

SAN DIEGO RIVER CONSERVANCY

Minutes of May 14, 2020 Public Meeting
(Draft Minutes for Approval on September 10, 2020)

CONSERVANCY Board Chair, Ben Clay called the May 14, 2020 meeting of the San Diego River Conservancy to order at approximately 2:00 p.m.

Item 1. Roll Call

Members Present

Richard Burg	Department of Fish and Wildlife
Ben Clay, Chair	Public at Large
John Donnelly	Wildlife Conservation Board
John Elliott	Kumeyaay Diegueño Land Conservancy
Clarissa Falcon	Public at Large
Ruth Hayward	Public at Large
Dianne Jacob	Supervisor, County of San Diego, Second District
Ray Lennox	Department of Parks and Recreation
Amanda Martin	Natural Resources Agency
Gina Moran	Department of Parks and Recreation
Cody Petterson	Speaker of the Assembly
Elsa Saxod	Public at Large
Gary Strawn	San Diego Regional Water Quality Control Board

Absent

Matt Almy	Department of Finance
Conrad Wear	Mayor, City of San Diego, Designee
Scott Sherman	Councilmember, City of San Diego, District 7
Stephen Houlahan	City of Santee

Staff Members Present

Julia Richards	Executive Officer
Wendell Taper	Administrative Services Manager
Dustin Harrison	Environmental Scientist
Hayley Peterson	Deputy Attorney General

Item 2. Approval of Minutes

John Elliott moved for approval of the minutes for the January 9, 2020 meeting and Cody Petterson seconded. Roll Call: Ayes: Ben Clay, Ruth Hayward, Amanda Martin, Gina Moran, Ray Lennox, Richard Burg, Dianne Jacob, Cody Petterson, John Elliott, Clarissa Falcon, Elsa Saxod (11-0-0)

Item 3. Public Comment (*INFORMATIONAL*)

No public comment.

Item 4. Chairperson's and Governing Board Members' Report (*INFORMATIONAL*)

Ben Clay thanked the City of San Diego's Fire and Rescue service in the San Diego and Tijuana Rivers for a tremendous job rescuing people.

Item 5. Deputy Attorney General Report (*INFORMATIONAL/ACTION*)

Hayley Peterson no report.

Item 6. Health and Safety Report (*INFORMATIONAL/ACTION*)

Ben Clay no report.

Item 7. Contamination Study by San Diego State University (*INFORMATIONAL*)

Julia Richards the overall goal of this study was to evaluate and understand the potential for pathogen transmission from soils and contaminated surfaces in the San Diego River riparian zone. This project was led by San Diego St (SDSU) professors who have experience researching surface water contaminants and transport of excreta-related pathogens. The study will quantify constituents not regularly monitored in the San Diego River. Data was collected during storm events and before/after illegal encampment removal. In addition, a soil leaching experiment was conducted to better understand pathogen transport in riparian areas.

Natalie Mladenov thanked Julia for the introduction. The project lasted two years and was funded by the San Diego River Conservancy, State Water Resources Control Board, City of San Diego and San Diego State University. The study's goal is to determine the source of microbial contamination in the San Diego River during wet and dry weather.

Her colleagues Matthew Verbyla and Alicia Kinoshita will be helping with the presentation today. Rich Gersberg from Public Health, Megan Welsh and Shawn Flannigan from Public Affairs also participated in the study. Student researchers include Jose Calderon, Mireille Garcia, Mia Gil and Federick Pinongcos. Today we will cover the background and context for evaluating different pollutants in the San Diego River Watershed

Alicia Kinoshita explained pollutant inputs can have negative consequences for aquatic life and human health. For example, high fecal bacteria concentrations during storm events have resulted in warnings to beach goers and beach closures. In June 2019, the San Diego Regional Water Quality Control Board issued an Investigative Order to identify and quantify the courses and transport of human fecal contamination. Possible sources include sewer infrastructure for the lower San Diego River watershed are widespread. Many sewer lines run adjacent to the San Diego River and tributaries. The Investigative Order identifies open defecation from homeless encampments are potential sources of microbial pollution. San Diegans experiencing homelessness often lack access to basic sanitation and sometimes practice open defecation. Therefore, open defecation and other possible discharges from homeless encampments have been implicated when discussing pollution to the river. But the relative contribution of different sources has not been well understood.

Tents and latrine sites were identified by presence of fecal material and or toilet paper provided by trash mapping efforts of the San Diego River Park Foundation (Foundation). Data was compiled from 2017 and 2018. 2018 follows a stricter enforcement action towards homeless encampments. An important point from the dataset is that there were fewer camp sites in 2018 than in 2017 possibly due to stricter enforcement. Also, fewer latrine sites were identified in

2018, but it is important to note the Foundation's main priority was to document trash sites not map latrines. Some of these changes are due to the fact observers were paying more attention after SDSU discussed their interest. A number of latrine sites were within 200 ft of the river. More intentional mapping of the numbers because these data may not be representative of the actual number. Open defecation is likely to be closer to the river which becomes inundated during large storm events. Also, sheet flow running across fecal matter is not documented in other parts of the watershed.

Natalie Mladenov noted Shawn Flannigan and Megan Welsh collected data for SDSU School of Public Health and interviewed San Diegans experiencing homelessness. Individuals living in the river margin were asked a suite of questions. Among those living by the river, about 73% have practiced open defecation. About 20% of those used river water for non-drinking purposes. 2% used it for drinking. The objectives of this study were to evaluate the pollutant inputs from homeless encampments during dry weather conditions. Dry weather is a time when more encampments are observed in the river margins. There is also scarce data on the quality of the San Diego River during this time. SDSU was also interested in evaluated pollutants during and after encampment cleanups with particular interest in the potential risk to those doing the cleanup activities. SDSU is interested in quantifying the leaching of pollutants from wastewater contaminated soils and soils contaminated with feces. Those are two end member environments SDSU is investigating because the San Diego River Watershed has places with failing infrastructure.

By collecting pollution concentrations during storm events at a higher temporal resolution, SDSU felt it would help understand sources of the greatest pollutant loadings. Chemical and microbial markers were used to track human pollution. Two regularly measured fecal indicator bacteria *e. coli* and enterococci have bench marks set by the Clean Water Act.

HF183 is a new bacterial marker specific to humans and of interest to the Waterboard and Pepper Mild Mottle Virus (PMMoV) is a virus found in pepper-based sauces almost exclusively consumed by humans. Other microbial markers are pathogens of interest including Hepatitis A, norovirus and campylobacter. Due to the Hepatitis A outbreak, which included San Diegans who were unsheltered, there was a concern the virus could be mobilized and enter the San Diego River. The chemical markers caffeine and sucralose are predominantly in human products were analyzed from human waste. There is a difference between them where caffeine degrades quickly and sucralose persists for a long time in the environment.

Matthew Verbyla measuring pollution from homeless encampments during dry weather. The first site Alvarado Creek adjacent to SDSU, second site in El Cajon discharging to Forester Creek both had active homeless encampments at the time of sampling. SDSU measured water quality upstream and downstream to see if there were any differences. In Alvarado Creek the changes in bacterial indicators only changed slightly for *e. coli*. There was more variation in Forester Creek. A significant increase in the concentration of *e. coli*, but it ranged from almost not changing at all to increasing by a factor of 10. The next slide shows other water quality indicators that were expected to change if there had been fecal inputs from homeless encampments. There was no significant change. They also did not detect any HF183, neither upstream nor downstream. The evidence points to encampments did not have significant influence on microbial pollution of the river and streams during dry weather.

The next slide is for objectives 2 and 3 which is to evaluate pollution in water and soils during and after river bank cleanup activities. A map of the cleanup site in Mission Valley. They partnered with the San Diego River Park Foundation to collect samples the day of cleanup. SDSU returned a week after and a month after that to collect additional samples. Soil samples at location of open defecation. A photo is shown of how the site was identified with evidence of open defecation in the vicinity of toilet paper or napkins. The concentrations of fecal indicators were high during the day of cleanup and still detected a month after cleanup, although fecal indicator bacteria decreased a month after cleanup. This experiment concluded homeless encampments did result in microbial contamination of soils at the site of homeless encampments after cleanup.

Objective 4 examined the leeching of contaminated soils. A better understanding of the possibility leeching into the river. two different experiments; one simulated sewer exfiltration where sewage can enter the soil. Another example is sewer overflow. Soils were spiked with waste water and the concentration of microbial markers were measured after being flushed multiple times with simulated (?)rain water. This study concluded waste water spike soils continued to be a source of e. coli, HF183 and PMMoV even after 4 months. Slide 22 shows how fast these markers decayed since contamination. After 60 days there was less than .001% relative to day 1 whereas PMMoV was much slower to die off, and HF183 was somewhere in the middle. All markers were detected after 120 days. Contaminants can be leached into soil after a contamination event.

The study contained 4 different locations of contaminated sites totaling 9 experiments flushed soil with synthetic rain water to collect e. coli enterococci and PMMoV. HF183 was only detected in 1 out of 9 sites where fecal material was the freshest. Caffeine and HF183 are high in waste water and low or undetected in stormwater runoff. This could be one way to distinguish open defecation from leaking sewers.

Natalie Mladenov objective 5 was to evaluate the temporal trends in pollutant concentrations and loadings during storm events with the aim of gaining better insight of potential sources. SDSU measured concentrations of chemical and microbial pollutants in the San Diego River between January 2018 and March 2019. SDSU also performed storm sampling in two tributaries - Alvarado Creek in February 2018 and Forester Creek in November 2018. Their main finding was chemical markers showed untreated waste water is likely the major source of microbial pollution in the San Diego River.

Looking at the hydrology during storm events starts from baseflow conditions before soils get saturated. There will be sheet flow and runoff directly to the river. Panel 3 shows rain event underway and soils saturating, water flows laterally at interflow. At that point it can flush any subsurface pollutants. And Panel 4 returns to baseflow conditions. The discharge/ volume peaks when storm event is at its highest. During the storm event e. coli and enterococci, HF 183 and PMMoV. Fecal indicator exceeds benchmark for all storm events that were measured. They tested HF183 and PMMoV. Hepatitis A was not detected. Other pathogens, norovirus and campylobacter was present.

SDSU examined untreated waste water which had high HF 183 higher than PMMoV. In open defecation HF183 was rarely detected. This shows low HF183 before and during bulk of storm HF183 increases, likely due to untreated waste water. For chemical markers caffeine was higher than sucralose. On the other hand, caffeine was low at open defecation sites. The caffeine to sucralose ratio is an indicator of untreated waste water as indicated in other studies.

In conclusion, water quality evaluations did not show strong evidence that homeless encampments cause an increase in the concentration of pollutants at least in the water during dry weather conditions. However, they did see fecal contamination during cleanup. Individuals living near the river should have access to adequate sanitation and those doing the cleanup should have proper measures. The experimental work showed soils can be a source of contamination even 4 months after sewage spills. The changes in chemical and bacterial markers showed other pathogens, but untreated waste water is the main source of contamination. Efforts to repair damaged or aged infrastructure is recommended.

The outcome of this study resulted in 3 masters theses, data shared with the Regional Water Quality Control Board, the San Diego River Park Foundation, Southern California Coastal Water Research Project, City of San Diego, Santee and El Cajon. SDSU is thankful for the Conservancy, State Water Board, SDSU and students involved in the research. Does anyone have questions?

Ruth Hayward commented it was an interesting project and showed what changes need to be made with some infrastructure. She asked if this research and methods survived new techniques that might be able to be shared with others. This would be ground breaking research. She likes to see follow up from research being used for other applications.

Natalie Mladenov responded until now it has been hard to distinguish between open defecation and waste water sources. The new chemical and microbial markers when used together, also well as HF183 and PMMoV, give a good signal of confidence where the majority of pollution is coming from during storm events. SDSU didn't develop new methods for the study but applied these ratios of caffeine and sucralose as well as HF183 and PMMoV.

Matthew Verbyla noted both the HF183 and PMMoV have been studied extensively but have not been examined together. To add to that this study also evaluated the leeching of pollutants from open defecation sites. Experiments conducted in situ were difficult to coordinate but the contributions in other markers in conjunction with bacterial markers can be ground breaking. The numerous pathogens would be difficult to measure which is why indicators are used. SDSU want a good idea of all the different pathogens existing in waste and how they behave in the environment.

Ruth Hayward asked if this research can help with Corona virus which is being detected in sewage systems.

Natalie Mladenov responded they have put in a proposal to study Covid-19 in seawater and river water. Covid-19 is found in waste water. Although other schools are leading the charge, they remain interested in the topic to detect presence in water spiked with waste water. Perhaps examine real water samples.

Ben Clay asked about viral persistence. Is there a linkage between corona virus and how long it lasts compared to bacteria? Was this peer reviewed with County of San Diego Health Department?

Matthew Verbyla commented PMMoV is used because it is specific to humans. It is commonly found in human feces and waste water. It persists longer than most viruses that are human pathogens. Viruses are diverse, the Corona virus is enveloped and the PMMoV is not. Most human viruses are non-enveloped. He understands Corona virus to not be as persistent in the environment as the non-enveloped enteric viruses.

Natalie Mladenov shared this with staff from Dianne Jacob's office. The executive summary and reporting will be shared with anyone who wants access. The Final report is not yet finished.

Item 8. Main Street - Green Street Improvements - Proposition 68 (ACTION)

Julia Richards the proposed project entitled Main Street – Green Street Improvements is within the San Diego River Watershed. It is located in a disadvantaged community and within 6ft of a severely disadvantaged community. This proposed project promotes 3 state plans, plus El Cajon's Climate Action Plan. It is consistent with the San Diego River Conservancy's enabling legislation and supports 3 programs from the Conservancy's strategic plan. The proposed project includes multi-benefits of capturing and filtering stormwater, improving water quality, increasing public access, planting native trees, reducing heat island effect and improving quality of life in an urban community. This project has received a \$2.5 million grant from SANDAG's smart growth incentive program. More details can be found in the staff report. Conservancy Staff recommends approval of resolution 20-03 to the City of El Cajon in the amount of \$250,000. Julia welcomed and introduced Jeffrey Manchester, Principal Civil Engineer and Tony Mendoza Associate Engineer to provide a presentation and answer any questions the Board may have.

Jeffrey Manchester said this project will improve a business urban corridor. El Cajon will plant trees and implement stormwater best management practices (BMPs) under this proposal and he turned it over to Tony Mendoza.

Tony Mendoza thanked the Board for the opportunity to present. The City of El Cajon's Main Street – Green Street Improvement Project will improve an important gateway to the city. The project starts at Marshall Avenue and continues to El Cajon Boulevard. This half mile stretch is highly used for people moving from El Cajon to the El Cajon Transit Center. El Cajon is the 6th largest city in the county has about 300,000 people. Geographically it is surrounded by mountains, where stormwater flows into the Forester Creek channel and eventually the San Diego River. The City studied and developed the El Cajon Transit District Specific Plan (TDSP) approved in 2018 was

intended to boost the economy and revamp the boundary area and improve ease of access by vehicle, foot or bike. TDSP gave recommendations of 2 projects – the one discussed today and the El Cajon Community Transit Connection Improvement Project which was approved by the San Diego River Conservancy Board in January. Main Street and El Cajon Boulevard are two separate corridors similar in scope. Traffic safety measures and surface improvements will help pedestrian access.

TDSP proposes improvements along Main Street to develop a sense of arrival. Installing parkway improvements such as landscaping widened sidewalks and lighting will make it safer for pedestrians. Stormwater features and low impact development (LID) such as biofiltration. El Cajon is also looking at parkway planting including native drought tolerant species. TDSP provides for two vehicle lanes in each direction would be improved by reducing number of lanes and adding bike lanes and widening the sidewalk and install a roundabout for car traffic.

The portion funded by SANDAG is scheduled to start February and is currently in design phase. El Cajon expects 100% design by march 2021 and then begin construction in summer 2021, and project completion by summer 2022. Rendering of what the project would look like includes greenscapes and street trees which make it safer for pedestrians. Another intersection shows bulb outs, crosswalk and greenscapes. Project funding includes \$2.5 smart growth incentive and Trans Net funding. Additionally, funding from the San Diego River Conservancy would help with green enhancements, LID features and low maintenance vegetation. He hopes the Board will invest to help the City accomplish these plantings and obtain the City's Climate Action Plan in reducing greenhouse gases. The idea was created with the TDSP including public input. If funded, El Cajon would make the biggest impact by installing LID BMP to treat water.

Ruth Hayward recommended to plant as many trees as possible. She asked would bioswales collect 2,300 cubic ft of water and how many swales would be needed along Main Street.

Tony Mendoza responded the pictures are examples, and they are working with landscape architect to size the plants and trees to find the best location. It has not been finalized.

Richard Burg asked about native plants regarding western redbud and Torrey Pine. He does not recommend either of those for this project because they are not found in that location. Torrey Pines are endemic to the northern coastal area of San Diego and western red bud are found more in the foothills. To the extent practical and possible, the project should use native plants for bioswales to filter hydrocarbons.

John Elliott appreciated including native plantings and encourages them to use native plants especially by the flow. They use grasses around springs and river he can provide suggestions.

Ruth Hayward moved for approval of Resolution 20-03 and **John Elliott** seconded.

Roll Call: Ayes: Ben Clay, Ruth Hayward, Amanda Martin, Gina Moran, Ray Lennox, Richard Burg, Dianne Jacob, Cody Petterson, John Elliott, Clarissa Falcon, Elsa Saxod (11-0-0)

Item 9. Lindo Lake Restoration and Improvements to Public Access - Proposition 68 *(ACTION)*

Julia Richards the proposed project entitled Lindo Lake Improvements is located in the San Diego River Watershed. It is located in a disadvantaged community and benefits and severely disadvantaged community. It promotes the California Water Action Plan. It is consistent with the San Diego River Conservancy enabling legislation and it supports 4 program areas in the Conservancy's Strategic Plan. This proposed project is focused on the east basin and includes multiple benefits including public trail, public park amenities and expanding ADA accessibility and the installation of fishing pier and bird viewing station. San Diego County committed \$5 million for the planning, design and California Environmental Quality Act (CEQA). More information is located in the Staff Report. Conservancy staff

recommends approval of Resolution 20-04 to the County of San Diego Parks and Recreation Department for \$250,000. Julia introduced Ieszcik Formeller Park Project Manager to provide a presentation and answer any questions you may have.

Ieszcik Formeller Lindo Lake County Park is in the community of Lakeside California adjacent to SR-67 at the intersection of Vine Street and Lakeshore Drive. The Lindo Lake Improvements Project will be constructed in 2 phases. Phase 1 is the east basin shown on the right-hand side of the map and phase 2 on the left map. The goal of both phases is to restore habitat, improve public water quality, beautify Lindo Lake and increase recreation opportunities for public benefit. The Department's Proposition 68 grant application with San Diego River Conservancy is to support phase 1 construction and restoration work at Lindo Lake East Basin.

Lindo Lake County Park is a popular destination in the community of Lakeside which includes playgrounds, picnic areas, all wheel skate park, outdoor exercise areas, sports fields, 1.25-mile trail around the perimeter. Lindo Lake is co-located with the Lakeside Community Center and Lakeside Teen Center which provides daily programs to families, seniors people with disabilities and at-risk youth. Lindo Lake is home to a wide variety of native animals and migratory wildlife including sensitive species. Lindo Lake is the heart of and name sake of the community.

Lindo Lake is the only natural lake in the County of San Diego. In 1962 a dam was constructed on Quail Creek to form Lake Jennings. This blocked Lindo Lakes natural water source. Due to this the main source of water became urban runoff and stormwater. Today the east basin contains water for roughly half the year and groundwater is used to supplement water levels of the west basin which is only 2-3ft deep year-round. Lindo Lake was separated by an earthen causeway decades ago in order to make it possible to fill one basin at a time. Disturbances to water flow have increased water temperature and nutrient levels. Over the years erosion stormwater and runoff introduced sediment and changed water depth leading.

Construction in two phase aim to increase health of the basin. Phase 1 is the project being considered today. Maximum depth of 10ft natural clay liner stormwater BMP to capture and filter sediment and fish habitat structures. Constructing new recreational amenities, viewing areas and trails. The project will improve aquatic and terrestrial ecosystems. Restored habitat and increased public opportunities benefit the environment, community and visitors. Restoring Lindo Lake has been in the planning stages for nearly 4 decades. The project was analyzed in accordance with today's requirements and environmental studies were conducted for the project. A Supplemental Environmental Impact Report (SEIR) was circulated for public review and comment. The final review was adopted by the County Board of Supervisors May 11, 2019. The County's consultant, AECOM had highly qualified engineers and landscape architects to design and engineer the project to ensure the supplemental EIR and other applicable requirements were met.

Construction documents for this phase were completed in February 2020. Construction project management and administration for the project will be conducted by Department of Parks and Recreation staff and will in part be supported by potential Proposition 68 San Diego River Conservancy Grant funding. The Department staff will manage ongoing operations and maintenance to the lake as they do today. A Kumeyaay monitor will be present during all ground disturbance activities as well as monitors for birds and nesting raptors. Permitting with USACE CDFW and Regional Water Quality Control Board is underway.

Phase 1 is anticipated to start July 2020 and estimated completion January 2022. Phase 2 is anticipated to start January 2022 and be completed in July 2023. Phase 2 is currently unfunded but the County is diligently seeking funding. Phase 1 supported in part consists of site hardscape and accessible stabilized decomposed granite trails and recreational amenities, fishing pier benches and bird watching stations for public benefit. Other improvements are planting of native trees and installation of a water conserving irrigation system. Open play area and 6 different native habitat types would be present. The Lindo Lake improvement project will improve water circulation and aeration, restore wetland areas reduce water loss. The new sedimentation basin and stormwater treatment facilities will prohibit sediment from entering the lake. The landscape improvements will stabilize banks and reduce erosion restore local and migratory habitat and beautiful the park for visitors.

Richard Burg asked about the eucalyptus woodland. It is not native.

Ieszc Formeller stated the eucalyptus woodland is existing not proposed.

Clarissa Falcon thanked Ieszc for the presentation. She asked the total cost of the project and how much requested from Proposition 68.

Julia Richards responded staff is recommending \$250,000 today.

Ieszc Formeller commented on the total project cost is \$7.525 million. \$5.525 are allocated for construction. Remainder is for design, environmental analysis, inspections, construction administration and project management. Overall cost of the project is being determined now from publicly solicited bids to determine final cost for construction.

Clarissa Falcon moved for approval of Resolution 20-04 and **John Elliott** seconded.

Roll Call: Ayes: Ben Clay, Ruth Hayward, Amanda Martin, Gina Moran, Ray Lennox, Cody Petterson, John Elliott, Clarissa Falcon, Elsa Saxod. Abstain: Richard Burg, Dianne Jacob (9-0-2)

Item 10. Executive Officer's Report (INFORMATIONAL/ACTION)

Julia Richards a few more items for review. The Governors stay at home order. San Diego River Conservancy office remains open at this time. Staff are essential employees for the state of California. Staff members have been provided the opportunity to telework. Current focus at the office is on bond-funded agreements processing invoices and amendments to allow flexibility for grantees. May budget revision will be posted on the Department of Finance's website today. Possibly an August revise for Fiscal year 2021.

Greening San Diego Program was presented at the November 2019 meeting. At the meeting Chairman Clay instructed staff to develop draft program guidelines for review. Guidelines were posted online for a 30-day public input. Document will be finalized from public input and will be presented before the Board for final approval at the July 9th meeting.

The Conservancy provided two spreadsheets summarizing bond programs in Proposition 1 – the Water Bond, and Proposition 68 – the Park Bond. These spreadsheets list the status of concept proposal and approved projects under each program. In march Prop 1 Round 5 the Conservancy received 10 proposals. The proposals are currently under review and staff will set up site visits. The final application has been extended from June 15, 2020 to August 28, 2020. Staff has notified applicants. Additionally, under Proposition 1, \$9.5 has been awarded to date. \$2.5 is available for Round 5, and remaining \$4 million bond funds.

Proposition 68 has awarded \$1.25 million to date not including today's action items. Approximately \$9 million remain for Prop 68. Round 2 is anticipated January 15 through February 15, 2021.

Ruth Hayward thanked the Conservancy staff for running a smooth teleconference.

Ben Clay agreed and adjourned the meeting.

Meeting adjourned at 3:39 pm