Concord	Crude oil	1,890	0	0	\$1,839,410	Corrosion failure
Yes	7/3/2012	Shell pipeline co., L.P.	Martinez	Refined product	546	0	0	\$176,000	Equipment failure
No	10/17/2012	Chevron pipe line co	Byron	Refined product	10	0	0	\$26,200	Equipment failure
Yes	8/8/2013	Sfpp, lp	Concord	Refined product	57	0	0	\$427,913	Material failure of pipe or weld
No	6/20/14	Pacific gas & electric co	Antioch	Natural gas	N/a	0	0	\$70,021	Excavation damage
No	6/21/2014	Sfpp, lp	Concord	Refined product	302	0	0	\$34,453	Incorrect operation
No	6/21/2014	Nustar terminals	Crockett	Refined product	1,554	0	0	\$52,000	Incorrect operation
No	9/14/2014	Sfpp, lp	Concord	Refined product	536	0	0	\$80,967	Incorrect operation
Yes	9/15/14	Pacific gas & electric co	Lafayette	Natural gas	N/a	0	0	\$115,315	Excavation damage
No	9/17/2014	Phillips 66 pipeline llc	Richmond	Refined product	89	0	0	\$5,000	Equipment failure
Yes	12/9/2014	Sfpp, lp	Concord	Refined product	0.42	0	0	\$150,501	Equipment failure
Yes	1/12/2015	Sfpp, lp	Richmond	Refined product	2,474	0	0	\$550,497	Equipment failure
Totals					116,716	5	3	\$10,732,712	

Appendix E. All Reported Incidents on Kinder Morgan's SFPP Pipeline System

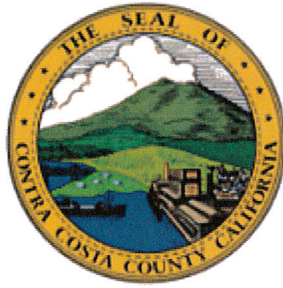
All incidents, 2006 - present. Significant Incidents are highlighted in yellow.

Date	City	State	County	Cause	Fatalities	Injuries	Property Damage	Gallons Spilled
5/23/2015	Rocklin	Ca	Placer	Material/weld/equip failure	0	0	\$5,578	0
2/23/2015	Long beach	Ca	Los angeles	Material/weld/equip failure	0	0	\$178,131	0
1/12/2015	Richmond	Ca	Contra costa	Material/weld/equip failure	0	0	\$550,497	2,436
12/9/2014	Concord	Ca	Contra costa	Material/weld/equip failure	0	0	\$150,501	0
10/6/2014	Brisbane	Ca	San mateo	Incorrect operation	0	0	\$16,169	0
9/14/2014	Concord	Ca	Contra costa	Incorrect operation	0	0	\$80,967	504
6/21/2014	Concord	Ca	Contra costa	Incorrect operation	0	0	\$34,453	294
8/8/2013	Concord	Ca	Contra costa	Material/weld/equip failure	0	0	\$427,913	42
1/8/2013	West sacramento	Ca	Yolo	Material/weld/equip failure	0	0	\$2,429	0
10/16/2012	Long beach	Ca	Los angeles	Material/weld/equip failure	0	0	\$16,012	252
8/23/2011	Brentwood	Ca	Contra costa	Material/weld/equip failure	0	0	\$410,000	1,596
8/10/2011	Colfax	Ca	Placer	Material/weld/equip failure	0	0	\$2,046	0
4/25/2011	Live oak	Ca	Sutter	Material/weld/equip failure	0	0	\$27,301	336
11/4/2010	Pomona	Ca	Los angeles	Material/weld/equip failure	0	0	\$64,964	84
7/19/2010	Rocklin	Ca	Placer	Material/weld/equip failure	0	0	\$49,500	0
3/16/2010	Sacramento	Ca	Sacramento	Corrosion	0	0	\$480,000	2,016
5/18/2009	Bloomington	Ca	San bernardino	Material/weld/equip failure	0	0	\$72,147	462
5/1/2009	Phoenix	Az	Maricopa	All other causes	0	0	\$33,684	714
9/18/2008	Deming	Nm	Luna	Material/weld/equip failure	0	0	\$2,431	0
6/4/2008	Indio	Ca	Riverside	Excavation damage	0	0	\$222,245	31,542
5/23/2008	Richmond	Ca	Contra costa	Corrosion	0	0	\$114,815	168
3/29/2008	Phoenix	Az	Maricopa	Material/weld/equip failure	0	0	\$5,212	42
2/15/2008	Phoenix	Az	Maricopa	Material/weld/equip failure	0	0	\$7,172	84
10/2/2007	Reno	Nv	Washoe	Material/weld/equip failure	0	0	\$4,055,353	35,742
4/8/2007	Long beach	Ca	Los angeles	Material/weld/equip failure	0	0	\$8,209	84
2/26/2007	El paso	Tx	El paso	Material/weld/equip failure	0	0	\$47,066	0
2/26/2007	Long beach	Ca	Los angeles	All other causes	0	0	\$144,063	126
1/12/2007	Rocklin	Ca	Placer	Material/weld/equip failure	0	0	\$249	0
11/28/2006	Long beach	Ca	Los angeles	Incorrect operation	0	0	\$5,030	0
10/23/2006	El paso	Tx	El paso	Incorrect operation	0	0	\$0	0
9/27/2006	Rocklin	Ca	Placer	Material/weld/equip failure	0	0	\$6,421	126
9/27/2006	El paso	Tx	El paso	Corrosion	0	0	\$177,110	84
9/11/2006	Carson	Ca	Los angeles	All other causes	0	0	\$11,158	0

Appendix A

Date	City	State	County	Cause	Fatalities	Injuries	Property Damage	Gallons Spilled
8/24/2006	Soda springs	Ca	Nevada	Corrosion	0	0	\$1,608,202	4,074
8/23/2006	West sacramento	Ca	Yolo	Material/weld/equip failure	0	0	\$52,488	0
7/24/2006	Stockton	Ca	San joaquin	Material/weld/equip failure	0	0	\$223,391	504
6/22/2006	Dublin	Ca	Alameda	Other outside force damage	0	0	\$1,845,651	672
6/10/2006	El paso	Tx	El paso	Material/weld/equip failure	0	0	\$557	84
6/9/2006	Long beach	Ca	Los angeles	Material/weld/equip failure	0	0	\$520	0
5/26/2006	Long beach	Ca	Los angeles	Incorrect operation	0	0	\$32,937	1,134
5/21/2006	Rocklin	Ca	Placer	All other causes	0	0	\$50,512	168
5/16/2006	Deming	Nm	Luna	Material/weld/equip failure	0	0	\$5,142	84
4/30/2006	Concord	Ca	Contra costa	Material/weld/equip failure	0	0	\$499,493	3,234
3/17/2006	El paso	Tx	El paso	Material/weld/equip failure	0	0	\$25,093	42
3/13/2006	Tucson	Az	Pima	Incorrect operation	0	0	\$173	0
1/27/2006	Portland	Or	Multnomah	Corrosion	0	0	\$30,145	84
Totals					0	0	\$11,783,130	86,814

Appendix B



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

5.

Meeting Date: 04/14/2016

Subject: CONSIDER selected recommendations in the Pipeline Safety Trust report directed at the County or County Departments, and DIRECT staff as appropriate.

Submitted For: TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE,

Department: Conservation & Development

Referral No.: 12, 15

Referral Name: MONITOR and REPORT on the Underground Utilities Program and MONITOR the Iron Horse Corridor Management Program.

Presenter: Michael Kent, Executive
Assistant to Hazardous
Materials Commission

Contact: Michael Kent (925)313-6587

Referral History:

This report has not been taken up by TWIC in the past, but is related to an earlier presentation at TWIC by the State Fire Marshal on the Integrity Management Plan for the Kinder Morgan pipeline running parallel to the Iron Horse Trail and other discussions that have occurred at TWIC concerning pipeline safety.

Referral Update:

In 2015 the Alamo Improvement Association received a grant from the Federal Department of Transportation to conduct public engagement around pipeline safety issues. As part of that grant they contracted with the Pipeline Safety Trust to write a report on pipeline safety in Contra Costa County. That report, Pipeline Safety in Alamo, and surrounding areas within Contra Costa County, California (see attached), contained nine recommendations to the County concerning pipeline safety issues.

On January 28, the Hazardous Materials Commission unanimously agreed that the following recommendations contained in the report merit further consideration by the Board of Supervisors. The Commission encourages the Board to discuss these recommendations with the appropriate departmental staff and other stakeholders to determine what measures may be necessary to implement

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these recommendations, to identify the appropriate lead staff that would be necessary to implement these measures, and to identify potential sources of any additional funding which may be needed to implement these recommendations.

The page number where each recommendation can be found in the Pipeline Safety Trust report is listed after each recommendation:

1. Review all development applications for opportunities to improve existing ingress/egress where currently limited, and where possible, include conditions on approvals to improve connectivity and avoid exacerbation of access problems. (p.27)

2. Plan emergency evacuation ingress/egress for areas in Alamo west of Danville Boulevard and the Iron Horse Corridor where a single pipeline crossing road is the only access for numerous homes and facilities with the goal of creating public accessibility across these "dead-end" neighborhoods that necessitate crossing the pipeline to access any services. (p.27)

3. Ensure the county has complete and accurate records of corridor and right of way locations. Continue to coordinate with Kinder Morgan and other utilities on resolution of encroachments into pipeline Rights of Way. (p. 23)

4. Ensure the single staff point-of-contact for citizens with concerns about multiple utility issues and right of way questions has technical training on safety concerns, adequate resources to conduct regular and broad community outreach (especially along the Iron Horse Trail Corridor), and resources to work in close coordination with other related departments and advisory groups. (p. 23)

5. Request appropriate staff conduct an analysis of all congregate facilities located in close proximity to transmission pipelines; Work with other emergency response agencies to develop a list of resources for emergency and evacuation planning expertise for congregate facilities near pipelines that can include potential hazards from a pipeline incident, and mitigation strategies for those hazards based on site-specific considerations.(p. 27)

6. Adopt clear policies and deterrents regarding preventing encroachment including the review

Appendix B

of setback variances by municipal advisory councils or committees and department staff, so that properties and vegetation along utility corridors do not encroach on pipelines. (p. 23)

On February 17, 2016 the Planning and Policy committee of the Hazardous Materials Commission voted to endorse language changes the Department of Conservation and Development is proposing to make to Section 82 of the County Zoning Code in response to the following recommendation in the Pipeline Safety Report.

7. Consider adding goals and policies regarding pipelines to the General Plan, and amending Contra Costa County Zoning Code 82.2.010 so that all gas and hazardous liquid transmission pipelines would be subject to land use regulations. Consider additional ordinances (s) pertaining to zoning and land use that are proposed for construction, replacement, modification, or abandonment.

The following two recommendations from the report did not garner any support from the Commission:

8. Work in coordination with pipeline operators to develop a technical advisory body that can review the integrity management plans (similar to the Santa Barbara County System Safety Reliability Review Committee) and other technical assessments of the pipelines in order to cultivate informed technical expertise in the county and increase public trust and awareness.

9. Expand the scope of the Hazardous Materials Ombudsman and the Hazardous Materials Commission regarding pipelines to provide an ongoing review of pipeline operators' emergency plans and an active role in possible county efforts regarding additional coordinated technical review of pipeline integrity management planning.

Recommendation(s)/Next Step(s):

CONSIDER selected recommendations in the Pipeline Safety Trust report directed at the County or County Departments, and DIRECT staff as appropriate.

Fiscal Impact (if any):

None.

Attachments-Y

HMC Pipeline Report to TWIC 41416

Appendix C



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

7.

Meeting Date: 06/09/2016

Subject: CONSIDER Department responses to the Pipeline Safety Report and DIRECT staff on next steps.

Submitted For: TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE,

Department: Conservation & Development

Referral No.: 15

Referral Name: Monitor the Iron Horse Corridor Program

Presenter: Carrie Ricci, Department of Public Works, and John Cunningham,
Department of Conservation and Development

Contact: Carrie Ricci (925)313-2235

Referral History:

At the April meeting of the Transportation, Water and Infrastructure Committee (TWIC), Michael Kent, Executive Assistant to the Hazardous Materials Commission presented the Pipeline Safety Report that was developed by the Pipeline Safety Trust.

The Hazardous Materials Commission supported seven of the nine recommendations moving forward. TWIC directed staff from the Departments of Conservation and Development and Public Works to review the recommendations and report on how they could be implemented within the County.

Referral Update:

On May 23, 2016 staff from the Departments of Conservation and Development and Public Works met with staff from the Office of Emergency Services, Health Services, Contra Costa County Fire Protection District and San Ramon Valley Fire District to discuss the following recommendations, what is currently being performed and any additional steps that can be taken to improve in these areas.

Recommendation: Review all development applications for opportunities to improve existing ingress/egress where currently limited, and where possible, include conditions on approvals to improve connectivity and avoid exacerbation of access problems.

Response: The Contra Costa County Fire Protection District and San Ramon Valley Fire District review development applications to determine based on the size of the development whether a second access is required. Access requirements are determined by the Contra Costa County Fire Code.

Recommendation: Plan emergency evacuation ingress/egress for areas in Alamo west of Danville Boulevard and

the Iron Horse Corridor where a single pipeline crossing road is the only access for numerous homes and facilities with the goal of creating public accessibility across these “dead-end” neighborhoods that necessitate crossing the pipeline to access any services.

Appendix C

Response: The San Ramon Valley Fire Protection District is in the preliminary phase of developing evacuation maps for neighborhoods on the west side of the trail in the Danville area. They have requested feedback from the Danville Police Department and will look at the Alamo area next. The information will be incorporated into a mailer and is anticipated to be sent to residents in fiscal year 2016-17. In some emergency situations, Shelter in Place may be the most appropriate option.

Recommendation: Ensure the County has complete and accurate records of corridor and right of way locations. Continue to coordinate with Kinder Morgan and other utilities on resolution of encroachments into pipeline rights of way.

Response: The County has current maps that show property lines and utility easements. Staff continues to work with the utilities and property owners to address encroachments.

Recommendation: Ensure the single staff point-of-contact for citizens with concerns about multiple utility issues and right of way questions has technical training on safety concerns, adequate resources to conduct regular and broad community outreach (especially along the Iron Horse Trail Corridor), and resources to work in close coordination with other related departments and advisory groups.

Response: The Public Works Department has a single staff contact for the corridor who is the Iron Horse Corridor Manager. The Corridor Manager works with the utilities, County Survey staff and property owners to address right of way questions. The Corridor Manager interacts with other departments to address corridor concerns and attends advisory committee meetings, as needed to share information with the community. The Department has contacts with all of the utilities and the State Fire Marshal so they can provide expertise, as needed.

Recommendation: Request appropriate staff conducts an analysis of all congregate facilities located in close proximity to transmission pipelines. Work with other emergency response agencies to develop a list of resources for emergency and evacuation planning expertise for congregate facilities near pipelines that include potential hazards from a pipeline incident, and mitigation strategies for those hazards based on site-specific considerations.

Response: The Fire District and Health Services discussed working with Community Awareness and Emergency Response (CAER) to develop a fact sheet to send to the congregate facilities that describes what to consider regarding pipelines when they're developing their emergency plans. The term congregate will need to be further defined to determine what facilities would receive this information. San Ramon Valley Fire Protection District has an evacuation video developed for this type of scenario that has been promoted to surrounding jurisdictions.

Recommendation: Adopt clear policies and deterrents regarding preventing encroachments including review of setback variances by municipal advisory councils or committees and department staff, so that properties and vegetation along utility corridors do not encroach on pipelines.

Response: The County has clear policies that prevent encroachments. Property owners and contractors are required to apply for a permit to access and/or perform work in the Iron Horse Corridor. The Public Works Department is looking into different methods to communicate this information to property owners adjacent to the Iron Horse Corridor, such as informational letters

that remain. Appendix C contains the requirements of the corridor property lines, utilities in the corridor and the requirement to call Underground Service Alert when digging. Other possibilities include Board of Supervisors email communication and markers in the corridor designating the property line in various locations. The County and cities along the corridor have setback requirements in place. Utilities companies, specifically Kinder Morgan routinely clears vegetation over their easement. When property owners apply for a setback variance the application may go to the appropriate municipal advisory committee for review and a recommendation.

Recommendation: Consider adding goals and policies regarding pipelines to the General Plan, and amending Contra Costa County Zoning code 82.2.010 so that all gas and hazardous liquid transmission pipelines would be subject to land use regulations. Consider additional ordinances pertaining to zoning and land use that are proposed for construction, replacement, modification, or abandonment.

Response: The Land Use, Transportation and Circulation, Open Space, and Safety elements of the County General Plan contain references to pipelines that transport hazardous materials. The Land Use and Safety elements also contain policies, though they are few and their nature is more suggestive than directive. Because the County does not always have jurisdiction over pipeline projects, amending the General Plan to add goals and policies pertaining directly to pipeline development may have limited value. However, adding policies addressing the relationship of other land uses to pipelines could be useful. Examples of such policies could include, but not be limited to:

- Discouraging placement of uses and facilities which primarily house or serve vulnerable or sensitive populations (elderly, ill, children, etc.) within X feet of a hazardous materials pipeline right-of-way.*
- Requiring deed notifications for all newly subdivided lots within X feet of a hazardous materials pipeline right-of-way.*
- Encouraging new buildings to be located away from hazardous materials pipeline rights-of-way when such design flexibility exists on the project site.*

Ordinance Code Section 82-2.010 currently states that pipelines are exempt from the County's zoning regulations. However, on May 24, 2016, the Board of Supervisors adopted an amendment to Section 82-2.010 clarifying that pipelines are subject to Ordinance Code Chapter 84-63, Land Use Permits for Development Projects Involving Hazardous Waste or Hazardous Materials. The amendment becomes effective 30 days after adoption.

Staff believes the Ordinance Code provides for proper review of pipelines and sees no compelling need for additional regulation of pipeline construction, replacement, modification, or abandonment. Statutory exemptions exist for replacement/modification of pipelines and often these activities take place under order from a federal or state agency. Pursuant to Chapter 84-63, pipeline projects located more than 300 feet from residential or commercial properties are not "development projects" and therefore do not require a land use permit. If a pipeline is located

within 300 feet of such properties and has a hazard score [\[1\]](#) of 80 or higher, then a land use permit is required and an environmental review will be performed.

The Transportation Risk component of hazard scoring rates pipelines as the preferred method for transporting hazardous materials, relative to truck, rail, and marine vessels. Discouraging pipeline development through unnecessary regulation could have the unintended consequence of incentivizing the use of less safe transportation methods, especially since increasing the frequency of truck, rail or vessel deliveries typical would not require a County review.

[\[1\]](#) The hazard score is calculated pursuant to Ordinance Code Section 84-63.1004 and represents a project-specific risk assessment based on the following factors (possible points for each factor are indicated in parentheses): Transportation Risk (0-10); Community Risk – Distance from Receptor (1-30); Community Risk – Type of Receptor (4-7); Facility Risk – Size of Project (Total Amount Change in Tons; 0-30); Facility Risk – Size of Project (Percentage Change; 0-6); and Hazard Category of Material or Waste (1-3).

Recommendation(s)/Next Step(s):

CONSIDER Department responses to the Pipeline Safety Report and DIRECT staff on next steps.

Fiscal Impact (if any):

N/A



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

7.

Meeting Date: 08/11/2016

Subject: CONSIDER report on Local, State, and Federal Transportation Related Legislative Issues and take ACTION as appropriate.

Department: Conservation & Development

Referral No.: 1

Referral Name: REVIEW legislative matters on transportation, water, and infrastructure.

Presenter: John Cunningham, DCD

Contact: John Cunningham
(925)674-7883

Referral History:

This is a standing item on the Transportation, Water, and Infrastructure Committee referral list and meeting agenda.

Referral Update:

In developing transportation related legislative issues and proposals to bring forward for consideration by TWIC, staff receives input from the Board of Supervisors (BOS), references the County's adopted Legislative Platforms, coordinates with our legislative advocates, partner agencies and organizations, and consults with the Committee itself.

Recommendations are summarized in the Recommendation(s)/Next Step(s) section at the end of this report. Specific recommendations, if provided, are underlined in the report below. This report includes three sections, 1) LOCAL, 2) STATE, and 3) FEDERAL.

1) LOCAL

Transportation Expenditure Plan (TEP)

Background: The Contra Costa Transportation Authority (Authority) is in the process of putting a half-cent transportation sales tax on the ballot in November 2016. A TEP is a statutorily required component of a transportation sales tax. This is a standing TWIC item for the foreseeable future.

TEP Update

The Authority approved the TEP in May and circulated the document to all Cities/Towns and the County for approval. As of July 12 all Cities/Towns and the County had approved the TEP. The Board of Supervisors introduced the ordinance to place the TEP on the November 8, 2016 ballot and will take final action at the second reading of the ordinance on August 9, 2016.

At the July TWIC meeting the Committee requested that the most recent polling information on the TEP be provided to the Committee. That information is attached to this report.

Accessible Transit Service Strategic Plan/Transportation Expenditure Plan: In response to advocates and the County CCTA included in the TEP that required 1) an "Accessible Transit Service (ATS) Strategic Plan" be conducted and, 2) transit providers must participate in the planning effort in order to be eligible for any transit funding in the TEP. In later TEP versions that requirement removed for eligibility for conventional, fixed route funding but the requirement remains for the Transportation for Seniors and Disabled funding category.

During one TEP discussion at the CCTA Board there was a comment (paraphrased) "...there was no need to wait for the TEP to conduct the ATS Plan, we all know it needs to be done..." In response to that comment, CCTA and County staff have initiated a dialog on the ATS Plan with a coalition of transit operators and accessible transit advocates. Funding is being sought and a small working group of staff has been meeting to discuss. A draft of potential scope of work concepts has been distributed at that working group. A draft list of study components has been developed and is provided below for the Committees review:

Framework for an ATS Strategic Plan Scope of Work

A detailed scope of work will be finalized after a consultant has been selected. The following are issues the coalition expects to be addressed in the final scope of work.

- The study should review recent breakdowns in accessible transit institutions (San Bernardino, Santa Clara County, and ???) and make recommendations to avoid the conditions which led to these setbacks.
- Identification of senior and disabled demographics and unmet needs based on existing trip making characteristics, and any potential latent demand.
- Documentation of inter and intra county transfer trips (number of trips, providers).
- Analysis of the need for, and implications of seamless travel between service areas, and different service types (demand response, fixed route, and rail service).
- Interviews with randomly selected individuals or organizations that use (or could potentially use) or interface with AT in the county including existing patrons, program managers (dialysis, regional center, adult day health care, etc), healthcare & other care providers, homeless shelters, Veterans Affairs/Veterans Health Administration, etc. to document service needs.
- Address ADA and non-ADA services and consider/recommend funding allocations based on service type need.
- Consideration of any coordination requirements anticipated from the Federal Transit Administration (FTA), Caltrans, or the Metropolitan Transportation Commission (MTC).
- To the extent possible, recommendations regarding software/hardware needs and costs will be provided. The study will document data compatibility needs within the county/adjoining counties/region, current and emerging data interoperability standards, support for robust reporting (including NTD) and analysis functions, advanced/automated scheduling functionality including web/mobile based and interactive voice response.
- Institutional arrangements: The study should address any service model and best practice, regardless of the existing arrangements in the county. Applicable models should increase efficiencies, improve service, attract additional funding, and be appropriate for county trip making characteristics.
- The service model should facilitate the comingling of different funding sources and riders of different trip and funding eligibility.
- All functions should be addressed including, dispatch, maintenance, eligibility, contracting methods, service quality surveying/reporting, etc. to the extent possible.
- The recommendations will be detailed, documenting any phasing or transitional steps necessary and any specific institutional arrangements or intergovernmental agreements necessary.
- Document any potential issues with study recommendations relative to FTA and ADA service obligations and initiate any necessary consultation/resolution.
- The study should identify benefits to service provision through a model that accommodates or encourages:
 - Competition between transportation service providers to help control costs and improve service
 - donations from private individuals or foundations

- Efficient implementation of emerging technologies/service taking in to account the sensitive population, complex funding arrangements, driver training requirements/vetting, etc.
- A reasonable balance between the beneficial consistency of governance and operations with the ability to take advantage of the benefits of competitive, private sector bidding.

RECOMMENDATION: DISCUSS any local issues of note and take ACTION as appropriate.

2) STATE Legislative Report

The August legislative report from the County's legislative advocate, Mark Watts, is attached (*June TWIC Report*).

Mr. Watts will be present at the August meeting to discuss state legislation, the status of the state budget/transportation revenues, Iron Horse corridor status and other items of interest to the Committee.

School Siting and Safety

The County has been engaged in advocating for improved school siting and safety for a number of years. That advocacy resulted in some specific activities. A brief update on each activity is below.

Department of Education Revisions to School Siting Policies: After a two reports (in 2011 and 2012) from the State Superintendent of Public Instruction on broad school policy reform including school siting issues, the state held a "Policy Symposium" in December 2012 to discuss, among other things, bringing school siting policies in to line with other state policies such as active transportation, safe routes to school, and greenhouse gas reduction initiatives.

It would appear that any momentum that was present with these initiatives has been lost. The Department of Education recently released a white paper, "Sustainable Communities and School Planning" (attached) the title of which self-describes the contents of the document. The document lists existing guidelines and statutes and describes how these policies could be used to develop sustainable communities.

Senate Bill 313 (Monning): Zoning Ordinances: School Districts/Farmland: The bill proposed modest requirements placed on school districts that sought to construct facilities on agricultural land. The California Farm Bureau Federal (CFBF) was working on the bill and consulting with County staff on the various revisions. CFBF staff determined that they would not be able to secure approval of a bill that had any meaningful reform and abandoned the effort for this year.

Senate Bill 632 (Cannella): School Zone Expansion/"When Children Are Present"

Reforms: The Senate Committee on Transportation and Housing referred the bill to the California Traffic Control Device Committee (CTCDC) due to the technical nature of the bill. The CTCDC formed a school zone subcommittee to address the issues. The subcommittee and the CTCDC met several times to discuss the changes to the code found in the bill.

In summary, neither Caltrans staff or Committee leadership appeared receptive to meaningful changes to current policies. Final input to the Senate T&H Committee from the CTCDC is not yet available but staff anticipates little to progress on this particular initiative.

Staff will discuss options for the Committee to consider at the August TWIC meeting.

RECOMMENDATION: DISCUSS any state issues of note and take ACTION as appropriate.

3) FEDERAL No written report in August.

RECOMMENDATION: DISCUSS any federal issues of note and take ACTION as appropriate.

Recommendation(s)/Next Step(s):

CONSIDER report on Local, State, and Federal Transportation Related Legislative Issues and take ACTION as appropriate including CONSIDERATION of any specific recommendations in the report above.

Fiscal Impact (if any):

There is no fiscal impact.

Attachments

TWIC State Legislative Report August 2016

CCTA TEP June Polling Results

CDE Best Practices

Smith, Watts & Hartmann, LLC.

Consulting and Governmental Relations

MEMORANDUM

TO: John Cunningham

FROM: Mark Watts

DATE: August 2, 2016

SUBJECT: **August TWIC Report**

Key Bills - Update

Presented below are brief summaries of remaining bills of interest to the County, including AB 1592 (Bonilla) and AB 1764 (Stone). A brief summary of the key transportation items acted upon on the pending state budget is included, as well as an update on the effect locally of legislation approved this year to begin state repayment of outstanding loans.

AB 1592 (Bonilla)

This measure authorizes the Contra Costa Transportation Authority to conduct a pilot project for the testing of autonomous vehicles.

The Senate Appropriations Committee moved the bill out on August 1, 2016, based on very minor cost implications to the state. Amendments taken earlier at the suggestion of the Senate Transportation Committee imposed a new requirement for insurance and limits on the use of vehicle data.

The Tech industry objected to the amendments that related to limits on vehicle data. Through the month of July, CCTA management and TechNet worked to develop alternative language added to the bill on August 2. The new language would (1) allow the DMV to require the submission of information and data regarding the testing of autonomous vehicles, and (2) would require the operator of the autonomous vehicle technology to disclose what personal information concerning a pilot project participant is collected by an autonomous vehicle.

The bill is on the Senate floor and when passed, will return to the Assembly for concurrence.

AB 1746 (Stone)

This bill would have extended the present limited authority for a pilot program to operate transit buses on highway shoulders to additional transit operators, including Livermore Amador Valley Transit Authority (LAVTA) and Central Contra Costa Transit Authority (CCCTA).

925 L Street, Suite 220 ♦ Sacramento, CA 95814
Telephone: (916) 446-5508 ♦ Fax: (916) 266-4580

Late opposition from public safety organizations led to the bill failing to be considered in the Senate Transportation & Housing committee on June 28th, as the author withdrew it from consideration. Having thus failed a critical deadline, it is no longer viable.

State Transportation Funding

The final week of July was busy getting ready for the return of the Legislature on Monday, August 1.

Negotiations between Sen. Beall and Assembly Member Frazier on a combined transportation reform and revenue package have gone well, and a consensus bill is expected to be ready for introduction early next week. There are still a few outstanding issues that will require the direct engagement of the authors, but it appears that language for most of the proposal has already been drafted. If enacted, the bill would produce roughly \$6.5 billion per year when fully implemented.

Efforts to engage the legislature in considering a transportation bill are beginning to pay off with a focus on engaging Assembly Republicans in discussions at the staff level on convening meetings to see “what might be possible.” Assembly Republican Leader Mayes has expressed a willingness to sit down with the Democratic leaders. Finally, staff in the Governor’s Office has had conversations with Assembly Republican staff about a transportation package and Transportation Secretary Kelly is involved in direct talks with Sen. Beall and Assembly Member Frazier as well.

Iron Horse Trail

I revisited with the new CTC executive director on the Commission’s response to the letter that they had suggested the County send to them. She is confirming that the letter comports with the advice given and coordinating an additional review with Caltrans, who have been the grant mangers for the grants in question.



Contra Costa County Voter Telephone Survey Summary Report



Presented to the
Contra Costa Transportation Authority
Board of Directors

July 6, 2016
Authority Special Meeting Handout July 6, 2016
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Methodology

- ▶ Telephone survey of Likely voters in Contra Costa County
- ▶ Interviewing conducted June 15 - 23, 2016
- ▶ 800 total interviews countywide; Margin of Error = ± 3.50 points
- ▶ Interviewing conducted by trained, professional interviewers
- ▶ Where applicable, results compared with past research conducted for the CCTA
- ▶ Split sample methodology employed to test potential order effects of presentation of CCTA and BART measures. Half of respondents heard the CCTA measure first, the other half heard the BART measure first. 400 total interviews per split; Margin of Error = ± 4.9 points
- ▶ Interviews were distributed at the following proportions to allow for regional analysis , and weighted to the appropriate likely voter population distribution

Region	Number of Interviews (Unweighted n)	Margin of Error (+/-)	Weighted %
Central	226	6.5 percentage pts	31%
East	187	7.2 percentage pts	24%
Lamorinda	96	10.0 percentage pts	9%
South	126	8.7 percentage pts	15%
West	165	7.6 percentage pts	21%

Please note that due to rounding, some percentages may not add up to exactly 100%.

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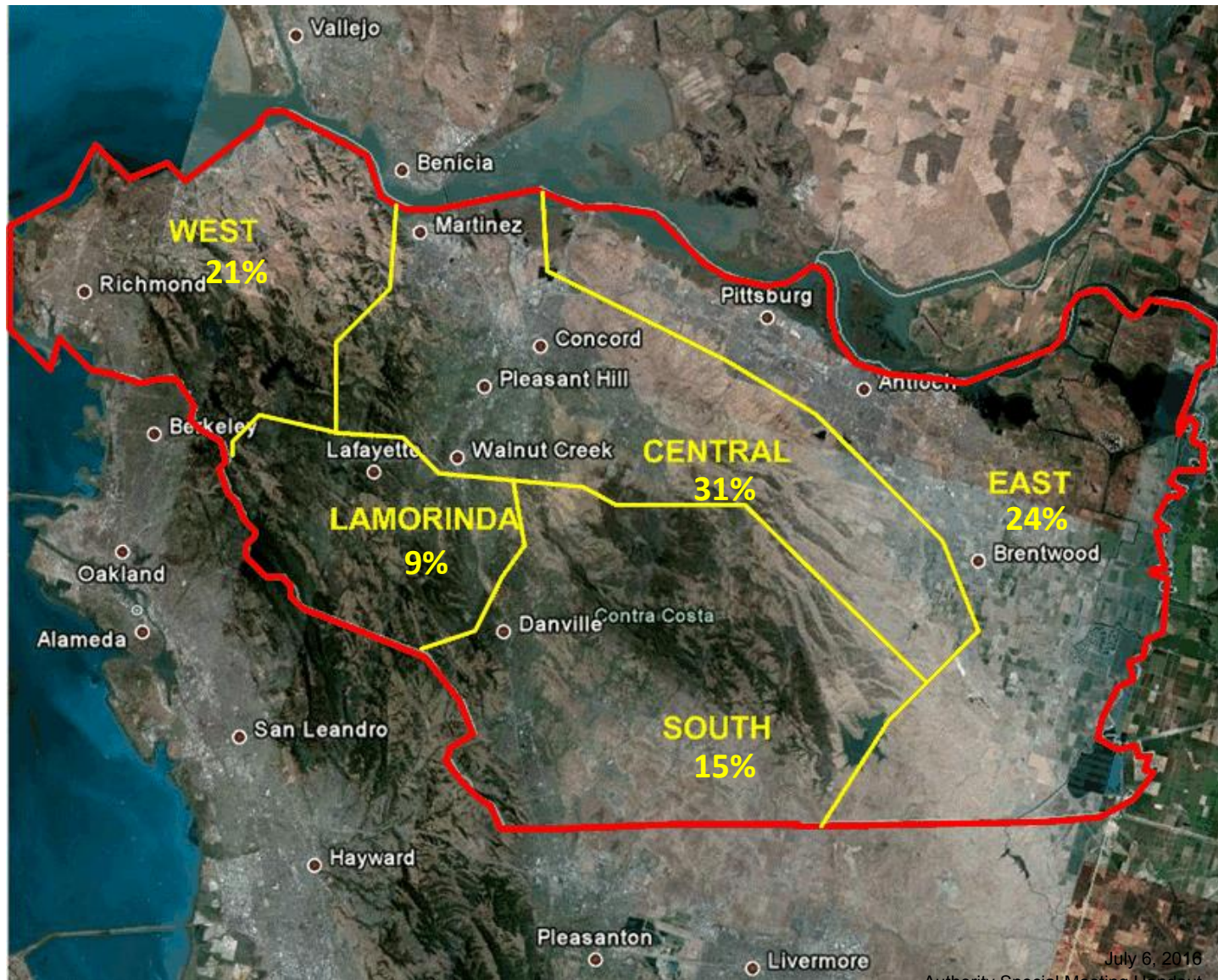


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Key Findings

- ▶ Voters are optimistic about the direction of the County, and three quarters see a need for additional transportation funding for Contra Costa County's transportation network.
- ▶ Support for a transportation sales tax is supported by 65% of likely voters, within the margin of error of the two-thirds needed for passage.
 - The ballot question as it was tested may have obscured the fact that this measure augments an existing tax for an existing agency; refinements are recommended to ensure clarity on that point.
- ▶ The plan includes a number of elements that are strongly supported by voters, such as pothole and road repairs, traffic congestion reduction, and transparency and accountability components.
- ▶ The survey's presentation of the CCTA and BART measures only, without the additional context that will be present in the election, may have artificially pitted the measures against each other in a way that does not represent the true voter experience.

Region Subgroups



Demographics by Region

	Overall	Central	East	Lamorinda	South	West
Male	46%	45%	44%	48%	50%	46%
Female	54%	55%	56%	52%	50%	54%
18-49	35%	30%	38%	38%	37%	37%
50-64	34%	34%	36%	33%	35%	31%
65+	31%	36%	26%	29%	28%	32%
White	66%	80%	55%	70%	68%	53%
Non-white	34%	20%	45%	30%	32%	47%
Democrat	51%	50%	53%	43%	37%	63%
Republican	25%	27%	24%	34%	38%	9%
NPP/ Other	24%	23%	22%	23%	25%	27%
Voted 0-3/6	49%	41%	62%	43%	52%	47%
Voted 4-5/6	26%	26%	25%	29%	27%	25%
Voted 6/6	25%	33%	14%	28%	21%	27%

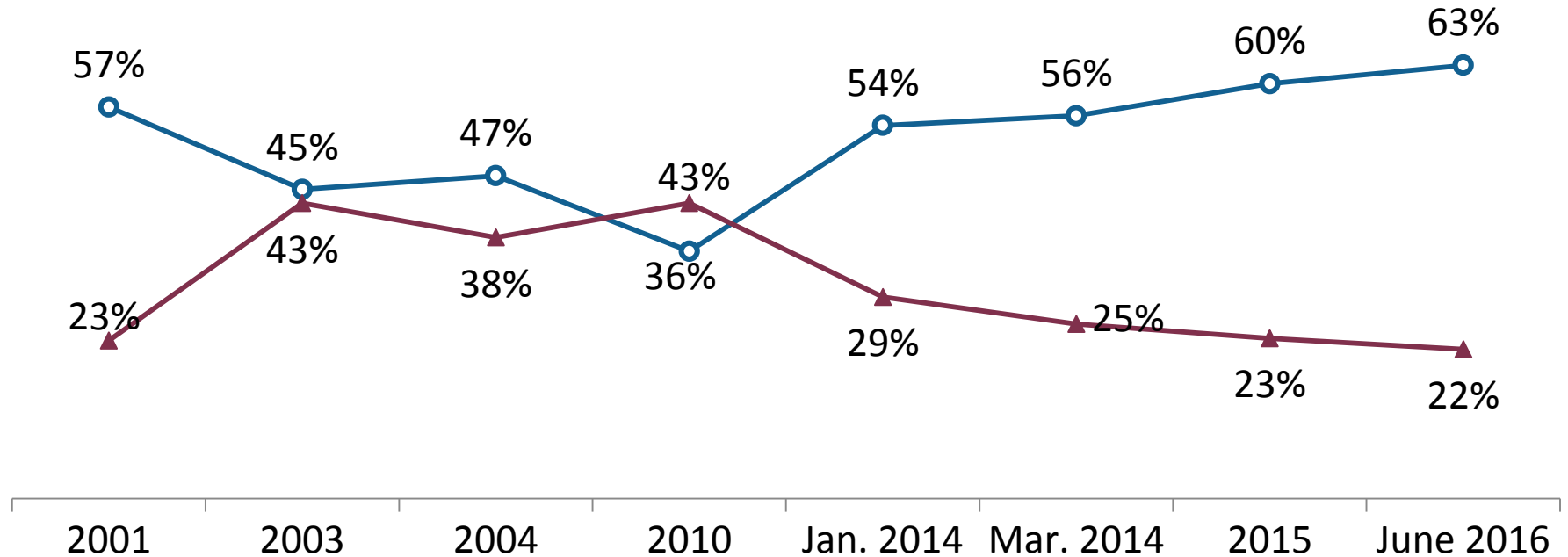


General Environment

Right Direction/Wrong Track

Optimism in Contra Costa County has steadily increased in the past six years.

—○— Right Direction —▲— Wrong Track



Q5. Do you think things in Contra Costa County are generally going in the right direction, or do you feel that things are pretty seriously off on the wrong track?

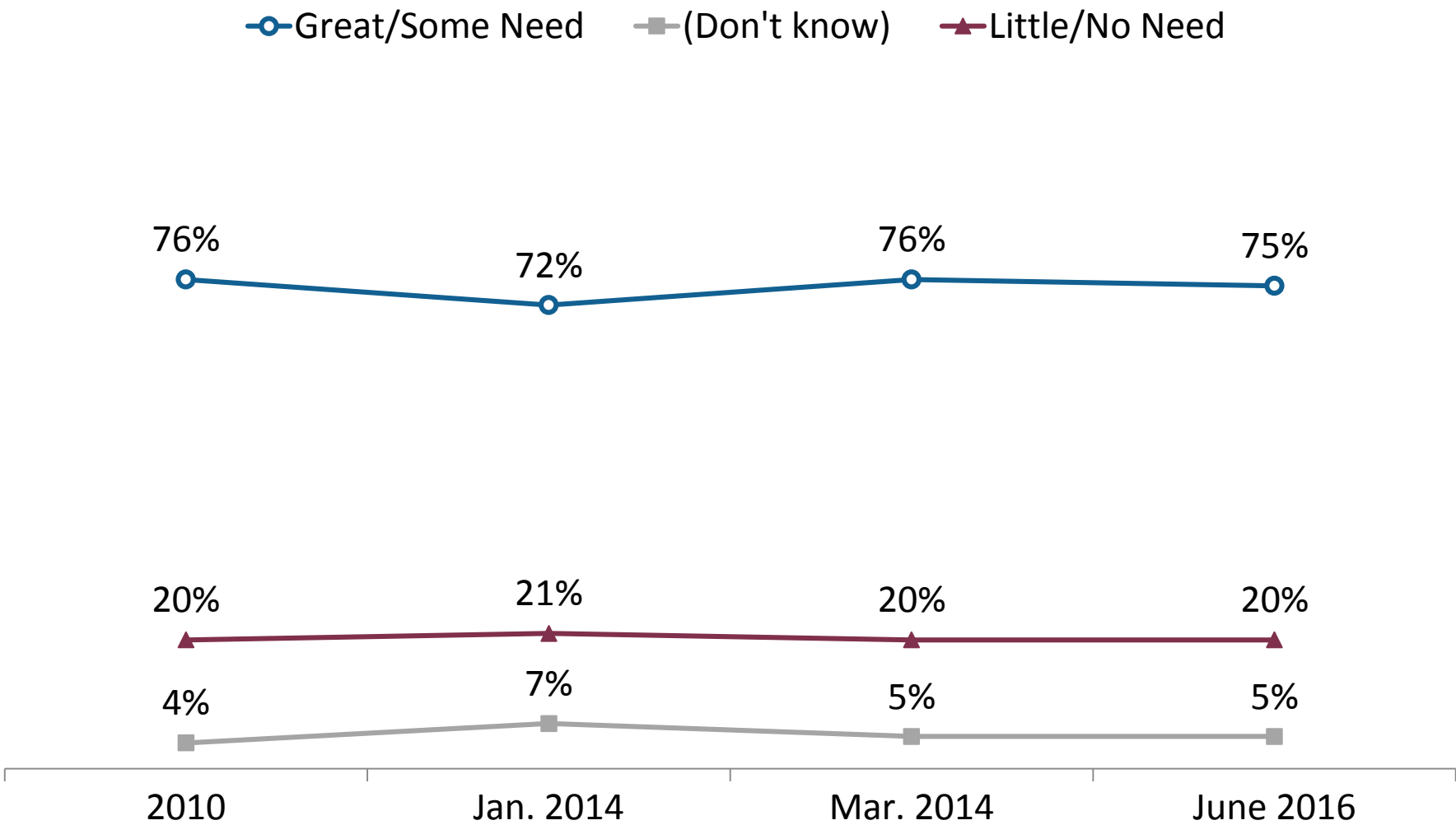
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Need for Transportation Funding

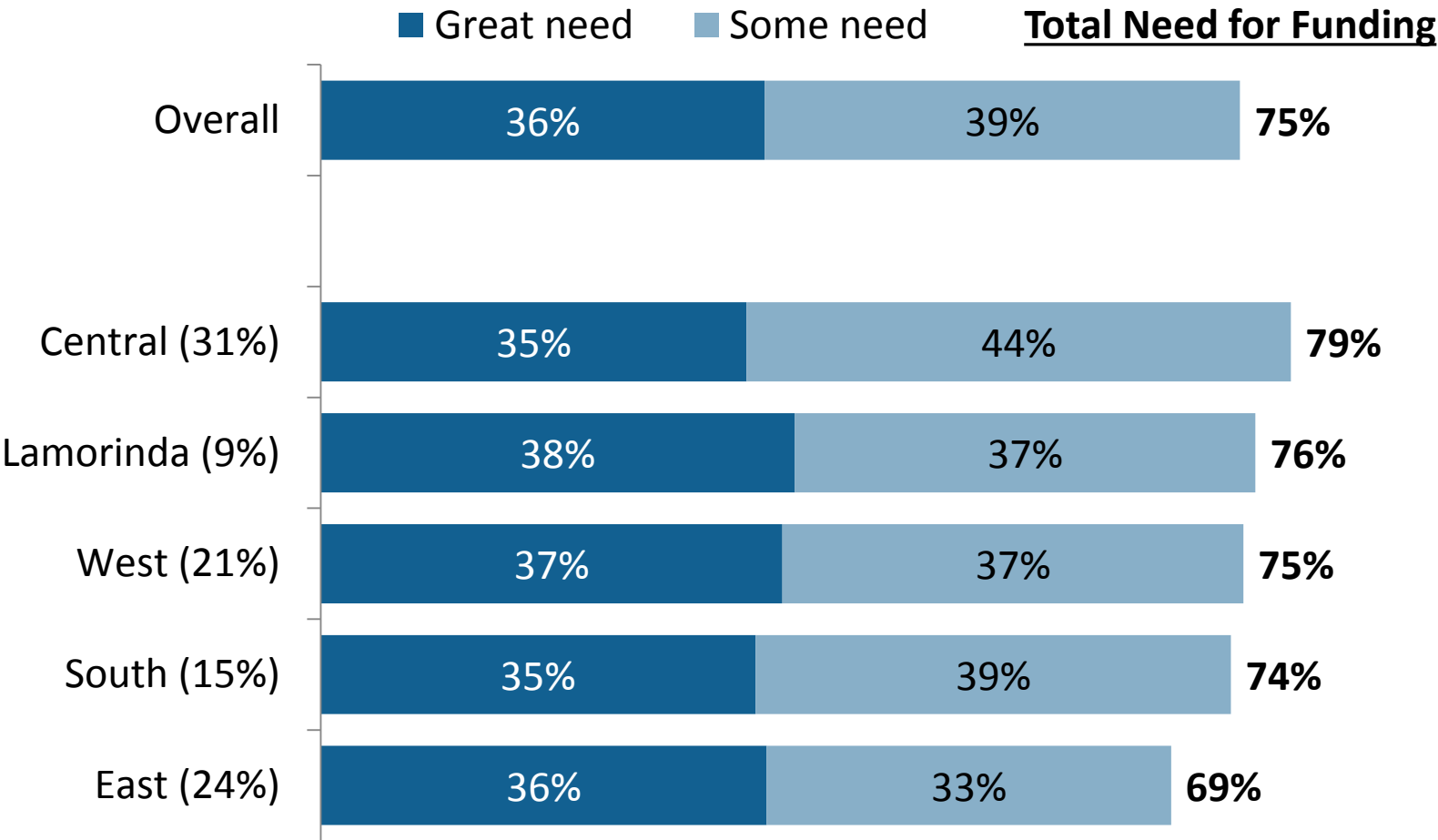
The perceived need for funding has remained relatively consistent.



Q6: Thinking about the roads, highways, BART, buses, bike paths, and sidewalks in Contra Costa County, that is, the entire county transportation network, would you say that there is a great need for additional funding, some need, a little need, or no real need for additional funding?

Need for Transportation Funding

Three-quarters of county voters believe there is a need for more transportation funding, with awareness of need high in all parts of the county.



Q6: Thinking about the roads, highways, BART, buses, bike paths, and sidewalks in Contra Costa County, that is, the entire county transportation network, would you say that there is a great need for additional funding, some need, a little need, or no real need for additional funding?



Support for Transportation Revenue Measures

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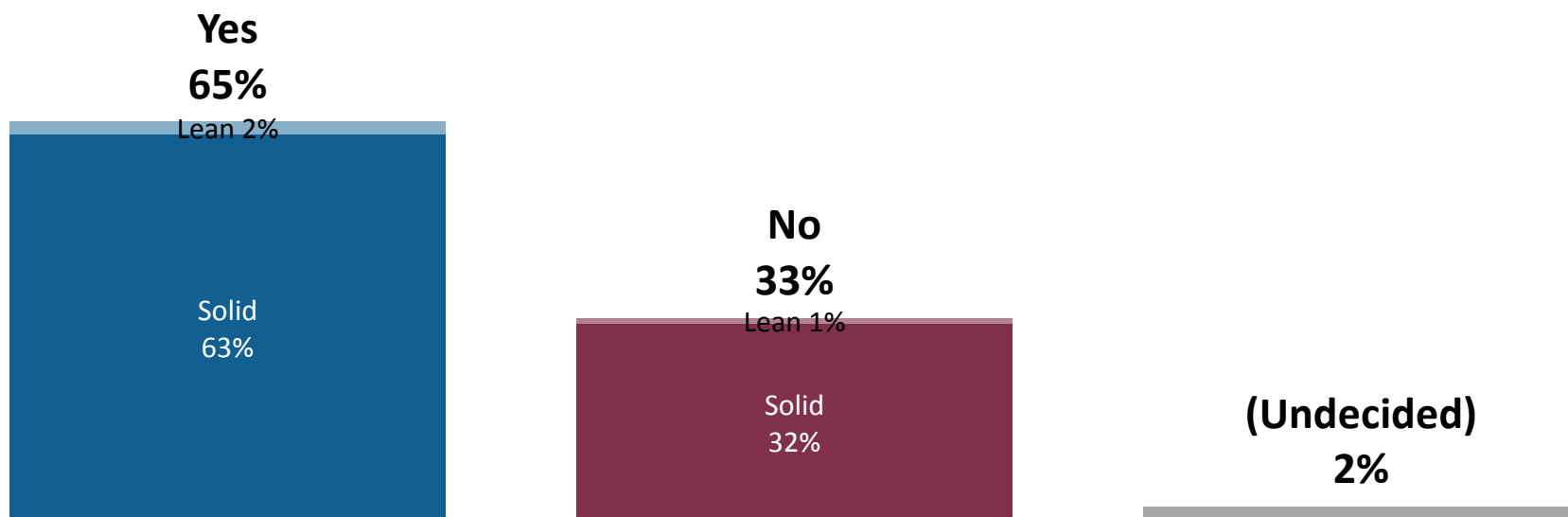
CCTA Measure Initial Vote

Initial support is within the margin of error of a two thirds threshold.

To implement a Transportation Expenditure Plan to continue:

- Improving BART capacity, frequency, and reliability;
- Repairing potholes and fixing roads;
- Improving Highways 680, 80, 24, and 4;
- Enhancing bus and other transit for seniors and people with disabilities;
- Increasing bicycle and pedestrian safety;
- Reducing traffic, and;
- Improving air quality;

shall the ordinance enacting a half percent sales tax be adopted, raising \$97,000,000 annually for 30 years, with independent oversight, audits, and all money benefitting local residents?

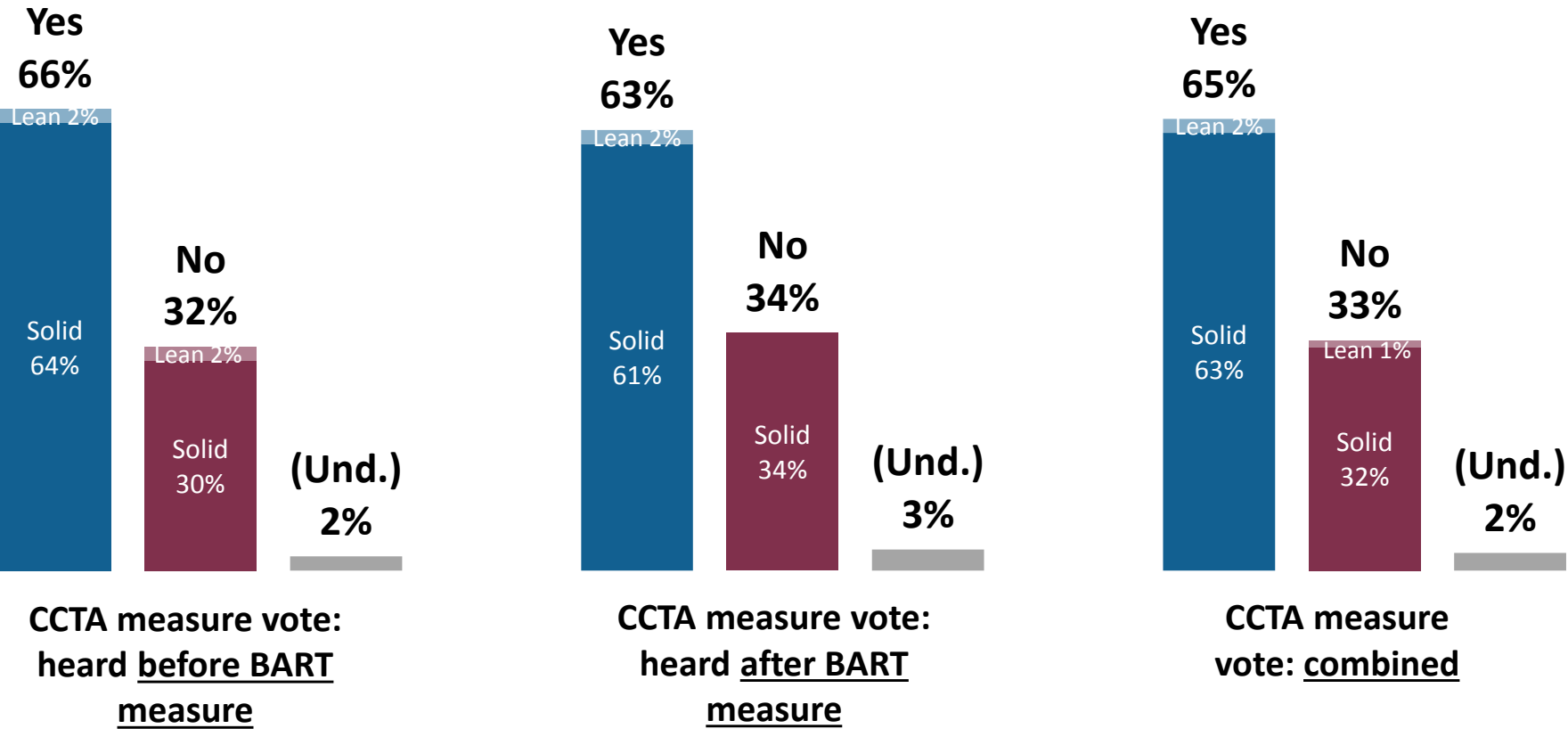


Q7. If this measure were on the ballot today, would you be likely to vote yes to approve it, or no to reject it?

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CCTA Measure Initial Vote

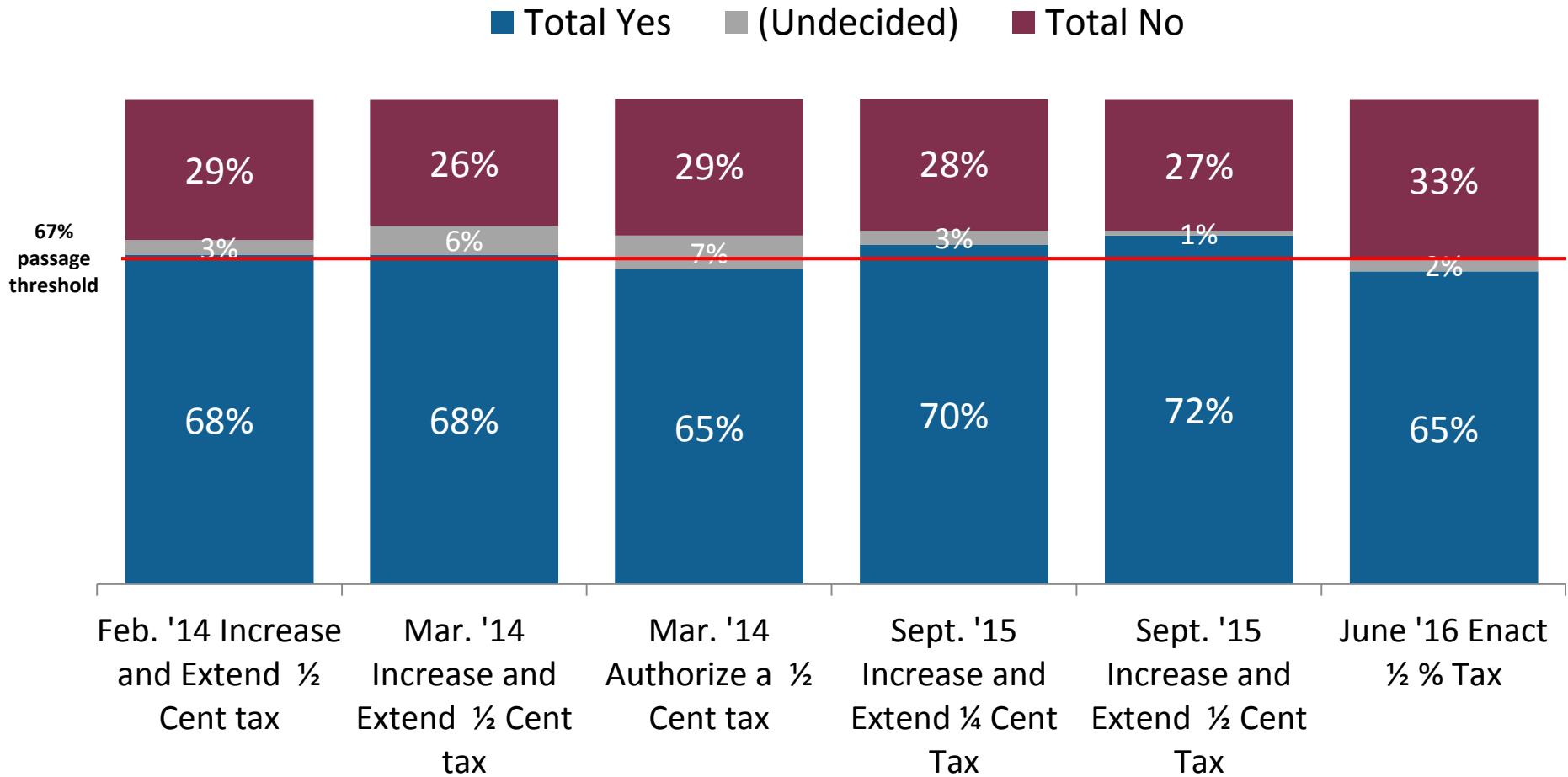
The CCTA measure fared modestly better when it is heard first, but the two results are within the margin of error of each other.



Q7. If this measure were on the ballot today, would you be likely to vote yes to approve it, or no to reject it?

CCTA Measure over Time

Support for a transportation tax hovers around the required two-thirds.



Q7/Q8: If this measure were on the ballot today, are you likely to vote yes to approve it, or no to reject it?

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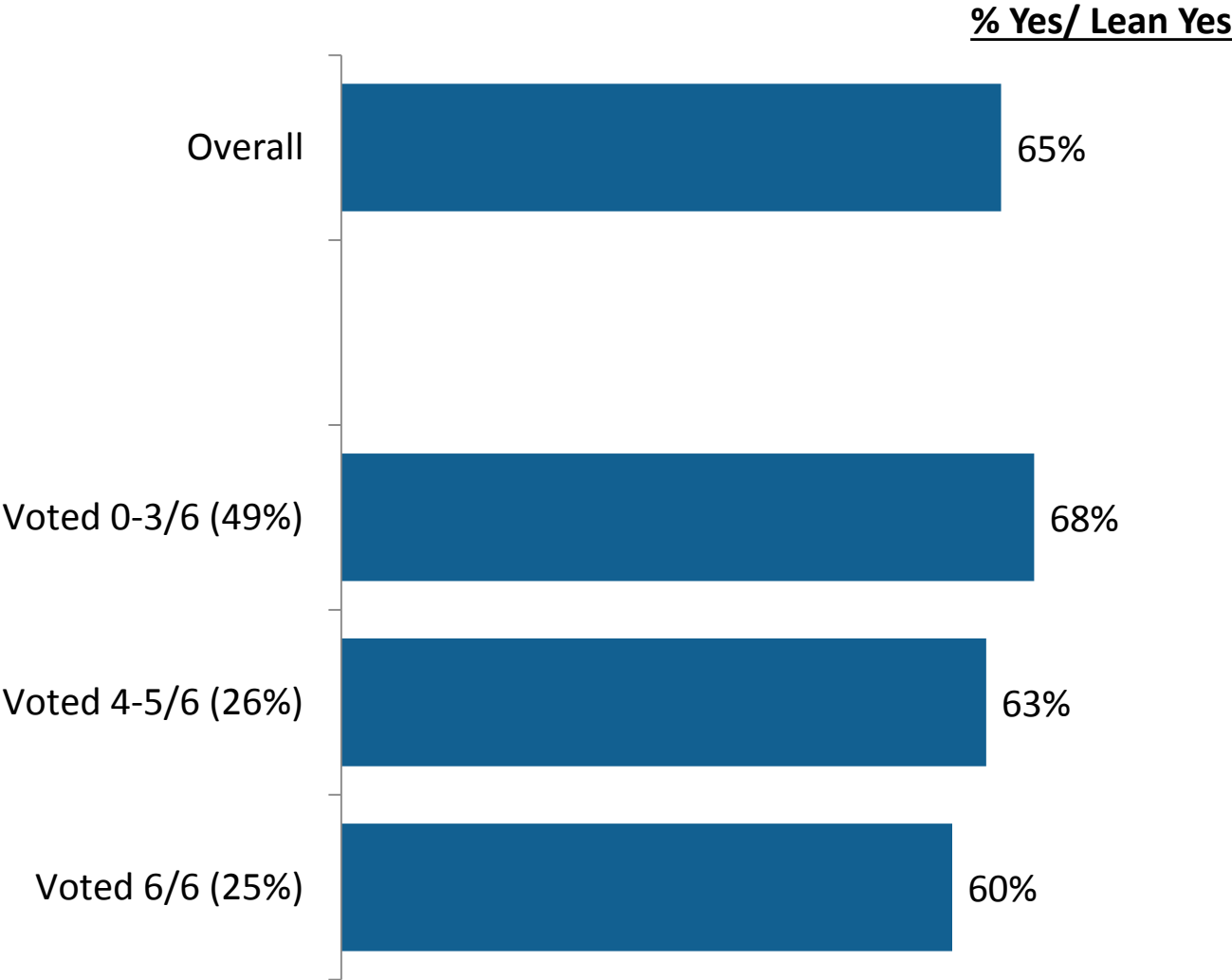
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Initial Vote by Vote History

Less frequent voters are more supportive of a transportation measure.

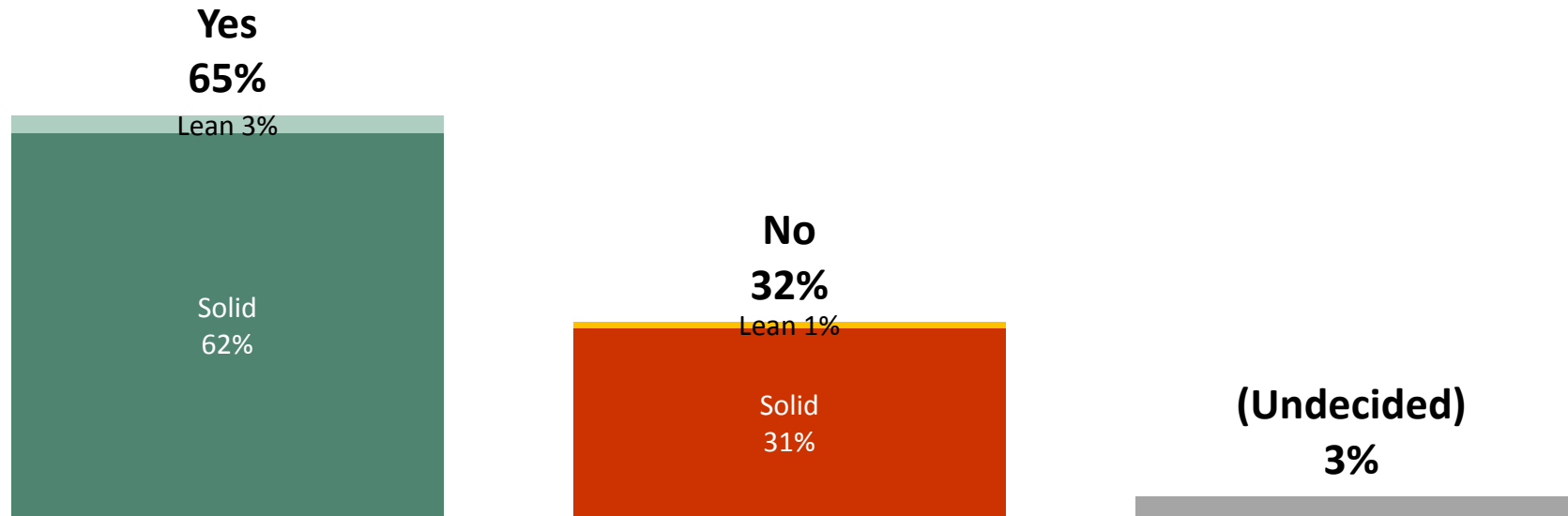


Q7. If this measure were on the ballot today, would you be likely to vote
yes to approve it, or no to reject it?

BART Measure Initial Vote

Initial support for a BART bond is just below two-thirds in Contra Costa. In order to pass, the measure needs to be supported by two-thirds of the voters in Alameda, Contra Costa, and San Francisco counties combined.

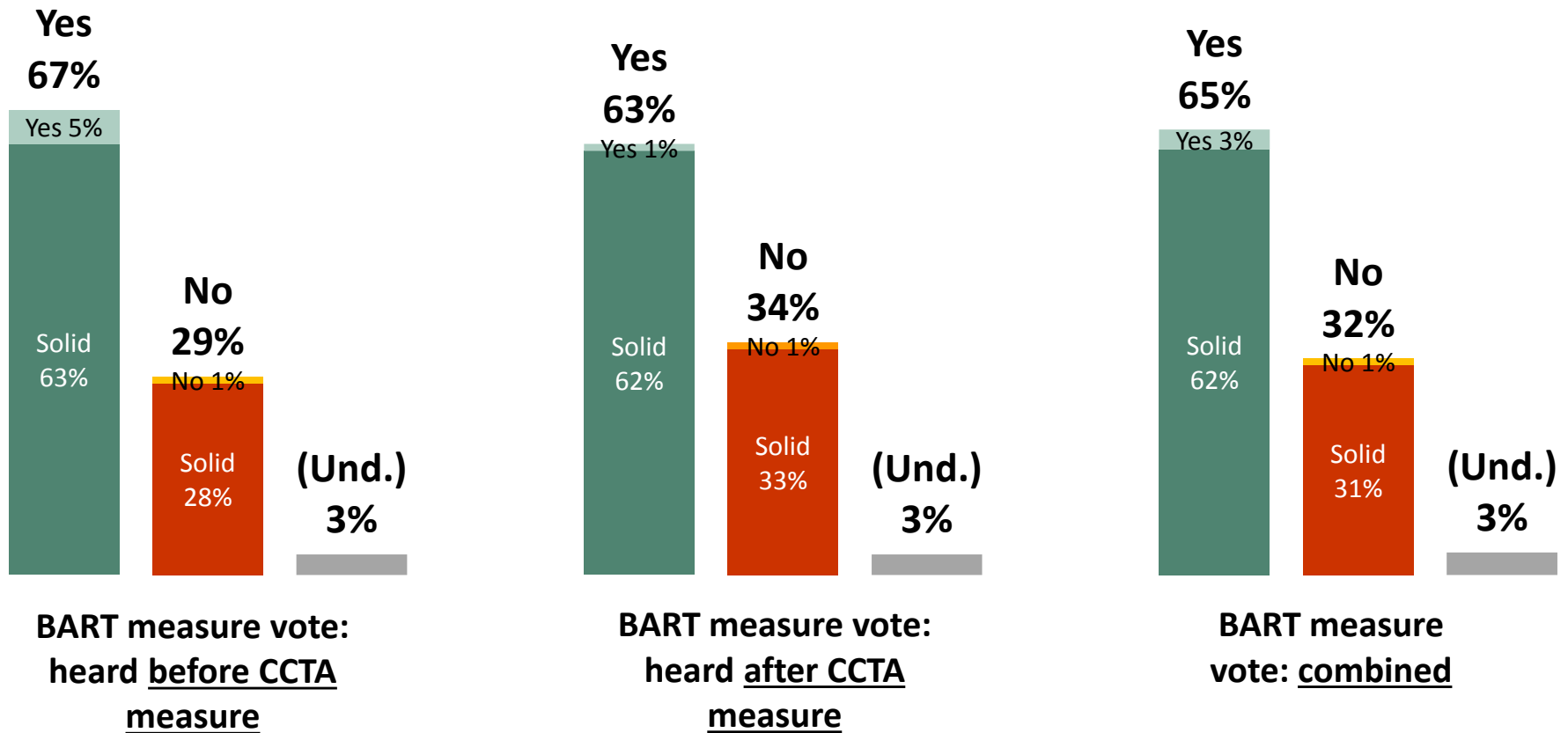
To keep BART safe; prevent accidents/breakdowns/delays; relieve BART crowding and traffic congestion; reduce pollution; and improve earthquake safety and access for seniors/people with disabilities by replacing and upgrading 90 miles of severely worn tracks; tunnels damaged by water intrusion; 44-year-old control system infrastructure; and other deteriorating/aging infrastructure shall the Bay Area Rapid Transit District issue \$3.5 billion dollars of bonds subject to independent oversight and annual audits?



Q8. If this measure were on the ballot today, would you be likely to vote yes to approve it, or no to reject it?

BART Measure Initial Vote

As with the CCTA measure, the BART measure fares modestly better when it is heard first, but the two results are within the margin of error of each other.



Q8. If this measure were on the ballot today, would you be likely to vote yes to approve it, or no to reject it?

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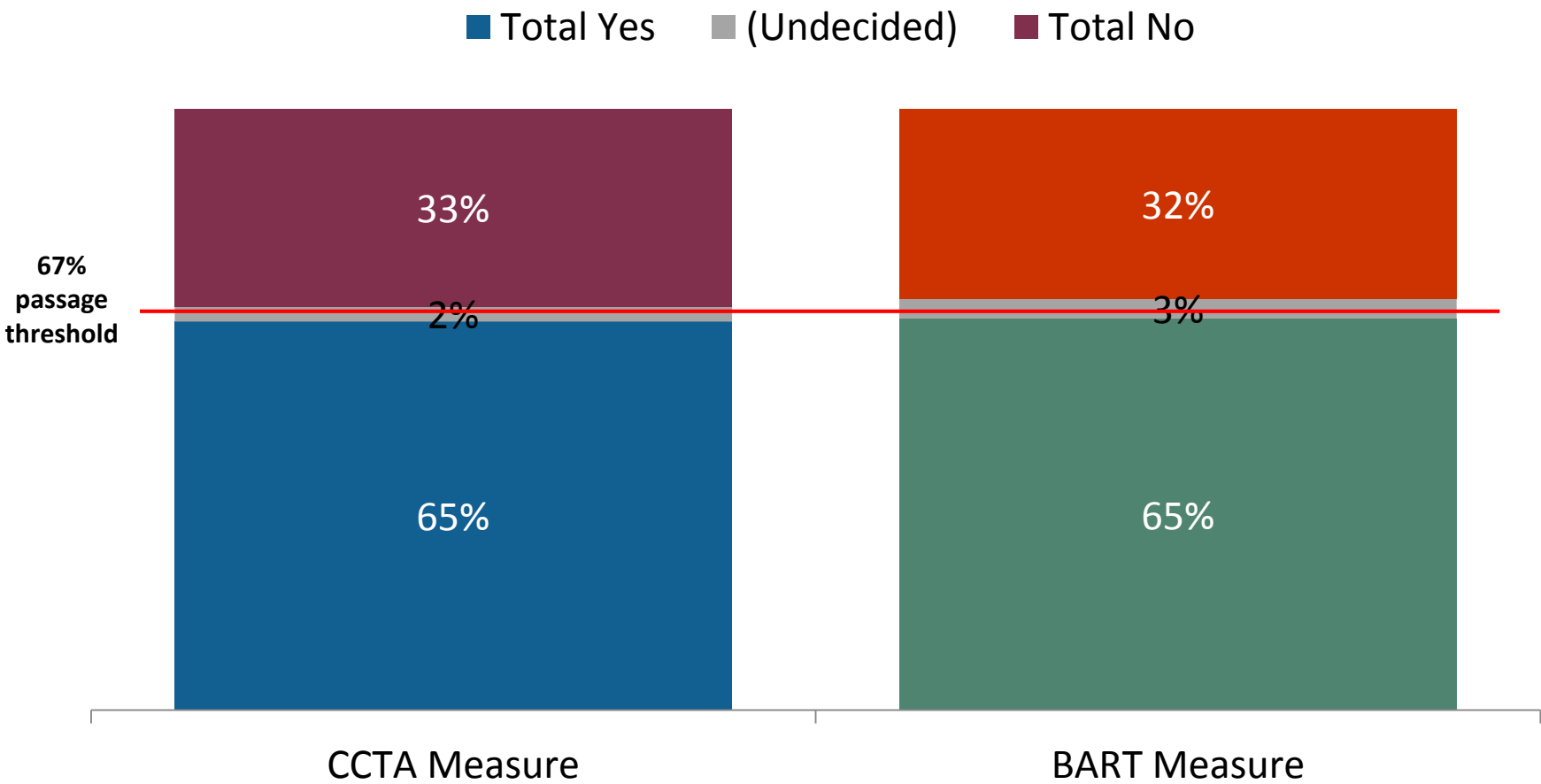
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Combined Initial Vote

Support is nearly equal for both measures.



Q7/Q8: *If this measure were on the ballot today, are you likely to vote yes to approve it, or no to reject it?*

CCTA/BART Voter Segmentation

When votes for the CCTA & BART measure are crossed, 76% support at least one of the transportation measures.

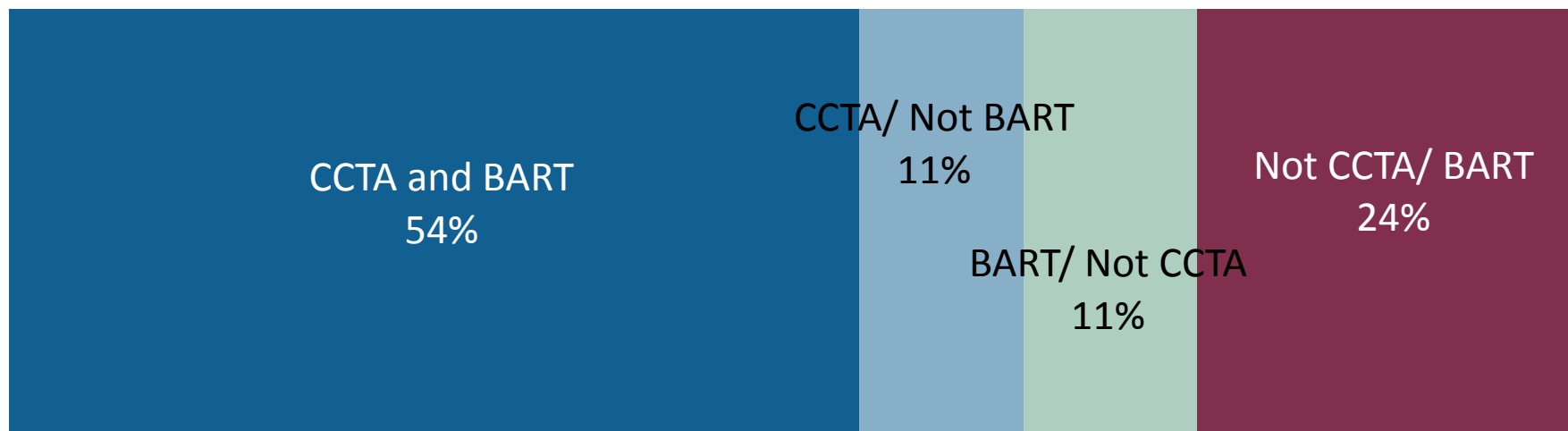
Segmentation:

CCTA and BART= Voted yes on CCTA AND yes on BART

CCTA/Not BART= Voted yes on CCTA; voted no or undecided on BART

BART/Not CCTA=Voted yes on BART; voted no or undecided on CCTA

Not CCTA/BART = Voted no or undecided on both CCTA and BART

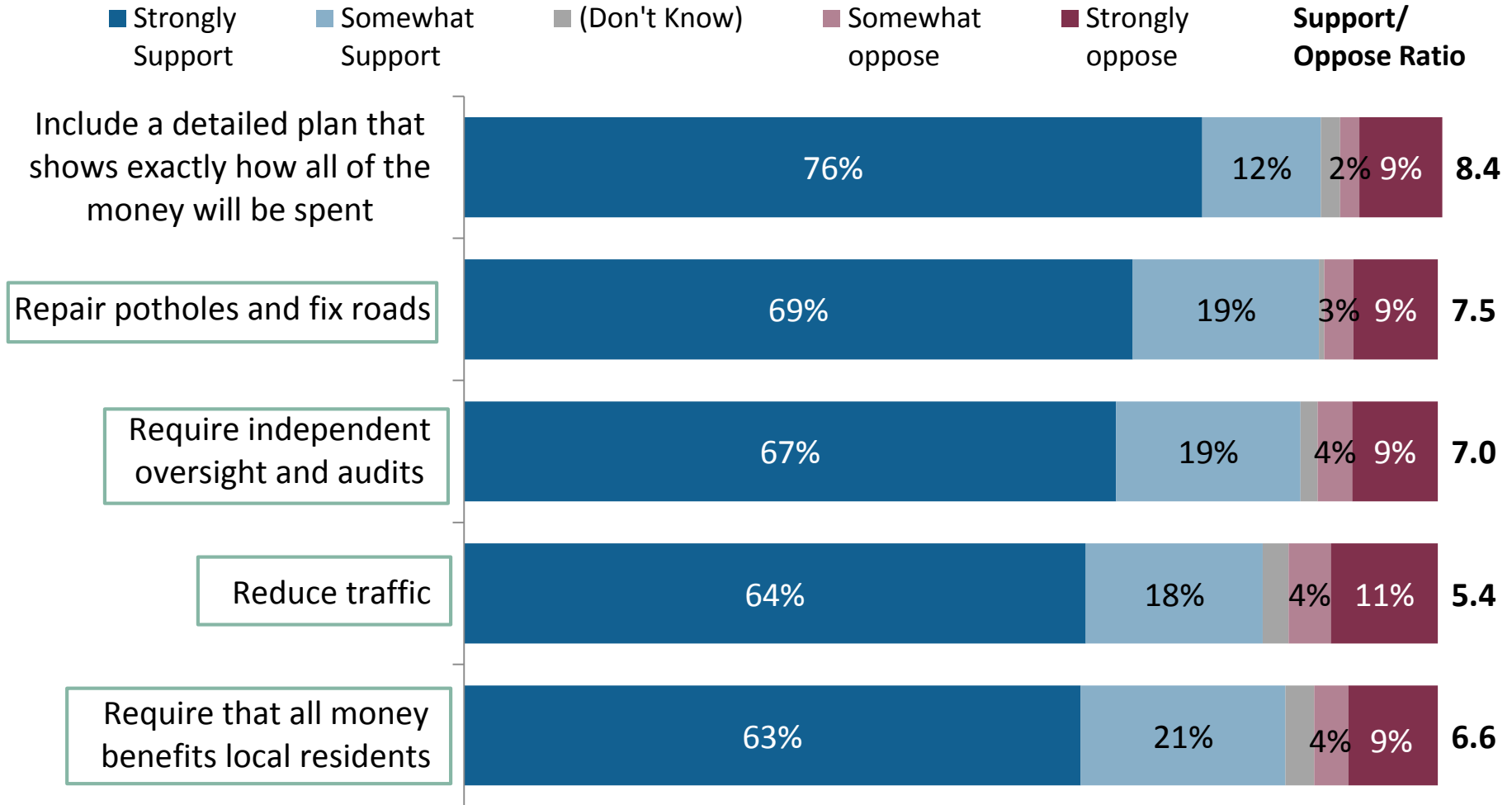




CCTA Plan Elements

Elements of the CCTA Plan Measure: Top Five

Transparency and accountability, repairing potholes and fixing roads, and reduced traffic are the most supported projects among elements.

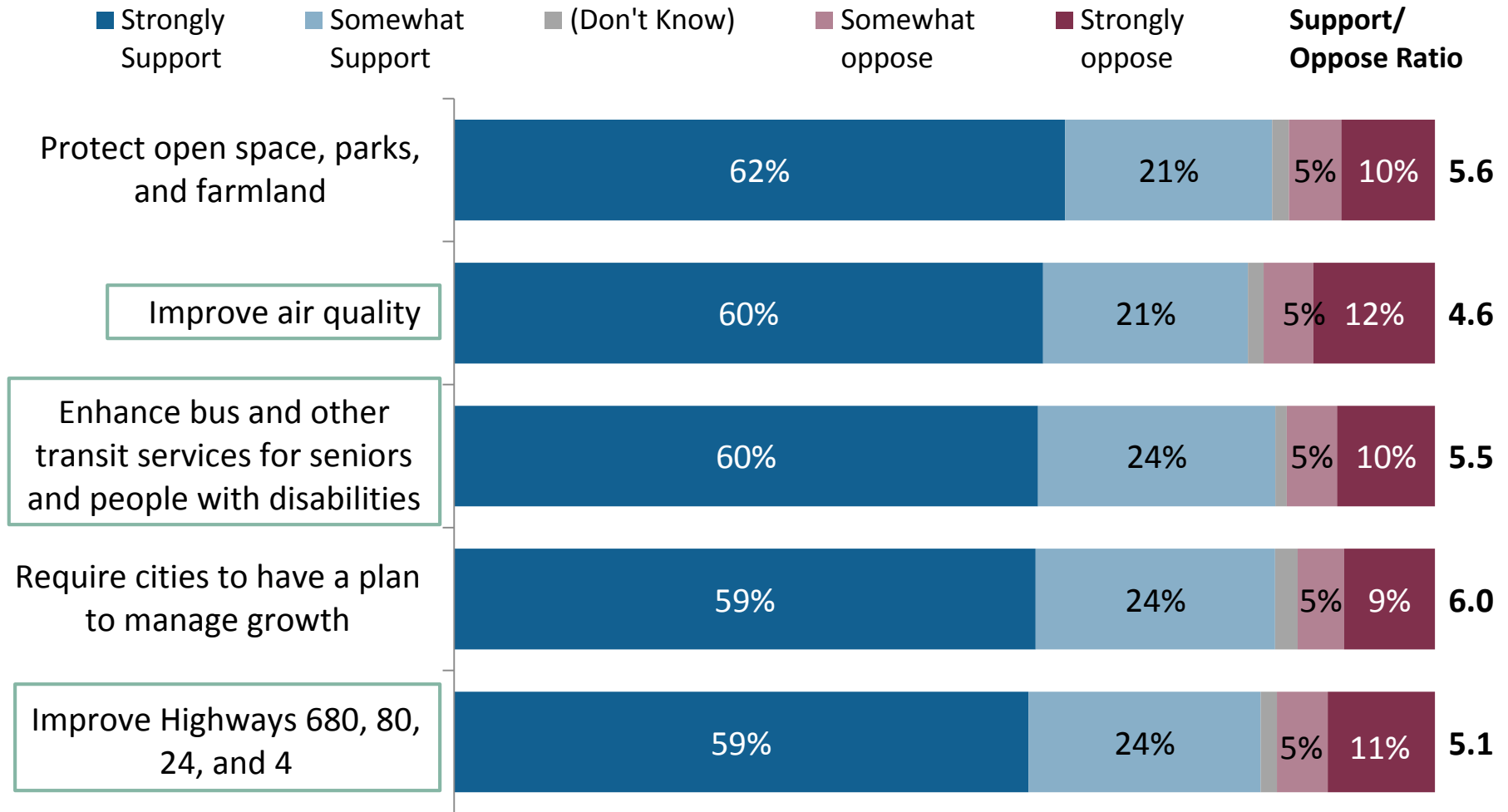


Q9-29. Now I'm going to read you some of the specific elements of the Contra Costa Transportation Expenditure Plan measure. After each please tell me if you support or oppose that particular element.

*Green box denotes elements pulled directly from the ballot text

Elements of the CCTA Plan Measure, cont.

Open space, air quality, and transit for seniors and people with disabilities are also strongly supported.



Q9-29. Now I'm going to read you some of the specific elements of the Contra Costa Transportation Expenditure Plan measure. After each please tell me if you support or oppose that particular element.

*Green box denotes elements pulled directly from the ballot text

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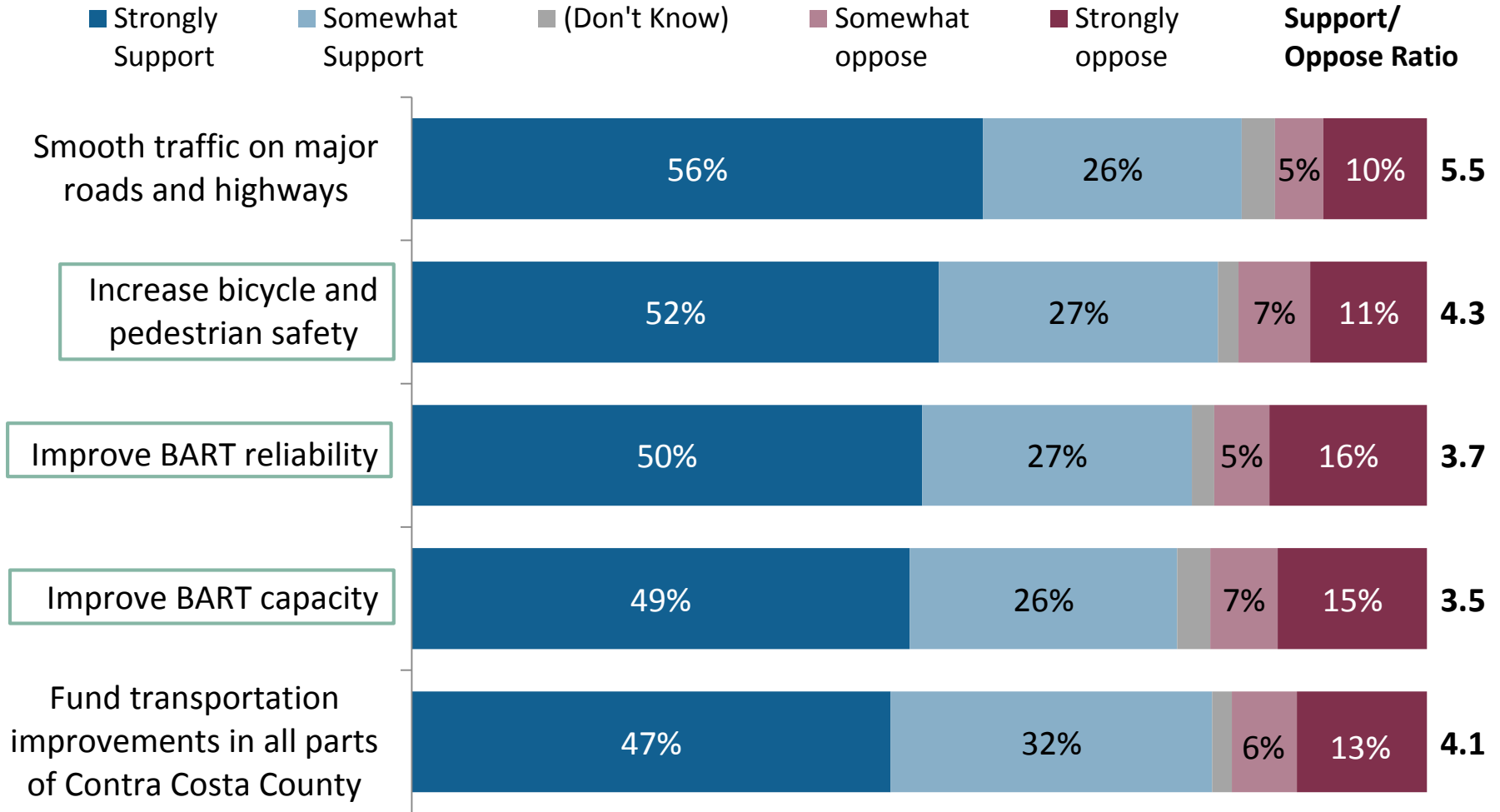
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Elements of the CCTA Plan Measure, cont.

BART reliability and capacity are strongly supported by half of voters.



Q9-29. Now I'm going to read you some of the specific elements of the Contra Costa Transportation Expenditure Plan measure. After each please tell me if you support or oppose that particular element.

*Green box denotes elements pulled directly from the ballot text

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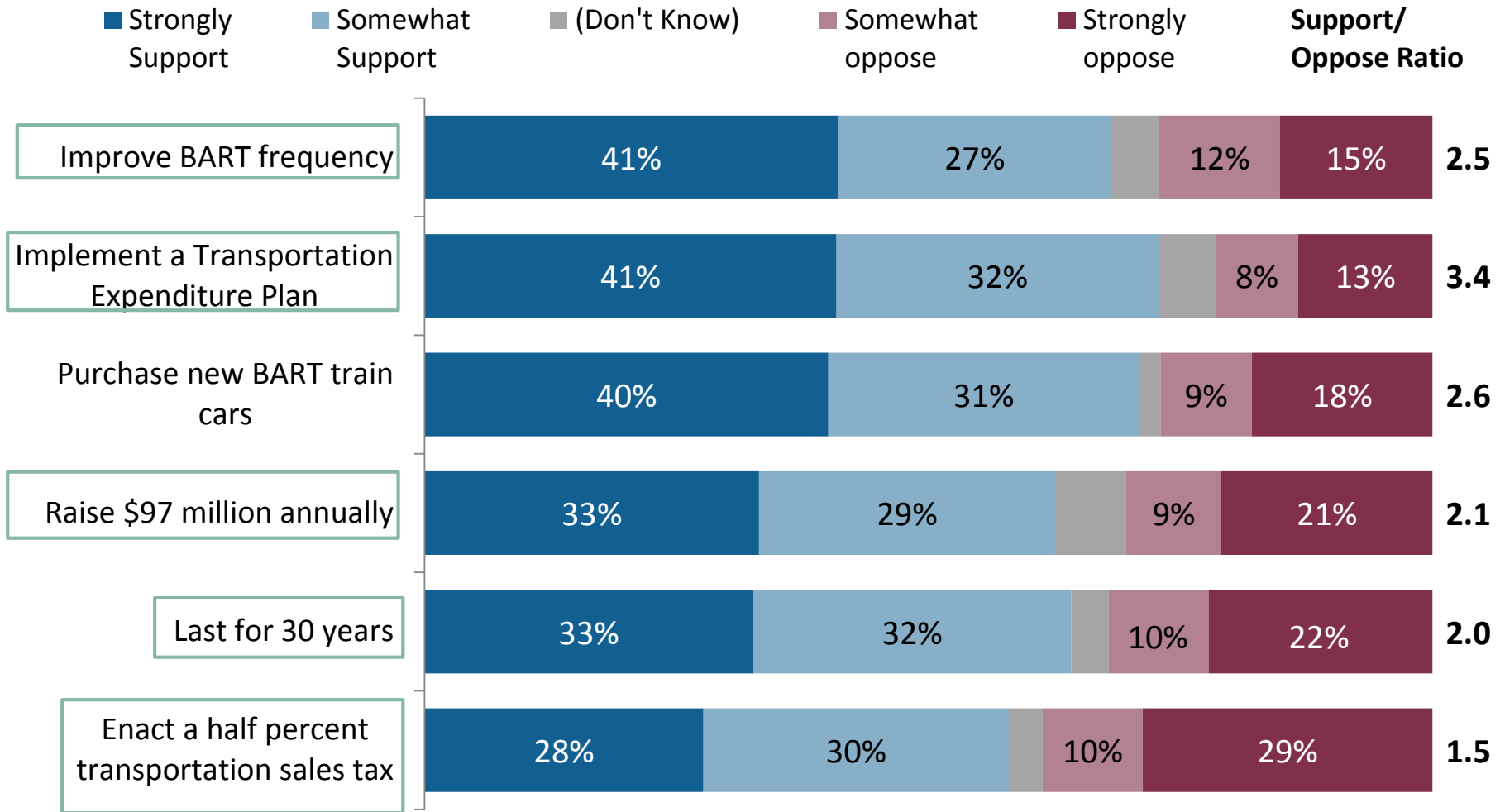
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Elements of the CCTA Plan Measure, cont.

Improving BART frequency is not as highly supported as other BART improvements.



Q9-29. Now I'm going to read you some of the specific elements of the Contra Costa Transportation Expenditure Plan measure. After each please tell me if you support or oppose that particular element.

*Green box denotes elements pulled directly from the ballot text

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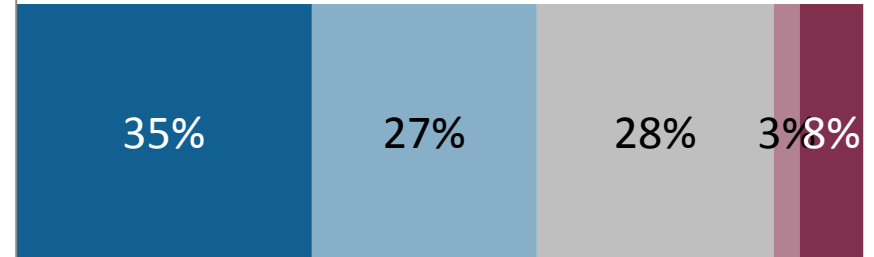
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Measure Information

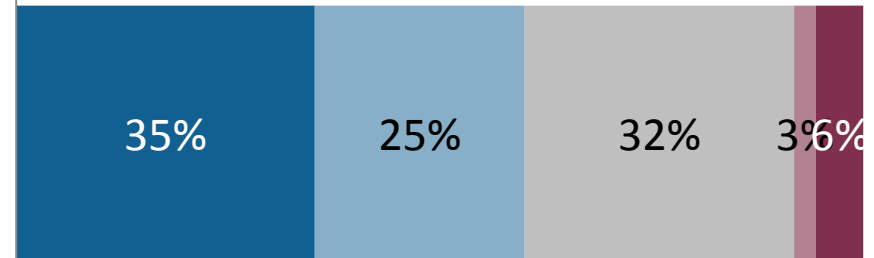
Talking about what the measure will do, along with past successes, are good ways to encourage voters to support the CCTA measure.

■ Much more likely to support
■ Somewhat more likely to support
■ No difference/ Don't know
■ Somewhat more likely to oppose
■ Much more likely to oppose

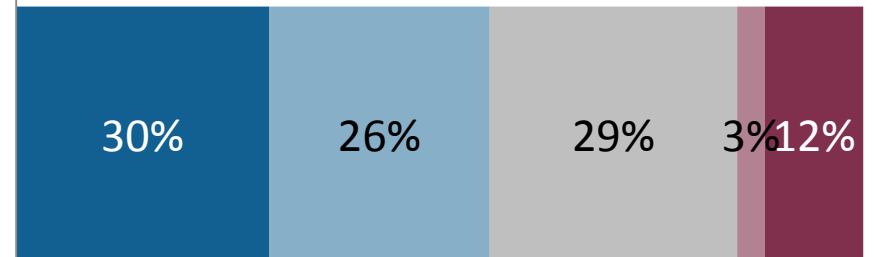
This measure will bring badly-needed transportation improvements to our area, including pothole and road repair, reduced traffic, major BART improvements, and improved transit for youth, seniors and people with disabilities.



This measure builds on the success of earlier voter-approved transportation measures...Approving this measure means continuing to make these types of major improvements that smooth traffic flow and help people get around more easily.



This measure, along with the BART bond, will fund essential improvements...that will directly benefit Contra Costa County residents, including new train cars, parking and station improvements, and a new control system that allows BART to expand capacity.



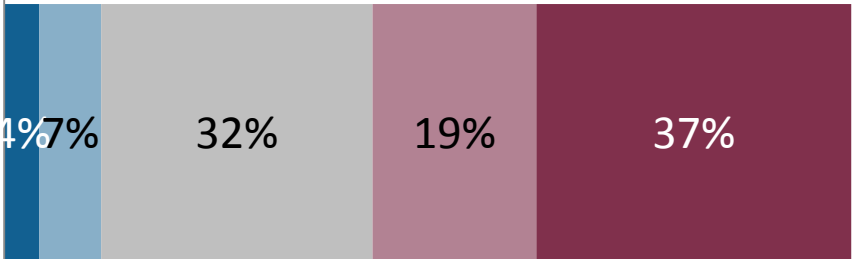
Q30-35. Now I'd like to read you some statements people have made about the Contra Costa County sales tax measure for transportation. After each one, please tell me if that statement makes you more likely to support the measure, more likely to oppose the measure, or if it does not make a difference to you.

Measure Information

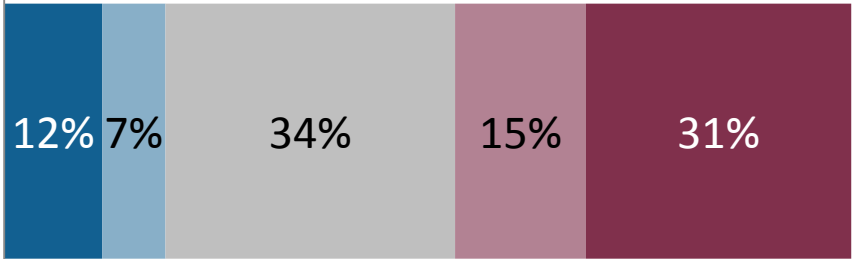
Discussion of the tax rate raises questions.

■ Much more likely to support
 ■ Somewhat more likely to support
 ■ No difference/ Don't know
 ■ Somewhat more likely to oppose
 ■ Much more likely to oppose

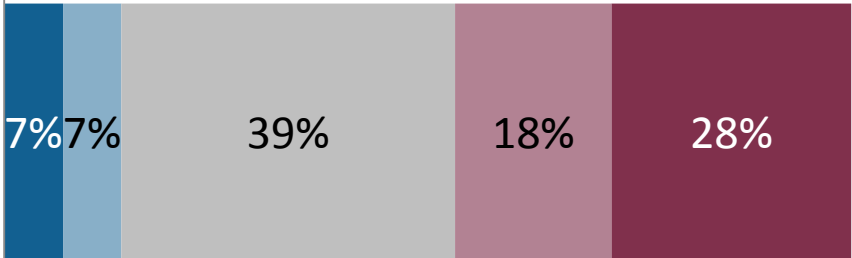
This measure would double the transportation sales tax to a whole cent, raising the sales tax rate in some parts of the county to 10%, among the highest in the state.



BART is mismanaging the money they currently have, wasting billions of dollars on bloated union contracts and pension obligations and allowing its system to fall into terrible disrepair. Why should the taxpayers bail them out of the mess they created?



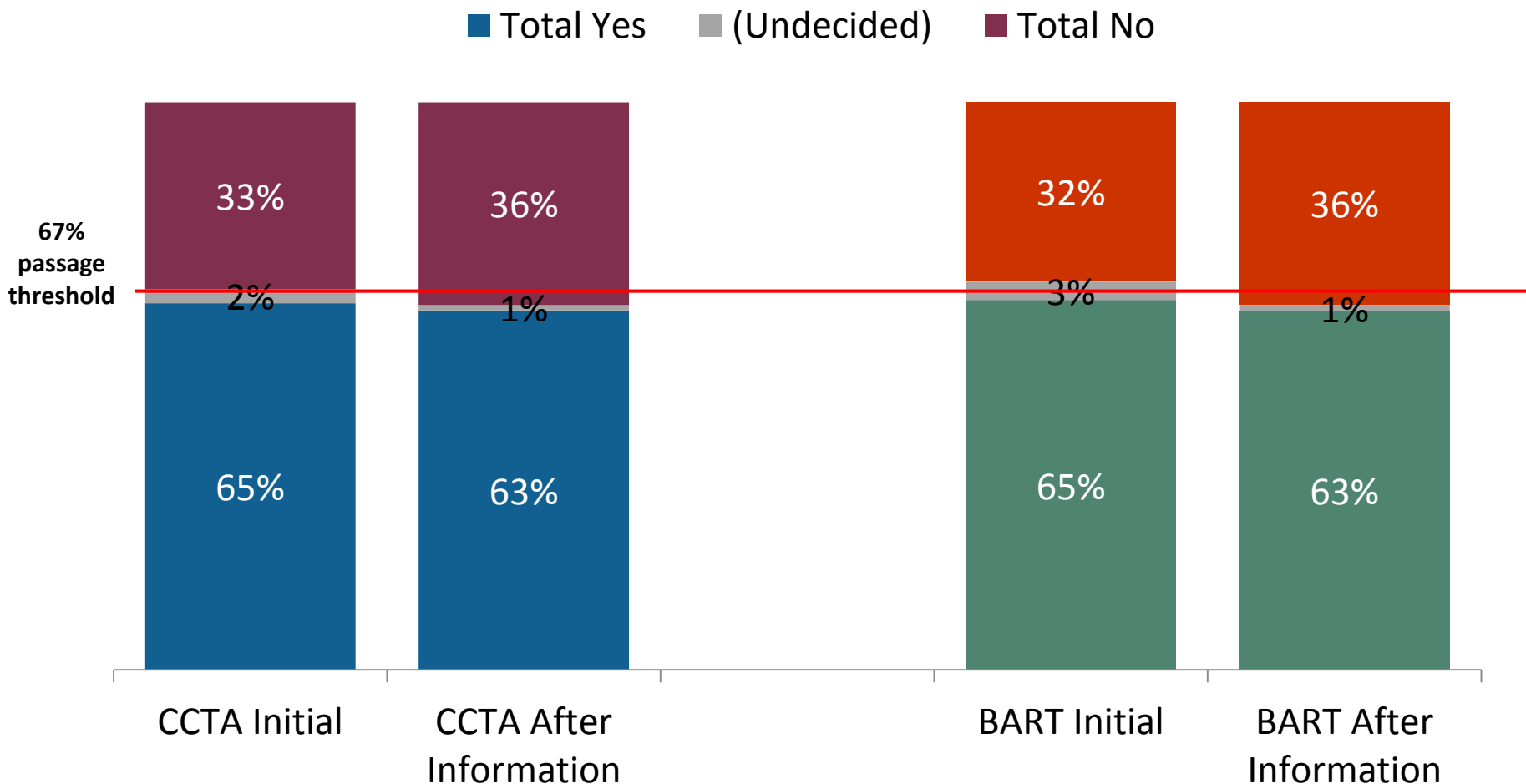
This November's ballot will be loaded with measures that would increase our taxes, including a state school bond measure, a BART bond measure, and plenty of local city and school taxes. This is just too many tax measures.



Q30-35. Now I'd like to read you some statements people have made about the Contra Costa County sales tax measure for transportation. After each one, please tell me if that statement makes you more likely to support the measure, more likely to oppose the measure, or if it does not make a difference to you.

CCTA and BART Vote Progression

After additional information, support remains essentially unchanged and identical for the two measures.



Q7/Q8; Q36/37: If this measure were on the ballot today, are you likely to vote yes to approve it, or no to reject it?

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Contacts



Alex Evans

alex@EMCresearch.com
510.550.8920

Sara LaBatt

sara@EMCresearch.com
510.550.8924

Jenny Regas

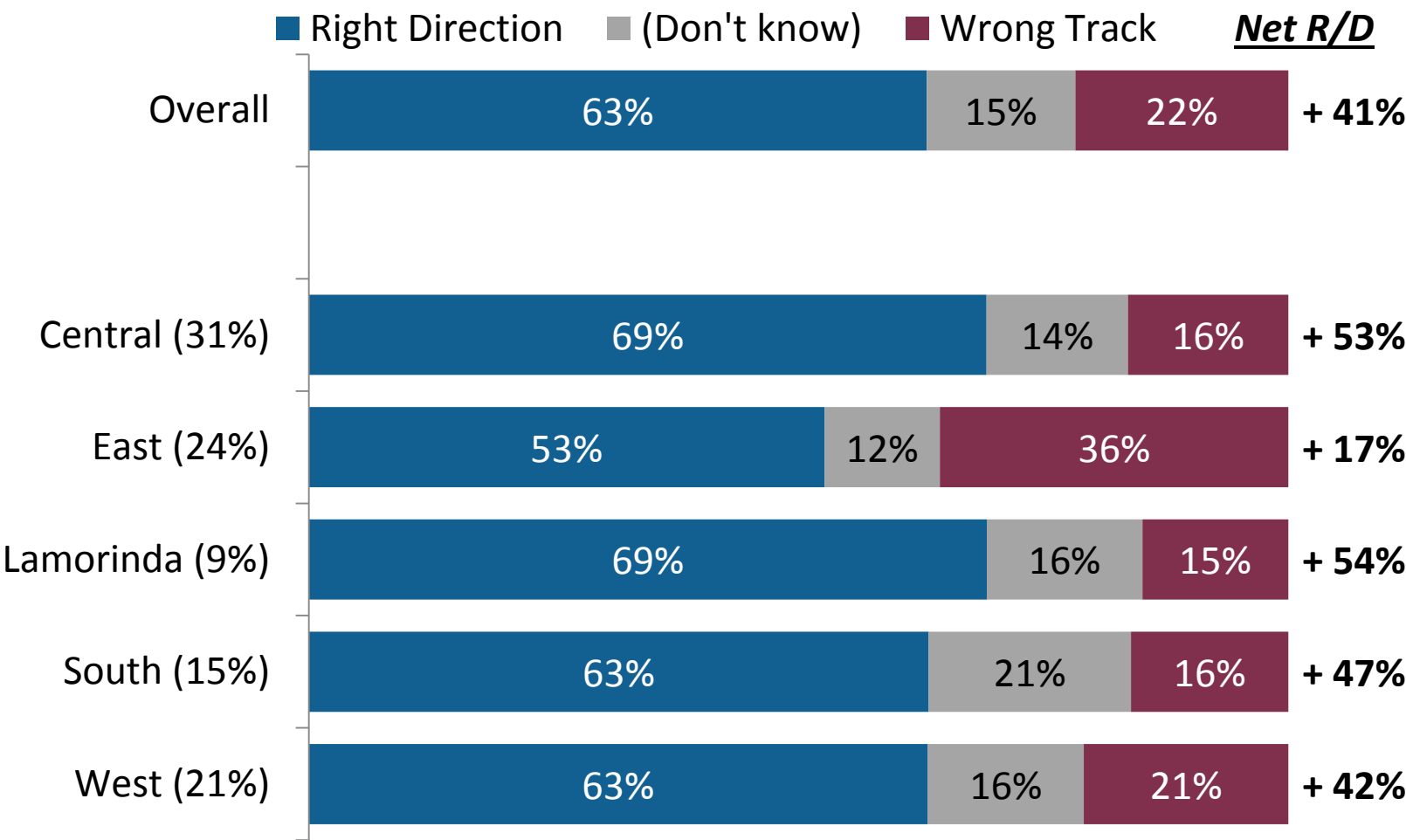
jenny@EMCresearch.com
510.550.8929



Appendix: Additional Slides

Contra Costa: Right Direction/Wrong Track

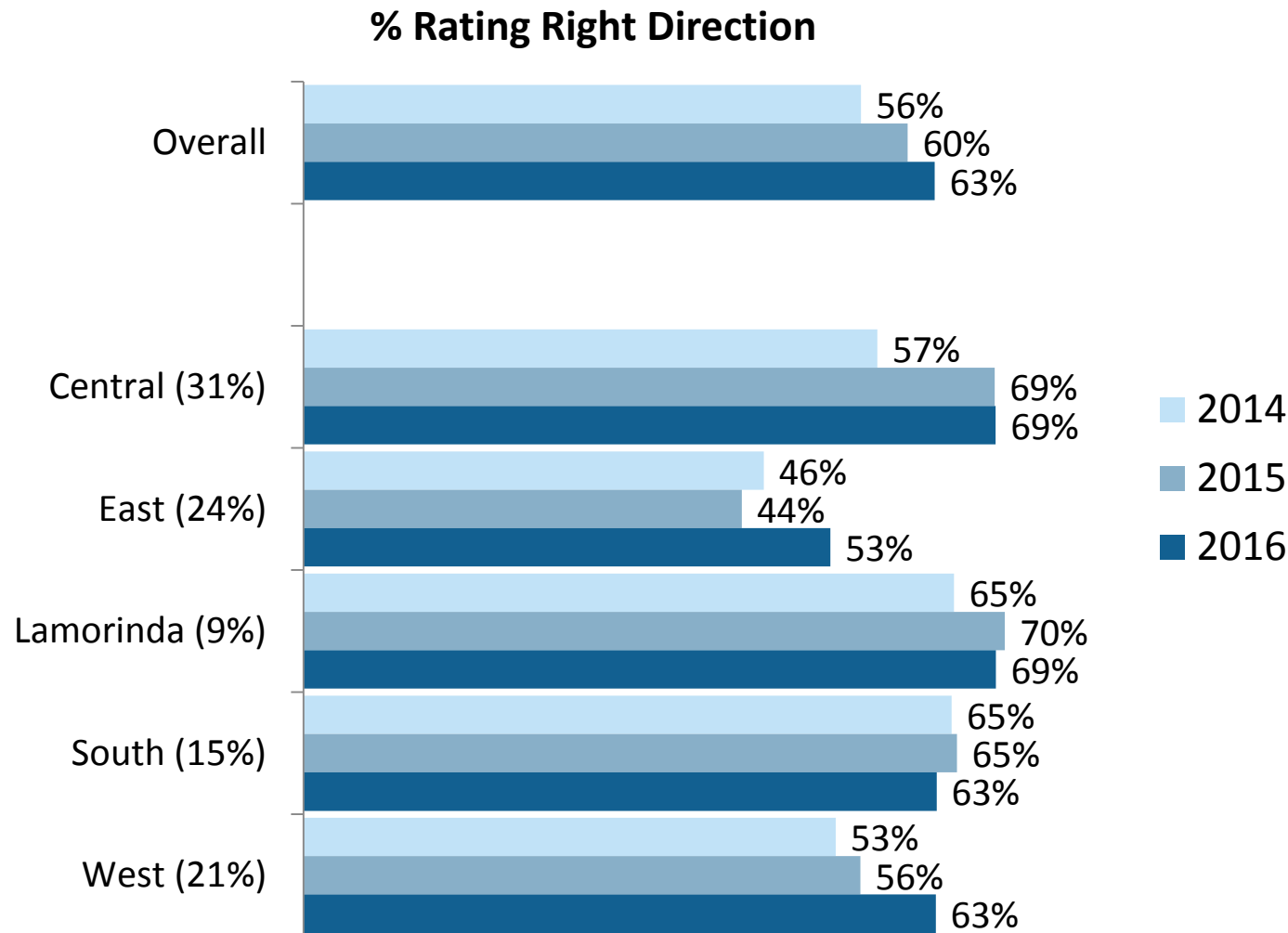
Optimism is highest in Central and Lamorinda, those in the East are feeling less optimistic.



Q5. Do you think things in Contra Costa County are generally going in the right direction, or do you feel that things are pretty seriously off on the wrong track?

Contra Costa: Right Direction/Wrong Track: Tracked

Optimism has stayed constant or increased across the county.



Q5. Do you think things in Contra Costa County are generally going in the right direction, or do you feel that things are pretty seriously off on the wrong track?

Previous Measure Language

Feb. '14 and March '14: Increase and Extend (68%, 68%)

Shall voters authorize implementing the Contra Costa County 25 year Transportation Expenditure Plan to:

- Expand BART in Contra Costa County;
- Improve transit connections to jobs and schools;
- Fix roads, improve highways and increase bicycle and pedestrian safety;
- Reduce traffic congestion and improve air quality;
- Enhance transit services for seniors and people with disabilities?

Approval **increases by half a cent and extends the existing County sales tax**, with independent oversight and audits. All money spent will benefit Contra Costa County residents.

March '14: Authorize a Half Cent Tax (65%)

Shall voters authorize implementing the Contra Costa County 25 year Transportation Expenditure Plan to:

- Expand BART in Contra Costa County;
- Improve transit connections to jobs and schools;
- Fix roads, improve highways and increase bicycle and pedestrian safety;
- Reduce traffic congestion and improve air quality;
- Enhance transit services for seniors and people with disabilities?

Approval **authorizes a half cent sales tax**, with independent oversight and audits. All money spent will benefit Contra Costa County residents.

Sept. '15: Half and Quarter Cent Tax (72%, 70%)

Shall voters authorize implementing the Contra Costa County 25 year Transportation Expenditure Plan to:

- Expand BART in Contra Costa County;
- Improve transit connections to jobs and schools;
- Fix roads, improve highways and increase bicycle and pedestrian safety;
- Reduce traffic congestion and improve air quality;
- Enhance transit services for seniors and people with disabilities?

Approval **increases by a half/quarter cent and extends the existing County sales tax**, with independent oversight and audits. All money spent will benefit Contra Costa County residents.

June '16: Enact a Half Percent Sales Tax (65%)

To implement a Transportation Expenditure Plan to continue:

- Improving BART capacity, frequency, and reliability;
- Repairing potholes and fixing roads;
- Improving Highways 680, 80, 24, and 4;
- Enhancing bus and other transit for seniors and people with disabilities;
- Increasing bicycle and pedestrian safety;
- Reducing traffic, and;
- Improving air quality;

Shall the ordinance **enacting a half percent sales tax be adopted**, raising \$97,000,000 annually for 30 years, with independent oversight, audits, and all money benefitting local residents?

Top Measure Components by Region

[TOTAL SUPPORT]

Central (31%)

1. **Repair potholes and fix roads (92% rating support)**
2. Include a detailed plan that shows exactly how all of the money will be spent (91%)
3. Require independent oversight and audits (90%)
4. Require cities to have a plan to manage growth (90%)
5. Protect open space, parks, and farmland (89%)

East (24%)

1. **Require independent oversight and audits (86%)**
2. **Repair potholes and fix roads (86%)**
3. Require cities to have a plan to manage growth (85%)
4. Include a detailed plan that shows exactly how all of the money will be spent (84%)
5. Enhance bus and other transit for seniors and people with disabilities (83%)

Lamorinda (9%)

1. **Require independent oversight and audits (88%)**
2. Include a detailed plan that shows exactly how all of the money will be spent (85%)
3. **Repair potholes and fix roads (81%)**
4. **Require that all money benefits local residents (80%)**
5. **Reduce traffic (79%)**

South (15%)

1. **Include a detailed plan that shows exactly how all of the money will be spent (89%)**
2. **Repair potholes and fix roads (85%)**
3. **Require that all money benefits local residents (85%)**
4. Enhance bus and other transit for seniors and people with disabilities (84%)
5. Require independent oversight and audits (83%)

West (21%)

1. **Repair potholes and fix roads (88%)**
2. Include a detailed plan that shows exactly how all of the money will be spent (88%)
3. Enhance bus and other transit for seniors and people with disabilities (86%)
4. Protect open space, parks, and farmland (85%)
5. **Require that all money benefits local residents (84%)**

Top Measure Components by Region

[STRONGLY SUPPORT]

Central (31%)

1. Include a detailed plan that shows exactly how all of the money will be spent (77% Strongly support)
2. Require independent oversight and audits (72%)
3. Repair potholes and fix roads (69%)
4. Protect open space, parks, and farmland (65%)
5. Require cities to have a plan to manage growth (65%)

East (24%)

1. Include a detailed plan that shows exactly how all of the money will be spent (75%)
2. Repair potholes and fix roads (70%)
3. Require that all money benefits local residents (68%)
4. Require independent oversight and audits (67%)
5. Enhance bus and other transit for seniors and people with disabilities (64%)

Lamorinda (9%)

1. Require independent oversight and audits (72%)
2. Include a detailed plan that shows exactly how all of the money will be spent (71%)
3. Repair potholes and fix roads (64%)
4. Reduce traffic (61%)
5. Protect open space, parks, and farmland (59%)

South (15%)

1. Include a detailed plan that shows exactly how all of the money will be spent (78%)
2. Repair potholes and fix roads (68%)
3. Reduce traffic (67%)
4. Require independent oversight and audits (67%)
5. Require that all money benefits local residents (66%)

West (21%)

1. Include a detailed plan that shows exactly how all of the money will be spent (74%)
2. Repair potholes and fix roads (69%)
3. Require that all money benefits local residents (66%)
4. Enhance bus and other transit for seniors and people with disabilities (65%)
5. Improve air quality (64%)



SUSTAINABLE COMMUNITIES AND SCHOOL PLANNING

Although safety and educational appropriateness are the highest priorities for school facilities, the California Department of Education (CDE) also supports school district advancement of community sustainability via local engagement and collaborative planning.

What Sustainable Communities Are

Sustainability reflects an understanding that the needs of the present must be met without compromising the ability of meeting future needs.¹

Generally defined in the *California Public Resources Code*,² “sustainable communities” are those that promote equity, strengthen the economy, protect the environment, and promote public health and safety. They often utilize planning concepts such as smart growth, complete streets, mixed use, infill, brownfields, and transit-oriented development—all intended to encourage more walking and biking, efficient use of land, infrastructure, and multimodal transit, and a better jobs–housing balance.

Statewide, Regional, and City/County Sustainable Communities Planning


California’s Strategic Growth Council brings together numerous state agencies with the Governor’s Office of Planning and Research to coordinate activities that support sustainable communities consistent with the State’s Planning Priorities.³ Also with a goal of more sustainable communities, recent legislation⁴ supports the State’s climate action efforts through coordinated transportation and land use planning. For example, the Air Resources Board is required to set regional targets for each of the 18 metropolitan planning organizations (MPOs) for reduction of greenhouse gas emissions from cars. Each MPO must prepare a “sustainable communities strategy” (SCS) as part of its regional transportation plan. Within the SCS, land use, housing, and transportation plans are primarily aimed at reducing vehicle miles traveled by making more efficient use of land and infrastructure. Through their own general and specific plans, cities and counties are encouraged to implement the SCS. Local governments and developers are offered incentives, such as relief from certain environmental review requirements, for projects that are consistent with the SCS.



Schools’ Role in Sustainable Communities

The location, accessibility, quality, maintenance, safety, and use of a school can have a significant impact on the health and well-being of a community. A school district can help advance its community’s sustainability goals by including:

- **Partnerships, Co-location, and Joint Use/Development:** Sharing resources and facilities are excellent ways to leverage public and private funding, reduce costs, and increase the amount and quality of community and education assets provided. A common example is joint use with parks, where schools can be built on smaller sites and have access to adjacent parkland and facilities for physical activity. It also can include opening up use of facilities on school sites during both school and nonschool hours for a variety of uses and services: pools, theaters, libraries, fitness centers, parking, health clinics, senior centers, and career-technical educational partnerships. Strategically co-located and offering a variety of uses, a school can become the center of a community and help reduce the number and length of vehicle trips otherwise required.
- **Promoting Active Transportation:** Safe routes to school promote active forms of transportation (e.g., walking and biking) with associated health benefits and reduced pollution and traffic near schools. Creating safe routes by removing existing barriers or mitigating safety issues is much more difficult and expensive to accomplish after construction than if the school is originally sited



and designed correctly. Working with local traffic planners is critical, and help is available in the form of technical resources, training, and funding from a variety of sources.⁵

District efforts may involve walkability audits, surveys on modes of transportation, safety curriculum, and program development such as the “walking school bus” and bicycle “train” (students accompanied by adults walking or bicycling on a safe route) and infrastructure or safety projects such as bike and skateboard racks, sidewalks, bike lanes, and lighting improvements.

► **Communication and Collaborative Planning:**

Although some local planning agency notification or meeting is required by code,⁶ continual two-way communication should be established to share plans and development and demographic data. Collaboration will help determine and plan for impacts from new development and coordination of schools with public facilities and services (such as parks and recreation, transit, and libraries) to maximize sustainable school and community benefits.

For example, proposed high-density infill projects may generate enrollment beyond existing schools’ capacities, or the location of magnet and charter schools or changes in school attendance boundaries may have impacts on busing, safe routes to school, and use of transit.

Districts should also request to be involved in city and county general plan updates and preparation and review of specific plans to help ensure the number and size of schools are adequate and in locations that are consistent with school siting standards.⁷ In addition to staff contacts, a more formal and transparent collaboration with leadership, such as joint city council/board of supervisors, and school board meetings or subcommittees can be explored in which the city manager and mayor meet with the school board president and superintendent. These high-level meetings help build trust and enable the decision makers to understand and coordinate issues with a larger and more comprehensive perspective.

► **School Facilities Master Plan:** A school facilities master plan (SFMP) is an excellent starting place for collaboration and for setting and sharing with the city, county, and community the vision, goals, policies, and priorities for districtwide sustainable school planning. The SFMP provides comprehensive data on the district’s facilities needs and is a necessary tool in discussing how the city, county, and district can work together in locating, designing, and improving schools that will advance sustainability efforts. For example, modernizing older schools can contribute to the stability or revitalization of neighborhoods. The SFMP can also address closing and reuse of schools and thus should include local government and community input and involvement.

► **Sustainable School Facility Design and Operation:** In addition to helping meet sustainability goals of the larger community, schools themselves can also be designed and operated to conserve resources, provide open space, promote physical activity, protect the environment, and create healthy, quality learning spaces that support student achievement and lower life-cycle costs. They typically incorporate concepts such as “green,” “high performance,” and “zero net energy.” Designs can also be adaptable to accommodate increases in enrollment and evolving trends in education, technology, and community needs, thus supporting long-term sustainability.

Each new school or major addition or renovation project should be designed with an understanding of how the facilities will be used to support the staff, students, and community. Stakeholder input and school board adoption of an educational specification can contribute to this understanding. The education specification document will link the facility design to educational programs and community functions and can include requirements for sustainability features and operations.

By applying principles of sustainability in school facilities planning, school districts can have a significant, enduring, and positive impact on the communities they serve.

1. Brundtland Commission, 1987.

2. *California Public Resources Code* Section 75125.

3. *California Government Code* Section 65041.

4. Senate Bill 375 Sustainable Communities and Climate Protection Act of 2008.

5. National Center for Safe Routes to Schools; Caltrans’ Active Transportation Program and *California Manual on Uniform Traffic*

Control Devices, Part 7; and Strategic Growth Council—Sustainable Communities Planning Grants.

6. *California Public Resources Code* Section 21151.2, *Government Code* sections 65352, 65352.2, and 65402; and *Education Code* Section 35275.

7. *California Code of Regulations*, Title 5, Section 14010.



Contra Costa County Board of Supervisors

Subcommittee Report

TRANSPORTATION, WATER & INFRASTRUCTURE COMMITTEE

8.

Meeting Date: 08/11/2016

Subject: COMMUNICATION/News Clippings

Department: Conservation & Development

Referral No.: N/A

Referral Name: N/A

Presenter: John Cunningham, DCD

Contact: John Cunningham
(925)674-7833

Referral History:

Communication items are added to the TWIC agenda on an as-needed basis.

Referral Update:

Communication Received:

Roger Smith submitted information regarding the Pipeline Safety Report currently under consideration by the Committee:

- July 28, 2016 Letter from Roger Smith, President of the Alamo Improvement Association
- 5 photographs of exposed pipelines along the Iron Horse Corridor in the vicinity of Hemme and Wayne Avenue in Alamo.

Leigh Chavez, Public Works - Environmental Services Division Manager, sent the attached email to TWIC staff regarding new regulations from the State Water Resources Control Board. Final comments on the new regulations will be copied to the Committee when available.

Recommendation(s)/Next Step(s):

RECEIVE communication and DIRECT staff as appropriate.

Fiscal Impact (if any):

N/A

Attachments

SWRCB New Regs on Discharges

AIA - RS - Pipeline Safety

John Cunningham

From: Leigh Chavez <leigh.chavez@pw.cccounty.us>
Sent: Monday, July 18, 2016 2:57 PM
To: Lara DeLaney
Cc: Steve Kowalewski; Mike Carlson; Jerry Fahy; John Cunningham
Subject: State Board's New Regs: Procedures for Discharges of Dredged or Fill Materials to Waters of the State

Hi Lara,

You may be aware that the State Water Resources Control Board is in the process of formalizing new regulatory procedures for Discharges of Dredged or Fill Materials to Waters of the State (formerly known as the "State Wetlands Policy"). While these are not new legislation, they are regulatory policy and they will affect how we apply for and obtain Water Quality Certification from the Regional Boards. According to staff at the State Board, the new procedures essentially make regulatory the currently non-regulatory process that the State and Regional Boards have been following for the last several years. Further, the State Board notes that their jurisdiction stems from the existing Porter Cologne Water Quality Control Act and Water Code and these new procedures do not have any relation to the question of their jurisdiction.

I have participated in public workshops, conference calls, and meetings with State Board staff as well as CEAC members and CSAC staff about these new regs. In my opinion, the procedures go a little farther than the State Board suggests, including instituting a formal Least Environmentally Damaging Practicable Alternatives analysis (or LEDPA analysis) requirement for many projects. However, I have verified with State Board staff that our infrastructure projects which are location-specific (i.e., targeted at specific safety hazard locations: bridge replacements, streambank repairs, road safety projects, etc.) will qualify for an exemption from this very onerous LEDPA analysis requirement.

Although there is some general industry angst about the regs, based on State Board staff's ability to speak to my initial questions and concerns, I don't have significant reservations/concerns about the regs. Nevertheless, I do want to provide at least some formal comments, as follows:

- It is critical that the LEDPA exemption apply to the majority of the types of projects we do (as I indicate above, I've already confirmed this at meetings with the State Board, but I'd like to actually put it in writing)
- The regs should allow for creative and non-comparable mitigation for impacts to Waters of the State
- Routine maintenance of existing facilities should be exempt from compensatory mitigation (this is a general statement that goes well beyond these procedures, but this seems like a good, formal opportunity to make that statement). Similarly, temporal impacts should not trigger compensatory mitigation
- The regs force an application process that will be much more back-and-forth between the applicant and their Regional Board. While this collaborative approach seems reasonable (or even good), we currently have a hard time getting attention on actual applications. I am concerned about the Regional Board's ability to participate in this very fluid and time-consuming way. Further, it could take what is an already lengthy application process and make it even longer
- This entire process should consider scale. In other words, low impact projects should take less time, detail and effort on both sides (both our application and their review)
- The regs suggest that many aspects of the application and approval process will be analyzed on a case-by-case or situation-by-situation basis. Although the State Board considers this beneficial to the applicant (and in some cases it may be), this creates a distinct lack of certainty for those who are regulated
- Current wetland delineation procedures allow dry season delineations. The new procedures suggest that the State and Regional Boards can require wet weather delineations if they believe there is a reason to do so. This could add considerable time to a project's schedule and I believe it is unwarranted. The science of delineating

wetlands relies on indicators and triggers that are present regardless of season. A quality wetland delineation provides accurate results even in late summer.

Formal written comments on the procedures are due by August 4. Please let me know if you have questions about my comments, are interested in reviewing my comment letter before I send it, or if you think it needs to be vetted through the Leg Committee or TWIC (if there is time to do so....).

Thank you!
Leigh Chavez
Environmental Services Division Manager
(925) 313-2366

John Cunningham

Subject: FW: August TWIC
Attachments: AIA Pipeline Safety TWIC Letter.pdf; AIA Pipelines Exposed in Alamo at Hemme and Wayne Ave..pdf

From: Roger Smith
Sent: Friday, July 29, 2016 5:12 PM
To: John Cunningham <John.Cunningham@dcd.cccounty.us>; Carrie Ricci <carrie.ricci@pw.cccounty.us>
Cc: Roger Smith
Subject: RE: August TWIC

Hello John:

Attached is my letter for distribution to TWIC members with the meeting agenda.

Also, a photo file of the exposed Kinder Morgan pipelines within the Iron Horse Trail Corridor at Hemme and Wayne Ave. in Alamo. The one at Hemme is located within 100 yards of our Rancho Romero Elementary School. The product (Diesel, High Octane Jet Fuel) in this pipeline is pressurized at 1100 PSI. There is a 10 mile stretch of pipeline bookended with only a manual valve at the north side of Alamo and one at the south side of Danville. The potential leak could be more than 200,000 gallons.

If this occurred during an earthquake with downed power lines (igniter) we would have a disaster multiplied many times over the Walnut Creek 2004 explosion and fire.

Please enjoy your day.

Roger

Thank you,

Roger Smith

ALAMO IMPROVEMENT ASSOCIATION

FOR FINE COUNTRY LIVING



P.O BOX 156, ALAMO, CALIFORNIA 94507

July 28, 2016

Supervisor Mary N. Piepho, Chair
Supervisor Candace Andersen, Vice Chair
TRANSPORTATION, WATER AND INFRASTRUCTURE COMMITTEE
651 Pine Street, Room 101
Martinez, CA.

SUBJ: PIPELINE SAFETY TRUST's
Pipeline Safety Report

Dear Supervisor Piepho and Supervisor Andersen:

As the TWIC committee completes its discussion of the recommendations shown within the Pipeline Safety Trust (PST) report, I want to encourage all parties to keep focused on the bigger picture, that Pipeline Safety is important to everyone, all residents of Contra Costa County and also Statewide.

In response to the 2015 Santa Barbara Petroleum Spill, the PG&E San Bruno explosion and numerous other incidents, the State of California, during the last nine (9) months, has passed four very important State Assembly and Senate Bills:

Petroleum Pipelines

AB 295 - State Fire Marshal Annual Inspections of all Intrastate Petroleum Pipelines

SB 864 - State Fire Marshal Testing of all California Coastal Petroleum Pipelines, Contra Costa County is included in this for the areas close to the Bay/Straits. (October, 2015)

Gas Pipelines

AB 1420 - Division of Oil, Gas and Geothermal Resources - Testing every Two Years requirement for all active gas lines located in sensitive areas (October, 2015)

AB 2856 - PUC to require Automatic Shutoff Valves/Remote Controlled Sectionalized Block valves in all high consequence areas and where lines traverse an active seismic earthquake fault. (February, 2016)

The Pipeline Safety Trust's report provides not just recommendations to Contra Costa County but also to our California State Regulatory bodies

I am asking that the TWIC committee and our Board of Supervisors unite in support of the PST report Executive Summary recommendations for Pipeline Safety. I will attend the upcoming TWIC meeting in August to speak to this issue.

In support of Pipeline Safety, I am providing information on the above legislation for review by our CCCounty Legislative Committee to be included in CCCounty's State Legislative Platform.

In the aftermath of pipeline accidents in both Walnut Creek and San Bruno, it is no longer "if" but rather "when" our next pipeline accident will occur. We, collectively, need to do everything within our power to make sure that our Pipelines are safe.

Alamo and other Contra Costa communities with pipelines close to resident's homes support automatic shut-off valves for all existing pipelines and protection of all exposed pipelines spanning seasonal creek beds. The PST report shows this information clearly.

Let's work together to make this happen.

I want to thank you and each of the TWIC committee members for their review of this important report and its findings.

We appreciate all of the hard work that you do.

Sincerely,



Roger F. Smith
President









