

**DEPARTMENT OF THE ARMY PERMIT EVALUATION
AND DECISION DOCUMENT**

APPLICANT:

APPLICATION No. 2001-260240N

Mr. Jim Dunbar
Potrero Hills Landfill, Inc.
P.O. Box 68
Fairfield, California 94533

Project Name: Potrero Hills Landfill Expansion Project
Project Location: Solano County approximately one mile south of Travis Air Force Base and two miles southeast of Suisun City, California.
Named Waterway: Spring Branch Creek
Project Site Latitude: 38.21006°N
Project Site Longitude: -121.97218°W

This document constitutes the Environmental Assessment, Statement of Findings, and review and compliance determination according to the Section 404(b)(1) Guidelines for the project (applicant's preferred alternative) described in the attached Public Notice. The Department of the Army permit application was processed pursuant to the provisions of Section 404 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1344 *et seq.*).

I. PROPOSED PROJECT:

A. PROJECT DESCRIPTION (33 C.F.R. § 325.1(d) and 325.3(a)(5); 40 C.F.R. § 1508.20): Mr. James Dunbar, Potrero Hills Landfill, Inc., through his agent Environmental Stewardship & Planning, Incorporated (contact: Mr. Steve Peterson), has applied for a Department of the Army permit to expand the existing Potrero Hills Landfill operation onto an adjacent 167.63 acre site identified as the "Phase II-area" to increase the landfill's capacity and waste processing capabilities. Potrero Hills Landfill, Inc. is seeking Department the Army authorization to permanently fill of approximately 1.86 acres of waters of the United States (approximately 1.42 acres of seasonal wetlands, 0.44 acre [3,970 linear feet] of discontinuous intermittent stream segments at the headwaters of Spring Branch Creek, and a 0.004 acre pond) to allow a proposed 167.63-acre eastward expansion of the Landfill site. Components of the Potrero Hills Landfill Expansion Project (the Project or a.k.a. Phase II) would consist of: extending the landfill footprint horizontally to the east by approximately 164 acres; increase the landfill height to an elevation of 345 feet MSL; excavate on dry land a 6,500 linear foot surrogate bypass channel to route water formerly developed within the Phase II footprint away from the landfill; construct infrastructure to allow the potential for future landfill gas-to-energy power plant; installation of new power lines; construct a new visitor's center; and modification of night-lighting.

B. PROJECT MODIFICATIONS (33 C.F.R. § 325.2(a)(2)): No substantive modifications have been made to the project subsequent to the publication of the Public Notice

C. PROJECT IMPACTS TO WATERS OF THE UNITED STATES: The project would result in the permanent fill of approximately 1.86 acres of waters of the United States, including 1.42 acres of seasonal wetlands and seeps, 0.44 acre (3,970 linear feet) of intermittent/ephemeral jurisdictional drainages, and one 0.004 acre pond located within the Phase II Project area.

The following project elements would require a permit pursuant to the provisions of Section 404 of the Clean Water Act of 1972, as amended (33 U.S.C. § 1344 *et seq.*): The Project footprint would be about 164 acres. As mentioned above, all aquatic features within the footprint would be filled. The Project also proposes to divert water away from the Phase II footprint via a buried pipeline and surface channel which would span the entire southern boundary of Phase I and Phase II (6,500 linear feet). No reduction of surface water-carrying capacity is proposed. The two separate drainage systems would be constructed to prevent the landfill from flooding and to accept sheetflow runoff from the capped landfill. The drainage system would be constructed over the life of the proposed landfill (35 years), with additional detention basins installed concurrently with the build-out of each landfill cell. The drainage systems would convey water west from the landfill. The upstream end of the pipeline would be located near the southeast corner of the Phase II. The downstream end of the pipeline would be located near the southwest corner of Phase I. The pipeline would be designed to handle the 1,000-year storm to protect the landfill from flooding. Along its length, the pipeline would be bedded in native soil and overtopped entirely with soil materials. The pipeline would be constructed of pre-cast sections or of concrete poured in place with the segments being built in increments of approximately 200-600 feet every 3-5 years. The second, above ground, drainage system would be a drainage channel excavated on dry land to convey runoff from the southern portion of the landfill. The surface channel would be protected from scouring with erosion control fabric.

D. PROPOSED MITIGATION (33 C.F.R. §§ 320.4(r) and 332.4(b); 40 C.F.R. §§ 230.70-230.77 and 1508.20): The project would result in a permanent discharge of fill into all 1.86 acres of waters of the United States located within the Phase II footprint which would consist of: 1.42 acres of seasonal wetlands; 0.44 acre, 3,970 linear feet of unnamed, intermittent streams at the headwaters of Spring Branch Creek; and a 0.004 acre pond.

To compensate for permanent impacts to waters of the United States a would complete a Mitigation and Monitoring Plan (MMP), as revised March 4, 2011, prepared by LSA Associates, Inc., and Environmental Stewardship & Planning, Inc. Mitigation will occur on 963.28 acres within the Suisun Marsh Secondary Management Area of the Suisun Marsh on land owned by the applicant. The mitigation for impacts to wetlands and other waters of the United States would consist of the following components:

- a) Establishment of 4.49 acres of seasonal wetlands;
- b) Establishment of 1.80 acres (5,600 linear feet) of stream channel;
- c) Establishment of 1.78 acres of pond habitat (breeding habitat for the California tiger salamander);
- d) Wetland Enhancement of 65.12 acres of seasonal wetlands;
- e) Stream Enhancement on 1.49 acres (11,980 linear feet) of stream channel;
- f) Preservation of 4.73 acres of pond habitat (breeding habitat for the California tiger salamander);

- g) Preservation of 863.13 acres of California tiger salamander upland buffer habitat; and
- h) Preservation of 20.74 acres of upland buffer grassland habitat (California tiger salamander upland habitat).

The above-described MMP components would occur at the following six sites:

- a) **Southern Hills Site, 428.70 acres:** CTS upland habitat preservation would be 420.33 acres; CTS open water pond habitat preserved would be 3.78 acres; CTS open water pond habitat created would be 1.05 acres; Seasonal Wetlands Preservation would be 2.92 acres; and intermittent stream channel preserved would be 0.62 acres (4,230 linear feet).
- b) **Pond 5 Buffer Area, 41.23 acres:** CTS Upland Habitat Buffer Preservation would be 40.78 acres; CTS Pond Habitat Preservation would be 0.45 acre.
- c) **Eastern Valley Site, 160 acres:** CTS upland Habitat Buffer Preservation would be 159.16 acres; CTS Pond Habitat Preservation would be 0.50 acre; Seasonal wetland preservation would be 0.20 acre; and stream preservation would be 0.14 acre (1,540 linear feet).
- d) **Eastern Hills Site, 137.39 acres:** CTS upland habitat buffer preservation would be 136.87; seasonal wetlands preserved would be 0.004 acre; and seasonal stream preserved would be 0.51 acres (5,175 linear feet).
- e) **Griffith Ranch Site, 112.16 acres:** CTS upland habitat buffer preservation would consist of 105.99 acres; CTS pond habitat establishment would be 0.73 acre; Preservation of seasonal wetlands would be 0.34 acre; establishment of wetland habitat would be 4.07 acres; establishment of intermittent stream habitat would be 1.03 acres (3,702 linear feet).
- f) **Director's Guild Site, 83.80 acres:** CTS upland grassland habitat would be 20.74 acres; Seasonal wetlands preserved would be 61.66 acres; Seasonal wetlands established would be 0.42 acre; intermittent stream preservation of 0.21 acre (1,035 linear feet) of stream; and creation of 0.77 acre (1,898 linear feet) of stream channel.

II. ENVIRONMENTAL AND PUBLIC INTEREST FACTORS CONSIDERED:

A. PROJECT PURPOSE AND NEED:

1. **Basic Project Purpose** (40 C.F.R. § 230.10(a)(3)): The basic project purpose, consistent with 40 CFR Section 230.10(a) (3), is to construct a municipal solid waste landfill and resource recovery center, which the U.S. Army Corps of Engineers (Corps) has determined to be a non-water dependent activity.

2. **Overall Project Purpose** (40 C.F.R. § 230.10(a)(2)): The overall project purpose is to construct an economically viable municipal solid waste landfill and resource recovery center to serve the long-term waste management needs of Solano County and the associated primary service area. Although the overall project purpose is to principally serve the waste management needs of Solano County, the Potrero Hills Landfill also accepts waste material from a larger service area in order to operate in an economically viable manner. Therefore, the Potrero Hills Landfill accepts waste from many other Northern California counties and municipalities, including the Sierra foothill counties and Alameda, Contra Costa, Marin, Mendocino, Napa, Sacramento, San Mateo, Santa Clara, Solano, and Yolo Counties. However, the Potrero Hills Landfill primary service area, from which approximately 90 percent of the waste material is received, consists of Solano, Sonoma, Contra Costa and Santa Clara counties.

3. **Need for the Project** (33 C.F.R. §§ 325, Appendix B, Para. 9.b.(4), 325.1(d), and 325.3(a)(5)): Solano County continues to need economical and environmentally sound landfill disposal capacity as well as the capacity for recycling and reuse of waste materials to achieve state-mandated landfill diversion requirements in state law. Expansion of the Potrero Hills Landfill (PHLF) onto the adjacent 167.63-acre area would increase the waste disposal capacity of the PHLF site and would enable Solano County and its cities to provide the minimum 15 years of disposal capacity and the needed capacity for recycling and reuse of waste materials. The proposed project will extend the County's waste disposal capacity by 35 years.

In 1995-1996, Solano County and its seven cities adopted the Countywide Siting Element of the Countywide Integrated Waste Management Plan (CIWMP) (pursuant to California Public Resources Code §41700). The purpose of the Countywide Siting Element is to "demonstrate that within a county or region, there is a minimum of 15 years of combined permitted disposal capacity through existing or planned disposal facilities..." (EDAW 2003). The County's two landfills (PHLF and the Hay Road Landfill) currently have life expectancies that are less than the 15-year requirement set forth in the Public Resources Code. Therefore, under current circumstances, Solano County may not meet the mandated minimum 15 years of waste disposal capacity.

B. PROJECT ALTERNATIVES (33 C.F.R. 33 §§ 320.4(a)(2)(ii) and 325.2(a)(4); 40 C.F.R. §§ 230.10(a) and 1508.25):

1. **No Action:**

The proposed project entails a higher final elevation for the existing landfill and expansion onto the adjacent 167.63-acre property to the east identified as "Phase II." The project would add approximately 35 years to the current landfill's remaining capacity "site life" which is approximately 3 years. Thus, the probable future site baseline trend condition that would likely occur without the issuance of a Department of the Army Permit for the project would be the failure of Solano County to maintain the State-mandated minimum of 15 years of assured waste disposal capacity.

As part of their Alternatives Analysis proposal, the applicant described the feasibility of constructing a modified project that avoids all jurisdictional waters called "Alternative 5. Construct Landfill Expansion to the Upper Potrero Hills Valley." Under Alternative 5, the entire landfill expansion would be located approximately 3,500 feet from the existing landfill in the valley portion of the 297-acre Eastern Valley parcel which encompasses the upper reaches of the Potrero Hills valley and the north facing slopes of the eastern Potrero Hills. This alternative would result in two distinct landfill sites separated by the 210-acre Phase II parcel which would remain undisturbed except where it would be crossed by an extended access road. Total capacity would be 9.9 million tons which is approximately 76% less than the proposed project. The site life of Alternative 5 would be approximately 8.6 years, rather than the 35-year life span of the proposed project. The unit costs are 270% higher than under the proposed project.

2. **Other Project Designs:** The following alternatives describe the applicant's on site alternatives analysis:

Alternative 4. Maximum Wetland Avoidance in the Potrero Hills Valley. Under this alternative the landfill expansion footprint is contracted to approximately 105 acres. Total additional capacity would be 84% less than the preferred alternative. The site lifespan would be less than 5.9 years, rather than the 35-year lifespan of the proposed project. The unit costs are 327% higher than the proposed project;

Alternative 3. Partial Wetland Avoidance in the Potrero Hills Valley. This alternative would shift the project footprint to the south and contract the footprint to 112 acres. Under this alternative the landfill expansion capacity would be 74% less than the proposed project and the life-span of the landfill would be 8.7 years as opposed to the 35-year life of the proposed project; and

Alternative 2. Increase Height of the Existing Landfill. This alternative would expand landfill operations vertically rather than horizontally. This alternative would avoid impacts to jurisdictional waters of the United States. Landfill height would be increased from the currently permitted 220 feet MSL to 410 feet MSL, which is the maximum height that can be attained while still maintaining a geo-technically sound landfill shape and drainage pattern. Additional landfill capacity gained would be 81% less than the proposed project and the site life would be 7.0 years as opposed to the 35-year lifespan of the proposed project. Unit costs would not be greater than 50% higher than the proposed project.

None of the on-site alternatives were found to be practicable due to excessively high costs and/or logistical limitations. Under this type of analysis, any alternative having unit costs (per ton of waste material) at least 50% higher than the proposed project would be non-practicable.

Alternatives 3, 4, and 5 were non-practicable based on the cost criterion.

Any alternatives that didn't meet the State-mandated requirement of providing a minimum of 15 years disposal capacity for Solano County would be logistically non-practicable. None of the four alternatives, including alternative 2, was found to be practicable based on this logistical criterion since their disposal capacities would be less than the required 15 year minimum.

On-site alternatives rejected only due to logistical screening criteria were: expansion into the Griffith Ranch Parcel to the north; and expansion into the Valley of the Southern Hills.

Expansion onto the Griffith Ranch Parcel would create a separate landfill unit that would be in conflict with Solano County Roadway elements and the General Plan Policies for Protection of Scenic Resources.

Expansion to the south onto the Southern Hills Parcel would be impracticable because it would conflict with two logistical screening criteria: the Suisun Marsh Protection Program; and impacts to significantly more jurisdictional wetlands.

3. **Other Sites:** The applicant analyzed 16 off-site alternatives after considering the following screening criteria: size; physical suitability; availability.

The off-site alternatives analyzed were:

- 1) Solano County Hay Road Site. This site would not have capacity to accept PHLF's volume of waste under its current permitted capacity. If Hay road site were able to modify its waste permit, it would not meet the mandated 15 years of assured disposal capacity. Use of the Hay Road site would be contrary to Solano County's Integrated Waste Management Plan (CIWMP), which calls for two active landfill facilities to handle the County's long-term waste management needs. Also, the site is an operating landfill facility and not available for development;
- 2) Solano County Aqua Clear Farms Site: this site is an operating landfill facility and not available for development;
- 3) Solano County Rio Vista Landfill Site: this site no longer accepts waste and is pending closure;
- 4) Solano County American Canyon Landfill Site: this site is an operating landfill facility and not available for development;
- 5) Contra Costa County Keller Canyon Landfill Site: this site is an operating landfill facility and not available for development;
- 6) Contra Costa County Sanitary Landfill Site: this site is capped and closed and not available for development.
- 7) Contra Costa County Acme Landfill Site: this site is near capacity and pending closure and not available for development.
- 8) Western Contra Costa County Sanitary Landfill: this site is closed and capped and not available for development.
- 9) Santa Clara County Guadalupe Rubbish Disposal Site: this site is an operating landfill facility and not available for development;
- 10) Santa Clara County Kirby Canyon Recycling and Disposal Facility Site: this site is an operating landfill facility and not available for development;
- 11) Santa Clara County Newby Island Landfill Site: this site is an operating landfill facility and not available for development;
- 12) Santa Clara County Owens-Corning Disposal Site: this site is an operating landfill facility and not available for development;
- 13) Santa Clara County Pacheco Pass Site: this site is an operating landfill facility and not available for development;
- 14) Santa Clara County Palo Alto Landfill Site: this site is an operating landfill facility and not available for development;
- 15) Santa Clara County Zanker Road Class II Landfill Site: this site is an operating landfill facility and not available for development; and
- 16) Sonoma-Marín County Redwood Landfill Site: this site is an operating landfill facility and not available for development.

C. ENVIRONMENTAL ASSESSMENT (33 C.F.R. §§ 320.4(a) and 325.2(a)(4); 40 C.F.R. § 1508.9): The following paragraphs describe potential beneficial and adverse direct, indirect, and cumulative impacts of the project on various public interest factors. Direct impacts are specifically caused by the project, occur at the same time and place, and may result in short-term and/or long-term changes to the environmental baseline condition. Indirect impacts are caused by the project but occur later in time or are further removed by distance, but are still reasonably foreseeable. Cumulative impacts are specifically addressed at the end of this section.

1. Scope of Analysis:

a. **NEPA Scope of Analysis** (33 C.F.R. §§ 325, Appendix B, Para. 7.b. and 325.2(a)(4)): Under the provisions of Paragraph 7.b. of Appendix B to 33 C.F.R. Part 325, when an activity requiring a Department of the Army Permit is merely one component of a larger project, the scope of analysis should address those portions of the entire project over which USACE has "sufficient control and responsibility" to warrant Federal review. Typical factors to consider in determining whether sufficient control and responsibility exist include: (a) Whether or not the regulated activity comprises merely a link in a corridor type project; (b) whether there are aspects of a upland facility in the immediate vicinity of the regulated activity which affect the location and configuration of the regulated activity; (c) the extent to which the entire project occurs in jurisdictional waters; and (d) the extent of cumulative Federal control and responsibility. The determination of Federal control and responsibility may include portions of the project beyond the limits of USACE jurisdiction where the cumulative Federal involvement, such as Federal financing, assistance, direction, regulation, or approval, is sufficient to grant legal control over such additional portions of the project.

The USACE has determined the project action area includes all waters of the United States in reasonable proximity to the existing landfill, the proposed expansion project footprint, the mitigation parcels, and the immediate upland areas proposed by the applicant for threatened and endangered species mitigation under the Endangered Species Act (ESA). USACE is not aware of any Federal funding used to construct (conduct) the project or of other Federal agency direct involvement in the project that would otherwise establish sufficient Federal control and responsibility to further expand the project action area.

b. **NHPA Scope of Analysis** (33 C.F.R. § 325, Appendix C, Para. 1.g.): Under the provisions of Paragraph 1.g. of Appendix C to 33 C.F.R. Part 325, the term "permit area" is defined as those areas comprising jurisdictional waters that would be directly affected by the proposed work or structures and uplands directly affected as a result of the authorized work or structures. The permit area may be expanded beyond the limits of the affected jurisdictional waters to upland areas, provided the activity satisfies the following three factors: (a) The activity does not take place but for the authorization of the work or structures; and (b) the activity is integrally related to the authorized work or structures; and (c) the activity is directly associated (first order impact) with the authorized work or structures.

The NHPA scope of analysis extends to the existing landfill, the proposed expansion project footprint, the mitigation parcels, and the immediate upland areas proposed by the applicant for threatened and endangered species mitigation under the Endangered Species Act (ESA).

c. **ESA Scope of Analysis** (50 C.F.R. § 402.02): Under the provisions of 50 C.F.R. Section 402.02, the term "action area" is defined as all areas to be affected directly or indirectly by the authorized work or structures. Accordingly, the action area typically includes the affected jurisdictional waters and uplands affected by the authorized work or structures within a reasonable distance. While USACE Headquarters has not provided finalized guidance on formulating the ESA Scope of Analysis, it is presumed that the action area may be expanded beyond limits of the immediate uplands, taking into account the following evaluation factors: (a) That either a causal physical relationship exists between the authorized work or structures and any indirect effects occurring in uplands, or that the extent of USACE involvement is sufficient to exert Federal control and responsibility over additional upland areas; or (b) that activities

occurring in upland areas would not occur but for the authorized work or structures; and (c) that activities occurring on upland areas are interrelated activities or interdependent activities with respect to the authorized work or structures.

The ESA scope of analysis extends to the existing landfill, the proposed expansion project footprint, the mitigation parcels, and the immediate upland areas proposed by the applicant for threatened and endangered species mitigation under the ESA.

2. **Site Description:** The PHLF Site is located in the Potrero Hills in Solano County, California approximately one mile south of Travis Air Force Base and two miles southeast of Suisun City. The existing landfill (Phase I) occupies a 320 acre area, within which approximately 190 acres is permitted and used for waste disposal. Phase II would extend the landfill laterally to the east to add an additional 215 acres to the landfill, of which approximately 150 acres will be permitted for waste disposal. With the expansion, the total size of the PHLF would become 535 acres, of which 340 acres is permitted for waste disposal. Most of the remaining area owned by the applicant (893 acres) is reserve for habitat mitigation and to serve as a buffer around the landfill.

The Potrero Hills and the surrounding area (where Phase I and Phase II are situated) are protected under the Suisun Marsh Preservation Act (SMPA), which was adopted by the California Legislation in 1977. The area comprising the greater Suisun Marsh is subject to the developmental restrictions enforced by the San Francisco Bay Conservation and Development Commission (BCDC). The SMPA established Primary and Secondary Management Areas within Suisun Marsh. Both the existing Phase I and proposed Phase II are located within the Secondary Management Area which is comprised primarily of upland areas. Land uses within the Secondary Management Area are governed by the Local Plan of Protection, which was adopted by Solano County and approved by BCDC in 1982.

Phase II is situated upon open pastureland grazed by cattle, vegetated primarily with non-native upland grasses. The landscape surrounding the Project footprint to the north, south, and east consists of steep, hilly topography (the Potrero Hills). The Potrero Hills are also utilized for pastureland and vegetated with non-native upland grasses. The Project footprint and the surrounding hills are all located within the aforementioned SMPA Secondary Management Area. The project site drains via Spring Branch Creek to the west. The creek ultimately discharges into the brackish Suisun Marsh located approximately three miles to the west.

3. **Direct and Indirect Impacts to the Physical Environment** (40 C.F.R §§ 230.11, 230.20-230.25, and 1508.8):

a. **Substrate:** The stream segments located within the Project footprint are shallow, narrow grassy swales with discontinuous Ordinary High Water Mark (OHWM). The Project would fill all regulated waters located within the Phase II footprint. The streams that would be filled as a result of Phase II construction are very marginal by definition and by physical appearance (marginally identifiable bed and banks). The Project proposes capture all water developed within the footprint by: constructing a 6,500 linear foot pipeline; and by constructing a surface channel on top of the landfill's soil cover buttress (the completed landfill's exterior southern slope).

The 6,500 linear foot pipeline would route water west along the southern boundary of Phase I and Phase II. Water would ultimately discharge at the same existing point located west of Phase I. Upon landfill completion this pipeline would be buried beneath the southern slope of the landfill.

A new surface channel would be constructed near the base of the southern slope of the finished landfill to capture sheet flow runoff. The surface channel would be approximately five feet deep and 30 feet wide.

As previously mentioned, both the underground pipeline and the surface channel would begin at the southeast corner of Phase II and be routed along the southern boundary of the landfill. Water would ultimately discharge at the south west corner of Phase I, in-line with the natural channel course of Spring Branch Creek.

The aforementioned activity would result in direct long term impacts to the substrate of Spring Branch Creek and its' unnamed tributaries. However adverse impacts are not expected to be more than minor in magnitude. The affected segments of Spring Branch Creek and its' tributaries are intermittent and/or ephemeral. The OHWM of these features are discontinuous and the bed (substrate) is not well defined. They marginally meet the regulatory definition of a stream. The drainage ditch located immediately west of Phase II was excavated on dry land. Water routed through this man-made segment is a surrogate for the poorly organized, very intermittent segments of Spring Branch Creek that were filled when Phase I was constructed.

A Draft Streambed Alteration Agreement was issued by the California Department of Fish and Game (CA F/G) on August 25, 2011.

b. **Erosion and Sediment Accretion Patterns:** The long term direct impacts are expected to be minimal in magnitude during the duration of the Project (35 year project lifespan). The Project would construct a new 2-acre sedimentation control basin. The basin would be located at the easternmost landfill cell. During development of the Project temporary sedimentation control basins would be utilized to control sediment laden storm water runoff pursuant to Special Conditions found in the 401 Water Quality Certification, Order No. RS-2011-0032, adopted by the California Regional Water Quality Control Board May 18, 2011.

c. **Currents, Circulation, or Drainage Patterns:** The landfill would expand up-gradient west- to-east within a valley that drains east-to-west. The footprint of Phase II is entirely within the valley and surrounded by the Potrero Hills (steep, rounded hills on the north, east, and south sides).

The property that comprises the Project footprint is drained by the upper most reach of Spring Branch Creek. This reach of the creek is a very narrow, shallow intermittent/ephemeral stream with a discontinuous OHWM. As previously mentioned, a portion of the lower watershed has been routed along the southern boundary of Phase I.

Segments of Spring Branch Creek and its' tributaries within the Phase II footprint are intermittent and ephemeral grassy swales with discontinuous OHWM's. They are not well

defined. All water developed within the footprint would be re-directed and routed to the southern boundary so that it can discharge into the man-made channel at the southern boundary of Phase I. Ultimately, drainage patterns within the footprint would have a major change.

The Phase II footprint would transform a valley into what would ultimately become a tall, raised mound. During construction, the Project would capture water developed within the un-built portion footprint via a series of detention basins. The detention basin system during construction and upon project completion would always maintain the capacity to detain a 100 year storm event. The pipeline would be constructed in segments concurrent with the build-out of landfill "cells" as landfill cells are filled west-to-east. The pipeline would be sized to convey a 1000 year storm event. An exterior surface channel would also be constructed (excavated on dry land) concurrently as each cell is filled to capacity.

Thus, ultimately, the Project would change the drainage patterns within the footprint. However, the following measures would mitigate impacts to the lower watershed of Spring Branch Creek: Soils and vegetation utilized on the landfill buttresses (exterior landfill slopes) would mimic natural drainage conditions. The landfill slope would not be an impervious surface; and the storm water detention basins would be designed and maintained to detain a 100 year storm event.

Drainage patterns in the lower watershed (west of the landfill) would not be altered. Construction of the Project would result in short term and long term direct adverse impacts to drainage patterns in the upper watershed of Spring Branch Creek. Those impacts would be minor in magnitude via the implementation of the aforementioned landfill design measures.

d. **Water Quality** (temperature, suspended particulates and turbidity, salinity patterns): The Project would necessitate the filling and relocation of the uppermost reach of Spring Branch Creek. The CA RWQCB has determined that the Discharger has taken appropriate steps to avoid, minimize, and mitigate impacts on affected water bodies, as required by the San Francisco Bay Region Water Quality Control Plan (Basin Plan) and that the Project, as proposed, will not violate State water quality standards. Accordingly, the Order also issues conditional federal Clean Water Act Section 401 water quality certification for the Project. Discharge Requirements are outlined within the 401 Water Quality Certification issued by the California Regional Water Quality Control Board, San Francisco Bay Region (Order No. R2-2011-0032), dated May 18, 2011. Compliance with the aforementioned permit and compliance with all pertinent Soil Erosion Control Best Management Practices (BMP's) should result in adverse impacts minimal in magnitude during the duration of the project lifespan (35 years).

e. **Flood Hazards and Floodplain Functions:** No effect. The Project is located outside the 100 year floodplain.

f. **Wetland Functions** (flood control, storm or wave erosion control buffers): The project would permanently fill 1.42 acres of seasonal wetlands. Wetland functions that may be impacted by the project include natural biological functions; storage for storm and flood waters; maintenance of minimum baseflows; and sequestering sediment suspended in the water column of sheet flow and concentrated flow during storm events.

Mitigation of flood storage capacity functions would occur via Project design. To offset

unavoidable, permanent impacts to all other wetland functions Discharger would complete a Mitigation and Monitoring Plan (MMP), as revised on March 4, 2011, prepared by LSA Associates, Inc. The MMP proposes mitigation on 963.28 acres located in close proximity to the impact site, within the same watershed as the impact site, on property adjacent to the Project, located within the Secondary Management Area of the Suisun Marsh. The MMP would consist of the following wetland mitigation components: establishment of 4.49 acres of seasonal wetlands; and enhancement of 65.12 acres of seasonal wetlands. Adverse impacts to wetland functions are expected to be minor in magnitude via implementation of the MMP.

g. **Baseflow:** Water developed within the Project footprint would be conveyed to the existing, pre-project, discharge point. Short term adverse impacts to baseflow would be minimal. Detention basins would be designed to sequester sediments suspended in the water column to prevent off site sedimentation. However, long-term adverse impacts are expected to have no effect as the conveyance channels would be designed to maintain pre-existing baseflow.

h. **Aquifer Recharge and Water Supply** (natural): No effect. The CA RWQCB has determined that the Discharger has taken appropriate steps to avoid, minimize, and mitigate impacts to aquifer recharge and water supply, as required by the San Francisco Bay region Water Quality Control Plan (Basin Plan) and that the Project, as proposed, will not violate State water quality standards. Accordingly, the Order also issues conditional federal Clean Water Act Section 401 water quality certification for the Project. Requirements are outlined within the 401 Water Quality Certification issued by the California Regional Water Quality Control Board, San Francisco Bay Region (Order No. R2-2011-0032), dated May 18, 2011.

The Project should result in no effect to aquifer recharge and water supply pursuant to full compliance with the aforementioned permit conditions as they pertain to ground water withdrawal .

4. **Direct and Indirect Impacts to the Biological Environment** (40 C.F.R §§ 230.11, 230.30-230.45, and 1508.8):

a. **Wetlands** (Special Aquatic Site): See “Wetland Functions” section above. Adverse impacts to wetland functions are expected to be minor in magnitude via implementation of the MMP.

b. **Mudflats** (Special Aquatic Site): No effect.

c. **Vegetated Shallows** (Special Aquatic Site): No effect.

d. **Coral Reefs** (Special Aquatic Site): No effect.

e. **Pool and Riffle Areas** (Special Aquatic Site): No effect.

f. **Wildlife Sanctuaries and Refuges** (Special Aquatic Site): No effect.

g. **Threatened and Endangered Species, and Critical Habitat:** A Biological Opinion from the United States Fish and Wildlife Service (Service) received on November 29,

2010, (File # 81420-2007-F-1362-3) for effects of the proposed project on: the threatened California tiger salamander (*Ambystoma californiense*), endangered Conservancy fairy shrimp (*Branchinecta conservation*) and its critical habitat, endangered vernal pool tadpole shrimp (*Lepidurus packardi*) and its critical habitat, threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and its critical habitat, and endangered Contra Costa goldfields (*Lasthenia conjugens*) and its critical habitat.

The project would comply with terms and conditions listed in the USFWS BO to minimize impacts to Threatened and Endangered Species, and Critical Habitat.

- h. **Essential Fish Habitat:** No effect.
- i. **Riparian Vegetation:** No effect.
- j. **Habitat for Fish, Other Aquatic Organisms, and Other Wildlife:** No effect.

5. **Direct and Indirect Impacts to the Social-Economic Environment** (40 C.F.R. §§ 230.11, 230.50-230.54, and 1508.8):

a. **Air Quality:** Air quality within the Bay Area is regulated by several jurisdictions including the U.S. Environmental Protection Agency (EPA), the California Air Resources Board, and the Bay Area Air Quality Management District (BAAQMD). The following Air Quality impacts have been considered: federal, state, and local standards for “criteria air pollutants”; federally and state standards toxic air contaminants (TACs); and Odorous Emissions.

The following mitigation measures, and compliance with BAAQMD permit conditions should mitigate air quality impacts associated with expanded landfill operations to minor in magnitude:

1. All disturbed areas, including storage piles, which are not being actively utilized for construction purposes, would be effectively stabilized for dust emissions using water, chemical stabilizer/suppressant, or vegetative cover.
2. All onsite unpaved roads and offsite unpaved roads would be effectively stabilized for dust emissions using water or chemical stabilizer/suppressant.
3. All land clearing, grubbing, scraping, excavation, land leveling, grading, and cut and fill operations would be effectively controlled for fugitive dust emissions by utilizing application of water or by pre-soaking.
4. When materials are transported off site, all material would be covered or effectively wetted to limit visible dust emissions, or at least 6 inches of freeboard space from the top of the container shall be maintained.
5. All operations would limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets.
6. Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles would be effectively stabilized for fugitive dust emissions by utilizing sufficient water or chemical stabilizer.
7. The excavator would use either water or petroleum-based palliatives (approved for use by

- the BAAQMD) as a dust control measure.
8. Excavation would be suspended and grading activity associated with site construction operations when winds exceed 20 mph.
 9. The area subject to excavation, grading, and any other construction activity would be limited at any one time.
 10. When shredding or chipping of wood or concrete crushing would be practiced at the site, the shredding and crushing units would be equipped with water sprays to provide control of dust. The amount of water used would be regulated and minimized to avoid runoff, ponding, or leaching of the wood materials.
 11. Compost piles would be watered as necessary to maintain the necessary moisture content for composting to occur during the dry weather season and to minimize dust generation. If insufficient water is available on the site and the landfill operator does not wish to haul water to the site for composting operations, the operations would be reduced or cease as appropriate until such time that adequate water is available.
 12. New sources of waste would be evaluated for potential dust emissions. The specific waste handling protocols would identify the type of dust control method that would be used. Examples include moistening the waste at the point of generation or placing the material in plastic bags. The case-specific protocols would be reviewed with the LEA, RWQCB, and BAAQMD before finalizing. If the evaluation of the waste handling protocol indicates the potential for release of fugitive dust or volatile substances, the BAAQMD would be contacted. If emission controls are anticipated for a new waste that is of substantial quantity and to be frequently delivered over a long time, an application for amendment of the Air Permit would be made, if deemed necessary by the BAAQMD.
 13. The Permittee would comply with the requirements of the revised BAQMD permit for the proposed composting operations, and fill gas power plant facility and the landfill gas collection and control system at the site. In addition, the project applicant would comply with the requirements of a full Composting Facility Permit for the site including managing composting operations to minimize the generation of emissions. This would include monitoring the water content, pile temperature, and turning frequency in order to ensure that composting operations are effectively managed.

Odors associated with expanded landfill operations should be adequately mitigated via compliance with applicant's Odor Impact Minimization Plan which was submitted to the Local Enforcement Agency (LEA) as part of their Environmental Impact Report. Odor Control Measures include: increasing the frequency of cover application on the working face of the landfill; use of vapor phase counteractant system during sludge processing operations; or the use of topical applicants as an odor neutralizer at the close of sludge spreading or borrowing operations. In addition, all composting operations at the site would be relocated from the northern site boundaries to the center or southern portions of the site. Sludge processing and storing would also occur in the center or southern portion of the site.

Long term adverse air quality impacts are expected to be minor in magnitude upon application of the aforementioned air quality mitigation measures.

b. **Noise Conditions:** The project would increase the landfill's operation hours from 20 hours per day, seven days a week, to 24 hours a day, Monday through Friday and 20 hours per day on Saturday and Sunday. This minor increase to the hours of operation would

result in a long term minor adverse affect to noise conditions.

- c. **Mineral Resources:** No effect.
- d. **Prime and Unique Agricultural Lands:** No effect.
- e. **Food and Fiber Production:** No effect.
- f. **Commercial and Recreational Fishing:** No effect.

g. **Recreational Resources:** Neutral. A component of the Project, as stipulated in the applicant's permit from the San Francisco Bay Conservation and Development Commission, Permit No. 3-10(M), dated November 1, 2010, the following items would be required: a 57,000 square foot public access overlook on the former Solano County Garbage Company landfill site to allow unrestricted public access for: walking, running, bird watching, bicycling, sitting, viewing, picnicking, and other passive recreational activities; dedicated easements for trails on the Southern Hills Properties; and improvements to the Overlook Area.

h. **Wild and Scenic Rivers:** No effect. The project neither occurs on a reach of a Federally-designated Wild and Scenic River nor would cause any direct or indirect impacts to a Wild and Scenic River.

i. **Nationwide Rivers Inventory:** No effect. The project neither occurs on a river reach listed on the Nationwide River Inventory nor would cause any direct or indirect impacts to a listed river reach.

j. **National and Historical Monuments, National Seashores, Wilderness Areas, Parks, and other Preserves:** No effect.

k. **Aesthetic Quality:** No effect. State Highway 12 is a Solano County-designated scenic highway. Grizzly Island Road is also a Solano County-designated scenic highway.

Landfill height has been restricted to "hide" the Project from view from Highway 12. Upon completion, the Project's overall appearance would generally look similar to the surrounding Potrero Hills in terms of its form, color, and texture.

The Project would be out of the viewshed of the scenic Potrero Hills to protect the visual resources of the Suisun Marsh. A visual resources report indicates that the Project would not be visible from Grizzly Island Road and therefore views from this area would not be affected.

l. **Navigation:** No effect.

m. **Traffic and Transportation:** Long term adverse impacts to traffic are expected to be minimal in magnitude. An existing 30-foot wide X 400-foot long bypass road, comprised of two lanes is located adjacent to Potrero Hills Lane at the entrance into the landfill. This auxiliary road would be used when necessary to cope with transportation interruptions into

the landfill. However, it is believed traffic interruptions into the landfill would be uncommon.

The primary objective of the project is to increase the lifespan (capacity) of the landfill not the rate at which it is filled. The hours of landfill operation would be extended, however, direct and indirect adverse impacts to traffic and transportation are not expected to be more than minimal in magnitude.

- n. **Municipal and Private Water Supply and Conservation:** No effect.
- o. **Public Health and Safety:** No effect. The Project would be designed to meet all pertinent landfill standards.
- p. **Energy and Conservation:** No effect
- q. **Land Use:** No effect. The Project would comply fully with the Secondary Management Area of the SMPA.
- r. **Consideration of Property Ownership:** No effect.
- s. **Economics and Employment:** Long-term, indirect, beneficial impacts to city and county tax revenue, the property tax base, and business impacts are expected to be minor magnitude. The Project would extend the lifespan of the landfill from approximately three years to 35 years. As stated in the Project Need section of this document, there is a mandate in Solano County to have viable landfill options for waste disposal. A residual economic benefit to meeting that need would likely result in a long term beneficial impact.
- t. **Environmental Justice:** No effect.

6. **Direct and Indirect Impacts to the Historic and Cultural Environment** (40 C.F.R §§ 230.11, 230.50-230.54 and 1508.8): No effect. According to the Potrero Hills Landfill Environmental Impact Report (EIR), past surveys have included reference checks and field studies to locate possible cultural resources within the site and on surrounding properties. Potential cultural resources in the Phase I project area and proposed Phase II landfill expansion areas were addressed in a 1974 EIR prepared by Jones and Stokes Associates. In that report, they concluded that no historic or cultural resources were found in the study area.

- a. **National Historic Landmark Properties:** No effect.
- b. **Other National Register Historic Properties:** No effect.
- c. **Archaeological and Cultural Resources:** No effect.

7. **Summary of Cumulative Impacts on the Aquatic Ecosystem** (40 C.F.R. §§ 230.11(g) and 1508.7): Cumulative impacts result from incremental impact of the project when added together to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Within this context, the following cumulative impacts to the aquatic ecosystem have

been identified:

The landfill Phase I disposal area consists of approximately 190 acres, and the Phase II area will add an additional 150 acres. Due to landscape constraints, Phase II will be the final phase of the landfill.

The affected geographical area is clearly defined. The PHLF is located within a narrow valley that is confined by a backwards letter "C" shaped hilly ridge line. Water drains east-to-west from the valley while the landfill expands and subsequently fills from west-to-east.

Phase I began operation at its present site in August 1986. It was constructed in five modules that would eventually cover 200 acres of the 320 acre parcel. Module 1 was constructed under Nationwide Permit 26, authorized in 1990 (Corps file #15501E95A). The remaining modules were authorized August 29, 1995 via a Standard Individual Permit, (Corps file #21252E95). Work authorized under the aforementioned permits allowed construction of what is currently referred to as PHLF Phase I. The August 29, 1995 Corps Permit also authorized construction of a storm water channel, approximately 4,800-linear feet which created a realigned segment of Spring Branch Creek to allow development of Phase I. The current proposal would enclose that channel into pipe, sized to accommodate a 1,000 year storm event.

The current proposal, Phase II, is the final phase of landfill construction. It would fill an additional 150 acres of the upper watershed of Spring Branch Creek. The project would expand the PHLF lifespan by 38 years. Ultimately, all storm water issues have been addressed. Drainage patterns in the upper watershed would change due to project construction. However, all drainage and storm water issues have been addressed and the Project would not result in any meaningful cumulative impacts to the lower watershed.

III. FINDINGS:

A. STATUS OF OTHER AUTHORIZATIONS:

1. **Water Quality Certification** (33 C.F.R. §§ 320.4(d) and 325.2(b)(1)(ii)): By letter of May 18, 2011, the Regional Water Quality Control Board (RWQCB), North Coast Region, issued a water quality certification for the project under WDID No. R2-2011-0032, pursuant to Section 401 of the Clean Water Act (33 U.S.C. § 1341) and waste discharge requirements under the Porter-Cologne Water Quality Control Act (California Water Code § 13000 et seq.).

2. **Coastal Zone Management Consistency Review** (33 C.F.R. §§ 320.4(h) and 325.2(b)(2)(i)-325.2(b)(ii)): San Francisco Bay Conservation and Development Commission, Permit No. 3-10(M), dated November 1, 2010. The permittee, Potrero Hills Landfill, Inc., was granted permission to construct within the secondary management area of the Suisun Marsh.

3. **Other State and County Requirements** (33 C.F.R. § 320.4(j)(1)): By letter of August 25, 2011, the California Department of Fish and Game issued a Draft Lake and Streambed Alteration Agreement for the project under Notification No. 1600-2010-0382-R3.

B. COMPLIANCE WITH VARIOUS FEDERAL LAWS (33 C.F.R. § 320.3):

1. **Endangered Species Act of 1973, as amended (ESA)** (16 U.S.C. § 1531 *et seq.*) (33 C.F.R. § 325.2(b)(5)): Section 7 of ESA requires Federal agencies to consult with either the U.S. Fish and Wildlife Service or the National Marine Fisheries Service to insure any action authorized, funded, or carried out by the agency is not likely to jeopardize the continued existence of any Federally-listed species or result in the adverse modification of designated critical habitat. By letter of July 13, 2007, USACE initiated consultation with the U.S. Fish and Wildlife Service (Service) to address project related impacts to threatened California tiger salamander (*Ambystoma californiense*), endangered Conservancy fairy shrimp (*Branchinecta conservation*) and its critical habitat, endangered vernal pool tadpole shrimp (*Lepidurus packardii*) and its critical habitat, threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and its critical habitat, and endangered Contra Costa goldfields (*Lasthenia conjugens*) and its critical habitat. By letter of November 29, 2010, the Service issued a Biological Opinion that concluded that the level of the anticipated take is not likely to result in jeopardy to the tiger salamander, vernal pool fairy shrimp, vernal pool tadpole shrimp, Conservancy fairy shrimp, or Contra Costa goldfields and their critical habitat. The Biological Opinion contained: Conservation Measures; Avoidance and Minimization Measures to minimize take of salamanders; Avoidance and Conservation Measures-Vernal Pool Crustaceans, to minimize take of vernal pool shrimp; Avoidance and Conservation Measures-Contra Costa Goldfields, to minimize take of Contra Costa Goldfields; Reasonable and Prudent Measures; Terms and Conditions; and Conservation Recommendations. All of the aforementioned Conservation Measures, Avoidance and Minimization Measures, Terms and Conditions, and Conservation Recommendations must be implemented for the take exemption defined in Section 7(o)(2) of the ESA to remain in effect; these mandatory Terms and Conditions would be incorporated as a Special Condition to the Department of the Army Permit to ensure project compliance with ESA.

2. **Magnuson-Stevens Fishery Conservation and Management Act of 1996, as amended (MSFCMA)** (16 U.S.C. § 1801 *et seq.*): Section 305(b)(2) of MSFCMA requires Federal agencies to consult with the National Marine Fisheries Service on all proposed actions authorized, funded, or undertaken by the agency that may adversely affect essential fish habitat (EFH). EFH is defined as those waters and substrate necessary to fish for spawning, breeding, feeding, or growth to maturity. EFH is designated only for those species managed under a Federal Fisheries Management Plan (FMP), such as the *Pacific Groundfish FMP*, the *Coastal Pelagics FMP*, and the *Pacific Coast Salmon FMP*. Consultation under MSFCMA was not required since the project would not occur in or affect EFH.

3. **National Historic Preservation Act of 1966, as amended (NHPA)** (16 U.S.C. § 470 *et seq.*) (33 C.F.R. § 325.2(b)(3)): Section 106 of NHPA requires Federal agencies to consult with the appropriate State Historic Preservation Officer to take into account the effects of their undertakings on historic properties listed in or eligible for listing in the *National Register of Historic Places*. Section 106 of NHPA further requires Federal agencies to consult with the appropriate Tribal Historic Preservation Officer or any Indian Tribe to take into account the effects of their undertakings on historic properties, including traditional cultural properties, trust resources, and sacred sites, to which Indian Tribes attach historic, religious, and cultural significance. Consultation under NHPA was not required, since the project would not have the potential to cause any effect on historic properties.

4. **Wild and Scenic Rivers Act of 1968, as amended (WSRA)** (16 U.S.C. § 1271 *et seq.*): Section 7(a) of WSRA provides that no Federal agency shall assist by loan, grant, license or otherwise, in the construction of any water resources project that would have a direct and adverse effect on the values for which such river designation was established, as determined by the Secretary charged with its administration. Consultation under WSRA was not required since the project would not occur in or affect a designated wild or scenic river.

5. **Clean Air Act of 1963, as amended (CAA)** (42 U.S.C. § 7401 *et seq.*): Section 176(c) of CAA requires Federal agencies to demonstrate that activities in which they engage conform with applicable, Federally-approved CAA state implementation plans. Furthermore, projects occurring in geographic areas designated as "non-attainment" and "maintenance" areas are to be analyzed for conformity applicability, pursuant to the provisions of 40 C.F.R. Section 51.850. In this project, the Corps is authorizing the fill of approximately 1.42 acres of seasonal wetlands, 0.44 acre of discontinuous intermittent stream segments at the headwaters of Spring Branch Creek, and a 0.004 acre pond for a 167 acre landfill expansion project. Under these facts CAA General Conformity Rule guidelines (see 58 FR 63227, November 30, 1993) regarding CAA scope of analysis for federal permit actions, the USACE concludes any increase in direct air emissions of criteria pollutants attributed to project related dredged and fill material discharges into waters of the United States would be clearly *de minimis* and are, therefore, exempt from the requirement of a CAA conformity determination, pursuant to the provisions of 40 C.F.R. Section 93.153. Any indirect air emissions associated with later phases of the project operation or maintenance would not be a continuing program responsibility of nor practicably controlled by USACE. In the event such discharges exceeded the *de minimis* threshold, USACE would prepare an appropriate CAA conformity determination for the project.

6. **Marine Protection, Research, and Sanctuaries Act of 1972, as amended (MPRSA)** (16 U.S.C. § 1432 *et seq.*) (33 C.F.R. § 320.4(i)): Section 302 of MPRSA, as amended, authorizes the Secretary of Commerce, in part, to designate areas of ocean waters, such as Cordell Bank, Gulf of the Farallones, and Monterey Bay, as national marine sanctuaries for the purpose of preserving or restoring such areas for their conservation, recreational, ecological, or aesthetic values. After such designation, activities in sanctuary waters authorized under other authorities are valid only if the Secretary of Commerce certifies that the activities are consistent with Title III of MPRSA. Consultation under MPRSA was not required since the project would not occur in or affect designated sanctuary waters.

C. COMPLIANCE WITH VARIOUS EXECUTIVE ORDERS:

1. **Executive Order 11990, Protection of Wetlands:** This Executive Order (EO) directs Federal agencies to ensure their actions minimize the destruction, loss, or degradation of wetlands, and to preserve and enhance the natural and beneficial values of wetlands. This EO does not apply, however, to the issuance of Federal permits, licenses, or allocations to private parties for activities involving wetlands on non-Federal property. Project related impacts to wetlands and measures to further avoid, minimize, and compensate for unavoidable impacts to wetlands are described and evaluated in this document (Refer to Sections II.B. and II.C). The project would not cause any substantial adverse impact to wetlands.

2. **Executive Order 11988, Floodplain Management:** This EO directs Federal

agencies to ensure their actions avoid, to the extent practicable, the long and short term adverse impacts associated with the occupancy and modification of floodplains, and to avoid direct and indirect support of floodplain development whenever there is a practicable alternative. Project related impacts to floodplains and measures to further avoid, minimize, and compensate for unavoidable impacts to floodplains are described and evaluated in this document (Refer to Sections II.B. and II.C). The project would not cause any substantial adverse impact to floodplains.

3. **Executive Order 12898, Federal Actions to Address Environmental Justice in Minority Populations and Low-Income Populations:** This EO directs Federal agencies to ensure their programs, policies, and activities do not have a disproportionately high and adverse human health or environmental effects on minority populations and low-income populations. Project related impacts to minority and low-income populations and measures to further avoid, minimize, and compensate for unavoidable impacts to these populations are described and evaluated in this document (Refer to Sections II.B. and II.C). The project would not cause any substantial adverse impact to minority and low-income populations.

4. **Executive Order 13112, Invasive Species:** This EO directs Federal agencies to ensure their programs, policies, and activities prevent the introduction of invasive species, to provide for their control, and to minimize the economic, ecological, and human health impacts that invasive species cause. Project related impacts to native species and measures to further avoid, minimize, and compensate for unavoidable impacts to native species are described and evaluated in this document (Refer to Sections II.B. and II.C). The project would not cause any substantial adverse impact to native species or result in the import of invasive species.

5. **Executive Order 13175, Consultation and Coordination with Indian Tribal Governments:** This EO directs Federal agencies to establish regular and meaningful consultation and collaboration with tribal officials in the development of Federal policies that have tribal implications, and to reduce the imposition of unfunded mandates upon Indian tribes. Comments received from Indian tribes through consultation and by other means are described and evaluated in this document (Refer to Sections II.C., III.B.3, and III.E.).

6. **Executive Order 13186, Responsibilities of Federal Agencies to Protect Migratory Birds:** This EO directs Federal agencies to ensure their programs, policies, and activities promote the conservation of migratory bird populations. Project related impacts to migratory birds and measures to further avoid, minimize, and compensate for unavoidable impacts to migratory birds are described and evaluated in this document (Refer to Sections II.B. and II.C). The project would not cause any substantial adverse impact to migratory birds.

7. **Executive Orders 13212 and 13302, Actions to Expedite Energy-Related Projects:** This EO directs Federal agencies to expedite their review of permits and other evaluations for projects that increase the production, transmission, or conservation of energy and for projects that strengthen pipeline safety. The project does not entail the production, transmission, or conservation of energy and does not involve pipeline safety.

D. **PROJECT BACKGROUND:** An initial Department of the Army permit application was received by USACE on March 21, 2006. It was denied without prejudice on April 15, 2008

due to a long time delay/lack of any prospect of obtaining certification of approval from the California RWQCB. A second Department of the Army permit application was received by the USACE on March 12, 2010. A 30-day Public Notice describing the project was issued on June 1, 2010, and was sent to all interested parties, including appropriate Federal, State, and County agencies, organizations, and the public at large. USACE conducted field investigations on: December 30, 2009; March 10, 23, 2010; May 13, 2010; and August 26, 2010 to confirmed the extent of jurisdictional waters.

E. **PUBLIC NOTICE COMMENTS:** (33 C.F.R. § 325.2(a)(3)): All comments received on the Public Notice and response to comments are summarized below:

1. **Native American Tribal Governments:** None.
2. **Federal Agencies:**
 - a. **U.S. Environmental Protection Agency (USEPA):** None.
 - b. **U.S. Fish and Wildlife Service (USFWS):** None.
 - c. **National Marine Fisheries Service (NMFS):** None.
 - d. **U.S. Coast Guard (USCG):**
 - e. **Federal Emergency Management Agency (FEMA):** None.
 - f. **National Park Service (NPS):**
 - g. **Advisory Council on Historic Preservation (ACHP):** None.
 - h. **Other Federal Agencies:** None.
3. **State and Local Agencies:**
 - a. **State Historic Preservation Officer (SHPO):** None.
 - b. **California Department of Fish and Game (CDFG):** None.
 - c. **California Department of Transportation (CALTRANS):** None.
 - d. **California State Lands Commission (CSLC):** None.
 - e. **California Regional Water Quality Control Board (RWQCB):** None.
 - f. **California Coastal Commission (CCC):** None.
 - g. **SF Bay Conservation and Development Commission (BCDC):** None.

h. **Other State and Local Agencies:** None.

4. **Organizations:** None.

5. **Individuals:** Please see the attached Public Comments Worksheet, and the Memo for Record titled, "Corps Review of Applicant Response to Comments on Public Notice for Potrero Hills Landfill Expansion Project, Corps file #260240N." These two documents are incorporated into this document by reference.

F. PUBLIC HEARING COMMENTS: (33 C.F.R. § 327.9): A Public Hearing was requested by two individuals: Mr. Stephan C. Volker and Mr. Kelly T. Smith, both representing SPRAWLDEF (Sustainability, Parks, Recycling, and Wildlife Legal Defense Fund), 1541 Corporate Way, Suite 100, Sacramento, California, to further express concerns about Solano County Measure E, project need, project alternatives, impacts to Spring Branch Creek, endangered species impacts, cumulative impacts, water quality impacts, traffic impacts, impacts to the Suisun Marsh, NEPA level of review, aesthetic impacts, and recreational impacts. Upon reviewing this request for a Public Hearing, USACE determined that no new information would be obtained by a public hearing, as the record and public interest review could sufficiently address these issues. Furthermore, it was determined that these issues could be readily addressed through standard Regulatory evaluation procedures; accordingly, the request for a Public Hearing was denied.

The issues raised as the basis for the need of a Public Hearing by the requesting parties were accommodated through the following alternative forums: The Certified County of Solano Revised Re-circulated Final Environmental Impact Report dated May 28, 2009; the 401 Water Quality Certification issued by the California Regional Water Quality Control Board, San Francisco Bay Region (Order No. R2-2011-0032), dated May 18, 2011; Biological Opinion from the United States Fish and Wildlife Service (Service) received on November 29, 2010, (File # 81420-2007-F-1362-3) for effects of the proposed project on: the threatened California tiger salamander (*Ambystoma californiense*), endangered Conservancy fairy shrimp (*Branchinecta conservation*) and its critical habitat, endangered vernal pool tadpole shrimp (*Lepidurus packardii*) and its critical habitat, threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and its critical habitat, and endangered Contra Costa goldfields (*Lasthenia conjugens*) and its critical habitat; A Draft Streambed Alteration Agreement that was issued by the California Department of Fish and Game (CA F/G) on August 25, 2011; and the San Francisco Bay Conservation and Development Commission, Permit No. 3-10(M), dated November 1, 2010.

G. EVALUATION: The documents and factors relating to the Department of the Army permit application, and the stated views of other agencies and the concerned public have been reviewed and evaluated in light of the overall public interest. In this analysis, the possible consequences of the project were considered in accordance with regulations published in 33 C.F.R. Parts 320 to 332, and 40 C.F.R. Part 230. The following paragraphs include the USACE evaluation of comments received and project compliance with the above cited regulations.

1. **Consideration of Public Notice and Public Hearing Comments** (33 C.F.R. §§ 325.2(a)(3) and 327.9): By letter of July 28, 2010, USACE forwarded all comments to Steve Peterson, Environmental Stewardship & Planning, Inc. for resolution or rebuttal. This letter identified

specific comments for which a response was deemed essential in order to conclude the permit evaluation process, pursuant to the provisions of 33 C.F.R. Section 325.1(e). All comments received in response to the Public Notice were adequately addressed by Environmental Stewardship & Planning, Inc. (Environmental Consultant for Potrero Hills Landfill, Inc.) in their email response of May 4, 2011, evaluated by USACE, or would be resolved through the use of Special Conditions to the Department of the Army Permit (Refer to Sections III.E. III.F. and III.G.2.d.). The Public Notice did not generate any substantive comments by the public or by other government agencies. None of the Federal resource agencies identified the project as causing "substantial and unacceptable impacts to aquatic resources of national importance" in accordance with the Section 404(q) MOA; therefore, these agencies have relinquished their options to elevate specific objections on permit issuance for reconsideration by higher authority.

2. **Compliance with Section 404(b)(1) Guidelines:**

a. **Alternative Test** (40 C.F.R. § 230.10(a)): The Section 404(b)(1) Guidelines presume the availability of a practicable alternative to project related dredged and fill material discharges into waters of the United States that would result in less adverse impact to the aquatic environment, provided the alternative does not cause some other adverse environmental consequence. An alternative is considered to be practicable if it is available and capable of being implemented, after taking into account cost, logistics, and technology in light of the overall project purpose (40 C.F.R. § 203.10(a)(2)). An evaluation pursuant to the Guidelines indicates the project is not dependent on location in or proximity to waters of the United States to achieve the basic project purpose of constructing a municipal solid waste landfill and resource recovery center. For non-water dependent projects involving discharges of dredged and fill material into special aquatic sites, the Guidelines presume the availability of a practicable alternative that does not require such discharges into special aquatic sites, unless clearly demonstrated otherwise by the applicant. An evaluation pursuant to the Guidelines indicates the project is dependent on location in or proximity to waters of the United States to achieve the basic project purpose of constructing a municipal solid waste landfill and resource recovery center.

Mr. James Dunbar, Potrero Hills Landfill, Inc., through his agent Environmental Stewardship & Planning, Incorporated has reasonably demonstrated there are no other locations within the locale (market-project area) to accommodate the project or that would result in less impact to aquatic resources, or alternative designs that would further reduce impacts to aquatic resources (Refer to Section II.B.). Proposed discharges of dredged and fill material in wetlands, below OHWM of Spring Branch Creek would constitute the minimum volume and fill area necessary to achieve the overall project purpose. Based on this evaluation, USACE concludes there are no other practicable alternatives to the project with less adverse impact on the aquatic ecosystem or without other significant adverse environmental consequences.

b. **Special Restrictions** (40 C.F.R. § 230.10(b)): Proposed discharges of dredged and fill material discharges into waters of the United States would not: (1) Violate State water quality standards; (2) Violate toxic effluent standards (under Section 307 of the Clean Water Act); (3) Jeopardize endangered or threatened species or their critical habitat; or (4) Violate standards set by the Department of Commerce to protect marine sanctuaries.

c. **Other Restrictions** (40 C.F.R. § 230.10(c)): Proposed discharges of dredged and

fill material would not contribute to *significant* degradation of waters of the United States by adversely affecting: (1) Human health or welfare through pollution of municipal water supplies, fish, shellfish, wildlife, and special aquatic sites; (2) Life stages of aquatic life or other wildlife; (3) Diversity, productivity, and stability of the aquatic ecosystem, such as loss of fish or wildlife habitat, or loss of the capacity of wetlands to assimilate nutrients, purify water, or reduce wave energy; or (4) Recreational, aesthetic, and economic values.

d. **Actions to Minimize Adverse Impacts** (40 C.F.R. §§ 230.10(d), 230.70-23076, and 1508.20; 33 C.F.R. §§ 320.4(r) and 325.4): The Department of the Army Permit authorizing the project would include the following Special Conditions to further avoid, minimize, and compensate for unavoidable adverse impacts to aquatic resources:

--All project related construction work shall incorporate appropriate best management practices (BMPs), including stabilizing and seeding of all disturbed areas to minimize the discharge of sediment laden water from the site;

--To compensate for the permanent discharge of fill material into 1.86 acres of waters of the United States, including 1.42 acres of seasonal wetlands and seeps, and 0.44 acre of intermittent/ephemeral jurisdictional drainages, associated with project construction, the permittee shall complete a Mitigation and Monitoring Plan (MMP), as revised March 4, 2011, prepared by LSA Associates, Inc., and Environmental Stewardship & Planning, Inc. Mitigation will occur on 963.28 acres within the Suisun Marsh Secondary Management Area of the Suisun Marsh on land owned by the applicant. The mitigation for impacts to wetlands and other waters of the United States would consist of the following components:

- a) Establishment of 4.49 acres of seasonal wetlands;
- b) Establishment of 1.80 acres (5,600 linear feet) of stream channel;
- c) Establishment of 1.78 acres of pond habitat (breeding habitat for the California tiger salamander);
- d) Wetland Enhancement of 65.12 acres of seasonal wetlands;
- e) Stream Enhancement on 1.49 acres (11,980 linear feet) of stream channel;
- f) Preservation of 4.73 acres of pond habitat (breeding habitat for the California tiger salamander);
- g) Preservation of 863.13 acres of California tiger salamander upland buffer habitat; and Preservation of 20.74 acres of upland buffer grassland habitat (California tiger salamander upland habitat);

--All required on-site mitigation construction work identified in the Mitigation Plan shall commence concurrently with or prior to any authorized discharge of fill material into waters of the United States associated with construction of the project;

--By 31 December of each year of the five-year permit authorization period, an Annual Mitigation Monitoring Report shall be submitted to the U.S. Army Corps of Engineers, Regulatory Division, North Branch. **The annual reports shall include: i. Monitoring Report Narrative.** It shall include; Permit number, name of parties responsible for conducting monitoring, dates inspections were conducted, brief description of approved project, aquatic resources impacted, mitigation acreage, and type of aquatic resources authorized to compensate for aquatic impacts, a written description of the mitigation location (expressed as latitude,

longitudes, UTM's, state plane coordinate system, etc.), dates the compensatory mitigation commenced and/or was completed, short statement on whether the performance standards are being met, dates of any corrective actions or maintenance activities conducted, specific recommendations for any additional corrective or remedial actions. **ii. Monitoring Requirements:** As specified in the approved mitigation plan titled, "Mitigation and Monitoring Plan, Potrero Hills Landfill Phase II Expansion, Solano County, California" **iii. Summary Data:** Data shall be provided to substantiate the progress of the wetland mitigation. **iv. Maps and Plans:** each map or diagram should be formatted to print on a standard 8 ½ x 11" piece of paper. As-built plans may be included. **v. Conclusions:** A general statement describing the condition of the mitigation to determine if performance standards are being met;

--Your responsibility to complete the required compensatory mitigation as set forth in Special Conditions 2 and 3 will not be considered fulfilled until you have demonstrated compensatory mitigation project success and have received written verification of that success from the U.S. Army Corps of Engineers.

3. Public Interest Evaluation (33 C.F.R. §§ 320.4(a)(2)(i)-320.4(a)(2)(iii)):

a. Extent of Public and Private Need for the Project: The project would fulfill a public need for economical and environmentally sound landfill disposal capacity as well as the capacity for recycling and reuse of waste materials to achieve state-mandated landfill diversion requirements in state law.

b. Practicality of Alternative Locations and Methods: No alternative location was identified that would fulfill the purpose and need for the project. The project would not cause an unresolved conflict in resource use.

c. Extent and Permanence of Beneficial and Detrimental Effects: Various public interest factors were taken into account in evaluating the effects of the project. The primary detrimental effect of the project would be an alteration to the drainage patterns of the uppermost segments of Spring Branch Creek and the small unnamed tributaries that drain into it. Beneficial effects of the project would include economical and environmentally sound landfill disposal capacity as well as the capacity for recycling and reuse of waste materials for Solano County and the surrounding communities in accordance with the CIWMP, and to California Public Resources Code §41700.

On the basis of this analysis, USACE concludes the benefits of the project would outweigh any resulting damage to the aquatic ecosystem.

4. Significant National Issues (33 C.F.R. §§ 320.4(j)(4) and 325.2(a)(6)): No national issue of overriding importance to State and local issues was identified that would cause the issuance of a Department of the Army Permit to be contrary to the public interest.

IV. DETERMINATIONS:

A. FINDING OF NO SIGNIFICANT IMPACT (33 C.F.R. §§ 325, Appendix B, Para. 7 and 325.2(a)(4); 40 C.F.R. §§ 1501.4(e) and 1508.13): The Environmental Assessment has been prepared to

address comments generated by the applicant, general public, and resource agencies have special expertise or jurisdiction by law in response to the Public Notice (Refer to Section II.C.). Based on a review of the impacts addressed in the Environmental Assessment incorporated herein, USACE concludes that the issuance of a Department of the Army Permit for the project (applicant's preferred alternative) does not constitute a major Federal action that would *significantly* affect the quality of the human environment. Pursuant to the provisions of the National Environmental Policy Act of 1969 (42 U.S.C. § 4332), the preparation of an Environmental Impact Statement (EIS) is, therefore, not required.

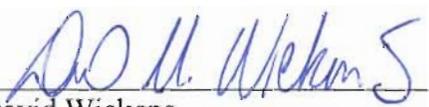
B. COMPLIANCE WITH DISCHARGE RESTRICTIONS (40 C.F.R. § 230.12): USACE concludes that project related dredged and fill material discharges into waters of the United States comply with the Section 404(b)(1) Guidelines, and that the project represents the least environmentally damaging practicable alternative. Furthermore, the USACE concludes that project related dredged and fill material discharges into waters of the United States comply with the Section 404(b)(1) Guidelines, with the inclusion of appropriate and practicable Special Conditions to the Department of the Army Permit to minimize pollution or adverse effects to the aquatic ecosystem (Refer to Section III.G.2.d.). With the inclusion of these discharge conditions, the project currently represents the least environmentally damaging practicable alternative.

C. PUBLIC HEARING DETERMINATION (33 C.F.R. §§ 325, Appendix B, Para. 11, 325.2(a)(5), and 327.4(b)): A Public Hearing may be held if USACE determines that information essential to the permit evaluation could be gleaned from such a forum. A Public Hearing is conducted on an as needed basis at the discretion of the District Engineer. Public comments on the project included a request for a Public Hearing by Mr. Stephan C. Volker and Mr. Kelly T. Smith, both representing SPRAWLDEF (Sustainability, Parks, Recycling, and Wildlife Legal Defense Fund), 1541 Corporate Way, Suite 100, Sacramento, California, to further express concerns about Solano County Measure E, project need, project alternatives, impacts to Spring Branch Creek, endangered species impacts, cumulative impacts, water quality impacts, traffic impacts, impacts to the Suisun Marsh, NEPA level of review, aesthetic impacts, and recreational impacts. Upon reviewing this request for a Public Hearing, USACE determined that the issues raised were insubstantial or could be readily addressed through standard Regulatory evaluation procedures; accordingly, the request for a Public Hearing was denied.

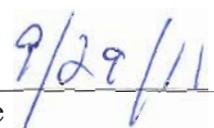
The issues raised as the basis for the need of a Public Hearing by the requesting parties were accommodated through the following alternative forums: The Certified County of Solano Revised Re-circulated Final Environmental Impact Report dated May 28, 2009; the 401 Water Quality Certification issued by the California Regional Water Quality Control Board, San Francisco Bay Region (Order No. R2-2011-0032), dated May 18, 2011; Biological Opinion from the United States Fish and Wildlife Service (Service) received on November 29, 2010, (File # 81420-2007-F-1362-3) for effects of the proposed project on: the threatened California tiger salamander (*Ambystoma californiense*), endangered Conservancy fairy shrimp (*Branchinecta conservation*) and its critical habitat, endangered vernal pool tadpole shrimp (*Lepidurus packardii*) and its critical habitat, threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and its critical habitat, and endangered Contra Costa goldfields (*Lasthenia conjugens*) and its critical habitat; A Draft Streambed Alteration Agreement that was issued by the California Department of Fish and Game (CA F/G) on August 25, 2011; and the San Francisco Bay Conservation and Development Commission, Permit No. 3-10(M), dated November 1, 2010.

D. PUBLIC INTEREST DETERMINATION (33 C.F.R. § 320.4(a)): The decision on whether to issue a Department of the Army Permit is based on an evaluation of probable effects, including cumulative effects, of the project and its intended use on the public interest. This evaluation reflects the national concern for both the protection and utilization of important resources identified at 33 C.F.R. Section 320.4(a)(1). Pursuant to the provisions of 33 C.F.R. Parts 320 to 330 and 40 C.F.R. Part 230, USACE has reviewed the administrative record for the Department of the Army permit application and considered all pertinent comments received on the project. Upon completing this evaluation and weighing all factors relevant to the project, USACE concludes that the issuance of a Department of the Army Permit, with Special Conditions, to authorize the project is not contrary to the public interest.

PREPARED AND RECOMMENDED BY:



David Wickens
Regulatory Permit Manager



Date

REVIEWED AND CONCURRED BY:



Laurie A. Monarres
Chief, North Branch

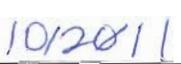


Date

APPROVED BY:



for Torrey A. DiCiro, P.E., PMP
Lieutenant Colonel, U.S. Army
Commanding



Date

Memo for Record

Corps Review of Applicant Response to Comments on Public Notice for Potrero Hills Landfill Expansion Project Corps file #260240N

Alternatives Analysis comments (AA): Seven people commented on the applicant's alternatives analysis. Some commented that viable project alternatives existed; that the Hay Road Landfill was a viable alternative to the proposed project; or that other viable project locations existed.

The applicant submitted a project Alternatives Analysis in accordance with the U.S. Environmental Protection Agency's Section 404(b)(1) Guidelines (Guidelines), dated November 4, 2009. The applicant's Alternatives Analysis considered a total of 16 off-site alternatives and five on-site alternatives (including the proposed project).

The off-site project alternatives were screened by size, physical suitability, and availability within located within the Sonoma County, Solano County, Contra Costa County, and Santa Clara County service area. The following sites were considered and rejected based on one or more of the aforementioned screening criteria: Hay Road Site, Aqua Clear Farms Site, Rio Vista Landfill Site, American Canyon Landfill Site, Keller Canyon Site, Contra Costa Sanitary Landfill Site, Acme Landfill Site, Western Contra Costa Sanitary Landfill Site, Guadalupe Rubbish Disposal Site, Kirby Canyon Recycling and Disposal Facility Site, Newby Island Landfill Site, Owens-Corning Disposal Site, Pacheco Pass Site, Palo Alto Landfill Site, Zanker Road Class II Landfill Site, Redwood Landfill Site.

The on-site alternatives were examined within the constraints of where it is physically possible to expand the existing landfill and design alternatives such as: footprint size reduction; footprint size reduction via increased landfill height; and footprint layout adjustment. Practicability was determined per Guidelines rules using factors such as cost, logistics, and technology screening criteria. On-site alternatives considered included: the proposed project (preferred alternative); a smaller project footprint via increased height of landfill; partial wetland avoidance in Spring Branch Creek Valley; construction of expansion project in Upper Spring Branch Creek Valley. With the exception of the preferred alternative, none of the on-site alternatives were deemed feasible due to excessively high costs and/or logistical limitations.

The Corps determines the appropriate level of analysis. Focus was made on environmental impacts to ensure the rigor of alternatives analysis was commensurate

with the impacts to the aquatic environment. The Corps found the level of alternatives analysis to be adequate and agrees with the applicant's preferred alternative.

Applicant response: The applicant response to this comment is adequate.

Aesthetic Impacts concern (AI): Two people commented with concerns regarding the aesthetic impacts of the project. The project is located within a horseshoe-shaped hill that surrounds it on the north, east, and south. This hill provides a natural screen that obstructs the PHLF from view from SR-12 and most of the surrounding properties. The project site, ancillary structures, and lighting will be at an elevation that is, for the most part, shielded from view. The applicant proposes measures to mitigate impacts from litter. Impacts from lighting are considered to be minor in magnitude.

Applicant response is adequate.

Air Quality comments (AQ): Six people had comments regarding project impacts to air quality. Their comments ranged from impacts to overall air quality to impacts from elevated greenhouse gasses to impacts from methane gas emissions.

Air quality mitigation measures shall be implemented pursuant to the Revised Re-circulated Final Environmental Impact Report, dated May 28, 2009, prepared by the County of Solano, to reduce emissions to a less than significant level.

Applicant response is adequate.

Cultural Resources comments (CI): One person commented with concerns of impacts to an Indian burial grounds.

No prehistoric sites, historic sites, or artifacts (ie no burial grounds) occur on the project site.

Applicant response is adequate.

Cumulative Impacts Analysis comments (CI). One person commented with concerns regarding cumulative impacts that may result from project construction. Cumulative impacts result from incremental impact of the project when added together to other past, present, and reasonably foreseeable future actions. Cumulative impacts can result from individually minor but collectively significant actions taking place over a period of time. Within this context, the following cumulative impacts to the aquatic ecosystem have been identified:

The landfill Phase I disposal area consists of approximately 190 acres, and the Phase II area will add an additional 150 acres. Due to landscape constraints, Phase II will be the final phase of the landfill.

The affected geographical area is clearly defined. The PHLF is located within a narrow

valley that is hemmed in by a backwards letter "C" shaped hilly ridgeline. Water drains east-to-west from the valley while the landfill expands and subsequently fills from west-to-east.

Phase I began operation at its present site in August 1986. It was constructed in five modules that would eventually cover 200 acres of the 320 acre parcel. Module 1 was constructed under Nationwide Permit 26, authorized in 1990 (Corps file #15501E95A). The remaining modules were authorized August 29, 1995 via a Standard Individual Permit, (Corps file #21252E95). Work authorized under the aforementioned permits allowed construction of what is currently referred to as PHLF Phase I. The August 29, 1995 Corps Permit also authorized construction of a storm water channel, approximately 4,800-linear feet which created a realigned segment of Spring Branch Creek to allow development of Phase I. The current proposal would enclose that channel into pipe, sized to accommodate a 1,000 year storm event.

The current proposal, Phase II, is the final phase of landfill construction. It would fill an additional 150 acres of the upper watershed of Spring Branch Creek. The project would expand the PHLF lifespan by 38 years. Ultimately, all storm water issues have been addressed. Drainage patterns in the upper watershed would change due to project construction. However, all drainage and storm water issues have been addressed and the Project would not result in any meaningful cumulative impacts to the lower watershed.

Applicant response is adequate.

Endangered Species Comments (ESA): Five people commented on project impacts to California tiger salamander (*Ambystoma californiense*).

The Corps received a Biological Opinion from the Service dated November 29, 2010 for consultation on the threatened California tiger salamander (*Ambystoma californiense*), endangered Conservancy fairy shrimp (*Branchinecta conservatio*) and its critical habitat, endangered vernal pool tadpole shrimp (*Lepidurus packardi*) and its critical habitat, threatened vernal pool fairy shrimp (*Branchinecta lynchi*) and its critical habitat, and endangered Contra Costa goldfields (*Lasthenia conjugens*) and its critical habitat.

Construction of the PHLF Expansion Project will result in the permanent loss of approximately 165.16 acres of tiger salamander upland habitat, the permanent loss of 1.86 acres of tiger salamander wetland dispersal habitat, and the permanent loss of 0.61 acre of tiger salamander breeding habitat due to the loss of existing Pond 1 (0.39 acre) and existing Pond 4 (0.22 acre). These impacts will be off-set as described in the Biological Opinion (BO) at: the Conservation Measures beginning at page 14; the BO Terms and Conditions at page 57; and the BO Conservation Recommendations at page 58.

Applicant response: The applicant response to this comment is adequate.

Lighting Pollution Comments (LP): Two people commented on the project's nighttime lighting and the potential for adverse impacts to birds due to light pollution. The project

would increase operations Monday thru Friday to a 24-hour/day schedule (up from the current 21-hour/day schedule) and a 20-hour/day schedule on weekends (beginning at 4:00AM).

The applicant proposes to limit light impacts by continuing to focus all lights towards the ground (as opposed to the sky). The applicant does not propose a large increase in the duration of illumination of the landfill. These factors should reduce impacts to minimal magnitude.

Applicant response: The applicant response to this comment is adequate.

Litter Control comments (LI): One person commented with a concern for litter control.

PHLF will be required to update its litter control program in compliance with the California Department of Resources Recycling and Recovery. The litter control program will utilize litter catching fences and staff to collect daily on site and off site litter.

Applicant response is adequate.

Measure E comments (ME): Seven people had comments relating to the requirements of Solano County Measure E.

Solano County Measure E limits out-of-county wastes brought into Solano County landfills from out-of-county sources to 95,000 tons/year. On August 10, 2009, the Sierra Club sued Solano County, claiming the County should enforce Measure E and rescind its use permit for the landfill expansion. On May 12, 2010, the Solano County Superior Court ruled that Measure E was constitutional and enforceable in Northern California Recycling Association v. Solano County. However, the ruling did not enjoin or invalidate the County's use permit. On August 30, 2010, the court reconfirmed its decision. Today, Measure E is still not enforced and a bill to remove it is pending. Regardless of the outcome of Measure E, the applicant has displayed a need for the proposed project.

Applicant response: The applicant response to this comment is adequate. Furthermore, a DA permit does not convey any property rights under 33 CFR 320.4(g)(6).

Mitigation Plan comments (MP): Three people commented with concerns that the wetland mitigation plan was not adequate, and mitigation for impacts to California Tiger Salamander was not adequate.

Based on the BO received from the Service dated November 29, 2010, the mitigation plan for California Tiger Salamander is adequate.

The project would permanently fill 1.42 acres of seasonal wetlands. Wetland functions that may be impacted by the project include natural biological functions; storage for storm and flood waters; maintenance of minimum baseflows; and sequestering sediment

suspended in the water column of sheet flow and concentrated flow during storm events.

Mitigation of flood storage capacity functions would occur via Project design. To offset unavoidable, permanent impacts to all other wetland functions Discharger would complete a Mitigation and Monitoring Plan (MMP), as revised on March 4, 2011, prepared by LSA Associates, Inc. The MMP proposes mitigation on 963.28 acres located in close proximity to the impact site, within the same watershed as the impact site, on property adjacent to the Project, located within the Secondary Management Area of the Suisun Marsh. The MMP would consist of the following wetland mitigation components: establishment of 4.49 acres of seasonal wetlands; and enhancement of 65.12 acres of seasonal wetlands.

The mitigation for impacts to wetlands and other waters of the United States would consist of the following components:

- a) Establishment of 4.49 acres of seasonal wetlands;
- b) Establishment of 1.80 acres (5,600 linear feet) of stream channel;
- c) Establishment of 1.78 acres of pond habitat (breeding habitat for the California tiger salamander);
- d) Wetland Enhancement of 65.12 acres of seasonal wetlands;
- e) Stream Enhancement on 1.49 acres (11,980 linear feet) of stream channel;
- f) Preservation of 4.73 acres of pond habitat (breeding habitat for the California tiger salamander);
- g) Preservation of 863.13 acres of California tiger salamander upland buffer habitat; and
- h) Preservation of 20.74 acres of upland buffer grassland habitat (California tiger salamander upland habitat).

Applicant response is adequate.

Noise Impacts comments (NI): One person commented with a concern for project noise impacts.

The commentor is not clear as to what would be affected by noise generated by the project. The noise levels generated by project activities are allowable under the Suisun Marsh Plan, and the BO from the Service. The project location has a large buffer from population centers. The long term adverse noise impacts are minor.

Applicant response: The applicant response to this comment is adequate.

Nuisance Birds Comments (NB): Three people commented on nuisance bird species that could be attracted to the project if constructed.

The applicant proposes to implement a nuisance species abatement plan consisting of pyrotechnics, falconry, and dogs. The Service did not identify any potential for nuisance bird species to affect any federally listed threatened and/or endangered bird species that may occur in the surrounding area.

Applicant response: The applicant response to this comment is adequate.

Potrero Hills Landfill Design Comments (PHLFD): Five people commented on the PHLF design as it pertains to: ancillary structures such as the water tanks, pipeline, and power plant; and the landfill's liner and containment of pathogens.

The project will utilize design components such as berms to mitigate aesthetic impacts that could occur from the aforementioned ancillary structures per BCDC Permit No. 3-10(M). Construction of the above-listed ancillary structures do not result in a discharge of fill material into waters of the U.S.

With respect to the landfill liner and containment of pathogens: The PHLF Expansion Project design would meet California Regional Water Quality Control Board, San Francisco Bay Region Order No. R2-2011-0032, Updated Waste Discharge Requirements and Water Quality Certification and Discharge Monitoring Program requirements. Furthermore, monitoring for pathogen containment would be required by the Solano County health officials as/if deemed necessary.

Applicant response: The applicant response to this comment is adequate.

Public Hearing Request comments (PH): Two separate attorneys requested a Public Hearing on behalf of the same environmental group (SPRAWLDEF [Sustainability, Parks, Recycling, and Wildlife Legal Defense Fund]). In accordance with 33 CFR Part 327 any person may request, in writing, within the specified comment period, that a public hearing be held to consider material matters at issue in the permit application.

For both requests for public hearing the issues in question have been addressed and resolved.

Applicant response is adequate.

Public Notice comments (PN): One person commented with a concern that the Public Notice project description is outdated.

The public notice project description is accurate and complete pursuant to 33CFR Section 325.3.

Applicant response is adequate.

Recreational Impacts concerns (RI): The San Francisco Bay Conservation and Development Commission determined that the project would be consistent with the Suisun Marsh Preservation Act and the Recreation and Marsh Access section of Solano County's certified Suisun Marsh Local Protection Program.

Applicant Response is adequate.

Significant impacts to wetlands and streams comments (WSI): Two people commented that the applicant's proposed project should receive an EIS level of review. Most permits will only require an Environmental Assessment (EA) level of review because most proposed actions are not likely to have a significant impact on the quality of the human environment. In this case, an EA level of review (EA/404(b)(1)/Statement of findings/FONSI) confirms that the impact of the applicant's proposal is not significant and there are no unresolved conflicts concerning alternative uses of available resources.

The Corps determines the appropriate level of analysis. Focus was made on environmental impacts to ensure the rigor of alternatives analysis was commensurate with the impacts to the aquatic environment (as mentioned in the AA section of this document).

With respect to NEPA compliance the Corps considered the proposed impacts to the aquatic environment both individually and cumulatively within the scope of analysis and determined there are no significant impacts to the aquatic environment. The proposed action is not likely to have a significant impact on the quality of the human environment.

Impacts that have been identified were not considered significant and have been mitigated for. The use of mitigation to make a Finding of No Significant Impact is a standard practice for NEPA compliance. Mitigation includes avoiding impacts, minimizing impacts, and compensating for impacts by replacing or providing resources or environments pursuant to 33 CFR Parts 325 and 332, Compensatory Mitigation for Losses of Aquatic Resources; Final Rule. Furthermore, the mitigation plan (MMP) for the project is complete, pursuant to the aforementioned regulations, and adequate pursuant to mitigation ratio guidance.

Applicant response is adequate.

Spring Branch Creek Comments (SBC): Five people commented on downstream impacts to Spring Branch Creek. These comments pertained to flow rates and water quality associated with diverting 3,490 linear feet of Spring Branch Creek away from the Phase II footprint.

Water developed within the footprint will be diverted into basins during construction. Water would be conveyed off-site along the southern project boundary. Ultimately, the total length of the pipeline would be approximately 6,500-linear feet because it would span the length of Phase II and the existing Phase I (thus, the length of the entire landfill). Currently, water is diverted away from the existing landfill (Phase I) into a channel excavated on dry land and located on the landfills southern boundary. The channel was constructed as part of Corps file #21252E95.

Note: The stream segments of Spring Branch Creek located within the Project footprint are shallow, narrow grassy swales with a discontinuous Ordinary High Water Mark (OHWM) that marginally meet the regulatory definition of a stream subject to

jurisdiction under Section 404 of the Clean Water Act.

Upon build-out and completion of Phase II (when the landfill is filled and prepared for closure) a surface channel excavated at the toe of the landfill's exterior southern slope would capture surface runoff. The surface channel would be approximately five feet deep and 30 feet wide.

Both the underground pipeline and the surface channel would discharge at the same existing discharge point located west of Phase I and in-line with the natural channel course of Spring Branch Creek.

With respect to the public comment for impacts to stream rates: The pipeline would be constructed in segments concurrent with the build-out of landfill "cells" as landfill cells are filled west-to-east. The pipeline would be sized to convey a 1000 year storm event.

With respect to concerns for downstream water quality: the proposal does not result in an unacceptable water quality discharge. For details please see the California Regional Water Quality Control Board, San Francisco Bay Region Order No. R2-2011-0032, Updated Waste Discharge Requirements and Water Quality Certification for Potrero Hills Landfill, Suisun, Solano County, dated May 18, 2011. Please also see State of California, San Francisco Bay Conservation and Development Commission (BCDC) Permit No. 3-10(M).

Applicant response: The applicant response to this comment is adequate.

Suisun Marsh Comments (SM): Nine people commented with concerns that the project would have an adverse affect on the Suisun Marsh: the project was too close to the Suisun Marsh; the project would result in unacceptable runoff into the Suisun Marsh; or the project violates the Suisun Marsh Plan.

In a letter from State of California, San Francisco Bay Conservation and Development Commission (BCDC) Permit No. 3-10(M) dated November 1, 2010, a determination was made that the PHLF Expansion Project was consistent with the Suisun Marsh Preservation Act (Marsh Act) and Solano County's certified Suisun Marsh Local Protection Program (LPP). The PHLF Expansion Project would also be required to meet discharge requirements outlined in their California Regional Water Quality Control Board, San Francisco Bay Region Order No. R2-2011-0032, Updated Waste Discharge Requirements and Water Quality Certification and Discharge Monitoring Program requirements.

Applicant response: The applicant response to this comment is adequate.

Traffic Impacts comments (TI): Three people commented with concerns of traffic impacts associated with the project. These comments did not speak in very specific terms as to what their traffic concerns were.

PHLF would utilize an existing 30' wide X 400' long gravel bypass road located adjacent to Potrero Hills Lane as auxiliary access to the site in the event traffic interruptions occur. PHLF does not anticipate a need to use this bypass road very often. One commentor was concerned about traffic impacts to animals protected under the Endangered Species Act (ESA). Consultation with the Service concluded with a Biological Opinion dated November 29, 2010. The Biological Opinion (BO) contains Conservation Measures to minimize impacts on native plant and animal species, including listed species. The BO also contains non-discretionary terms and conditions that must be followed to minimize the effects of take on listed species. In addition, the BO also contains discretionary Conservation Recommendations to further the purposes of the ESA.

Applicant response: adequate.

Waste Concerns comments (WC): One person commented as being opposed placement of sludge or biosolids in the landfill.

This issue is outside the jurisdiction of the Corps. That said, it is our understanding the PHLF does possess the appropriate permits to accept sludge and biosolids.

Applicant response: The applicant response to this comment is adequate.

Water Quality comments (WQ): Four people commented with concerns for water quality. Of those concerns, one person was concerned with water quality in general and three other people were concerned with water quality impacts to the Suisun Marsh.

The PHLF Expansion Project received an updated Waste Discharge Requirements and water Quality Certification (401 Cert) from the **California Regional Water Quality Control Board, San Francisco Bay Region on May 18, 2011, Order No. R2-2011-0032** (File No. 2129.2045 [KER], CIWQS Place ID Nos. 248989 & 742394).

The purpose and authority of the 401 Cert are to: document compliance with waste discharge requirements (WDRs) and prohibitions established by the Regional Water Board; facilitate self-policing by the Discharger in the prevention and abatement of pollution arising from the waste discharge; develop or assist in the development of effluent standards of performance and toxicity standards; and assist the Discharger in complying with the requirements of the 401 Cert.

Pursuant to the aforementioned requirements and the applicant's responsibility to obey those requirements, water quality impacts to the Suisun Marsh have been addressed adequately by the applicant.

Applicant response: is adequate.

PREPARED BY:

David Wickens

David Wickens
Regulatory Permit Manager

9-29-11

Date

Commenter	Organization	Address	Comment Type	Comment Category
Florence M. LaRiviere	Citizens Committee to Complete the Refuge	453 Tennessee Lane, Palo Alto, CA 94306	How will CTS connectivity issues be addressed?	ESA
			Downstream impacts to Spring Branch Creek.	SBC
			How will biosolids, pathogenic and coliform bacteria be prevented from leaving the site?	PHLFD
			Nuisance animal species concerns.	NS
			Light pollution	LP
			Landfill too close to environmentally sensitive area.	SM
			Hay Road Alternative	AA
			Only Solano Co. waste should be allowed	ME
			Air Quality Concern.	AQ
George Guynn Jr.	1109 Pheasant Drive Suisun City, CA 94585-2212	Aesthetic impacts	AI	
		Spring Branch Creek Impacts to water table	SBC	
		Truck wash station odor impacts	AQ	
		Light pollution	LP	
		Traffic impacts	TI	
		Noise impacts	NI	
		Measure E enforcement	ME	
		No bio-solids or sludge.	PN	
		Litter control.	LC	
		Power plant and pipeline system impacts	PI	
		Mitigation concerns	MMP	
		Project design and liners	PHLFD	
		Cultural resources concern	CR	
		Impacts to T&E species	ESA	
Aurthur Feinstein	Consulting for Conservation on Behalf of SPRAWLDEF	590 Texas Street San Francisco, CA 94107	Alternative project sites available	AA
			Impacts to Suisun Marsh	SM
			Mitigation plan cannot offset project impacts	MMP
			Mitigation plan for California tiger salamander success questioned.	MMP
			Raven and Gull adverse affects to ESA species	NS
			Suisun marsh water quality impacts.	WQ
			Proposed impacts are avoidable	AA
			Spring Branch Creek impacts affect Suisun	
			Suisun marsh water quality.	SBC
T&E impacts to birds	ESA			

Commenter	Organization	Address	Comment Type	Comment Category
Kelly T. Smith	The Smith Firm	1541 Corporate Way, Ste 100	Traffic impacts	TI
	representing SPRAWLDEF	Sacramento, CA 95831	The "no project" alternative.	AA
	(Sustainability, Parks,		Measure E not addressed.	ME
	Recycling, and Wildlife Legal		PN project description outdated	PN
	Defense Fund)		Alternative Analysis	AA
			Spring Branch Creek downstream impacts	SBC
			Public Hearing request	PH
			Water quality	WQ
			Runoff into Suisun Marsh	SM
			Endangered Species	ESA
		Cumalitive impacts analysis	CIA	
William S. Reustle	William S. Reustle	609 Jefferson Street, Ste G-1	Air quality issue regarding methane gas.	AQ
	Attorney & Counselor at Law	Fairfield, CA 94533	Runoff into Suisun Marsh	SM
			Project violates the Suisun Marsh Plan.	SMP
			Alternatives locations are better.	AA
			Truck wash station, caretaker house, visitor center, and power plant violate Suisun Marsh Plan.	SMP
			No project need due to Measure E.	ME
			Project impacts to wetlands must be analyzed	PI
			Project impacts must be mitigated	MMP
			Air quality issue regarding methane gas.	AQ
			Downstream impacts to Spring Branch Creek.	SBC
		New roads impacts to T&E species	TI-2	
		Impacts to Suisun Marsh	SM	
John D. Moore	Zero Waste Committee	PO Box 5581 Berkeley, CA 94705	No project need due ot Measusre E.	ME
	Northern California Recycling Association			
Arthur Feinstein	Consulting for Conservation on behalf of SPRAWLDEF	590 Texas Street, San Francisco, CA 94107	Raven and Gull adverse affects to threatened/endangered birds of Suisun Marsh.	NS
	(Sustainability, Parks, Recycling, and Wildlife Legal Defense Fund)			
Norman La Force	President of SPRAWLDEF		Significant impacts on wetlands and streams	EI
			Alternatives to project	AA

Commenter	Organization	Address	Comment Type	Comment Category
Laurie Sarachan	Voices for Suisun Marsh	1000 Rispin	<i>impacts to Suisun Marsh too great</i>	SM
Lesley Emmington Jones		Berkeley, CA 94705	<i>Air quality issue regarding methane gas.</i>	AQ
Cristina Padua-Hughes		emcy@sbcglobal.net	<i>Water tank and pipeline need?</i>	PN
			<i>Measure E not addressed.</i>	ME
			<i>Impacts to Suisun Marsh</i>	SM
			<i>Water quality Impacts</i>	WQ
			<i>Air quality impacts</i>	AQ
Robert Valdez		248 Plantation Way Vacaville, CA 95687	<i>Threatened and Endangered Species concern</i>	ESA
Stephan C. Volker	Law Offices of Stephan C. Volker. Representing SPRAWLDEF	436 14th Street, Ste 1300 Oakland, CA 94612	<i>Measure E and project need.</i>	ME
			<i>Water quality impacts to Suisun Marsh</i>	WQ
			<i>Runoff into Suisun Marsh</i>	WQ
			<i>Spring Branch Creek proposal</i>	SBC
			<i>Landfill Liner</i>	PD
			<i>Air quality, greenhouse gasses</i>	AQ
			<i>Project review NEPA level of review</i>	PR
			<i>Public Hearing</i>	PH
			<i>Aesthetic concern</i>	AC
			<i>Recreation impacts</i>	RI