North Richmond Climate Resilience and Integrated Water Management Plan

Current Project Updates:

1. NORTH RICHMOND PUMP STATION UPGRADE

North Richmond is located in a floodplain of two creeks - Wildcat Creek and San Pablo Creek. This means that, historically, North Richmond would flood during the rainy season. Creek levees (barriers that keep water inside the creeks) and a pump station were constructed to help protect the community from flooding. The North Richmond Pump Station was constructed in 1974 and is now nearing the end of its expected life cycle. Without the pump station, homes may flood and homeowners in flood zones would need to pay for flood insurance, which is costly. Additionally, the pump station could be affected by rising sea levels, affecting its ability to operate correctly and causing flooding in much of the community.

Upgrading and repairing the pump station to keep it operational was a clear top priority for North Richmond residents. In a 2020 survey in which we asked 300 community members to prioritize and provide feedback on possible projects, over 40% of the respondents selected the pump station project as their #1 choice out of 15 projects, and over 70% included it in their top five choices.

During the 2021-2022 fiscal year, The Watershed Project advocated for the project and the County was able to work with the City of Richmond to complete the upgrades to the pump station to ensure the turbines were working and will be adding the study of subsequent upgrades to the pipeline. The Watershed Project will work with the County and City to communicate the good news back to the community that this critical priority project has been completed and the community’s concerns were addressed.

2. TAP WATER TESTING, EDUCATION AND OUTREACH

North Richmond’s drinking water, sourced from the Mokelumne River watershed in the Sierra Nevada mountains and provided by East Bay Municipal Utility District, is very high quality. Despite this, most residents mistrust the safety of their tap water, and some have experienced problems with it including discolored water, bad taste, particles or residue, and drying of hair or skin when washing with it.

It’s currently not clear whether the mistrust in tap water is a result of perception (for example, residents hearing that their tap water is not safe or moving from places where it’s unsafe to
drink the tap water) or of aging infrastructure onsite (at the home or building), impacting the quality of the water by the time it comes out of the tap.

We began testing tap water quality in February 2022. We started by reconnecting with several members of the community who expressed interest and concern in better understanding their water, and inviting additional community members to participate. We collected samples of tap water from 20 different Richmond residences. These samples were sent to SimpleLab, where they are tested for levels of over 100 water constituents, including chlorine, alkalinity, pH, hardness, fluoride, and other contaminants. We also completed surveys with participants to learn about their individual experience with their water supply, and gather their reports on taste, odor, and discoloration. When visiting the homes of community members, we were able to respond to any other concerns they might have regarding their water supply.

From visiting our participants, we have had the opportunity to connect with people all over the community of Richmond, with the shared goal of understanding their water. We have learned that there are many different ways in which people use and interact with water. A striking similarity between most of our participants is that very few of them actually drink their tap water. Some use tap water with filters, others use it only for cooking, and some don’t use it at all, including for bathing. Bottled water purchases are very prevalent among all our participants, which emphasizes why it’s important that we learn whether the quality of bottled water is any better than the tap water supply. Basing water usage on bottled water adds to the household expenses, increases the burden especially for those without cars, and creates plastic pollution.

By the end of the summer of 2022, all of the laboratory results were received, and we began an analysis phase. In addition to the community members that participated in this activity, we also tested samples from four houses in more affluent neighborhoods in the East Bay, to compare their tap water quality with those in North Richmond, and received results from the DACTIP program for test that they conducted on a few major water bottle brands.

Results indicated that overall, tap water quality in North Richmond was good and safe to drink. None of the water constituents measured exceeded the regulatory limits for drinking water in California in any of the homes tested. Tap water quality in North Richmond equaled or exceeded the quality of tap water in Berkeley and Berkeley hills, and equaled or exceeded the quality of bottled water.

We prepared an individual ‘Report Card’ for each program participant, letting them know about the quality of their home’s tap water with easy-to-understand explanations of the technical issues. Our field coordinator reached out to the residents and delivered these individual report cards manually, explaining all details and answering any questions. This process was done in Spanish for those that needed it.

Next, we are planning a community-wide event in which we will show these results to a wider audience and bring experts on drinking water, water testing, water filters, etc, to be able to address any questions and concerns raised by community members. We aspire to start a
tradition for annual tap water quality workshops in Richmond with the intention of shifting beliefs around tap water vs. bottled water quality.

3. **FLOOD RISK REDUCTION IN THE RHEEM CREEK WATERSHED (ROLLINGWOOD)**

For over 20 years, this neighborhood has suffered from flooding related to creek overflows. The Rollingwood reach of Rheem Creek has long been neglected and is choked with sediment buildup and invasive vegetation, leading to obstructed channels and worsening flood conditions.

Climate change is expected to increase flood frequency and unpredictability. The City of Richmond, American Rivers, The Watershed Project, Restoration Design Group, the Coastal Conservancy and Contra Costa College have partnered on a multi-phased project to restore ecological function to the Rheem Creek watershed while reducing the risk of flooding to nearby residents.

The project aim was to implement nature-based solutions placed throughout the watershed, benefiting people, wildlife, and the economy by restoring and enhancing riparian habitat, providing open space and educational opportunities, and improving the watershed’s ecological function, all of which will build climate change resilience. Phase I of this project consisted of community and Tribal engagement and agency coordination, site-specific restoration planning, and advancing restoration efforts throughout the watershed. By working together, residents, public agencies and environmental groups can improve the health of Rheem Creek while alleviating long-standing flooding issues. We have entered phase II of the project with design and future construction.

During the 2021-2022 fiscal year the restoration and sediment management of the mid reaches of Rheem creek was selected for funding by the CA Natural Resources Agency and the City of Richmond, American Rivers, The Watershed Project and Restoration Design Group are working on advancing the design to construction documents to remove the sediment and re-align the creek channel, bringing back its original function. Construction should start in 2023 and The Watershed Project will be acting as the community liaison for the project during the design and implementation phases.

4. **WILDCAT CREEK TRAIL IMPROVEMENTS AND FISH PASSAGE**

This project’s purpose was to design and construct park amenities along the Wildcat Creek Trail to make it more inviting. Community-led visioning efforts facilitated by Urban Tilth, with support from The Watershed Project, indicated that community members were most concerned with improvements in safety, recreation, and education. Specific recommendations included lighting, emergency phone, trash receptacles, benches, drinking fountains, and informational and educational signage. We have been working to expand the engagement of stakeholders and potential trail users to ensure community wide participation in the design and planning process.
There also was interest in the feasibility of connecting the Creek Trail to the Bay Trail and the City of San Pablo Davis Park further upstream. One way of connecting the Creek Trail to the Bay Trail is by constructing an overpass over the Richmond Parkway, since the existing underpass is frequently flooded and not usable, so we are advocating for updating the feasibility study of the overpass and keeping it in the conversation.

Most people want to use the trail for walking and exercise, but also biking, being in nature (habitat for wildlife) and family time (spaces for children to play/exercise). People also expressed interest in a dog park, picnic/grill areas, and an outdoor fitness area. Overwhelmingly, the community’s biggest concern about the creek was trash (illegal dumping by people who are from outside North Richmond), followed by insufficient safety measures.

During 2021-2022 we contracted with Mithun to develop drawings for potential trail improvements from the Creek Trail to the Bay Trail, using the community priorities and publicly available data as the basis of design. We also secured funding for the planning and design of trail amenities and viewpoints adjacent to the creek’s fish passage, currently under design by the Flood Control District. The task for the next year is to work with the community and design team to incorporate some trail improvements, viewpoints and interpretative features to help people understand the importance of the creek for wildlife and improve peoples’ experience and enjoyment. We have funding for 65% design for trail amenities next to the fish passage and the Flood Control District is advancing the Design of the Fish Passage to 65% design and permits. In the next few years, we expect the project to be funded for implementation.

5. **HORIZONTAL LIVING LEVEE AT WEST COUNTY WASTEWATER DISTRICT**
Once a wetland that was dried up to create space for industry, the North Richmond shoreline and the low-lying adjacent areas are extremely vulnerable to sea-level rise flooding. If the wastewater treatment plant is flooded by rising sea levels, wastewater could back up drains into toilets, sinks and showers and excessive pollutants could be released into the Bay.

A horizontal levee is a constructed marsh habitat that would act like a giant sponge, protecting the wastewater treatment plant from flooding, and providing habitat for wildlife and a beautiful shoreline trail for residents to enjoy.

The horizontal levee could serve as flood protection for the critical infrastructure (wastewater treatment plant, Republic Services solid waste transfer station and sanitary landfill, and Chevron Refinery) and transportation systems (Richmond Parkway, railroad) existing along the shoreline, as well as for the adjacent residential communities. In the past, North Richmond and Parchester Village have endured chronic flooding with limited services due to a limited tax base.

While flood control projects on lower Wildcat and San Pablo Creeks in the late 1980s relieved the flooding, predicted sea level rise combined with storm events could cause a return of chronic flooding in these communities. A horizontal levee would include oyster reefs, eel grass beds, and marsh habitat which would help calm wave action against the shoreline and reduce the risk of flooding. The project would also include designing a bicycle and pedestrian trail, linked to the Bay Trail, for local users and visitors to the area.

The Watershed Project partnered with Mithun, an architectural designers firm, and ESA, a landscape engineering firm to envision nature based solutions for sea level rise along a 5-mile stretch. Measure AA funding granted to the West County Wastewater provided an opportunity to work with North Richmond community members on design solutions that will also include multiple benefits to the residents. Working weekly in three small workgroups over a half year period, this process provided direct input from residents to the designers. In addition, through this capacity-building process, community members were able to sit at the decision-making table with the designers and engineers and increase transparency and trust. Community members were paid for their time and expertise dedicated to the project.
Through this process, community members learned about our natural wetland habitat, hazards from sea level rise, environmental justice and activism in North Richmond, design processes, and surveying methodology. Community members helped design a community survey and led focus group discussions with community representatives they selected. This survey informed the architects and designers on community preferences and priorities on topics such as amenities (boardwalk, community center, trails, and so forth), access and transportation to the shoreline, and employment and workforce development opportunities. Community members that took part in the survey were paid for their time and contribution.

We are currently working on the 30% design for the pilot project in front of the Wastewater Treatment Facility and a conceptual design for the 5 miles long stretch of shoreline from Point San Pablo to Point Richmond. In the summer of 2022, the Project was submitted for implementation funding from Prop 68 and if funded the conceptual designs will be advanced to 65% design and permitting by 2024. The Wastewater Treatment Plant is the lead stakeholder in the implementation of the project and the rest of the project partners, including The Watershed Project, are interested in the multi benefits that could come from this pilot project and future connections to the rest of the shoreline.