

**Agenda**  
**\*\*\*Special Meeting\*\*\***  
**Of the Oakland Parks and Recreation Advisory Commission (PRAC)**  
**Wednesday, December 14<sup>th</sup>, 2022, 4:30 PM**

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**Zoom Webinar Information:**

When: Dec 14, 2022 04:30 PM Pacific Time (US and Canada)

Topic: Parks and Recreation Advisory Commission Meeting - December 14, 2022

Please click the link below to join the webinar:

<https://us06web.zoom.us/j/87188101861>

Or One tap mobile :

US: +16699006833,,87188101861# or +14086380968,,87188101861#

Or Telephone:

Dial(for higher quality, dial a number based on your current location):

US: +1 669 900 6833 or +1 408 638 0968 or +1 669 444 9171 or +1 719 359 4580 or +1 253 205 0468 or +1 253 215 8782 or +1 346 248 7799 or +1 646 876 9923 or +1 646 931 3860 or +1 689 278 1000 or +1 301 715 8592 or +1 305 224 1968 or +1 309 205 3325 or +1 312 626 6799 or +1 360 209 5623 or +1 386 347 5053 or +1 507 473 4847 or +1 564 217 2000

Webinar ID: 871 8810 1861

International numbers available: <https://us06web.zoom.us/j/87188101861>

**How To Submit Public Comments:**

1. To comment by Zoom video conference, click the “Raise Your Hand” button to request to speak when Open Forum comments are being taken or on an eligible agenda item after it has been presented. You will be permitted to speak during your turn, allowed to comment, and after the allotted time, re-muted. Instructions on how to “Raise Your Hand” is available at: <https://support.zoom.us/hc/en-us/articles/205566129> - Raise-Hand-In-Webinar.

2. To comment by phone, please call on one of the above listed phone numbers. You will be prompted to “Raise Your Hand” by pressing “\*9” to speak when Open Forum is taken or after an eligible agenda item has been presented. You will be permitted to speak during your turn, allowed to comment, and after the allotted time, re-muted. Please unmute yourself by pressing \*6.

3. To submit comments to the PRAC prior to the meeting, send an email to: [publiccomments2prac@oaklandca.gov](mailto:publiccomments2prac@oaklandca.gov) by 10:00 a.m. the day of the meeting. List the following information on the “subject” line of your email:

**Public Comments: PRAC meeting dd/mm/yy (date of the scheduled meeting)**

>>>Replies will not be sent from this email address<<<

If you have questions, email [publiccomments2prac@oaklandca.gov](mailto:publiccomments2prac@oaklandca.gov) or phone Oakland Parks, Recreation and Youth Development @ 510-238-7275. Thank you.

*Pursuant to California Government Code section 54953(e). Parks Recreation Advisory Commission Board Members/Commissioners, as well as staff, will participate via phone/video conference, and no physical teleconference locations are required.*



**AGENDA**  
**Parks And Recreation Advisory Commission (PRAC)**  
**Wednesday, December 14<sup>th</sup>, 2022, 4:30 P.M.**

**\*\*\*NOTE: ALL PUBLIC COMMENT ON ACTION ITEMS WILL BE TAKEN AT THE BEGINNING OF THE MEETING UNDER ITEM 3. COMMENT FOR ITEMS NOT ON THE AGENDA WILL BE TAKEN UNDER ITEM 9, OPEN FORUM, AT THE END OF THE MEETING.**

CALL TO ORDER / ROLL CALL

ALLEN, BARACH, DUHE, HA, KOS-READ, D. SMITH, K. SMITH, TORRES, TRAN, AND WATKINS

1. MODIFICATION OF THE AGENDA:
2. DISPOSITION OF MINUTES:
  - November 9<sup>th</sup>, 2022 Draft Meeting Minutes
3. PUBLIC COMMENT:

Comment on all items will be taken at this time. Comments for items not on the agenda will be taken during Open Forum.
4. CONSENT CALENDAR ITEMS:
  - 4A. RESOLUTION RENEWING AND CONTINUING THE PARKS AND RECREATION ADVISORY COMMISSION'S DETERMINATION THAT CONDUCTING IN-PERSON MEETINGS OF THE PARKS AND RECREATION ADVISORY COMMISSION AND ITS COMMITTEES WOULD PRESENT IMMINENT RISKS TO ATTENDEES' HEALTH, AND ELECTING TO CONTINUE CONDUCTING MEETINGS USING TELECONFERENCING IN ACCORDANCE WITH CALIFORNIA GOVERNMENT CODE SECTION 54953(e), A PROVISION OF AB-361.

5. MEASURE Q OVERSIGHT/AD HOC COMMITTEE UPDATE:

“\*Visit Measure Q [website](#) for more information, documents and reports”

- Informational Report: OPW Monthly Measure Q Report and Performance Measures Update.

6. NEW BUSINESS:

6A. **REQUEST FOR THE PARKS AND RECREATION ADVISORY COMMISSION TO APPROVE THE USE NONINVASIVE TOOLS TO MONITOR THE URBAN WILDLIFE OF OAKLAND.**

7. PLANNING AND CONDITIONAL USE PERMITS:

8. UPDATE FROM DIRECTOR, COMMITTEES, RECREATION ADVISORY COUNCILS & ANNOUNCEMENTS:

9. OPEN FORUM:

All comment for items not on the agenda will be taken at this time.

ADJOURNMENT

**Next Meeting:**

***Wednesday, January 11<sup>th</sup>, 2023, 4:30PM***

***Via Zoom Teleconference***

\* Visit [PRAC Website](#) for more information, documents, and reports.

This meeting location is wheelchair accessible. To request disability-related accommodations or to request an ASL, Cantonese, Mandarin or Spanish interpreter, please email [publiccomments2prac@oaklandca.gov](mailto:publiccomments2prac@oaklandca.gov) or call Oakland Parks, Recreation and Youth Development at (510) 238-7275 or TDD/TTY (510) 238-3254 at least five working days before the meeting. Please refrain from wearing scented products to this meeting as a courtesy to attendees with chemical sensitivities.

Esta reunión es accesible para sillas de ruedas. Si desea solicitar adaptaciones relacionadas con discapacidades, o para pedir un intérprete de en español, Cantones, Mandarín o de lenguaje de señas (ASL) por favor envíe un correo electrónico a [publiccomments2prac@oaklandca.gov](mailto:publiccomments2prac@oaklandca.gov) o llame al (510) 238-7275 o (510) 238-3254 por lo menos cinco días hábiles antes de la reunión. Se le pide de favor que no use perfumes a esta reunión como cortesía para los que tienen sensibilidad a los productos químicos. Gracias.

會場有適合輪椅出入設施。需要殘障輔助設施, 手語, 西班牙語, 粵語或國語翻譯服務, 請在會議前五個工作天電郵 [publiccomments2prac@oaklandca.gov](mailto:publiccomments2prac@oaklandca.gov) 或致電 (510) 238-7275 或 (510) 238-3254 TDD/TTY。請避免塗搽香氛產品, 參加者可能對化學成分敏感。



**DRAFT MINUTES:**  
**\*Special Meeting of the Oakland**  
**Parks and Recreation Advisory Commission (PRAC)**  
**Wednesday, November 9<sup>th</sup>, 2022, 4:30 P.M.**  
**Zoom Teleconference**

**Meeting Recording Link:**

<https://oakland.granicus.com/player/clip/5191?&redirect=true>

CALL TO ORDER / ROLL CALL: 4:39 P.M.

**ALLEN, DUHE, HA, KOS-READ, D. SMITH, K. SMITH, TORRES, TRAN, WATKINS**

**Present (7):** Chair Allen, Vice Chair Tran, Commissioners Ha, Kos-Read, Torres, Watkins

**Excused (1):** Commissioner Duhe

**Absent (2):** Commissioners D. Smith, K. Smith

Chair Allen read statement on Consent Item 4A – Resolution No. 2022-01 in accordance with California Government Code Section 54953(e), a provision of AB-361.

**1. MODIFICATION OF THE AGENDA:**

- Modification requested to remove Agenda Item 6A.

**Motion:** Chair Allen entertained a motion to remove Agenda Item 6A. **Moved by:** Vice Chair Tran. **Second by:** Commissioner Kos-Read. **Vote:** Yes (6) Allen, Ha, Kos-Read, Torres, Tran, Watkins. **Abstain:** (0). **Motion:** Passed.

**2. DISPOSITION OF MINUTES:**

- October 12<sup>th</sup>, 2022 Draft Meeting Minutes
  - Chair Allen’s comments under Announcements were in reference to the RAC Updates under Item 8 and moved to the appropriate section.
  - Vice Chair Tran requested clarification on the “tragedy” referenced in Commissioner Kos-Read’s Lake Merritt Ad Hoc Committee update. Commissioner Kos-Read recalled the “tragedy” as a fatal incident that recently occurred near Fairyland.

**Motion:** Chair Allen entertained a motion to approve the October Meeting Minutes with corrections. **Moved by:** Commissioner Ha. **Second by:** Vice Chair Tran. **Vote:** Yes (6) Allen, Ha, Kos-Read, Torres, Tran, Watkins. **Abstain:** (0). **Motion:** Passed.

**3. OPEN FORUM:** There were 3 speakers and 2 public comments received via email.

4. CONSENT CALENDAR ITEMS:

- 4A. **RESOLUTION RENEWING AND CONTINUING THE PARKS AND RECREATION ADVISORY COMMISSION'S DETERMINATION THAT CONDUCTING IN-PERSON MEETINGS OF THE PARKS AND RECREATION ADVISORY COMMISSION AND ITS COMMITTEES WOULD PRESENT IMMINENT RISKS TO ATTENDEES' HEALTH, AND ELECTING TO CONTINUE CONDUCTING MEETINGS USING TELECONFERENCING IN ACCORDANCE WITH CALIFORNIA GOVERNMENT CODE SECTION 54953(e), A PROVISION OF AB-361.**

**Motion:** Chair Allen entertained a motion to approve Item 4 – Consent Items. **Moved by:** Commissioner Ha. **Second by:** Commissioner Kos-Read. **Vote:** Yes (6) Allen, Ha, Kos-Read, Torres, Tran, Watkins. **Abstain:** (0). **Motion:** Passed.

5. MEASURE Q OVERSIGHT/AD HOC COMMITTEE UPDATE:

\*Visit Measure Q [website](#) for more information, documents, and reports.

- Informational Report: OPW Monthly Measure Q Hiring Matrix and Performance Measures Update:

Sean Maher, OPW Public Information Officer, Assistant to the Director presented verbal report. Hiring Updates: none at this time. Staff Labor Hours per Park Acre for the fiscal year is updated. Ballfields Mowed data capture available through September. New metrics added to monitor Monthly Litter Collection by Hours and Volume, and the number of times Park Restroom Cleanings occur monthly updated from July through September. Periodic audit on resource use underway via the elected City Auditor's Office. Other departments involved are: Public Works, Finance, and Human Services.

*Commissioner K. Smith joined the meeting.*

**Motion:** Chair Allen entertained a motion to accept the informational report on Measure Q. **Moved by:** Commissioner Ha. **Second by:** Vice Chair Tran. **Vote:** Yes (7) Allen, Ha, Kos-Read, K. Smith, Torres, Tran, Watkins. **Abstain:** (0). **Motion:** Passed.

6. NEW BUSINESS:

- 6A. **STAFF RECOMMENDS THAT THE PARK AND RECREATION ADVISORY COMMISSION RECEIVE THIS INFORMATIONAL REPORT ABOUT THE DRAFT SAN ANTONIO PARK MASTER PLAN AND MAKE A RECOMMENDATION TO THE CITY COUNCIL TO SUPPORT THIS PLAN.**

Mi Kyung Lew, OPW Capital Improvement Project Coordinator, introduced speaker Denise Youmans, LCA Architects, who presented the follow up report to September's PRAC Meeting. Friends of San Antonio Park (FOSAP) members, Elena Serrano, Diego Gonzalez, and Mira Manickam-Shirley provided a supplemental presentation.

**Motion:** Chair Allen entertained a motion to receive this informational report about the Draft San Antonio Park Master Plan and make a recommendation to Council for support. **Moved by:** Commissioner Ha. **Second by:** Commissioner Kos-Read. **Vote:** Yes (7) Allen, Ha, Kos-Read, K. Smith, Torres, Tran, Watkins. **Abstain:** (0). **Motion:** Passed.

7. PLANNING AND CONDITIONAL USE PERMITS:  
None.

8. UPDATE FROM THE DIRECTOR, COMMITTEES, RECREATION  
ADVISORY COUNCILS & ANNOUNCEMENTS:

**Director's Report:**

- No updates at this time.

**PRAC Committees:**

- Lake Merritt Ad Hoc: No update.
- Tree Advisory: No update.
- Park Rules & Regulations: No update.
- Priority & Goals Ad Hoc: No update.

**Recreation Advisory Councils (RACs):**

- Lincoln Park liaison, Vice Chair Tran, attended a Planning Commission Meeting on their behalf to speak earlier this month as they take their plans to different bodies in the City. They are moving forward with the plan as previously presented to PRAC.
- Chair Allen advised Mosswood RAC met Nov. 2<sup>nd</sup> and next steps are to follow up status of repaving basketball courts through a partnership between Kaiser and the Warriors. There will be a Winter Festivity Event in partnership with the Evergreen Church on Saturday, December 17<sup>th</sup> where there will be a ribbon cutting for the park's beautification. Unable to break ground on park renovation past spring due to increase of funding gap to \$11.74 million. RAC is exploring fundraising options and following up with the Mayor's Office for support.

**Announcements:**

- Bundle Up Coat & Shoe Drive on Saturday, December 3<sup>rd</sup> at the Boys and Girls Club of Oakland on International Blvd. from 12 – 3 pm.
- Measures for the Oakland Zoo, Q and U passed. More updates to come.
- PRAC was present for the unveiling of the renaming of Madison Park in honor of former Alameda County Supervisor Wilma Chan on December 11<sup>th</sup>. Chair Allen thanks all who helped with the effort. Special recognition went to Zermaine Thomas and Hank Phan of OPRYD who received awards.
- Welcome to the newest Commissioner Marc Barach who was sworn in on November 8<sup>th</sup>. He will officially join the Commission in December and was present for this meeting.
- Farewell to Commissioner Peter Moore who stepped down in September. Thus, there is still an open seat on the PRAC with Districts 6 and 7 prioritized. Advise Chair Allen or OPRYD Interim Director Dana Riley on interest.
- Commissioner Kos-Read clarified Measures for the Oakland Zoo, Q and U were leading, but final results will be out at the end of the week.

9. OPEN FORUM: There were 2 speakers.

10. ADJOURNMENT: 6:35 p.m.

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\*Visit [PRAC Website](#) for more information, documents, and reports.

**Next Meeting:**

***Wednesday, December 14<sup>th</sup>, 2022 at 4:30 pm  
Via Zoom Teleconference***

Respectfully Submitted,

Jasmine Bellow  
Assistant to the Director  
Recording Secretary



# **OAKLAND PARKS AND RECREATION ADVISORY COMMISSION**

## **RESOLUTION NO. 2022-01**

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**RESOLUTION RENEWING AND CONTINUING THE PARKS AND RECREATION ADVISORY COMMISSION'S DETERMINATION THAT CONDUCTING IN-PERSON MEETINGS OF THE PARKS AND RECREATION ADVISORY COMMISSION AND ITS COMMITTEES WOULD PRESENT IMMINENT RISKS TO ATTENDEES' HEALTH, AND ELECTING TO CONTINUE CONDUCTING MEETINGS USING TELECONFERENCING IN ACCORDANCE WITH CALIFORNIA GOVERNMENT CODE SECTION 54953(e), A PROVISION OF AB-361.**

**WHEREAS**, on March 4, 2020, Governor Gavin Newsom declared a state of emergency related to COVID-19, pursuant to Government Code Section 8625, and such declaration has not been lifted or rescinded. (See <https://www.gov.ca.gov/wp-content/uploads/2020/03/3.4.20-Coronavirus-SOE-Proclamation.pdf>); and

**WHEREAS**, on June 17, 2022 Gavin Newsom issued Executive Order N-11-22 reaffirming that a State of Emergency exists in California as a result of COVID-19. (See <https://www.gov.ca.gov/wp-content/uploads/2022/06/6.17.22-COVID-EO-Rollback-signed.pdf>); and

**WHEREAS**, on March 9, 2020, the City Administrator in their capacity as the Director of the Emergency Operations Center (EOC), issued a proclamation of local emergency due to the spread of COVID-19 in Oakland, and on March 12, 2020, the City Council passed Resolution No. 88075 C.M.S. ratifying the proclamation of local emergency pursuant to Oakland Municipal Code (O.M.C.) section 8.50.050(C); and

**WHEREAS**, City Council Resolution No. 88075 remains in full force and effect to date; and

**WHEREAS**, the Centers for Disease Control (CDC) continues to recommend physical distancing of at least six (6) feet whenever possible, avoiding crowds and poorly ventilated spaces, particularly for people who are not fully vaccinated or who are at higher risk of getting very sick from COVID-19. (See <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>); and

**WHEREAS**, the CDC recommends that families with children under 5 and unvaccinated household members continue to take steps to prevent COVID-19 infection including distancing. (See <https://www.cdc.gov/coronavirus/2019-ncov/groups/families-covid-19.html>); and

**WHEREAS**, the CDC continues to caution that older adults remain more likely to get very sick from COVID-19. (See <https://www.cdc.gov/aging/covid19/covid19-older-adults.html>.); and

**WHEREAS**, the CDC, the California Department of Public Health, and the Alameda County Public Health Department all recommend that people experiencing COVID-19 symptoms or who have tested positive for COVID-19 stay home. (See <https://www.cdc.gov/coronavirus/2019-ncov/if-you-are-sick/steps-when-sick.html>.); and

**WHEREAS**, the CDC still finds that COVID-19 vaccines are highly effective at preventing severe illness, hospitalizations and death and continues to recommend that all eligible persons get vaccinated for COVID-19 and stay up to date on their COVID-19 vaccines. (See <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/prevention.html>.); and

**WHEREAS**, vaccinated persons may still get COVID-19 and can spread the virus to others. (See <https://www.cdc.gov/coronavirus/2019-ncov/vaccines/effectiveness/why-measure-effectiveness/breakthrough-cases.html>.); and

**WHEREAS**, anyone infected with COVID-19 can spread the virus, even if they do not have symptoms. (See <https://www.cdc.gov/coronavirus/2019-ncov/prevent-getting-sick/how-covid-spreads.html>.); and

**WHEREAS**, the City's public-meeting facilities are indoor facilities not designed to ensure circulation of fresh/outdoor air, particularly during periods of cold and/or rainy weather, and were not designed to ensure that attendees can remain six (6) feet apart; and

**WHEREAS**, holding in-person meetings would encourage community members to come to City facilities to participate in local government, and some of them would be at high risk of getting very sick from COVID-19 and/or may live with someone who is at high risk; and

**WHEREAS**, in-person meetings would tempt community members who are experiencing COVID-19 symptoms to leave their homes in order to come to City facilities and participate in local government; and

**WHEREAS**, attendees would use ride-share services and/or public transit to travel to in-person meetings, thereby putting them in close and prolonged contact with additional people outside of their households; and

**WHEREAS**, for the first time on October 13, 2021, and most recently on September 14, 2022, the Parks and Recreation Advisory Commission adopted a Resolution determining that conducting in-person meetings would present imminent risks to attendees' health, and electing to conduct meetings using teleconferencing in accordance with California Government Code section 54953(e), a provision of AB 361; and

**WHEREAS**, by making these findings that conducting in-person meetings would present imminent risks to attendees' health, and by making an election to conduct meetings via teleconference, the Parks and Recreation Advisory Commission may elect to continue to meet via teleconference by adopting subsequent resolutions, at least every 30 days, as part of a broader Parks and Recreation Advisory Commission agenda, and need not do so on a single-subject agenda; now therefore be it:

**RESOLVED:** that the Parks and Recreation Advisory Commission finds and determines that the foregoing recitals are true and correct and hereby adopts and incorporates them into this Resolution; and be it

**FURTHER RESOLVED:** that, based on these determinations and consistent with federal, state and local health guidance, the Parks and Recreation Advisory Commission renews its determination that conducting in-person meetings would pose imminent risks to the health of attendees; and be it

**FURTHER RESOLVED:** that the Parks and Recreation Advisory Commission firmly believes that the community's health and safety and the community's right to participate in local government, are both critically important, and the Parks and Recreation Advisory Commission is committed to balancing the two by continuing to use teleconferencing to conduct public meetings, in accordance with California Government Code section 54953(e), a provision of AB 361; and be it

**FURTHER RESOLVED:** that the Parks and Recreation Advisory Commission will renew these (or similar) findings at least every thirty (30) days in accordance with California Government Code section 54953(e) until the state of emergency related to COVID-19 has been lifted, or the Parks and Recreation Advisory Commission finds that in-person meetings no longer pose imminent risks to the health of attendees, whichever is occurs first.



**CITY OF OAKLAND  
Oakland Parks & Recreation**

**TO:** Princess Allen, Chair, Parks and Recreation Advisory Commission (PRAC)  
Tam Tran, Vice Chair, PRAC  
**FROM:** Sean Maher, Assistant to the Director, Oakland Public Works (OPW)  
**DATE:** December 14, 2022  
**SUBJECT: Informational Report: OPW Monthly Measure Q Performance Measures Update**

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**SUMMARY**

Oakland Public Works (OPW) meets regularly with PRAC commissioners and community leaders engaged on the implementation of Measure Q resources for parks maintenance services and clean water services. At the request of the commissioners, this report provides the OPW Measure Q Budget for FY21-22 and FY22-23, and FY 2021-23 Oakland Public Works - Facilities Services Division Projects List (including projects receiving one-time Measure Q funding).

Due to temporary staffing challenges, OPW's routine Measure Q hiring and performance reporting will be held this month. OPW will resume this reporting as usual in January 2023.

**FISCAL IMPACT**

Since this report is informational only, no fiscal impacts are included.

**BACKGROUND / LEGISLATIVE HISTORY**

Measure Q, approved by Oakland voters in March 2020, provides funding for City of Oakland services related to parks maintenance, homelessness services, and water quality, subject to civilian oversight. The Oakland City Council assigned PRAC the oversight role regarding the Measure Q expenditures related to parks maintenance and water quality services.

**RECOMMENDATION**

OPW recommends that PRAC accept this informational report.

Respectfully submitted,

/s/ Sean Maher

Prepared by:

Sean Maher

Assistant to the Director

Oakland Public Works

**Identification of Support Documents:**

Attachments: Exhibit A – *OPW Measure Q Budget for FY21-22* and Exhibit B – *FY22-23 and FY 2021-23 Oakland Public Works - Facilities Services Division Projects List*

## Exhibit A – Measure Q Budget for FY21-22 and FY22-23

Measure Q Budget for FY21-22 and FY22-23.

Department	Section Description	Category	Budget	
			FY21-22	FY22-23
Capital Improvement Projects				
	CIP Public Works: Engineering Design			
		O&M	1,954,000	
Capital Improvement Projects Total			1,954,000	
City Administrator				
	City Administrator: Homelessness			
		Personnel	123,622	147,022
		O&M	2,113,268	1,491,377
City Administrator Total			2,236,890	1,638,399
Finance				
	Budget Unit			
		O&M	8,500	8,500
	Revenue: Audit			
		O&M	73,285	72,649
Finance Total			81,785	81,149
Human Services				
	Community Housing Services			
		Personnel	(185,332)	327,227
		O&M	5,781,545	5,975,218
		ISF	3,612	3,687
	DHS Fiscal Operations			
		Personnel	213,875	235,664
		O&M	67,100	
		ISF	5,603	5,718
	OHHS Administration			
		ISF	3,376	3,444
Human Services Total			5,889,779	6,550,958
Non-Departmental				
	Public Support:City-wide Activity			
		O&M	443,468	443,468
Non-Departmental Total			443,468	443,468
Oakland Parks, Recreation & Youth Development				
	OPR: Area One: Operations			
		O&M	100,000	
	OPR: Area Three: Operations			
		O&M	145,000	
Oakland Parks, Recreation & Youth Development Total			245,000	
Oakland Public Works				
	Engineering Design/ROW			
		Personnel	179,474	194,156
		O&M	465,058	1,220,214
		ISF	11,848	12,453
	Facilities Services			
		Personnel	1,233,297	1,805,121
		O&M	2,546,834	1,022,035
		ISF	59,433	62,449
	Management Information Systems			
		Personnel	199,802	198,853
		ISF	13,189	13,863
	Park Building Maintenance			
		Personnel	10,664,178	13,195,118
		O&M	840,172	634,543
		ISF	1,428,760	1,369,065
	Project Delivery			
		O&M	125,000	175,000
	Street Cleaning Graffiti Abatement			
		O&M	461,617	371,580
Oakland Public Works Total			18,228,662	20,274,450
Grand Total			29,079,584	28,988,424

### Notes:

- Capital projects includes
  - 1005274 - STORM DRAINAGE MASTER PLAN \$775,000
  - 1005979 - UNION POINT PK RESTORATION \$1,179,000
- Non Departmental Budget is for County Administrative Cost & Commission.

Exhibit B – FY 2021-23 Oakland Public Works - Facilities Services Division Projects List

FY 2021-23 Oakland Public Works - Facilities Services Division Projects List  
2244 Measure Q - Parks & Recreation

Council Approved Projects	FY 2021-22	FY 2022-23	FY 2021-23	Project #	NOTES & COMMENTS SEPTEMBER 2022
San Antonio Park Repairs	\$ 250,000.00	\$ -	\$ 250,000.00	1004880	~\$33K Expended. Determining Course of Action considering pending park renovation
Citywide Park Signage	\$ 86,454.00	\$ -	\$ 86,454.00	1005343	ONGOING
Arroyo Viejo Park Renovation	\$ 90,000.00	\$ -	\$ 90,000.00	1006031	This is a OPW-PTSD Project (Clinton Pugh?)
Lake Merritt Bowling Green Restroom	\$ 350,000.00	\$ -	\$ 350,000.00	1006034	Insufficient Funding. Estimated at >\$1M
Lake Merritt Trail Repair	\$ 300,000.00	\$ -	\$ 300,000.00	1005343	Identified Method to Repair. Determining How to Complete (Contract or In-House)
Restroom Paint Abatement	\$ 50,000.00	\$ -	\$ 50,000.00	1006034	ONGOING
Courtland Creek Park 1/2 Court	\$ -	\$ 75,000.00	\$ 75,000.00	1006033	Quote in Hand. Coordinating w/ larger Project.
Basketball Court Resurface	\$ -	\$ 62,212.00	\$ 62,212.00	1006034	OPW-FSD-Construction & Maintenance Project
Joaquin Park Restrooms Renovations	\$ 113,380.00	\$ -	\$ 113,380.00	1005343	To Be Used In Conjunction w/ CalTrans Clean CA Mini-Park Improvements
Thomas Melero Park - Cosmetic Repairs	\$ 25,000.00	\$ -	\$ 25,000.00	1005343	To Be Used In Conjunction w/ CalTrans Clean CA Mini-Park Improvements
55th Avenue Mini Park Repairs	\$ 20,000.00	\$ -	\$ 20,000.00	1005343	To Be Used In Conjunction w/ CalTrans Clean CA Mini-Park Improvements
88th Mini Park Renovations	\$ 100,000.00	\$ -	\$ 100,000.00	1005343	To Be Used In Conjunction w/ CalTrans Clean CA Mini-Park Improvements
Montclair Park Main Tot Lot Turf	\$ 35,000.00	\$ -	\$ 35,000.00	1005343	Complete
Restoration	\$ 1,179,000.00	\$ -	\$ 1,179,000.00	1005979	Construction started in September 2022
Union Point Park Restoration	\$ 1,179,000.00	\$ -	\$ 1,179,000.00	1005979	Construction started in September 2022
<b>Measure Q Approved Projects Total:</b>	<b>\$ 2,598,834.00</b>	<b>\$ 137,212.00</b>	<b>\$ 2,736,046.00</b>		
<b>Unfunded Measure Q Projects</b>					
	<b>FY 2021-22</b>	<b>FY 2022-23</b>	<b>FY 2021-23</b>	<b>Project #</b>	<b>Notes</b>
Willie Wilkins Park Mini-Pitch / Skate Park Buildout & Finishings	\$ 131,200.00	\$ -	\$ 131,200.00	NA	\$100,000 from Measure Q (OPRYD ORG); \$31,200 from Misc. Measure Q (OPW-FSD); Construction scheduled for October 2022
Diamond Park Play Structure Re-Surfacing	\$ 143,446.25	\$ -	\$ 143,446.25	NA	Completed
Joaquin Miller Park Security Cameras	\$ 13,087.00	\$ -	\$ 13,087.00	NA	Currently in Construction
DeFreney Park Pool Filter Replacements	\$ 77,747.79	\$ -	\$ 77,747.79	NA	Completed
Joaquin Miller Park Community Center	\$ 200,728.00	\$ -	\$ 200,728.00	NA	Currently in Construction
Root Repair	\$ -	\$ -	\$ -		Repair is TBD pending foundation and bulding assessment
Montclair Recreation Center Roof	\$ -	\$ -	\$ -		
Linden Park Play Structure Re-Surfacing	\$ -	\$ -	\$ -		Pending available funding
<b>Unfunded Measure Q Projects Total</b>	<b>\$ 566,209.04</b>	<b>\$ -</b>	<b>\$ 566,209.04</b>		
<b>Council Approved and Unfunded Measure Q Projects Total</b>			<b>\$ 3,302,255.04</b>		

###

**CITY OF OAKLAND**  
**Oakland Parks, Recreation & Youth Development**

**TO:** Princess Allen, Chair, Parks and Recreation Advisory Commission  
**FROM:** Marc Weinstein, Parks, Recreation, and Youth Development  
**DATE:** November 28<sup>th</sup>, 2022  
**SUBJECT: REQUEST FOR THE PARKS AND RECREATION ADVISORY  
COMMISSION TO APPROVE THE USE NONINVASIVE TOOLS TO  
MONITOR THE URBAN WILDLIFE OF OAKLAND**

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**SUMMARY**

Dr. Christopher Schell and members of the Schell Lab at the University of California Berkeley are requesting permission to deploy wildlife cameras (i.e., Bushnell wildlife cameras, model no. 119774c) to quantify and assess mammalian biodiversity in the City of Oakland. Briefly, Dr. Schell is an Assistant Professor and urban ecologist that has worked with urban mammals – e.g., coyotes, raccoons, foxes, etc. – over the past decade. In collaboration with the Oakland Zoo and East Bay Regional Parks, his lab group has launched an extensive biodiversity survey effort across the region, using wildlife cameras positioned in parks, forest remnants, golf courses, and backyards to document (1) where certain wildlife species are, and (2) how urban factors like greenspace complexity, road densities, human activity, and environmental health affect urban mammal space use. To date, the project has deployed over 40 cameras from April to November 2022, extending from Pinole to San Leandro, with more than 10,000 wildlife photos recorded. Our hope is that these data will greatly inform how we manage urban greenspaces to promote environmental, animal, and human health and well-being, priority items for both EBRP and Oakland Zoo officials. Moreover, as habitats transform due to urbanization and climate change, East Bay communities are likely to interact with – and potentially come into conflict with – wildlife. For all these reasons, we hope these data will contribute to broadening our knowledge and tools for coexisting with wildlife in cities.

However, as currently constructed our survey is incomplete. To date, most of our species occurrence data has primarily been collected from recreational parks owned by EBRP, which are geographically positioned either along the shoreline or along the hillside. Consequently, this means that we have a lack of deployed cameras in greenspaces interior to EBRP sites. As such we run the risk of overlooking an extraordinary amount of mammalian biodiversity. Hence, to build a more comprehensive survey, we are requesting to station several cameras in greenspaces under the jurisdiction of the City of Oakland. Scouted camera locations (10 total; seen below in Table 1) were strategically chosen given their size and relative distance to a neighboring camera. If the initial deployment is approved and successful, our protocol is flexible enough to iteratively increase or reduce the number of greenspaces surveyed. Currently, the only request from the PRAC is permission to deploy these devices. Members of the PRAC and the City will not be held responsible for any damages, loss, or theft of any wildlife equipment, and data collected from this effort will be openly shared with members. Our hope is to begin this preliminary effort in January 2023, with subsequent surveys occurring during the months of April, July, and October to capture seasonal variation in biodiversity.



## **FISCAL IMPACT**

No funding will be requested nor required from PRAC. Rather, all the equipment and its associated maintenance will be purchased via research funds in the Schell Lab and UC Berkeley. Because we are conducting an urban ecological experiment, we are aware that damage or theft is an inevitability, but these burdens are solely shouldered by the host lab and institution.

## **PROJECT / PROGRAM DESCRIPTION**

The continued and unprecedented expansion of cities is transforming ecological systems worldwide. Human-driven landscape transformations (e.g., deforestation, industrialization, agricultural development, etc.) have fundamentally altered suites of biophysical and biogeochemical processes, including soil characteristics, air quality, temperature gradients, and vegetative cover. As a result, urban environments present wholly novel challenges for wildlife to either locally adapt to urban conditions, migrate away from urban centers, or face local extinction. Despite long-held beliefs that urban environments were inhospitable matrices ill-equipped to sustain wildlife, recent studies have highlighted the myriad strategies wildlife employ in cities, leading to a critical paradigm shift in ecological and evolutionary research. Urban ecosystems have now become hotbeds of research, due in large part to the remarkable adaptability of organisms to persist in non-ideal conditions, as well as the overall importance of species diversity to ecosystem health and function.

Despite the interconnectedness of humans, wildlife, and their environment in cities, social heterogeneity – i.e., variation among individuals, neighborhoods, and regions due to social, cultural, political, and/or historical processes – is infrequently considered as a driver of urban biological systems (Schell et al., 2020). Some recent literature does suggest that wealth inequality has a strong influence on vegetation cover and habitat characteristics, as well as local species biodiversity, in which wealthier regions of cities tend to have greater species richness and biodiversity of both flora and fauna. However, such luxury effects (i.e., positive relationships between socioeconomic wealth and species alpha diversity metrics) are not universal and may be shaped by other local or regional variables. To better understand how human-induced disturbances shape the biology of our cities, it is critical to disentangle which societal drivers contribute most substantially to influencing wildlife dynamics. Moreover, given the overall significance of biodiverse systems to ecosystem health and function, it is critical to interrogate the factors that shape differences in biodiversity within cities.

In our ongoing research effort, we investigate how social heterogeneity shapes patterns of mammalian biodiversity in cities. Specifically, we use remote-triggered wildlife camera traps placed along urban transects throughout the East Bay to explore how socioeconomic, demographic, and attitudinal predictors of cities are associated with local and regional biodiversity. Briefly, a Bushnell motion-triggered infrared Trophy Cam (Bushnell, Overland Park, Kansas, USA) is placed at a designated site for approximately 6 weeks in October (i.e., fall season), January (i.e., winter season), April (i.e., spring season), and July (i.e., summer season). This approach will allow us to capture any variance in wildlife distributions that occur as a function of seasonal variation. Each sampling site is at least 1 km away from any adjacent camera-trap site and within 4 km of the designated transect. Sampling locations were chosen based on green space boundaries, GIS inference, relative size of the green space, and ease of camera installation (i.e., at least two trees within proximity are ideal for camera installation). Each camera will then be secured to a single tree using a secured metal lock box, nylon fastening strap, vinyl-covered cable locks, and keyed master locks to prevent damage or theft of the camera while in the field. Each camera will be placed approximately 1 m above the

ground opposite. Cameras remain up for approximately 6 weeks in each season before removed from the area.

Site Name	Projected Lat	Projected Long
Rockridge-Temescal Greenbelt	37.84188	-122.25754
Morcom Rose Garden	37.82062	-122.24678
The Gardens at Lake Merritt	37.80628	-122.2584
Dimond Canyon Trail	37.81077	-122.2139
Central Reservoir Recreation Area	37.79573	-122.22408
Peralta Hacienda Historical Park	37.78666	-122.21675
Cesar Chavez Park	37.77842	-122.21836
Shepherd Canyon Park	37.82539	-122.20195
Bridgeview Trail - Monterey Redwoods	37.81762	-122.20581
Palos Colorado Trail	37.8147	-122.19749

**Table 1.** Projected wildlife camera sites with coordinates (lat, long) indicating where the camera would be approximately stationed. Photos of the setup will be taken once initial deployment is complete.

### **BACKGROUND / LEGISLATIVE HISTORY**

Because this is a relatively new research project conducted by members of the University of California Berkeley, there is no background or legislative history to report.

### **RECOMMENDATION**

Marc Weinstein recommends the Park and Recreation Advisory Commission approve the request for the Schell Lab and UC Berkeley to deploy ten wildlife cameras in the designated parks and greenspaces noted in Table 1 above. Marc also concurs that Dr. Schell and associates will assume full responsibility for equipment maintenance, damage, and loss.

Respectfully submitted,

/s/ Marc Weinstein

Prepared by:

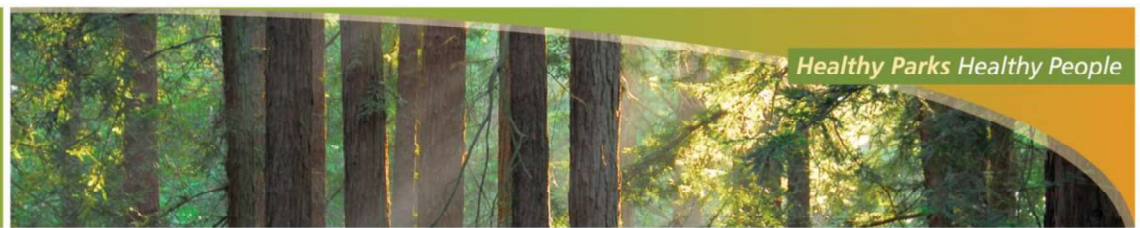
Marc Weinstein

Recreation Supervisor

### **Identification of Support Documents:**

Attachments: Exhibit A - *Permit 22-1144\_East Bay Regional Parks.pdf* – Permit approving the associated wildlife camera project

Exhibit B - *UWIN Bay Area Proposal\_3.21.22 – proposal document submitted to EBRP*



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April 14, 2022

Permit 22-1144

**Permit expires: April 14, 2027**

Christopher J. Schell  
University of California, Berkeley  
130 Hilgard Way, Mulford Hall  
Berkeley, CA 94720

**Dear Mr. Schell,**

This letter will serve as a permit for you to enter Claremont Canyon Regional Preserve, Crown Memorial State Beach, Huckleberry Botanic Regional Preserve, Kennedy Grove Regional Recreation Area, Martin Luther King Jr. Regional Shoreline, McLaughlin Eastshore State Park, Miller/Knox Regional Shoreline, Oyster Bay Regional Shoreline, Point Isabel Regional Shoreline, Point Pinole Regional Shoreline, Reinhardt Redwood Regional Park, Sibley Volcanic Regional Preserve, Sobrante Ridge Regional Preserve, Temescal Regional Recreation Area, Tilden Regional Park, Tilden Nature Area, and Wildcat Canyon Regional Park for the purpose of exploring the social-ecological drivers of mammalian biodiversity in cities.

**Your Stewardship staff contact is Tammy Lim, 510-544-2310, TLim@ebparks.org**

Your permit covers the following additional individuals: Christine Wilkinson, Lauren Stanton, Elizabeth Carlen, Tyus Williams, Cesar Estien

**Special conditions regarding your research includes:**

- 1) Driving is not allowed within any of the Park Boundaries
- 2) All camera locations must be pre-approved by the Park Supervisor
- 3) Permit holder will be responsible for reporting stolen or damaged cameras to the East Bay Parks Police Department
- 4) All cameras must include a note about the purpose of the cameras and who to contact if they have questions

**Upon completion of this study, you will provide this office with a written summary of your findings, which may include any papers or published articles.**

The term of this authorization is for, and shall be subject to the following standard conditions:

1. You must contact the Park Supervisors and appropriate staff for each park directly one week prior to first entry into the park, sampling event, etc. During this contact, park staff and permittee will agree upon the preferred method of contact (i.e., via email or phone) and requirements for advanced notice before each subsequent visit. **Failure to communicate with the Park Supervisor and their staff may result in revocation of this permit.**
2. You and your associates must each **keep a signed copy of this permit on your person and post one on your vehicle** as evidence of your authorization to do research in this park.

**Exhibit A – Permit 22-1144\_East Bay Regional Parks.pdf:  
PRAC Item #6A 12/14/22**

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3. That you and your research associates abide by the rules and regulations as set forth in Ordinance 38. Park rules are available at the respective park kiosk, signs and public information centers and can also be found at <https://www.ebparks.org/activities/ord38.htm>
4. The applicant should be on the lookout for both prehistoric and historic-period archaeological sites/resources. Examples of historic-period archaeological resources include, but are not limited to: privies, wells, trash pits, concentrations of ceramics, bottles, animal bones. Prehistoric archaeological resources can include, but are not limited to: concentration of shellfish remains or bones and recognizable Native American artifacts such as arrowheads, shell beads.  
If any archaeological resources are identified during the course of the applicant's work, all work should stop within the immediate vicinity of the find and I should be contacted immediately in order to evaluate the find (c: 510-673-4387).
5. In accordance with the East Bay Regional Park District's Ordinance 38 (04-19-2016) Section 806. Archaeological Features. No person shall damage, injure, collect or remove any object of paleontological, archaeological or historical interest or value located on District parklands. In addition, any person who willfully alters, damages, or defaces any object of archaeological or historical interest or value or enters a fenced and posted archaeological or historical site shall be arrested or issued a citation pursuant to Penal Code Section 622-1/2. This also pertains to any maritime resources that the applicant may encounter.
6. You agree that East Bay Regional Park District shall not be liable for any bodily injury, sickness, disease or death of any person or for damages to any property as a result of this Permit. In consideration of being permitted to enter the Property and perform the work under this Permit, you agree to defend, indemnify and hold harmless the East Bay Regional Park District, its directors, officials, agents and employees (collectively "District") from and against any and all actions, claims, demands and liabilities for any loss or damage, including claims for bodily injury, sickness, disease or death or property damage, arising from, relating to, or resulting from the entry onto the Property and/or the performance of activities under this Permit.
7. You must wear a high visibility vest at all times when conducting research so that the public understands that the sampling is sanctioned by the East Bay Regional Park District.
8. You must follow the attached decontamination protocol for driving within the park and walking off-trail.
9. Should any member of the public question your project, you will take the time to explain the purpose of this activity and that such activity is undertaken through this permit process.
10. As a condition of being granted a research permit, a report or written summary of your findings is required annually and at the completion of your study. This may include any papers or written articles, published or unpublished, regarding your subject matter. If you wish to continue your study and extend your permit past the allotted period of five years, you are still required to submit a summary of findings or actions and reapply for a new permit. If reports from past research are not submitted, your permit will not be renewed or extended.
11. Because you are working on a mutually beneficial exercise, we are obliged to waive the normal \$50 permit fee.

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General Manager




If these terms and conditions are acceptable, please sign below and return to this office. We will then send one copy, signed and approved by the Chief of Stewardship, back to you. Thank you.

**ACCEPTED AND AGREED TO BY:**

  
Christopher J. Schell  
University of California, Berkeley

04/14/2022

Date

  
Matt Gaul  
Chief of Stewardship, East Bay Regional Park District

Apr 19, 2022

Date

**cc:**

**Park Supervisors:**

Jim Rutledge, Claremont Canyon/Huckleberry/Sibley – (510) 544-3111, [jrutledge@ebparks.org](mailto:jrutledge@ebparks.org)  
Steve Donnelly, Wildcat Canyon Regional Park – (510) 544-3093, [sdonnelly@ebparks.org](mailto:sdonnelly@ebparks.org)  
Bridget Calvey, Reinhardt Redwood – (510) 544-3126, [bcalvey@ebparks.org](mailto:bcalvey@ebparks.org)  
Sarah Motley, Tilden Regional Park – (510) 544-2711, [smotley@ebparks.org](mailto:smotley@ebparks.org)  
Chris Newey, Kennedy Grove/Sobrante Ridge – (510) 544-3117, [cnewey@ebparks.org](mailto:cnewey@ebparks.org)  
Kenneth Miller, Temescal – (510) 544-3090, [kmiller@ebparks.org](mailto:kmiller@ebparks.org)  
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Scott Possin, Miller/Knox/Point Isabel/Eastshore – (510) 544-3108, [spossin@ebparks.org](mailto:spossin@ebparks.org)  
Sara Fetterly, Tilden Nature Area – (510) 544-3256, [sfetterly@ebparks.org](mailto:sfetterly@ebparks.org)

**Parks:**

Claremont Canyon/Huckleberry/Sibley – (510) 544-3112, [sibley@ebparks.org](mailto:sibley@ebparks.org)  
Wildcat Canyon Regional Park – (510) 544-3092, [wildcat@ebparks.org](mailto:wildcat@ebparks.org)  
Reinhardt Redwood – (510) 544-3127, [redwood@ebparks.org](mailto:redwood@ebparks.org)  
Tilden Regional Park – (510) 544-2712, [tilden@ebparks.org](mailto:tilden@ebparks.org)  
Kennedy Grove/Sobrante Ridge, (510) 544-3118, [Kennedy@ebparks.org](mailto:Kennedy@ebparks.org)  
Temescal, (510) 544-3089, [temescal@ebparks.org](mailto:temescal@ebparks.org)  
Point Pinole, (510) 544-3063, [pinole@ebparks.org](mailto:pinole@ebparks.org)  
Crown Memorial State Beach, (510) 544-3175, [crown@ebparks.org](mailto:crown@ebparks.org)  
Martin Luther King Jr./Oyster Bay, (510) 544-3114, [mlking@ebparks.org](mailto:mlking@ebparks.org)  
Miller/Knox/Point Isabel/Eastshore, (510) 544-3107, [miller@ebparks.org](mailto:miller@ebparks.org)  
Tilden Nature Area, (510) 544-3265, [tnarea@ebparks.org](mailto:tnarea@ebparks.org)

**Unit Managers:**

Dan Sykes, Parkland Unit Manager – (510) 544-3128, [dsykes@ebparks.org](mailto:dsykes@ebparks.org)  
Joseph Murdach, Recreation Unit Manager – (510) 544-3040, [jmurdach@ebparks.org](mailto:jmurdach@ebparks.org)  
Jeff Manley, Shoreline Unit Manager – (510) 544-3172, [jmanley@ebparks.org](mailto:jmanley@ebparks.org)

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**Cultural Services Coordinator:** Annamarie Guerrero, (510) 544-2555, [aguerrero@ebparks.org](mailto:aguerrero@ebparks.org)  
**Stewardship Contact:** Tammy Lim, 510-544-2310, [TLim@ebparks.org](mailto:TLim@ebparks.org)  
**Dispatch:** (510) 881-1833, [dispatch@ebparks.org](mailto:dispatch@ebparks.org)

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**Living for the City: Exploring the social-ecological drivers of urban biodiversity in the Bay Area**

Department of Environmental Science, Policy, and Management (ESPM)  
University of California, Berkeley

**Core contributors:**

Christopher J. Schell (lead PI)

Christine Wilkinson (postdoctoral researcher, ESPM)

Lauren Stanton (postdoctoral researcher, ESPM)

Elizabeth Carlen (postdoctoral researcher, ESPM and Washington University in St. Louis)

Cesar Estien (grad student, ESPM)

Tyus Williams (grad student, ESPM)

**Introduction**

The continued and unprecedented expansion of cities is transforming ecological systems worldwide. Human-driven landscape transformations (e.g., deforestation, industrialization, agricultural development, etc.) have fundamentally altered suites of biophysical and biogeochemical processes, including soil characteristics, air quality, temperature gradients, and vegetative cover (Heaviside et al., 2017; Pataki et al., 2011). As a result, urban environments present wholly novel challenges for wildlife to either locally adapt to urban conditions, migrate away from urban centers, or face local extinction (McDonnell & Hahs, 2015). Despite long-held beliefs that urban environments were inhospitable matrices ill-equipped to sustain wildlife, recent studies have highlighted the myriad strategies wildlife employ in cities (Ouyang et al., 2018), leading to a critical paradigm shift in ecological and evolutionary research (Collins et al., 2021). Urban ecosystems have now become hotbeds of research, due in large part to the remarkable adaptability of organisms to persist in non-ideal conditions, as well as the overall importance of species diversity to ecosystem health and function (Dearborn & Kark, 2010).

Recent arms of urban ecological research have either focused on the modification of ecosystem-level processes and/or changes to the biology of cities – often referred to as the ecology *of* and ecology *in* cities paradigms, respectively (Pickett et al., 2016). Such frameworks have greatly advanced how we think about urban centers as hubs for both wildlife and people, while also elucidating sustainable pathways to building resilience in the face of climate change. For instance, access to green spaces and experiences of wildlife have multiple physical and mental health benefits (Bratman et al., 2019; Callaghan et al., 2021), underscoring the need to preserve natural spaces for human and nonhuman well-being. In addition, more diverse and contiguous vegetation mitigates the urban heat island effect by influencing rates of evapotranspiration and boosting environmental cooling (Jenerette et al., 2011; Wang et al., 2019) ecosystem services that will undoubtedly be critical to urban resilience during the climate crisis. These studies highlight the interconnectedness of people, wildlife, and urban infrastructure in cities, noting that we are interdependent on the ecosystem services provided within and around urban ecosystems (Des Roches et al., 2021).

Despite the interconnectedness of humans, wildlife, and their environment in cities, social heterogeneity – i.e., variation among individuals, neighborhoods, and regions due to social, cultural, political, and/or historical processes – is infrequently considered as a driver of urban biological systems (Schell et al., 2020). Some recent literature does suggest that wealth inequality has a strong influence on vegetation cover and habitat characteristics, as well as local species biodiversity, in which wealthier regions of cities tend to have greater species richness and biodiversity of both flora and fauna (Hope et al., 2003; Leong et al., 2018; Magle et al., 2021). However, such luxury effects (i.e., positive relationships between socioeconomic wealth and species alpha diversity metrics) are not universal (Chamberlain et

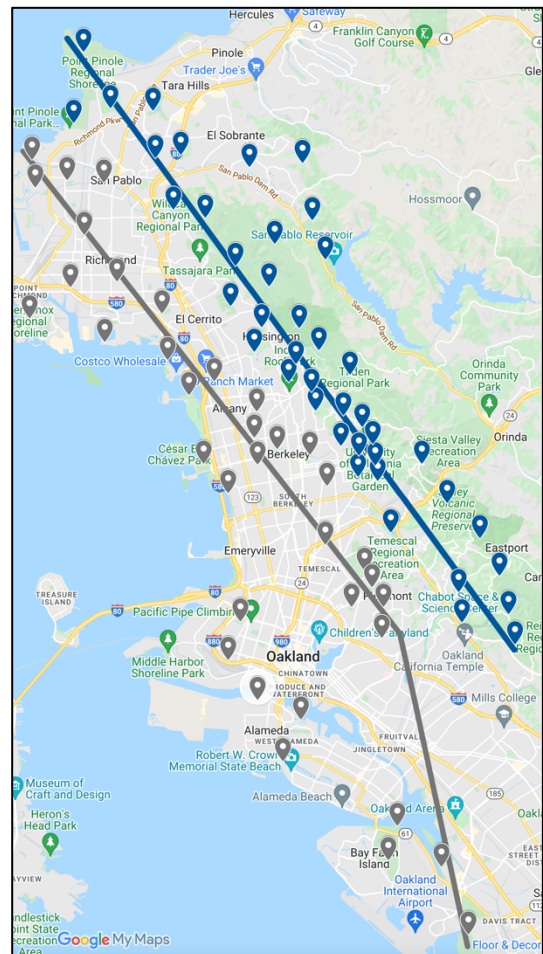
al., 2019, 2020; Kuras et al., 2020), and may be shaped by other local or regional variables (Chamberlain et al., 2020). For instance, emerging research suggests that racially-driven residential segregation decreases plant diversity and niche complexity in disinvested areas (Locke et al., 2021; Nardone et al., 2021), with preliminary evidence suggesting that the genetic diversity of wildlife may similarly be impacted (Schmidt & Garraway, 2022). Hence, to better understand how human-induced disturbances shape the biology of our cities, it is critical to disentangle which societal drivers contribute most substantially to influencing wildlife dynamics. Moreover, given the overall significance of biodiverse systems to ecosystem health and function, it is critical to interrogate the factors that shape differences in biodiversity within cities.

In the proposed study, we plan to investigate how social heterogeneity shapes patterns of mammalian biodiversity in cities. Specifically, we will use remote-triggered camera traps positioned throughout the Bay Area megapolitan region (mainly in the cities of Oakland, San Francisco, El Cerrito, Richmond, and Alameda) to explore how socioeconomic, demographic, and attitudinal predictors of cities are associated with local and regional biodiversity. In doing so, we hope that our research will both advance our understanding of how social systems influence wildlife community dynamics, as well as help promote applied solutions that promote wildlife-friendly and equitable cities (Kay et al., 2021). The design and implementation of the proposed study is positioned under the research collective known as the **Urban Wildlife Information Network** (UWIN; <https://www.urbanwildlifeinfo.org/>), a wildlife biomonitoring initiative aimed at describing urban wildlife patterns across a large network of major U.S. cities. Moreover, this network of camera traps complements other efforts from UWIN partners at the Oakland Zoo and the City and County of San Francisco. The present proposed study – under the guidance and auspices of the Schell Lab at the University of California Berkeley – will address the following hypotheses:

#### Hypotheses:

- H<sub>1</sub>: Urban mammalian biodiversity will vary according to neighborhood socioeconomic status
- H<sub>2</sub>: Legacies of residential segregation (i.e., redlining) will strongly influence current mammalian species richness and biodiversity
- H<sub>3</sub>: Species richness and diversity will be greatest in areas with reduced environmental health disturbances
- H<sub>4</sub>: Social perceptions and attitudes towards wildlife will shape species richness and diversity

#### Methods



**Figure 1. Map of camera trap locations across the East Bay, CA.** Each location dot represents a single camera on the landscape (N = 80). The Tilden transect (blue) and the Flats transect (gray) extend for 28 km and 34.4 km, respectively, from as far north as Point Pinole to as far south as the Oakland International Airport.



This study will use remote-triggered wildlife camera traps (brand: Bushnell Trophy Cams) placed along urban transects throughout the East Bay region (Figure 1). Briefly, a Bushnell motion-triggered infrared Trophy Cam (Bushnell, Overland Park, Kansas, USA) will be placed at each site for approximately 35-40 days in October (i.e., fall season), January (i.e., winter season), April (i.e., spring season), and July (i.e., summer season), with the first season of operation April 2022. This approach will allow us to capture any variance in wildlife distributions that occur as a function of seasonal variation. Each sampling site is at least 1 km away from any adjacent camera-trap site and within 4 km of the designated transect. Sampling site locations were chosen based on green space boundaries, GIS inference, relative size of the green space, and ease of camera installation (i.e., at least two trees within proximity are ideal for camera installation). Each camera will then be secured to a single tree using a secured metal lock box, nylon fastening strap, vinyl-covered cable locks, and keyed master locks to prevent damage or theft of the camera while in the field.

Each camera will be placed approximately 0.5 m to 1 m above the ground opposite. Approximately 2-3 weeks into the field season, camera SD memory cards and batteries will be checked and refreshed. Then at the end of the sampling period, cameras will be removed from the site. This methodology is consistent with previous literature and the overall UWIN protocol (Fidino et al., 2021; Magle et al., 2019, 2021)

### Timeline

The proposed study is the beginning of a long-term ecological research program aimed at understanding how mammalian species richness and biodiversity change in response to societal drivers within cities. Additionally, using a LTER framework allows us to address how the concomitant disturbances driven by climate change contribute to mammalian occupancy, colonization, and extinction. As a result, the timeline for data collection is tentatively set for a full 5 years, with the hope of collecting additional data post the first 5-year period.

### Broader Impacts

The findings from this study can help guide urban conservation strategies by emphasizing the ecological importance of human societies to urban ecology. In so doing, urban planning professionals and designers can develop social-ecological strategies that plan for societal equity in wildlife management and conservation programs. Further, this study can provide actionable data highlighting which anthropogenic drivers are most prominent in dictating wildlife distributions. As a result, these data can inform protocol that efficiently regulates human drivers to increase wildlife success in cities. Finally, the implementation and promotion of this study is expected to galvanize communities within the Bay Area in learning and exploring wildlife within our urban landscape. As a result, we hope to foster greater intrinsic value in urban wildlife and highlight their importance in fundamental ecological processes that occur in urban ecosystems.

### References

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