CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

ORDER NO. R2-2022-00XX

TENTATIVE WASTE DISCHARGE REQUIREMENTS ORDER for:

PACIFIC 42, LLC.

for the property located at**:**

APN 405-030-062
LAKE PARCEL C LANDFILL
RICHMOND, CONTRA COSTA COUNTY

The California Regional Water Quality Control Board, San Francisco Bay Region (Regional Water Board) finds that:

SITE DESCRIPTION, LOCATION, AND DISCHARGER

1. The Lake Parcel C landfill (landfill) is a closed six-acre landfill within the 22.196-acre Parcel C (APN 405-030-062) in Richmond, near San Pablo Bay. The landfill is located on a larger former industrial property, which has been divided into four parcels, referred to as Parcel A, Parcel B, Parcel C, and the Remainder Parcel. Parcel A contains a former capped acid pond with a large commercial warehouse recently constructed on top; Parcel B currently has a warehouse under construction; and the Remainder Parcel contains undeveloped wetland areas. The property is located approximately ½ mile east-northeast of the intersection of Giant Highway and Atlas Road (Figure 1). In addition to the landfill, Parcel C contains a freshwater lake and two decommissioned oil and gas wells. The property is bounded to the north by Union Pacific Railroad tracks, which traverse approximately east-west and separate the property from San Pablo Bay and the Point Pinole Regional Shoreline, a park operated by the East Bay Regional Park District. Burlington Northern/Santa Fe Railroad tracks run along the southern property boundary. To the south are residences, to the east and west are commercial/industrial warehouses.

2. The larger property, including Parcel C and the landfill, was previously owned and operated by Bethlehem Steel Company (Bethlehem) from 1963 to 1979, when it was sold to Pinole Point Properties, LLC (PPP). In 2016 - 2017, PPP sold the property to 6200 GR, LLC. In 2019, 6200 GR, LLC transferred ownership to another entity called Pacific 42, LLC.

3. Parcel C is the subject of this Waste Discharge Requirements (WDR) Order. Pacific 42, LLC hereinafter the Discharger, is the Responsible Party and named discharger for Parcel C and the landfill. Parcels A and B are also under new ownership but are not addressed in this Order.

PURPOSE OF THE ORDER

4. The purpose of this Order is to:

a. Recognize the new property ownership;
b. Summarize landfill consolidation and capping work that has been completed;
c. Require a Self-Monitoring Plan (SMP) and establish Water Quality Protection Standards (WQPS); and
d. Require Post-Closure Monitoring and Maintenance.

5. This Order does not authorize the excavation or filling of wetlands or waters of the State. Such activities require separate authorization by the Water Board pursuant to the Porter-Cologne Water Quality Control Act (Wat. Code §§ 13000 et seq.; Porter-Cologne Act) and/or Section 401 of the Clean Water Act. Such activities, if permitted, may require an amendment or update of WDRs contained in this Order for any proposed fill or excavation area.

SITE AND REGULATORY HISTORY

6. From approximately the 1940s to 1960, a domestic landfill operated at the site in the general area of the existing freshwater lake and to the west of the former Parcel A capped acid pond. At the time, the lake and acid pond were marshland.

7. In 1964 Bethlehem submitted a Report of Waste Discharge (ROWD) in order to construct two evaporation ponds on existing marshland for the disposal of galvanizing wastes. Bethlehem planned to use the native surface of the marsh as the bottom of the ponds. In 1965, the Regional Water Board issued Resolution 711 in response to the ROWD.

8. Bethlehem constructed an approximately seven-acre acid pond (Pond 1) in 1965 to collect wastewater from their steel galvanizing operation, and a second pond (Pond 2) on the existing marshland. Pond 1 was used to contain liquid acidic waste from operations at the fabrication plant, and later became known as the Parcel A acid pond. Pond 2 was used to dispose of oily wastewater from hydraulic equipment in the galvanizing plant, and occasionally wastewater containing sodium chromate base. Because Bethlehem's discharge rate was lower than originally estimated, Pond 1 became the only discharge pond starting in 1967. Pond 2 became what is now known as the freshwater lake. Facility operations released contaminants of concern (COC) that impacted soil and groundwater, including lead, zinc, and acids which created low-pH conditions.

9. In 1968, Standard Oil installed an exploratory oil well approximately 300 feet east of the freshwater lake, and a second well approximately 100 feet to the south (Figure 3). These wells were constructed to reported depths of approximately 10,000 and 6,400 feet, respectively. Due to the lack of production, Standard Oil transferred the well to Bethlehem in the early 1970s. The second well was decommissioned in 1972 and the first well was decommissioned in 1975 per the Division of Oil, Gas, and Geothermal Resources (DOGGR) requirements.

10. In May 1985, the Regional Water Board issued Cleanup and Abatement Order (CAO) No. 85-015, requiring Bethlehem and Pinole Point Properties to clean up the Parcel A acid pond.

11. In April 1986, the Department of Health Services (DHS, now the Department of Toxic Substances Control or DTSC) issued a hazardous waste facility permit approving closure of the

acid pond as a land disposal facility. In May 1986, PPP submitted a ROWD and Remedial Action Plan (RAP) to the Regional Water Board proposing to cover residual sludge and impacted soil with a compacted clay cover, construct drainage facilities to divert surface runoff around the capped acid pond, and conduct long-term groundwater monitoring (via a Self-Monitoring Plan, SMP) for detection of metals leaching from the soil. The Regional Water Board adopted Waste Discharge Requirements Order No. 86-40 approving the RAP and imposing water quality protection standards (WQPS) of 860 µg/L (micrograms per liter) for lead and 5,800 µg/L for zinc.

12. In 1990, the Regional Water Board issued Site Cleanup Requirements Order No. 90-161 requiring installation and monitoring of additional groundwater wells to delineate the vertical and horizontal extent of metals in groundwater.

13. In 1993, PPP filed a land use covenant with the DTSC to restrict future land use on the former capped acid pond. Sensitive land uses, groundwater extraction, and disturbing the cap were prohibited.

14. DTSC is now the lead agency for Parcel A, so the Regional Water Board rescinded SCR Order No. 90-161 on January 24, 2022 (Order No. R2-2022-0002), and WDR Order No. 86-40 on February 9, 2022 (Order No. R2-2022-0005). This WDR focuses solely on Parcel C, for which the Regional Water Board remains the lead agency.

GEOLOGY AND SEISMICITY

15. The property is located at the northwestern end of San Pablo Ridge, within the Coast Ranges Geomorphic Province. San Pablo Ridge is one of a series of northwest-trending ridges and valleys within the Coast Ranges that formed because of deformation within the San Andreas Fault system, beginning approximately 10 million years ago. Tectonic activity continues regionally and locally along the Moraga and Hayward Faults, which are located approximately one-half mile from the site to the south and west, respectively.

16. The property is near the shore of San Pablo Bay and is underlain by alluvial deposits from upland sources and bay deposits. Soil near the surface consists of interfingering sand, silt and clay of varying permeability. Bay Mud—comprised of soft, highly compressible, organic-rich silt and clay—underlies most of the site and is generally characterized with a low estimated hydraulic conductivity. The top of the Bay Mud ranges from approximately mean sea level (msl) to 5 feet below msl. Based on data from site borings, the thickness of the Bay Mud varies beneath the site from non-existent to more than 24 feet.

HYDROGEOLOGY AND SURFACE HYDROLOGY

17. The site topography slopes gently to the north, toward San Pablo Bay, and ranges in elevation from 25 feet above mean sea level (msl) on the southern side to 15 feet msl on the northern side adjacent to the railroad tracks. The groundwater flow direction in the site vicinity is generally northward toward San Pablo Bay, and ranges from a depth of approximately 8 to 10 feet msl. The freshwater lake and adjacent 0.4-acre freshwater pond appear to be fed by surface runoff

from areas of higher elevation to the south. Overflow from the freshwater lake drains into San Pablo Bay through a culvert beneath the railroad embankment.

18. Data from over 20 years of monitoring at the former capped acid pond (Parcel A) indicate that the groundwater elevations in the monitoring wells are similar to the water elevation of the freshwater lake, suggesting that the surface water and groundwater are hydraulically connected. The water level of the lake reportedly is relatively consistent throughout the year, and since no sustained source of surface runoff to the lake is known, the lake seems to be at least partially replenished by groundwater. Groundwater elevations historically showed evidence of fluctuation in response to tidal variations and may be hydraulically connected to the Bay.

19. In 2012, the US Army Corps of Engineers mapped the freshwater lake, surrounding wetlands, and riparian line. Their map shows 3.98-acres of waters of the State, 0.03-acres of wetlands, and 0.86-acres of riparian/wetlands (Figure 3).

SITE CONTAMINATION AND LANDFILL CAPPING ACTIVITIES

20. To determine if the freshwater lake was impacted by historical site use, surface water samples were collected in 1969, 1975, 1986, and 1999, with limited detections of heavy metals. Sediment samples from beneath the lake showed higher concentrations of heavy metals, some of which exceeded the WQPS. The final 1999 assessment concluded that disturbing the sediment at the bottom of the lake in order to remove the underlying waste would be more detrimental than leaving it in place. This conclusion was determined to be the best approach for maintaining the biological integrity of the pond during more a recent assessment (2019).

21. Field investigations were conducted from 2000-2005 to evaluate the lateral and vertical extent of the landfill and the quality of the fill material. Landfill debris ranged from a few inches to approximately 14 feet thick in the exploratory test pits, and consisted primarily of metal, glass, and construction debris. The debris was capped with silty clay to clayey sand fill ranging in thickness from one to 12 feet. Soil and soil vapor samples were collected from various locations throughout the landfill footprint.

22. Contaminants of concern (COCs) discovered in the landfill soils included soluble metals (copper and lead exceeded the Soluble Threshold Limit Concentration), dioxins, and petroleum hydrocarbons. Soil vapor detections included some low-level volatile organic compounds (VOCs), such as acetone, benzene, tetrachloroethene, toluene, and xylenes. Follow-up grab groundwater samples from four locations contained elevated concentrations of several metals and dioxins above Maximum Contaminant Levels (MCLs) and applicable Environmental Screening Levels (ESLs).

23. In 2009 a geophysical survey investigation was performed to assess whether wastewater pipelines to the freshwater lake were still present and if groundwater beneath the lake had been impacted by the intermittent discharge of industrial wastewater to the lake. A magnetometer survey and excavation using a backhoe did not identify any buried pipelines. Magnetic anomalies were detected within the landfill and across a portion of the freshwater lake, indicating that the landfill debris extends beneath the lake.

24. In February 2013, a Removal Action Plan (RAP) was submitted for the landfill and the former oil and gas wells, which described the need for additional investigation of the extent of landfill materials, verification that the oil and gas wells had been properly decommissioned, construction of a cap pursuant to CCR title 27, and subsequent monitoring requirements. The RAP also established the need for a 50-foot setback from wetland areas around the freshwater lake, with the exception of a small, seasonal wetland (0.03-acres) within the landfill footprint that would need to be filled during capping activities. The Regional Water Board approved the RAP in March 2013.

25. In 2017, when ownership of the landfill was transferred to 6200 GR, LLC, a RAP addendum was prepared based on updated development plans at the adjacent Parcel A. The new owner performed an additional investigation to determine the extent of landfill materials and collected soil vapor samples from beneath the footprint of the proposed building slab (outside of the landfill boundary). A Soil Management Plan was also prepared at this time for use during development activities.

26. Landfill grading and capping activities began in October 2018 and were completed in 2019, in accordance with the RAP. Debris was removed from the northern and eastern portions of the landfill and consolidated to an area in the southwestern portion of the landfill. The limit of the landfill is now located at least 50 feet to the east of the riparian line around the freshwater lake (Figure 3). A two-foot foundation layer was placed over the consolidated waste, capped with one foot of clay, and covered with an erosion-resistant soil layer. The surface was graded to prevent ponding and promote surface water runoff to a series of bioretention basins along the perimeter of the landfill. The Regional Water Board issued a 401 Certification for filling of the small 0.03-acre wetland area in May 2019, which also required that surface water flow to a constructed wetland area after leaving the bioretention basins. Mitigation required for the project impacts included the on-site creation of wetlands, and a swale complex (totally 0.3-acres) north of the remedial action area. Future wetland and swale monitoring will be reported to the Water Board as part of the 401 Certification.

27. Between August 2018 and August 2019, the oil and gas wells were re-abandoned to current DOGGR standards.

28. A Post-Closure Monitoring Plan (PCMP) was prepared in November 2020 to document how the landfill would be monitored and maintained during the minimum 30-year post-closure period. Six groundwater monitoring wells and six landfill gas monitoring probes were installed in pairs around the perimeter of the landfill (Figure 4). Groundwater and landfill gas samples will be collected and analyzed semi-annually for VOCs, petroleum hydrocarbons, and metals (in groundwater only). The Regional Water Board approved the RAP Implementation Report and the PCMP in December 2020.

29. In December 2021, oversight of Parcel A, which includes a large commercial warehouse equipped with a VIM system for methane mitigation, was transferred to DTSC.

BASIN PLAN AND RIGHT TO WATER

30. The Water Quality Control Plan for the San Francisco Bay Basin (Basin Plan) is the Water Board's master water quality control planning document. It designates beneficial uses and water quality objectives for waters of the State, including surface waters and groundwater. It also includes programs of implementation to achieve water quality objectives. The Basin Plan was adopted and amended by the Water Board and approved by the State Water Resources Control Board, U.S. EPA, and the Office of Administrative Law where required.

31. The Basin Plan considers all groundwater within the Region to be suitable, or potentially suitable, for municipal or domestic water supply (MUN) and that, in making any exceptions, the Water Board will consider the criteria referenced in Water Board Resolution No. 88-63, "Sources of Drinking Water," where:

    (a) The total dissolved solids exceed 3,000 mg/l (5,000 µS/cm, electrical conductivity), and it is not reasonably expected by the Water Board that the groundwater could supply a public water system, or

    (b) There is contamination, either by natural processes or human activity (unrelated to the specific pollution incident), that cannot reasonably be treated for domestic use using best management practices or best economically achievable treatment practices, or

    (c) The water source does not provide sufficient water to supply a single well capable of producing an average, sustained yield of 200 gallons per day.

    Groundwater beneath the site is not part of a designated groundwater basin as defined by the California Department of Water Resources and is not currently used as a drinking water source. Based on the hydrogeologic characterization and water quality data for the site, groundwater underlying the site does not qualify as a potential source of drinking water in accordance with Water Board Resolution No. 88-63. Groundwater is fairly shallow, and appears to be tidally connected to the Bay, especially within the northern portion of the site. Electrical conductivity in the northern portion of the site ranges from 33,000 to 57,000 µS/cm, indicating brackish conditions.

32. **Antidegradation.** California's Antidegradation Policy, contained in State Water Board Resolution No. 68-16, "Statement of Policy with Respect to Maintaining High Quality of Waters in California," states that discharges to existing high quality waters will be required to meet WDRs that will result in the best practicable treatment or control of the discharge necessary to assure that (a) a condition of pollution or nuisance will not occur, and (b) the highest water quality consistent with maximum benefit to the people of the State will be maintained. This Order is consistent with Resolution No. 68-16 because the post-closure monitoring and maintenance requirements in this Order represent the best practicable controls of discharges from the landfill. Implementation of these requirements will prevent degradation of water quality or beneficial uses. Specifically, the Discharger's adherence to the prohibitions and provisions in this Order is expected to ensure that stormwater does not come in contact with landfill waste and that constituents of concern in the landfill waste do not migrate further in groundwater. Per the 401 Certification, stormwater runoff

will flow to bioretention treatment features that will drain to the mitigation wetlands and swale area.

BENEFICIAL USES OF SURFACE WATER

Surface Water

33. Existing or potential beneficial uses identified for the San Pablo Bay, according to the Basin Plan, include:

    a. Industrial Service Supply (IND)
    b. Commercial and Sport Fishing (COMM)
    c. Shellfish Harvesting (SHELL)
    d. Navigation (NAV)
    e. Water Contact Recreation (REC1)
    f. Non-Water Contact Recreation (REC2)
    g. Wildlife Habitat (WILD)
    h. Estuarine Habitat (EST)
    i. Preservation of Rare and Endangered Species (RARE)
    j. Fish Migration (MIGR)
    k. Fish Spawning (SPWN)

34. Basin Plan section 2.2.1 and 2.2.3 provides that inland surface waters and wetlands, respectively, can or do support a variety of beneficial uses. The existing or potential beneficial uses for the freshwater lake and surrounding wetlands include:

    a. Wildlife Habitat (WILD)
    b. Groundwater recharge (GWR)
    c. Preservation of rare and endangered species (RARE)
    d. Wildlife habitat (WILD)

35. While special status species have the possibility to occur in the area, the 2016 Biological Resource Assessment concluded none are expected due to low-value, non-native grassland habitat in the immediate area.

    Recreational activities such as fishing (no fish are present in the lake) and swimming are not permitted in the freshwater lake due to it being on private property, and the potential to remobilize contaminated sediments on the lake bottom.

CEQA, NOTIFICATION, AND PUBLIC MEETING

36. On December 23, 2016, an Initial Study and Mitigated Negative Declaration (ISMND) was prepared by the City of Richmond, as the lead agency for the Revised Phase III of the Pinole Point Mixed Use Development Project. This ISMND is an update to the 1992 Environmental Impact Report prepared for the four phases of development at Point Pinole. The ISMND identified mitigation measures for potentially significant impacts due to the presence of the

former capped acid pond, landfill, and former oil and gas wells. The mitigation measures identified were imposed by the 2017 RAP Addendum.

37. Adoption of this Order setting forth requirements related to the post-closure monitoring and maintenance of the landfill cap, groundwater, and landfill gas well is categorically exempt from the provision of the California Environmental Quality Act pursuant to California Code of Regulations, title 14, section 15308.

38. The Water Board has notified the Discharger, interested agencies and persons of its intent to update waste discharge requirements. The Water Board provided a thirty-day written comment period for the public and interested persons to submit their views and recommendations.

39. The Water Board in a public meeting heard and considered all comments pertaining to the proposed waste discharge requirements for the landfill.

IT IS HEREBY ORDERED pursuant to the authority in Division 7, section 13263 of the California Water Code (CWC), title 27, Division 2, Subdivision 1 of the California Code of Regulations (title 27), and State Board Resolution No. 93-62 that the Discharger, its agents, successors, and assigns shall meet the applicable provisions contained in title 27, Division 7 CWC, and State Board Resolution No. 93-62, and shall comply with the following:

A. PROHIBITIONS

1. No additional waste shall be deposited or stored at this landfill.

2. The Discharger shall not excavate within or reconfigure wastes within the landfill boundary without prior Regional Water Board approval.

3. Wastes shall not be exposed where they can be transported from the landfill and discharged into waters of the State or of the United States.

4. The discharge of sediment, waste products, hazardous materials, or other materials that will degrade, or threaten to degrade, water quality, or adversely affect, or threaten to adversely affect existing or potential beneficial uses of waters of the State is prohibited.

5. The discharge of sediment into waters of the State resulting from failure to provide effective erosion and sediment control measures is prohibited.

6. Removal of riparian vegetation in a manner that impacts water quality in the freshwater lake, wetlands, or any other water of the State is prohibited.

7. The Discharger shall not perform any intrusive activities on the landfill surface that have the potential to negatively affect the integrity and proper function of the landfill cap, such as digging, trenching, or planting of deep-rooted trees without prior Regional Water Board approval.

8. Fill or excavation of waters of the State without authorization by the Water Board pursuant to the Porter-Cologne Act and/or Section 401 of the Clean Water Act is prohibited.

9. Surface drainage from tributary areas and internal site drainage from surface or subsurface sources shall not contact or percolate through wastes during the post-closure life of the landfill.

10. The Discharger shall not cause the following conditions to exist in waters of the State or of the United States at any place outside the landfill boundary:

    a. Surface Waters:
        (1) Floating, suspended, or deposited macroscopic particulate matter or foam
        (2) Bottom deposits or aquatic growth
        (3) Adverse changes in temperature, turbidity, pH levels, or apparent color beyond natural background levels
        (4) Visible, floating, suspended, or deposited oil or other products of petroleum origin
        (5) Toxic or other deleterious substances to be present in concentrations or quantities which may cause deleterious effects on aquatic biota, wildlife or waterfowl, or which render any of these unfit for human consumption either at levels created in the receiving waters or as a result of biological concentrations.

    b. Groundwater:
        (1) Degradation of groundwater quality; or
        (2) Substantial worsening of existing groundwater impacts

11. Migration of pollutants through subsurface transport to waters of the State is prohibited.

B. SPECIFICATIONS

1. The landfill shall be protected from any washout or erosion of wastes or cover material and from inundation or flooding that could occur as a result of a 100-year, 24-hour precipitation event.

2. Internal site drainage from surface sources shall not contact or percolate through wastes during the life of the landfill.

3. The Discharger shall ensure that the structures that control surface drainage, erosion, and landfill gas are constructed and maintained to withstand conditions generated during the maximum probable earthquake.

4. The final cap system shall be maintained to promote lateral runoff and prevent ponding and infiltration of water.

5. The Discharger shall analyze samples from groundwater monitoring wells as outlined in the Self-Monitoring Program (SMP) (Attachment A).

6. The Discharger shall install any reasonable additional groundwater and landfill gas monitoring devices required to fulfill the terms of the attached and any future SMP issued by the Executive Officer.

7. Landfill gases shall be adequately vented or otherwise controlled to minimize the danger of explosion, adverse health effects, nuisance conditions, or the impairment of beneficial uses of water.

8. The Discharger shall maintain all devices or designed features installed in accordance with this Order, such that they continue to operate as intended without interruption.

9. The Water Board shall be notified immediately of any failure occurring within the landfill capping system. Any failure that threatens the integrity of containment features of the landfill shall be promptly corrected after approval of the method and schedule by the Executive Officer.

10. The Discharger shall comply with all applicable provisions of CCR Title 27 that are not specifically referred to in this Order.

11. The Discharger shall maintain the landfill to prevent a statistically significant increase in water quality parameters at points of compliance as provided in Section 20420 of Title 27.

12. All monitoring instruments and devices used by the Discharger to fulfill the prescribed monitoring program shall be properly maintained and calibrated as necessary to ensure their continued accuracy.

13. At any time, the Discharger may file a written request (including supporting documentation) with the Executive Officer, proposing modifications to the attached SMP. If the proposed modifications are acceptable, the Executive Officer may issue a letter of approval that incorporates the proposed revisions into the SMP.

14. The Discharger shall implement a Detection Monitoring Program (DMP) pursuant to title 27, CCR, section 20420. The DMP shall be designed to identify any water quality impacts from the landfill and demonstrate compliance with the Water Quality Protection Standard (WQPS) required pursuant to title 27, CCR, section 20390. The SMP attached to this Order is intended to constitute the DMP for the landfill.

15. The WQPS for the landfill shall include the following:

    a. Constituents of Concern: Section 20395 of title 27, CCR, defines Constituents of Concern (COCs) as "all waste constituents, reaction products, and hazardous constituents that are reasonably expected to be in or derived from waste contained in the Unit." COCs for the landfill include monitoring parameters identified in the SMP attached to this Order, or any future amendment thereof.

    b. Monitoring Parameters: Monitoring parameters (MPs), a subset of the COCs, are typically the most mobile and commonly detected COCs in groundwater at the landfill and are

measured on a more frequent basis than the entire list of COCs. The MPs for the landfill shall include, at a minimum, all constituents identified as such in the SMP attached to this Order, or any future amendments thereof. The Discharger may propose modification to the MPs as additional data become available concerning site-specific source characteristics and natural background water quality. However, modifications shall only be made upon written concurrence from the Executive Officer.

c. Concentration Limits: Concentration limits (CLs) for all COCs detected at the specified points of compliance shall be established using the background data set pursuant to Title 27, CCR, Section 20400. A control chart limit shall be calculated from the background data set using statistical methods as appropriate.

d. Point of Compliance: Title 27 of the CCR defines the Point of Compliance (POC) as the "vertical surface located at the hydraulically downgradient limit of the Unit that extends through the uppermost aquifer underlying the Unit." The POC for the landfill shall be the hydraulically downgradient groundwater monitoring well.

e. Monitoring Points: Title 27 of the CCR defines Monitoring Points as "a well, device, or location specified in the waste discharge requirements at which monitoring is conducted and at which the water quality protection standard applies". Monitoring points for the landfill are specified in the SMP attached to this Order, or any future amendments thereof.

16. Whenever there is "measurably significant" evidence (as defined in title 27, CCR, section 20164) or significant physical evidence of a release, the Discharger shall be prepared to implement an Evaluation Monitoring Program (EMP) pursuant to title 27, CCR, section 20425, at the direction of the Water Board. In such a case, the Discharger shall continue implementing the DMP as prescribed in any SMP attached to this Order. If required, the EMP shall be implemented to determine the nature and extent of any release detected by the DMP.

17. The Discharger shall notify the Water Board immediately of any structural failure occurring in the landfill. Any failure that threatens the integrity of containment or control features or structures at the landfill shall be promptly corrected after approval of the method and schedule by the Executive Officer.

18. All reports submitted pursuant to this Order shall be prepared under the supervision of and signed by appropriately licensed professionals, such as a California registered civil engineer, professional geologist, and/or certified engineering geologist.

C. PROVISIONS

1. Self-Monitoring Program: The Discharger shall establish a Self-Monitoring Program (SMP) based on the approved PCMP. The SMP attached to this Order outlines general monitoring requirements for landfills, and the self-monitoring report content and format required. The SMP shall establish monitoring frequency, parameters, and analytes, including an expanded five-year sampling event (including, but not limited to contaminants such as pesticides, polychlorinated biphenyls, polycyclic aromatic hydrocarbons, and poly- and perfluoroalkyl substances) and

establish a reporting frequency and schedule for groundwater and landfill gas. WQPS shall be established for analyte comparison and results reporting. The SMP and WQPS proposed must be acceptable to the Executive Officer.

The SMP is intended to constitute a Detection Monitoring Program (DMP) pursuant to Title 27, CCR, Section 20420, and is designed to identify significant water quality impacts from the landfill and demonstrate compliance with the WQPS established pursuant to Title 27, CCR, Section 20390. The attached SMP may be amended as requested by the Discharger (see Specification 2) or at the discretion of the Executive Officer.

COMPLIANCE DATE: July 1, 2022

2. Financial Assurance for Post-Closure Monitoring and Maintenance: The Discharger shall submit to this Board evidence of an Irrevocable Fund acceptable to the Executive Officer, to ensure monitoring and maintenance of the landfill during the post-closure period. Every five years, for the duration of the post-closure monitoring period, the Discharger shall submit a report that includes an outline of the financial assurance mechanism and verification that the fund has been created. Fund value should be supported by calculations, to be included with this submittal, providing cost estimates for all post-closure monitoring, maintenance, repair and replacement of landfill containment, cover, and monitoring systems. The fund value should be based on the sum of these estimates. The cost estimates and funding should be updated to reflect change to monitoring systems as they occur. The post-closure maintenance period shall extend as long as the landfill wastes pose a threat to water quality, however for purposes of calculating cost estimates, a period of no less than 30 years may be used.

   COMPLIANCE DATE: October 1, 2022, then every five years thereafter

3. Well Installation Report: The Discharger shall submit a technical report, acceptable to the Executive Officer, that provides well construction details, geologic boring logs, and well development logs for all new wells installed as part of the Discharge Monitoring Program (Attachment A).

   COMPLIANCE DATE: 60 days following completion of well installation

4. Earthquake Inspection: The Discharger shall submit a detailed Post-Earthquake Inspection Report acceptable to the Executive Officer, in the event of any earthquake generating ground shaking of Richter Magnitude 7 or greater at or within 30 miles of the landfill. The report shall describe the containment features, groundwater monitoring, and control facilities potentially impacted by the static and seismic deformations of any cell. Damage to any waste containment facility that may impact State waters must be reported immediately to the Executive Officer.

   COMPLIANCE DATE: Within 2 weeks of qualifying earthquake

5. Availability: A copy of these waste discharge requirements shall be maintained by the Discharger and shall be made available by the Discharger to all employees or contractors performing work (maintenance, monitoring, repair, construction, etc.) at the landfill.

6. Change of Ownership: The Discharger must notify the Executive Officer in writing at least 30 days in advance of any proposed transfer of this Order's responsibility and coverage to a new Discharger. The notice must include a written agreement between the existing Discharger and the new Discharger containing a specific date for the transfer of this Order's responsibility and coverage between the current Discharger and the new Discharger. This agreement shall include an acknowledgment of which Discharger is liable for violations up to the transfer date and which Discharger is liable from the transfer date on.

7. Revision: These waste discharge requirements are subject to review and revision by the Water Board.

8. Incorrect Submissions: Where a Discharger becomes aware that it failed to submit any relevant facts in a Report of Waste Discharge or submitted incorrect information in a Report of Waste Discharge or in any report to the Water Board, it shall promptly submit such facts or information.

9. Vested Rights: This Order does not convey any property rights of any sort or any exclusive privileges. The requirements prescribed herein do not authorize the commission of any act causing injury to persons or property, do not protect the Discharger from liability under Federal, State or local laws, nor do they create a vested right for the Discharger to continue the waste discharge.

10. Operation and Maintenance: The Discharger shall, at all times, properly operate and maintain all facilities and systems of treatment and control (and related appurtenances) which are installed or used by the Discharger to achieve compliance with conditions of this Order. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls including appropriate quality assurance procedures. This provision requires the operation of backup or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of this order.

11. Reporting of Hazardous Substance Release: If any hazardous substance is discharged into any waters of the State, or discharged or deposited where it is, or probably will be, discharged into any waters of the State, the Discharger shall report such discharge to the Water Board by calling (510) 622-2300 during regular office hours (Monday through Friday, 8:00 to 5:00). The Discharger shall file a written report with the Water Board within five working days. The report shall describe the nature of the hazardous substance, estimated quantity involved, duration of incident, cause of release, estimated size of affected area, nature of effect, corrective actions taken or planned, schedule of corrective actions planned, and persons/agencies notified.

12. Entry and Inspection: The Discharger shall allow the Water Board, or an authorized representative upon the presentation of credentials and other documents as may be required by law, to:

    a. Enter upon the Discharger's premises where a regulated facility or activity is located or conducted, or where records must be kept under the conditions of this Order;
    b. Have access to and copy, at reasonable times, any records that must be kept under the conditions of this Order;

c. Inspect at reasonable times any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this Order; and
d. Sample or monitor at reasonable times, for the purposes of assuring compliance with this order or as otherwise authorized by the CWC, any substances or parameters at any location.

13. Discharges to Navigable Waters: Any person discharging or proposing to discharge to navigable waters from a point source (except for discharge of dredged or fill material subject to Section 404 of the Clean Water Act, which are subject to water quality certifications by the Water Board) must file an NPDES permit application with the Water Board.

14. Endangerment of Health or the Environment: The Discharger shall report any noncompliance that may endanger health or the environment. Any such information shall be provided orally to the Executive Officer, or an authorized representative, within 24 hours from the time the Discharger becomes aware of the circumstances. A written submission to the Water Board shall also be provided within five days of the time a Discharger becomes aware of the circumstances. The written submission shall contain a description of the noncompliance and its cause; the period of noncompliance, including exact dates and times, and if the noncompliance has not been corrected; the anticipated time it is expected to continue and steps taken or planned to reduce, eliminate, and prevent recurrence of the noncompliance. The Executive Officer, or an authorized representative, may waive the written report on a case-by-case basis if the oral report has been received within 24 hours.

15. Document Distribution: Copies of all correspondence, technical reports, and other documents pertaining to compliance with this Order shall be provided to the San Francisco Bay Regional Water Quality Control Board.

16. Duty to Comply: The Discharger shall comply immediately, or as prescribed by the time schedule below, with all Prohibitions, Specifications and Provisions of this Order. All required submittals must be acceptable to the Executive Officer. The Discharger must also comply with all conditions of these waste discharge requirements. Violations may result in enforcement actions, including Water Board orders or court orders requiring corrective action or imposing civil monetary liability, or in modification or revocation of these waste discharge requirements by the Water Board.

17. Electronic Reporting Format: All reports submitted pursuant to this Order must be submitted as electronic files in PDF format, unless otherwise requested as a paper copy. The Water Board has implemented a document imaging system, which is ultimately intended to reduce the need for printed report storage space and streamline the public file review process. Documents in the imaging system may be viewed, and print copies made, by the public, during file reviews conducted at the Water Board's office. Email notification should be provided to Water Board staff whenever a file is uploaded to the Water Board's GeoTracker database.

I, Thomas Mumley, Interim Executive Officer, do hereby certify that the foregoing is a full, complete, and correct copy of an Order adopted by the California Regional Water Quality Control Board, San Francisco Bay Region, on _____.

_____
Thomas Mumley
Interim Executive Officer

Attachments:
Figure 1 – Site Location Map
Figure 2 – Site Plan
Figure 3 – Landfill limits and Locations of Former Oil and Gas Wells
Figure 4 – Groundwater and Landfill Gas Monitoring Well Locations

Self- Monitoring Program

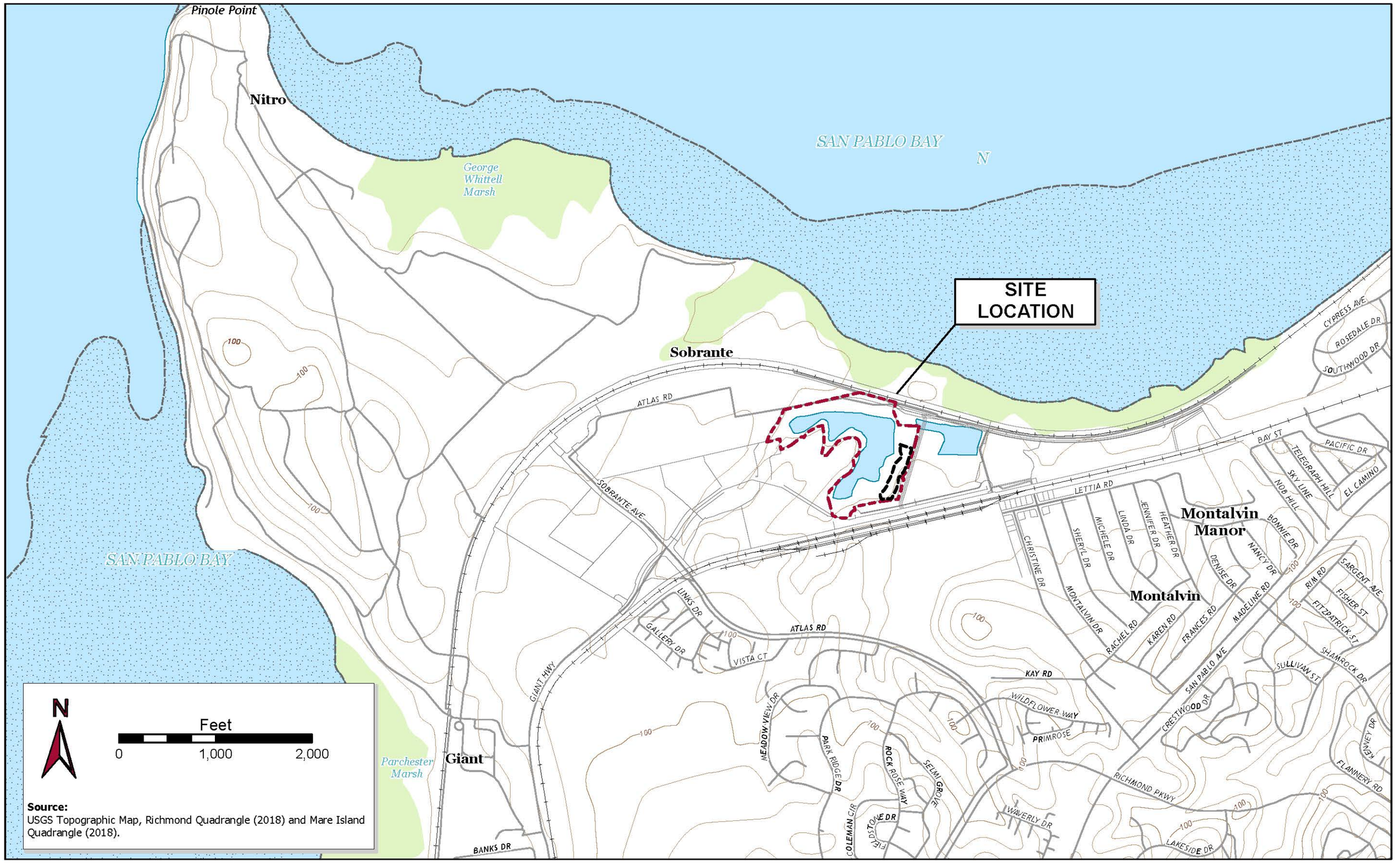
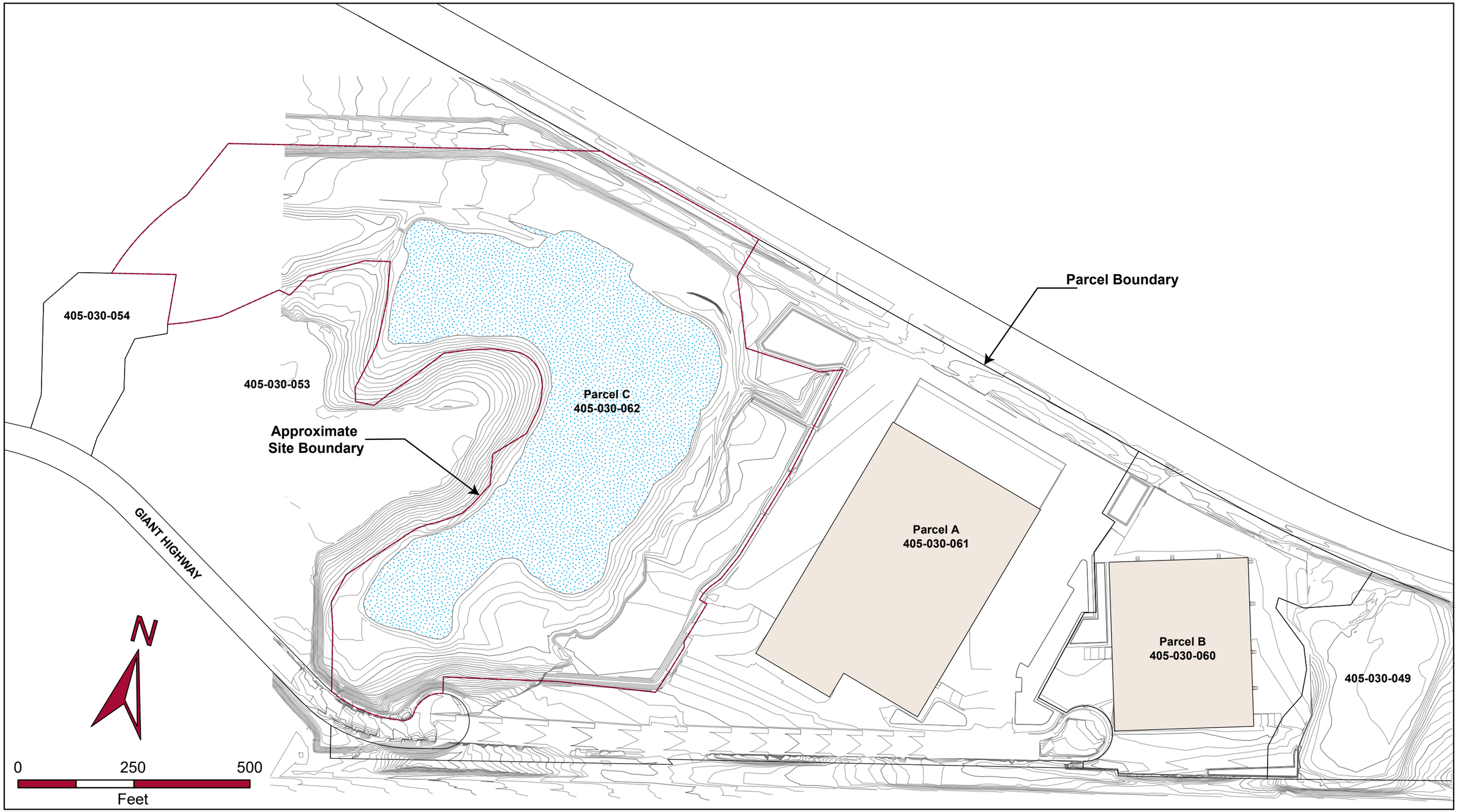
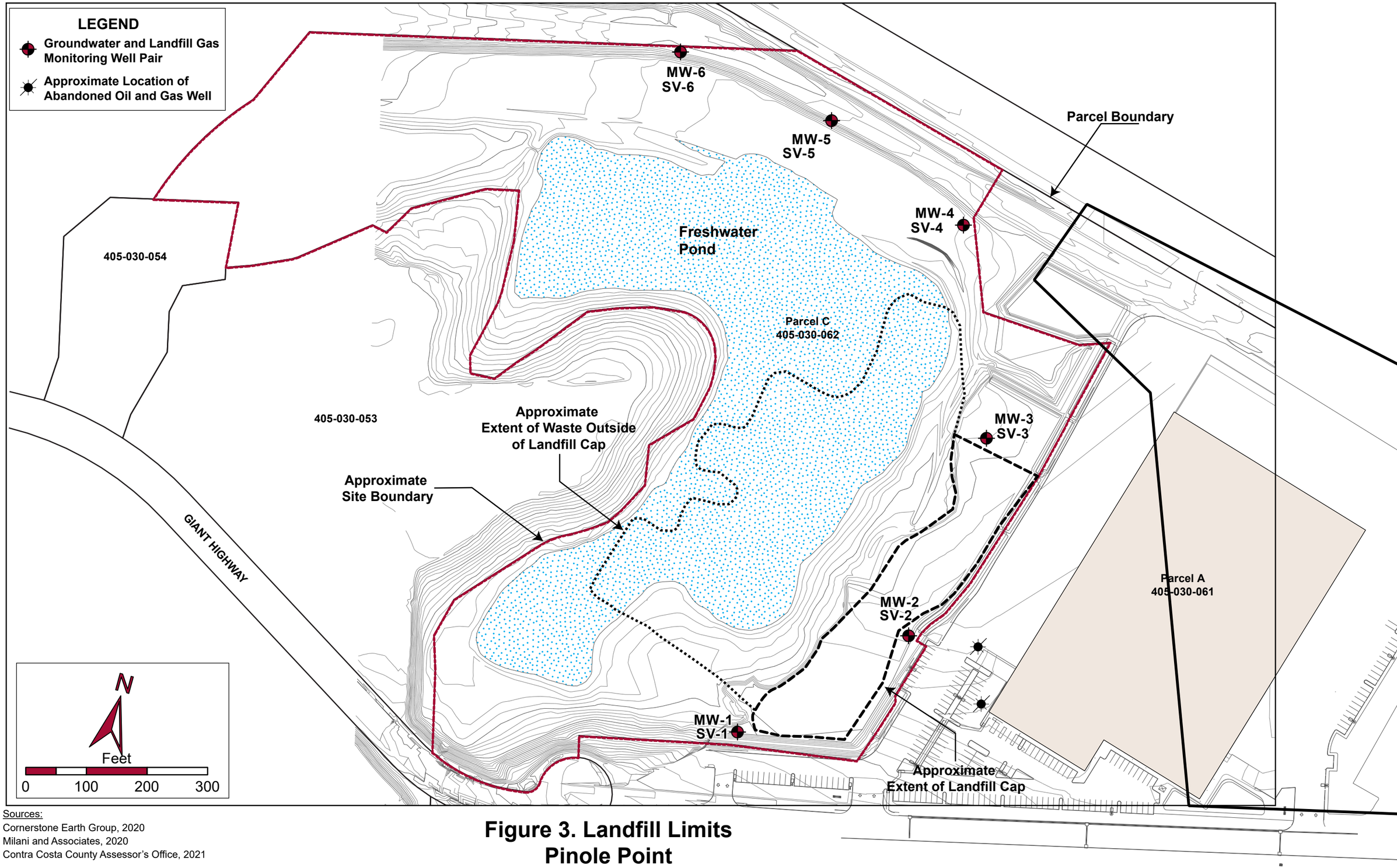


FIGURE 1. VICINITY MAP
PINOLE POINT
6200 GIANT HIGHWAY
RICHMOND, CALIFORNIA



Sources:
Cornerstone Earth Group, 2020
Milani and Associates, 2020
Contra Costa County Assessor's Office, 2021

Figure 2. Site Plan
Pinole Point
Giant Highway
Richmond, California



Sources:
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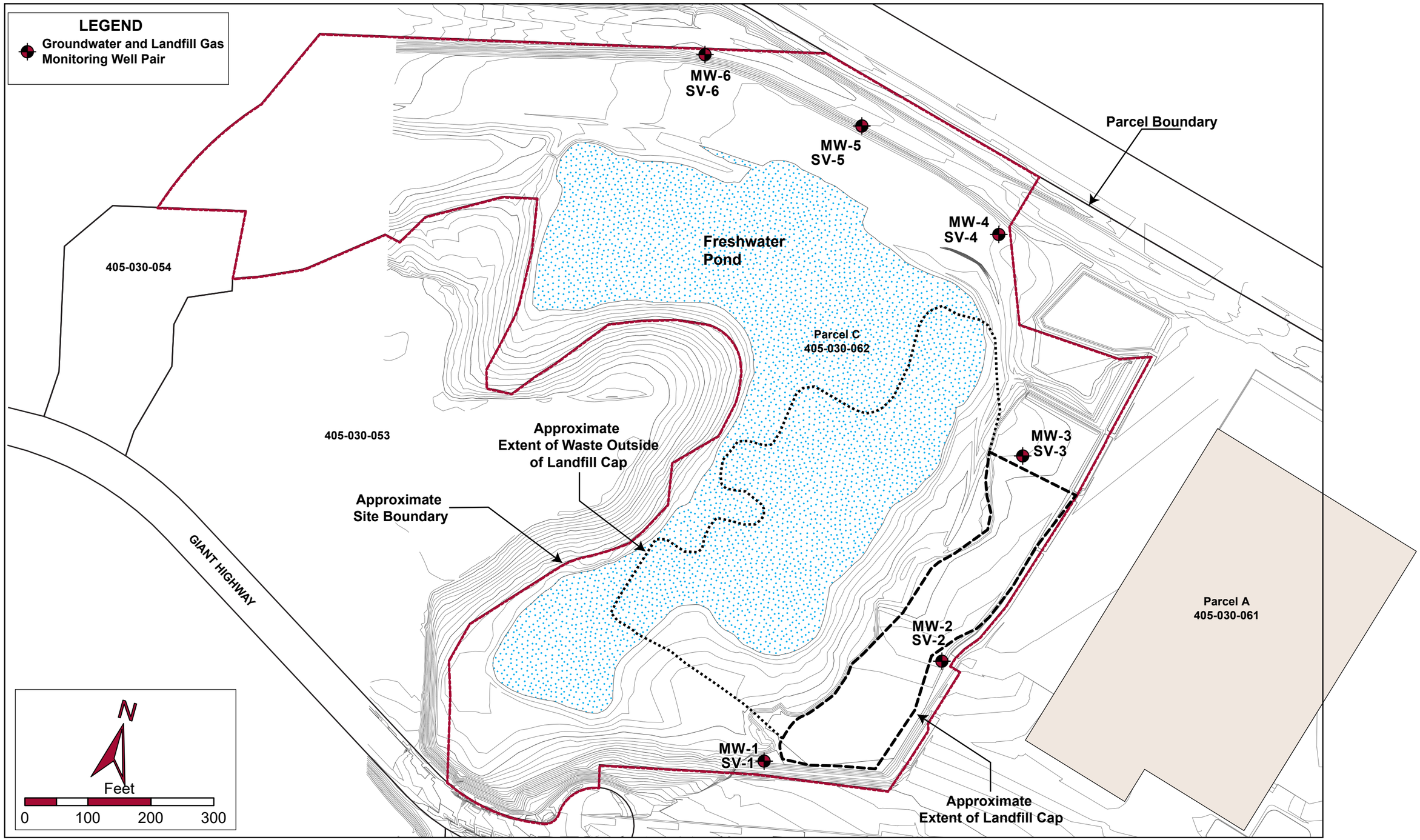
Milani and Associates, 2020
Contra Costa County Assessor's Office, 2021

Figure 3. Landfill Limits
Pinole Point
Giant Highway
Richmond, California



Sources:
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Milani and Associates, 2020
Contra Costa County Assessor's Office, 2021

Figure 4. Groundwater and Landfill Gas Well Locations
Pinole Point
Giant Highway
Richmond, California

CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD
SAN FRANCISCO BAY REGION

SELF-MONITORING PROGRAM

FOR

PACIFIC 42, LLC

LAKE PARCEL C LANDFILL
RICHMOND, CONTRA COSTA COUNTY

ORDER No. R2-2022-00XX

A. AUTHORITY AND PURPOSE

For discharges of waste to land, water quality monitoring is required pursuant to the California Code of Regulations, Division 2, Title 27 (CCR title 27), Subdivision 1, Chapter 3, Subchapter 3, sections 20380 through 20435. The principal purposes of an SMP are: (1) to document compliance with waste discharge requirements and prohibitions established by the Water Board; (2) to facilitate self-policing by the Discharger in the prevention and abatement of pollution arising from the waste discharge; (3) to develop or assist in the development of effluent standards of performance, and toxicity standards; and (4) to assist the Discharger in complying with the requirements of CCR title 27.

B. MONITORING REQUIREMENTS

Monitoring refers to the observation, inspection, measurement, and/or sampling of environmental media, waste management units (WMUs), containment and control facilities, and waste disposed in the landfill. The following defines the types of monitoring that may be required.

Monitoring of Environmental Media

The Water Board may require monitoring of groundwater, surface water, stormwater, landfill gas, and any other environmental media that may pose a threat to water quality or provide an indication of a water quality threat at the site.

Sample collection, storage, and analyses shall be performed according to the most recent version of U.S. EPA-approved methods or in accordance with a sampling and analysis plan approved by Water Board staff. Analytical testing of environmental media required by this SMP shall be performed by a State-approved laboratory for the required analyses. The director of the laboratory whose name appears on the certification shall be responsible for supervision of all analytical work in his/her laboratory and shall have signing authority for all reports or may designate signing of all such work submitted to the Water Board.

All monitoring instruments and devices used to conduct monitoring in accordance with this SMP shall be maintained and calibrated as necessary to ensure their continued accuracy. All flow measurement devices shall be calibrated at least once every two years.

Standard Observations

Standard observations refer to observations within the limits of the landfill, perimeter, and of the receiving waters beyond the landfill limit, such as the freshwater lake. Standard observations include:

1. Landfill:
    a. Evidence of ponded water at any point on the landfill cap
    b. Evidence of odors, including their presence or absence, characterization, source, and distance of travel from source
    c. Evidence of erosion and/or daylighted waste

2. Perimeter of the Landfill:

a. Evidence of liquid leaving or entering the landfill, estimated size of affected area, and estimated flow rate (show affected area on map)
b. Evidence of odors, including their presence or absence, characterization, source, and distance of travel from source
c. Evidence of erosion and/or daylighted waste

3. Receiving Waters:

a. Floating and suspended materials of waste origin: including their presence or absence, source, and size of affected area
b. Discoloration and turbidity: description of color, source, and size of affected area
c. Evidence of odors, presence or absence, characterization, source, and distance of travel from source
d. Evidence of beneficial use: presence of water associated with wildlife
e. Estimated flow rate
f. Weather conditions: wind direction and estimated velocity, total precipitation

Facilities Inspections

Facilities inspections refer to the inspection of all containment and control structures and devices associated with landfills. Containment and control facilities may include the following:

1. Earthen or asphalt covers
2. Perimeter drainage or diversion channels
3. Detention ponds or collection tanks

C. REPORTING REQUIREMENTS

Reporting responsibilities of waste dischargers are specified in Water Code sections 13225(a), 13267(b), 13383, and 13387(b) and this Water Board's Resolution No.73-16 and Order No. R2-2022-00XX. At a minimum, each Self Monitoring Report (SMR) shall include the following information:

1. **Transmittal Letter**: A cover letter transmitting the essential points shall be included with each monitoring report. The transmittal letter shall discuss any violations during the reporting period and actions taken or planned to correct the problem. The letter shall also certify the completion of all monitoring requirements. The letter shall be signed by the Discharger's principal executive officer or his/her duly authorized representative, and shall include a statement by the official, under penalty of perjury, that the report is true and correct to the best of the official's knowledge.

2. **Graphic Presentation**: The following maps, figures, and graphs (if applicable) shall be included in each SMR to visually present data collected pursuant to this SMP:

a. Plan-view maps showing all monitoring, sampling, and observation point locations, containment and control structures surface water bodies, and site/property boundaries
b. Groundwater level/piezometric surface contour maps for each groundwater-bearing zone of interest showing inferred groundwater gradients and flow directions under/around the landfill, based upon the past and present water level elevations and pertinent visual observations

c. Post-plot maps with analyte concentration posted adjacent to each sampling location and/or isoconcentration contour maps displaying analyte concentrations and sample locations
d. Concentration vs. time graphs for key sampling parameters for each sampling location
e. Geologic cross-sections showing groundwater-bearing zones, sample locations, contaminant sources, and the extent of contamination
f. Any other maps, figures, photographs, cross-sections, graphs, and charts necessary to visually demonstrate the appropriateness and effectiveness of sampling, monitoring, characterization, investigation, or remediation activities relative to the goals of this SMP.

3. **Tabular Presentation**: The following data (if applicable) shall be presented in tabular form and included in each SMR to show a chronological history and allow quick and easy reference:

a. Well designations
b. Well location coordinates (latitude and longitude)
c. Well construction (including top of well casing elevation, total well depth, screen interval depth below ground surface, and screen interval elevation)
d. Groundwater depths
e. Groundwater elevations
f. Horizontal groundwater gradients
g. Vertical groundwater gradients (including comparison wells from different zones)
j. Current analytical results (including analytical method and detection limits for each constituent)
k. Historical analytical results (including at least the past five years unless otherwise requested)
l. Measurement dates

4. **Compliance Evaluation Summary and Discussion**:

a. A summary and certification of completion of all environmental media monitoring, standard observations, and facilities inspections
b. The signature of the laboratory director or his/her designee indicating that he/she has supervised all analytical work in his/her laboratory
c. Provide a discussion of the field and laboratory results that includes the following information:

(1) Data Interpretations
(2) Conclusions
(3) Recommendations
(4) Newly implemented or planned investigations and remedial measures
(5) Data anomalies
(6) Variations from protocols
(7) Condition of wells
(8) Effectiveness of landfill gas monitoring and control facilities

5. **Appendices:** The following information shall be provided as appendices in electronic format only, unless requested otherwise by Water Board staff and unless the information is already contained in a Sampling and Analysis Plan approved by Water Board staff.

a. New boring and well logs
b. Method and time of water level measurements
c. Purging methods, and method of disposing of the purge water, and results including the type of pump used, pump placement in the well, pumping rate, equipment and methods used to monitor field pH, temperature, and conductivity, pH, temperature, conductivity, and turbidity measurements
d. Sampling procedures, field and travel blanks, number and description of duplicate samples, type of sample containers and preservatives used, the date and time of sampling, the name of the person actually taking the samples, and any other relevant observations
e. Documentation of laboratory results, analytical methods, detection limits, and Quality Assurance/Quality Control (QA/QC) procedures for the required sampling.

D. CONTINGENCY REPORTING

1. The Discharger shall report by telephone to the Water Board any discharge from the disposal area immediately after it is discovered. The Discharger shall submit a written report with the Water Board within five days of discovery of any discharge. The written report shall contain the following information:

   a. A map showing the location(s) of discharge
   b. Approximate flow rate
   c. Nature of effects (e.g., all pertinent observations and analyses)
   d. Corrective measures underway or proposed

2. The Discharger shall submit a written report to the Water Board within seven days of determining that a statistically significant difference occurred between a self-monitoring sample set and an approved Water Quality Protection Standard (WQPS). The written report shall indicate what WQPS(s) have been exceeded. The Discharger shall resample at the compliance point(s) where this difference has been found within 30 days.

3. If re-sampling and analysis confirms the earlier finding of a statistically significant difference between self-monitoring results and WQPS(s), the Discharger shall, upon determination by the Executive Officer, submit to the Water Board an amended Report of Waste Discharge as specified in CCR title 27, section 20420 for establishment of an Evaluation Monitoring Program meeting the requirements of CCR title 27, section 20425.

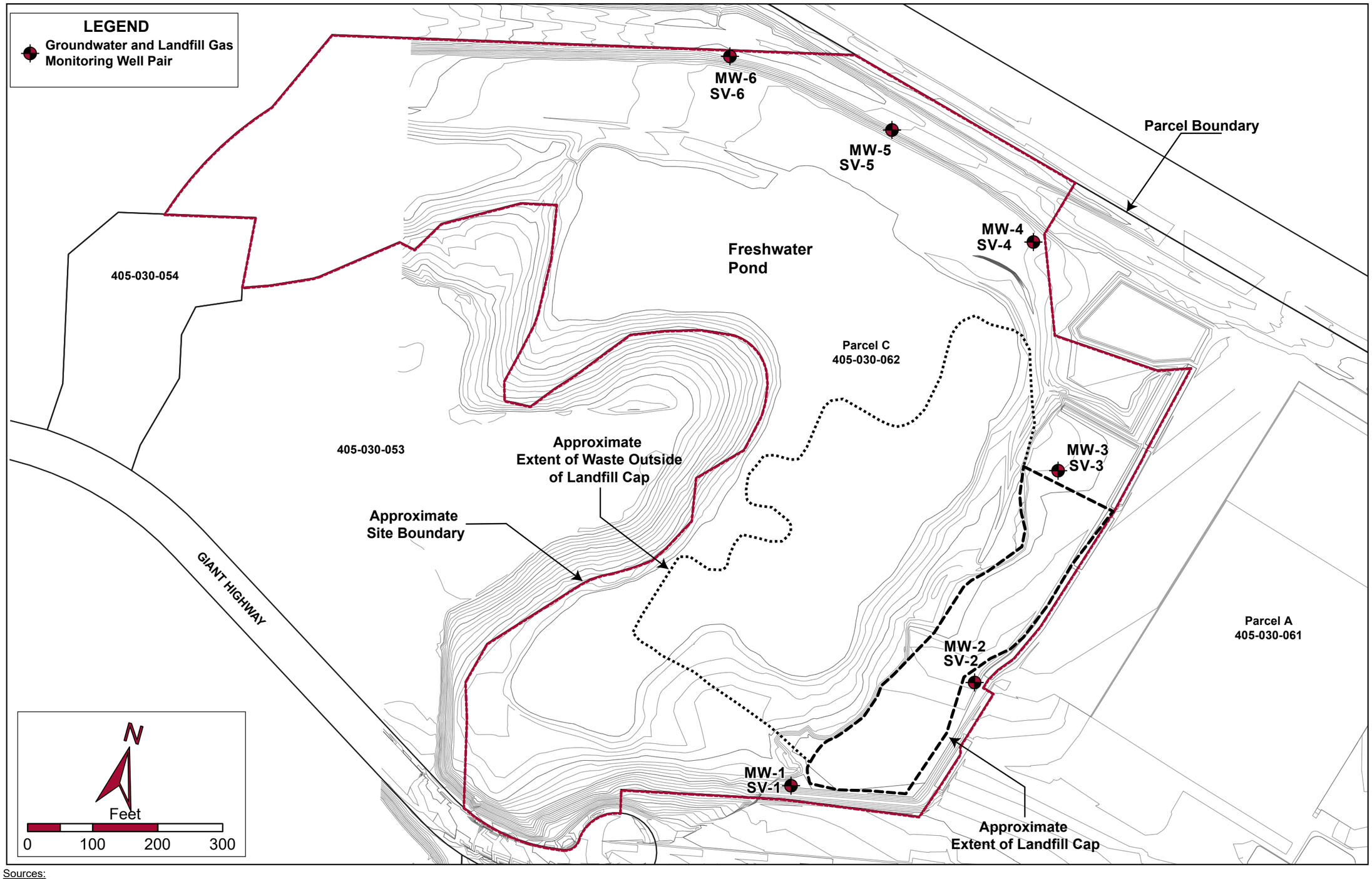
E. ELECTRONIC REPORTING FORMAT

All SMRs submitted pursuant to this SMP must be submitted as electronic files in **PDF format** to GeoTracker. The Water Board has implemented a document imaging system, which is ultimately intended to reduce the need for printed report storage space and streamline the public file review process. Documents in the imaging system may be viewed, and print copies made, by the public during file reviews conducted at the Water Board's office. Email notification should be provided to Water Board staff whenever a file is uploaded to the Water Board's GeoTracker website.

F. MAINTENANCE OF WRITTEN RECORDS

Dischargers shall maintain information required pursuant to this SMP for at least five years. The five-year period of retention shall be extended during the course of any unresolved litigation regarding this discharge or when requested by the Water Board.

Attachment: SMP Figure B-1



Sources:
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Figure SMP-1. Groundwater and Landfill Gas Well Locations
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Giant Highway
Richmond, California