PARKS, RECREATION, AND WATERFRONT COMMISSION

Regular Meeting
Wednesday, July 10, 2024, 7:00 P.M.
Frances Albrier Community Center - auditorium
2800 Park Street, Berkeley, CA 94702

Parks and Waterfront Commission

Agenda

The Commissions may discuss any items listed on the agenda, but may take action only on items identified as Action.

1. **Call to Order** (Chair).
2. **Roll Call** (Secretary).
3. **Land Acknowledgement**: The City of Berkeley recognizes that the community we live in was built on the territory of xučyun (Huchiun (Hooch-yoon)), the ancestral and unceded land of the Chochenyo (Cho-chen-yo)-speaking Ohlone (Oh-low-nee) people, the ancestors and descendants of the sovereign Verona Band of Alameda County. This land was and continues to be of great importance to all of the Ohlone Tribes and descendants of the Verona Band. As we begin our meeting tonight, we acknowledge and honor the original inhabitants of Berkeley, the documented 5,000-year history of a vibrant community at the West Berkeley Shellmound, and the Ohlone people who continue to reside in the East Bay. We recognize that Berkeley's residents have and continue to benefit from the use and occupation of this unceded stolen land since the City of Berkeley's incorporation in 1878. As stewards of the laws regulating the City of Berkeley, it is not only vital that we recognize the history of this land, but also recognize that the Ohlone people are present members of Berkeley and other East Bay communities today. The City of Berkeley will continue to build relationships with the Lisjan Tribe and to create meaningful actions that uphold the intention of this land acknowledgement.
4. **Action**: **Approval of Agenda** (Chair).
5. **Action**: **Approval of Minutes** for June 12, 2024 (Chair).*
6. **Public Comment**.
7. **Chair's Report**. (Kawczynska).
8. **Discussion/Action: Council referral to designate Planter to Honor Ms. Richie Smith** (Miller).*
9. **Discussion: Recent Community Survey of City needs and potential ballot measures for November 2024** (Kawczynska).[1]
10. **Discussion/Action: 2024 Update to Local Hazard Mitigation Plan**.[2]
11. **Discussion/Action: Berkeley Stormwater Master Plan Project** (Kawczynska).*
12. **Information Reports**: Recent PRW Council Reports.*
13. **Future Agenda Items**: Public Art in Aquatic Park (Lavvorn); PRW Commission Workplan 2024; Citywide Accessibility Plan; Locations for Dog Parks.
14. **Communications**.* Mental Health Services Act FY25 Annual Update flyer.
15. **Next PRW Commission meeting**: Wednesday, September 11, 2024.
16. **Adjournment**.

* document is attached to agenda packet and on the commission website.
** document will be provided at the meeting.

[1] See Council Report on June 14, 2024 at https://berkeleyca.gov/sites/default/files/documents/2024-06-14%20Special%20Item%2002%20Community%20Survey%20Results%20and%20Direction.pdf

[2] See Item 13. LHMP Update on pp. 16-38 in the June 12, 2024 PRW Commission agenda at: https://berkeleyca.gov/sites/default/files/legislative-body-meeting-agendas/PRW%20AGND%202024-06-12_1.pdf

ADA Disclaimer: This meeting is being held in a wheelchair accessible location. To request disability-related accommodations 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.

SB343 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 Parks Recreation & Waterfront Department Office at 2180 Milvia Street, Berkeley, CA.

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.** All communications to the Commission should be received at least 10 days before the meeting date. 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 commission or committee for further information.

Commission Information: The agenda packets for the Parks and Recreation Commission and the Waterfront Commission are available for review at www.cityofberkeley.info/commissions; the Berkeley Main Library and the Parks Recreation & Waterfront Department Office at 2180 Milvia Street –3rd Floor, during their normal business hours. If you have questions, call Commission Secretary, Roger Miller at 981-6704 at 2180 Milvia Street, Berkeley, CA 94704 or by email at rmiller@cityofberkeley.info.

MISSION STATEMENT – PARKS AND WATERFRONT: Reviews and advises the City Council on issues related to all City/public parks, open space, greenery, pools, programs, recreation centers, the Waterfront, and resident camps: their physical conditions, policies, projects, programs, planning efforts, activities, and funding; early childhood education programs; and animal care issues in parks.

COMMISSION MEMBERS

Mayor- Gordon Wozniak	**District 3 -** Gianna Ranuzzi	**District 6 -**
District 1 - Sarah Bell	**District 4 -** Erin Diehm	**District 7 -** Alyssa Hurtado
District 2 - Claudia Kawczynska	**District 5 -** Brennan Cox	**District 8 -** Allan Abshez

Current assignments

Subcomm on dogs and parks (06-12-2024)

Liaison - Civic Center Planning – Erin Diehm
Liaison - Civic Arts in Parks – Brennan Cox

2024 Commission Meeting Dates

Name of Commission: Parks, Recreation, and Waterfront Commission

Commission Secretary: Roger Miller

Location: Frances Albrier Community Center, 2800 Park St

Month	Meeting Day and Date (2nd Wednesday per month)	Time	Notes
2024			
January	Wednesday, January 10	7:00 p.m.	Regular Mtg
February	Thursday, February 15	5:30 p.m.	Regular Mtg/Corp Yard Rm
March	Wednesday, March 13	7:00 p.m.	Regular Mtg
April	Wednesday, April 10	7:00 p.m.	Regular Mtg
May	Wednesday, May 8	7:00 p.m.	Regular Mtg
June	Wednesday, June 12	7:00 p.m.	Regular Mtg
July	Wednesday, July 10	7:00 p.m.	Regular Mtg
August	No meeting		
September	Wednesday, September 11	7:00 p.m.	Regular Mtg
October	Wednesday, October 9	7:00 p.m.	Regular Mtg
November	Wednesday, November 13	7:00 p.m.	Regular Mtg
December	No Meeting		
2025			
January	*Wednesday, January 8*	*7:00 p.m.*	*Regular Mtg*

PARKS AND WATERFRONT COMMISSION
Regular Meeting
Wednesday, June 12, 2024, 7:00 P.M., Frances Albrier Community Center, 2800 Park St

Minutes - Draft

The Commissions may discuss any items listed on the agenda, but may take action only on items identified as Action.

1. **Call to Order** (Chair). 7:15pm.
2. **Roll Call** (Secretary). Present: Abshez; Bell; Hurtado; Kawczynska; Lee; Ranuzzi; Wozniak; Absent: Cox.
3. **Land Acknowledgement** was provided.
4. **Action**: **Approval of Agenda** (Chair). (M/S/C: Kawczynska/Abshez/U): Ayes: Abshez; Bell; Hurtado; Kawczynska; Lee; Ranuzzi; Wozniak; Noe: None; Absent: Cox.
5. **Action**: **Approval of Minutes** for May 8, 2024 (Chair).* (M/S/C: Kawczynska/Wozniak/U): Ayes: Abshez; Bell; Hurtado; Kawczynska; Lee; Ranuzzi; Wozniak; Noe: None; Absent: Cox.
6. **Public Comment**. a) Toni Mester, drainage plan; b) Rachel Fishman, dogs; c) Naomi Friedman, dog park; d) Dana Bontrac, Monkey Island Park; e) Jim McGrath, marina finance. Cal Sailing Item: a) Shreyas Chand; b) Robert Ofsevit; c) Camille Antinori; d) Paul Kamen; e) Isna Mishra; f) Heather Breaux; g) Margaret Spencer; h) Alice Jandova; i) Joel Beazer; j) Gordon Stout; k) Ben Lee; l) David Fraser; m) Sheldon Coad; n) Peter Baczek; o) Matt Daniel; p) Aradhna Mayalall; q) Neeraj Delima; r) Sara Zimmerman; s) Luis Rangel.
7. **Discussion/Action: Update on Cal Sailing Club 6 berth slips on J-Dock** (Kawczynska).* (M/S/C to move Cal Sailing Item to No. 7): Ayes: Abshez; Bell; Hurtado; Kawczynska; Lee; Ranuzzi; Wozniak; Noe: None; Absent: Cox.
8. M/S/C (Abshez/Hurtado/U) to approve Councilmember Taplin's recommendation and replace "in perpetuity" with "for four years". Ayes: Abshez; Bell; Hurtado; Kawczynska; Lee; Ranuzzi; Wozniak; Noe: None; Absent: Cox.
9. **Chair's Report**. Page 41 in the agenda packet shows a sign at the Off Leash Area (Kawczynska); Grove Park ribbon-cutting (Kawczynska).
10. **Director's Report** (Ferris): PRW Divisions (Recreation; Parks; Waterfront; Capital; Budget; Grants). Update was provided.
11. **Presentation: Update on Cesar Chavez Park Landfill Issues** (Kawczynska).* Update was provided.
12. **Discussion: Recent Community Survey of City needs and potential ballot measures for November 2024** (Ferris).[3] Update was provided.
13. **Discussion/Action: create subcommittee on new dog parks in Berkeley** (Kawczynska). M/S/C (Kawczynska/Hurtado/U) to create a subcommittee with commissioners Kawczynska and Hurtado: Ayes: Abshez; Bell; Hurtado; Kawczynska; Lee; Ranuzzi; Wozniak; Noe: None; Absent: Cox.

[3] See: https://berkeleyca.gov/sites/default/files/documents/2024-06-14%20Special%20Item%2002%20Community%20Survey%20Results%20and%20Direction.pdf

14. **Information Reports**: The 2024 Update to Local Hazard Mitigation Plan, public process memo; Mental Health Services Act Community Meeting Flyer; Recent PRW Council Reports.*
15. **Future Agenda Items**: Public Art in Aquatic Park (Lavvorn); PRW Commission Workplan 2024; Citywide Accessibility Plan; Locations for Dog Parks.
16. **Communications**.* PRW Comm to Council re: CIP allocation in FY25-26.
17. **Next PRW Commission meeting**: Wednesday, July 10, 2024.
18. **Adjournment**. 9:45pm.

* document is attached to agenda packet and on the commission website.
** document will be provided at the meeting

- Commissioners in attendance: 7 of 8 appointed.
- Public in attendance: 27
- Public speakers: 24

***Note**: For any handouts distributed at the meeting, please see the Draft Minutes for June 12, 2024 on the Parks, Recreation, and Waterfront Commission webpage at the following link online: https://berkeleyca.gov/your-government/boards-commissions/parks-recreation-and-waterfront-commission

BERKELEY CITY COUNCIL AGENDA & RULES COMMITTEE SPECIAL MEETING MINUTES

MONDAY, JUNE 10, 2024
2:30 P.M.

2180 Milvia Street, 6th Floor, Berkeley, CA 94704 – Redwood Room

1404 Le Roy Ave, Berkeley, CA 94708 – Teleconference Location

Committee Members:

Mayor Jesse Arreguin, Councilmembers Sophie Hahn and Susan Wengraf
Alternate: Councilmember Terry Taplin

This meeting will be conducted in a hybrid model with both in-person attendance and virtual participation. If you are feeling sick, please do not attend the meeting in person.

Remote participation by the public is available through Zoom. To access the meeting remotely using the internet: Join from a PC, Mac, iPad, iPhone, or Android device: Use URL - https://cityofberkeley-info.zoomgov.com/j/1605781315. To request to speak, use the "raise hand" icon on the screen. To join by phone: Dial **1-669-254-5252 or 1-833-568-8864 (Toll Free)** and Enter **Meeting ID: 160 578 1315**. If you wish to comment during the public comment portion of the agenda, press *9 and wait to be recognized by the Chair. Please be mindful that the meeting will be recorded.

To submit a written communication for the Committee's consideration and inclusion in the public record, email policycommittee@berkeleyca.gov.

Written communications submitted by mail or e-mail to the Agenda & Rules Committee by 5:00 p.m. the Friday before the Committee meeting will be distributed to the members of the Committee in advance of the meeting and retained as part of the official record.

Pursuant to the City Council Rules of Procedure and State Law, the presiding officer may remove, or cause the removal of, an individual for disrupting the meeting. Prior to removing an individual, the presiding officer shall warn the individual that their behavior is disrupting the meeting and that their failure to cease their behavior may result in their removal. The presiding officer may then remove the individual if they do not promptly cease their disruptive behavior. "Disrupting" means engaging in behavior during a meeting of a legislative body that actually disrupts, disturbs, impedes, or renders infeasible the orderly conduct of the meeting and includes, but is not limited to, a failure to comply with reasonable and lawful regulations adopted by a legislative body, or engaging in behavior that constitutes use of force or a true threat of force.

Roll Call: 2:39 p.m. All present.

Public Comment – 9 speakers

Review of Agendas

1. **Approval of Minutes: May 21, 2024**
   Action: M/S/C (Wengraf/Hahn) to approve the minutes of 5/21/24.
   Vote: All Ayes.

2. **Review and Approve Draft Agenda:**
   a. 6/25/24 – Regular City Council Meeting
   Action: M/S/C (Arreguin/Hahn) to approve the agenda of 6/25/24 with the changes noted below.
   - *Item Added: Pride on the Plaza (Taplin)*
   - *Item Added: Grant Application (City Manager)*
   - *Item Added: Nexus Study (City Manager)*
   - *Item Added: Communications Consulting (Arreguin)*
   - *Item Added: Library Tax Rate (City Manager)*
   - *Item 23 Funding Reservation (City Manager) – moved to Action Calendar*
   - *Item 28 Compliance Plan (City Manager) – moved to Action Calendar*
   - *Item 41 Front Row Festival (Arreguin) – Councilmember Hahn added as a co-sponsor*
   - *Item 42 Support ACA 14 (Arreguin) – Councilmembers Hahn and Bartlett added as co-sponsors*
   - *Item 46 Edgeworth (City Manager) – moved to Consent Calendar*
   - *Item 51 Audit Recommendations (City Manager) – moved to Consent Calendar*
   - *Item 52 Dark Skies (Commission) – scheduled for July 9, 2024*
   - *Item 54 Planet DMA (Arreguin) – Councilmember Hahn added as a co-sponsor; moved to Consent Calendar*
   - *Item 55 Food Assistance (Kesarwani) – scheduled for Action Calendar*
   - *Item 56 Designation of Planter (Bartlett) – referred to the Parks, Recreation & Waterfront Commission pursuant to the City Policy for Naming City Facilities*

   Order of Action Items
   Item 23 Funding Reservation
   Item 28 Compliance Plan
   Item 44 Street Lighting
   Item 45 Stormwater
   Item 43 Biennial Budget
   Item 48 Appropriations
   Item 49 Tax and Revenue
   Item 47 Horses
   Item 50 Bonding Capacity
   Item 53 BMC Chapter 12.01
   Item 55 Food Assistance

   Vote: All Ayes.

   Action: M/S/C (Arreguin/Hahn) to reconsider the motion to approve the agenda of 6/25/24 with the changes noted.
   Vote: All Ayes.

Action: M/S/C (Arreguin/Wengraf) to approve the agenda of 6/25/24 with the changes noted in the original motion.
Vote: All Ayes.

3. **Selection of Item for the Berkeley Considers Online Engagement Portal**

   – None Selected

4. **Adjournments In Memory** – None

Scheduling

5. **Council Worksessions Schedule**
   - Feasibility study postponed to the fall
   - June 25 meetings confirmed

6. **Council Referrals to Agenda Committee for Scheduling**

   Action: M/S/C (Arreguin/Hahn) to schedule the Demolition Ordinance for a special meeting on June 25.
   Vote: All Ayes.

7. **Land Use Calendar** – received and filed

Referred Items for Review

8 **Discussion and Possible Action on City Council Rules of Decorum, Procedural Rules, and Remote Public Comments**

   Action: 2 speakers. Continued to next meeting.

9. **City Council Legislative Systems Redesign**

   Action: 1 speaker. Continued to next meeting.

Unscheduled Items

10. **Modifications or Improvements to City Council Meeting Procedures (referred by Council at the March 14, 2023 meeting)**

11. **Strengthening and Supporting City Commissions: Guidance on the Development of Legislative Proposals**

12. **Discussion and Recommendations on the Continued Use of the Berkeley Considers Online Engagement Portal**

Unscheduled Items

13. Consideration of Changes to Supplemental Material Timelines (referred by Council at the May 7, 2024 meeting)

Items for Future Agendas

- None

Adjournment

Action: M/S/C (Arreguin/Hahn) to adjourn the meeting.
Vote: All Ayes.

Adjourned at 4:22 p.m.

I hereby certify that the foregoing is a true and correct record of the Agenda & Rules Committee meeting held on June 10, 2024.

_____
Mark Numainville, City Clerk

Communications

Communications submitted to City Council Policy Committees are on file in the City Clerk Department at 2180 Milvia Street, 1st Floor, Berkeley, CA, and are available upon request by contacting the City Clerk Department at (510) 981-6908 or policycommittee@berkeleyca.gov.

BEN BARTLETT
CITY COUNCILMEMBER, DISTRICT 3

CONSENT CALENDAR
June 25, 2024

To: Honorable Mayor and Members of the City Council

From: Councilmember Ben Bartlett

Subject: Designation of Planter to Honor Ms. Richie Smith

RECOMMENDATION:
That the Council refers to the City Manager to officially name the raised concrete bed on the southeast corner of Alcatraz Street and Adeline Ave in honor of Richie Brook-Cole Smith (Ms. Richie).

BACKGROUND:

In the next month, City of Berkeley staff will install the following at the identified planter:

- New black metal 24 inch-fencing
- New black bench
- 90-100 plants (see attached planting plan)
- Renovated irrigation system
- New signage

Parks, Recreation & Waterfront will spend an already allocated $50K refurbishing the planter and adjacent area.

Over 12 years ago, BART construction damaged the irrigation system and mainline that supplies water to the green area at the corner of Alcatraz and Adeline. After trying to work with BART for many years to repair the damage, the City spent over $100,000 this year to have the water line and irrigation restored so that the last several blocks on Adeline have a restored water source. This restored water source would not have been possible without Ms. Richie's persistent requests to staff to fix the broken.

On October 31st, 2017, Ms. Richie was honored with a proclamation in Recognition of her service as a Berkeley Activist and Volunteer (attached).

In the ensuing year, Ms. Richie has been a constant advocate for the community and has exhibited selfless dedication to her neighborhood.

2180 Milvia Street, Berkeley, Floor 5, CA 94704 ● Tel: (510) 981-7130 ● E-Mail: bbartlett@cityofberkeley.info

ENVIRONMENTAL SUSTAINABILITY

No negative impact.

FISCAL IMPACTS OF RECOMMENDATION

There is no General Fund impact; $50k has been previously allocated to improve this area.

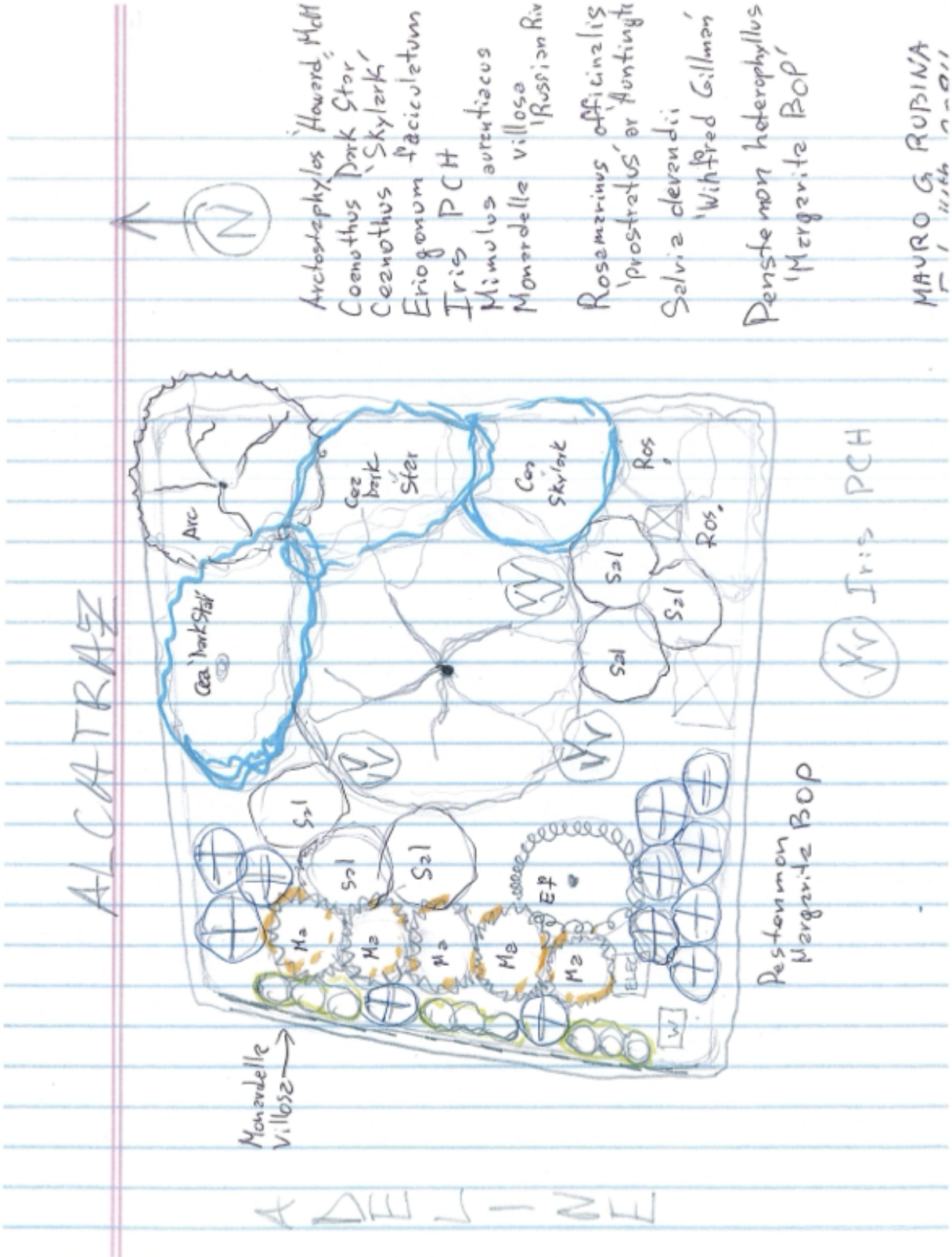
CONTACT PERSON:

Councilmember Ben Bartlett	510-981-7130
Tina R. Posner	510-981-7131
James Chang	510-981-7135

ATTACHMENTS:

1. Garden Layout Mock-Up
2. Proclamation for Ms. Richie Smith from October 31, 2017 Regular Council Meeting

Attachment 1:



Attachment 2:

IN HONOR OF RICHIE SMITH

WHEREAS, Ms. Richie Brook-Cole Smith moved from Oklahoma to South Berkeley during the Great Migration in 1949; and

WHEREAS, Ms. Richie graduated from Berkeley High in 1953, and became a teacher at Head Start, where she made a difference by providing guidance and care in the lives of young children; and

WHEREAS, Ms. Richie has been a staunch community leader. She co-founded "Take a Stand Against Elder Abuse" in 2004, and is currently a member of Iota Phi Lambda Sorority, Beta Mu Chapter in Oakland, Echoes Down the Corridor, Friends of Adeline, the Homeless Encampment Support Group of South Berkeley, the Berkeley NAACP, the South Berkeley and North Oakland Senior Center, and the African-American Holistic Resource Center; and

WHEREAS, Ms. Richie has served with great distinction on Berkeley's Commission on Aging from 2005-2013, where she served as Vice Chair from 2006-2007; and

WHEREAS, Ms. Richie collected 2,000 signatures to save the South Berkeley Post Office; and

WHEREAS, in 2006, Ms. Richie was honored by the Commission on the Status of Women at the 17th Annual Ceremony honoring outstanding Berkeley women; and

WHEREAS, in 2009, Ms. Richie was honored as a California Senior Leader by UC Berkeley's School of Public Health in 2009; and

WHEREAS, Ms. Richie's dedication to the betterment of our city has led to her involvement in a variety of civic affairs, including fighting for affordable housing, regularly attending city council meetings, and picking up trash every day on the streets of her neighborhood; and

WHEREAS, Ms. Richie is prominently featured in the "Music on Our Minds" mural, painted in 2009 by Edythe Boone in collaboration with young people from Youth Spirit Artworks, which honors her many contributions as the South Berkeley Adeline Corridor's unofficial "mayor";

WHEREAS, Ms. Richie's tireless dedication to the Berkeley community and her many accomplishments deserve our recognition and gratitude.

NOW THEREFORE, BE IT RESOLVED that I, Jesse Arreguin, Mayor of the City of Berkeley, do hereby recognize and thank

RICHIE SMITH

for her years of service to the Berkeley community and her tireless advocacy on behalf of the people of Berkeley.

_____
Jesse Arreguin
Mayor

October 31, 2017

BEN BARTLETT
CITY COUNCILMEMBER, DISTRICT 3

To: PRW Commission

From: Councilmember Ben Bartlett's Office

Subject: Designation of Planter to Honor Ms. Richie Smith

Ms. Richie, a long-time Berkeley resident, Berkeley High School Class of '53, founding Friends of Adeline Member and Berkeley Community Leader, has worked tirelessly to maintain and uplift the South Berkeley streets, neighborhoods and communities.

Ms. Richie Brook-Cole Smith relocated from Oklahoma to South Berkeley during the Great Migration in 1949 and graduated from Berkeley High School in 1953. She later became an educator at Head Start, where she significantly impacted the lives of young children through her guidance and care.

Ms. Richie has been a dedicated community leader. In 2004, she co-founded "Take a Stand Against Elder Abuse" and is currently an active member of Iota Phi Lambda Sorority, Beta Mu Chapter in Oakland, Echoes Down the Corridor, Friends of Adeline, the Homeless Encampment Support Group of South Berkeley, the Berkeley NAACP, the South Berkeley and North Oakland Senior Center, and the African-American Holistic Resource Center.

Moreover, she served with distinction on Berkeley's Commission on Aging from 2005 to 2013, holding the position of Vice Chair from 2006 to 2007.

Among her numerous accolades, Ms. Richie was honored by the Commission on the Status of Women at the 17th Annual Ceremony recognizing outstanding women in Berkeley. In 2009, she was named a California Senior Leader by UC Berkeley's School of Public Health and is prominently featured in the "Music on Our Minds" mural, painted in 2009 by Edythe Boone in collaboration with Youth Spirit Artworks, which celebrates her many contributions as the unofficial "mayor" of South Berkeley's Adeline Corridor.

Ms. Richie's unwavering commitment to the betterment of our city is evident through her involvement in various civic affairs, including advocating for affordable housing, regularly attending city council meetings, and daily street clean-ups in her neighborhood. Her tireless dedication to the Berkeley community and her numerous accomplishments deserve our recognition and gratitude.

On October 31st, 2017, Ms. Richie was honored with a proclamation in Recognition of her service as a Berkeley Activist and Volunteer.

2180 Milvia Street, Berkeley, Floor 5, CA 94704 ● Tel: (510) 981-7130 ● E-Mail: bbartlett@cityofberkeley.info

She has dedicated her time to the maintenance and beautification of South Berkeley spending several hours a week picking up trash, reporting neighborhood issues, welcoming the influence of officers providing a traffic-calming presence and overall embodying the community spirit of South Berkeley.

This commemorative planter is a token of gratitude for the magnitude of work Ms. Richie has provided the community.

The Berkeley City Council
Rules of Procedure and Order

Adopted by Resolution No. 71,174–N.S.

Effective January 22, 2024

Weblink:
https://berkeleyca.gov/sites/default/files/documents/City%20Council%20Rules%20of%20Procedure%20-%20January%2022%2C%202024%20-%20FINAL_1.pdf

APPENDIX A. POLICY FOR NAMING AND RENAMING PUBLIC FACILITIES

Purpose
To establish a uniform policy regarding the naming and renaming of existing and future parks, streets, pathways and other public facilities.

Objective
A. To ensure that naming public facilities (such as parks, streets, recreation facilities, pathways, open spaces, public building, bridges or other structures) will enhance the values and heritage of the City of Berkeley and will be compatible with community interest.

Section 1 – Lead Commission
The City Council designates the following commissions as the 'Lead Commissions' in overseeing, evaluating, and ultimately advising the Council in any naming or renaming of a public facility. The lead commission shall receive and coordinate comment and input from other Commissions and the public as appropriate.

Board of Library Trustees

Parks and Recreation Commission –Parks, recreation centers, camps, plazas and public open spaces

Public Works Commission –Public buildings (other than recreation centers), streets and bridges or other structures in the public thoroughfare.

Waterfront Commission –Public facilities within the area of the City known as the Waterfront, as described in BMC 3.36.060.B.

Section 2 – General Policy
A. Newly acquired or developed public facilities shall be named immediately after acquisition or development to ensure appropriate public identity.
B. No public facility may be named for a living person, but this policy can be overridden with a 2/3 vote of the City Council.
C. Public facilities that are renamed must follow the same criteria for naming new facilities. In addition, the historical significance and geographical reference of the established name should be considered when weighing and evaluating any name change.
D. The City encourages the recognition of individuals for their service to the community in ways that include the naming of activities such as athletic events, cultural presentations, or annual festivals, which do not involve the naming or renaming of public facilities.
E. Unless restricted by covenant, facilities named after an individual should not necessarily be considered a perpetual name.

Section 3 – Criteria for Naming of Public Facilities
When considering the naming of a new public facility or an unnamed portion or feature within an already named public facility (such as a room within the facility or a feature within an established park), or, the renaming of an existing public facility the following criteria shall be applied:

A. Public Facilities are generally easier to identify by reference to adjacent street names, distinct geographic or environmental features, or primary use activity. Therefore, the preferred practice is to give City-owned property a name of historical or geographical significance and to retain these names.
B. No public facility may be named for a living person, but this policy can be overridden with a 2/3 vote of the City Council.
C. The naming of a public facility or any parts thereof in recognition of an individual posthumously may only be considered if the individual had a positive effect on the community and has been deceased for more than 1 year.
D. When a public facility provides a specific programmatic activity, it is preferred that the activity (e.g. skateboard park, baseball diamond) be included in the name of the park or facility.
E. When public parks are located adjacent to elementary schools, a name that is the same as the adjacent school shall be considered.
F. When considering the renaming of an existing public facility, in addition to applying criteria A-E above, proper weight should be given to the fact that: a name lends a site or property authenticity and heritage; existing names are presumed to have historic significance; and historic names give a community a sense of place and identity, continuing through time, and increases the sense of neighborhood and belonging.

Section 4 –Naming Standards Involving a Major Contribution

When a person, group or organization requests the naming or renaming of a public facility, all of the following conditions shall be met:

A. An honoree will have made a major contribution towards the acquisition and/or development costs of a public facility or a major contribution to the City.
B. The honoree has a record of outstanding service to their community
C. Conditions of any donation that specifies that name of a public facility, as part of an agreement or deed, must be approved by the City Council, after review by and upon recommendation of the City Manager.

Section 5 –Procedures for Naming or Renaming of Public Facilities

A. Any person or organization may make a written application to the City Manager requesting that a public facility or portion thereof, be named or renamed.
    1. Recommendations may also come directly of the City Boards or Commissions, the City Council, or City Staff.
B. The City Manager shall refer the application to the appropriate lead commission as defined in Section 1 of the City's policy on naming of public facilities, for that commission's review, facilitation, and recommendation of disposition.
    1. The application shall contain the name or names of the persons or organization making the application and the reason for the requested naming or renaming.
C. The lead commission shall review and consider the application, using the policies and criteria articulated to the City Policy on Naming and Renaming to make a recommendation to Council.
    1. All recommendations or suggestion will be given the same consideration without regard to the source of the nomination

D. The lead commission shall hold a public hearing and notify the general public of any discussions regarding naming or renaming of a public facility.

1. Commission action will be taking at the meeting following any public hearing on the naming or renaming.

E. The commission's recommendation shall be forwarded to Council for final consideration.

The City of Berkeley Policy for Naming and Renaming Public Facilities was adopted by the Berkeley City Council at the regular meeting of January 31, 2012.

Miller, Roger

From: Friends of Five Creeks <f5creeks@gmail.com>
Sent: Monday, June 17, 2024 9:10 PM
To: Miller, Roger; Moore, Sarah M.; May, Keith
Subject: Letter for Berkeley Parks, Rec., & Waterfront; Env. & Climate; & Disaster &Fire Safety Commissions
Attachments: F5C Letter re Berkeley Stormwater Plan 06_17_24.pdf

Dear Roger, Ms. Moore, and Deputy Fire Chief May:
I hope you will distribute to your respective commissions the attached iletter re Berkeley's developing a new plan for storm water and other urban runoff over the next two years.
In keeping with Vision 2050's goal of getting plannning out of silos, I think commission members and some other staff members should be interested in at least the following aspects:

- For Parks, Rec., & Waterfront:This plan and its studies will deal with Aquatic Park and Berkeley's open creeks.
- For Environment and Climate: This letter details how this plan should take a deeper and more forward-looking approach to likely effects of climate change, including rising groundwater and larger storms.
- For Disaster & Fire Safety: This plan may include drone survey of open creeks and make recommendations on vegetation management. This would have direct bearing on creek canyons that could funnel fire - for example, the deep Cerrito Creek canyon on Berkeley's north border. This canyon also has a long history of slides and erosion. Management would need to be thought through. Commissioners also may be interested in likely effects of climate change, including rising groundwater and floods.

Thank you for distributing this letter. I will try to speak at public comment at the next Environment and Climate Commission meeting.

Susan Schwartz, President
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Friends of Five Creeks

Volunteers preserving and restoring watersheds of
North Berkeley, Albany, Kensington, south El Cerrito and Richmond since 1996
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June17, 2024

Berkeley Transportation and Infrastructure Commission, via Noah Budnick
Srinivas Muktevi, Berkeley Public Works Supervising Civil Engineer, Storm Water Plan Project Director
Cc: Ron Nevels, City Engineer; Terrance Davis, Berkeley Public Works Director
Cc: Berkeley City Mayor and Council, Berkeley City Clerk
Cc: Berkeley Parks, Recreation, and Waterfront Commission, via Roger Miller; Berkeley Environment and Climate Commission, via Sarah Moore; Berkeley Disaster and Fire Safety Commission, via Keith May

Re: Comments on Berkeley Storm Water Master Plan, Specification 22-11505-C

This letter updates and supplements Friends of Five Creeks' May 24 comments to the Transportation and Infrastructure Commission on the $1.9 million Berkeley Storm Water Master Plan, under development with Wood Rodgers, Inc., consultants (Berkeley Specification 22-11505-C).

As a volunteer group that has dealt with the challenges of Berkeley creeks and watersheds for 27 years, we continue to applaud the proposal's innovative and cost-saving elements, emphasis on accurate data and modeling, and promise of a prioritized and timely maintenance plan. A new plan is much needed.
We are distributing these comments widely because two aspects alarm us:

1. Critical work apparently is being performed and decisions made without (a) public or stakeholder information or input or (b) coordination with other affected city departments or commissions, including Parks, Recreation, and Waterfront; Disaster and Fire Safety; and Environment and Climate. These are the opposite of Vision 2050's goal of public engagement and planning done by departments in coordination, not in silos.
2. Important effects and recent research on climate change and sea-level rise must be included.

Item 3 lists other concerns that flow from these.

1. **Lack of public, stakeholder, and other city department and commission input:**
Task 1.1 in the city's specification for the work says, " **Prior to commencing any work, the Wood Rodgers' Team will meet with the City and any other stakeholders**. The purpose of this kickoff meeting is to clearly define the goals of the project, to establish an understanding of the City's needs, to determine the standards and policies that apply to the project, and to refine the project's scope of work and budget…." **This promised kickoff meeting has not been held. The department's schedule envisions no public meetings until February 2026, three months before approval.**

Wood Rodgers routinely holds these kickoff meetings. Albany's contract for a new stormwater plan, signed in June 2024 (task 1.2, p. 13), has identical wording. Albany's public works director has assured me that they plan to hold the meeting.

The public could not know that work was underway. Outreach to relevant commissions appears minimal to nonexistent. The city's web site offers nothing but the brief July 2023 consent item. The project has not appeared on the Transportation and Infrastructure Commission's agenda since before it was approved.

Friends of Five Creeks is a partner project of 501(c)3 Berkeley Partners for Parks

After repeatedly asking various staff members over months, Friends of Five Creeks discovered that a subcommittee existed only by speaking at public comment at the Transportation and Infrastructure Commission's May meeting. Outreach to other relevant commissions appears minimal to nonexistent**.** The Parks, Recreation, and Waterfront Commission (concerned with creeks and Aquatic Park) was informed in recent days by stakeholders; it now plans to discuss the project in July.

Public information and input are essential to governing a city. Residents need to know about unseen water and flood infrastructure – why it matters, how it works, and what residents' taxes and fees support. Berkeley urgently needs to update its aged and neglected system for handling storms and other urban runoff, and make key changes to deal with rising sea- and groundwater levels and larger storms. Informed, experienced stakeholders can offer important information and history to an understaffed Public Works Department with new leadership. **A stakeholder meeting should be held as soon as possible, before any important decisions are finalized. Ongoing communication channels should be announced and kept open.**

2. The Wood Rodgers proposal does not adequately deal with climate change.
A. **The consultants' Berkeley proposal does not mention rising groundwater levels – which current research shows are likely to have serious effects in the low-lying East Bay plain**. Rising with sea level, not deterred by barriers or green infrastructure, this groundwater will increase flooding, decrease infiltration, and corrode and weaken the built environment. **Wood Rogers' recent contract with Albany clearly addresses this** (Section 3.3. pp. 11-12), citing the study linked above.

B. **Wood Rodgers' Albany contract promises to use recent climate information and models not included in Berkeley's proposal.** In the Albany plan, "Pathways and LBNL's [Lawrence Berkeley National Laboratory] completed Extreme Precipitation Study" (p. 12) are to be used to analyze how climate change may change intense storms. Tide and sea-level -rise data are to be based on "data sources highlighted in the Flood Risk and Sea Level Rise Adaptation Report, and the State of California *Sea Level Rise Guidance 2024 Science and Policy Update*…." (p. 12). The one-year gap between Berkeley's and Albany's contracts may explain these differences. But Berkeley needs the most current information in a plan likely to be used for 20-30 years in a fast-changing climate. As in Albany, this information should be used to determine **both** capacity deficiencies and high-priority capital improvements. It's worth noting that Albany hopes to also use the design storm that Wood-Rodgers is developing for Berkeley to make these calculations. **Berkeley must plan for climate change using use up-to-date inputs and methods** .

3. The comments below illustrate matters that stakeholders and other commissions and departments should be able to raise with consultants before decisions are made.

A. **The Public Works Department schedule says that "Criteria Review and Recommendations" will be complete by July 12**. All the above issues regarding climate change should be clarified in binding form before any such decisions.

B. **The Public Works Department schedule says that inspection schedules will be final by July 26.** Some inspections, especially of storm drains on private property, are likely to face issues and challenges. Stakeholders and commissioners should be able to weigh in on focus and adequacy.

C. **Aquatic Park depths (bathymetry) are to be surveyed between July 29 and Aug. 19.** Aquatic Park has three lagoons -- Wood Rodgers mentions only one. It is vital to measure the rapidly shallowing Middle/Model Yacht Basin, critical to flood protection. Data also must be easily comparable to bathymetry in the 2008-11 Aquatic Park Improvement Program, to show change over time.

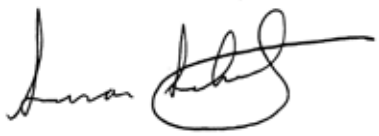
D. **Data collection is scheduled to be complete by Sept. 6** (except for vegetation management, below). **The design storm is to be decided by Sept. 13**. The design storm is basically how big a storm or range of storms the system should be able to handle. It is unacceptable to make these decisions with no public information or input, based on a document that does not mention more up-to-date information, at a time when changing climate is increasing the threat of much larger storms.

E. **A drone survey is scheduled December 2024 to January 2025 to measure vegetation and capacity in open creek channels – basically, private back yards**. At minimum, residents – including those in Albany and Kensington where creeks form Berkeley's borders – need notice and the ability to ask questions. Other attempts to survey have sometimes met stiff resistance. **If this drone survey is done, Berkeley should consult and share data with the Fire Department, appropriate commissions, and regional wildfire agencies** . Creek canyons, such as the deep Cerrito Creek canyon on Berkeley's northeast border, can funnel fire.

F. Friends of Five Creeks is delighted that lidar and other tools are to be used to model creek channels and flood plains for flood risk and perhaps needs for vegetation management (Wood Rodgers proposal p. 13). Managing vegetation on creek channels, however, requires considering erosion, slides, habitat, privacy, and fire hazard –as well as complex multi-agency permits. **Consultants and Public Works staff should work with other commissions, departments, and agencies to avoid contradictory or unworkable recommendations**.

These examples clearly show that this plan should be developed with both robust exchange of ideas, including with stakeholders, and the most current available information on climate change. We look forward to working with the city to create the plan it needs.

Sincerely,



Susan Schwartz, President, Friends of Five Creeks

Friends of Five Creeks is a partner project of 501(c)3 Berkeley Partners for Parks *3*

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CONSULTANT IDENTIFICATION

Wood Rodgers, Inc.

Local Offices |	**Oakland** 180 Grand Avenue, Suite 775 Oakland, CA 94612 Phone | (510) 208-2400	**Pleasanton** 4670 Willow Road, Suite 125 Pleasanton, CA 94588 Phone | (925) 847-1556
Headquarters |	**Sacramento** 3301 C Street, Building 100B Sacramento, CA 95816 Phone | (916) 341-7600 Fax | (916) 341-7767	
Primary Point-of-Contact |	**Cheng Soo, PE, CFM** 180 Grand Avenue, Suite 775 Oakland, CA 94612 Direct Phone | (415) 205-9874 Email | csoo@woodrodgers.com	
Tax Identification No.	91-1762478	

Subconsultants

The following subconsultant team members are available to assist the Wood Rodgers Team. Brief firm biographies of each firm's qualifications and capabilities are included in the Consultant Team section of this Statement of Qualifications.

NCE | Capital Improvement Plan/Maintenance + Inspection Plan 5253 College Avenue, Suite B | Oakland, CA 94618 (510) 250-9189	Balance Hydrologics, Inc. | Drainage Design/Hydrologic + Hydraulic Analysis 800 Bancroft Way, Suite 101 | Berkeley, CA | 94710 (510) 704-1000 ext. 203
Geosyntec Consultants | Green Infrastructure/ Maintenance + Inspection Plan 803 2nd Street, Suite D, Davis California 95616 (530) 554-2484	SCI Consulting Group | Financial Analysis + Grant Funding 4745 Mangels Blvd, Fairfield, CA 94534 (707) 430-4300

SCOPE OF WORK

Project Understanding + Approach

Storm Water Master Plans for a city the size of the City of Berkeley require resources, in-depth knowledge, technology, and experience to be successfully executed on time and in budget. Wood Rodgers' Oakland office has been especially focused on developing high quality and detailed drainage master plans in the Bay Area for the past two decades. We have developed large (greater than 40-60 square miles) storm drainage master plans for municipalities similar to the City of Berkeley such as Alameda County Zone 12 (Oakland) Master Plan, City of Oakland Drainage Master Plan, Port of Oakland Drainage Study, San Jose Citywide Storm Sewer Master Plan, Valley Water San Francisquito/Adobe Flood Study, and others.

Notably, Wood Rodgers is currently developing the City of Oakland Drainage Master Plan that has very similar complexities as those in Berkeley such as privately-owned, century-old facilities, densely populated areas, heavily used industrial areas, high trash generation, and a high-value lake; and similar unique master plan task requirements such as daylighting old channels, integrating green infrastructure, performing condition assessments, and rehabilitating old facilities. Wood Rodgers also has licenses for major modeling software, which will facilitate modeling development within the City's planned schedule. For example, we own four (4) Infoworks ICM licenses and have more than ten experienced ICM modelers.

The City developed the *2011 Watershed Management Plan* to provide high-level strategies and guidance, which will be used as the basis for developing an implementable plan supported by technical information in this project. Wood Rodgers proposes an inspection-based maintenance and rehabilitation program based on the successes with this approach in the neighboring City of Oakland Drainage Master Plan, calibration-based modeling based on data from more than 100 gages in the Bay Area, and a social equity- and risk-based capital improvement plan based on the social equity approach in the City of Oakland and on the FEMA flood risk model, respectively.

The City's drainage facilities are intertwined with those on private properties, and the performance of the City's facilities is highly correlated with the private facilities' condition and performance. However, the condition of the private facilities is mostly unknown, and some of the pipes lie underneath buildings, which are especially at high risk if not properly maintained.

Typically, conventional closed-circuit television (CCTV) inspections are used to assess the condition of pipes, but these inspections can be expensive, for example, in the City of Berkeley, the cost could potentially be up to $5,000,000 for all the pipes in the City. To avoid this and to minimize inspection costs, Wood Rodgers proposes an innovative predictive inspection approach as described in **Task 3.4 – Inspection, Survey, and Inventory**.

In addition to inspection costs, another challenge is defining the need to rehabilitate the deficiencies found on private properties. Therefore, Wood Rodgers proposes to develop design guidelines in **Task 2 | Drainage Design Standards,** technical information in **Task 5 | Hydraulic/Hydrologic Modeling and Assessment**, and permitting requirements in **Task 7 | Development of Maintenance and Inspection Plan** for both the City and private property owners. This information can be used to implement and enforce rehabilitation of the deficiencies. Wood Rodgers worked with the Alameda County Flood Control District by providing peer review and researching and documenting the references for the latest *2018 Alameda Flood Control Hydrologic and Hydraulic Design Manual* development, so we are well qualified to develop drainage design standards.

Capital improvement projects are increasingly expensive with the current construction climate. Over-simplified modeling (with the resulting conservative design), while initially less expensive, is no longer a viable model for public agencies. Wood Rodgers is a firm believer that a detailed master plan is much more cost-effective to implement a capital improvement program than an over-simplified master plan. Understanding the true facility capacity and deficiencies can be achieved by

developing hydrologic and hydraulic models that match historical data through calibration. Wood Rodgers' unique technical approaches as proposed in **Task 5 | Hydraulic/Hydrologic Modeling and Assessment** embrace detailed one- and two-dimensional modeling and accurate calibration to identify real flood risk and to optimize improvements. Wood Rodgers' extensive experience in detailed risk-based hydrologic and hydraulic modeling with calibration efforts using more than 100 stream and pipe gages in the Bay Area agencies has contributed to accurate flooding risk assessment, optimized drainage facility design, and optimized operations. Wood Rodgers has successfully optimized improvements and saved tens of millions of dollars from previously identified improvements in recent years, especially for the City of San Jose, Alameda County, and Valley Water. Wood Rodgers proposes a social equity- and risk-based capital improvement plan in **Task 6 | Development of a Capital Improvement Plan**.

Water quality regulatory compliance has stretched the City's financial and maintenance resources. Trash capture devices, hydromodification systems, and other green infrastructure have been planned and constructed to be in compliance with the NPDES MS4 Permit. However, there is still synergy to integrate the water quality enrichment green infrastructure with storm drainage facilities to assess the hydraulic impacts and flood reduction benefits. Wood Rodgers will use case studies and historical gage data from other agencies to develop a realistic impact analysis. In **Task 5 | Hydraulic/Hydrologic Modeling and Assessment,** Wood Rodgers proposes to integrate low impact development projects, large trash capture devices, and regional stormwater capture facilities to storm drainage facilities to combine and reduce improvements.

Reactive and unplanned operations and maintenance activities increase operational costs and liabilities. Conversely, conservatively planned operations and maintenance activities reduce liabilities but substantially increase operational costs. Increasingly stringent environmental and safety requirements, and urban trash generation also add a burden to the existing operations and maintenance activities. Confined space entry, full trash capture device maintenance, and other required compliance measures are burdening the City's resources. Wood Rodgers proposes to use our inspection experience, develop life cycle costs, and use modeling results to prioritize rehabilitation and replacement improvements to create best management practices. This asset management approach targets and prioritizes operations and maintenance activities and locations to optimize the City's resources.

In 2018, the property owners in the City voted in favor of a second Clean Stormwater Fee. However, the revenue from the fee may not be sufficient to fund the capital projects developed in this master plan, given the current construction climate and recent inflation. Without a reliable and sufficient funding mechanism, the City's much-needed maintenance, rehabilitation, and improvements can be delayed, and the City could be forced to adopt a reactive approach. The Wood Rodgers Team's experience in identifying needs, developing a funding mechanism, and applying grant applications will be instrumental to implementing a healthy and sustainable funding program for the City. Our long-term teaming partner, SCI, notably supported the City in the second Clean Stormwater Fee approval and is well positioned to provide financial planning. Wood Rodgers' success in recent years in applying for grant funding, totaling more than $70M, will provide much needed relief to the financial burden of the City. Wood Rodgers proposes to leverage our experience to explore the FEMA funding opportunities in **Task 10.2 – FEMA Grant Funding Opportunity**.

With the understanding of the City's issues, the Wood Rodgers Team has formulated the following tasks to address the issues as discussed above.

Scope

Task 1 | Project Management

Task 1.1 – Management and Coordination

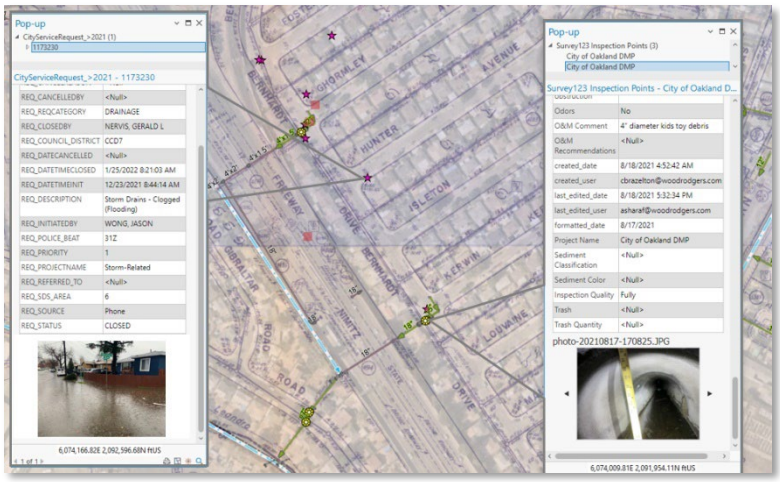
Prior to commencing any work, the Wood Rodgers' Team will meet with the City and any other stakeholders. The purpose of this kickoff meeting is to clearly define the goals of the project, to establish an understanding of the City's needs, to determine the standards and policies that apply to the project, and to refine the project's scope of work and budget. The meeting will also include an initial effort to collect data and to comprehend the City's understanding of the drainage system.

Wood Rodgers' project manager will perform project management activities throughout the entire duration of the project. These project management activities include:

	**Meetings and Presentations** | Wood Rodger will maintain a constant and clear channel of communication by hosting bimonthly status meetings. We will attend public, City Council and other meetings as requested and will prepare presentation materials.
	**Risk Management |** Risk management is perhaps the most integral part of the Wood Rodgers' project management approach. The premise behind risk management is to identify scope, schedule, and cost related risks early, to identify means and methods to manage specific risks and lastly to identify the entity or person who will most likely be responsible for implementing any risk mitigation strategy. This will be accomplished through the development of a Risk Management Matrix.
	**Schedule Management |** The Wood Rodgers' project manager will prepare and maintain a critical path method (CPM) schedule, presented in a Gantt chart format, using Microsoft Project software. Each task and project milestone in the Scope of Work will be included in the schedule, so that the progress of each task milestone can be monitored.
	**Cost Management |** All charges to the project will be monitored and controlled to assure that costs are kept within budget limitations. Wood Rodgers' computerized BST10 enterprise system will be utilized to monitor and control budgets on a task-by-task and consultant/subconsultant basis. Monthly invoices will be prepared and submitted to the City.
	**Progress Reports |** Monthly progress reports will be prepared and submitted to the City. Progress reports will cover work and tasks performed during the pay period, work forecast for the pay period to come, overall project progress, and identification of issues needing discussion and resolution.
	**Quality Assurance/Quality Control |** Wood Rodgers will perform Quality Assurance/Quality Control (QA/QC) on the project. A project-specific QA/QC Plan will be prepared that will be administered by a quality manager. The quality manager is a senior-level experienced engineer who will provide independent review and approve all deliverables before they are submitted to the City.

Deliverable(s): Kickoff Meeting Notes \| Project Schedule \| Monthly Progress Reports

Task 1.2 – Data Collection, Review and Geodatabase Update



Wood Rodgers will collect and review the City's GIS geodatabase, parcel data, easements, historical flooding information, record drawings, maintenance documents, latest hydrologic and hydraulic data, land use, general plan, relevant reports, studies, plans, and supporting data to sufficiently update the City's drainage facility.

Wood Rodgers will also collect as-builts, survey, and the latest standards from Caltrans and other agencies to supplement missing data or "gaps" in the geodatabase. This information will be converted into the geodatabase. Data gaps will be documented on a map where necessary data is missing. The map will serve as a basis for determining which missing data is essential, and for prioritizing field inspection.

Work orders from operations and maintenance activities and anecdotal flooding incidents will be collected to verify flooding locations and extents, and to understand drainage facility operation issues.

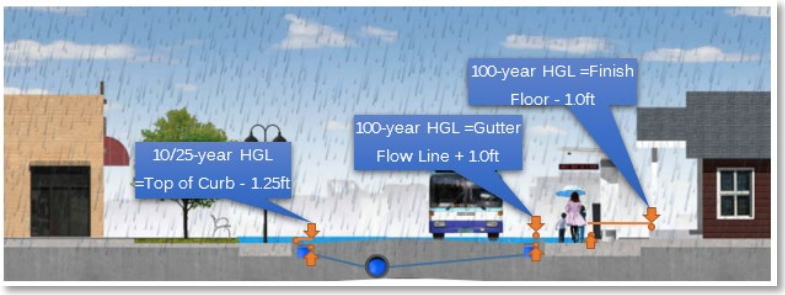
Planned and existing capital improvement projects, green infrastructure facilities, low impact development (LID) projects, and existing full trash capture devices will be collected to assess the hydraulic impacts or benefits.

Wood Rodgers will review the collected data in the geodatabase and document on a map where necessary data is missing. For example, modeling a storm drain system will require the storm drain type, the storm drain diameter/dimensions, the storm drain length, and upstream and downstream inverts. The missing data will be noted. The map will serve as a basis for determining which missing data is essential.

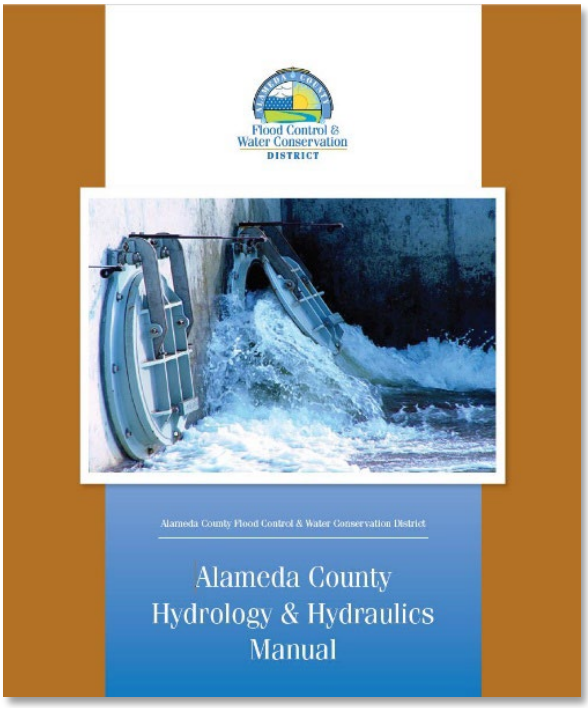
Deliverable(s): Updated geodatabase | Data gap maps

Task 2 | Drainage Design Standards

Task 2.1 – Criteria Review and Recommendations



Wood Rodgers will develop storm drain design guidelines and standards to be applied to public infrastructure and private development projects. Wood Rodgers will use user-friendly schematics, flow charts, tables, and other visual graphics to present complex ideas. The guidelines and standards will incorporate the hydrologic and hydraulic methodologies developed and utilized in this master plan along with relevant Alameda County, Caltrans, FEMA, and Regional Board standards. They will include sizing criteria, materials, alignment, minimum slope and spacing requirements, runoff estimation procedures, hydraulic design standards, and other pertinent guidelines and standards. Wood Rodgers will develop a simplified runoff estimation equation using the model results developed in **Task 5** to replace runoff estimation hydrologic equations. This simplified equation standardizes runoff estimation for pipe design, removes the interpretation of hydrologic equations, and ensures accurate representation of local hydrology. Wood Rodgers will also provide recommendations on public right-of-way or property runoff on private properties, drainage facilities without easements, and other similar drainage issues.



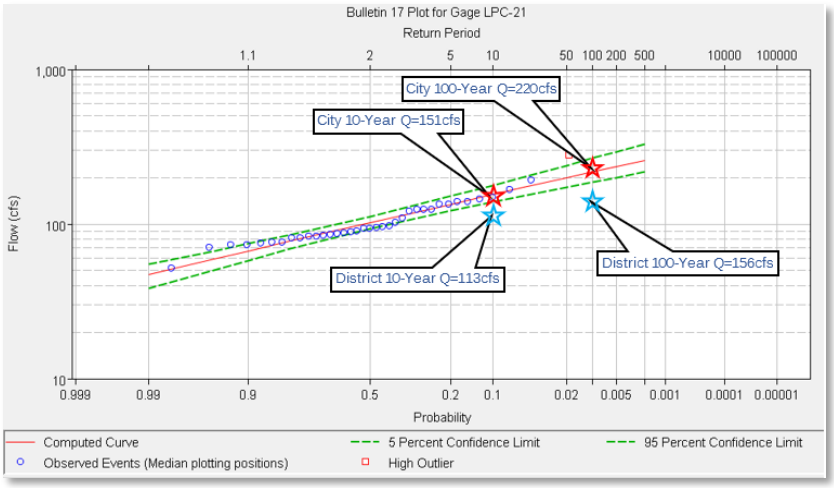
Alameda County has recently updated the *Alameda County Hydrology and Hydraulics Manual* in 2018 with long-term rain and flow gage data. Wood Rodgers supported the County in the development of the manual. The manual uses local rain and stream gauge data, as well as calibration findings, to establish hydrologic and hydraulic criteria that are appropriate for use in the City located on the northern edge of Alameda County.

The County manual was developed for the analysis and design of trunk drainage facilities, but it requires further refinement to apply to smaller drainage facilities in the City. Nevertheless, the manual serves as a strong technical foundation for the City to build upon. Wood Rodgers proposes to update the City's design standards by referencing the County manual. This will provide guidance on a range of important topics, including infill development, new development, green infrastructure, sea level rise, and water quality as they relate to flood control and drainage facilities. For example, large full trash capture devices have been constructed and integrated into drainage facilities in the Bay Area to be in compliance with Provision C.10 of the Municipal Regional Stormwater NPDES Permit (Permit). Many of the devices have been designed without proper guidance and result in reduced capacity of the existing storm drainage facility.

Deliverable(s): Updated City storm drainage design standards

Task 2.2 – Design Storm

Design storms are hypothetical storms used to approximate a given probability precipitation event. The design storm represents a distinct event probability, and when it is accurately transformed into rainfall runoff, the transformation will result in a reasonably accurate estimate of the corresponding event probability flow characteristics. Design storms must be developed to correlate with the types of systems that they are going to be used for. An inaccurate design storm could fail to reflect flooding and lead to under-designed improvements.



Because the City requires the assessment of smaller storm drain systems than the systems assessed by the County, it must confirm a design storm appropriate for these smaller systems. The design storm must also reflect the most local precipitation characteristics.

Wood Rodgers proposes to select the most appropriate existing design storm to analyze drainage facilities deficiencies and design mitigation improvements. To predict the design storm's resultant design flow with the greater accuracy, Wood Rodgers proposes this optional design storm validation and development task to confirm and select a statistically accurate

design storm based on long-term gage data for the local condition in Berkeley. If no design storm matches the long-term gage data, Wood Rodgers will then develop a statistically accurate design storm.

Wood Rodgers will use the City's long-term pipe and stream gage data to develop flow frequency curves and simulate design storms with the calibrated models to validate or refine a statistically accurate design storm.

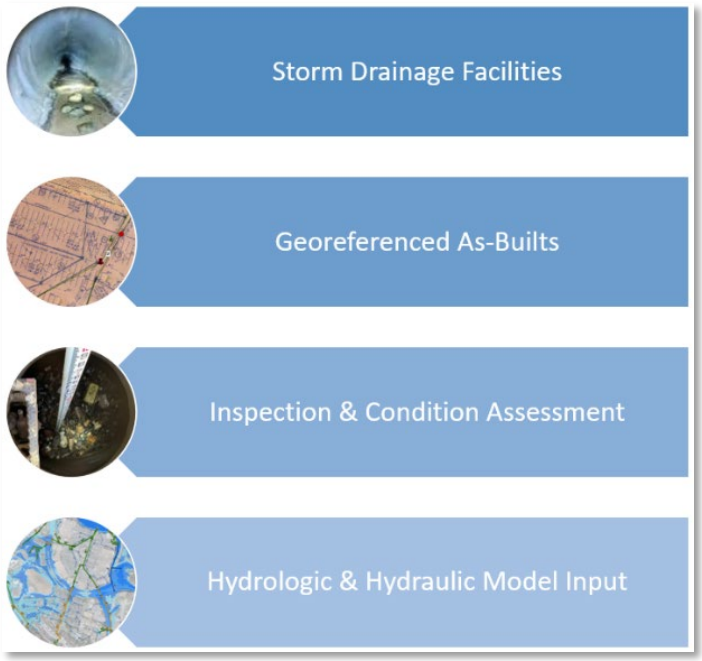
Deliverable(s): Design storm technical memorandum for Master Plan appendix

Task 3 | Field Verification + Inventory of Drainage System

Wood Rodgers will collect and compile all data to support the Master Plan in an easily accessible, easily linkable, and easily understood geodatabase. Wood Rodgers will implement an innovative predictive inspection approach to strategically select inspection sites and minimize inspection efforts. The resulting findings will inform condition assessments and identify opportunities for improving maintenance activities.

Task 3.1 – Geodatabase Refinement

Wood Rodgers proposes to refine/design a geodatabase and to use it as the central repository for the City's supporting data and results. Wood Rodgers has successfully used this approach for drainage master plan studies performed for public agencies throughout the Bay Area. This approach has improved quality, reduced redundancy, improved efficiency, and improved accessibility.



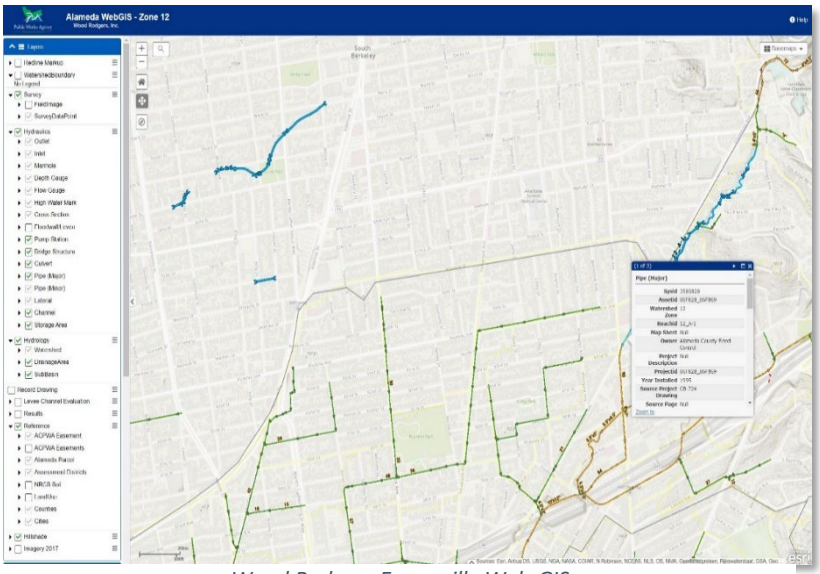
Wood Rodgers proposes to refine and enhance the City's geodatabase to include comprehensive stormwater features, and hydrologic and hydraulic parameters for inventory, inspection, condition assessment, and modeling and reporting tasks. The geodatabase will be used to store and manage stormwater facility information; to identify missing information; to prioritize data collection, inventory, and condition assessment; and to facilitate geodatabase to modeling software import and export processes. This approach reduces the City staff's reliance on modeling software.

Wood Rodgers will review the City's existing geodatabase and recommend necessary refinement to capture all storm drain facility properties and conditions to be inspected. The refinements will be based on a comprehensive geodatabase with related tables and domain values that have already been designed and are being used for drainage systems in Valley Water, Alameda County, Marin County, the City of Novato, and the City of San Jose. Wood Rodgers modified the Esri file geodatabase using the Esri Local Government Information System Model as the basis, and then supplemented it with drainage feature datasets such as field surveys, topography, drainage facility (including storm drains, maintenance holes, pumps, open channels, structures, etc.), georeferenced as-built drawings, parcel maps, streets, municipal boundaries, photographs from field visits and inspections with photo locations, watersheds, land use data, soil data, and hydrologic and hydraulic parameter data.

Deliverable(s): Refined City's and reconciled geodatabase

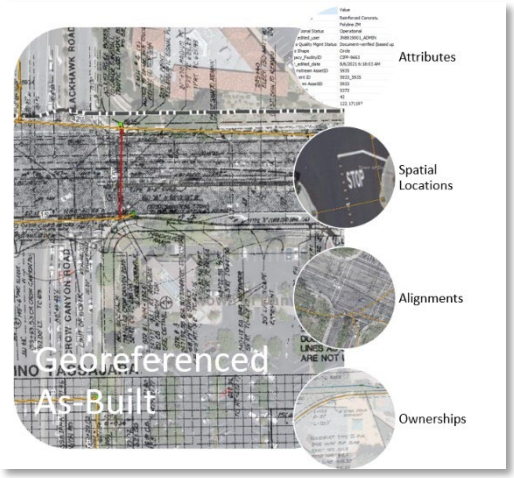
Task 3.2 – Desktop Asset Inventory

Wood Rodgers will complete drainage facility properties in the geodatabase with record drawings and as-builts prior to field inspection. This has been proven to be the most cost-effective approach in other drainage studies and assessment projects when combined with limited field inspection data to provide a more complete inventory of pipe systems. This approach will also provide sufficient resolution and accuracy for the capacity and condition assessment. Based on the City available record drawings, Wood Rodgers will perform this task for 30 miles of drainage facilities or approximately 50% of the 60 miles of drainage facilities that we propose to model in **Task 5**.



Wood Rodgers Emeryville Web-GIS

Wood Rodgers will georeference record drawings and as-builts and use existing survey data (if any) to complete the geodatabase inventory of the City's systems. We will use NearMap, the City's latest ortho imagery, and Google Street View to locate facilities and to create or refine existing geometry. This approach provides horizontal accuracy between 1 and 3 feet, which is sufficient to determine maintenance hole, catch basin, and outfall structure locations and to estimate the connecting storm drain lengths. Latest LiDAR data will be used to determine the facility rim or ground elevations. Newer LiDAR data typically has sufficient point resolution and vertical accuracy (typically less than 3 inches) to determine elevations. The LiDAR derived facility rim or ground elevations will be used in conjunction with inspection data to verify the as-built data.



The spatially rectified facilities will be used in conjunction with the georeferenced as-builts to realign storm drain alignments, and to identify other paved-over facilities, such as junction boxes and transition structures. The georeferenced as-builts will also be used to record storm drain materials, diameter/dimensions, lengths, and upstream and downstream inverts (both original and converted NAVD88 datum).

Wood Rodgers will flag facilities that do not have the appropriate public ROW or easements to the best of our ability.

The geodatabase will include an inventory of all the storm drains, grade breaks (storm drain invert slope changes), maintenance holes, outfalls, junction boxes, and transition structures.

Deliverable(s): Georeferenced as-builts for 30 miles of drainage facility | Updated geodatabase

Task 3.3 – Inspection Plan Development

After reviewing the collected data, Wood Rodgers will develop a field inspection plan to collect additional data required for the project. The field inspection plan will outline the techniques for collecting field data, inspection procedures, and protocols, as well as the locations and types of facilities chosen for inspections.

Wood Rodgers' experience with storm drain inspection throughout the Bay Area leads to a unique inspection approach that we will use to optimize the inspection effort. Inspection at key locations can:

- Verify as-built data along a system
- Reduce inspection locations with the verified as-built data
- Reduce the need for CCTV inspection

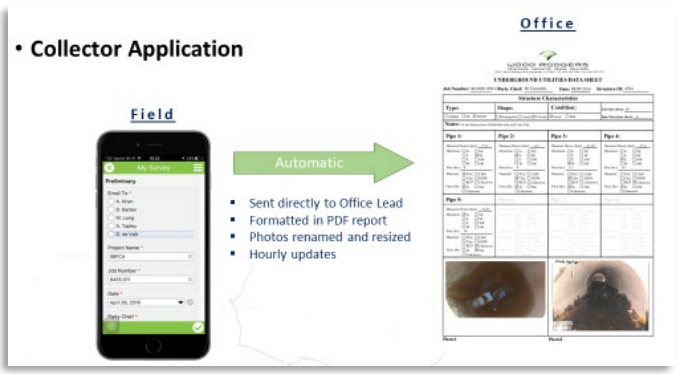
Wood Rodgers will prioritize, survey, and inspect storm drain facilities at crucial locations along the system: at the upstream and downstream ends, at hillsides, at major junctions or bends, at metal pipes beyond service life, at systems subject to high backwater sediment, and locations with high trash loading. We have found that this approach is sufficient to collect the overall pipe system geometry, materials, and conditions when used in conjunction with the geodatabase developed in the **Desktop Asset Inventory** task.

Deliverable(s): Inspection plan | Inspection site map

Task 3.4 – Inspection, Survey, and Inventory

Wood Rodgers will inspect **320 structures** at key locations identified in the inspection plan (**Task 3.3**) and approved by the City. Based on Wood Rodgers' inspection experience, there is approximately one deficient drainage structure for every 1,500 feet of pipes. This interval translates to an estimated 320 deficient structures likely present in the City's 90 miles of pipes.

Maintenance holes, junction boxes, transition structures, and pipes' horizontal GPS coordinates (X,Y) will be recorded; pipes' diameters and inverts will be measured; pipes' materials and flow directions will be recorded; sediment and debris depths will be estimated and documented with pictures and field notes; and any structural deficiencies such as corroded metal pipes and cracked walls will be documented with field notes and pictures, and stored in the City's geodatabase.



Wood Rodgers will also visit major storm drain outfall structures and inspect for any structural integrity, sediment, and erosion problems. Outfall structure flap gate and cathodic protection system conditions will also be assessed and documented. The collected data, pictures, and notes will be stored in the City's geodatabase.

For open channels on private properties where access is challenging, Wood Rodgers will conduct LiDAR drone surveying for **8 miles of channels** to collect both high-resolution aerial imagery and topographic data. An unmanned aerial system (UAS) will be utilized to collect imagery and LiDAR data. Ground control and photo identification points will be established and measured by Wood Rodgers. A 1-foot resolution digital elevation model (DEM) will be generated from the ground classified LiDAR points. Wood Rodgers will provide up to 10 days of traffic control services.

Deliverable(s): Inspection photos and notes for 320 structures | 8 miles of open channel aerial imagery and LiDAR DEM | Updated geodatabase | 10 days of traffic control services

Task 3.5 – Bathymetry Survey (Optional)

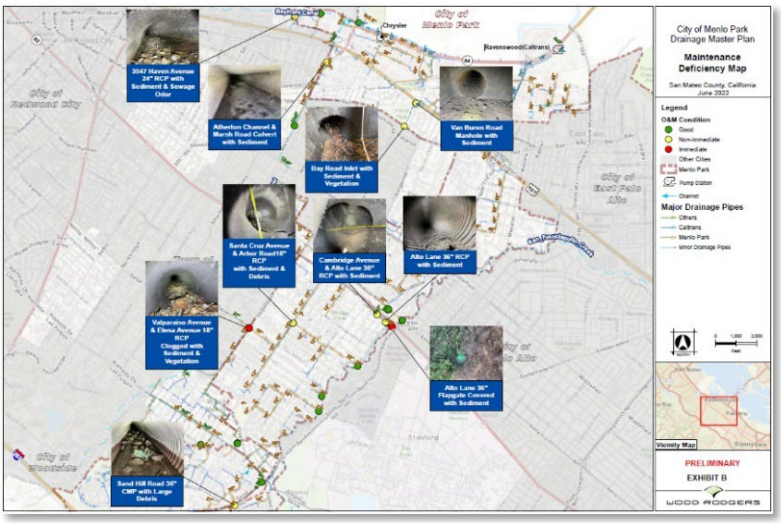
The lagoon in Aquatic Park serves as the centerpiece of recreation and could be an essential flood control facility for the City. The Master Plan needs accurate geometry of the lagoon to define and improve its level of service and identify opportunities to improve its water quality. If optional **Task 10.1** is not selected by the City, this bathymetry survey can be an optional task and Wood Rodgers will use the previously surveyed data.

The Wood Rodgers team will perform a bathymetric survey for the entire lagoon. The survey procedures and equipment will follow the Class 1 survey methods and accuracies, per the United States Army Corps of Engineers' (USACE) Hydrographic Survey Manual. The resultant dataset will meet Special Order standards as outlined by the Federal Geographic Data Committee (FGDC).

Deliverable(s): XYZ data set delivered on a 3-foot grid.

Task 4 | Condition Assessment

Task 4.1 – Storm Drain Assessment



Maintenance and structural condition assessments for storm drain systems are the processes of inspection and systematic defect categorization. It is one of the processes in an asset management approach to prioritize operation and maintenance activities.

Wood Rodgers will use the storm drain inspection data developed in **Task 3.4** and up to **10,562 feet** of CCTV inspections provided by the City to evaluate maintenance conditions based on the location, magnitude, and accumulation rate of trash, debris, and sediment; to evaluate structural conditions based on size, material, age, and structural integrity.

Wood Rodgers will use the Environmental Protection Agency (EPA) asset management guidelines and National Association of Sewer Service Companies (NASSCO) pipeline assessment condition grading system code to provide a standard condition rating system for each component. For example, the inspected facilities will be categorized into the following structural deficiency conditions in the City's refined geodatabase:

- Not functional or requires complete replacement
- Overhaul or substantial repair required
- Minor repairs to improve functionality
- Minor repairs, mainly cosmetic
- Good, no repair necessary

The ratings will then be used to develop recommendations for maintenance, rehabilitation and replacement projects and the associated costs in **Task 4.2**. Maintenance condition ratings of trash, debris, and sediment will also aid to prioritize the areas and frequency of operations and maintenance activities in **Task 7** when used in conjunction with the hydraulic results developed in **Task 5**.

Deliverable(s): Condition assessments for 320 inspected sites and 10,562 feet of CCTV | Technical memo/ report updated with condition assessment findings | Refined geodatabase updated with facility rated conditions.

Task 4.2 – Maintenance, Rehabilitation, and Replacement Plan

Wood Rodgers will develop a maintenance, rehabilitation, and replacement plan to recommend activities and work to restore drainage facility condition and maximize their useful life for up to **80** projects. Based on Wood Rodgers' inspection and condition assessment experience, there is generally a 20 to 30% chance that the inspected facilities are in critical condition and require maintenance, rehabilitation, and replacement recommendations. That probability translates to 80 projects out of the 320 sites proposed to be inspected in **Task 3.4**.

Wood Rodgers will recommend maintenance activities, rehabilitation work, and replacement projects to address deficiencies in critical condition based on field assessment, remaining useful life of facilities, and cost effectiveness. When a facility is near the end of its useful life or the rehabilitation cost is greater than the replacement cost, replacement work is recommended over rehabilitation work. When the improvements recommended to address deficiencies require substantial resources and planning for implementation, the improvements are categorized in the Capital Improvement Plan in **Task 6**.

The need and extent of rehabilitation and replacement work will be estimated from the inspection reports and site photos for the inspected facilities with "critical" and "poor" structural condition ratings. The inspected facilities with a "poor" rating are recommended for continued monitoring in case they become "critical." Inspected facilities with "critical" rating are recommended for improvement, either through a capital improvement or more minor rehabilitation/replacement.

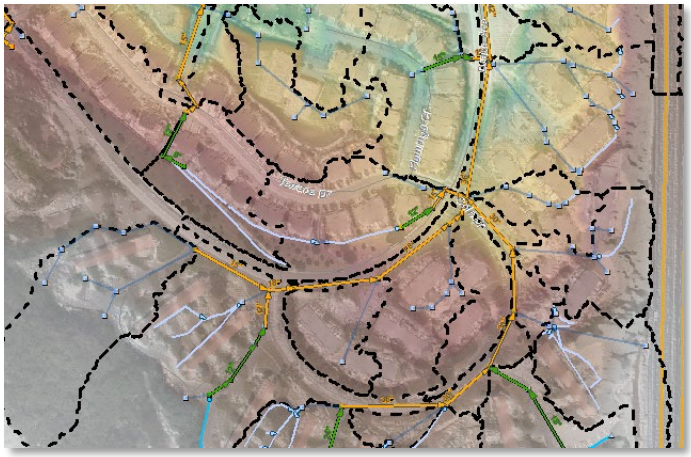
Deliverable(s): Maintenance, Rehabilitation, and Replacement Plan for 80 projects

Task 5 | Hydraulic/Hydrologic Modeling and Assessment

Oversimplification of hydrology and hydraulics could cost the City 10-50% more on improvements than necessary. Wood Rodgers proposes developing a detailed and calibrated model to provide valuable insights into the actual flood risks and optimized solutions for improving the drainage facility capacity, leading to significant cost savings and improved outcomes for the city.

Task 5.1 – Catchments and Hydrologic Parameters

Catchment boundary accuracy is important for hydrologic modeling and runoff simulation for facility sizing. Wood Rodgers has developed an accurate catchment delineation tool that is being used by other public agencies like Marin County, Alameda County Flood Control District, and Santa Clara County Valley Water. The tool automates the delineation process, provides consistency, and minimizes human interpretation.



Wood Rodgers will use this customized tool to automate catchment delineation for **60 miles** of storm drainpipes. The

pipe extent is determined based on the City's pipe sizes equal to or greater than 15 inches, which generally serve larger catchment areas. Pipes are generally sized to a minimum of 12 inches based on the City design standard, and they are typically oversized relative to the contributing catchment areas. Hence, pipe sizes smaller than 15 inches are not proposed for this task.

This catchment tool will include topographic resolutions, range from steep valleys and incised channels to detailed curb, gutter and street crown geometries, and also the connectivity of storm drains and channels. The tool will be used to embed storm drain and channel networks in a newly created LiDAR Digital Elevation Model (DEM), and then create sub catchments at the confluences of lateral storm drains and trunks, major trunk confluences, and upstream ends of storm drain systems.

The tool will use the latest land use and soil maps in conjunction with the sub catchment delineations to develop hydrologic parameters. Wood Rodgers proposes to use land use types and the corresponding imperviousness to develop hydrologic parameters because the imperviousness is a physically based parameter that can be measured.

Catchments will be developed and analyzed for existing and future general plan land use.

Deliverable(s): Catchment boundaries and hydrologic parameters for 60 miles of pipes in existing and future conditions | Updated geodatabase

Task 5.2 – Hydraulic 1D and 2D Models

Wood Rodgers proposes to develop a detailed and fully integrated one-dimensional (1D) model for **60 miles** of storm drainpipes equal to or greater than 15 inches, **8 miles** of open channel, detention basin/lake, and two-dimensional (2D) floodplain model. The models will reflect the hydraulic interactions between storm drains and open channels, storm drains and 2D floodplain, open channels and 2D floodplain, and storm drains/open channels. The model will have enough resolution to reflect all flood water performance within the drainage facilities in the City and understand or pinpoint the true capacity deficiency without model simplification.

The City's drainage facilities to the east are subjected to high velocities because of the steep terrain. Wood Rodgers will model appropriate junction bend losses to reflect the hydraulic performance and deficiency of the steep storm drains which are often overlooked in model simplification. Entrance and exit losses are also crucial within the interaction of storm drains, culverts, and open channels, and will be modeled to accurately account for the hydraulic performance.

A detailed and accurate open channel model is crucial to understand the true capacity and deficiencies, and even the maintenance requirements. We will develop a detailed open channel model with the new LiDAR and construct detailed channel overbank elevation profiles to reflect accurate channel and 2D floodplain interaction during overbank flooding. The detailed open channel model can also be used to assess the frequency and extent of vegetation maintenance and the corresponding hydraulic impacts.

Wood Rodgers will develop 2D meshes to model floodplains up to a 100-year storm. A detailed flexible mesh will be developed and adjusted to capture the terrain resolution for street areas where conveyance and storage is important. The City's drainage facilities include both storm drains and street networks. The interaction between the two systems should be hydrodynamically modeled to properly assess the true combined drainage capacity. This complex calibrated (accurate), and flexible model will serve as a basis for the City for years to come.

Wood Rodgers' team member, Balance Hydrologics, who previously developed the hydrologic and hydraulic models for the *2011 Watershed Management Plan* will work with the modeling team to leverage their knowledge and information for the Potter and Codornices watersheds. This approach will facilitate the model development and leverage previously developed information to the fullest extent possible.

Deliverable(s): Storm drains (up to 60 miles), open channels (up to 8 miles), detention basins/lakes in 1D and 2D hydraulic models

Task 5.3 – Green Infrastructure Modeling

Green infrastructure (GI) is an effective solution for improving water quality and meeting Municipal Regional Permit requirements. However, storm drain master plans often overlook the hydraulic impacts and benefits of green infrastructure. At Wood Rodgers, we have access to gage data on green infrastructure and large trash capture devices and are intimately familiar with the performance of these facilities. With this knowledge, we are well-equipped to accurately assess the performance of these facilities and accurately reflect that in the capital improvement plan.

Large trash capture devices typically reduce existing storm drain capacity and will be modeled to determine the impacts to the hydraulic performance with the consideration of debris clogging. The facilities will be modeled and adjusted with a debris clogging factor and reduced performance efficiency. On the contrary, LIDs, hydromodification facilities, and regional stormwater capture facilities reduce runoff and increase storm drain capacity. Including these facilities will reduce the extent of capital improvements for capacity.

Wood Rodgers team member, Geosyntec, will conduct a GIS analysis to identify locations of future citywide GI. The locations of future citywide GI will be determined based on the City's GI Plan, other GI planning processes conducted by the City, anecdotal information from the City regarding public desires relating to GSI, previous work performed by Geosyntec including the Alameda County Stormwater Resources Plan and C.3.j/C.12.c regional project analysis, and an examination of potential locations for regional facilities that could be implemented as joint flood/GSI facilities to mitigate downstream flood concerns and provide other multiple benefits, such as reduction of legacy pollutants (i.e., treatment of PCBs as required by Municipal Regional NPDES Stormwater Permit (MRP) C.12.c) or trash capture (as required by MRP Provision C.12). Other compliance considerations, including the City's plan to meet MRP Provision C.3.j green infrastructure retrofit requirements, will also be incorporated into the GSI siting exercise. GSI opportunities will be summarized in a map and matrix.

GI facility footprints and types will be developed for GSI opportunity locations based on preliminary sizing factors. Geosyntec will also work with Wood Rodgers H&H modelers to accurately represent facilities in their model. Geosyntec will prepare a brief memorandum describing the GI siting analysis, including details about referenced plans, GI type selection, footprint estimates, and cost estimates. A draft will be submitted to the client, and a final version will be developed to respond to any comments from the client.

Citywide small GI facilities will be modeled using the Sustainable Urban Drainage Systems (SUDS) feature in modeling software. For the identified large trash capture devices, hydromodification facilities, and regional stormwater capture facilities, Wood Rodgers will collect plans for up to **10** facilities with significant hydraulic impacts and benefits. The plans will be used to convert the facilities into the City's geodatabase for hydraulic impact modeling and analyses.

Deliverable(s): Map of proposed citywide GI facilities with GSI measure type and footprint | Up to 10 Large trash capture, hydromodification, and regional stormwater capture facilities in geodatabase | Refined 1D and 2D hydraulic models with the features.

Task 5.4 – Tree Canopy Modeling (Optional)

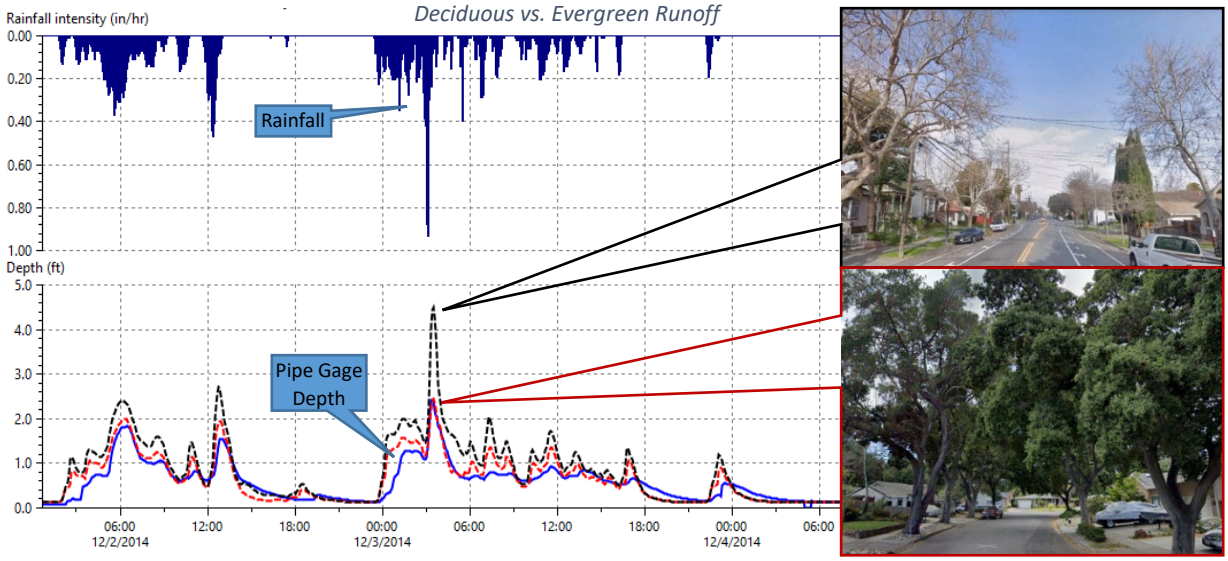
Part of the effort to prevent oversimplification and overly conservative improvements will include reflecting the actual benefit to the City's storm drainage system capacity provided by tree canopies.

Dense vegetation and trees have been recognized for their capacity to intercept rainfall and reduce catchment runoff. Trees are also recognized as a subset of green infrastructure; however, there are limited practical resources to quantify the benefit for urban runoff reduction. Until recently, the Center for Watershed Protection developed a national

Stormwater Performance-Based Credit, Making Urban Trees Count, for tree planting that quantifies an event-based reduction in runoff volume and nutrient and sediment loads associated with tree planting. The method has been adopted by regulatory entities and offers a scientifically defensible credit that encourages greater use of trees for stormwater management requirements.

The City of San Jose in its Drainage Master Plan has further confirmed this application and quantified runoff reduction benefit with historical flow gage data and calibrated hydrologic and hydraulic models that Wood Rodgers helped to develop. The City of San Jose installed more than 70 flow gages in its pipe systems and collected depth and flow data for 2 to 4 years. Five of the pipe gages were installed at locations with dense, evergreen, and mature tree lined streets. Hydrologic and hydraulic models were calibrated (by Wood Rodgers) to validate the rainfall to runoff reduction efficiency with tree canopies. The figure below shows the comparison of the model results with deciduous (assumed) and evergreen tree canopies (calibrated) against recorded pipe gage depths. The model results with evergreen tree canopies match the recorded gage depths consistently for all five gages.

Wood Rodgers will utilize the aforementioned *Making Urban Trees Count* reference to develop the basis for this modeling approach by quantifying the tree species suitable for different areas of the City of Berkeley (with our landscape department) and by estimating the respective tree canopy widths. We will then use our experience gained in the San Jose Drainage Master Plan mentioned above to assign appropriate impervious area reduction factors with different mature tree canopy assumptions. Wood Rodgers will model a tree canopy layer to reduce the impervious areas in the City's hydrologic model and quantify the resultant catchment runoff in the hydraulic model. The reduced runoff will be



compared with the runoff without tree canopies. The reduced runoff will be used later in **Task 6** to reduce grey infrastructure improvements.

Deliverable(s): Green street layer in geodatabase | Refined 1D and 2D hydraulic models with reduced runoff

Task 5.5 – Flow Monitoring

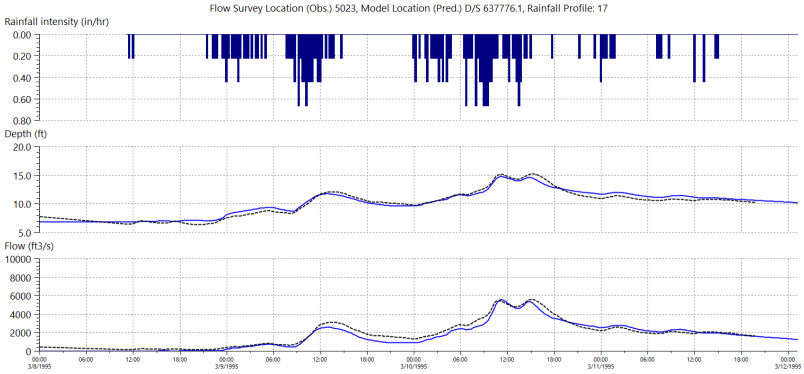
Wood Rodgers' team member, Balance Hydrologics, will install, maintain, and monitor one rental gaging station for two continuous wet seasons to provide validation/calibration data for the concurrent drainage system model builds. The site will be identified in close coordination with City staff. The site would be equipped with depth sensors that, coupled with direct high flow measurements, will allow for development of full flow rating curves. Data processing can readily be expanded to included ongoing gaging installations in the lower Codornices Creek watershed, thus providing a comprehensive data set for the vast majority of the City drainage area. Since Balance already operates rain gauges

covering key points in the City, full rating curves will allow for validation of both the hydrologic and hydraulic modeling components of the study.

Deliverable(s): Depth and flow data at one location for two years | One rental depth gage

Task 5.6 – Model Calibration

A model cannot be used confidently, and proposed improvements can be grossly oversized without proper calibration. A properly calibrated hydrologic and hydraulic model will be consistent with and will match historical data, such as flow gage data, maintenance records, and anecdotal observations. The detailed models Wood Rodgers proposed in the tasks above will provide a platform to develop independent and soundly calibrated hydrologic and hydraulic parameters.



Hilly open space in the Bay Area typically contributes base-flow and interflow after storm events. Wood Rodgers has successfully identified and calibrated catchments with substantial base-flow and interflow using groundwater modeling features in software. With this previous experience, we will further calibrate the catchments for City's facilities to reflect the actual base-flow, interflow, and the total storm peak flow and to accurately reflect the actual performance of the flood system.

Wood Rodgers will collect and quality check rain gage, stream gage, and tide gage data for one wet season for model calibration. Wood Rodgers will select a wet season with the highest peak flow out of the two seasons that will be collected in **Task 5.5**. Wood Rodgers will refine the model's hydrologic and hydraulic parameters iteratively using the quality checked historical recorded data to ensure accurate model performance. The intent is to refine the model parameters so that the model's depth and flow results match the historical data before further analysis is conducted using hypothetical design storms as input.

Deliverable(s): Quality checked rain and stream gage data | Calibrated models for one wet season.

Task 5.7 – Design Storms and Tidal Boundary Conditions

Wood Rodgers has worked with Alameda County and is working with the City of Oakland to develop appropriate design storms for minor as well as major drainage facilities sizing, taking into account the coincident tidal water boundary in San Francisco Bay as the tailwater conditions. Given the proximity of Oakland to Berkeley and the hydrologic and hydraulic similarities between the two cities, Wood Rodgers proposes to apply this knowledge and approach to the project in Berkeley.

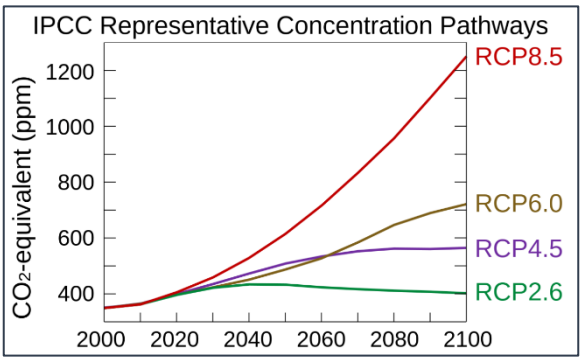
The tide water levels to be used as boundary conditions are based on a recently completed advanced 3D model (Delft3D) of the Bay calibrated to 70 years of tide records. The 3D model accounts for the mean sea level around Berkeley, astronomical tidal effects, and storm surge. The design storm developed in **Task 2.2** will be coupled with these tide water levels to model coincident storm events. Wood Rodgers will simulate accurate coincident design storm (2, 10, and 100-year) and tide boundary combinations in the hydraulic model developed **Task 5.2** to assess the drainage system capacity and deficiencies. The model results will inform which combinations cause the most flooding within the drainage systems and the corresponding improvements. The high tide (100-year) boundary condition event will also be used to determine flood control improvements necessary for coastal flooding protection.

Deliverable(s): 2, 10, and 100-year Design Storms and Tidal Boundary Conditions Simulations

Task 5.8 – Climate Change Analysis

Recent scientific research has identified multiple scenarios that estimate likely rises of the global sea level and increases in extreme precipitation. These scenarios consist of projections based on continuing land ice melt as a consequence of greenhouse gas emissions. The estimates have inherent uncertainty, and thus are usually presented as a range.

Wood Rodgers will use three global climate change models and two emissions scenarios to estimate peak precipitation intensity changes and projected sea level rise, respectively, for the City 50 years into the future. Use of multiple models will help bracket the variability in predictions. These models and emissions come from the Cal-Adapt website and State of California Sea-Level Rise Guidance, respectively. The three global climate models are: 1) CanESM2, which is considered an average simulation; 2) HadGEM2-ES, which is considered a warm/drier simulation; and 3) CNRM-CM5, which is considered a cooler/wetter simulation. The two emissions (Representative Concentration Pathway, RCP) scenarios are RCP 4.5 (low emission) and RCP 8.5 (high emission).



Based on the six combinations of global climate models and emission scenarios, Wood Rodgers will recommend, with the City's input, two combinations of sea level rise and precipitation intensity values to represent the lowest and highest climate change values in the City's hydrologic and hydraulic model (i.e., two additional modeling scenarios total).

For any deficient facilities, Wood Rodgers would model the proposed improvements identified in **Task 6** with sea level rise, adjusted peak precipitation intensities, and propose additional improvements necessary to address the deficiencies found in the climate change modeling conditions. The design criteria for additional improvements would consider factors such as project lifespan, asset criticality, project adaptability, environmental constraints, costs, and the City's risk tolerance.

Deliverable(s): Sea Level Rise and Precipitation Intensity Adjustments | Climate Models

Task 5.9 – Capacity Deficiencies

The City's drainage system performance will be evaluated using the design standards developed in **Task 2** and the hydraulic results developed in **Task 5.7**. The drainage systems within the City will be evaluated with the appropriate design storm frequencies and the resultant floodplain extents, and then categorized into 2-, 10-, and 100-year deficiencies.

Deliverable(s): Deficiency map | Updated Geodatabase

Task 6 | Development of a Capital Improvement Plan

The following tasks are proposed to develop and prioritize improvement alternatives based on flood risk, benefit to cost effectiveness, and social equity.

Task 6.1 – Risk for Condition and Capacity Deficiencies

Wood Rodgers will conduct a prioritization of storm drainage system improvements based on modeled capacity deficiencies and inspected condition deficiencies. The practice is to maximize the involvement of City staff in all critical decisions relating to developing the Capital Improvement Plan (CIP), including selecting appropriate design and performance criteria, evaluating alternatives, and prioritizing projects.

Where numerous projects are required to address maintenance, system capacity, and condition deficiencies, we have implemented more formal risk models that quantify the likelihood of capacity exceedance/failure and the associated consequences. Projects intended to address the highest risks in the storm drainage system will be given the highest priority in the CIP.

The drainage facility flood risk for each of the deficient systems is calculated using the following formula:

Flood Risk = Likelihood x Consequence

The calculated flood risks provide standard and quantifiable values to assist the City with prioritizing improvement projects for both condition and capacity deficient drainage systems. Wood Rodgers will use this risk model to calculate flood risks for the major deficient drainage systems in the City.

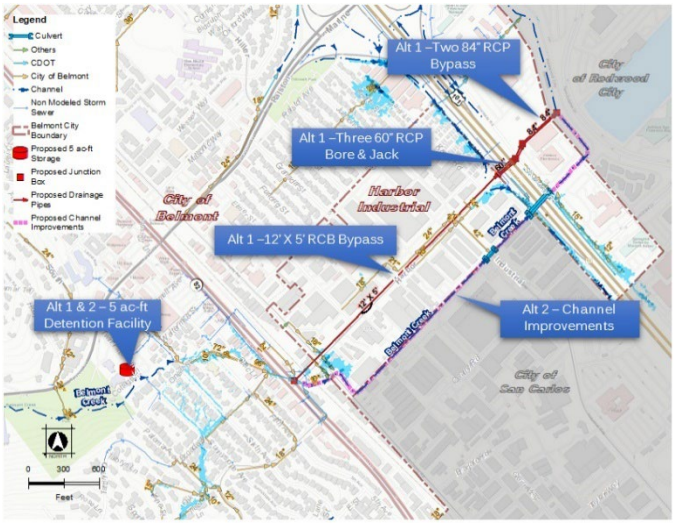
Once the improvement projects are prioritized, Woods Rodgers will summarize the hydrologic and hydraulic results of the drainage area, the improvement extent and cost, and the effectiveness of the improvements by comparing the existing and post improvement floodplains for each of the selected improvement projects.

Deliverable(s): Project flood risk for 6 major systems

Task 6.2 –Improvement Alternatives and Costs

Wood Rodgers will develop improvement alternatives and cost estimates to address capacity and condition deficiencies. Once the risk of the deficiencies are determined, Wood Rodgers will develop up to **two** conceptual capacity alternatives for each of the **six** major system (multiple pipes) of deficiencies. Alternatives will vary per drainage system and may include new or upsized storm drainage pipes, diversions, detention, floodwalls, pump station improvements, and any combinations of the facilities. Multi-benefit improvement opportunities such as regional green infrastructure and recreation and will be emphasized when developing improvement alternatives to increase capacity, improve water quality, and incorporate social benefits and climate change.

Improvement alternatives will be evaluated for both existing and future land use conditions. The improvement alternatives will be developed based on a watershed-wide approach rather than an individual site approach. This is necessary because a comprehensive CIP must demonstrate that alleviating deficiencies in one location will not exacerbate problems elsewhere in the system. Potential projects will be proposed to address areas with the largest risk factors.



Conceptual design figures will be developed for each selected alternative of each major system to better quantify the capital, permitting, administration, and construction management costs. Potential projects will be presented for discussion in a workshop setting with City staff and operators. This will allow for key staff input and allow the creation of in-depth justification.

Improvement alternatives will then be selected based on the potential benefit (reduction in annual consequences from **Task 6.1**) weighed against preliminary costs, and from the City' input. Anticipated environmental impacts of the alternatives will be identified at a cursory level (**Task 6.6**) with the understanding that more detailed CEQA analysis may be needed, depending on the scope and potential impacts of proposed projects.

Deliverable(s): Conceptual design figures and costs for up to 6 projects

Task 6.3 – Sea Level Rise Improvement Alternatives and Costs

Wood Rodgers will use the simulation results developed in **Task 5.8** to determine high-level improvement engineering costs for coastal flooding protection.

Because of the uncertainty in the extent of the sea level rise, improvements developed in this task will be prioritized separately from the CIP projects. The proposed improvements that will reduce the coastal flooding will likely include flap gates at storm drain outfalls, pump stations at low-lying areas, and floodwalls along the shoreline.

Conceptual design figures will be developed for up to **two** projects to better quantify the lifecycle cost, which includes capital and maintenance costs. Each alternative will be presented as a preliminary plan view drawing with preliminary designs, permitting, capital, administration, management, and lifecycle maintenance costs. Potential projects will be presented for discussion in a workshop setting with City staff and operators. This will allow for key staff input and allow the creation of in-depth justification.

Deliverable(s): Conceptual design figures and costs up to 2 projects.

Task 6.4 – Environmental Constraints Analysis

Wood Rodgers will assess natural resources and evaluate the potential sensitivity of those resources at the selected improvement sites. The output of this evaluation will include the identification of potential environmental impacts, requirements, and costs estimates associated with environmental compliance documentation and regulatory permits, and facility operation and maintenance of proposed alternatives. This scope of work anticipates up to four (4) alternatives/locations that would be evaluated in the Storm Water Master Plan requiring environmental constraints analysis.

Wood Rodgers will develop a Project alternatives summary table that qualitatively evaluates each alternative's potential impact to biological resources and potential implications related to permitting by resource agencies. The Project

alternatives summary table will also identify anticipated CEQA compliance requirements for the improvement alternatives, in addition to CEQA compliance and costs for facility operations and maintenance. This summary table is intended to support decision makers in screening alternatives and selecting the preferred Project alternative(s).

Wood Rodgers has found this screening process invaluable as it allows us to incorporate our deep understanding of environmental regulations, costs, and considerations into the design process, thereby preserving resources where feasible and lowering project construction and mitigation costs.

Deliverable(s): Project alternatives summary table

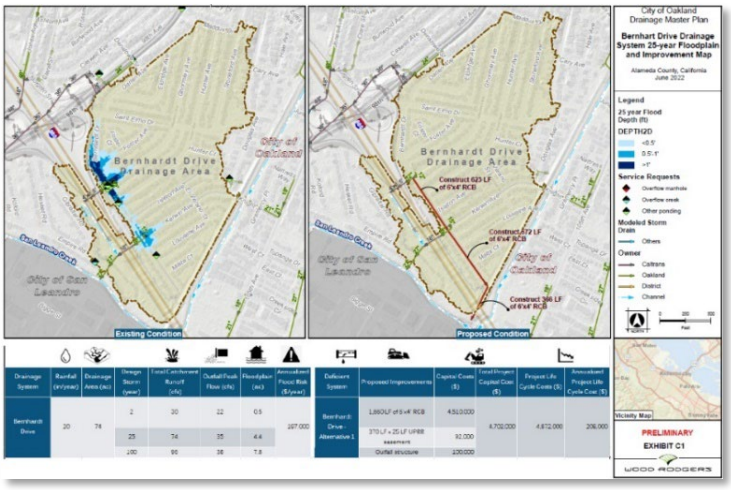
Task 6.5 – Benefit Cost Analysis and Improvement Prioritization

Wood Rodgers, in collaboration with the City and community stakeholders will develop a capital improvement plan (CIP) to determine locations, schedules, and resources (land, labor, capital) for up to **six** improvement projects. These improvements will be identified to restore design conditions, improve performance of the storm drain facilities, reduce flood risks, and improve water quality, and improve social benefits. The improvement projects developed in **Task 6.2** will be prioritized using the flood risks developed in **Task 6.1**, and other considerations. Other considerations may include, but are not limited to, social equity benefits, environmental benefits, constructability, and funding availability. Each of the components used in the prioritization process will be assigned with a weighting factor based on the District's, Task Force's, and community stakeholder input.

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

Wood Rodgers' consideration of **equity** as part of project prioritization would leverage a program that was developed for the diverse communities in the City of Oakland. This equity program is currently being integrated into Oakland's storm drainage capital improvement plan, which Wood Rodgers is developing with the City. The equity framework consists of six themes that cover broad areas of people's lives, including: 1) economy; 2) education; 3) public health; 4) housing; 5) public safety; and 6) neighborhood and civic life. The **equity** objectives and metrics of success will be finalized with the District and Task Force as part of the public engagement task.

The metrics of success will be assigned with weighting factors based on the City's and stakeholders' input. The improvement projects with higher combined scores will be recommended over those with lower scores for CIP implementation. The project priority rankings will be finalized through discussions with the City to incorporate their priorities and local experience.



The project priority rankings and project costs will be used collectively to categorize improvement projects into 5-year (urgent), 10-year, and 30-year (low priority) planning-level capital improvement projects based on the City's existing or planned financial resources.

Once the improvement projects are prioritized, Wood Rodgers will summarize the hydrologic and hydraulic results of the drainage area, the improvement extent and cost, and

the effectiveness of the improvements by comparing the existing and post improvement floodplains for each of the selected improvement projects.

Deliverable(s): Prioritized 6 capital improvement projects | CIP implementation schedule.

Task 6.6 – Financial Analysis

Wood Rodgers' team member, SCI, understands that the City likely may need to increase its current stormwater fee to support enhanced operations and maintenance and some capital improvements and/or consider proposing a bond measure to potentially fund large capital improvement projects.

As the engineering consultant leading the successful implementation of the City's 2018 Stormwater Fee (including polling, fee study development, outreach, and balloting), SCI will utilize its direct learned experience from this effort and analyze the City's current funding environment and the funding requirements developed as part of the Master Plan. Additionally, SCI will review the current state of stormwater services funding in California since 2018 to identify any new opportunities.

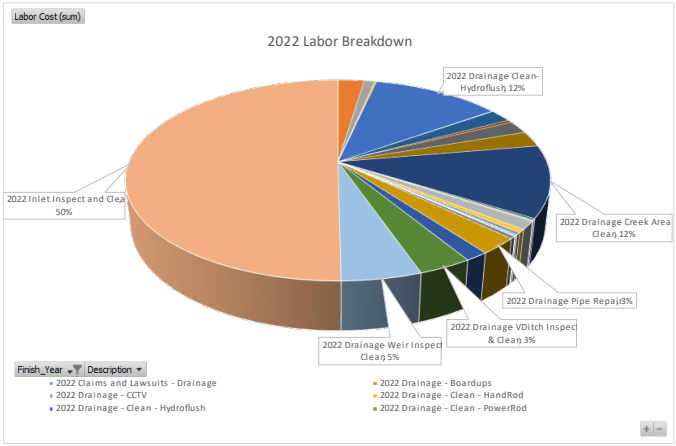
Next, a variety of potential funding mechanisms will be evaluated, for both short- and long-term funding of the City's storm drainage system, including special taxes (e.g., parcel taxes, user taxes, transient occupancy taxes, sales taxes, bond measures), Proposition 218 balloted property-related fees, non-balloted property-related fees, benefit assessments, regulatory fees, new development fees, service fees, and other non-balloted fees and revenues such as state and federal funding sources. A special focus will be placed upon balloted property-related fees and bond measures. Each potential source will be studied and evaluated along with important attributes such as political viability, legal rigor, sustainability, legislative factors, costs of implementation and administration, future reliability, timeline, and compatibility with other funding mechanisms.

Deliverable(s): PowerPoint Presentation | Financial Analysis Plan

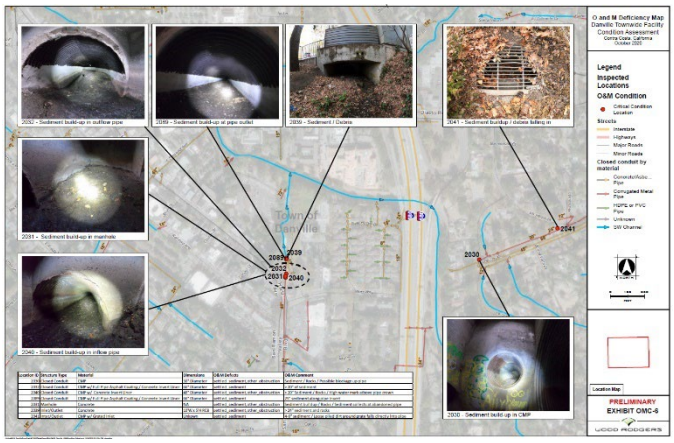
Task 7 | Development of Maintenance and Inspection Plan

The Wood Rodgers team has extensive experience in developing programmatic maintenance and inspection plans for a range of drainage systems, including storm drain systems, open channels, and large trash capture devices. The team is proposing to develop a predictive and proactive maintenance and inspection plan for the City that utilizes inspection findings from **Task 3** and hydraulic model results from **Task 5** to optimize inspection locations. The plan will also recommend inspection activities to inform and optimize maintenance activities, thereby extending the useful life of the drainage facilities.

The team will meet with City staff to document and review existing maintenance operations conducted within the City's service area. The team will download the existing maintenance logs from the City's asset management software to analyze maintenance hotspots, work order types, frequencies, and resources. After reviewing existing practices and data, the team will prepare maintenance and inspection guidelines describing best practices for operations, maintenance, repairs, replacement, project performance and surveillance, inspection and reports needed to maintain the City's storm drainage facilities. The guidelines will provide consistent and sound protocols to inventory, maintain, rehabilitate, and improve drainage facilities.



The guidelines will include, at a minimum, the following:



Introduction | Provides a summary of the guidelines and describes the purpose, goals, and objectives.

Program Setting | Provides the context/background to understand the jurisdictional areas affected by maintenance activities.

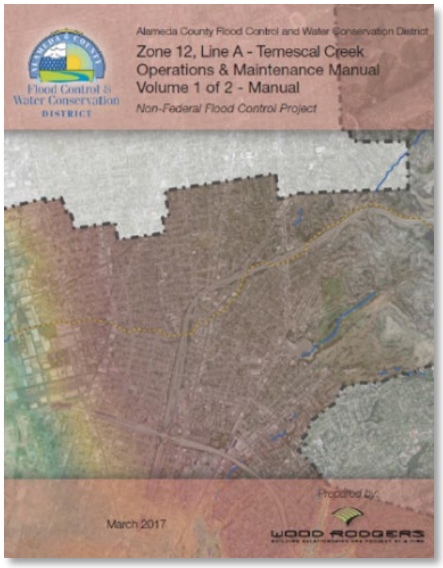
Regulatory Framework | Summarizes and describes federal, state, and local regulatory jurisdictional boundaries, regulations, and authorizations/permits/certifications that apply to maintenance activities.

Inspection Schedules and Checklists | Provides a recommended frequency to inspect pipe outfalls, pipes, catch basins, open channel, and large trash capture devices for sediment/debris build-up and structural deficiencies. These inspections are important to confirm and maintain the full capacity of the City's drainage facilities and to issue work orders to retain their functionality.

Preventive Maintenance Schedules and Checklists | Provides recommended frequencies to remove sediment/debris and perform preventive maintenance for pipe outfalls, pipes, catch basins, open channel, and large trash capture devices.

Rehabilitation/ Replacement Plan and Schedules | Recommends the frequency to rehabilitate or replace items based on the facility age, inspected condition, and material. Describes potential failures, both exceptional and routine, and provides detailed recommended measures for repair of each type of failure that might be needed during the service life of the improvements and facilities. The recommended repair and replacement measures are intended to be conducive to the City's current and revised reporting and tracking methods and capabilities to perform the work.

Staffing, Funding, Equipment and Vehicle Recommendations | Recommendations will be made based on an evaluation of the maintenance records and refined procedures. This will include recommendations for adequate staffing, equipment, and vehicles to perform the recommended activities; a schedule for future inspections; and appropriate annual funding levels for repairs of the City's storm drainage infrastructure that fall within the City's capabilities. The recommendations will consider the City's existing asset management systems and policies.



Environmental Permitting Assessment | Wood Rodgers will work with the City to identify and map all natural water ways and drainages in the City that may require routine maintenance. Our environmental staff will perform a desktop review of these drainage facilities and provide the City with preliminary recommendations for which facilities should be considered Waters of the U.S./State and which are non-jurisdictional. This effort will provide the City with a better understanding of when maintenance work would require environmental permits and when it could be performed without regulatory agency coordination. Wood Rodgers recommends the City consider obtaining future long-term maintenance agreement permits for citywide stormwater master plan maintenance activities in the future (not included in this scope of work).

Reporting | Describes necessary documentation required for the City's internal work tracking. This also includes reporting measures as required by federal, state, and local resource agencies.

Deliverable(s): Draft and Final Maintenance and Inspection Plan for Storm Drains, Open Channels, and Full Trash Capture Devices.

Task 8 | Training and Documentation on Modeling and Database

Information developed for Master Plan studies are not always easily accessible because of static data and a lack of technical resources. Wood Rodgers' approach of using an implementable geodatabase (**Task 3.1**) as the central repository for this Master Plan will help the City to continue using and updating the geodatabase for drainage facility inventory, inspection, condition assessment, modeling, and CIP implementation at the end of this project. Training and documentation proposed in the following tasks are to ensure that the geodatabase, and hydrologic and hydraulic models are implementable, accessible, and updatable.

Wood Rodgers will provide training and documentation for the City staff to continuously maintain the geodatabase and hydrologic and hydraulic models developed for this Master Plan.

Wood Rodgers has developed extensive training manuals and videos for geodatabase feature processing, geodatabase maintenance, and software training for Alameda County Flood Control District, Santa Clara Valley Water, City of San Jose, City of Oakland, and a few other agencies. Wood Rodgers will use the already developed manuals as a base and refine those for the City's use.

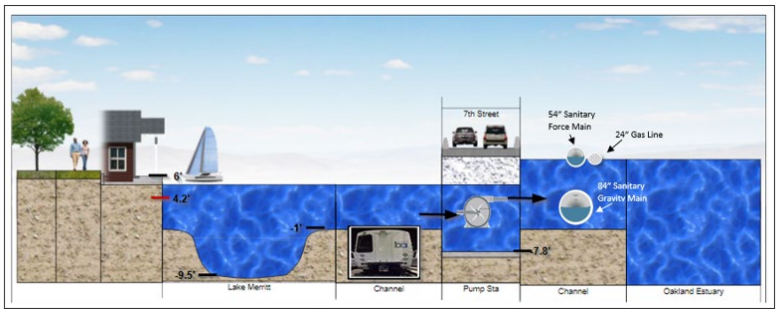
Wood Rodgers will engage the selected City staff along the master plan development process to provide hands-on training experience. We will coordinate with the City's GIS department to install and implement the geodatabase developed for this Master Plan. Programming assistance will be provided to address any software compatibility issues.

Deliverable(s): 3 Trainings | Geodatabase and Modeling Software Documentation

Task 9 | Report Drafting and Delivery

Task 9.1 – Meetings and Presentations

Upon completion of the project, Wood Rodgers will prepare presentation materials containing technical information, findings, and recommendations. The presentation materials will be developed by our landscape architects with graphical illustrations to express visual ideas, convey messages, educate the audience, and promote the project recommendations. Wood Rodgers will use the materials to conduct up to eight presentations to stakeholders as requested by the City.



Deliverable(s): Up to eight presentations and materials

Task 9.2 – Draft and Final Report

Documentation provided to the City will include a summary report and appendices documenting the storm drain inventory and condition assessment, design standards, hydrologic and hydraulic model development, capital maintenance and improvement plan, and financial analysis and grant funding. The appendices will include all the previously developed technical memoranda, documenting criteria, data sources, regulatory requirements, verification, database, condition assessment, hydrologic analysis, hydraulic analysis, calibration, reconciliation, and all necessary maps. Wood Rodgers will use a user-friendly and graphical presentation approach to convey complex information throughout the documents.

Wood Rodgers develops Master Plan Reports concurrently with the development of the study and provides draft copies throughout, in order to provide the client with the ability to provide input as it is developed. Wood Rodgers will respond up to two rounds of the City's comments.

Deliverable(s): Draft and Final Master Plan Report (pdf)

Task 10 | Other Tasks

Task 10.1 – Aquatic Park Multi-Benefit Improvements (Optional)

Aquatic Park is the jewel of the City and subjected to water quality, trash, and flooding issues. It is a facility that will be closely scrutinized by the public for any proposed improvements. Wood Rodgers is solving a very similar situation for the City of Oakland at Lake Merritt and will use the experience and approach for this task. The Wood Rodgers team proposes to develop a multi-benefit improvement alternative that will mitigate the water quality, trash, and flooding issues with improvements. This multi-benefit improvement alternative will be favorable and better received by the community.

Wood Rodgers will install two water quality monitoring and level gages in Aquatic Park. The recorded data will be used to inform existing water quality conditions, the impacts of tidal flushing on water quality, the impacts of nutrient on algae

growth, the water level and performance of the lagoon during storms. This data will inform the development of comprehensive improvements that maximize tidal flushing for water quality enhancement, maintain recreational use by maintaining desired water levels, and minimize flooding during storms. The improvements for flood control, tidal flushing, and recreation will be simulated, designed, and optimized with the calibrated hydraulic model developed in **Task 5**. The improvement recommendations for water quality enhancement will be analyzed in the subsequent Water Quality Recommendations Report subtask. Wood Rodgers will develop a conceptual improvement figure, high-level engineering cost, and an implementation program.

Water Quality Recommendations Report

Wood Rodgers' team member, Geosyntec, will develop a Water Quality Recommendations Report for the Aquatic Park lagoon in Berkeley. Geosyntec will review available reports, documents, and data and develop an inventory of available data sets relevant to the lagoon, primarily focused on in-lake water quality (temperature, conductivity, dissolved oxygen [DO], nutrients, and algae), water quality of inflows, and exchange of water with San Francisco Bay.

Geosyntec will review and plot the data listed in the inventory. Plots will include timeseries and vertical profile plots of in-lake water quality data and timeseries plots of inflow water quality data and tide data, with annotations indicating tide tube/gate operations (if available). Plots will be limited to data obtained in the last three years (or an earlier three-year period if deemed more useful).

The plots will be analyzed to identify trends (e.g., relationships between interactions with San Francisco Bay, between tide tube/gate operations, stratification/mixing, and water quality) and develop an increased understanding of water quality in the Berkeley Aquatic Park lagoon. Plots and analyses will include visual comparisons between measurements at different locations to understand spatial variability and to inform appropriate future monitoring locations. Geosyntec will present results of the data analyses in a meeting, with the goal of summarizing the current understanding of the lake.

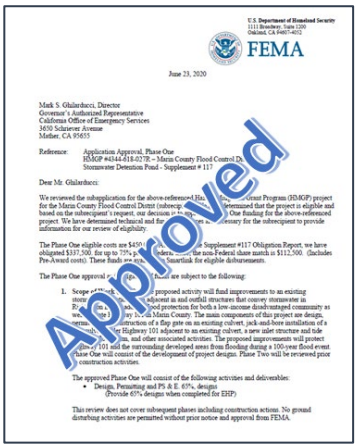
Geosyntec will utilize information from existing reports and documents and data analyses to evaluate strategies to improve water quality in the lagoon. Possible strategies may include oxygenation or aeration devices that can increase DO concentrations without necessarily addressing algae issues, operations of tide tubes/gates to improve circulation and promote destratification (i.e., mixing), dredging to improve circulation and/or remove legacy sediments, treatment with alum or other phosphorus-binding technology, and watershed improvements to reduce nutrient concentrations in stormwater inflows. Geosyntec will also provide recommendations on how the physical monitoring may be improved or streamlined and develop a high-level nutrient sampling plan. The data review, data analyses, and proposed monitoring and implementation strategies will be summarized in an Aquatic Park Lagoon Water Quality Recommendations Report.

Deliverable(s): Conceptual improvement figure | Engineering costs | Depth and water quality data at two rental gages | Water Quality Recommendations Report

Task 10.2 – FEMA Grant Funding Opportunity

Grant funding provides financial resources to public agencies in a cost sharing partnership to finance administration, design services, and construction of capital improvement projects for public safety and benefits. Wood Rodgers has resources and experience to support flood mitigation grants.

Wood Rodgers has a successful track record in supporting public agencies to acquire grant funding for much-needed capital improvement projects. Wood Rodgers has successfully supported the public agencies in the Bay Area and Central Valley to obtain more than $70 million in flood mitigation grant funds.


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

FEMA

June 23, 2020

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

Reference: Application Approval, Phase One
HMGP-4434-018-0278 – Marin County Flood Control D...
Stormwater Detention Pond - Supplement # 117

Dear Mr. Ghilarducci:

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

The Phase One eligible costs are $450... Supplement #117 Obligation Report, we have obligated $337,500 for up to 75% o... federal... the non-Federal share match is $112,500. (Includes Pre-Award costs). These funds are... Smartlink for eligible disbursement.

The Phase One approval ... funds are subject to the following:

1. Scope ... proposed activity will fund improvements to an existing ... adjacent in and outfall structures that convey stormwater in ... flood protection for both a low-income disadvantaged community as ... 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 ... Highway 101 adjacent to an existing culvert, a new inlet structure and tide ... and other associated activities. The proposed improvements will protect ... 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 ... 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.

Approved

Wood Rodgers proposes to identify up to two improvement projects that are competitive in grant applications and to develop sufficient technical data to support future grant applications (not included in this proposal).

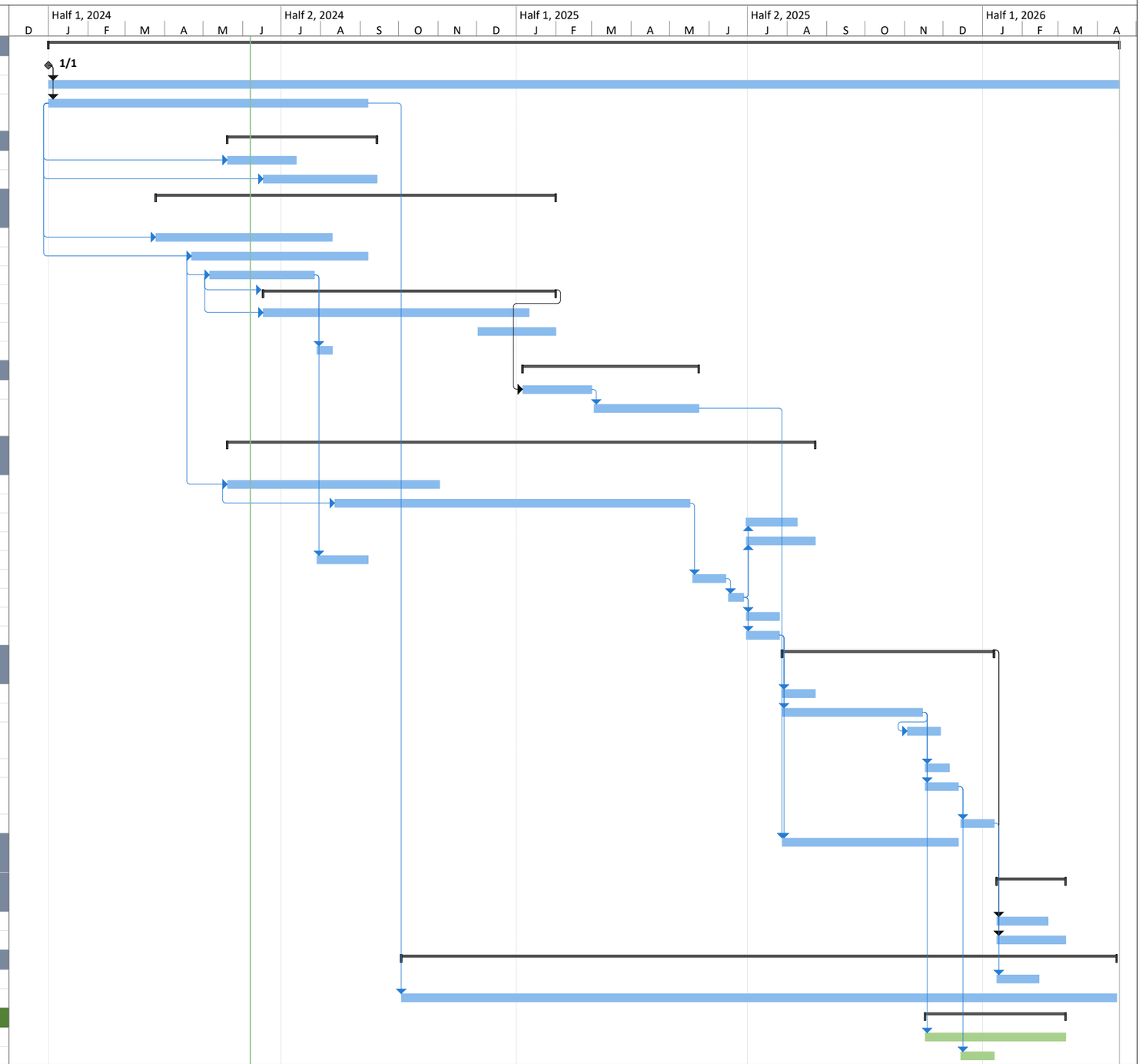
Flood mitigation grants provide funds to local agencies for flood risk reduction improvement projects. For successful applications, local agencies have to submit competitive applications that identify floodplain extents, flood frequencies, flood damages, and benefit-cost ratios (BCR). Wood Rodgers will develop FEMA Hazus flood damages for the deficient drainage systems, 10% design plans, and the associated improvement capital costs to support future grant applications (not included in this proposal). With the information, Wood Rodgers will identify and recommend the most competitive improvement projects for future grant application considerations. We will develop BCR analyses for the projects to determine the cost effectiveness and grant application competitiveness.

Deliverable(s): FEMA Hazus analysis | 10% design plans | Capital costs | Benefit-cost ratio analysis for two improvement projects

City of Berkeley Storm Water Master Plan

03/30/2023

ID	Task Name	Duration	Start	Finish	Predecessors	Resource Names
1	**Task 1. Project Management**	**600 days**	**Mon 1/1/24**	**Fri 4/17/26**		
2	Notice to Proceed	0 days	Mon 1/1/24	Mon 1/1/24		
3	Task 1.1 Management and Coordination	600 days	Mon 1/1/24	Fri 4/17/26	2	
4	Task 1.2 Data Collection, Review, and Geodatabase Update	180 days	Mon 1/1/24	Fri 9/6/24	2	
5	**Task 2. Drainage Design Standards**	**85 days**	**Mon 5/20/2**	**Fri 9/13/24**		
6	Task 2.1 Criteria Review and Recommendations	40 days	Mon 5/20/24	Fri 7/12/24	4SS+100 days	
7	Task 2.2 Design Storm	65 days	Mon 6/17/24	Fri 9/13/24	4SS+120 days	
8	**Task 3 Field Verification and Inventory of a Drainage System**	**225 days**	**Mon 3/25/24**	**Fri 1/31/25**		
9	Task 3.1 Geodatabase Refinement	100 days	Mon 3/25/24	Fri 8/9/24	4SS+60 days	
10	Task 3.2 Desktop Asset Inventory	100 days	Mon 4/22/24	Fri 9/6/24	4SS+80 days	
11	Task 3.3 Inspection Plan Development	60 days	Mon 5/6/24	Fri 7/26/24	10SS+10 days	
12	**Task 3.4 Inspection, Survey, and Inventory**	**165 days**	**Mon 6/17/2**	**Fri 1/31/25**	**11SS+30 days**	
13	Pipes	150 days	Mon 6/17/24	Fri 1/10/25	11SS+30 days	
14	Channel Drone Survey	45 days	Mon 12/2/24	Fri 1/31/25		
15	Task 3.5 Bathymetric Survey	10 days	Mon 7/29/24	Fri 8/9/24	11	
16	**Task 4. Condition Assessment**	**100 days**	**Mon 1/6/25**	**Fri 5/23/25**		
17	Task 4.1 Storm Drain Assessment	40 days	Mon 1/6/25	Fri 2/28/25	12FS-20 days	
18	Task 4.2 Maintenance, Rehabilitation and Replacement Plan	60 days	Mon 3/3/25	Fri 5/23/25	17	
19	**Task 5. Hydraulic/Hydrologic Modeling and Assessment**	**330 days**	**Mon 5/20/24**	**Fri 8/22/25**		
20	Task 5.1 Catchments and Hydrologic Parameters	120 days	Mon 5/20/24	Fri 11/1/24	10SS+20 days	
21	Task 5.2 Hydraulic 1D and 2D Models	200 days	Mon 8/12/24	Fri 5/16/25	20SS+60 days	
22	Task 5.3 Green Infrastructure Modeling	30 days	Mon 6/30/25	Fri 8/8/25	26	
23	Task 5.4 Tree Canopy Modeling	40 days	Mon 6/30/25	Fri 8/22/25	26	
24	Task 5.5 Flow Monitoring	30 days	Mon 7/29/24	Fri 9/6/24	11	
25	Task 5.6 Model Calibration	20 days	Mon 5/19/25	Fri 6/13/25	21	
26	Task 5.7 Design Storms and Tidal Boundary Condi	10 days	Mon 6/16/25	Fri 6/27/25	25	
27	Task 5.8 Climate Change Analysis	20 days	Mon 6/30/25	Fri 7/25/25	26	
28	Task 5.9 Capacity Deficiencies	20 days	Mon 6/30/25	Fri 7/25/25	26	
29	**Task 6. Development of a Capital Improvement Plan**	**120 days**	**Mon 7/28/25**	**Fri 1/9/26**		
30	Task 6.1 Risk for Capacity and Condition Deficienc	20 days	Mon 7/28/25	Fri 8/22/25	28	
31	Task 6.2 Improvement Alternatives and Costs	80 days	Mon 7/28/25	Fri 11/14/25	28	
32	Task 6.3 Sea Level Rise Improvement Alternatives and Costs	20 days	Mon 11/3/25	Fri 11/28/25	31FS-10 days	
33	Task 6.4 Environmental Constraints Analysis	15 days	Mon 11/17/2	Fri 12/5/25	31	
34	Task 6.5 Benefit Cost Analysis and Improvement Prioritization	20 days	Mon 11/17/25	Fri 12/12/25	31	
35	Task 6.6 Financial Analysis	20 days	Mon 12/15/2	Fri 1/9/26	34	
36	**Task 7. Development of a Maintenance and Inspection Plan**	**100 days**	**Mon 7/28/25**	**Fri 12/12/25**	**18,28**	
37	**Task 8. Training and Documentation on Modeling and Database Software**	**40 days**	**Mon 1/12/26**	**Fri 3/6/26**		
38	Task 8.1 Training and Preparation	30 days	Mon 1/12/26	Fri 2/20/26	29	
39	Task 8.2 Manual	40 days	Mon 1/12/26	Fri 3/6/26	29	
40	**Task 9. Report Drafting and Delivery**	**400 days**	**Thu 10/3/24**	**Wed 4/15/26**		
41	Task 9.1 Meetings and Presentations	25 days	Mon 1/12/26	Fri 2/13/26	35	
42	Task 9.2 Draft and Final SWMP Report	400 days	Thu 10/3/24	Wed 4/15/26	4	
43	**Task 10. Other Tasks**	**80 days**	**Mon 11/17/**	**Fri 3/6/26**		
44	Task 10.1 Aquatic Park Multi-Benefit Improvemer	80 days	Mon 11/17/2	Fri 3/6/26	31	
45	Task 10.2 FEMA Grant Funding Analysis	20 days	Mon 12/15/2	Fri 1/9/26	34	



PARKS AND WATERFRONT COMMISSION
RECENT COUNCIL REPORTS

The following recent PRW council reports can be accessed from the City Council Website by using the following URL's:

July 9, 2024 (regular)

5.-Policies and Timelines for Filing Ballot Measure Arguments
URL: https://berkeleyca.gov/sites/default/files/documents/2024-07-09%20Item%2005%20Policies%20and%20Timelines%20for%20Filing%20Ballot%20Measure%20Arguments.pdf

11.-Contract: Rincon Consultants, Inc. for Environmental Support Services for the Berkeley Water Transportation Pier Ferry Project
URL: https://berkeleyca.gov/sites/default/files/documents/2024-07-09%20Item%2011%20Contract%20Rincon%20Consultants%2C%20Inc.%20for%20Environmental%20Support%20Services.pdf

June 25, 2024 (regular)

Urgent Item: Contract Amendment: California Lake Research Partners, Inc. for Community Survey
URL: https://berkeleyca.gov/sites/default/files/documents/2024-06-25%20Urgent%20Item%20Contract%20Amendment%20California%20Lake%20Research%20-%20Supp%202%20%28City%20Manager%29.pdf

7.-FY 2025 Tax Rate: Fund the Maintenance of Parks, City Trees and Landscaping
URL: https://berkeleyca.gov/sites/default/files/documents/2024-06-25%20Item%2007%20FY%202025%20Tax%20Rate%20%20Fund%20the%20Maintenance.pdf

32.-Grant Application: California Fire Foundation-Camps Wildfire Response Equipment
URL: https://berkeleyca.gov/sites/default/files/documents/2024-06-25%20Item%2032%20Grant%20Application%20%20%20California%20Fire%20Foundation-Camps.pdf

43.-Allocation of funds for a Nexus Study to develop a Parks Impact Fee for new developments
URL: https://berkeleyca.gov/sites/default/files/documents/2024-06-25%20Item%2043%20Allocation%20of%20funds%20for%20a%20Nexus%20Study.pdf

June 14, 2024 (special)

2. -Community Survey Results and Direction on Potential November 2024 Ballot Measures
URL: https://berkeleyca.gov/sites/default/files/documents/2024-06-14%20Special%20Item%2002%20Community%20Survey%20Results%20and%20Direction.pdf

Presentation
URL: https://berkeleyca.gov/sites/default/files/documents/Community%20Survey%20%20Ballot%20-%202024-06-14%20final.pdf

June 4, 2024 (regular)
17.-FY 2025 Tax Rate: Fund the Maintenance of Parks, City Trees and Landscaping
URL: https://berkeleyca.gov/sites/default/files/documents/2024-06-04%20Item%2017%20FY%202025%20Tax%20Rate%20%20Fund%20the%20Maintenance%20of%20Parks%2C%20City%20Trees.pdf

Greetings!

Your input and comments are invited on the **City of Berkeley Mental Health Services Act (MHSA) FY25 Annual Update** which has been posted on the website for a 30-day Public Review and comment period. The 30-day Public Review period is being held from Wednesday, June 26th through Thursday, July 25th to provide the opportunity for input on MHSA funding and programming.

To access and review the proposed Annual Update, click on the following link: **Draft MHSA FY25 Annual Update**

Individuals interested in providing input on this Annual Update can also attend in-person or by Zoom, one of the following Community Input Meetings that will be held in July during the 30-Day Public Review. All meetings will be held from 6:00pm-7:30pm at the North and South Berkeley Senior Centers (and on Zoom) as outlined below and on the attached flier:

South Berkeley Senior Center: 2939 Ellis Street
Multi-purpose Room
-Thursday, July 9th
-Tuesday, July 18th

North Berkeley Senior Center: 1901 Hearst Ave.
-Thursday, July 11th – Gooseberry Room
-Tuesday, July 16th – Poppy Room

To join one of the Community Input Meetings on your computer or mobile device access the link below:
https://us06web.zoom.us/j/8446733966?pwd=OGp3Tm5L QTc5TGdhb2tYWllKcDVhdz09&omn=89471660365

Or call into the Zoom Meetings:
1 (669) 444-9171
Password: 081337

Immediately following the end of the 30 Day Public Review period, a Public Hearing will be held at 7:00pm on Thursday July 25th, during the Mental Health Commission meeting which will be held in the Juniper Room of the North Berkeley Senior Center, at 1901 Hearst Avenue.

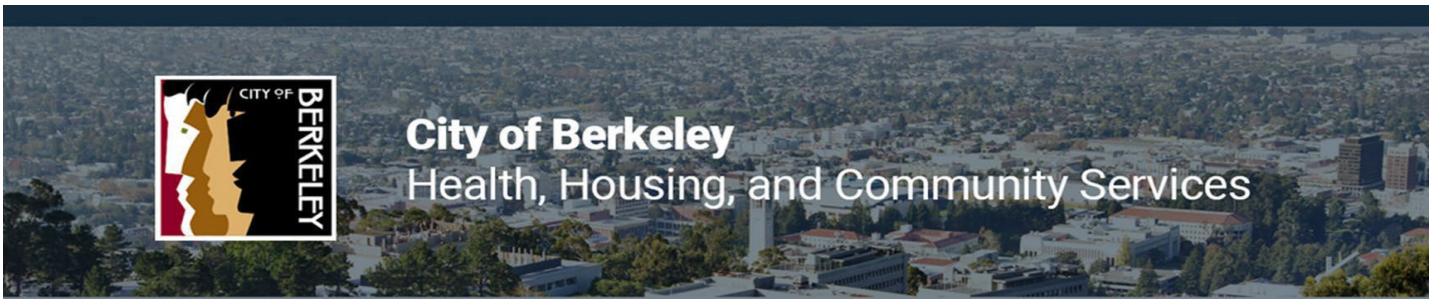
In order to provide input on the MHSA FY25 Annual Update, please respond by **5:00pm on Thursday, July 25th, 2024** by directing your feedback via email, phone or mail to:

Karen Klatt, MEd
MHSA Coordinator
City of Berkeley Mental Health
1521 University Ave.
Berkeley, CA 94704
(510) 981-7644 – Office
(510) 849-7541 – Cell
KKlatt@berkeleyca.gov

Please share widely with anyone who you feel would be interested in providing input into this process.

Thanks,

Karen



JOIN A COMMUNITY MEETING TO SHARE INFORMATION AND PROVIDE INPUT ON CITY OF BERKELEY MENTAL HEALTH SERVICES ACT (MHSA) FUNDING AND SERVICES AND PROPOSITION 1

In-Person Hybrid Meetings:

South Berkeley Senior Center
2939 Ellis Street, Berkeley – Multipurpose Room
Tuesday, July 9th: 6:00pm-7:30pm
Thursday, July 18th: 6:00pm-7:30pm

North Berkeley Senior Center
1901 Hearst Ave., Berkeley – Gooseberry Room
Thursday, July 11th: 6:00pm-7:30pm
1901 Hearst Ave., Berkeley – Poppy Room
Tuesday, July 16th: 6:00pm-7:30pm

Join Hybrid Meetings at:
https://us06web.zoom.us/j/8446733966?pwd=OGp3Tm5LQTc5TGdhb2tYWllKcDVhdz09&omn=89471660365
Or call into Zoom Meetings: 1(669) 444-9171
Meeting ID: 844-673-3966
Password: 081337

Meetings are being held to share information and elicit input on the proposed MHSA FY25 Annual Update, Proposition 1, and on mental health needs in Berkeley.

Four in-person hybrid meetings (where individuals can either join in person, or by Zoom), will be held.

Light refreshments will be served at in-person meetings.

For more Information contact:
Karen Klatt (510) 981-7644
KKlatt@cityofberkeley.info

*If you are calling into the meeting and would like a copy of the presentation, please contact Karen Klatt.