North Richmond Water Needs Assessment
Introduction and Methodology
North Richmond Water Needs Assessment

Part of the IRWM DAC planning process

Goal: Gain insight as to which types of water-related improvements are of greatest priority to the community

Evaluated four areas of need:

- Sea level rise and stormwater
- Habitat protection and access to recreation
- Water supply (drinking water)
- Wastewater and recycled water
Recruiting Participants

Recruited 54 North Richmond residents to participate in focus group

- Block Ambassadors
- Healthy Richmond
- Senior Center
- Offered a gift card stipend

Gained input from an additional ~200 residents at North Richmond Earth Day Celebration
Focus Group

1. Individual Interview (Pre-Survey)
2. Educational Workshop
3. Written Post-Survey

How long have you lived in North Richmond?

<table>
<thead>
<tr>
<th>Time Period</th>
<th>Number of responses</th>
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<tbody>
<tr>
<td>less than 5 years</td>
<td></td>
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<tr>
<td>5-10 years</td>
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<td>11-20 years</td>
<td>10</td>
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<tr>
<td>21-30 years</td>
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<td>31-40 years</td>
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<tr>
<td>41-50 years</td>
<td>8</td>
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<td>51-60 years</td>
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<td>60+</td>
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Interviews (Pre-Survey)

Ranked their level of concern with each of the 4 areas

- Four-point scale: not at all concerned to very concerned

Described their personal experiences

- Have they experience problems with flooding or sewer backup?
- Do they use the Wildcat Creek path or North Richmond shoreline for recreation?
- How do they use tap water? Have they experienced problems with it?
Educational Workshops

Participants rotated around 4 stations, one for each area of need:

- Sea level rise and stormwater
- Habitat protection and access to recreation
- Water supply (drinking water)
- Wastewater and recycled water

Examined hands on materials such as posters, videos, maps, and models with a facilitator

Learned about:

- Existing water-related infrastructure
- Anticipated future challenges
- Potential solutions
Learning Outcomes – Sea Level Rise and Stormwater

Participants will understand that…

● North Richmond is highly susceptible to flooding as a result of sea level rise.

● North Richmond is protected by creek levees, tidal marshes, and a pump station. The pump station is nearing the end of its expected life cycle. Without this infrastructure, homes may flood and homeowners in flood zones would need to pay for flood insurance, which is costly.

● Pavement (impervious surfaces) worsens flooding during storm events. Green urban infrastructure like rain gardens and bioswales prevents flooding and pollution by slowing and filtering stormwater before it enters the stormwater system. Trees, parks, and lawns provide similar benefits for reducing flooding.

● Features that improve shoreline resilience, such as oyster reefs and salt marshes, help protect against sea level rise.
Learning Outcomes – Habitat Protection and Access to Recreation

Participants will understand that…

- Improvements in connectivity (such as a pedestrian/bike bridge over Richmond Parkway) might make local natural spaces more accessible for recreation and improve alternative transportation corridors.

- The Wildcat Creek walking and biking path does not currently have many amenities such as benches, recreational spaces, managed vegetation, and interpretive signage. These amenities might make this path more inviting for recreation.

- Urban trees and gardens can bring nature into the city and make urban spaces more walkable.
Learning Outcomes – Water Supply and Water Quality

Participants will understand that…

- North Richmond’s tap water is supplied by EBMUD, which sources very high quality water from the Mokelumne Watershed. This water is safe for drinking and other uses.
- Any issues that residents experience with tap water are most likely a result of indoor plumbing pipes or fixtures, which are the responsibility of the property owner.
Learning Outcomes – Wastewater and Recycled Water

Participants will understand that…

- West Contra Costa County Wastewater District manages North Richmond’s wastewater. Wastewater from WCCCWD goes through purple pipes after treatment and is transported to Chevron, where it is used to cool boilers.

- There is a wastewater treatment plant on the North Richmond shoreline, which is vulnerable to sea level rise. It could be protected by a natural buffer (horizontal levee).

- Treated wastewater can be used for irrigation.
Post-Survey (Written)

Reassessed their level of concern with each of the 4 areas

- Four-point scale: not at all concerned to very concerned

Feedback on what they had learned

- Did you learn any new information about these areas in today’s workshop?
- What was the most surprising thing you learned during today’s workshop?
- What types of water-related improvements would you like to see in your community?
Initial Interview: Sea Level Rise and Stormwater

73% have personally experienced flooding when it rains

- Difficulty walking or driving, damage to infrastructure (flooding of homes, potholes in streets)
- Concerned about trash or other pollutants in floodwaters

45% said flooding used to be much worse than it is now

15% described their concern about sea level rise

- May not be a familiar topic for many residents

Results
55% of residents use the Wildcat Creek path or North Richmond shoreline for recreation

- Vast majority use these spaces for walking
- Other uses: biking, taking kids or pets out, social events

42% of residents said they were concerned about safety on the Wildcat Creek path

- Flooding
- Trash/pollution/cleanliness
- Crime/drugs/needles
- Homeless encampments
- Insufficient lighting
- Overgrown vegetation

Some residents said they don’t use the creek or shoreline for recreation simply because they’re unaware of it or don’t think about it
Initial Interview: Water Supply and Water Quality

Drinking was listed as the number one use for tap water

- Other uses: bathing, cooking, cleaning/laundry, watering plants

70% of residents drink tap water, although 38% mentioned buying bottled water as well

Nearly half of residents don’t trust their tap water, even if they drink it

- They’re not sure where it comes from and how to tell whether it’s actually safe
- 48% of residents have experienced problems with their tap water, including discolored water, bad taste, particles or residue, and drying of hair or skin when washing with it

Results

Top Uses of Tap Water

Drinking | Bathing | Cooking | Cleaning, dishes, laundry | Outdoor watering
---|---|---|---|---
80.00% | 60.00% | 40.00% | 20.00% | 0.00%
In the initial interview, the sewer system was the topic of least concern for residents

- 58% of residents have experienced problems with the sewer backing up in their home, but the frequency and severity varies widely
- A few have seen backups on the street, but not enough to create the impression that there is any problem with the system

Other concerns:
- Water conservation
- Cost of water
Top Takeaways from the Workshop

Top 3 most surprising things residents learned in the workshop

1. North Richmond’s tap water is safe to drink (32%)
2. North Richmond’s vulnerability to sea level rise (25%)
3. There is interest in investing in water-related improvements in North Richmond

Other things people learned about: living shorelines, pump station, bridge overpass
Top Takeaways – North Richmond’s tap water is safe to drink

- Access to clean, safe drinking water seems to be a high priority for residents.
- Residents left the workshop feeling less concerned about their source water but more concerned about potential contamination in pipes.
- Residents were excited about the possibility of self-testing their tap water.
- 34% of residents said they want to see improvements related to clean drinking water in North Richmond, 16% specifically mentioned pipe inspections or upgrades.
Top Takeaways – North Richmond’s vulnerability to sea level rise

- 98% were “somewhat concerned” or “very concerned” about wastewater and recycled water on the post-survey, compared to 60% on the pre-survey (statistically significant difference)
  - Their concern rose after learning that the wastewater treatment plant is highly vulnerable to sea level rise
- 88% said they learned something new about sea level rise and flooding during the workshop
Top Takeaways – There is interest in investing in water-related improvements in North Richmond

- In their interview, without prompting, 23% of residents mentioned authorities/residents do not care about their community as much as other places.
- Many said it was hopeful and refreshing to see positive energy from residents and community partners during the workshops.
What do residents want to see in their community?

- Clean drinking water improvements (34%), pipe upgrades
- Urban greening, green infrastructure, or parks (23%)
- Solutions to sea level rise and flooding (living shorelines or horizontal levee)
- Improved sewer system
- More water conservation measures
- Using some of the recycled water that goes to Chevron for irrigation in the community
Other Considerations

- Overall, residents were supportive of any of the improvements we proposed during the workshop, but there is concern about possible resulting gentrification.
- Residents could much more easily connect with tangible issues such as drinking water, stormwater flooding, and trash rather than sea level rise, living shorelines, or horizontal levees.
- There was a fair amount of confusion about the stormwater system, sewer system, and drinking water supply.
Next Steps

- Work with stakeholders to identify possible projects, based on the needs identified by the community. (Fall – Winter 2019)

- Host community workshops in which residents prioritize and provide feedback on the projects. (Spring 2020)

- Finalize project proposals and seek funding for implementation.