Meeting Summary

Keller Beach Sanitary Sewer Project

Community Workshop Meeting (Hybrid Format)

Monday, January 14, 2026
6:00 – 8:00 pm

Richmond City Council Chambers and via Zoom

Overview

On January 14, 2026, the City of Richmond hosted a public community workshop for the Keller Beach Sanitary Sewer (KBSS) Project at City Council Chambers, with an option for community members to participate virtually via Zoom. The purpose of the workshop was to provide an overview of the KBSS Feasibility Study, clarify project objectives and evaluation criteria, and present the range of alternatives under consideration. The workshop also provided an opportunity for participants to ask questions, share concerns, and offer input to help inform the City's ongoing evaluation and next steps.

In total, **83** individuals attended the meeting, including staff from the City of Richmond and consultants from Kearns & West, BKF, and Anchor QEA. **25** participants attended in-person and **58** participated virtually via Zoom. The list of attendees is provided in **Appendix A.**

Welcome and Agenda Review

Ben Gettleman, facilitator from Kearns & West, opened the workshop by welcoming participants and briefly reviewing the agenda and format for the session. He was joined by Vice Mayor Cesar Zepeda, Hillal Hamdan of the City of Richmond Public Works Department, and Adam Brown of BKF Engineers (BKF), each of whom provided brief introductions and context for the KBSS Project.

Ben also provided a short overview of Zoom participation guidelines and emphasized that both in-person and virtual participants would have equal opportunities to contribute throughout the discussion.

KBSS Project Overview

Background and History

Adam Brown (BKF) provided an overview of the Keller Beach Sanitary Sewer Interceptor and the City's current feasibility study effort. He explained that Point Richmond's original subdivision maps date back to 1902–1912, and the neighborhood's earliest sewer infrastructure was constructed between 1909 and 1916. These early sewer lines historically discharged directly into San Francisco Bay. In 1959, the City constructed the Keller Beach interceptor and pump station to stop direct bay discharges and convey wastewater from the neighborhood's lowest point up and over the hill through the Keller Beach Pump Station.

Adam noted that the existing shoreline interceptor was built in 1959 and is approximately one mile long. The pipe ranges from 8 to 12 inches in diameter and consists of concrete-encased cast iron. He emphasized that the original as-built drawings are relatively clear and have clarified existing conditions. The City's records indicate the first major inspection of the interceptor occurred in 2021, and that inspection found the pipe to be in very poor condition.

BKF Scope and Deliverables

BKF's role is to conduct a comprehensive alternatives analysis as part of the feasibility study to evaluate options to rehabilitate, replace, or relocate the Keller Beach interceptor. Adam emphasized that no preferred alternative has been selected and that all options remain under consideration.

Adam also reviewed the project study area, and the sewer shed that drains to the Keller Beach line. He explained that mapped parcels within the boundary represent properties that flow to the interceptor, including shoreline parcels that are assumed (for conservative planning purposes) to be directly connected via laterals to the interceptor. These shoreline connections are a key concern because they are most affected by any changes to the interceptor alignment. The study area includes approximately 340 lots and about 290 sewer connections, including multifamily parcels that generate higher flows, as well as some open space and undeveloped parcels.

Adam summarized BKF's scope of work for the feasibility study, which includes reviewing existing documentation; defining and evaluating up to six alternatives (three interim and three final); and prioritizing evaluation of interim options to determine whether they can provide near-term benefits. BKF is also conducting field investigations as needed,

including utility locating, topographic surveying, potholing/vacuum excavation to confirm utility conflicts in critical areas, and a geotechnical desktop review to evaluate soil considerations.

Environmental screening is also part of the feasibility study process. For each feasible alternative, Anchor QEA (environmental subconsultant) will assess anticipated environmental and regulatory requirements, including preliminary coordination with regulators to understand what may be allowed, what permitting requirements could apply, and what constraints could affect feasibility. BKF also noted that public engagement—including meetings like this workshop—is a core part of the project scope, in coordination with the City and Kearns & West.

Finally, Adam described several scope refinements made since the start of the study. These include conducting property and title research to identify existing easements and determine where new easements might be required depending on the alternative selected, and researching potential funding sources such as grants and low-interest loan programs. BKF also added a high-level erosion analysis to evaluate how the interceptor may be affecting shoreline conditions (including potential impacts to the beach and adjacent homes), and to better understand what effects pipe removal or modification could have. Adam also explained that two originally planned interim and final alternatives memos have been consolidated into a single feasibility study report, which is currently expected to be delivered in the May–June 2026 timeframe.

Q&A

- **Question (Q):** Will the erosion analysis also consider future mitigation for rising waters related to climate change, including environmental measures such as reefs or other in-water features to protect bayfront homes in Point Richmond?
    - **R (Response):** The erosion analysis will be limited in scope and focused on sediment deposits and beach processes. It will not be a full climate change or sea level rise analysis and is not expected to evaluate mitigation measures such as reefs or other in-water features.
- **Q:** Is water quality testing at the Keller Beach Pump Station included in the project scope, and if so, are any results available?
    - **R:** Since the meeting, it has been confirmed that water quality testing is not a part of the contract scope. The scope mentions looking at any water quality data that can be provided by the City, but no such water quality data exists.

Project Objectives

Adam explained that the purpose of the feasibility study is to clarify what the City must accomplish to address the Keller Beach interceptor, particularly given community questions about what is "minimally necessary." He emphasized that the City's wastewater collection system must comply with applicable federal and state laws, and that any solution developed through this project must meet those legal requirements.

Adam noted that some community questions have focused on the Baykeeper settlement and whether requirements can be "negotiated." He explained that Baykeeper's role is to ensure the City complies with state law, and that compliance obligations apply to the City's sewer system as a whole—not just the Keller Beach interceptor. As a result, any solution must be fully accessible, inspectable, maintainable, and repairable. He also stated that grade 4 and grade 5 defects must be addressed, or placed on a schedule to be addressed, using the Pipeline Assessment and Certification Program (PACP) industry standard for defect grading.

Adam added that, while this project is focused on the Keller Beach line, the Baykeeper settlement requires that the sewer system not leak or overflow, that it can be thoroughly cleaned and inspected without obstructions or gaps in inspection coverage, and that it be free of grade 4 and grade 5 defects. He emphasized that this is the standard the City must meet for at Keller Beach. He also noted that the Keller Beach shoreline location has a high consequence of failure due to its exposure to erosion and wave action, and that a break in the line could result in sewage discharging directly to the Bay and potentially lead to significant fines.

Existing Conditions

Adam reviewed what the sewer line looks like in the field and how it compares to the 1959 as-built plans. He noted that the plans show the pipe originally constructed with two layers of concrete encasement. Based on site observations, the outer layer of concrete encasement is missing in many areas, leaving a remaining "octagonal" concrete shape around the pipe in exposed sections.

Adam explained that access along the interceptor includes manholes in some locations, but also includes blind flange plates that represent "tee" access points. He noted that these tees are not well suited for traditional crawler CCTV inspection equipment, which limits the ability to inspect the pipe using standard municipal methods. He highlighted that the combination of limited access points and missing concrete encasement contributes to the pipeline's overall vulnerability.

Adam also described how the laterals shown in the 1959 plans generally match field conditions today. Some laterals are exposed and some remain buried, but several are vulnerable, including laterals that are open to the atmosphere. He also pointed to areas where the interceptor was designed to be buried and encased in concrete, while other segments were designed to run through a concrete wall in exposed areas. He noted that these details help illustrate what the team is dealing with as they evaluate potential solutions.

Pipeline Cleaning and Inspections

Adam described the standard process for sewer cleaning and inspection, which includes cleaning the pipe, inspecting it with a camera, preparing a summary of the video findings, and having an engineer review the results to determine needed repairs or next steps. He emphasized that understanding this process is important because Keller Beach is unusually difficult to clean and inspect due to its location and access constraints.

Adam noted that during the 2021 inspection, the contractor (Express Sewer) staged equipment on nearby roads and carried hoses and tools down cliffs and side yards to reach access points, making the work labor intensive and time consuming. He explained that standard sewer cleaning relies on high-pressure jetting and vacuum removal from a truck positioned at a manhole—an approach that is straightforward in roadways but difficult to perform at Keller Beach due to limited access.

Adam also compared inspection methods, describing “push cameras” (often used by plumbers for smaller pipes) and municipal “crawler” CCTV cameras, which provide higher-quality footage and allow for standardized defect coding. He noted that crawler systems require a cable connection back to the truck and sufficient access openings to deploy the equipment.

Adam explained that the 2021 inspection was completed, but not for the entire length of the interceptor. He noted that video quality was sometimes limited due to sags in the pipe that create high water levels and reduce visibility, and that overall the pipe appeared to be in poor condition. He emphasized that inspection and cleaning are costly and challenging at Keller Beach due to poor access, limited work windows tied to tides, and the pipe’s cast iron material, which is susceptible to corrosion. He noted that crews were unable to remove all tuberculation (i.e., buildup) during cleaning, and that infiltration—water entering the pipe from outside—was observed, with water and sand returning after flushing. Adam noted that sand sources could include multiple factors, such as broken laterals or missing manhole covers, which were reflected in the inspection report.

Adam shared that internal inspection footage shows significant tuberculation that remains after cleaning, which matters because many rehabilitation approaches (such as lining) work best when the pipe is clean, open, and circular. While some products may be able to work with remaining buildup, he noted that the pipe is not expected to be cleaned substantially better than what was achieved during the 2021 effort.

Finally, Adam addressed how much of the pipeline has been inspected. Based on the available report, the interceptor is approximately 5,400 feet long, with about 1,500 feet (approximately 30%) either not inspected or only partially inspected. Adam stated that additional inspection is not expected to be necessary for the feasibility study because of the high cost and time required, and because the team does not expect new inspection data to change the overall outcome of the alternatives evaluation. He noted that, in general, sewer lines should be inspected every five years, and clarified that while ongoing inspection may still be appropriate for system management, BKF is not recommending additional inspection solely for the purposes of completing the feasibility study.

Q&A

- **Q:** Is the project evaluating not only the pipe's visible condition, but also whether it is functioning—specifically whether flow is successfully conveyed end-to-end and whether there is any loss of material along the way?
    - **R:** This type of functional "mass balance" analysis (what goes in versus what comes out) is not part of the project scope. The Keller Beach Pump Station is operating, indicating flow is moving through the system.
- **Q:** If effluent is flowing through the pipe and it does not appear to be leaking into the Bay, why can't a "pig" be run through the line to enable a full inspection, and why wouldn't a complete (100%) inspection be performed before deciding whether replacement is necessary?
    - **R:** The 2021 inspection consisted of camera footage, but approximately 30% of the pipe was not inspected. Inspection limitations can be driven by access and distance constraints because the camera must remain connected to the truck. If 70% of the pipe is already documented as being in poor condition, the City would still need to address that portion, and at that point it may be reasonable to address the full line. Additional inspection data could be beneficial, but the project team's view is that additional inspection may not be cost-effective for this feasibility study.
- **Q:** Is there evidence the pipe is leaking or contaminating the Bay, and if pipes should be inspected every five years, why was the inspection not completed?

    - **R:** There is no visual evidence confirming leakage into the Bay. BKF is focused on what inspection information is needed for the feasibility study, and I would defer to the City regarding broader inspection requirements. In addition, completing additional inspection is not expected to change the outcome of the alternatives evaluation and could increase cost and delay the study. Depending on the preferred alternative, the report may recommend additional field investigations prior to design. The intent is to avoid unnecessary spending until those needs are clearer.
- **Comment (C):** The interceptor should be replaced with stainless steel pipe as a long-lasting, corrosion-resistant solution.
    - **R:** All pipe materials are being considered as part of the alternatives evaluation, but I am not aware of sewer agencies using stainless steel for raw sewage conveyance. The comment will be documented and materials such as HDPE and PVC are also being evaluated.
- **Q:** What was the cost of the 2021 cleaning and inspection?
    - **R:** The City is currently looking into the costs of the 2021 pipeline inspection.

Evaluation Criteria

Adam explained that the feasibility study will compare alternatives using a defined set of evaluation criteria developed in coordination with the City. These criteria are intended to provide a consistent framework for assessing tradeoffs across alternatives.

Hydraulics

Adam explained that some alternatives involve diverting flow away from the Keller Beach sewer line. The hydraulic evaluation will consider whether diversions could create downstream capacity issues, the magnitude of flow reduction achieved, and whether modifications to the Keller Beach Pump Station would be required.

Constructability

Adam described constructability as an assessment of how feasible and complex each alternative would be to build. Considerations include site access, staging needs for materials and equipment, potential soil-related risks, and how laterals would be reconnected depending on the location of new gravity lines, pump stations, and force mains. Adam also noted that alternatives involving rehabilitation of the existing interceptor may require additional pipe cleaning and inspection, and that dewatering and tide constraints would be important factors for any work occurring near the shoreline.

Environmental and Regulatory Compliance (Anchor QEA)

Katie Chamberlin (Anchor QEA) explained that environmental and regulatory considerations will be screened as part of the feasibility study, focusing on three related areas: permitting requirements, environmental review requirements, and anticipated timelines. She clarified that environmental review would include compliance with the California Environmental Quality Act (CEQA) and the National Environmental Policy Act (NEPA).

Katie noted that the alternative selected will directly affect the complexity and duration of both permitting and environmental review. Screening factors will include evaluating upland alternatives first to avoid and minimize impacts to San Francisco Bay; limiting net in-water fill and disturbance for shoreline/in-water alternatives (including subsurface work below the bay); reducing the amount and duration of in-water construction to lower regulatory risk and mitigation requirements; and considering long-term resilience, including exposure to sea level rise and shoreline erosion.

Katie explained that upland alternatives generally involve less complex permitting and shorter review timelines, while shoreline and in-water alternatives would trigger additional state and federal review and require more coordination. She also noted that CEQA and NEPA require agencies to demonstrate that both upland and in-water alternatives were considered before selecting an option with greater environmental impacts. At a planning level, she stated that CEQA review can take approximately one to two years, with additional time potentially required if NEPA applies. She added that if an alternative includes in-water work, NEPA compliance would likely be led by the U.S. Army Corps of Engineers through Clean Water Act and Rivers and Harbors Act permitting processes, and would involve coordination across multiple federal and state agencies, including bay-specific regulators.

Construction Cost

Adam noted that cost estimates will be developed for each alternative, including consideration of “throwaway costs” for interim measures that may not carry forward into a final solution. The analysis will also consider risk of cost overruns and, to a lesser extent, anticipated design costs, recognizing that feasibility-level assumptions may need refinement during later phases.

Operations and Maintenance

Adam stated that operations and maintenance requirements will be evaluated, particularly for pump-dependent alternatives that increase ongoing power and maintenance needs.

The criteria will also consider how difficult and costly future inspection and cleaning would be, along with staffing needs, energy use, and lifecycle costs over the anticipated design life.

Social and Community Impacts

Adam emphasized that community impacts are a key consideration, including disruption from roadway construction, impacts to residences, and potential implications of pump stations and sewer work on private property. Adam noted that public input and community preferences gathered through outreach and site walks will be incorporated into the evaluation.

Risk and Resilience

Adam explained that risk and resilience criteria will include consequences of failure, opportunities for redundancy and reliability, environmental exposure risks (including erosion and sea level rise), and the feasibility of emergency response if a spill or overflow takes place or repair is required.

Right-of-Way

Adam stated that right-of-way constraints will be evaluated, including whether easements, rights of entry, or other property agreements would be required for roadway alignments. Adam noted that continuous public right-of-way may not exist across the full corridor, which could affect feasibility and timelines for implementation.

Weighted Scoring Approach

Adam explained that alternatives will be scored against the criteria and combined using a weighted scoring approach to reflect differing levels of importance across categories. Adam clarified that this process is intended to provide an objective comparison tool, but that final decisions will ultimately be made by the City and City Council.

Q&A

- **Q:** Who will be responsible for developing the weighting of evaluation criteria and scoring the alternatives?
    - **R:** The project team will work with the City to develop the final weights for each criterion. The consultant team will assign scores to the alternatives and provide the results to the City for consideration.
- **Q:** Is the entire interceptor line exposed at low tide, and which portions are not visible?

    - **R:** The interceptor is not fully exposed above ground along its entire length. Some segments remain within the concrete wall near Ocean Avenue and other portions remain buried. During very low "king tides," the full alignment can be walked and the pipe is not underwater, but it is not fully exposed above ground everywhere.
- **C:** Funding sources are unclear, and it is difficult to evaluate alternatives without knowing whether funding will be available, including potential limitations on federal funding and current state budget constraints.
    - **R:** The City is looking into funding availability, and potential funding sources will be discussed later in the presentation.
- **Q:** Will environmental review include impacts associated with upland or roadway alternatives that could require pump stations for shoreline homes, including energy and related environmental considerations?
    - **R:** The feasibility study will screen the full scope of each alternative, including components such as pump stations if they are inherent to the alternative. No environmental documents are being prepared or submitted at this stage; the study will identify what environmental review and permitting would likely be required. Future environmental review under the CEQA would need to address topics such as energy use associated with pumping.
- **Q:** Are the weights used in the evaluation matrix required to meet any federal or state standards?
    - **R:** There are no federal or state requirements governing the weights. Weighting can be customized through coordination with the City and other stakeholders.
- **Q:** Are there comparable coastal or bayside communities that have gone through a similar process, and could lessons learned from other locations inform this project?
    - **R:** The project team has not identified a directly comparable example to date. Other shoreline communities exist, but conditions are often different because infrastructure is typically not located below the access roadway. Participants are invited to share examples of similar projects for review.

Alternatives

Adam explained that multiple alternatives are being evaluated because City Council directed staff to consider a range of options, and because regulators are expected to require documentation showing that feasible alternatives were evaluated. He added that compliance with CEQA and NEPA also requires consideration of alternatives, and that the

City has not ruled out funding sources that could introduce additional requirements. Adam emphasized that no single alternative has emerged as a clear "silver bullet," and each option presents tradeoffs.

Adam stated that the alternatives were initially framed as three interim and three final options, but were reorganized into three groups to better reflect how interim and final concepts overlap. The alternatives are now organized into Group A (Flow Diversion), Group B (Beach Alternatives), and Group C (Roadway Alternatives).

Maps illustrating each of the alternatives are available under the **Exhibits** section of the project website linked here: KBSS Project Website.

Interim vs. Final Alternatives

Adam explained that the primary distinction between interim and final alternatives is whether the alternative meets the full set of project objectives and legal requirements discussed earlier in the meeting. Interim options may provide near-term benefits, but do not meet all objectives. Final alternatives are intended to meet all objectives and are expected to take longer to implement. Adam noted that interim alternatives are limited to flow diversion approaches, while final alternatives may include flow diversion, rehabilitation, or relocation options.

Group A: Flow Diversion

Adam explained that flow diversion alternatives are intended to reduce the amount of wastewater conveyed in the KBSS line. He stated that reducing flow could limit the volume of sewage released if a failure occurs before a final solution is implemented and could also reduce pumping demands at the Keller Beach Pump Station or under future roadway alternatives. Adam noted that flow diversion options may be implemented more quickly because they can avoid beach and bay construction activities, and interim diversion measures could potentially be compatible with a final alternative.

Adam also described limitations of flow diversion alternatives. He stated that interim diversion options do not meet required objectives because the KBSS line would remain at least partially active and in poor condition and would continue to be difficult and costly to inspect and maintain. He added that interim options may result in "throwaway" costs if they do not integrate into a final solution, and noted that two of the three diversion alternatives require pumps, which would increase operations and maintenance demands.

Alternative A1: Gravity Flow (Interim)

Adam described Alternative A1 as a gravity diversion concept in which new gravity sewer segments would be installed to redirect flow from the KBSS line to other portions of the

collection system using elevation differences, without pumping. He explained that this would be achieved by plugging the downstream outlet of certain existing manholes to force flow in a different direction. Adam noted that the feasibility of the gravity approach depends on local elevations and stated that the team has confirmed that elevations work for one area and is continuing to refine a workable path for another area based on topographic survey information. He added that determining the exact number of connections diverted would require confirming which laterals connect to which pipes, and that additional field work would only be warranted if this alternative advances.

Alternative A2: Pumped Flow (Interim)

Adam described Alternative A2 as a similar diversion concept that intercepts flow farther downstream to divert additional connections. He explained that because elevations do not support gravity diversion at the selected interception points, this alternative would require a small pump station and a force main to convey flows to the same downstream discharge location. Adam noted that this alternative could divert more flow from the KBSS line and could potentially support a future final configuration depending on the selected long-term alternative.

Alternative A3: Pumped Flow (Final)

Adam explained that a pumped diversion approach could potentially divert most or all flow off the KBSS line through multiple pump stations and force mains. He noted, however, that even full diversion would still require a solution for the oceanfront properties that currently connect directly to the shoreline system.

Group B: Beach Alternatives

Adam explained that beach alternatives are intended to keep the system as a gravity interceptor along the shoreline and avoid adding new pumping. He stated that beach alternatives could reduce impacts to private property and homeowners, avoid increasing current pumping costs, and could potentially be less costly than roadway alternatives. He also noted that beach alternatives may allow a mix of rehabilitation and replacement methods depending on site conditions.

Adam also described challenges associated with beach alternatives. He stated that beach work is expected to be difficult to permit, would likely face limited work windows due to tides, and may require groundwater dewatering and use of inflatable dams to control seawater. He added that even if the interceptor is rehabilitated or replaced in its current location, it would remain difficult and expensive to inspect and maintain. Adam noted that shoreline placement remains susceptible to erosion, corrosion, and other natural forces, and that existing “bellies” in the line would remain unless corrected.

Alternative B1: Rehabilitate Existing Pipe

Adam explained that Alternative B1 would rehabilitate the existing beach interceptor, including adding access points to improve the ability to inspect and clean the line. He described several rehabilitation methods under consideration, including cured-in-place pipe (CIPP), sliplining with high-density polyethylene (HDPE), and sliplining with fold-and-form PVC. He also noted that rehabilitation could include manhole improvements and would require evaluating the condition of the concrete encasement and retaining wall to determine what exterior reinforcement may be needed to support long-term performance.

Adam identified several concerns related to rehabilitation. He noted that pipe cleaning may be limited by tuberculation and buildup, and that regulators may not allow chemically cured products in an ocean environment. He also stated that excessive diameter reduction could hinder future inspection, and that excavation would be required under all rehabilitation methods to gain access for installation, even if the approach is considered "trenchless." Adam added that if extensive excavation and permitting are required, constructing a new pipe may provide better long-term value than rehabilitating the existing line.

Adam also noted that tunneling beneath Cypress Point was considered but identified several challenges, including lateral reconnection, easements and access, and liability. He stated that if bellies remain in the line, the sewer may still function hydraulically, but standing water can prevent effective CCTV inspection.

Cured-in-Place Pipe (CIPP). Adam described CIPP as a liner impregnated with resin that is installed within the pipe and cured into a structural circular shape using steam, hot water, or ultraviolet light. He stated that CIPP generally provides a fully structural solution with minimal diameter reduction and can often be installed through existing manholes with a relatively small staging footprint. He noted, however, that it typically requires a clean pipe and that the curing process can be negatively affected by infiltration, which could affect long-term performance.

Traditional Sliplining (HDPE/PVC). Adam described traditional sliplining as inserting a new fused pipe within the existing pipe. He stated that sliplining results in a new pipe and does not require curing, but may be limited by joint deflections or tuberculation that prevent insertion. He also noted that sliplining requires staging space to string and fuse pipe and typically requires excavation pits because it cannot be installed through manholes. Adam added that sliplining produces the greatest diameter reduction of the rehabilitation options and that reducing diameter below 8 inches would make inspection, cleaning, and maintenance more difficult.

Fold-and-Form Sliplining (PVC). Adam described fold-and-form as a structural liner that is pulled into the pipe and expanded into place using heat and air, then hardened as it cools. He noted that it does not require chemical curing, can be installed through manholes, arrives on a spool with reduced staging needs, and may be better able to navigate bends than HDPE. He added that it still requires a reasonably clean pipe, may not be as strong as traditional pipe or CIPP, and that the project team is consulting with vendors and other agencies to better understand performance and applicability.

Alternative B2: Construct New Pipe

Adam explained that Alternative B2 would construct a new pipe along the beach corridor. He stated that if rehabilitation requires extensive excavation and environmental clearance, constructing a new pipe could be a more straightforward long-term approach while still limiting impacts to the upland community.

Group C: Roadway Alternatives

Adam explained that roadway alternatives are intended to relocate the interceptor into the roadway environment, where it would be more protected from wave action, erosion, and seawater exposure. He stated that roadway placement would allow inspection and maintenance using standard equipment and could potentially reduce environmental permitting requirements compared to shoreline and in-water work. Adam also noted that roadway alternatives may restore the beach to a more natural condition if the shoreline pipe is removed, and stated that one potential benefit could be eliminating the existing Keller Beach Pump Station (KBPS), depending on final configuration.

Adam also described key drawbacks of roadway alternatives. He stated that roadway relocation would likely require private pump stations for many oceanfront homes, and that available space and feasibility would need to be evaluated on a lot-by-lot basis. He noted that roadway alternatives would have the highest impacts to private property due to excavation in side yards, driveways, and backyards, and are expected to be among the most expensive options due to pavement restoration, pump stations, and specialized trenchless construction needs. Adam also noted that roadway alternatives may still require removal of the shoreline pipe depending on environmental permitting requirements, and would likely require easement acquisitions.

Alternative C1: Traditional Open-Cut with Pumps

Adam described Alternative C1 as a roadway alignment using conventional open-cut construction, with a series of gravity segments and pump stations connected by force mains. He explained that flow would move by gravity to a pump station, be pumped up to a higher elevation, flow by gravity down the next segment, and repeat in series. Adam noted

that the concept includes a pump station near the end of Cypress Point to capture flow that would otherwise have no downstream outlet if the shoreline interceptor were removed.

Adam also explained that under this roadway concept, it may be possible to route gravity flow through the existing tunnel and potentially eliminate the Keller Beach Pump Station. He noted that doing so would require navigating constraints within the tunnel area, including a 36-inch East Bay Municipal Utility District water line and the existing railroad tunnel, and stated that early indications suggest a feasible alignment may be possible.

Alternative C2: Trenchless; Less Pumps

Adam described Alternative C2 as similar to C1, but with fewer pump stations by using trenchless construction methods such as horizontal directional drilling or bore-and-jack to pass through hills rather than pumping up and over. He stated that the team is using topographic survey information and developing preliminary profiles to better understand invert elevations and feasibility for this approach.

Q&A

- **Q:** Has the project team reviewed similar shoreline conditions and sewer infrastructure approaches in Tiburon and Belvedere, particularly along Paradise Drive?
    - **R:** The project team is now in contact with Marin Sewer District No. 5 and will include any information obtained from them into the final analysis/report.
- **Q:** How will sewer service be maintained during construction, and will residents lose functioning plumbing while work is underway?
    - **R:** Service impacts will depend on the selected alternative and construction phasing. Industry standard practice typically uses temporary bypass pumping, generally from manhole to manhole and usually located in the street, to maintain service during construction. Work is typically phased to minimize shutdown durations and restore service quickly. Alternatives that require private pump stations on individual properties would result in higher impacts.
- **C:** Alternative A1 (gravity diversion) should not be treated as comparable to full replacement or rehabilitation alternatives and could be implemented independently without pumps or CEQA review. The alternative could reduce approximately 20% of flow and should be prioritized given the moratorium and impacts to property owners.

    - **Q:** Why is flow diversion from two sections of Point Richmond being treated as an interim alternative rather than a final solution, given that it could potentially meet evaluation criteria?
    - **R:** Unless all flow is removed from the Keller Beach interceptor, the shoreline line would remain active and in poor condition with severe defects. Based on discussions including with the City Attorney's office, partial diversion alone is not understood to be an acceptable final solution. The moratorium is a related but separate issue outside the consultant's scope. If an interim solution can comply with all regulatory requirements, it would remain under consideration.
- **Q:** Are any preliminary or rough cost figures available for the alternatives?
    - **R:** Cost estimates will be developed as part of the feasibility study but are not available at this time.
- **Q:** What is the order-of-magnitude size and configuration of the pump stations shown in the roadway alternatives, including whether they include holding tanks and how much space they require?
    - **R:** Pump station sizing is still under evaluation and can vary depending on pumping requirements. Gravity flow would enter an underground wet well, with submersible pumps conveying flow into a force main. Valves would be housed in a valve vault, and power infrastructure would include an above-ground power panel. The team is evaluating whether sufficient space exists at potential locations and expects to include illustrative graphics in the report.
- **Q:** Would small pump stations create noise, odor, or other neighborhood impacts, or are they effectively invisible once installed?
    - **R:** Impacts can vary based on individual sensitivity. Small pump stations are common in municipal systems. While impacts cannot be eliminated entirely, these pump stations would be relatively small, and the team will seek to site them to minimize impacts to residences where feasible.
- **Q:** Will the feasibility report address likelihood of failure and how Keller Beach should be prioritized relative to other City sewer projects, given that the Baykeeper settlement focuses on overflows elsewhere and distinguishes between grade 3, 4, and 5 defects?
    - **R:** While the settlement does not specifically reference Keller Beach, it requires grade 4 and grade 5 defects to be addressed or placed on a schedule. The 2021 inspection was not a full PACP report and did not quantify defects, but observed tuberculation and sags could elevate to grade 4 operations and maintenance defects. A PACP-certified staff member is

reviewing the footage. Although there is no current overflow, the shoreline interceptor has a high consequence of failure and potential for significant fines. The City cannot definitively confirm pipe wall condition due to concrete encasement and uncertainty between corrosion and buildup.

- **Q:** What is the condition of other sewer pipes in the broader system, would removal of the beach pipe trigger the same permitting requirements as replacement, and how are homeowner costs versus City costs being accounted for?
    - **R:** The feasibility study is focused on the Keller Beach interceptor, and the condition of other pipes has not been evaluated. Pipe removal is being evaluated to determine whether it would be required and what permits it would trigger; removal would likely require similar state and federal permits as replacement. Cost estimates will be conservative and high-level, with line items for private property work such as laterals and pumps, recognizing that costs vary by lot and include contingency.
- **Q:** Are there alternatives to traditional sewer inspection methods given the access and physical constraints at Keller Beach?
    - **R:** While newer technologies exist, most are variations on the same core cleaning and inspection concepts. The project lead plans to meet on-site with an advanced inspection contractor to gather input and explore any potential alternative approaches.
- **Q:** Is the project being advanced due to proposed housing?
    - **R:** The project is being advanced due to existing sewer conditions and associated legal requirements.
- **Q:** Are regulatory responses to locating pump stations in pocket parks being considered, along with hardships to residents below street grade such as costs and generator needs during power outages?
    - **R:** Yes. These factors are being considered as part of the feasibility evaluation.
- **Q:** How will odorous gases be managed under the proposed solutions, given the potential for localized odor impacts and limited dispersion due to topography?
    - **R:** The proposed solutions are not expected to generate odors beyond what is typical for other pipes or pump stations in the City's system. Odor concerns would be addressed if complaints arise following construction.
- **Q:** Has an alternative been evaluated that places a new pipeline in deeper Bay waters outside the intertidal zone, potentially installed on the bay floor surface rather than buried?
    - **R:** A pipeline farther out in the Bay would be more difficult to maintain, clean, and inspect, and would require laterals from shoreline homes to extend

farther into the Bay, increasing construction complexity. The team does not believe this alternative would be more effective or less costly than those already under consideration, but the suggestion will be documented in the final report.

Ben Gettleman read out a letter from Carolyn Neil, which was submitted for the record and is included in full in **Appendix B-1**. In the letter, Ms. Neil expressed support for rehabilitating the existing gravity system as the preferred approach. If rehabilitation is not feasible, she recommended using a small number (approximately six) of municipally owned and operated pump stations at beach level to consolidate flows from multiple households, rather than installing numerous privately owned and operated pumps. The letter raised concerns related to close spacing between homes, erosion and hillside stability, homeowner costs, power outage risks, and potential property line and legal constraints.

Adam stated that the concerns raised in the letter were noted and consistent with issues raised by other participants. He added that placing pump stations on the beach would, in his view, defeat the purpose of removing the pipeline from the shoreline. He stated that this configuration is not an alternative currently being considered but reiterated that the challenges described in the letter are recognized.

Funding Opportunities

Adam explained that BKF's funding team has been researching potential funding programs, including both grants and low-interest loan opportunities. He noted that low-interest loan programs are generally available on an ongoing basis, while grant programs vary in eligibility requirements and timing.

Adam highlighted the Environmental Protection Agency's Water Quality Restoration Grants as particularly promising because it is currently open and is specifically intended for projects related to San Francisco Bay. He stated that the application deadline is anticipated at the end of March and that BKF is coordinating with the City on what would be required to pursue the opportunity. Adam added that the program is expected to recur annually and is focused on improving water quality and protecting the Bay, with eligibility limited to Bay-area counties that border San Francisco Bay. He noted that BKF's grant specialist has spoken with the program administrator and received an initial favorable response regarding the potential fit of this project for the funding.

Ben also noted that project funding is expected to align with phased implementation. He explained that funding typically supports sequential phases—feasibility, design, and construction—and that completion of earlier phases is generally required before funding can be secured for later phases.

Next Steps

Post-meeting materials, including the presentation, video recording, exhibits, and a summary of comments and Q&A, will be made available on the project website linked here: KBSS Project Website. Some materials are already posted, and additional items will be uploaded as they are finalized.

The next public workshop is expected to occur after the alternatives evaluation results are available, to review outcomes and discuss next steps. This is anticipated in the May–June timeframe.

Participants may contact the project team with additional questions or to request follow-up discussions at Keller_Beach-Project@ci.richmond.ca.us. Community members are also encouraged to join the project distribution list to receive updates.

Appendix A. Participant List

Name	Attendance
Cesar Zepeda	In Person
Hillal Hamdan	In Person
Adam Brown	In Person
Katie Chamberlin	In Person
Joseph Yarosh	In Person
Ben Gettleman	In Person
Nicholas Saffold	In Person
Michael Ding	In Person
Marlys Jeane	In Person
Fred Page	In Person
David Anderson	In Person
Jan Diamond	In Person
Moses Vaughn	In Person
Zoe Harwood	In Person
Joe Puleo	In Person
Ray Anderson	In Person
Maria Katnelson	In Person
Eric Greenwood	In Person
Bonita Satre Daley	In Person
Rodrick Satre	In Person
Eric Meyer	In Person
Michelle Osborne	In Person
Luchana Messina	In Person

Norman Hantzsche	In Person
Andrea Biren	Virtual
Anna Froker	Virtual
Barry Goode	Virtual
Bart Obrien	Virtual
Bill S	Virtual
Blabls Bkabka	Virtual
Brenda Greenwood	Virtual
Bruce Brubaker	Virtual
C. Brooks	Virtual
Charmain Tyler	Virtual
Christine Neubert	Virtual
Christopher Roderick	Virtual
Chuck Weisselberg	Virtual
Claire A	Virtual
Dan Santos	Virtual
David Roche	Virtual
Derek Suring	Virtual
Doug Williams	Virtual
Elizabeth Langille	Virtual
Gabino Arredondo	Virtual
Graham Leggett	Virtual
Jaqi Thompson	Virtual
Jeff Ritterman	Virtual
Jeffrey Mulvihill Sr	Virtual

Jeffrey Vines	Virtual
Jennifer Kober	Virtual
John Towns	Virtual
Joseph john	Virtual
Joy Ruddell	Virtual
KenLori Eifert	Virtual
Kit Pappenheimer	Virtual
Melinda Mendelson	Virtual
Michael Chang	Virtual
Nancy Noble	Virtual
Paula Lavine	Virtual
Priya B.	Virtual
Raymond Pestalozzi	Virtual
Richard Giordano	Virtual
Richard Katz POB 452	Virtual
Richard Kramer	Virtual
Rosemary Corbin	Virtual
Sally Tobin	Virtual
Samantha Roderick	Virtual
Simon Winer	Virtual
Stephen Harvey	Virtual
Steve Birndorf	Virtual
Steven Harris	Virtual
Vivien Feyer	Virtual

William Gorjance	Virtual
Unknown Zoom User	Virtual

Appendix B. Written Submissions (Letters Submitted for the Record)

Appendix B-1. Letter from Carolyn Neil

"If we cannot do a restoration implementation, I'm in favor of a small number, maybe six of municipally owned and operated pump stations at beach level to consolidate multiple households worth of waste for pumping up to the newly invented pressure lines in Western Drive and Ocean Avenue and not 72 privately owned and operated pumps. I've attached rationale and photographs as to why in the following pages.

Issue one. Close proximity of some homes. Some homes are incredibly close together. In some cases about 8 ft with only poured sidewalks, stairs in between, all which would significantly impact homes including cost and integrity.

Issue two, erosion. When I purchased my home, the geoengineer advised to keep my back patio in great condition at all costs as it supports the home. The fairly new updated sewer lateral goes through that patio. I'm now facing some erosion issues on the hill below and will need to address that. I'm very concerned digging up between the tightly fit homes could further upset the hillside and possibly cause further erosion issues, undermining stability of homes.

Additional concerns, huge cost for homeowners. In addition to the cost of equipment installation, some homeowners would have huge structural engineering bills and concrete replacement bills. It's a poor engineering idea and poor economics of scale.

Power outages. What happens when individual pumping stations are without power?

Property line and legal issues. While many homes have a survey and property lines are clear, there may be cases where homes have issues on where these new sewer lines could or would need to go. Digging up all of Western Drive connection to the individual pumping stations has major issues in itself.

In conclusion, I'd like to have this letter be put on the public record as my recommendation to attempt to rehab existing gravity systems as a first choice. We have the science, engineering, and ability to make this happen. Even if it's hard, let's do better on this attempt and not give up because it's hard. I know from talking to engineers, it's not possible.

If the city and city consultants choose a different direction than rehabbing existing systems, I recommend a small number of municipally owned and operating pumping

stations to consolidate multiple households worth of waste. It's the smarter thing to do than individual pumping stations."

Appendix B-2. Letter from Barry Goode

Barry P. Goode
615 Cypress Point Road
Richmond, California 94801

January 18, 2026

Keller Beach Sanitary Sewer Project Team
City Hall
440 Civic Center Plaza
Richmond, CA 94804
and
mjeane@kearnswest.com

Re: Information Needed to Prioritize Sewer System Repairs

Gentlepersons:

I attended the community workshop held on January 14, 2026. I would like to reiterate a concern I have and ask that it be addressed more fully than it was at the meeting.

As the Keller Beach webpage says (in the FAQs) "The [Baykeeper] settlement is not specific to Keller Beach, but applies to the Citywide sewer system." I have read the settlement agreement. It appears there are significant problems with sanitary sewer overflows and inadequate systems throughout the city. It is clear that the city must make decisions about prioritizing which parts of the sewer system should be improved first.

Throughout the discussions of the Keller Beach system, there has never been much evidence offered to support the notion that the pipe is at risk of failure. As was discussed at the January 14 meeting, the pipe has not been fully inspected. (This, despite the fact that the Baykeeper settlement agreement required, "by June 30, 2018, all gravity sewer mains...[shall] have had their condition assessed within the last ten years. Condition assessment for gravity sewer lines shall be based on Closed Circuit Television... inspection and shall employ the Sewer Line Condition Grading Matrix attached hereto as Exhibit A.")

It was also said that the pipe was originally encased in two layers of concrete. In places, one layer has eroded. But there was no discussion of why the remaining layer is inadequate or how long that might last. (In places the two layers have lasted more than 60 years.)

In addition, no one has tested the waters adjacent to the pipe (and compared it to other nearby bay water) to see if there is any contamination coming from the pipe. Nor has there been evidence of infiltration of bay waters into the pipe. There is no evidence that the pipe is leaking or permeable.

Indeed, it was said at the workshop that the issue that could result in the Keller Beach sewer line being a category 4 issue was "operation and maintenance," not "structural defects."

Instead, the explanation for this focus on the Keller Beach pipeline boils down to two facts: one, it is old. Two, if it were to break, the city would be liable for substantial fines.

But the city is at risk of fines and penalties for violations of federal and state law with regard to all the other parts of the sewer system that are the object of the Baykeeper settlement. In fact, the Baykeeper settlement agreement says that the city must reduce the number of SSO's per 100 miles of sewer line to 5 this year, and 5 next year. The agreement says the city has almost 200 miles of sewer lines; so that's 10 SSO's per year. The settlement agreement expires in July 2028. If there are still 10 SSO's per year, what penalties could that bring?

Thus, the question has to be asked: "to which of the many problems should the city devote money and in what order of priority?"

Without a more complete assessment of the possibility of the Keller Beach sewer line failing, that question cannot be answered responsibly. Any need to repair it cannot be thoughtfully compared to the need to repair other parts of the system.

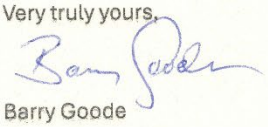
No one wants to see a discharge of sewage to the bay from the Keller Beach line. But the risk of that occurring seems not to have been assessed properly. (The Keller Beach line was not named in the Baykeeper settlement agreement; other parts of the system were.)

No one wants the city to be at risk of large fines for violation of state and federal law. But that risk applies to the entire sewer system, not just Keller Beach. One would think that responsible decision-making would start with an assessment of where the risk is greatest, and what the cost would be of a failure at significant points in the system.

This was not the first meeting I attended. At each, the question of assessing the Keller Beach sewer line's risk of failure was raised. At each, the presenters largely assumed there was a risk, hence the "need" for a feasibility study. Assuming a conclusion rarely leads to good decision-making. A feasibility study usually follows a proper risk assessment. That helps to focus the feasibility study on risks to be addressed. That seems to be lacking here.

I hope the forthcoming report will include a thorough discussion of the actual risk of failure of the Keller Beach line so that the city's decision-makers can compare that to the risk of failure at other points in the system and decide, on firm evidence, how best to allocate the city's resources.

Very truly yours,



Barry Goode

Cc: Cesar Zepeda (cesar_zepeda@ci.richmond.ca.us)