



# TRANSPORTATION and INFRASTRUCTURE COMMISSION REGULAR MEETING AGENDA

Thursday, September 19<sup>th</sup>, 2024, 6:15 pm

*Mission: The Berkeley City Council established this Transportation and Infrastructure Commission to advise the City Council on matters related to transportation and public works infrastructure policies, facilities, and services in the City. In addition, the commission functions as the City of Berkeley's Bicycle and Pedestrian Advisory Committee (BPAC).*

**North Berkeley Senior Center  
Aspen Room  
1901 Hearst Avenue  
Berkeley, CA 94709**

## **A. PRELIMINARY BUSINESS – 6:15 pm**

1. Call to order
2. Roll call
3. Public comment on items not on the agenda
4. Approval of minutes from August 15<sup>th</sup>, 2024 meeting
5. Approval and Order of Agenda
6. Update on administration and staff
7. Announcements

## **B. DISCUSSION/ACTION ITEMS – 6:45 pm**

\* Written material included in packet

\*\* Written material to be delivered at meeting

The public may speak at the beginning of any item.

### **1. Chair election**

*Commissioners*

Commissioners will act on the nomination made at the August 15, 2024 commission meeting and elect a chair. Action requested.

### **2. Regional Measure 3 Safe Routes to Transit Cycle 1 Grant Application MTC Complete Streets Checklist Review – Action Requested \* – 6:55 pm**

*Public Works staff*

As required by the Metropolitan Transportation Commission's Complete Streets Policy (Metropolitan Transportation Commission Resolution 4493, May 2022) and 2024 Regional Measure 3 Safe Routes to Transit Cycle 1 grant program guidelines, staff requests that the Transportation and Infrastructure Commission review and approve the MTC Complete Streets Checklist for Regional Measure 3 Safe Routes to Transit grant application for Adeline Street Quick Build project.

For more information: [https://mtc.ca.gov/sites/default/files/documents/2022-07/MTC\\_Administrative\\_Guidance\\_for\\_Complete\\_Streets\\_Checklist.pdf](https://mtc.ca.gov/sites/default/files/documents/2022-07/MTC_Administrative_Guidance_for_Complete_Streets_Checklist.pdf)

**3. Informational Update on the City's Storm Water Master Plan Update \* – 7:15 pm**

*Public Works staff*

Staff will provide a brief presentation about the development of the City's Stormwater Master Plan, hear public comments, answer Commissioners' questions and hear Commissioners' feedback.

**4. Rescheduling October Transportation and Infrastructure Commission meeting – Action item – 8:15 pm**

*Commissioners*

**5. Subcommittee assignments – 8:20 pm**

*Commissioners*

**C. INFORMATION ITEMS AND SUBCOMMITTEE REPORTS – 8:35 pm**

*Information items can be moved to Discussion or Action by majority vote of the TIC*

1. Subcommittee reports & assignments: verbal reports from subcommittees
2. TIC [Work Plan](#)
3. TIC Mission Statement (enclosed)
4. Public Works' [Top Goals and Projects](#) and [progress report](#)
5. Council Summary Actions 2022\*
6. [Link to Council and Committee Agendas and Minutes](#)

**D. COMMUNICATIONS**

**E. FUTURE AGENDA ITEMS**

**F. ADJOURNMENT 8:45 pm**

Agenda Posted: September 13<sup>th</sup>, 2024

*The next meeting of the Transportation and Infrastructure Commission is scheduled for Thursday, October 24<sup>th</sup>, 2024 at 6:15 pm, to be confirmed.*

**A complete agenda packet is available for public review at the Main Branch Library and at the Transportation Division and Engineering Division front desks.**

### **ADA Disclaimer**

 *This meeting is being held in a wheelchair accessible location. To request a disability-related accommodation(s) to participate in the meeting, including auxiliary aids or services, please contact the Disability Services specialist at 981-6418 (V) or 981-6347 (TDD) at least three business days before the meeting date. Please refrain from wearing scented products to this meeting.*

### **SB 343 Disclaimer**

Any writings or documents provided to a majority of the commission regarding any item on this agenda will be made available for public inspection at the Public Works Transportation Division offices located at 1947 Center Street, 4<sup>th</sup> Floor.

### **Communications Disclaimer**

*Communications to Berkeley boards, commissions or committees are public record and will become part of the City's electronic records, which are accessible through the City's website. **Please note: e-mail addresses, names, addresses, and other contact information are not required, but if included in any communication to a City board, commission or committee, will become part of the public record.** If you do not want your e-mail address or any other contact information to be made public, you may deliver communications via U.S. Postal Service or in person to the secretary of the relevant board, commission or committee. If you do not want your contact information included in the public record, please do not include that information in your communication. Please contact the secretary to the relevant board, commission or committee for further information.*

Commission Secretary Wahid Amiri  
Deputy Director, Engineering and Transportation, Public Works  
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Email: wamiri@berkeleyca.gov



TRANSPORTATION and INFRASTRUCTURE COMMISSION  
**REGULAR MEETING**  
**DRAFT MINUTES**

Thursday, August 15<sup>th</sup>, 2024, 6:15 pm

North Berkeley Senior Center  
1901 Hearst Avenue  
Berkeley, CA, 94709

**A. PRELIMINARY BUSINESS**

**1. Call to order**

**6:15 pm:** Acting Chair Parolek called the meeting to order.

12 members of the public present in person.

1 member of the public present via Zoom due to accommodation request.

**2. Roll call**

**6:17 pm:**

Commissioners Present: Barnali Ghosh, Adrian Leung, Liza Lutzker (arrived at 6:20 pm), Julia Moss, Karen Parolek, Kim Walton, Ray Yep, Ren Zaro

Excused: None

Commissioners Absent: Alison Bernstein

Staff Present: Wahid Amiri, Hamid Mostowfi, Ron Nevels, Noah Budnick, Eric Anderson, Dani Dynes, Matthew Bomberg (ACTC), Colin Dentel-Post (ACTC)

**3. Public comment on items not on the agenda**

**6:18 pm:** Four public comments.

**4. Approval of minutes from June 20<sup>th</sup>, 2024**

**6:28 pm Action:** It was Moved / Seconded (Yep / Ghosh) to approve the minutes with a friendly amendment to make Chris Lee-Egan's last name consistent throughout the minutes as "Lee-Egan."

**6:30 pm: Vote:**

Ayes: Ghosh, Leung, Moss, Parolek, Walton, Yep, Zaro

Noes: None

Abstain: Lutzker

Absent: Bernstein

Recused: None

**6:21 pm Motion passed 7-0-1-1-0**

**5. Approval and Order of Agenda**

**6:31 pm Action:** It was Moved / Seconded (Parolek / Lutzker) to move agenda item C1 (Subcommittee reports & assignments) to before item B3 (Chair nominations).

**6:31 pm: Vote:**

Ayes: Ghosh, Leung, Lutzker, Moss, Parolek, Walton, Yep, Zaro

Noes: None

Abstain: None

Absent: Bernstein

Recused: None

**6:31 pm Motion passed 8-0-0-1-0**

**6. Update on administration and staff**

**6:32 pm:** Engineering Manager Ron Nevels provided updates and answered Commissioner questions about the Engineering Division's staffing and vacancies. Transportation Manager Hamid Mostowfi provided updates and answered Commissioner questions about the Transportation Division's hiring and recruitment efforts.

**7. Announcements**

**6:38 pm:** Commissioner Lutzker announced that the Street Trauma Prevention position, which Disaster and Fire Safety Commissioner Mike Wilson presented to this commission for support, was funded by the City Council. She stated that this was a good step on the City's Vision Zero work.

**B. DISCUSSION / ACTION ITEMS**

**1. ATP Cycle 7 Grant Applications MTC Complete Streets Checklist Review – Action Requested**

**6:40 pm:** Public Works staff gave a presentation on and requested the Commission's approval of the City's Complete Streets Checklist and grant application for the Metropolitan Transportation Commission's Active Transportation Program Cycle 7 grant program. The grant application is for the Southwest Berkeley Bicycle Boulevards project.

**6:51 pm:** Two public comments.

**6:54 pm:** Commissioners asked questions and commented on disability access and equity, street design on specific road segments, how the proposal relates to the update of the City's Bike Plan and how the City's Pedestrian Plan will be incorporated into the project.

**7:07 pm Action:** It was Moved / Seconded (Zaro / Leung) to support the City Manager and Department of Public Works' statement of compliance that the Southwest Berkeley Bike Boulevards project meets the Metropolitan Transportation Commission (MTC) Complete Streets Policy (MTC adopted Resolution 4493) for the Caltrans Active

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Transportation Program (ATP), in the Commission's capacity as the City of Berkeley Bicycle and Pedestrian Advisory Committee (BPAC).

**7:08 pm: Vote:**

Ayes: Ghosh, Leung, Lutzker, Moss, Parolek, Walton, Yep, Zaro

Noes: None

Abstain: None

Absent: Bernstein

Recused: None

**7:08 pm Motion passed 8-0-0-1-0**

**2. Alameda County Transportation Commission (ACTC) San Pablo Avenue Corridor Bus and Bike Lanes Project presentation**

**7:08 pm:** ACTC staff presented an update on the San Pablo Avenue Corridor Bus and Bike Lane Project and requested feedback from the Commission on the bicycle, pedestrian and transit safety improvements proposed for it, particularly the segment in Berkeley.

**7:29 pm:** One public comment via Zoom; nine public comments in person.

**7:56 pm:** Commissioners asked questions and made comments on bike lane and sidewalk design, bus route changes, bus bunching, their enthusiasm for the project, feedback from door-to-door outreach, supporting local businesses, connections in the bike network, bus lane and bike lane merge zones, trash pick, paratransit service, appreciation for the project, taxi ramps for disabled passengers, traffic signal preemption for buses, pedestrian countdown timers, public education, the importance of new projects that speed up transit service and improve road safety, history of work to improve San Pablo Avenue, support for the project, building in flexibility in the design, incorporating goBerkeley demand-responsive parking pricing, loading zones, improving the pedestrian experience, sidewalk lighting, building more housing, and that this project will support crime prevention.

**8:33 pm Action:** It was Moved / Seconded (Parolek / Zaro) to extend the meeting until 9 pm.

**8:33 pm: Vote:**

Ayes: Ghosh, Leung, Lutzker, Moss, Parolek, Walton, Yep, Zaro

Noes: None

Abstain: None

Absent: Bernstein

Recused: None

**8:33 pm Motion passed 8-0-0-1-0**

**8:34 pm:** Commissioners asked questions and made comments on the work on this project that's happened over many years, that this design is the compromise option on

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that work, this project will support local businesses and make a much more pleasant pedestrian environment, adding more curb bulb outs, and bike lane crossing for pedestrians and people in wheelchairs.

**3. Chair nominations**

**8:42 pm:** Commissioners discussed chair nominations.

**8:43 pm:** Commissioner Walton left the meeting.

**8:44 pm:** Commissioner Zaro nominated herself to be chair. Commissioner Ghosh seconded the nomination.

No public comments.

The commission will vote on chair at their next meeting.

**C. INFORMATION ITEMS AND SUBCOMMITTEE REPORTS**

**Subcommittee reports & assignments: verbal reports from subcommittees**

**8:46 pm:** Commissioner Lutzker reported that the Bike Plan Update subcommittee met with staff and that the Bike Plan Update will come to the Commission at least twice in addition to updates for the subcommittee.

Commissioner Yep reported that the Watershed Management subcommittee met with staff in June about the Watershed Management Plan project scope and gave staff feedback. Commissioner Yep reported that there is interest in the project from Friends of Five Creeks and the Sierra Club about impacts on Aquatic Park. Staff will provide an update at the Commission's September meeting.

**D. COMMUNICATIONS**

**8:57 pm:** Acting Chair Parolek brought the Berkeley Scanner's article about the Fire Department's Street Trauma Prevention program to the Commission's attention.

**D. FUTURE AGENDA ITEMS**

**8:58 pm:** Future agenda items mentioned include: introducing Commissioner Moss, chair election, subcommittee assignments, goBerkeley update, Watershed Management Plan update, UC Berkeley development updates, Vision 2050, BerkDOT, introducing Public Works' new director, Terrance Davis.

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**E. ADJOURNMENT**

**9:00 pm:** It was Moved / Seconded (Parolek / Moss) to close the meeting

**9:01 pm: Vote:**

Ayes: Ghosh, Leung, Lutzker, Moss, Parolek, Yep, Zaro

Noes: None

Abstain: None

Absent: Bernstein, Walton

Recused: None

**8:33 pm Motion passed 7-0-0-2-0**

One member of the public present.

*The next meeting of the Transportation and Infrastructure Commission is scheduled for Thursday, September 19<sup>th</sup>, 2024 at 6:15 pm, at the North Berkeley Senior Center, 1901 Hearst Ave, Berkeley, CA 94709.*

Administrative Procedures

From the City of Berkeley Commissioners' Manual, 2019 Edition, page 70 regarding minutes:

Although the Brown Act does not require minutes, except for closed sessions, the Commissioners' Manual does require minutes of commission meetings but not for subcommittee meetings. When required, minutes are limited to action minutes only. Minutes are unofficial until approved by the commission. The minutes are converted to PDF and posted on the City's website.

The secretary shall keep an accurate record of the commission's proceedings and transactions. The secretary shall provide action minutes similar to those provided to the Council by the City Clerk. Action minutes list the date, time, and place of the meetings; the staff in attendance; the commissioners present and absent; and a clear and concise description of final actions taken. Approved motions are indicated by "moved, seconded, and carried" and include a breakdown of the vote. The vote breakdown includes the commissioners voting yes, no, abstain, absent, recused, and reason for recusal. Reasons for making a motion, debate, content of public comments, and audience reaction are not to be included.

Commission Secretary: Wahid Amiri, Deputy Director, Engineering and Transportation  
Divisions, Public Works

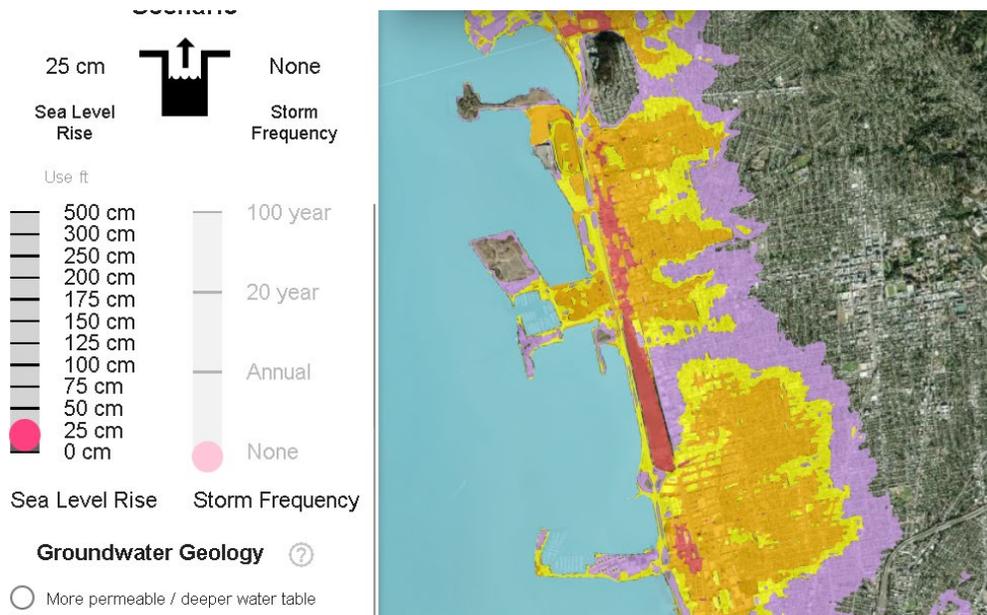
1947 Center St., 4th Floor, Berkeley, CA, 94704

Telephone (510) 981-7061 / Fax: (510) 981-7060 / TDD: (510) 981-6903

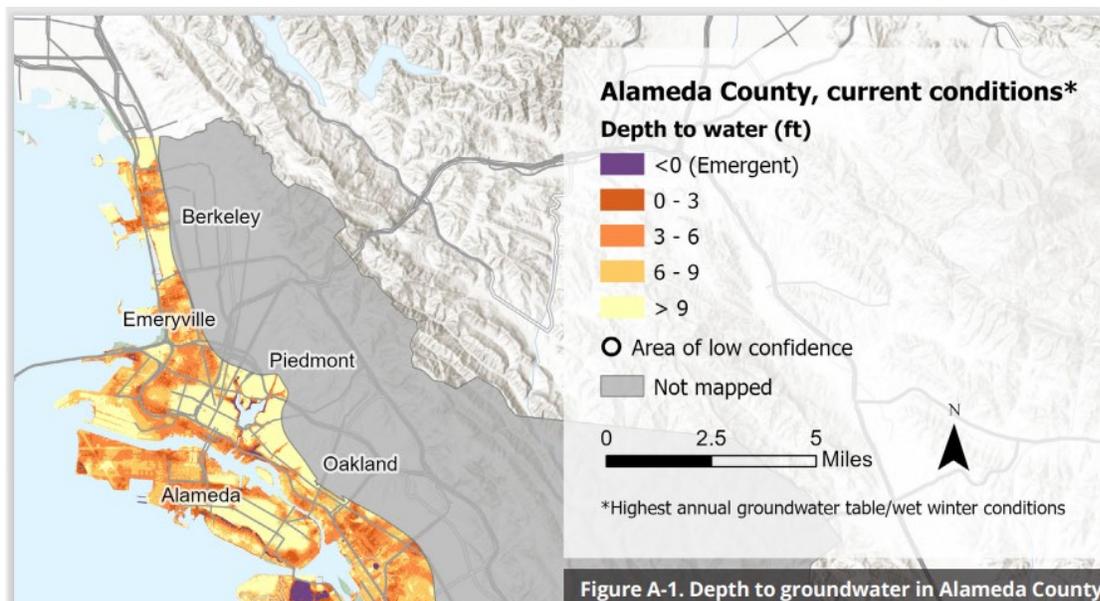
Email: wamiri@berkeleyca.gov

## Why Rising Groundwater Levels, Salt Intrusion, and Aquatic Park are critical to managing Berkeley's urban runoff as we face sea-level rise and larger storms

The two maps below begin to show where rising groundwater threatens West Berkeley. The hazard map below, from the US Geological Survey and Point Blue's [Our Coast Our Future](#), shows in red and orange areas where rising groundwater and accompanying salt might cause flooding and serious damage to buildings and infrastructure with 25 cm of sea-level rise. It is best used as a screening tool.



The more cautious map below, from ongoing research from the San Francisco Estuary Institute and Pathways Climate Institute, shows what was reliably known about groundwater depths in 2022. Orange or red indicate very shallow groundwater. The gray areas are being addressed in ongoing studies.

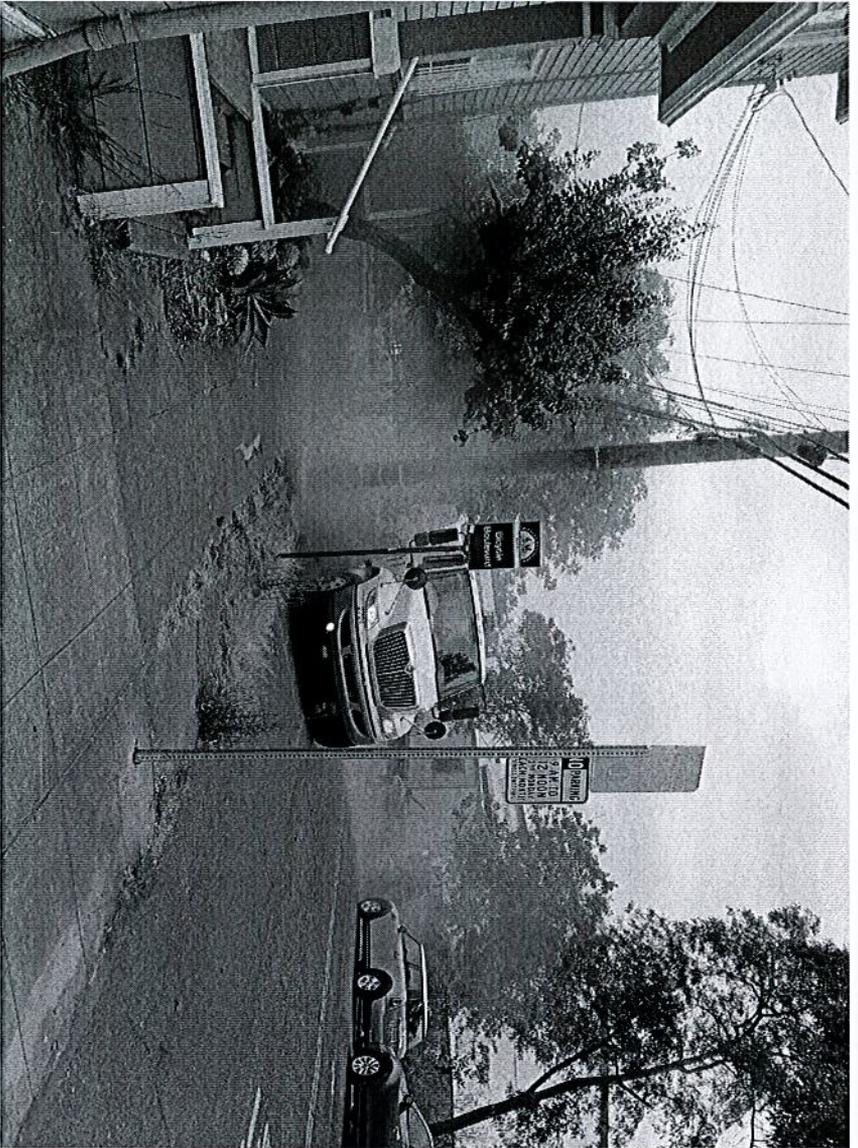


Aquatic Park is vital to runoff because it receives Bay water at high tides and freshwater runoff during storms from the city's two largest storm-drain lines, which together drain well over half of Berkeley. Without these outlets to Aquatic Park, many homes and businesses in low-lying West Berkeley would flood. The small middle lagoon/Model Yacht Basin is especially important because it appears to be rapidly filling in with sediment. The challenges are explained in more detail [at aquaticpark.org](http://aquaticpark.org).

### Aquatic Park main tide tubes and storm drains, 2024



Re-drawn from Balance Hydrologics, Inc., 2011



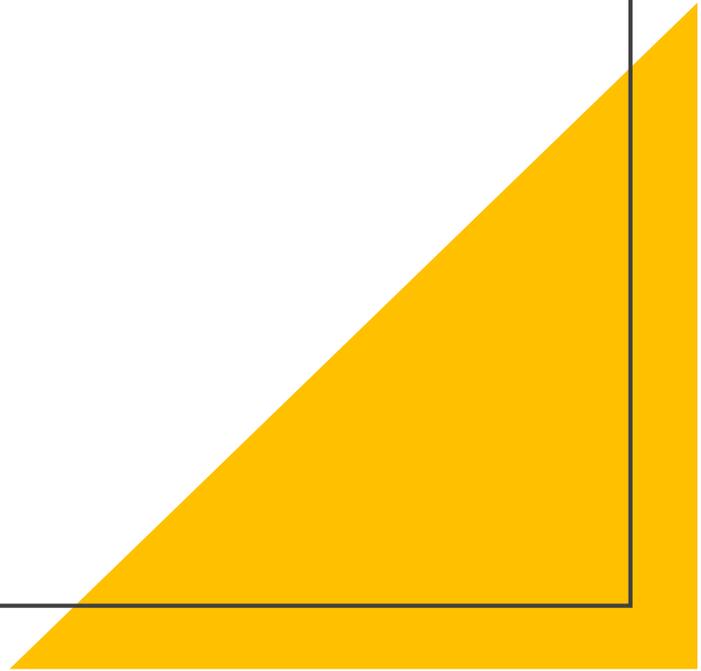
Regional Measure 3  
Safe Routes to Transit  
and Bay Trail Grant  
Application

Adeline Street Quick Build  
MTC Complete Streets  
Checklist

Berkeley Public Works Transportation Division

Transportation and Infrastructure Commission

September 19, 2024



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# Agenda

- I. Adeline Street Quick Build
- II. Metropolitan Transportation Commission's Complete Street Checklist
- III. Requested Action



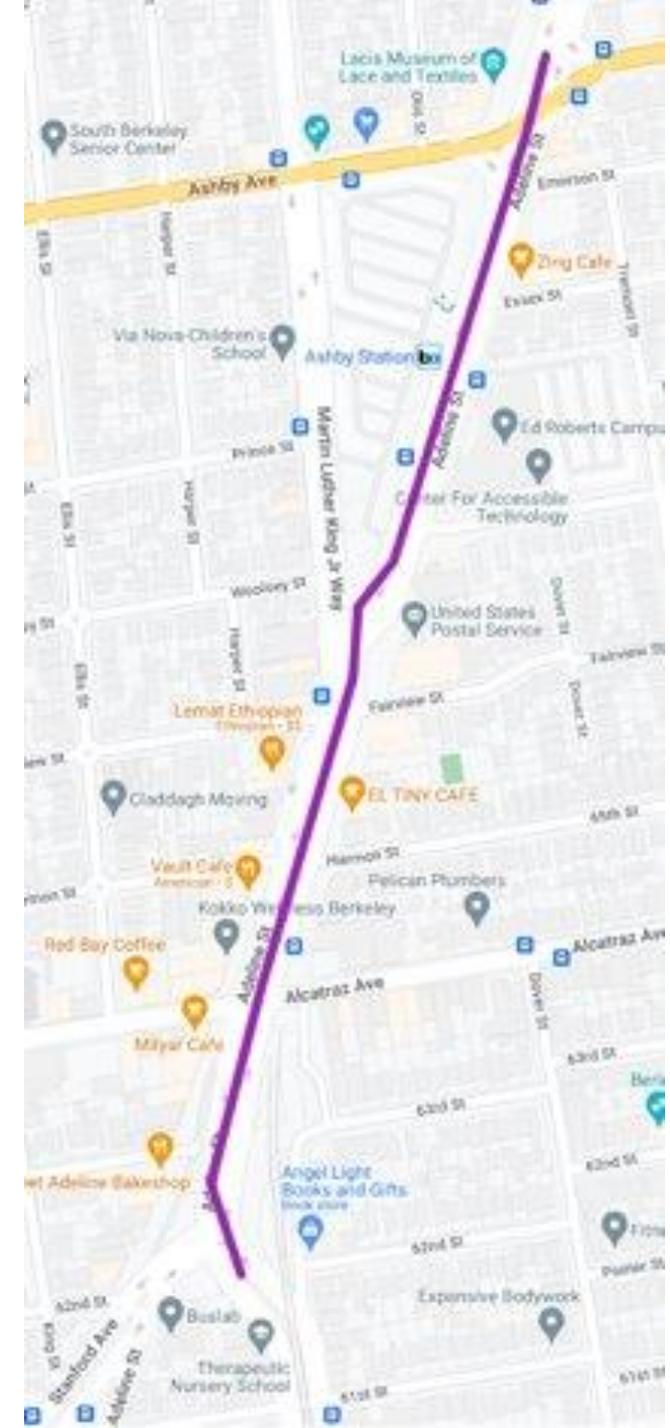
# Adeline Street Quick Build

In October 2024 we will be requesting \$1,041,000 in regional discretionary funding for a quick build protected bike lane ("cycle track") project on Adeline Street from Ashby Avenue to the Martin Luther King Jr Way/Stanford Ave intersection.

The project will be a mix of Class II buffered, colored bike lanes and Class IV separated bikeways. Buffered, colored Class II bike lanes will be used in the area along loading zones for the Ashby BART station and the Ed Roberts Campus. From Fairview Street to the City limits at MLK Jr Way, the project will be a Class IV separated bikeway, implemented via a 6-to-4 "road diet".

This will close the gap in the bikeway network between the existing protected bike lanes on Adeline north of Ashby and the Oakland border. Adeline is a high-injury street for severe and fatal traffic crashes involving walking and biking.

**Transit connection:** Includes concrete bus boarding islands at 3-4 locations in the project area and provides improved bike access to BART.



# Background

MTC's *Complete Streets (CS) Policy* has promoted the development of transportation facilities that can be used by all modes. This policy advances Plan Bay Area 2050 objectives of achieving mode shift, safety, equity, and vehicle miles traveled and greenhouse gas emission reductions.

## Requirements

MTC's CS Policy requires that all projects (with a total project cost of \$250,000 or more) applying for regional discretionary transportation funding – or requesting regional endorsement or approval through MTC – must submit a Complete Streets Checklist (Checklist) to MTC.



# MTC Complete Streets Checklist

## Bicycle, Pedestrian and Transit Planning

### **1. Does Project implement relevant Plans, or other locally adopted recommendations?**

Yes, it implements Council-Adopted Plans:

- 2017 Bike Plan (identified Adeline St as a Tier 1 Priority Project)
- 2020 Vision Zero Action Plan
- 2020 Pedestrian Plan
- 2020 Adeline Corridor Specific Plan
- The 2023 Transit First Policy Implementation Plan

### **2. Does the project area contain segments of the regional Active Transportation (AT) Network?**

Yes, the entirety of the project is located within the AT Network and will fill a 0.6-mile gap in the low-stress bikeway network and provide access to the Ashby BART Station.

# MTC Complete Streets Checklist

## Safety and Comfort

**3. Is the Project on a known High Injury Network (HIN) or has a local traffic safety analysis found a high incidence of bicyclist/ pedestrian-involved crashes within the project area?**

Yes. The 2019 Berkeley Vision Zero Action Plan established a designated network of high-injury streets: 16% of Berkeley's roadways where 91% of severe and fatal collisions occur. Adeline Street is designated as a high-injury street, based on collision data from 2008 to 2018, and the 2020 Berkeley Pedestrian Plan, using data from 2008 to 2017.

**4. Does the project seek to improve bicyclist and/or pedestrian conditions? If the project includes a bikeway, was a Level of Traffic Stress (LTS), or similar user experience analyses conducted?**

Yes. The 2017 Berkeley Bike Plan developed an LTS map for Berkeley's bike network, with the scoring designations based on the results of a citywide survey for comfort using different types of bicycle facilities. This map designated the corridor as a level of traffic stress (LTS) 3 (suitable only for confident adults) from Ashby Avenue to Woolsey Street and LTS 4 (suitable only for the most traffic-tolerant) to the city limits.

# MTC Complete Streets Checklist

## Transit Coordination

### **5. Are there existing public transit facilities (stop or station) in the project area?**

Yes. AC Transit Bus lines F Transbay and 12. Ashby BART station serving the Red Line and Orange Line.

### **6. Have all potentially affected transit agencies had the opportunity to review this project?**

Yes. The affected agencies have been informed and have provided feedback on the project.

Both agencies have signed letters of support for this project.

### **7. Is there a MTC [Mobility Hub](#) within the project area?**

Yes, There is one Mobility Hub within the project's affected area, the Ashby BART station. The project will strengthen the first—and last-mile connections to AC Transit bus lines and the Ashby BART station. These transit connections are particularly important for the MTC Equity Priority Community, which has a high rate of households without a vehicle.

# MTC Complete Streets Checklist

## Design

**8. Does the project meet professional design standards or guidelines appropriate for bicycle and/or pedestrian facilities?**

Yes, the design for this project reflects the latest standards in safety and comfort based on NACTO, the Caltrans DIB-94 guidelines, the CA MUTCD, and PROWAG.

## Equity

**9. Will Project improve active transportation in an Equity Priority Community (EPC)?**

Yes, the project affects one Equity Priority Community. The project will serve members of these communities by improving access and providing safe biking and walking routes to work, transit, errands, schools, churches, and recreation in the project area.

# Requested Action

We are requesting that the Commission adopt a motion to:

*"Support the City Manager and Department of Public Works' statement of compliance that the Adeline Street Quick Build project meets the Metropolitan Transportation Commission (MTC) Complete Streets Policy (MTC adopted Resolution 4493) for the Metropolitan Transportation Commission's Safe Routes to Transit and Bay Trail program, in the Commission's capacity as the City of Berkeley Bicycle and Pedestrian Advisory Committee (BPAC)."*

**Contact Name & Title:** Eric Anderson, Principal Transportation Planner

**Contact Email:** eanderson@berkeleyca.gov

**Contact Phone:** 510-981-7062

**Agency:** City of Berkeley

**Project Name:** Adeline Quick-Build Project

**Project Area Map:** Attachment

**Project Description (2000 character limit).**

*Count: 1980 characters*

The City of Berkeley seeks to implement a “quick-build” Class IV separated bikeway project to fill a 0.6-mile gap in the low-stress bikeway network and provide access to the Ashby BART Station. The project limits are on Adeline Street from Ashby Avenue to the Berkeley city limits at MLK Jr Way in Oakland. The project would install Class IV separated bikeways except in loading zones in front of the Ashby BART and the Ed Roberts Campus, where enhanced green bike lane striping would be used. The project will include four doweled-concrete floating transit boarding islands, a six-lane to four-lane road diet on Adeline Street south of Fairview Street, and pedestrian refuge islands at three crosswalks at Fairview and Harmon Streets.

The Project is entirely located on a high-injury street and will connect the disadvantaged community of Southwest Berkeley with regional transit, the regional East Bay low-stress bike network, local businesses, and other community destinations. Separated bikeways exist north of the project area and are planned for construction to the south through a City of Oakland project in 2026; if funded, this project would become part of a 1.75-mile long Class IV separated bikeway facility.

This grant application would fund temporary materials meant to last up to 5 years, and the project has been designed for flexibility of design and implementation. The Adeline Street Quick-Build Project would serve as a pilot version of a final street design to be developed through a comprehensive public engagement process as part of the upcoming Adeline Street Transportation Improvements Project. The quick-build project will include data collection and evaluation stages before and after implementation to further inform design changes.

Funding this project would fulfill recommendations identified in the 2017 Berkeley Bicycle Plan, the 2020 Berkeley Vision Zero Action Plan, the 2020 Berkeley Pedestrian Plan, and the 2020 Adeline Corridor Specific Plan.

**Please choose the project phases:**

- X Planning
- X PE
- X ENV
- X ROW
- X CON

## Topic 1: Bicycle, Pedestrian and Transit Planning

**Does Project implement relevant Plans, or other locally adopted recommendations?**

**Plan examples include:**

- City/County General + Area Plans
- Bicycle, Pedestrian & Transit Plan

- **Community-Based Transportation Plan**
- **ADA Transition Plan**
- **Station Access Plan**
- **Short-Range Transit Plan**
- **Vision Zero/Systematic Safety Plan**

Yes

**Description:**

The Adeline Street Quick-Build Project emerged as a Tier I high-priority project in the 2017 Berkeley Bicycle Plan and is consistent with the City Council adopted 2020 Berkeley Pedestrian Plan, the Vision Zero Action Plan (2019), and the 2020 Adeline Corridor Specific Plan.

The 2017 Berkeley Bicycle Plan recommends a Class IV separated bikeway on Adeline Street integrated with existing transit service.

The 2020 Berkeley Pedestrian Plan identifies Adeline Street (within the project area) as a top-10 project for improving pedestrian safety and access.

The 2019 Vision Zero Action Plan identified Adeline Street as one of the city’s high-injury streets, the 16% of city streets where 91% of Berkeley’s severe or fatal collisions occur.

The Adeline Corridor Specific Plan, adopted in 2020, reflects a community-driven planning process started in 2015 with a heavy emphasis on advancing equity for the corridor’s most vulnerable residents. The plan calls for a full reconstruction of Adeline Street, including Class IV separated bikeways and roadway reallocation for open space and public programming.

## Topic 2: Active Transportation Network

**Does the project area contain segments of the regional Active Transportation (AT) Network? See AT Network map on the [MTC Complete Streets webpage](#).**

Yes

**Description:**

The city of Berkeley Adeline Street Quick-Build Project is located entirely within the MTC Regional Active Transportation Network and will fill a 0.6-mile gap in the low-stress bikeway network and provide access to the Ashby BART Station. The project limits are on Adeline Street from Ashby Avenue to the Berkeley city limits at MLK Jr Way. The project would connect to the Woolsey-Fulton Bicycle Boulevard (planned for construction in 2025), as well as to the Alcatraz Avenue Class II bike lanes.

The project adheres to the NACTO All Ages and Abilities design principles and Caltrans DIB-94 guidance for complete streets. The project will include four doweled-concrete floating transit boarding islands, a six-lane to four-lane road diet on Adeline Street south of Fairview Street, and pedestrian refuge islands at three crosswalks at Fairview and Harmon Streets. It adheres to the NACTO All Ages and Abilities design principles and Caltrans DIB-94 guidance for complete streets.

### Topic 3: Safety and Comfort

**Is the project on a known High Injury Network (HIN) or has a local traffic safety analysis found a high incidence of bicyclist/ pedestrian-involved crashes within the project area?**

Yes

**Please summarize the traffic safety conditions and describe the project's traffic safety measures. The Bay Area Vision Zero System may be a helpful resource.**

The 2019 Berkeley Vision Zero Action Plan established a designated network of high-injury streets: 16% of Berkeley's roadways where 91% of severe and fatal collisions occur. Adeline Street is designated as a high-injury street, based on collision data from 2008 to 2018, as did the 2020 Berkeley Pedestrian Plan, using data from 2008 to 2017. The intersection of Alcatraz and Adeline is identified in the 2020 Berkeley Pedestrian Plan as a high-priority area due to its significant collision rates.

Between 2013 and 2021, there were 56 collisions involving bicyclists and pedestrians on Adeline Street in the project area. Of these incidents, two pedestrians were fatally injured. Six others—four pedestrians and two bicyclists—sustained severe injuries. Both pedestrian fatalities and two of the severe bicycle injuries occurred at the intersection of Adeline Street and Ashby Avenue. Additional severe pedestrian injury collisions took place in intersections at Fairview Street, Woolsey Street, and MLK Jr Way. The intersection of Adeline Street and Harmon Street accounted for 12 collisions, the highest among all intersections along this stretch.

Of all collisions, 70% (39) happened at an intersection; about 25% (14) of these collisions happened at an intersection without a traffic control device. Of pedestrian collisions, 62% (21) occurred when the pedestrians were crossing in a crosswalk at an intersection. Most vehicle- and bicycle-related collisions 63% (15) were broadsides, often due to improper turning 29% (7), with 63% (15) of bicycle-related collisions at an intersection.

In response, the project will restripe the existing Class II bike lanes from Ashby Avenue to Fairview Street as a mix of Class IV and Class II and implement Class IV separated bikeways with a road diet from Fairview Street to the Berkeley city limits using flexible and temporary materials. Class II colored bike lanes have been associated with a 39% crash reduction factor (CRF); colored bike lanes will be used in sections from Ashby Avenue to MLK Jr Way where loading needs conflict with a quick-build Class IV separated bikeway, warning drivers of the presence of bicyclists. The project will include enhanced skip-stripping of bike lanes across driveways and through intersections (35% CRF), enhancing visibility of bicyclists for drivers making turning movements.

Class IV separated bikeways, recommended from Fairview Street to city limits, have been associated with a 45% CRF. The road diet (35% CRF) will reduce travel lanes from six to four from Fairview Street to the Berkeley city limits. Combined with pedestrian refuge islands at unsignalized crossings (45% CRF) at Fairview Street and Harmon Street, the project will reduce vehicle speeds and significantly improve pedestrian safety when crossing at unsignalized intersections. These improvements will build upon the existing rectangular rapid flashing beacon at the Harmon Street crossing. On Adeline Street at Alcatraz

Avenue, a combination of features will effectively reduce the pedestrian crossing distance from 120 feet to 70 feet and improve the visibility of pedestrians and bicyclists for turning vehicles.

Transit boarding islands will separate bike travel from curbside transit loading, reducing conflicts between bicyclists and transit vehicles.

**Does the project seek to improve conditions for people biking, walking and/or rolling? If the project includes a bikeway, was a Level of Traffic Stress (LTS), or similar user experience analysis conducted?**

Yes

**Describe how project seeks to provide low-stress transportation facilities or reduce a facility's LTS.**

The 2017 Berkeley Bike Plan developed an LTS map for Berkeley's bike network, with the scoring designations being tied directly to a statistically balanced 600-count user survey for comfort using different types of bicycle facilities. This map designated the corridor as a level of traffic stress (LTS) 3 (suitable only for confident adults) from Ashby Avenue to Woolsey Street and LTS 4 (suitable only for the most traffic-tolerant) to the city limits. The corridor sees high vehicle speeds and low rates of yielding to pedestrians in uncontrolled crosswalks.

The proposed Adeline Quick-Build project will create a safer, more comfortable bicycle connection for people seeking a low-stress environment to bicycle. The new project will be rated LTS 1, as measured by the City of Berkeley. Creating a separated bikeway along Adeline Street exposes residents to far less risk of severe collisions when traveling in their community. The enhanced safety measures at major roadway crossings (road diets and median refuge islands) ensure that stress-averse residents will not be deterred from walking and biking trips by a "weak-link" in the route.

The project will connect with existing LTS 1 Class IV separated bikeways on Adeline Street north of Ashby Avenue, which connect with the LTS 1 Russell Street Bicycle Boulevard, providing direct connectivity to the low-stress Bicycle Boulevard network of Berkeley. The project will also intersect with the upcoming Woolsey-Fulton Bicycle Boulevard at Woolsey Street, another LTS 1 facility planned for construction in 2025. The project will also connect with the upcoming MLK JR Way Class IV separated bikeway project (LTS 1) in the City of Oakland, scheduled for construction in 2026.

## Topic 4: Transit Coordination

**Are there existing public transit facilities (stop or station) in the project area?**

Yes

**If yes, list transit facilities (stop, station, or route) and all affected agencies.**

AC Transit Bus lines F Transbay and 12.

Ashby BART station serving the Red Line and Orange Line.

**Have all potentially affected transit agencies had the opportunity to review this project? If yes, please save the email from transit operator(s) below.**

Yes

**Is there a [MTC Mobility Hub](#) (map) within the project area?**

Yes

**If yes, please describe outreach to mobility providers, and the project's Hub-supportive elements.**

**Please view the [Mobility Hubs Playbook Play 1](#).**

There is one Mobility Hub within the project's affected area, the Ashby BART station. The project will strengthen the first—and last-mile connections to AC Transit bus lines and the Ashby BART station. These transit connections are particularly important for the MTC Equity Priority Community (census tract 06001424001), which has a high rate of households without a vehicle (17%).

AC Transit and BART were both active stakeholders during the development of the 2020 Adeline Corridor Specific Plan. The City of Berkeley actively coordinated with AC Transit in the development of floating bus boarding islands as part of the design concept for this Quick-build project. The City of Berkeley is actively coordinating with BART on the redevelopment of the Ashby BART station for transit oriented development. The Berkeley City Council in 2024 adopted a formal roadway design for Adeline Street along the BART station frontage, to be built as part of the station's future redevelopment. The approved conceptual designs are consistent with the Class IV facilities proposed in the Quick-Build.

## Topic 5: Design

**If applicable, please describe the pedestrian focused improvements and cite the design standards used (links to standards are not needed).**

The project includes three pedestrian refuge islands at the intersections of Adeline Street with Fairview Street and with Harmon Street. The project will include up to 4 floating bus boarding islands, reducing conflict between bicyclists and pedestrians boarding transit. The bus boarding islands will also allow for in-lane boarding, improving transit efficiency and reliability. The project from Fairview Street to the Berkeley City Limits at MLK Jr Way will include a 6-to-4 road diet, reducing vehicle speeds and crossing distances for pedestrians, significantly improving safety for pedestrians crossing this high-injury street. The design for this project reflects the latest standards in safety and comfort based on NACTO, the Caltrans DIB-94 guidelines, the CA MUTCD, and PROWAG.

**If applicable, please provide the class designation for bikeways included in the project and cite the design standards used.**

From Ashby Avenue to MLK Jr Way, the project will be a mix of Class II buffered, colored bike lanes and Class IV separated bikeways. Buffered, colored Class II bike lanes will be used in this area along loading zones for the Ashby BART station and the Ed Roberts Campus; in these locations, parking-protected Class IV facilities and infeasible in a quick-build context because of the need to provide additional mid-block curb ramps for ADA access between the parking lane and the curb.

From Fairview Street to the City limits at MLK Jr Way, the project will be a Class IV separated bikeway, implemented via a 6-to-4 road diet.

The design for the Class IV Separated Bike Lane with transit boarding islands reflects the latest standards in safety and comfort based on NACTO, the Caltrans DIB-94 guidelines and the CA MUTCD.

## Topic 6: Equity

**Will the project improve active transportation in an Equity Priority Community (EPC)?**

Yes

**Please list census tracts that are designated as EPCs and affected by this project.**

The project affects one Equity Priority Community (Census Tracts 06001424001). The project will serve members of these communities by improving access and providing safe biking and walking routes to work, transit, errands, schools, churches, and recreation in the project area.

## Topic 7: Bicycle and Pedestrian Advisory Committee (BPAC) or Equivalent Committee Review (Requirement)

**Has a local (city or county) Bicycle and Pedestrian Advisory Commission (BPAC) reviewed this Checklist? The Checklist will begin MTC review once the BPAC meeting has occurred.**

The submission of this checklist will be reviewed by the Transportation and Infrastructure Committee.

**Please provide the meeting date(s).**

September 19, 2024

**Please provide a summary of meeting comments. If meeting date hasn't occurred yet, [please share future meeting comments here.](#)**

## Statement of Compliance

**The proposed project complies with California Complete Street Act of 2008 (Gov. Code Sections 65040.2 and 65302, MTC Complete Streets Policy (Reso. 4493), and locally adopted Complete Streets resolutions (adopted as OBAG 2 (Reso. 4202) requirement, Resolution 4202).**

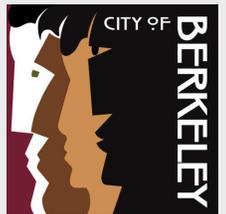
**Please check below if Yes. If no, complete the Statement of Exception. If Yes, this Checklist is complete and the rest of the form can be skipped. If No, please fill out the Statement of Exception section.**

Yes

# *City of Berkeley Stormwater Master Plan*

September 19, 2024

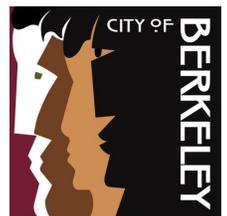
- **RICARDO SALCEDO PE, CITY OF BERKELEY – PROJECT MANAGER**
  - **CHENG SOO PE, WOOD RODGERS – PROJECT MANAGER**
- **SATISH KUMAR PE, WOOD RODGERS – DEPUTY PROJECT MANAGER**



- ▶ Introductions
- ▶ Purpose of SWMP
- ▶ Implementation Timeline
- ▶ Previous Planning Efforts
- ▶ Comprehensive SWMP
- ▶ Project Components
- ▶ Detailed Schedule
- ▶ Public Engagement

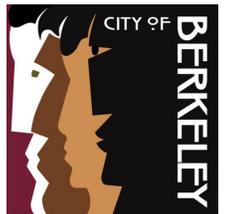


AGENDA



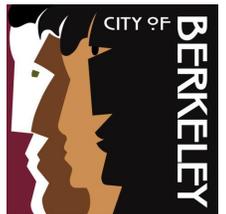
# Purpose of Stormwater Master Plan

- ▶ Provide the comprehensive technical analysis needed to guide the future maintenance and improvements of the City's aging stormwater system.
- ▶ Develop and prioritize capital improvement projects based on a social equity and risk-based model
- ▶ Develop the City's stormwater compliance strategy
- ▶ Update maintenance and inspection plans for stormwater facilities
- ▶ Identify funding needs and grant opportunities



# Project Implementation Timeline

- ▶ RFQ issuance – February 2023
- ▶ Council contract award approval - July 2023
- ▶ Start of work - Early 2024
- ▶ Expected completion - First half of 2026



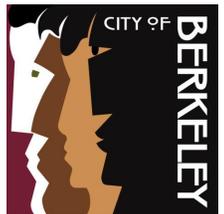
# Previous Planning Efforts

## ▶ **Watershed Management Plan**

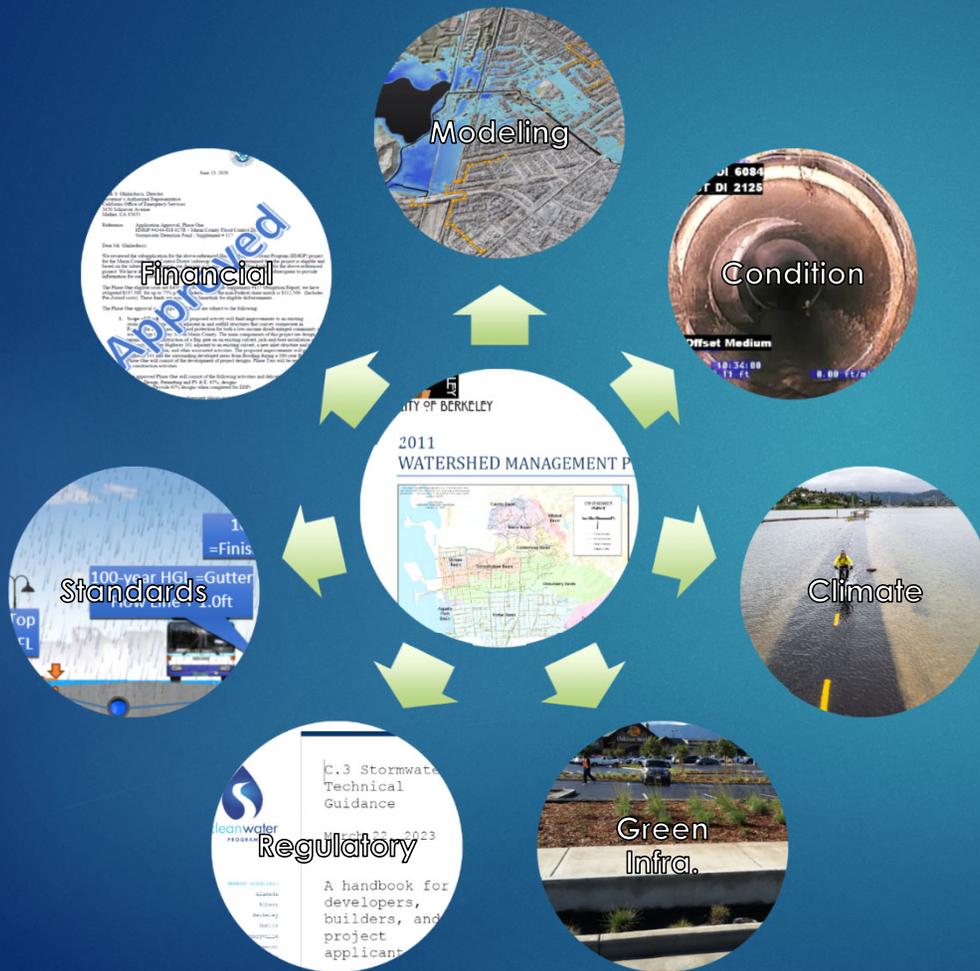
- ▶ Adopted by City Council in 2012
- ▶ Provided high-level guidance and strategies for managing the City's watersheds with a focus on improving water quality and reducing urban flooding.
- ▶ Hydraulic modeling and CIP recommendations for Codornices and Potter watersheds

## ▶ **Green Infrastructure Plan**

- ▶ Adopted by Council in 2019
- ▶ Established criteria for identifying and prioritizing green infrastructure projects



# Comprehensive Stormwater Master Plan



- ▶ Comprehensive hydraulic modeling of all City watersheds
- ▶ Field verification & targeted condition assessment of stormwater assets
- ▶ Climate change adaptation analysis
- ▶ Emphasis on incorporating large stormwater capture, trash capture, and LID opportunities
- ▶ Strategies for meeting updated regulatory requirements
- ▶ Update drainage design standards
- ▶ Detailed financial analysis

# SWMP Phase 1: Data Collection



Storm Drainage Facilities



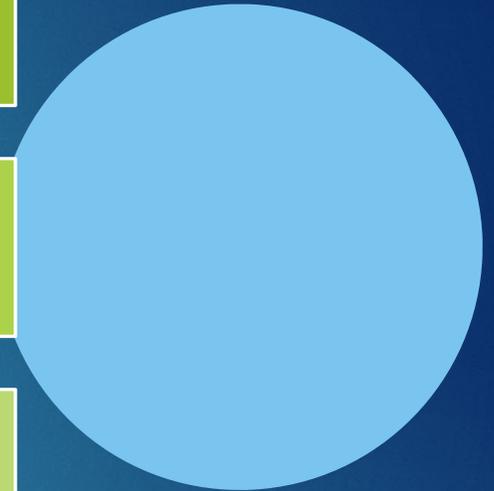
Georeferenced As-Builts



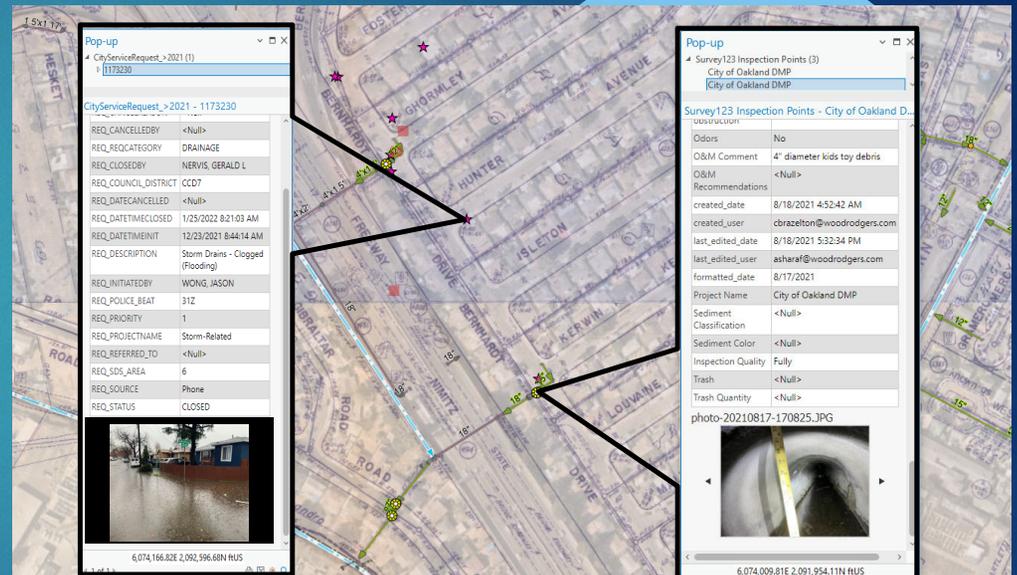
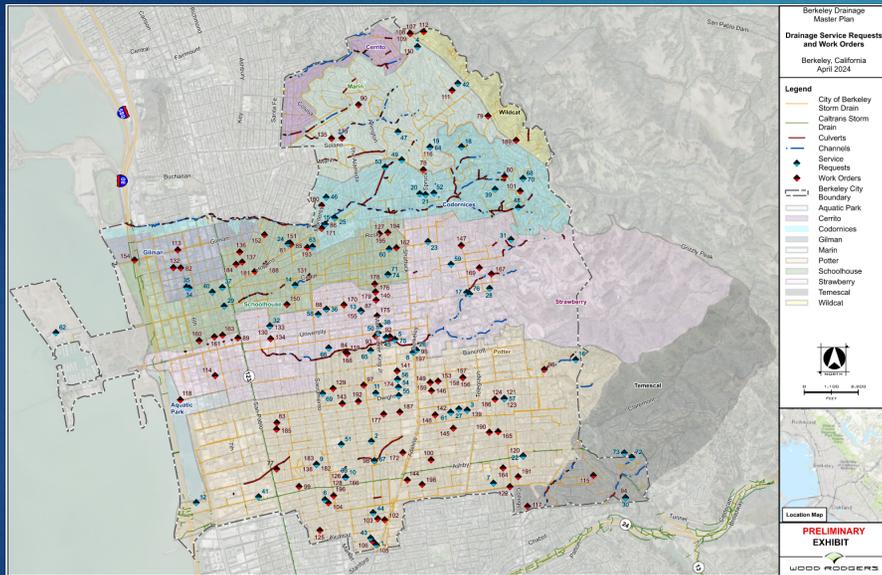
Inspection & Condition Assessment



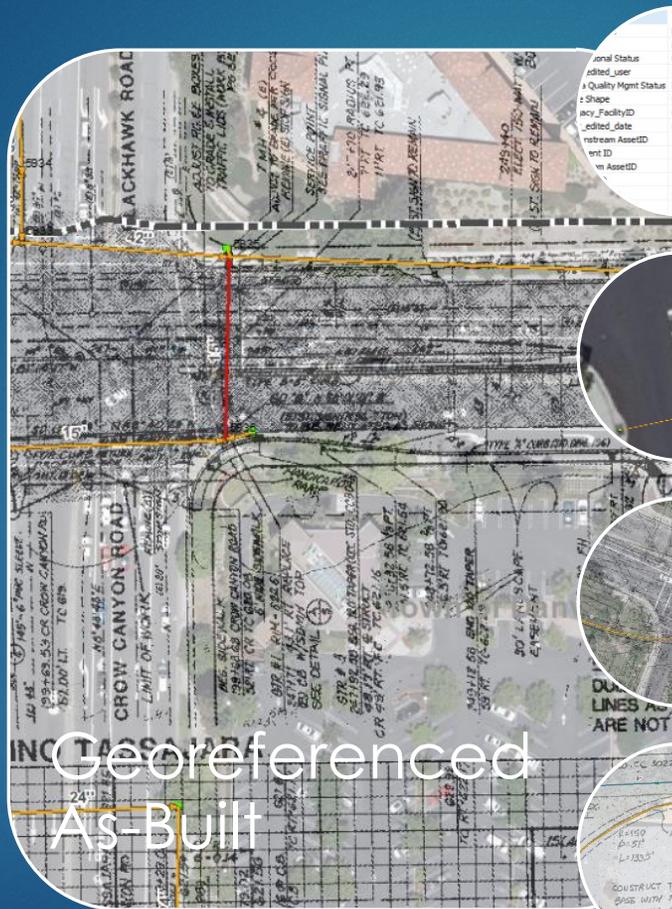
Community Input



# SWMP Phase 1: Data Collection

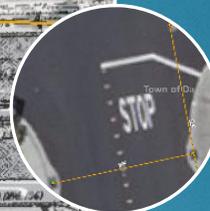


# SWMP Phase 1: Facility Inventory



Attribute	Value
Material	Reinforced Concrete
Polylines 2D	
Operational Status	Operational
Edited User	JN8819001_ADMIN
Quality Mgmt Status	Document-verified (based up)
Shape	Circle
FacilityID	CIPP-9663
Edited Date	8/6/2021 6:18:03 AM
Stream AssetID	5935
Event ID	5933, 5935
AssetID	5933
	5373
	42
	122.17167

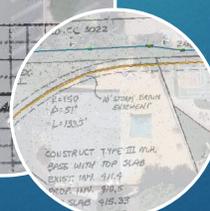
Attributes



Spatial Locations

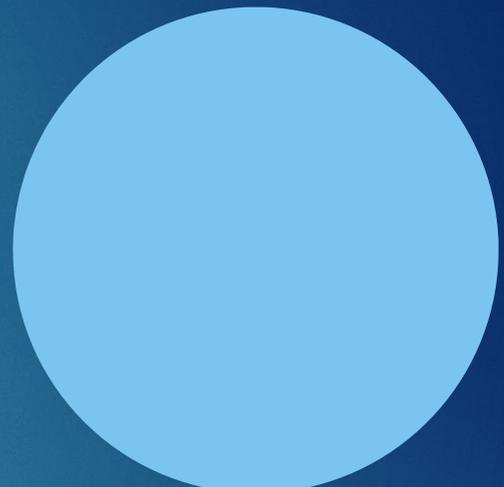


Alignments



Ownerships

Georeferenced  
As-Built



# SWMP Phase 1: Field Inspection



Field Inspection



1. Reported flooding & deficient pipe incidents



2. Aged CMPs



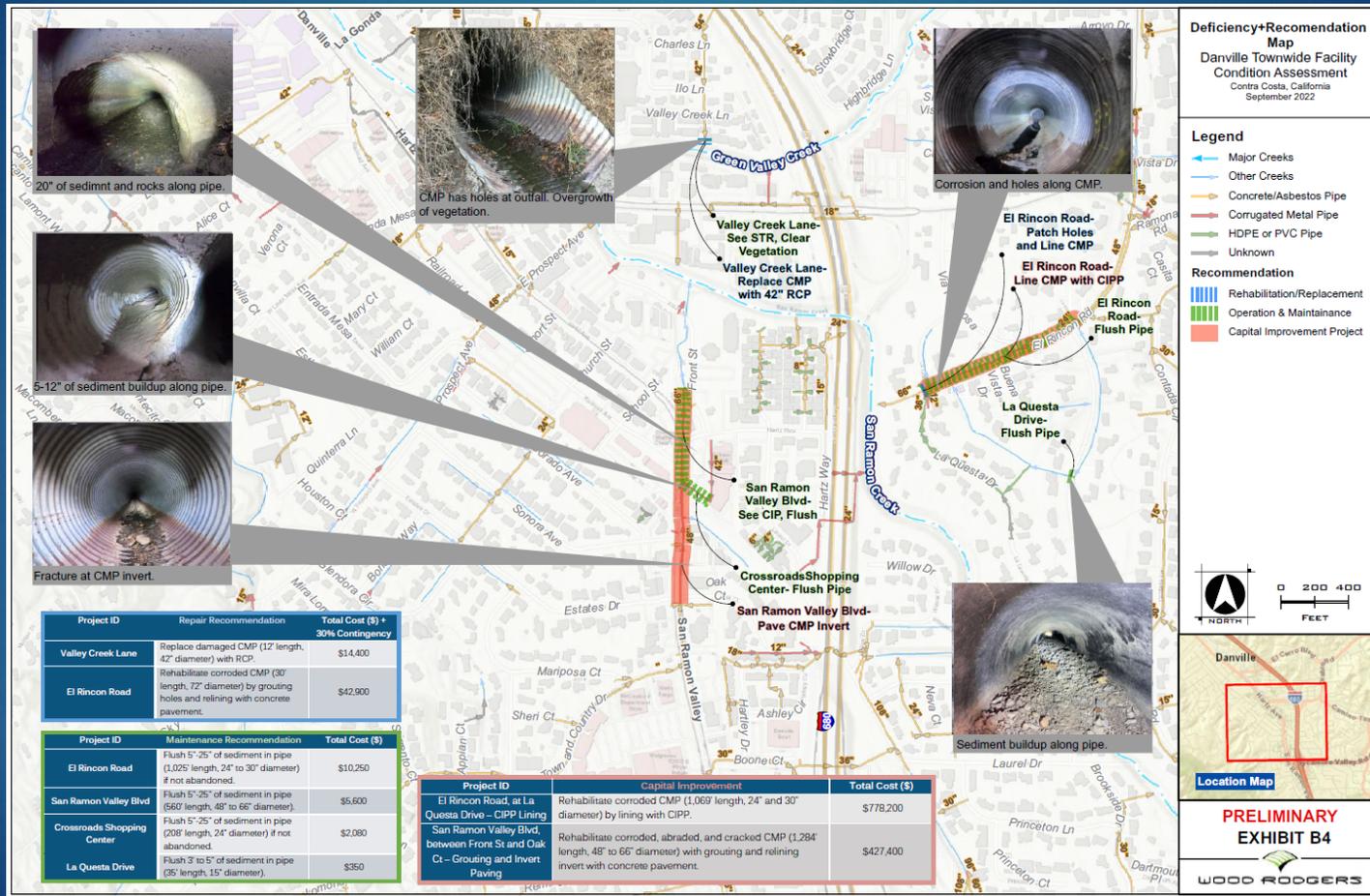
3. Upstream inlets, flat slope & backwater



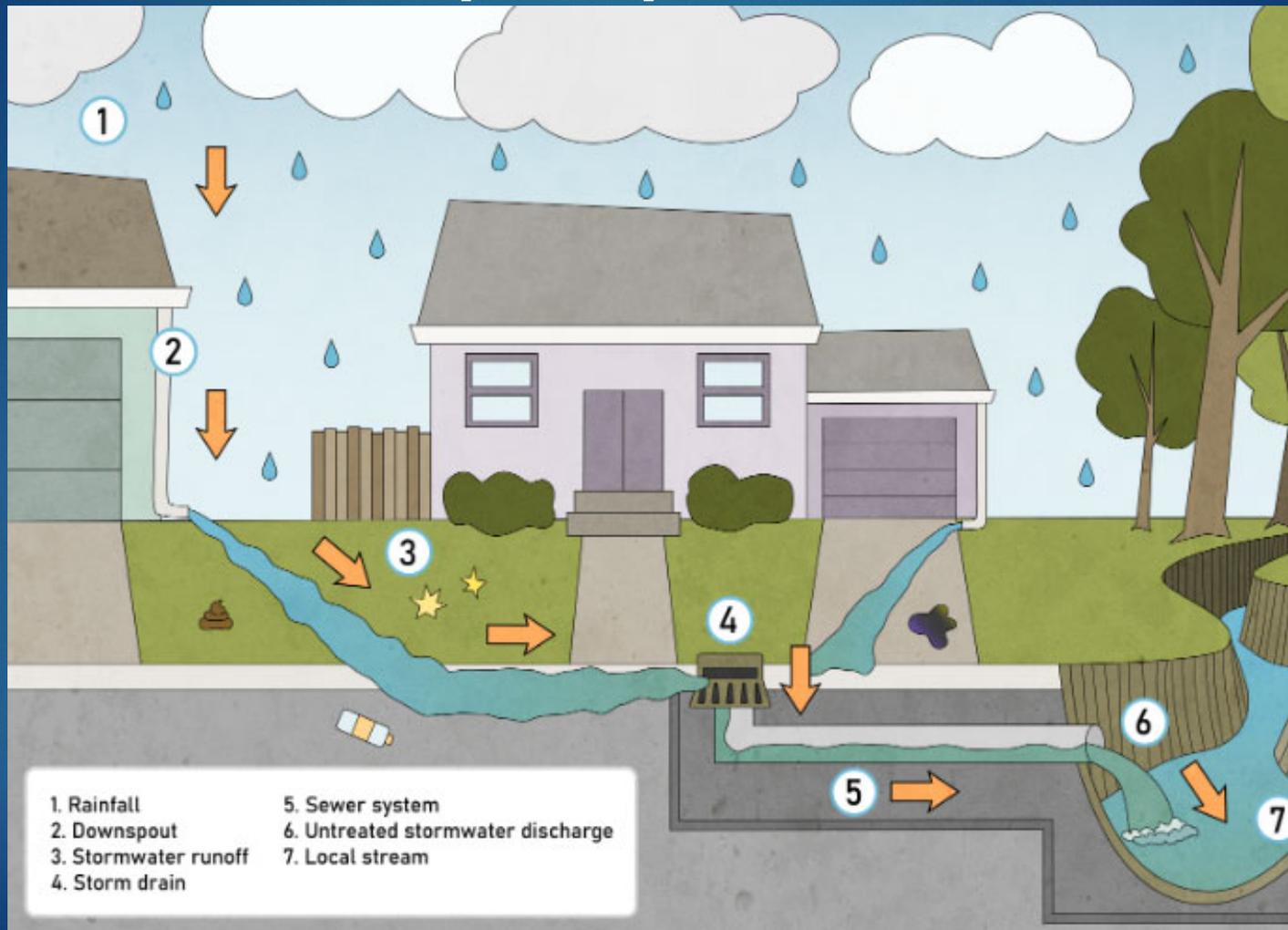
4. Hillsides & outfall structures



# SWMP Phase 1: Condition Assessment & Recommendations



# SWMP Phase 1: Capacity Assessment



# SWMP Phase 1: Capacity Assessment



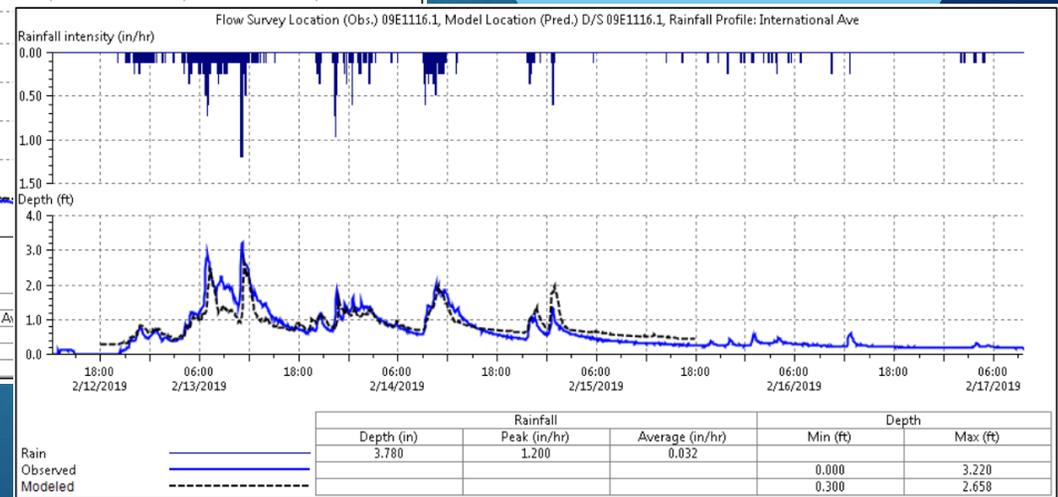
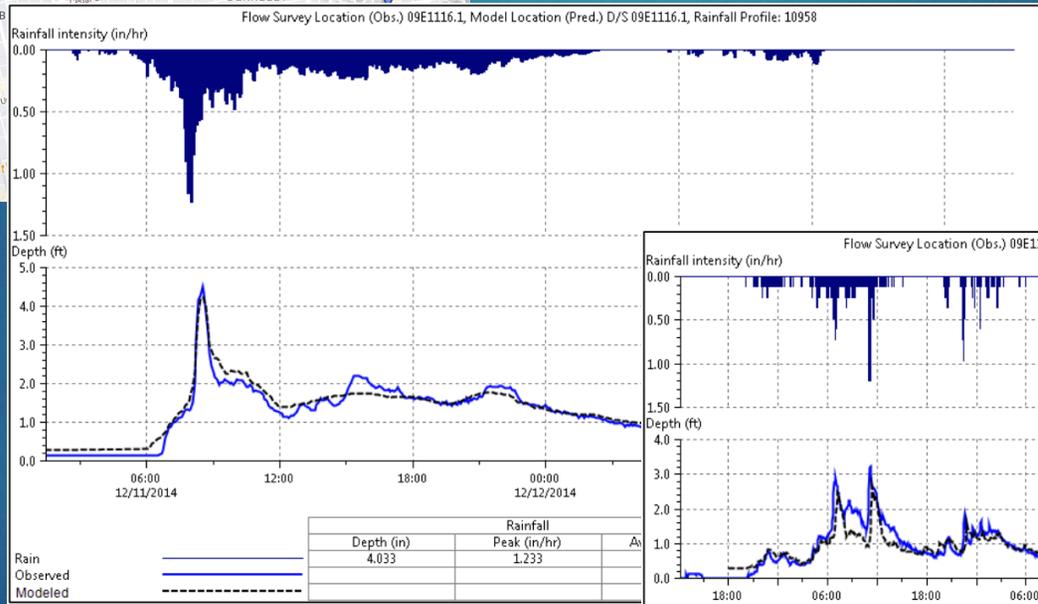
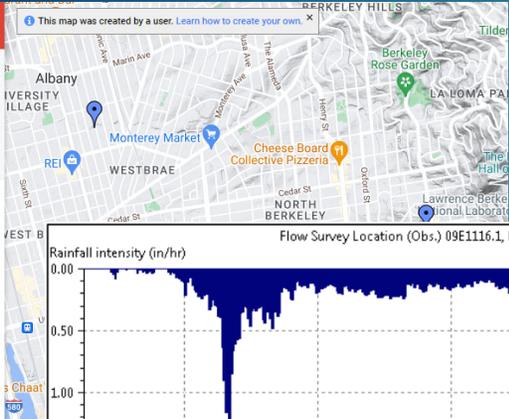
# SWMP Phase 1: Model Calibration

Balance Hydrologics; On-li...

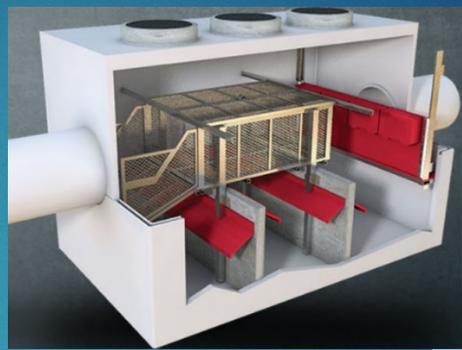
Stream and rainfall monitoring stations operated by Balance Hydrologics, Inc. See [www.balancehydro.com/onlinegaging.shtml](http://www.balancehydro.com/onlinegaging.shtml) for 89,543 views  
Published on April 24, 2023  
SHARE

Untitled layer

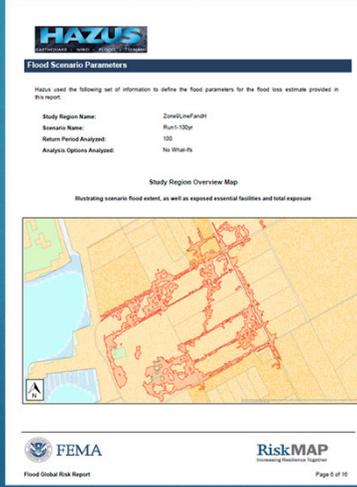
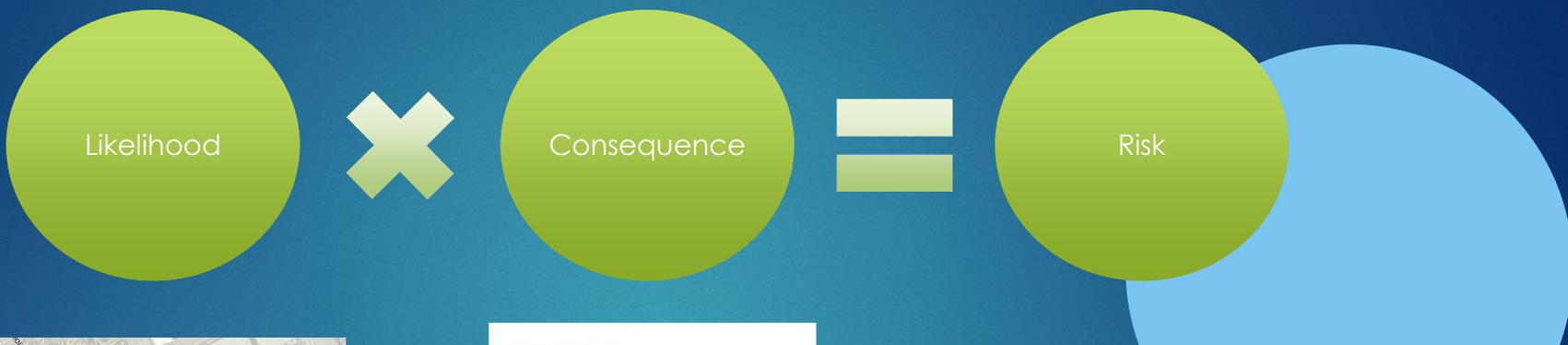
- Rainfall at Balance Hydrologics, Berkeley Office
- Rainfall at Balance's Santa Cruz office
- Strawberry Creek above Oxford St.
- Strawberry Creek at Stevens Hall
- Strawberry Creek at University House
- Wildcat Creek at Vale Rd.
- Codornices Creek at Cornell Ave.



# SWMP Phase 1: Green + Gray Infrastructure + Multi-Benefit

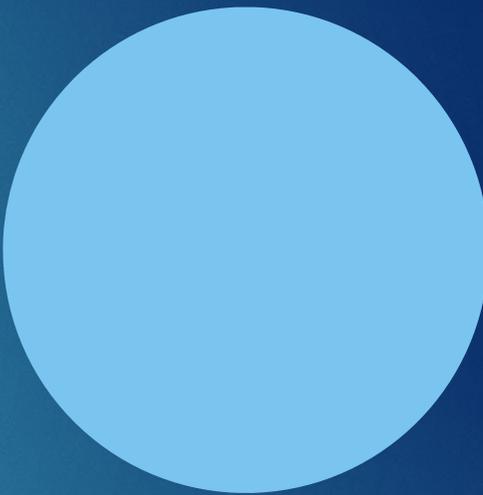
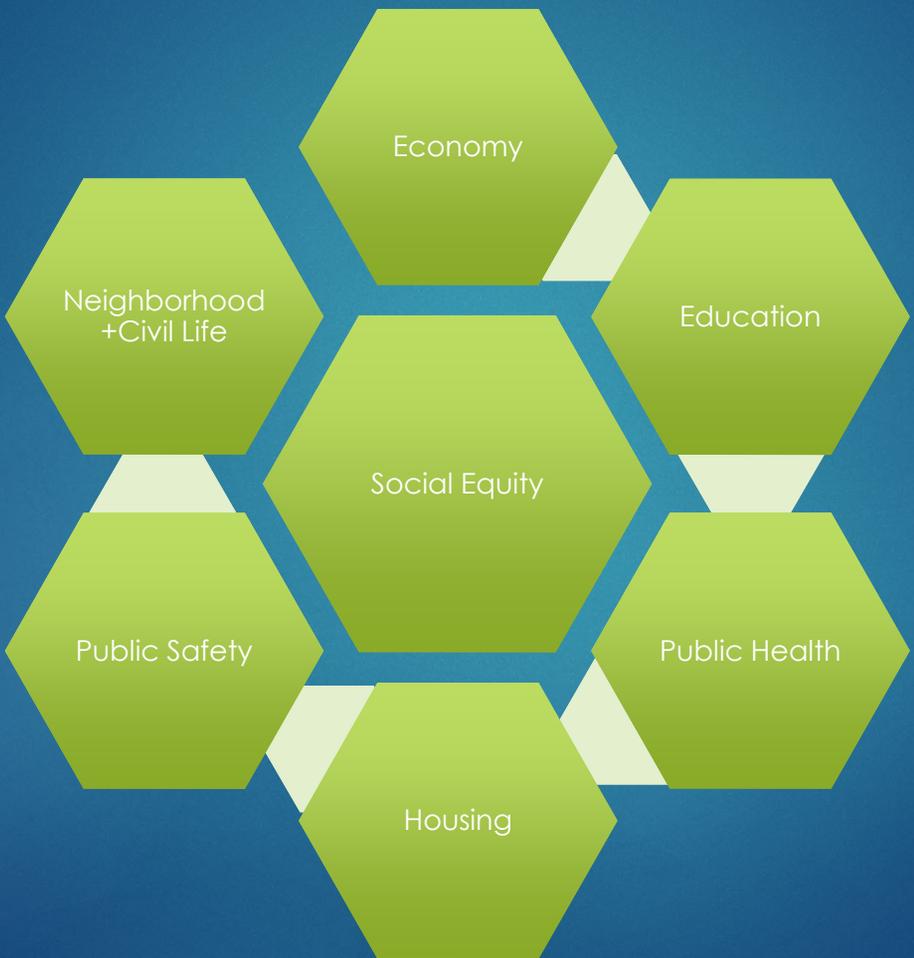


# SWMP Phase 2: Risk-Based Project Prioritization

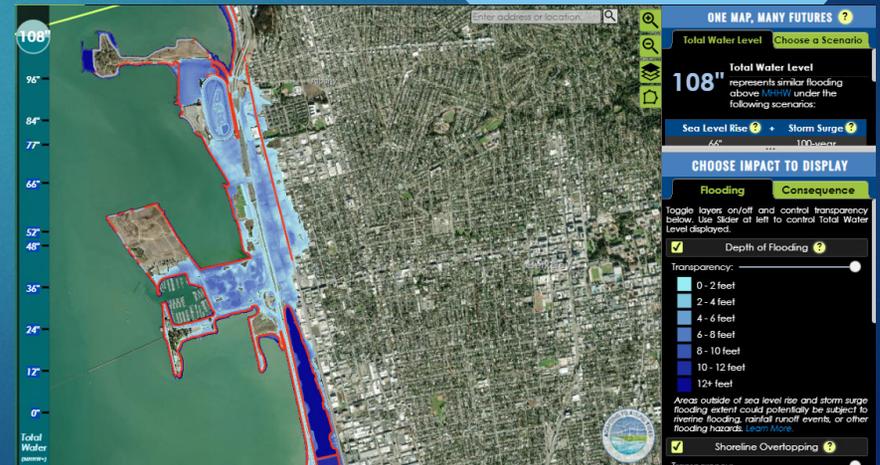
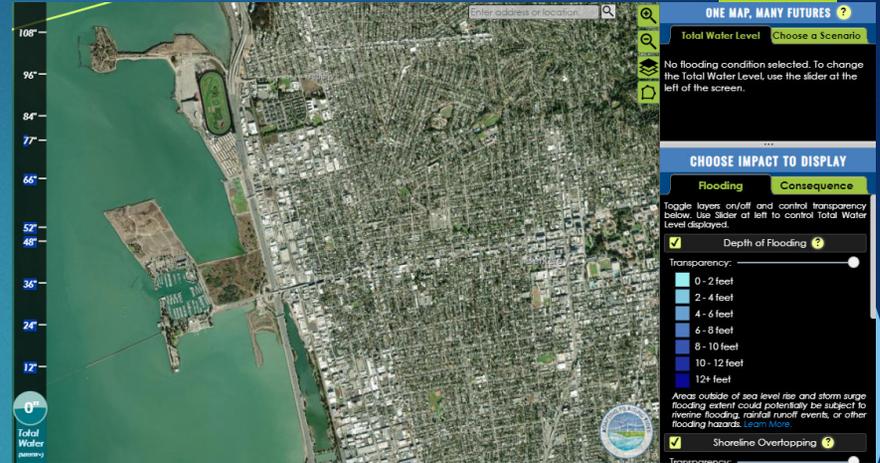
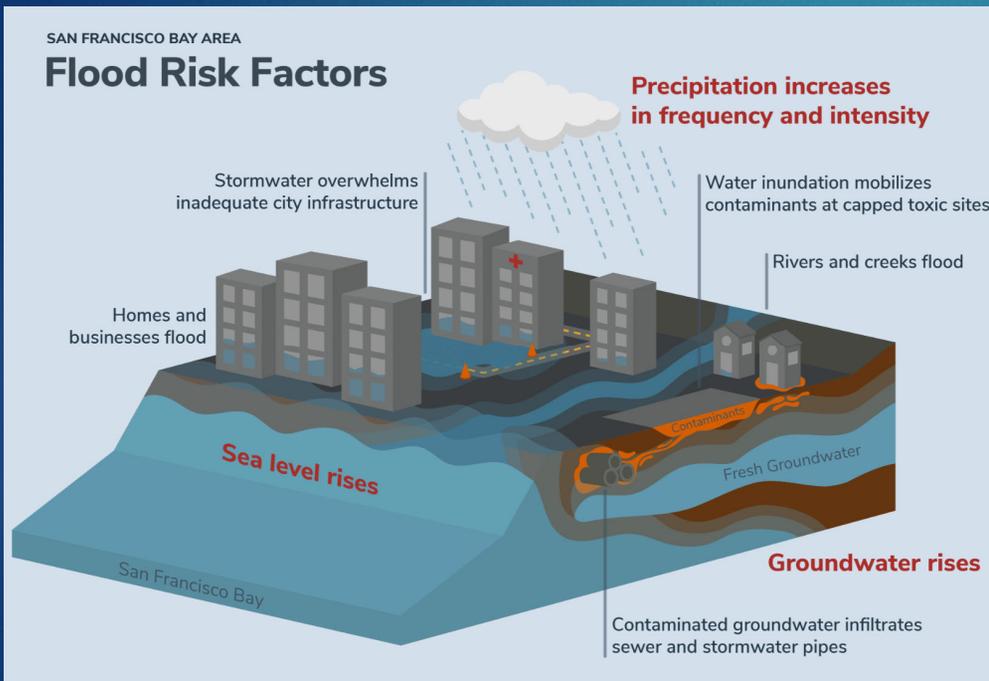


Deficient System	Likelihood (%)	Design Storm (year)	Consequence* (\$)	Annualized Risk <sup>17</sup> (\$/year)		
Middlefield Road	50	2	2.7 M	\$5.02 M		
	10	10	17.3 M			
	1	100	28.5 M			
El Camino Real / Alto Lane	50	2	1.8 M			
Recommended Improvements	Annualized Flood Risk (\$)	Annualized Project Life Cycle Cost (\$)	Annualized Risk/Annualized Project Life Cycle Cost	Prioritization Ranking		
Middlefield Road	5.02 M	0.72 M	7.0	1		
El Camino Real / Alto Lane	2.63 M	0.49 M	5.4	2		
Arbor Road	1.01 M	0.35 M	2.9	3		
Chrysler Drive	0.31 M	0.11 M	2.8	4		
O'Brien Drive	0.09 M	0.06 M	1.5	5		

# SWMP Phase 2: Equity-Based Project Prioritization



# SWMP Phase 2: Climate Change





# SWMP Phase 2: Multi-Benefit Aquatic Park



Recreation



Water Quality



Flood Control

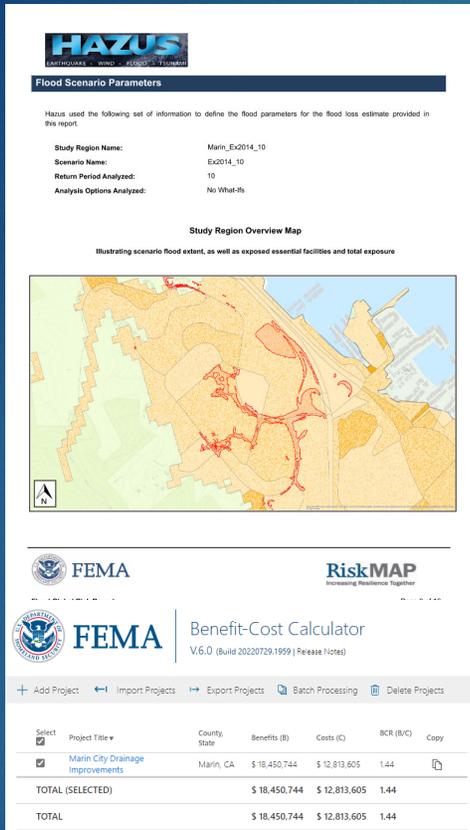


Maintenance



Operation & Improvements

# SWMP Phase 2: Grant Funding



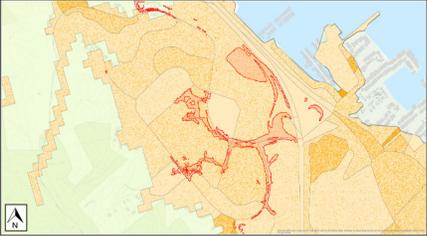
**HAZUS**  
EARTHQUAKE • WIND • FLOOD • COLLISION

**Flood Scenario Parameters**

Hazus used the following set of information to define the flood parameters for the flood loss estimate provided in this report:

Study Region Name: Marin\_EX2014\_10  
 Scenario Name: EX2014\_10  
 Return Period Analyzed: 10  
 Analysis Options Analyzed: No What-ifs

**Study Region Overview Map**  
 Illustrating scenario flood extent, as well as exposed essential facilities and total exposure



**FEMA RiskMAP**  
 Increasing Resilience Together

**FEMA Benefit-Cost Calculator**  
 V.6.0 (Build 20220729.1959) (Release Notes)

+ Add Project   ← Import Projects   → Export Projects   🔄 Batch Processing   🗑 Delete Projects

Select	Project Title	County, State	Benefits (B)	Costs (C)	BCR (B/C)	Copy
<input checked="" type="checkbox"/>	Marin City Drainage Improvements	Marin, CA	\$ 18,450,744	\$ 12,813,605	1.44	
<b>TOTAL (SELECTED)</b>			<b>\$ 18,450,744</b>	<b>\$ 12,813,605</b>	<b>1.44</b>	
<b>TOTAL</b>			<b>\$ 18,450,744</b>	<b>\$ 12,813,605</b>	<b>1.44</b>	



U.S. Department of Homeland Security  
 1111 Broadway, Suite 1200  
 Oakland, CA 94607-4052

 **FEMA**

June 23, 2020

Mark S. Ghalaracci, Director  
 Governor's Authorized Representative  
 California Office of Emergency Services  
 3650 Schaefer Avenue  
 Mather, CA 95655

Reference: Application Approval, Phase One  
 FEMA #4344-018-027R - Marin County Flood Control District  
 Stormwater Detention Pond - Supplement # 117

Dear Mr. Ghalaracci:

We reviewed the subapplication for the above-referenced Hazard Mitigation Grant Program (HMGP) project for the Marin County Flood Control District (subrecipient). We have determined that the project is eligible and based on the subrecipient's request, our decision is to approve the project. One funding for the above-referenced project. We have determined technical and financial information necessary for the subrecipient to provide information for our review of eligibility.

The Phase One eligible costs are \$450,000. In your Supplement #117 Obligation Report, we have obligated \$337,500, for up to 75% of the total eligible costs. The non-Federal share match is \$112,500. (Includes Pre-Award costs). These funds are available through the Smartlink for eligible disbursements.

The Phase One approval is subject to the following:

- Scope of Work: The proposed activity will fund improvements to an existing stormwater detention pond adjacent in and outfall structures that convey stormwater in the area of the pond. The project will provide flood protection for both a low-income disadvantaged community as well as a high-income area in Marin County. The main components of this project are design, construction of a flap gate on an existing culvert, jack-and-bore installation of a flap gate on Highway 101 adjacent to an existing culvert, a new inlet structure and tide gate, and other associated activities. The proposed improvements will protect Highway 101 and the surrounding developed areas from flooding during a 100-year flood event. Phase One will consist of the development of project designs. Phase Two will be reviewed prior to construction activities.

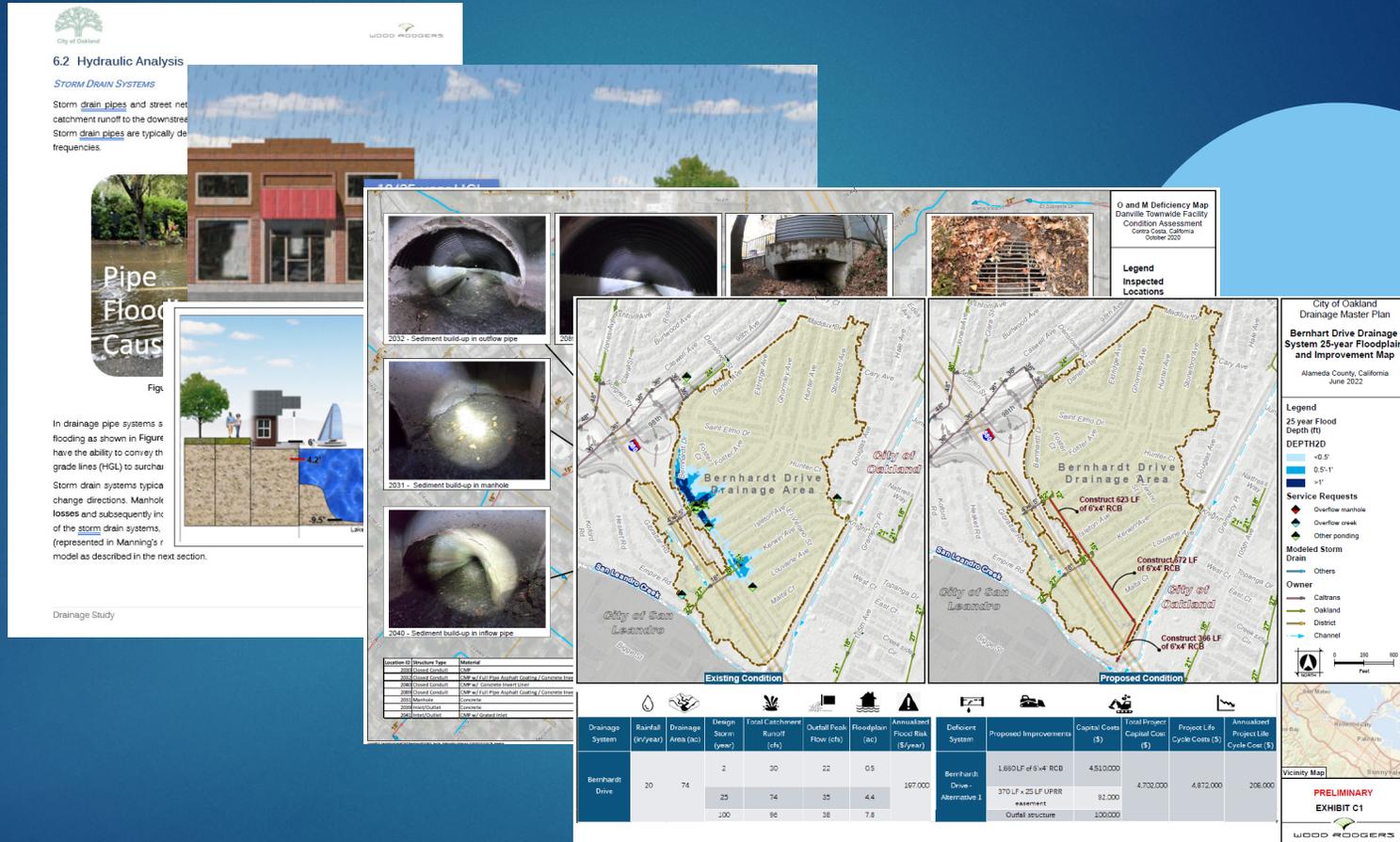
The approved Phase One will consist of the following activities and deliverables:

- Design, Permitting and PS & E. 65% designs (Provide 65% designs when completed for EHP)

This review does not cover subsequent phases including construction actions. No ground disturbing activities are permitted without prior notice and approval from FEMA.

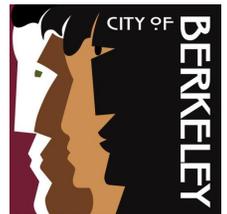
Funding

# SWMP Phase 2: Master Plan Report



# Planned Public Outreach

- ▶ **Public Input – Hotspot Reporting Survey**
  - ▶ Allows public to provide information about observed drainage related issues
    - ▶ Localized Flooding
    - ▶ Uncontrolled storm runoff
    - ▶ Broken infrastructure
  - ▶ Public feedback will be considered for inclusion in SWMP
- ▶ **Public engagement opportunities for several project components**
  - ▶ Climate Change/Sea Level Rise
  - ▶ CIP Prioritization
  - ▶ Aquatic Park





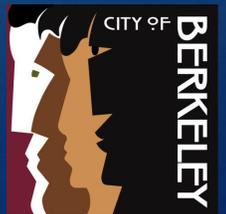
Ricardo Salcedo

▶ [rsalcedo@berkeleyca.gov](mailto:rsalcedo@berkeleyca.gov)

Additional Resources:

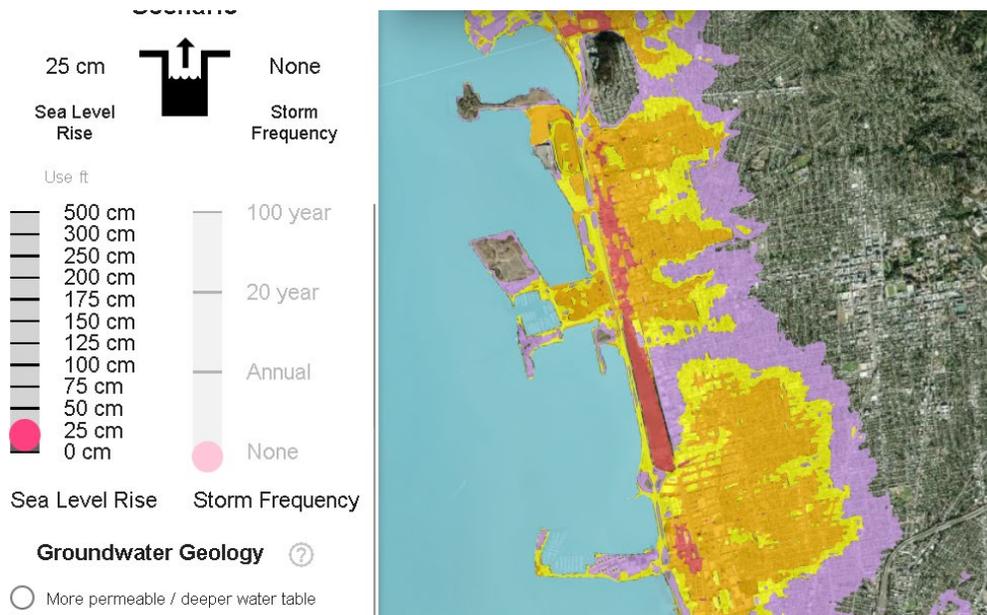
▶ City SWMP webpage :

<https://berkeleyca.gov/your-government/our-work/capital-projects/stormwater-master-plan>

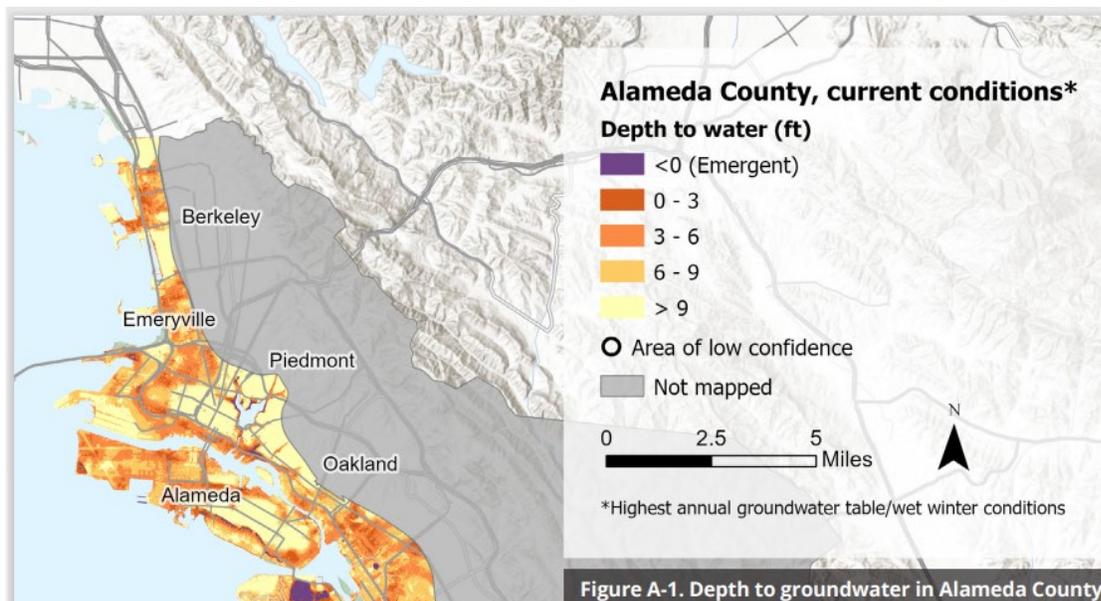


## Why Rising Groundwater Levels, Salt Intrusion, and Aquatic Park are critical to managing Berkeley's urban runoff as we face sea-level rise and larger storms

The two maps below begin to show where rising groundwater threatens West Berkeley. The hazard map below, from the US Geological Survey and Point Blue's [Our Coast Our Future](#), shows in red and orange areas where rising groundwater and accompanying salt might cause flooding and serious damage to buildings and infrastructure with 25 cm of sea-level rise. It is best used as a screening tool.



The more cautious map below, from ongoing research from the San Francisco Estuary Institute and Pathways Climate Institute, shows what was reliably known about groundwater depths in 2022. Orange or red indicate very shallow groundwater. The gray areas are being addressed in ongoing studies.



Aquatic Park is vital to runoff because it receives Bay water at high tides and freshwater runoff during storms from the city's two largest storm-drain lines, which together drain well over half of Berkeley. Without these outlets to Aquatic Park, many homes and businesses in low-lying West Berkeley would flood. The small middle lagoon/Model Yacht Basin is especially important because it appears to be rapidly filling in with sediment. The challenges are explained in more detail [at aquaticpark.org](http://aquaticpark.org).

### Aquatic Park main tide tubes and storm drains, 2024



Re-drawn from Balance Hydrologics, Inc., 2011