



Making San Francisco Bay Better

November 1, 2010

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

SUBJECT: BCDC Permit No. 3-10(M)

Dear Mr. Dunbar:

Enclosed please find an original of BCDC Permit No. 3-10(M), stamped "BCDC Original," one copy stamped "Permittee's Copy," and one stamped "Recorder's Copy," all executed by the Executive Director. You must: (1) **complete**, before a Notary Public, the acknowledgment section of the permit stamped "BCDC Original" and "Recorder's Copy," which indicates that you have read and that you understand all of the terms and conditions of the permit; (2) **return** the "BCDC Original" to the Commission's office within the ten-day time period; and (3) within thirty days, **submit proof** that the "Recorder's Copy" has been recorded by Solano County to the Commission's office. The copy stamped "Permittee's Copy" should be retained by you for your records, along with the Notice of Completion and Declaration of Compliance form, which you must return to us upon project completion.

Furthermore, your permit contains special conditions which require you to take certain specific actions. Attached is a checklist to assist you in following the correct procedures. Please understand that **no** work may commence on the project until the permit stamped "BCDC Original" is executed and returned to us. Until the Commission receives the executed permit, Potrero Hills Landfill, Inc. does not have the necessary authorization for the work authorized under the permit. The commencement of any work within the Commission's jurisdiction without the necessary authorization from the Commission is a violation of the McAteer-Petris Act and could subject you to substantial fines.

If you have any questions concerning the permit or the procedures outlined above, please contact me at 415/352-3616 or mingy@bcdc.ca.gov.

Very truly yours,

A handwritten signature in black ink, appearing to read "MING YEUNG", written in a cursive style.

MING YEUNG
Permit Analyst

MY/ra
Encls.

CHECKLIST For Permit Compliance

Permit No.: 3-10(M)
Permittee: Potrero Hills Landfill
Date Issued: November 1, 2010
Analyst: Ming Yeung

PERMITTEE CHECKLIST

FOR BCDC USE

Within 10 Days of the Issuance of this Permit

- Return the executed Original permit to BCDC
(*Standard Condition IV-A*)

Received _____

Within 30 Days of the Issuance of this Permit

- Submit Proof of Recordation of this Permit
(*Special Condition II-V*)

Received _____

**Within Six Months of Permit Issuance, Submit the
Appropriate Final Plans for BCDC Approval
(*Special Conditions II-A and II-H*)**

- Grading Plans

Received _____

Approved _____

- Visual Simulations of Final Height

Received _____

Approved _____

Prior to Commencement of Work:

- Submit certification that contractor(s) has reviewed
the permit and final, BCDC-approved plans
(*Special Condition II-W*)
- Submit a legal instrument agreeing to provide funds
to Solano Land Trust
(*Special Condition II-C*)
- Submit final Mitigation and Monitoring Plan
(*Special Condition II-E-1*)
- Submit final approvals from the Regional Water
Quality Control Board
(*Special Condition II-N*)

Received _____

Received _____

Received _____

Received _____

Submit the appropriate final plans for BCDC approval:

(Special Condition II-A)

Site Plans

Approved _____

Landscaping Plans

Approved _____

Public Access Plans

Approved _____

Prior to the Construction of Each Ancillary Structure

(Special Condition II-I):

Submit Plans for Truck/Container Washing Facility

Approved _____

Submit Plans for Visitor Center

Approved _____

Submit Plans for Landfill Gas-to-Energy Facility

Approved _____

Submit Plans for Water Storage Tanks and Berms

Approved _____

Prior to the Construction of the Landfill Gas-to-Energy Facility:

Submit Final Approval from the Bay Area Air Quality Management District
(Special Condition II-O)

Received _____

At Least Two Years Prior to Placement of Materials:

Submit a Corvid Monitoring Program
(Special Condition II-G-6)

Received _____

Approved _____

April 1 of Each Even Numbered Year, Biennially:

Submit Corvid Monitoring Report
(Special Condition II-G-6)

Received _____

Prior to Placement of Materials within Phase II:

Submit Litter Control Program for review and approval
(Special Condition II-K)

Received _____

Approved _____

Submit Odor Impact Minimization Plan for review
(Special Condition II-P)

Received _____

Submit Final Biological Opinion from USFWS
(Special Condition II-F)

Received _____

Prior to the Placement of Materials or by December 31, 2013, Whichever is Earliest:

- Make available for public access, the 57,000-square-foot public access overlook at Solano Garbage Company site and install improvements (*Special Condition II-B-1-a and II-B-2*)
- Dedicate public access through an approved Guarantee (Enclosed are a sample public access guarantee and instructions) (*Special Condition II-B-1-b and II-B-3*)
- Dedicate or otherwise permanently restrict as open space, the total conservation area (*Special Condition II-D-1*)
- Submit a final Grassland Management Plan for review and approval (*Special Condition II-E-3*)
- Submit a Planting Test Program (*Special Condition II-E-3-b*)

Completed _____

Received _____

Approved _____

Received _____

Approved _____

Received _____

Approved _____

Received _____

Approved _____

Within 30 days of Approval of the Document

- Submit Recorded Guarantee for Public Access (*Special Condition II-B-4*)

Received _____

Within 30 Days Following Project Completion

- Submit Notice of Completion (*Standard Condition IV-B*)
- (Final Site Inspection)

Received _____

Inspected _____

On-Going Permit Responsibilities

- Transfer Assignment of this Permit to New Owners Upon Sale of this Property Interest (*Standard Condition IV-C*)

Received _____

PERMIT NO. 3-10(M)

POTRERO HILLS LANDFILL, INC.

CERTIFICATION OF CONTRACTOR REVIEW

San Francisco Bay Conservation
and Development Commission
50 California Street, Suite 2600
San Francisco, CA 94111

Ladies and Gentlemen:

You are hereby informed that prior to commencing any grading, demolition, or construction authorized by the above referenced permit, I personally reviewed and understand the terms and conditions of the permit, the final plans approved by or on behalf of the Commission, particularly as they pertain to the public access, open space, and environmentally sensitive areas required herein, for those portions of the work for which I am in charge.

I, _____, hereby declare under penalty of perjury that the foregoing is true and correct and that if called upon to testify to the contents of this notice, I would so testify.

Executed on this _____ day of _____,

20____, at _____, California.

Contractor Name and Company

(Title)

PERMIT NO. 3-10(M)

POTRERO HILLS LANDFILL, INC.

NOTICE OF COMPLETION AND DECLARATION OF COMPLIANCE

San Francisco Bay Conservation
and Development Commission
Fifty California Street, Suite 2600
San Francisco, CA 94111

Ladies and Gentlemen:

You are hereby informed that the work authorized by the above-referenced permit was completed on _____.

I have personally reviewed the terms and conditions of the permit, the final plans approved by or on behalf of the Commission, and the completed project and hereby certify that the project is in compliance with all terms and conditions of the permit and conforms to the plans previously reviewed and approved by or on behalf of the Commission. I further certify that all conditions of the permit, particularly with regard to plan review, public access areas and improvements, recordation, open space restrictions and other special conditions have been met.

I, _____, hereby declare under penalty of perjury that the foregoing is true and correct and that if called upon to testify to the contents of this notice, I would so testify.

Executed on this _____ day of _____, 20____,
at _____, California.

(Permittee)

(Title)



Making San Francisco Bay Better

Permittee's Copy

PERMIT NO. 3-10(M)

November 1, 2010

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

ATTENTION: Mr. Jim Dunbar

SUBJECT: BCDC Permit No. 3-10(M)

Ladies and Gentlemen:

On October 21, 2010 the San Francisco Bay Conservation and Development Commission, by a vote of 15 affirmative, 4 negative, and 0 abstentions, approved the resolution pursuant to which this permit is hereby issued:

I. Authorization

A. Subject to the conditions stated below, the permittee, Potrero Hills Landfill, Inc., is hereby granted permission to construct within the secondary management area of the Suisun Marsh, in an unincorporated area of Solano County, approximately two miles southeast of the City of Fairfield, all activities authorized by Revision No. 2 to Solano County's Marsh Development Permit MD-88-09 (U-88-33), approved by the Solano County Board of Supervisors on September 13, 2005 (Resolution No. 2005-203), except as modified below:

1. At the End of Potrero Hills Lane, within the Potrero Hills:

- a. **Extend Landfill Horizontally.** Extend the landfill operations onto 167 acres of an approximately 210-acre parcel directly east of Phase I (Phase II expansion) up to a total capacity for both Phase I and Phase II of approximately 74.7 million cubic yards.
- b. **Landfill Height.** Allow the height of Phase I and II of the landfill to be a maximum of 220 feet above mean sea level (MSL), unless it can be demonstrated that an increase in height will not be visible from specified locations, pursuant to Special Condition II-H below and final plan review approval required by Special Condition II-A of this permit.
- c. **Relocate Spring Branch Creek Drainage.** Relocate the southern surface water drainage network (Spring Branch Creek and tributaries) by: (1) constructing an approximately 6,500-foot-long pre-cast concrete or similar capacity pipeline bedded in native soil and overtopped with soil materials up to approximately 75

feet deep (the pipeline will be built in segments of approximately 200-600 feet every three to five years as the landfill expands to the east) along the southern border of the Phase I/Phase II area to carry water from the eastern Potrero Hills Valley to the west; and (2) constructing a surface channel on top of the landfill's soil cover buttress, approximately five feet deep and 30 feet wide to transport runoff from the southern portion of the landfill and buttress fill.

- d. **Construct a Truck/Container Washing Facility.** Construct an approximately 10,000-square-foot, concrete-lined, drive-through truck/container washing facility, located near the entrance/exit to the landfill, to remove mud and dirt from vehicles. Water used at the washing facility will be supplied from the on-site domestic water well, from storage reservoirs, and/or from water delivered to the site by tank trucks.
 - e. **Construct a Landfill Gas to Energy Power Plant.** Construct an approximately 180-foot-long, 80-foot-wide and 25-foot-high power facility building at an approximately four-acre site, located near the existing gas flare on the Phase I site, to convert landfill gas to up to 10 megawatts (MW) of electricity, and install up to six generating units.
 - f. **New Power Lines.** Install approximately 6,800 feet of underground power lines and other supporting facilities to connect the new landfill gas-to-energy power plant to existing PG&E power lines located along the northern edge of the landfill site, pursuant to Special Condition II-L below.
 - g. **New Visitor Center.** Install an approximately 24-foot-wide, 60-foot-long, and 14-foot-high double-wide trailer with generator power near the entrance to the landfill for use as an assembly area for visitors and school field trips, and up to two, 12-foot-wide, 40-foot-long and 14-foot-high smaller trailers with generator power scattered throughout the landfill site as remote-area trailers. Parking will be limited to the immediate area around the trailer(s) utilizing existing parking area(s).
 - h. **Modify Night-Lighting Restrictions.** Allow a maximum of seven light plants to be used for night-lighting at disposal operations and allow flood lamps to be attached to poles from 8 to 15 feet above ground level, that illuminate an area approximately 300 feet from the light source and extend out at an angle of about 60 degrees on each side of the lighting unit for a distance of approximately 200 feet, consistent with Special Condition II-J.
 - i. **Bird Abatement Activities.** Expand bird abatement activities at PHLF that include the use of birds, dogs, balloons, kites, pyrotechnics, and other non-lethal techniques to haze gulls and corvids from the landfill and to discourage gulls and corvids from settling at the landfill, eight to 10 hours a day, five days a week, consistent with Special Condition II-G.
2. **At the Griffith Ranch, Director's Guild, Eastern Valley, Eastern Hills, Pond 5 Buffer, and Southern Hills Parcel Sites:**
- a. **Water Pipeline System and Storage Tanks.** Construct and operate for the life of the Phase II project: (1) approximately 7,160-linear-feet of underground pipeline extending from north of the landfill boundary to the entrance facilities and support area to convey water from an existing water well located on the Griffith

Ranch parcel, on the north slope of the Potrero Hills ridgeline (Griffith 6R well); (2) four, approximately 20-foot-in-diameter and 12-foot-tall water tanks to store up to 15,000 gallons of water each, located on the Griffith Ranch parcel, north of the dividing line between Phase I and Phase II for dust control, truck washing and fire suppression; and (3) a 10-foot-high sloped earthen berm to screen the water tanks from the west, north and east.

- b. **Habitat Enhancement and Restoration Areas.** Construct the following habitat enhancement and restoration measures as mitigation for unavoidable impacts:
 - (1) At the Griffith Ranch parcel, create an approximately 0.38-acre pond (Pond GR1) and an approximately 0.35-acre pond (Pond GR2) for California Tiger Salamander habitat, approximately 4.07 acres of seasonal wetlands, and approximately 1.03-acres of seasonal swale;
 - (2) At the Director's Guild parcel, create approximately 0.42 acres of seasonal wetlands (Pond DG1) and 0.77 acres of swale/channel features;
 - (3) At the Southern Hills parcel, near the border with the Eastern Valley parcel along the Spring Branch Creek channel, create an approximately 0.35-acre pond (Pond EV1) for California Tiger Salamander habitat; and
 - (4) At the Southern Hills parcel, create approximately 0.35 acres of additional seasonal wetlands (Seasonal Wetland SW4) within the existing 4.12-acre wetland/pond complex (Pond 7), and an approximately 0.35-acre pond (Pond SH1) for California Tiger Salamander habitat.
3. **At the Closed Solano Garbage Company Landfill Site, Near the Intersection of Kildeer Road and Potrero Hills Lane:**
 - a. **Public Access Overlook.** Construct an approximately 57,000-square-foot overlook on the former Solano Garbage Company landfill site with up to six parking spaces, interpretive signage, approximately five benches, a bicycle rack, two trashcans, and a portable toilet.
- B. **Limit of Authorization – Activities Not Authorized.** This authorization is generally pursuant to the appeal of Revision No. 2 to Solano County's Marsh Development Permit No. MD-88-09 (U-88-33) for the Phase II expansion project, issued by the County on September 13, 2005 (Resolution No. 2005-203). The project consists of the activities approved in Revision No. 2 to Solano County's Marsh Development Permit No. MD-88-09, as modified or supplemented by all accompanying and subsequently submitted correspondence and exhibits, including the revised project description submitted by letter on August 31, 2010, and subject to the modifications in Section I-A of this permit and the required conditions hereto. The activities included in Revision No. 2 to Solano County's Marsh Development Permit No. MD-88-09 that are expressly **not** authorized by this permit include the reactivation of an old quarry access road parallel to Potrero Hills Lane for use as a bypass lane. All activities at the site that are not expressly authorized by this permit (Section I-A of the permit) or that are listed above in this paragraph as not authorized, are subject to Solano County's Marsh Development Permit No. MD-88-09, Revision No. 2 (U-88-33).
- C. Work authorized under this permit must commence prior to December 1, 2013, or this permit will lapse and become null and void. All work authorized must be diligently pursued to completion and must be completed within 38 years of commencement or by

December 1, 2051, whichever is earlier, unless an extension of time is granted by amendment of the permit. An extension of time based on unused and available landfill disposal capacity shall not be unreasonably withheld.

- D. The project will create approximately 179,000 square feet (4.1 acres) of new public access. The public access improvements include: (1) an approximately 57,000-square-foot (1.3-acre) overlook at the former Solano Garbage Company landfill site with up to six parking spaces, interpretive signage, approximately five benches, a bicycle rack, a trashcan, and a portable toilet; (2) easements over approximately 12,200-linear feet (2.31 miles, 2.8-acres) of existing dirt roads and trails on the Southern Hills for future public access use; and (3) a total of \$300,000 to the Solano Land Trust over a period of 25 years, to fund public access improvements and services at the Rush Ranch site.

Type of Public Access	Square Feet	Acres	Length (miles)
On-Site (new)	0	0	0
Off-Site (new)	179,000	4.10	2.31
On-Site (improved existing)	0	0	0
Off-Site (improved existing)	0	0	0
Total:	179,000	4.10	2.31

II. Special Conditions

The authorization made herein shall be subject to the following special conditions, in addition to the standard conditions in Part IV:

A. Specific Plans and Plan Review

1. **Construction.** The final plans submitted pursuant to this condition shall generally conform to Exhibit A to this permit. Final plans for the construction of the structures authorized herein shall be prepared and submitted for Commission review as described below. No changes to the design of the project shall be made without the prior written approval of the Commission staff.
2. **Plan Review.** No work whatsoever shall be commenced pursuant to this authorization until final precise site, construction staging, engineering, grading, landscaping, public access and best management practices plans and any other relevant criteria, specifications, and plan information for that portion of the work have been submitted to, reviewed, and approved in writing by or on behalf of the Commission. The specific drawings and information required will be determined by the staff. To save time, preliminary drawings should be submitted and approved prior to final drawings.
 - a. **Site, Landscaping, and Public Access Plans.** Site, landscaping and public access plans shall include and clearly label the site location and landmarks, boundaries of all areas to be reserved for public access purposes, details showing the location, types, dimensions, and materials to be used for all structures, irrigation, planting, drainage, seating, parking, signs, lighting, fences, paths, trash containers, utilities and other improvements.
 - b. **Grading and Engineering Plans.** Engineering plans shall include a complete set of construction drawings and specifications and design criteria. The design criteria shall be appropriate to the nature of the project, the use of any structures,

soil and foundation conditions at the site, and potential earthquake-induced forces. Final plans shall be signed by the professionals of record and be accompanied by:

- (1) Evidence that the design complies with all applicable codes; and
 - (2) Evidence that a thorough and independent review of the design details, calculations, and construction drawings has been made.
- c. **Preliminary and Final Plans.** Plans submitted shall be accompanied by a letter requesting plan approval, identifying the type of plans submitted, the portion of the project involved, and indicating whether the plans are final or preliminary. Approval or disapproval shall be based upon:
- (1) Completeness and accuracy of the plans in showing the features required above, property lines, and any other criteria required by this authorization;
 - (2) Consistency of the plans with the terms and conditions of this authorization;
 - (3) The provision of the amount and quality of public access required by this authorization;
 - (4) Consistency with legal instruments reserving public access areas;
 - (5) Consistency of the plans with the recommendations of the Design Review Board;
 - (6) Assuring that appropriate provisions have been incorporated for safety in case of seismic event; and
 - (7) Assuring that existing public access will not be impeded during construction to the maximum extent feasible.

Plan review shall be completed by or on behalf of the Commission within 45 days after receipt of the plans to be reviewed.

3. **Conformity with Final Approved Plans.** All work, improvements, and uses shall conform to the final approved plans. Prior to any use of the facilities authorized herein, the appropriate design professional(s) of record shall certify in writing that, through personal knowledge, the work covered by the authorization has been performed in accordance with the approved design criteria and in substantial conformance with the approved plans. No noticeable changes shall be made thereafter to any final plans or to the constructed structure, public access, etc., without first obtaining written approval of the change(s) by or on behalf of the Commission.
4. **Discrepancies between Approved Plans and Special Conditions.** In case of any discrepancy between final approved plans and Special Conditions of this authorization or legal instruments approved pursuant to this authorization, the Special Condition or the legal instrument shall prevail. The permittee is responsible for assuring that all plans accurately and fully reflect the Special Conditions of this authorization and any legal instruments submitted pursuant to this authorization.
5. **Appeals of Plan Review Decisions.** Any plan approval, conditional plan approval or plan denial may be appealed by the permittee or any other interested party to the Design Review Board and, if necessary, subsequently to the Commission. Such appeals must be submitted to the Executive Director within 30 days of the plan

review action and must include the specific reasons for appeal. The Design Review Board shall hold a public hearing and act on the appeal within 60 days of the receipt of the appeal. If subsequently appealed to the Commission, the Commission shall hold a public hearing and act on the appeal within 90 days of the receipt of the subsequent appeal.

B. Public Access

1. **Total Area.** Prior to the placement of any materials within the Phase II expansion area, or by December 31, 2013, whichever is earliest, the permittee shall make available the following:
 - a. **Public Access Overlook.** An approximately 57,000-square-foot public access overlook on the former Solano Garbage Company (SGC) landfill site, as generally shown on Exhibit B, subject to SGC's on-going obligations for maintenance and compliance with applicable regulations governing the closed landfill parcel, solely for the use by the public for unrestricted public access including walking, running, bird watching, bicycling, sitting, viewing, picnicking, and other passive recreational activities.
 - b. **Southern Hills Easements.** Dedicated easements on the approximately 122,000-square-foot, 12,200-linear-feet (2.31 miles) of existing, approximately 10-foot-wide dirt roads and trails on the Southern Hills, permanently guaranteeing rights for the public for public access use, if and when connections to the trails become available and with the approval of the California Department of Fish and Game and the U.S. Fish and Wildlife Service, as generally shown on Exhibit C.
2. **Improvements Within the Overlook Area.** Prior to making the public access overlook area available to the public, the permittee shall install the following public access overlook improvements, as generally shown on Exhibit B, pursuant to final plan review approval required in Special Condition II-A of this permit:
 - a. Up to six parking spaces;
 - b. A minimum of three interpretive signs;
 - c. Approximately five benches;
 - d. A bicycle rack;
 - e. A minimum of two trash receptacles; and
 - f. One portable toilet.

The final improvements shall be selected so as to be consistent with the protection of wildlife resources and compatible with protection of the Marsh environment.

3. **Permanent Guarantee.** Prior to the commencement of any construction authorized herein, the permittee shall, by instrument or instruments acceptable to the Executive Director, offer to dedicate to a public agency or another party acceptable to the Executive Director, or otherwise permanently guarantee such rights for the public to the new 57,000-square-foot public access overlook area on the former Solano Garbage Company site and the 122,000 square feet (12,200-linear-feet (2.31 miles)) of trails on the Southern Hills. The instrument(s) shall create rights in favor of the public, which shall commence no later than after completion of construction of any

public access improvements required by this authorization and prior to the use of any structures authorized herein. Such instrument shall be approved by the Executive Director and be in a form that meets recordation requirements of Solano County and shall include a legal description of the property and of the area being restricted for public access, and other appropriate landmarks and topographic features of the site, any significant elevation changes, and the location of the nearest public street and adjacent public access areas. Approval or disapproval of the instrument shall occur within 30 days after submittal for approval and shall be based on the following:

- a. Sufficiency of the instrument to create legally enforceable rights and duties to provide the public access area required by this authorization;
 - b. Inclusion of an exhibit to the instrument that clearly shows the area to be reserved with a legally sufficient description of the boundaries of such area; and
 - c. Sufficiency of the instrument to create legal rights in favor of the public for public access that will run with the land and be binding on any subsequent purchasers, licensees, and users.
4. **Recordation of the Instrument.** Within 30 days after approval of the instrument, the permittee shall record the instrument on all parcels affected by this instrument and shall provide evidence of recording to the Commission. No changes shall be made to the instrument after approval without the express written consent by or on behalf of the Commission.
5. **Maintenance.** The areas and improvements within the total 57,000-square-foot public access overlook area at the former Solano Garbage Company landfill site shall be permanently maintained by and at the expense of the permittee or its assignees. Such maintenance shall include, but is not limited to, mowing trails and overlook area a minimum of three times a year; repairs to all path surfaces; replacement of any trees or other plant materials that die or become unkempt; repairs or replacement as needed of any public access amenities such as signs, benches, trash containers, and portable toilets; regular (at least weekly) cleanup of litter and other materials deposited within the access areas; removal of any encroachments into the access areas; and assuring that the public access signs remain in place and visible. Within 30 days after notification by staff, the permittee shall correct any maintenance deficiency noted in a staff inspection of the site. At such time when a trail system provides access to the Southern Hills area, the permittee or its assignees shall permanently maintain the approximately 122,000 square feet (12,200 linear feet) of trails and pathways on the Southern Hills, pursuant to this condition.
6. **Assignment.** The permittee shall transfer maintenance responsibility to a public agency or another party acceptable to the Commission at such time as the property transfers to a new party in interest. The transferee must agree in writing, acceptable to the Executive Director, to be bound by all terms and conditions of this permit.
7. **Reasonable Rules and Restrictions.** The permittee may impose reasonable rules and restrictions for the use of the public access areas to correct particular problems that may arise. Prior to implementation, such limitations, rules, and restrictions shall be approved by or on behalf of the Commission upon a finding that the proposed rules

would not significantly affect the public nature of the area, would not unduly interfere with reasonable public use of the public access areas, and would tend to correct a specific problem that the permittee has both identified and substantiated. Rules may include restricting hours of use and delineating appropriate behavior.

- C. **Rush Ranch Funding.** Commencing on the date that any construction authorized herein begins, the permittee shall provide for approval by the Executive Director a legal agreement to provide a total of \$300,000 in funds over a 25-year period to the Solano Land Trust, to help fund public access improvements and services at the Rush Ranch site. The funds shall be distributed in the following manner: (1) \$100,000 within the first five years of Phase II operations; and (2) \$200,000 over the next twenty years. No less than \$10,000 shall be given in any given year. The permittee shall submit to the Commission notice of the first payment when Phase II operations commence and, each year thereafter, an accounting record of the amount of funds provided to Rush Ranch during that given year, over the 25-year period. Funds shall be distributed according to the approved legal agreement between the Solano Land Trust and the permittee.
- D. **Conservation Areas**
1. **Total Conservation Area.** Prior to the commencement of any construction authorized herein, or by December 31, 2013, whichever is earliest, the permittee shall dedicate to a public agency or other agency acceptable to the Executive Director, or otherwise permanently restrict as open space to remain in its current condition with no further filling or development, subject to the habitat restoration requirements of Special Condition II-E below, the following conservation areas, as generally shown on Exhibit D: (1) the 428.7-acre Southern Hills parcel; (2) the 41.23-acre Pond 5 Buffer Area on the Phase II expansion parcel; (3) the 160-acre Eastern Valley Parcel; (4) the 137.39-acre Eastern Hills parcel; (4) the 142.7-acre Griffith Ranch parcel (30.7-acres of which may be reserved for the construction, operation and maintenance of the water system for the life of the Phase II project, and thereafter, all materials shall be removed and the area restored and permanently restricted as open space); and (5) the 83.8-acre Director's Guild parcel.
 2. **Conservation Easement.** The permittee shall place a conservation easement and endowment on these parcels, establishing these areas as plant and wildlife habitat in perpetuity, held by the Wildlife Heritage Foundation or another entity approved by the U.S. Army Corps of Engineers, the U.S. Fish and Wildlife Service (USFWS), the California Department of Fish and Game, the California Regional Water Quality Control Board, and the Commission. The permittee shall submit to the Commission notice of the entity chosen to hold the conservation easement and endowment, and all legal instruments to grant these rights for its review and final approval. The instrument shall be in a form suitable for recording in the county in which the restricted property is located.
- E. **Mitigation and Habitat Restoration.** To mitigate impacts from the proposed Phase II landfill expansion, the permittee shall provide mitigation and habitat restoration within the Griffith Ranch, Director's Guild, Eastern Valley, Eastern Hills, and Southern Hills parcels, as follows:
1. **Final Mitigation and Monitoring Plan.** Prior to construction within the Phase II expansion area, the permittee shall submit to the Executive Director for final review and approval, a final Mitigation and Monitoring Plan that includes the habitat to be

preserved and created, monitoring requirements, and any other conditions for habitat restoration. The plan shall include a schedule for implementing all elements of the mitigation plan. The schedule shall ensure that the habitats to be preserved or created described in Special Condition II-D-1 shall be permanently set aside and created prior to expanding the landfill operations into Phase II area.

2. **Habitat Types to be Preserved or Created.** The Final Mitigation and Monitoring Plan shall preserve and/or create the following habitat types, as generally shown on Exhibit D and as more fully described in the USFWS's draft Biological Opinion dated April 1, 2010:
 - a. **Seasonal Ponds.** Preserve approximately 4.72 acres of existing seasonal ponds, and create approximately 1.78 acres of seasonal pond habitat for California Tiger Salamander habitat;
 - b. **Seasonal Wetlands.** Preserve approximately 65 acres of existing seasonal wetlands, and create approximately 4.49 acres of seasonal wetlands;
 - c. **Swale/Channel.** Preserve approximately 1.48 acres of swale/channel habitat, and create approximately 1.80 acres of swale/channel; and
 - d. **Upland Grasslands.** Preserve approximately 914.71 acres of upland grasslands.
3. **Final Grassland Management Plan.** Prior to the placement of materials within the Phase II expansion area, or by December 31, 2013, whichever is earliest, the permittee shall submit a final Grassland Management Plan for the area described in Special Condition II-E-2-d above, that describes the objectives, forage production, appropriate stocking rate, grazing regime and non-grazing management activities for the upland mitigation parcels, to the Commission for its final review and approval. The grassland management plan shall assure that appropriate grass and forbs are planted on closed portions of the landfill as soon as possible but not later than six months following cessation of landfill operations in that cell, and the placement of final cover suitable for re-vegetation. The grassland management plan shall include an adaptive management plan with criteria that will be evaluated to determine when adjustments to grassland management are warranted. The final plan shall incorporate the recommendations of the Scientific Panel Report, dated August 21, 2007, including, but not limited to:
 - a. **Increasing Native Vegetation in Mitigation Areas.** Manage (fire, grazing, mowing, selective herbicides) to reduce the representation of non-native vegetation and increase the representation of native vegetation; and
 - b. **Increasing Native Vegetation on Final Landfill Cover.** By December 31, 2013, develop a planting test program, with a minimum of 20, 10,000-square-foot plots, primarily on the Phase I area to be approved pursuant to Special Condition II-A, to evaluate different approaches to promoting native vegetation on the final landfill cap. The test program shall develop a list of target species with each species growth requirements and community affinity. At least five of the test plots shall include planting San Joaquin saltbush and crownscale in an effort to reintroduce these species. The test landfill cover planting program may include such approaches as reserving native soils and integrating them into the landfill cap, collecting native plant seeds from the landfill expansion area for subsequent use in planting the landfill cover, importing serpentine or alkali

soils from nearby areas, grazing and controlled burns, different planting techniques, seasonal controls, planting endangered plant seeds, varying exposure, etc. The Grassland Management Plan should be modified to reflect the results of the planting test program.

- F. **Minimizing Impacts to Special-Status Species.** Prior to the placement of materials within the Phase II expansion area, the permittee shall obtain approval of a final Biological Opinion (BO) from USFWS, shall submit a copy of the opinion to the Commission for its review and use, and shall adopt the conservation measures required in the final BO. These conservation measures shall include, but are not limited to:

1. **California Tiger Salamander (CTS):**

- a. Installing a permanent, salamander-proof barrier around the perimeter of the Phase II landfill expansion site to prevent salamanders from moving onto the expansion area;
- b. Trapping and removing to suitable nearby habitat, all adult tiger salamanders from the Phase II expansion area prior to work in the area;
- c. Eliminating ground squirrel control in mitigation areas (CTS use ground squirrel burrows as refuges);
- d. Limiting all construction activities in and around Pond 1 and Spring Branch Creek to late summer or early fall (August 1 through October 15) to avoid mortality of larval salamanders that could be developing in these areas;
- e. Leaving intact all ponds in the Eastern Valley (Ponds 2, 3, and 6) and the surrounding upland area within 1,000 feet of existing or proposed ponds to provide breeding habitat and refuge for CTS. Improvements stipulated in the Mitigation and Monitoring Plan in the vicinity of the existing ponds are exempt from this requirement; and
- f. Deepening the depth of Pond 7.

2. **Burrowing Owls:**

- a. Conducting burrowing owl surveys where suitable habitat is present within 75 meters (approximately 245 feet) of construction/landfill expansion areas 14 to 30 days prior to commencing construction activities. Surveys shall be conducted in accord with the California Department of Fish and Game (CDFG) protocol;
- b. If occupied burrows are found, the burrows shall be avoided by providing a 50-meter (approximately 165 feet) buffer during the non-breeding season (September 1 through January 31) or 75 meters (approximately 245 feet) during the breeding season (February 1 through August 31), as well as preserving 6.5-acre foraging habitat contiguous with each occupied burrow; and
- c. If impact to occupied burrows are unavoidable due to their location within the landfill footprint, onsite passive relocation techniques approved by CDFG shall be used to encourage owls to move to alternative burrows in the local vicinity outside impacted areas.

3. Vernal Pool Shrimp:

- a. Playa pool restoration and swale creation on the Director's Guild mitigation parcel area shall only occur during the dry season;
- b. Before any construction activities begin on the Director's Guild mitigation parcel, a USFWS-approved biologist shall conduct a training session for all construction personnel describing the Conservancy fairy shrimp, vernal pool tadpole shrimp, and vernal pool fairy shrimp and their habitat, the importance of these species and their habitat, and the general measures being implemented to conserve these species; and
- c. The permittee shall minimize ground disturbance and work activities within a 250-foot buffer area immediately adjacent to the playa pools, except for restoration and enhancement activities stipulated in the BO.

4. Contra Costa Goldfields:

- a. Before any construction activities, the Contra Costa goldfield area will be fenced to prevent trampling of plants or soil disturbance during construction activities in the mitigation areas; and
- b. Before any construction activities begin on the Director's Guild mitigation parcel, a USFWS-approved biologist shall conduct a training session for all construction personnel describing the Contra Costa goldfield and its habitat, the general measures being implemented to conserve Contra Costa goldfields, and the boundaries within which the project may be accomplished.

G. Gulls and Corvids Abatement Program. To reduce the number of gulls and corvids attracted to the landfill that prey on other birds and their young, including endangered species, the permittee shall:

1. Expand the existing gull abatement program using blank pistols, propane canisters, balloons, falcons and dogs to cover the entire year;
2. Modify the abatement program in response to bird habituation to hazing measures, incorporate other abatement measures proven to be effective elsewhere, and try various combinations of the abatement measures in an attempt to maximize effectiveness;
3. Disrupt nesting of corvids so eggs will not hatch;
4. Provide chemically treated prey that can produce illness and alter predating behavior;
5. Minimize the active working face of the landfill and quickly cover deposited refuse; and
6. At least two years prior to placing refuse in the landfill expansion area, submit a corvid monitoring program to be approved by or on behalf of the Commission pursuant to Special Condition II-A. The monitoring program shall monitor the number of corvids foraging at the landfill and seasonal and annual changes in corvid numbers, the effectiveness of each abatement measure, efforts made to improve the effectiveness of the abatement program, and any reports of increased corvid predation within the Suisun Marsh. The monitoring program shall commence at least two years prior to placing refuse in the landfill expansion area and continue as long as

the landfill places refuse at the site. Brief, biennial monitoring reports shall be submitted to the Commission on April 1 of every even numbered year reporting on the effectiveness of the abatement program, changes in corvid and gull numbers at the landfill, and proposed refinements to the abatement program.

- H. **Landfill Height Restriction.** In order to avoid significant adverse aesthetic impacts to the Marsh, the final height of the landfill (Phase I and Phase II) shall not extend above 220 feet above mean sea level (MSL), unless it can be demonstrated that any additional height would not be visible from selected viewpoints within the Suisun Marsh, including but not limited to: portions of State Highway 12, Lawler Ranch, Rush Ranch, Grizzly Island Road, Beldon Landing, and other public viewpoints within the Suisun Marsh. Within 6 months of the issuance of the permit, the permittee shall submit adequate documentation, including a final grading plan and cross sections pursuant to Special Condition II-A of this permit, and visual simulations of the landfill project area from selected viewpoints determined by Executive Director and as generally shown on Exhibit E to ensure that the height is not visible from the selected viewpoint locations, or are below 220 feet above MSL.
- I. **Ancillary Structures.** In order to avoid significant adverse aesthetic impacts to the Marsh, all ancillary structures (including but not limited to, the truck/container washing facility, the visitor center, and the water storage tanks and berms) shall be constructed pursuant to final plan review approval required in Special Condition II-A of this permit, and designed in such a manner so that they are shielded and hidden within the Potrero Hills, and not visible to the public from the Marsh to the maximum extent feasible, and constructed in an appropriate scale, size and color so as to minimize their visual intrusion into the landscape.
- J. **Night-Lighting Restriction.** In order to avoid significant adverse ecological and aesthetic impacts to the Marsh, night-lighting shall be restricted to the following:
1. A maximum of seven separate light units shall be allowed on the entire facility at one time;
 2. The maximum height of the light unit mast shall be 15 feet;
 3. The maximum number of lights per unit shall be four;
 4. Lights shall be colored and positioned in a downward fashion when in use to avoid any excessive glare or halo effect and lights shall not be directed towards areas outside of the permitted landfill footprint; and
 5. Lights shall be allowed to be in operation only when the landfill facility is in operation and manned.

Prior to the use of night-lighting under this permit, all conditions and restrictions on night-lighting shall be approved by USFWS in its final Biological Opinion. Any additional requirements or restrictions on night-lighting required by the USFWS shall be incorporated into the project, including, but not limited to, specific light colors or maximum wattage.

- K. **Litter Control.** Prior to the placement of materials within the Phase II expansion area, the permittee shall submit a final copy of its litter control program (required by the Department of Resources Recycling and Recovery/CalRecycle) to the Commission for its final review and approval. The litter control program shall include measures to

control litter at the site, including controlling litter from blowing off trucks and vehicles entering the landfill site, enclosing the active portion of the landfill within litter control fences to trap wind-blown trash and contain it on-site, and increasing the staff of the daily clean-up crew to adequately collect both on- and off-site litter.

- L. **Power Lines.** All new power lines shall be installed underground unless undergrounding would have a greater adverse environmental effect on the Marsh than above-ground construction, or the cost of underground installation would be so expensive as to preclude service. If above-ground power lines are necessary, the permittee shall submit a request in writing to the Commission, detailing the length and project details of the above-ground power lines and facilities that are needed, including the number, location, and size of any new power poles, and a justification for why undergrounding would have a greater adverse environmental effect on the Marsh than above-ground construction or why the cost would be so expensive as to preclude service. The request shall also include visual simulations of the new power lines and poles demonstrating that the lines will not have a significant adverse aesthetic impact on the Marsh and to ensure that raptor-safe construction methods are used. The Commission shall review the permittee's request and determine whether above-ground construction of the power lines satisfies the condition of this permit and Policy 1(c) of the Utilities, Facilities and Transportation section of the Local Protection Program.
- M. **Groundwater Withdrawal.** The permittee shall pump water from the well at a rate no higher than that specified in the aquifer pump tests conducted by Golder Associates Inc., prepared for the Draft Environmental Impact Report on the project (approximately 15 gallons per minute (gpm) from June through November). Additionally, prior to the commencement of the construction of the water tanks and berms, or the withdrawal of groundwater from the Griffith-6R well, the permittee shall obtain and provide a copy to the Commission, all required final approvals from the Regional Water Quality Control Board (RWQCB) and any other required agencies responsible for groundwater withdrawal.
- N. **Water Quality.** Prior to the commencement of any of the construction authorized herein, the permittee shall obtain all required final approvals from the RWQCB, and shall ensure at all times that the landfill does not degrade the water quality of Spring Branch Creek from pre-project conditions.
- O. **Power Plant and Air Quality.** Prior to the construction of the landfill gas-to-energy power plant, the permittee shall obtain all required final approvals from the Bay Area Air Quality Management District to ensure that the power plant meets required air quality levels and requirements.
- P. **Odor Control.** Prior to the commencement of the placement of materials within the Phase II expansion area, the permittee shall submit a final copy of its Odor Impact Minimization Plan to the Local Enforcement Agency (LEA) for its final review and approval and a copy to the Commission for review. The Odor Impact Minimization Plan shall include odor control measures for the 24-hour operation of the working landfill face, the land application of biosolids, and the use of seasonal sludge-drying ponds. Odor control measures should include: conducting composting operations, sludge processing and storage operations, and mixing and storage of high-moisture content materials with dry powdery materials to the center or southern boundaries of the project site; increasing the frequency of cover application on the working face of the

landfill; and using a vapor phase counteractant system during sludge processing operations or topical applicants as an odor neutralizer at the close of sludge spreading or borrowing operations.

- Q. Implementation of Mitigation Measures.** The permittee shall implement the mitigation measures, best management practices and other conditions required in the approved Mitigation and Monitoring Plan under Special Condition II-E-1, Grassland Management Plan under Special Condition II-E-3, and Storm Water Pollution Prevention Plan and Waste Discharge Requirements under Special Condition II-N.
- R. Construction Operations and Debris Removal.** All construction operations shall be performed to prevent construction materials and dust from falling, washing or blowing into the Marsh or drifting and becoming a pollution hazard. In the event that such material escapes, the permittee shall immediately retrieve and remove such material at its expense. All construction debris shall be removed to an authorized location outside the jurisdiction of the Commission. In the event that any such material is placed in any area within the Commission's jurisdiction, the permittee, their assignee, or successor in interest, or the owners of the improvements, shall remove such material, at their expense, within ten days after it has been notified by the Executive Director of such placement.
- S. In-Kind Repairs and Maintenance.** Any in-kind repairs and maintenance of all areas shall only use construction material that is approved for use in the Marsh. Construction shall only occur during current approved months during the year to avoid potential impacts to fish and wildlife unless a written extension has been obtained from the Commission after consultation with the California Department of Fish and Game (CDFG) and the Suisun Resource Conservation District (SRCD). Commission staff should be contacted to confirm current restrictions. Repair and maintenance work shall be confined to existing structural footprints and shall not result in the enlargement of the existing structures.
- T. Landfill Closure.** Subject to the landfill facility preliminary and final closure and post-closure maintenance plan requirements pursuant to Title 27 Cal. Code Regs. Subchapter 5, when the landfill reaches capacity, as authorized by this permit, the landfill shall cease all landfill operations, remove all structures related to the landfill operation from the Marsh, restore and replant the Phase I and II areas with native vegetation, and return the upland grassland habitat to agricultural use, pursuant to the Grassland Management Plan approved in Special Condition II-E-3 above.
- U. Liability for Costs and Attorneys Fees.** The permittee shall reimburse BCDC in full for all BCDC costs and attorneys fees, including: (1) any fees charged by the Office of the Attorney General, and (2) any court costs and attorneys fees that BCDC may be required by a court to pay in connection with the defense of any action brought by a party other than the permittee against BCDC, its officers, employees, agents, successors and assigns challenging the approval or issuance of this permit, the interpretation and/or enforcement of permit conditions, or any other matter related to this permit. BCDC retains complete authority to conduct and direct the defense of any such action against BCDC.

- V. **Recording.** The permittee shall record this permit or a notice specifically referring to this permit on all parcels affected by this permit with Solano County within 30 days after execution of the permit and shall, within 30 days after recordation, provide a copy of the recorded permit to the Commission.
- W. **Certification of Contractor Review.** Prior to commencing any grading, demolition, or construction, the general contractor or contractors in charge of that portion of the work shall submit written certification that s/he has reviewed and understands the requirements of the permit and the final BCDC-approved plans, particularly as they pertain to any public access or open space required herein and environmentally sensitive areas.

III. Findings and Declarations

This authorization is given on the basis of the Commission's findings and declarations that the work authorized herein is consistent with the Suisun Marsh Preservation Act (Marsh Act) and Solano County's certified Suisun Marsh Local Protection Program (LPP) for the following reasons:

A. Background and Standard of Review

Section 29500 of the Marsh Act requires that any person wishing to undertake development in the Suisun Marsh, including both the primary and secondary management areas, obtain a marsh development permit. The local government with jurisdiction over the project has primary permitting authority over development within the secondary management area after the Commission certifies the local protection program (LPP). The Commission certified Solano County's LPP on November 4, 1982. A local government's decision to issue a marsh development permit may be appealed to the Commission and on appeal the Commission must issue the permit if it finds that the proposed development is consistent with the LPP under Marsh Act Section 29501(d).

In this case, on September 13, 2005, Solano County approved modifications to Marsh Development Permit No. MD-88-09 and Use Permit U-88-33, authorizing the Phase II landfill expansion project. Several members of the public appealed that decision to the Commission. On December 1, 2005, the Commission found that the appeal of modifications to MD-88-09 raised a substantial issue, staying the effect of the County's marsh development permit until the Commission takes action on the appeal.

On October 13, 2005, project opponents filed a lawsuit in Solano County Superior Court challenging the certification of the Environmental Impact Report (EIR) by the Board of Supervisors under the California Environmental Quality Act (CEQA). On November 3, 2009, after two court rulings finding the EIR inadequate, the County's second revised Recirculated Final EIR was upheld in Protect the Marsh v. County of Solano, et al. (Case No. FCS026839, November 3, 2009). The petitioners appeal was dismissed on October 8, 2010. Accordingly, the Commission assumes that the EIR complies with CEQA.

On August 10, 2009, the Sierra Club sued Solano County, claiming that the County should enforce Measure E, limiting out-of-County wastes to 95,000 tons per year, 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 (Case Nos. FCS03387, FCS033700 and FCS034073, May 12, 2010). However, the ruling did not enjoin or invalidate the County's use permit. On August 30, 2010, the Court reconfirmed its decision. The Sierra

Club may appeal this ruling after the Court enters a final judgment. The case does not challenge the validity of the County's marsh development permit (the subject of this appeal), and it therefore does not affect the Commission's consideration of this appeal under the policies of the LPP.

In this appeal, the Commission undertakes a de novo review of the development application. The applicable standard of review is whether the development would conform to the policies in the LPP. The Commission held a public hearing on the appeal on June 17, 2010.

B. Consistency with Wildlife, Land Use and Agricultural LPP Policies

The Suisun Marsh Preservation Act (Marsh Act) of 1974 was passed by the legislature with the intent of preserving and protecting valuable marsh habitat and upland grasslands within the Suisun Marsh.

Section 29002 of the Act states that: "... the Suisun Marsh represents a unique and irreplaceable resource to the people of the state and nation; that future residential, commercial, and industrial developments could adversely affect the wildlife value of the area; and that it is the policy of the state to preserve and protect the resources of this nature for the enjoyment of the current and succeeding generations."

Consistent with the Marsh Act, the policies of Solano County's LPP call for the preservation and enhancement of the diversity of habitats in the Suisun Marsh and existing agricultural uses as a valuable buffer in the secondary management area.

Policy 1 of the Wildlife Habitat Management and Preservation section states: "The diversity of habitats in the Suisun Marsh and surrounding upland areas should be preserved and enhanced wherever possible to maintain the unique wildlife resource."

Policy 2 of the Agriculture section states: "Agricultural uses consistent with protection of the Marsh, such as grazing and grain production, should be maintained in the secondary management area. In the event such uses become infeasible, other uses compatible with protection of the Marsh should be permitted. The value of the upland grassland and cultivated lands as habitats for Marsh-related wildlife should be maintained and enhanced where possible by planting or encouraging valuable wildlife food or cover plant species."

Policy 3 of the Agricultural and Open Space Land Use section states: "Existing uses should continue in the upland grasslands and cultivated areas surrounding the critical habitats of the Suisun Marsh in order to protect the Marsh and preserve valuable marsh-related wildlife habitats. Where feasible, the value of upland grasslands and cultivated lands as habitat for marsh-related wildlife should be enhanced."

In addition to these policies, the LPP contains specific policies that address landfill operations and other existing non-agricultural uses within agriculturally designated areas in the Marsh and secondary management area.

Policy 3 of the Agriculture section of the LPP states: "Existing non-agricultural uses, such as Solano Garbage Company, Pacific Reclamation and Disposal Inc., and Explosive Technology Corporation, on sites within the secondary management area should be allowed to continue if they are conducted so that they will not cause adverse impacts on the Suisun Marsh. Any future change in uses of these sites should be compatible with the preservation of the Suisun Marsh and its wildlife resources."

These policies are consistent with Section 29409 of the Marsh Act, which carves out an exception to the general preference for agricultural uses in the secondary management area by allowing for the development of a new solid waste disposal site in the Potrero Hills. When the legislature adopted the Marsh Act, the Solano Garbage Company was operating a solid waste disposal facility adjacent to the primary management area and Hill Slough, and an alternative location in Potrero Hills appeared to provide a better alternative to any expansion at the Solano Garbage Company site. To ensure that the landfill could continue its operations at a location in the Potrero Hills, Section 29409 of the Marsh Act states:

"Notwithstanding the policies of the protection plan, the local protection program may not preclude the future development of a new solid waste disposal site in the Potrero Hills if it can be demonstrated that the construction and operation of solid waste facilities at that site would not have significant, adverse ecological or aesthetic impacts on the marsh."

Consistent with this language in the Marsh Act, the LPP includes Policy 4 of the Utilities, Facilities, and Transportation section, which governs the construction of a new landfill site in the Potrero Hills:

"The Solano Garbage Company should be permitted to continue its existing County approved operation until it reaches capacity. Expansion of this facility or development of a new site in the Potrero Hills should be permitted if it can be shown that the construction and operation of such facilities will not have significant adverse ecological impacts or aesthetic impacts on the Marsh..."

The former Solano Garbage Company had several years of available operating capacity at its original site. However, the County approved its move to the Potrero Hills in 1984 (Permit No. MD-82-19; U-82-56) because the new site provided an alternate location out of public view (hidden by the Potrero Hills), had improved geological, topographical and environmental conditions, was farther away from the sensitive habitat of the primary management area and the wetlands of Hill Slough, provided an opportunity for joint land use between the existing quarry operation within the Potrero Hills and the landfill, and allowed for a greater landfill capacity to accommodate the expected population growth of the Fairfield-Suisun City area. The County's 1984 permit approving the move of the landfill to the Potrero Hills was not appealed to the Commission.

When the Potrero Hills Landfill first opened in 1986 at its new site within the Potrero Hills, it brought in on average between 225 to 324 tons of waste per day from Fairfield, Suisun City, Travis Air Force Base, Rio Vista and the Green Valley unincorporated

areas.¹ Solano County voters passed Measure E in 1984 limiting the importation of out-of-County wastes to 95,000 tons per year, or about 300 tons per day. However, the County determined this measure was unconstitutional and has not enforced it. Over time, the County expanded the various marsh development permits for PHLF to allow wastes from other counties to be received at the Potrero Hills site up to its current maximum allowance of 3,400 tons per day on a 7-day rolling average, approximately 2,300-2,400 tons of which comes from out-of-County. The landfill currently accepts wastes from up to 28 counties including the Sierra foothill counties and Alameda, Contra Costa, Marin, Mendocino, Napa, Sacramento, Santa Clara, San Mateo, Solano and Yolo counties. The Commission found that appeals of these modifications to the County's marsh development permit for increased landfill capacity raised no substantial issue until 2005.

On September 13, 2005, the Solano County Board of Supervisors approved Amendment No. 2 to Marsh Development Permit No. MD-88-09 and Use Permit U-88-33, authorizing Phase II of the existing landfill for an expansion onto an additional 167.63 acres to the east of the existing Phase I site. The amendment allows the conversion of the additional 167.63-acre area from primarily non-native upland grassland to active landfill and a height increase on both the Phase I and Phase II sites, an additional 125 feet. The expansion would allow the landfill to increase its capacity to approximately 83 million cubic yards, tripling its current authorized capacity of 21.5 million cubic yards.

Approximately 210 acres of upland grassland habitat would be affected by the proposed expansion authorized by the County.² In addition, the aquatic habitats on the expansion site that would be affected include an approximately 0.44-acre portion of Spring Branch Creek and its tributaries, several seasonal wetlands, and the filling of Ponds 1 and 4. According to the U.S. Army Corps of Engineers (Corps), this would result in impacts to approximately 2.42 acres of Section 404-jurisdictional wetlands and other waters of the United States, 0.076 acre of isolated waters of the State of California, and 0.61 acre of non-jurisdictional pond habitat.³

The September 13, 2005, Solano County Board of Supervisors' approval of modifications to Permit No. MD-88-09 for Phase II and the Final Environmental Impact Report (FEIR) was appealed to the Commission on October 27, 2005. On December 1, 2005, the Commission found that the appeal of modifications to MD-88-09 raised a substantial issue, staying the effect of the permit until the Commission takes action on the appeal.

The Commission held a public hearing on the appeal on June 17, 2010. Based on public and Commissioner feedback, the project was revised to reduce the maximum landfill height from the County's permitted 345 feet above MSL, to 220 feet above MSL (the current height limit on the permitted Phase I site). The height restriction will result in a reduction of approximately 10% of the County's permitted fill capacity, or approximately 8.3 million cubic yards. As conditioned herein, the permit will allow the permittee to add to the height of the landfill only if it can show that the final height is below the sightline at various locations within the Marsh, as illustrated on Exhibit E.

¹ Solano Cnty. Dep't. of Envtl. Mgmt., Draft Environmental Impact Report for the Potrero Hills Landfill Expansion Project 3-1 (2003) [hereinafter *DEIR*].

² This includes both the 167-acre landfill footprint and the related operations on the Phase II parcel.

³ A more recent delineation of jurisdiction wetlands and Waters of the United States conducted in 2010 by the U.S. Army Corps of Engineers has determined that the actual acreage numbers may be slightly lower; however the amount of mitigation proposed by PHLF will not change.

The permittee is required to submit a final grading plan and visual simulations to ensure that the final height of the landfill will not be visible from designated view-points within the Suisun Marsh. This height limitation will ensure that the landfill is sufficiently hidden behind the Potrero Hills and will not result in a significant adverse aesthetic impact on the Marsh.

In addition, the landfill agreed to remove its request to reactivate an old bypass lane along Potrero Hills Lane, which is therefore not authorized under this appeal.

In Phase II, approximately 167 acres of agricultural upland area (primarily non-native grasslands) in the secondary management area will be converted to landfill. The permit for Phase II authorizes the continuation of landfill operations at the current level of intensity, and the expansion of the waste disposal area to cover a larger area of primarily non-native grasslands. As discussed in more detail below, the proposed permit places restrictions on the scope of the expansion, requires restoration and enhancement of habitat for marsh-related wildlife after the landfill project is complete, and requires mitigation measures for each significant impact to avoid or minimize the impact to an insignificant level. As a result, the proposed project, as conditioned, is consistent with the LPP policies regarding allowable land uses in the secondary management area.

Upon closure, the landfill site is required to be replanted and returned to grasslands for agricultural use. The Phase I site is expected to reach capacity by 2016 and the Phase II site is expected to extend the life of the landfill another 35 years, based on current waste volumes. Special Condition II-E requires the development of a planting test program to promote native vegetation on the final landfill cap. The return of the final landfill footprint (totaling approximately 357 acres) back to upland habitat upon closure will allow for agricultural uses to return after landfill operations have ceased. When the landfill reaches capacity, as authorized under this permit, Special Condition II-T requires PHLF to cease all landfill operations, remove all structures related to the landfill operation from the Marsh, restore and replant the Phase I and Phase II areas with native vegetation, and return the upland grassland habitat to agricultural use. The removal of structures is subject to the landfill's post-closure plans, including any required monitoring and gas collection that may continue after the landfill reaches capacity. Although the landfill will not close for many years, requiring the area to be re-vegetated and returned to agricultural use maintains the habitat value of the area and, with the other mitigation measures required herein and described further below, renders the project consistent with the LPP policies calling for other uses to be "compatible with protection of the Marsh."

Approximately 2.42 acres of wetland and water features, including Spring Branch Creek and its tributary drainages, as well as 11 wetlands north and south of the creek, will be impacted by the Phase II expansion. To mitigate these impacts, areas surrounding the expansion area will be preserved and enhanced at an approximately 5:1 ratio. Under Special Condition II-D, approximately 914.71 acres of existing upland grasslands will be dedicated in perpetuity for agricultural use, 8.07 acres of wetland and water features will be created, and both the new and 71.02 acres of existing wetland and water features will be maintained and dedicated in perpetuity.

Although these mitigation areas are currently subject to the Marsh Act, the SMPP and the LPP, placing a conservation easement and endowment on these parcels will guarantee that these areas remain as plant and wildlife habitat in perpetuity and will help ensure the success of these areas for native plants, wildlife, special status species,

and agricultural grazing. Special Condition II-D requires the dedication of these areas to an approved conservation entity, such as the Wildlife Heritage Foundation, the approval of plans for these areas, increased native vegetation planting, and monitoring to ensure habitat success.

The preservation of up to 993.98 acres of secondary management area of the Marsh and additional maintenance and monitoring on these sites will benefit the Marsh habitat and species dependent on these areas. It will provide more native vegetation and better agricultural and grazing management activities within the upland areas of the mitigation parcels, and will preserve and enhance these areas for nesting and foraging habitat for Marsh wildlife species. In addition, the preserved and newly created water features will be monitored for success for California Tiger Salamander (CTS) and other special status species populations. The long-term preservation of these areas is consistent with policies of the LPP which call for preserving a diversity of habitats in the Marsh, maintaining agricultural uses in the secondary management area, and continuing existing uses in the upland grasslands to protect the Marsh and preserve valuable marsh-related habitat. Conserving these areas in perpetuity ensures that they forever remain valuable marsh-related habitat permanently protected from any possible future development.

As discussed in more detail below, a number of additional conditions have been included in the permit to ensure that the landfill operations will not cause adverse impacts on the Marsh, including: (1) requiring specific conditions to minimize impacts to special-status species (Special Conditions II-F and II-G); (2) reducing the landfill height so that it is not visible to the public behind the Potrero Hills (Special Condition II-H); (3) placing restrictions on night-lighting to avoid aesthetic and ecological impacts on the Marsh (Special Condition II-I); (4) requiring all required permits from appropriate agencies to be obtained prior to construction (Special Conditions II-M, II-N, II-O and II-P); and (5) final plan review and approval of a Mitigation and Monitoring Plan, a Grassland Management Plan, and a Planting Test Program for increasing natives on the closed landfill site (Special Condition II-E-3), and a litter control program (Special Condition II-K). These conditions are discussed more fully below.

These conditions, and others included in the permit, address and mitigate possible adverse impacts on the Marsh from the landfill operations and exceed the mitigation measures included in the FEIR for the project, which were found to mitigate the project's impacts to below a significant level. With these conditions, and the return of the landfill footprint back to agricultural use upon closure, the project, including the change in topography, is consistent with the LPP policies requiring that continuing existing non-agricultural uses (such as the landfill) will not cause adverse impacts on the Marsh and that future changes in such uses are compatible with the preservation of the Suisun Marsh and its wildlife resources.

Therefore, the Commission finds that the project, as conditioned, is compatible with the Land Use, Agricultural, and Wildlife Policies of the LPP which call for: (1) preserving a diversity of habitats in the Marsh and surrounding areas; (2) maintaining agricultural uses in the secondary management area; (3) allowing existing uses in the upland grasslands, including the landfill to continue; (4) where feasible, enhancing the value of upland grasslands and cultivated lands as habitat for marsh-related wildlife; and (5) ensuring that continuing existing non-agricultural uses (such as the landfill) "will not have significant adverse ecological or aesthetic impacts on the Marsh." The finding

that the landfill will not cause "significant adverse ecological impacts or aesthetic impacts on the Marsh" is discussed in more detail below, using the specific policies of the LPP to guide the analysis of each potential impact.

C. Ecological Impacts on the Marsh

The Draft Environmental Impact Report (DEIR) for the project identifies 24 significant adverse impacts from the proposed landfill expansion, including impacts to wildlife, habitats and aesthetic resources. The DEIR concluded that each impact could be reduced to less than significant levels with mitigation measures. These impacts and mitigation measures are summarized in Table 1.

Following the certification of the original FEIR and the Commission's finding of a substantial issue for appeal, BCDC staff established an independent scientific panel to assist the Commission in evaluating whether the proposed project complies with the relevant Solano County LPP policies. The panelists were charged with analyzing the potential environmental impacts of the proposed expansion on habitat and associated wildlife at the project site, and with reviewing the appropriateness and adequacy of the proposed mitigation measures. The scientific panel concluded their findings on four key biological resource areas: botanical and wetland resources, land and habitat management, California Tiger Salamander, and birds, in a report submitted to BCDC staff in August 2007.⁴ At the time the scientific panel report was issued, the 297.39-acre Eastern Valley and Eastern Hills parcels, and the remainder of the 30.7-acre Griffith Ranch parcel, had not been included in the mitigation proposal. In December 2007, PHLF prepared a report to respond to the scientific panelists' findings.⁵

On April 1, 2010, the USFWS issued a draft Biological Opinion (BO) on the potential effects of the proposed project to federally-listed threatened and endangered species and their habitats, specifically the California Tiger Salamander, the Conservancy fairy shrimp, the vernal pool tadpole shrimp, the vernal pool fairy shrimp, and the Contra Costa goldfields. The draft BO determined that the level of anticipated take is not likely to result in jeopardy to these listed species with the implementation of certain measures, including the conservation of approximately 963.28⁶ acres of lands outlined in the proposed mitigation plan required in Special Condition II-D.⁷ In addition, the USFWS found that the proposed project would not adversely modify or destroy critical habitat for these listed species because the effects are anticipated to be of a temporary nature and will be beneficial in the long-term by creating more aquatic habitat for these species. In particular, the USFWS states that, "the conservation measures will improve and create habitat for these listed species on habitat adjacent to the project area."⁸

The California Endangered Species Act (CESA) provides a permitting process for state incidental take authorization if such take is already authorized under Federal Endangered Species Act. This process, known as a "consistency determination", requires the California Department of Fish and Game (CDFG) to review the federal authorization to determine whether it is "consistent" with CESA (Fish and Game Code Section 2080.1).

⁴ Bay Conservation and Dev. Comm'n., Scientific Panel Review of Biological Resources Impacts and Proposed Mitigation for the Potrero Hills Phase II Expansion (2007) [hereinafter *Scientific Panel Report*].

⁵ Potrero Hills Landfill, Response to the Scientific Panel Review Report (2007).

⁶ The draft Biological Opinion has listed 963.12 acres but the correct number is 963.28 acres.

⁷ U.S. Fish and Wildlife Service, Draft Biological Opinion on the Proposed Potrero Hills Landfill Phase II Expansion Project 59-60 (2010) [hereinafter *Draft Biological Opinion*].

⁸ *Id.* at 57.

CDFG is currently working with the USFWS to ensure that the draft Biological Opinion addresses take avoidance and impact minimization measures for species protected under CESA. The Phase II project requires a consistency determination or, a California Endangered Species Act incidental take permit (Fish and Game Code 2081(B) and (C)) if CDFG determines that additional conditions beyond those defined by the final federal Biological Opinion are necessary to address potential impacts to CTS.

1. **Impacts to Plants and Animals.** The Phase II expansion area is located in the valley surrounded by the horseshoe-shaped Potrero Hills. According to the project's DEIR, the expansion area is a broad valley bounded on the north, south, and east by rolling, grassy hills. The western end of the valley opens toward the primary management area of the Suisun Marsh and the valley is dominated by non-native annual grasslands that have been used for years for cattle grazing. The DEIR notes that despite the dominance of non-native plants, a number of native plant species occur on the project site.⁹ Many common wildlife species forage in the expansion area, including a number of songbird species, common raptor species, great horned owls and golden eagles. Additional wildlife species that could use the project site include the California ground squirrel, deer mouse, coyote, gopher snake, and common kingsnake.¹⁰

Within the Phase II expansion area, a total of 2.42 acres of water features are subject to jurisdiction under Section 404 of the Clean Water Act and include Spring Branch Creek and its tributary drainages, as well as 11 wetlands north and south of the creek. Two stock ponds (Pond 1 – 0.39 acre; and Pond 4 – 0.22 acre) in the Phase II expansion area as well as a number of small wetlands were determined not to be subject to jurisdiction under Section 404 of the Clean Water Act by the U.S. Army Corps of Engineers.¹¹

The 2003 DEIR identified a total of 13 special-status plants and 21 special-status species that are known or have the potential to occur in the expansion and surrounding area.¹² According to the DEIR, all of the special-status plants occur in grasslands or vernal pools and most of them are restricted to alkaline soils. Of the 21 special-status species identified, seven are listed as state and/or federal Threatened or Endangered species and include: vernal pool fairy shrimp, conservancy fairy shrimp, vernal pool tadpole shrimp, valley elderberry longhorn beetle, California red-legged frog, Swainson's hawk, and peregrine falcon. Since the time of the DEIR preparation, the USFWS and the CDFG have listed the California tiger salamander (CTS) as a Threatened species. The remaining 13 wildlife species are considered Species of Special Concern by the CDFG and/or Federal Species of Concern by the USFWS. The USFWS draft Biological Opinion (2010) determined that the Phase II project (with the proposed Mitigation and Monitoring Plan and Grassland Management Plan) would not adversely affect federally-listed species.

⁹ Solano Cnty. Dep't. of Env'tl. Mgmt., Draft Environmental Impact Report for the Potrero Hills Landfill Expansion Project 4.2-2 (2003) [hereinafter *DEIR*].

¹⁰ *Id.* at 4.2-3.

¹¹ Potrero Landfill, Inc., Mitigation and Monitoring Plan 7 (2009).

¹² *DEIR*, *supra* note 9 at 4.2-4.

The following LPP policies apply to the protection of Special Status and Other Species:

Policy 1 of the Wildlife Habitat Management and Preservation section states: "The diversity of habitats in the Suisun Marsh and surrounding upland areas should be preserved and enhanced wherever possible to maintain the unique wildlife resource."

Policy 2 of the Agriculture section states, "The value of the upland grassland and cultivated lands as habitats for Marsh-related wildlife should be maintained and enhanced where possible by planting or encouraging valuable wildlife food or cover plant species."

Policy 3 of the Agricultural and Open Space Land Use section states: "Existing uses should continue in the upland grasslands and cultivated areas surrounding the critical habitats of the Suisun Marsh in order to protect the Marsh and preserve valuable marsh-related wildlife habitats. Where feasible, the value of upland grasslands and cultivated lands as habitat for marsh-related wildlife should be enhanced."

a. **Plants**

The DEIR concluded that the project would result in no impacts to special-status plants because no special-status plant species were observed in the expansion area during the protocol-level surveys of the site.¹³ Although two small populations of San Joaquin spearscale were observed in the proposed expansion area during a 1998 reconnaissance survey, this species was not identified at the site during plant surveys conducted in 2003-2004, and therefore it was assumed to no longer be present.¹⁴

The USFWS draft Biological Opinion found that, based on rare plant surveys conducted by the landfill's consultant and accepted by USFWS, Solano grass, San Joaquin Valley Orcutt grass, and Colusa grass were not found in the project area and therefore, the project is not likely to adversely affect these species.¹⁵ The USFWS also determined that Contra Costa goldfields occur within the project area, particularly on the Director's Guild mitigation parcel, and critical habitat for this species occurs in the seasonal wetlands of the Griffith Ranch and Director's Guild mitigation parcels. The USFWS determined, however, that if mitigation measures are adopted the project would not disturb the Contra Costa goldfields and would not appreciably diminish the value of critical habitat for the Contra Costa goldfields, or prevent the critical habitat from sustaining its role in the conservation and recovery of the species.¹⁶ The USFWS draft BO requires the following avoidance and conservation measures for the Contra Costa goldfields: (1) training on Contra Costa goldfields by a USFWS-approved biologist for all construction personnel prior to any construction; and (2) fencing of the goldfield area prior to construction activity. These measures have been included in Special Condition II-F-4 of this authorization.

¹³ *Id.* at 4.2-18

¹⁴ *Id.*

¹⁵ Draft Biological Opinion, *supra* note 7 at 1.

¹⁶ *Id.* at 56.

Rare plant surveys conducted by the landfill's consultant identified the presence of two sensitive plant species: San Joaquin saltbush and crownscale. The independent scientific panel concurred that the Phase II expansion area provides suitable habitat for these species that could be impacted and should be mitigated.¹⁷ The scientific panel report recommends planting seeds and monitoring populations of these special-status species on appropriate habitats within the mitigation properties. These measures are included in Special Condition II-E-3 of this authorization.

In addition to special-status species, the scientific panel focused on the loss of upland grasslands that would result from the expansion, and particularly the loss of native species. The scientific panel report found that the Phase II expansion area provides habitat for 148 species of plants (including subspecies and varieties), among which 68 (46%) are natives and 80 (54%) are introduced species. According to the scientific panel, this represents a high number of native plant species and in this area, only the Southern Hills parcel contains more native species than the Phase II expansion area (83 species).¹⁸

The scientific panel report recommends restoring and improving native vegetation on the mitigation sites according to specific ratios, using other tools to enhance natives, and using measures to reduce exotic species.¹⁹ Although the landfill proposed to re-establish grasslands on closed landfill cells, the scientific panel found that there is no evidence to support the conclusion that the revegetated surface of the landfill would provide habitat of equal value to the areas that are lost. The scientific panel report states that, "Even if re-vegetation efforts are successful, the habitat will have different geology, hydrology, and soils. My observations from other landfills indicate that non-native rather than native species tend to re-establish on revegetated landfill surfaces. Consequently, the loss of natural habitat should be considered permanent."²⁰

In order to address the concerns of the scientific panel, Special Condition II-E-3 requires the permittee to develop and submit to the Commission for approval a Final Grassland Management Plan for the mitigation areas to increase the representation of native vegetation and implementation of a planting test program to promote native vegetation on the landfill cap. Such a test program is experimental and can be expected to have varying degrees of success. Moreover, in response to the scientific panel report, PHLF modified the proposed project to consolidate the project features into a smaller footprint (from 241.9 acres originally proposed to the currently proposed 167.63 acres), including redesigning the northern drainage and sedimentation basin system and relocating the power facility site into the Phase I facility. This redesign and the grassland management plan will ensure that livestock grazing operations and non-grazing management activities provide for the long-term conservation of grassland habitats, associated aquatic resources, and special-status species habitats on the property consistent with LPP Wildlife Habitat Management and Preservation

¹⁷ Scientific Panel Report, *supra* note 4 at 2-5.

¹⁸ *Id.* at 2-4.

¹⁹ *Id.* at 2-7 - 2-9.

²⁰ *Id.* at 2-5.

Policy 1 which provides that a diversity of habitats should be preserved and enhanced, and Agriculture Policies 2 and 3 which provide that upland grasslands should be maintained and enhanced.

b. Invertebrates

The DEIR concluded that the project would result in less-than-significant impacts to invertebrates such as the valley elderberry longhorn beetle and callippe silverspot butterfly.²¹ The USFWS, in their draft Biological Opinion also concluded that the proposed project is not likely to adversely affect the Delta ground beetle, elderberry longhorn beetle, and the callippe silverspot butterfly.²²

However, the DEIR concluded that the project would result in significant impacts to vernal pool fairy shrimp and vernal pool tadpole shrimp and that Ponds 1, 4 and 5, which provide suitable habitat for these species, would be lost as a result of the landfill expansion.²³ (Pond 5 was later withdrawn from the project expansion area and will be preserved).

In its draft Biological Opinion, the USFWS determined that conservancy fairy shrimp, vernal pool tadpole shrimp, and vernal pool fairy shrimp and each of their respective critical habitats, could be adversely affected by the proposed project, and that incidental take of these species may occur.²⁴ In particular, the USFWS determined that despite the fact that vernal pool fairy shrimp,²⁵ vernal pool tadpole shrimp,²⁶ and conservancy fairy shrimp²⁷ have never been found to occur within the Phase II project area, the proposed Phase II expansion project is located entirely within the vernal pool fairy shrimp critical habitat unit 16A,²⁸ vernal pool tadpole shrimp critical habitat Unit 11D,²⁹ and conservancy fairy shrimp critical habitat Unit 3.³⁰ However, with respect to the critical habitat for these species, the USFWS found that the proposed project, as mitigated, is not expected to appreciably diminish the value of critical habitat for the vernal pool fairy shrimp, the vernal pool tadpole shrimp, and the conservancy fairy shrimp, or prevent the critical habitat from sustaining its role in the conservation and recovery of the species.³¹ The proposed project would also result in the take of all vernal pool fairy shrimp, vernal pool tadpole shrimp and conservancy shrimp inhabiting 0.42 acre of playa pool habitat in the project's Director's Guild mitigation area, but that the level of anticipated take is not likely to result in jeopardy to these species.³²

²¹ DEIR, *supra* note 9 at 4.2-20

²² Draft Biological Opinion, *supra* note 7 at 2.

²³ DEIR, *supra* note 9 at 4.2-19.

²⁴ Draft Biological Opinion, *supra* note 7 at 2.

²⁵ *Id.* at 36.

²⁶ *Id.* at 40.

²⁷ *Id.* at 44.

²⁸ *Id.* at 37.

²⁹ *Id.* at 41.

³⁰ *Id.* at 44.

³¹ *Id.* at 54, 55.

³² *Id.* at 59.

The draft Biological Opinion concludes that the conservation measures will improve and create habitat for these listed species. In particular, the conservation parcels will preserve 993.98 acres of habitat for all listed species; 63.89 acres of seasonal wetlands for Conservancy fairy shrimp, vernal pool tadpole shrimp, vernal pool fairy shrimp (and Contra Costa goldfields); and 4.49 acres of seasonal wetlands for Conservancy fairy shrimp, vernal pool fairy shrimp (and Contra Costa goldfields). In addition, 1.80 acres of swale/channel habitat for Conservancy fairy shrimp, vernal pool tadpole shrimp, vernal pool fairy shrimp (and Contra Costa goldfields) will be created.³³ The draft Biological Opinion also proposes the following conservation measures: "(1) The Corps should assist the [USFWS] in implementing recovery actions identified in the *Recovery Plan Vernal Pool Ecosystems of California and Southern Oregon* (Service 2005); (2) Encourage or require the use of appropriate California native species in revegetation and habitat enhancement efforts associated with projects authorized by the Corps; and (3) Sightings of any listed or sensitive species should be reported to the California Natural Diversity Database of the [CDFG]. A copy of the reporting form and a topographic map clearly marked with the location the species were observed also should be provided to the [USFWS]."³⁴ Therefore, Special Condition II-F requires the permittee to implement conservation measures contained in the draft BO to minimize the loss of individuals and habitat for these special status invertebrates consistent with LPP Marsh and Wetland Policy 1 which requires the County to "preserve and enhance wherever possible the diversity of wildlife and aquatic habitats found in the Suisun Marsh and surrounding upland areas to maintain these unique wildlife resources."

c. **Amphibians – California Red-legged Frog and California Tiger Salamander**

The DEIR concluded that California red-legged frog is not expected to occur in the proposed expansion area and therefore, the project would result in less-than-significant impacts to this species.³⁵ The USFWS did not identify the red-legged frog as a species for comment.

The DEIR concluded that the project would result in significant impacts to the California tiger salamander (CTS), a listed species by the USFWS and currently listed by the CDFG.³⁶ Although larval CTS develop in vernal pools and ponds in which they are born, they are otherwise terrestrial salamanders that spend most of their post-metamorphic lives in widely dispersed underground retreats. Sub-adult and adult CTS spend the dry summer and fall months of the year in the burrows of small mammals such as the California ground squirrels, which provide protection from the sun and wind that can cause drying out of amphibian skin.³⁷ According to the DEIR, all ponds in the proposed expansion area showed evidence of use as breeding sites either by the presence of larvae in the ponds, the presence of adult CTS during the breeding season, and/or the presence of

³³ *Id.* at 57.

³⁴ *Id.* at 61.

³⁵ DEIR, *supra* note 9 at 4.2-20.

³⁶ *Id.* at 4.2-21, 4.2-28

³⁷ Draft Biological Opinion, *supra* note 7 at 23-24.

egg masses. Adult CTS were also observed fairly regularly in the uplands during the breeding season, at distances ranging from a few feet to over 2,000 feet from the nearest breeding pond.³⁸

The independent scientific panel also found that the Phase II expansion would result in direct impacts to CTS with the loss of aquatic breeding habitat from the filling of Ponds 1 and 4, and the loss of terrestrial habitat. The scientific panel concluded that, "The effect of loss from Phase II is severe. Nearly two-thirds of that loss is due to the elimination of two breeding sites, ponds 1 and 4."³⁹ The scientific panel concluded that CTS move to and from breeding sites in straight lines and the Phase II expansion would block all movements north and south of the site. Of the parcels that were included in the mitigation proposal at the time of the scientific panel's review, the report found that only the Southern Hills provide mitigation for the loss of Ponds 1 and 4 and that the Director's Guild property and the Griffith Ranch site do not provide mitigation since these parcels are isolated and do not contain any known CTS breeding sites. However, this finding was made before the landfill's commitment to preserve the Eastern Valley and Eastern Hills in perpetuity. The scientific panel recommended that a 3:1 mitigation ratio be adopted for the loss of CTS habitat but also concludes that a 2:1 ratio would be adequate if the USFWS felt that was reasonable. The scientific panel also recommended adding the Eastern Valley parcel to the mitigation proposal, eliminating ground squirrel population control on all mitigation areas, requiring long-term monitoring of the CTS for the life of the landfill project, and constructing a solid and permanent, 2- to 3-foot-tall concrete "salamander-proof barrier".⁴⁰

In its draft Biological Opinion, the USFWS determined that CTS could be adversely affected by the proposed project.⁴¹ Individual animals may be directly injured, killed, harmed and harassed by activities that disturb breeding, migration, dispersal and aestivation habitat. Individuals exposed during excavations likely will be crushed and killed or injured by construction-related activities, or salamanders could fall into trenches, pits, or other excavations, and then be directly killed or unable to escape and be killed due to desiccation, entombment, or starvation. The increased landfill size and increased hours of operation would lead to higher levels of vehicle traffic which would result in higher numbers of CTS killed during their movements between their upland habitat and breeding ponds. The USFWS concluded that the Phase II expansion would result in the permanent loss of approximately 167.63 acres of CTS upland habitat and the permanent loss of 0.61 acre of CTS breeding habitat due to the loss of Pond 1 (0.39 acre) and Pond 4 (0.22 acre).

In addition to the effects of the increased landfill footprint, the USFWS concluded that the proposed powerline extension would result in 0.01 acre of temporary effects to CTS upland habitat from new poles and the installation of a

³⁸ DEIR, *supra* note 9 at 4.2-21.

³⁹ Scientific Panel Report, *supra* note 4 at 4-13.

⁴⁰ *Id.* at 4-18.

⁴¹ Draft Biological Opinion, *supra* note 7 at 2.

buried pipe line system and four troughs⁴² would temporarily affect 0.027 acre and permanently affect 0.002 acre of upland CTS habitat on the Southern Hills parcel. The USFWS also determined that the increase in night lighting at the landfill could disrupt CTS physiology and interrupt migration of larval CTS that could reduce the size at metamorphosis or survival.

CDFG has informed staff that it is working with the USFWS to make the draft Biological Opinion consistent under CESA as part of PHLF's proposed request for a Consistency Determination under Fish and Game Code Section 2080.1 for take authorization for CTS. CDFG is concerned that loss of the most productive breeding pond for CTS (Pond 1) may result in loss of a "source" population and reduce potential for CTS dispersal. According to survey results submitted to CDFG, Pond 5, which is proposed for preservation, appears to be a relatively productive pond and CTS could potentially disperse from this pond and colonize the two created ponds (EV1 and SH1). However, according to survey results conducted within the project area, existing Ponds 2, 3, 6 and 7 appear to have lower productivity than Ponds 1 and 5. Habitat enhancement is proposed at Pond 7 by increasing water depth.

Since the release of the DEIR and the scientific panel report, the landfill has revised its mitigation proposal to include the 297.67-acre Eastern Valley and Eastern Hills parcels (see Exhibit D). PHLF has also provided additional enhancement measures to increase the viability of two proposed CTS breeding ponds (GR1 and GR2) that are to be constructed on the southern end of the Griffith Ranch site. Both of these ponds are expected to function as CTS breeding ponds, as both ponds will be located within movement distance of Pond 1, a documented CTS breeding pond. Pond 1, located just 200 feet south of Griffith Ranch, with no impassable barriers between the two parcels, has been reliably producing CTS for approximately ten years. To address the possibility that the loss of source population may impact CTS dispersal, this pond will be preserved for the first five years after the expansion begins on the Phase II parcel in order to provide a source of juvenile salamanders that can eventually breed in the new ponds and find burrows in the uplands around the ponds.

The USFWS has incorporated this mitigation proposal in its draft Biological Opinion and has concluded that the restoration and management of the five mitigation parcels will protect CTS and its upland and aquatic habitat.⁴³

In contrast to the scientific panel's analysis, the USFWS has included both the Griffith Ranch and Director's Guild parcels as mitigation for impacts to CTS. The inclusion of all six parcels results in mitigation of upland habitat at a ratio of 5.3:1, preserved CTS seasonal pond habitat at a ratio of 7.7:1, and created CTS seasonal pond habitat at a ratio of 2.9:1.

According to the draft Biological Opinion, direct effects from the expansion will be minimized by a pre-construction CTS salvage plan during the dry season. Pre-construction surveys for CTS and relocating individuals may reduce injury

⁴² This project component was included and evaluated in the USFWS's draft Biological Opinion but is not included in the project description for this appeal as it was not included in the project descriptions provided to BCDC staff and has not yet been designed. Approval for this work would require separate review and a permit amendment.

⁴³ Draft Biological Opinion, *supra* note 7 at 14.

or mortality. The landfill proposes to transport and relocate CTS just outside the construction area by use of a qualified biologist. Potential risks of relocation of CTS include the spread of disease, outbreeding depression, maladaptation, and disruptions to the existing population. According to the USFWS, these risks outweigh the potential benefits for relocation of CTS from Pond 1 to existing or created ponds on the adjacent landfill parcels. Created sites adjacent to occupied habitat are likely to be colonized naturally over a few years if there are no barriers to animal movement. The proposed new ponds (GR1, GR2, EV1, and SH1) are close enough that they should be colonized naturally by CTS. The USFWS also determined that failure to adequately revegetate disturbed areas with appropriate native vegetation would facilitate the invasion and establishment by non-native plant and animal species that could reduce habitat quality for the CTS. One problematic species in particular is the yellow star thistle. Special Condition II-E-3 addresses this concern by requiring a grassland management plan to reduce the presence of non-native vegetation.

The USFWS states that the effects of increased lighting on CTS will be minimized by using a small number of lights in a manner that avoids off-site reflection and glare, with a maximum of seven construction light plants. According to the draft Biological Opinion, the nearest landfill operation to Pond 5 would be about 800 feet away and the nearest landfill operation to Pond 3 would be 300 feet away.⁴⁴

The Mitigation and Monitoring Plan for the project includes establishing performance criteria to measure the success of the created CTS ponds in creating productive CTS ponds. Special Condition II-E requires the permittee to develop a mitigation and monitoring plan for approval by the Commission to ensure that the habitats preserved or created to protect CTS are permanently set aside and created prior to expanding the landfill and that they are adaptively managed to increase their productivity for CTS. In addition, Special Condition II-F requires approval of the final Biological Opinion by the USFWS and incorporates all conservation measures included in the BO into this authorization including installing a permanent salamander-proof fence around the landfill expansion area, trapping and removing adult CTS before commencing construction activities within the expansion area, limiting construction within the expansion area to the non-breeding season, deepening Pond 7 so that it retains water longer, and eliminating ground squirrel control in mitigation areas to provide more burrows for CTS, limiting construction activities to avoid CTS mortality, and leaving intact all ponds in the Eastern Valley Pond Nos. 2, 3 and EV1, surrounding uplands to provide breeding habitat and refuge for CTS. With these mitigation measures, any potential impacts to California Tiger Salamander will be reduced to a level of less than significant - consistent with LPP Marsh and Wetland Policy 1 which requires the County to "preserve and enhance wherever possible the diversity of wildlife and aquatic habitats found in the Suisun Marsh and surrounding upland areas to maintain these unique wildlife resources."

⁴⁴ *Id.* at 52.

d. **Birds**

The DEIR concluded that the project would result in less-than-significant impacts to the long-billed curlew, loggerhead shrike, and tricolored blackbird⁴⁵ and potentially significant impacts to burrowing owls and other raptors, but that these impacts would be mitigated to less than significant levels.⁴⁶ These species are species of concern for the USFWS and CDFG.

The DEIR includes the following mitigation measures to address impacts to burrowing owls: (1) conducting pre-construction surveys no less than 14 days and no more than 30 days prior to commencement of construction activities, pursuant to CDFG protocol where suitable habitat is present within 75 meters of construction areas; (2) if no burrows are found, a letter report would be submitted to CDFG for review and approval and no further mitigation would be required; (3) if burrows are found, disturbance would be avoided by providing a buffer of 50 meters during non-breeding season (September 1 through January 31) or 75 meters during breeding season (February 1 through August 31) and, in addition to these buffers, a minimum of 6.5 acres of foraging habitat would be preserved contiguous with each occupied burrow; and (4) if impacts to occupied burrows are unavoidable due to their location within the landfill footprint, onsite passive relocation techniques approved by CDFG would be used to encourage owls to move to alternative burrows in the local vicinity. These requirements are incorporated into Special Condition II-F-2 to minimize and avoid impacts to burrowing owls consistent with LPP Marsh and Wetland Policy 3 which requires that uses in the marsh "protect the Marsh and preserve valuable marsh-related wildlife habitat."

To mitigate for potential impacts to other raptors at the site, the DEIR recommended including the following mitigation measures: (1) conducting pre-construction surveys no less than 14 days and no more than 30 days prior to commencement of construction activities in areas of suitable nesting habitat within 500 feet of the project activity if construction would commence during the raptor nesting season (February 15 to September 15); (2) if no active nests are found, no further mitigation would be required; and (3) if active nests are found, a 500-foot exclusion buffer would be established and no project activity allowed to occur within the buffer area until a qualified biologist confirms that the young have fledged from the nest through weekly monitoring, or the nests have been abandoned as determined through daily monitoring.

The scientific panel report found that a variety of resident, breeding, migratory and wintering birds use the site, including a number of special-status species. In general, the bird species that use the site include those that forage or nest in relatively open habitats, such as raptors (owls and hawks), curlews, corvids (ravens and crows), swallows, blackbirds and meadowlarks, finches, and sparrows. Small numbers of waterbirds use the ponds and swales.⁴⁷ The scientific panel found that the Phase II expansion would reduce nesting and foraging habitat for a number of special-status species, and, in particular, would permanently eliminate nesting territories for at least two pairs of Loggerhead

⁴⁵ DEIR, *supra* note 9 at 4.2-27

⁴⁶ *Id.* at 4.2-26.

⁴⁷ Scientific Panel Report, *supra* note 4 at 5-2.

Shrikes, at least part of the nesting territory of at least one pair of Northern Harriers, and part of the home range and (more importantly) the apparent core area of one pair of Golden Eagles nesting offsite. The scientific panel also found that the expansion would eliminate foraging habitat for wintering species such as the Long-billed Curlews, Tricolored Blackbirds and Burrowing Owls. In addition, the scientific panel found that above-ground power lines from the power plant could have the potential, depending on their design, length and placement, to cause direct mortality of Golden Eagles and other raptors from collisions with these lines, that increased night-lighting could cause disorientation of passerine birds and waterfowl or other waterbirds, and that the landfill expansion could result in an increase in American Crows and Common Ravens, predators of threatened and endangered species in California.⁴⁸

The scientific panel report makes the following recommendations to address these impacts: (1) fencing wetter areas to enhance nesting habitats and allowing tall marsh plants or grasses to grow; (2) planting isolated trees and shrubs such as willows, elderberry or poison oak; (3) enhancing grassland habitat value by managing the timing and intensity of grazing to benefit grasses and forbs; (4) removing artificial predator perches in wetland areas, such as including plastic spikes on top of signs; (5) integrating a corvid abatement program with the current gull program that involves pyrotechnics, falcons or dogs and monitoring its effectiveness; (6) minimizing the active working face of the landfill or quickly covering the active working face to minimize the availability of food for corvids; (7) requiring the Eastern Valley parcel as mitigation since it is the most similar in habitat to the Phase II expansion area and supports trees for nests, low valley for foraging and comparable habitat to support burrowing owls; and (8) limiting the number of night-lighting and specifying the type and height of lights, intensity and nature of light beams, and requiring that lights be shielded to focus downward.⁴⁹ As noted below, these measures are incorporated into the project or required by permit conditions. In addition, the authorization requires undergrounding power lines or, if power lines are placed above ground, requiring them to meet raptor-safe construction standards.

Bird abatement activities consistent with these recommendations are currently ongoing and coordinated with similar activities conducted by Travis AFB in accordance with its Birds/Wildlife Aircraft Strike Hazard Plan⁵⁰ to ensure safe military aircraft operations.

Additional comments on the scientific panel's review of the Phase II expansion were submitted to BCDC regarding the possible off-site effects to locally nesting rare, threatened and endangered species such as the California Least Tern and the Western Snowy Plover in the Montezuma wetlands and Hill Slough, from the potential increase in corvids.⁵¹ The comments were prepared by Avocet Research Associates and prepared for Sustainability, Parks, Recycling and Wildlife Legal Defense Fund (SPRAWLDEF). The comments suggest requiring an on-going gull-corvid monitoring program to collect data on corvid occur-

⁴⁸ *Id.* at 5-11 – 5-14.

⁴⁹ *Id.* at 5-17 – 5-19.

⁵⁰ Travis Air Force Base, Birds/Wildlife Aircraft Strike Hazard (BASH) Plan (2006).

⁵¹ Sustainability, Parks, Recycling and Wildlife Legal Defense Fund, Comments on the Scientific Panel Review of Biological Resource Impacts and Proposed Mitigation for Potrero Hills Landfill Phase II Expansion (2010).

rence at the landfill, especially during the nesting season prior to landfill expansion, employing corvid-deterrence methods, and an adaptive management plan to reduce corvid occurrence. In response to the recommendations of the scientific review panel, PHLF added a corvid abatement program to the mitigation and monitoring plan (Section 7.1.4) that was incorporated by reference into the Draft Biological Opinion by the USFWS. This plan is also incorporated in Special Condition II-G to expand the existing gull abatement programs that use falcons and dogs to keep native avian predators from obtaining significant food resource from the landfill, to minimize the active working face of the landfill quickly to cover deposited refuse, and to submit a corvid monitoring program for approval and implementation at least two years prior to initiating Phase II to establish a baseline of corvid presence at the landfill. A number of additional mitigation measures are required herein to further reduce impacts on birds, such as preserving the Eastern Valley and Eastern Hills parcels, undergrounding the power lines, and reducing the intensity of night-lighting. With these measures, the Commission finds the project consistent with LPP Marsh and Wetland Habitat Policy 1 and 3, and Wildlife Habitat Management and Preservation Policy 1, which require the preservation and enhancement of the diversity of wildlife and aquatic habitats and finds that any potential impacts to birds will be mitigated to a less-than-significant level.

The Commission also finds that, based on the information provided regarding special-status and other species at the site provided by the Scientific Panel Report, the DEIR, the report prepared by Avocet Research Associates for SPRAWLDEF, the requirements of the USFWS Biological Opinion, and the mitigation required herein, the project will not have "significant adverse ecological impacts" on the Marsh, pursuant to Policy 4 of the Utilities, Facilities and Transportation section of the LPP.

2. **Ecological Impacts – Groundwater.** Policy 2 of the Water Quality section of the LPP applies to impacts on groundwater:

"To prevent crop damage in some areas, the withdrawal of groundwater from the underground aquifers surrounding the Marsh may be desirable. Withdrawal should not be so extensive as to allow the salt water of the Marsh to intrude into fresh water aquifers [sic], or to disrupt the natural subsurface flow of groundwater into the Marsh."

The project involves the construction of a water pipeline system to convey water that will be pumped from an existing water well located on the Griffith Ranch parcel on the north slope of the Potrero Hills ridgeline (Griffith-6R well) to four water tanks that will store up to 15,000 gallons of water each. According to PHLF, the water will be used for landfill operations, such as dust suppression on the active landfill face, landfill cell construction and fire suppression.⁵² PHLF has also identified that this water will be used for the truck/container washing facility.

In response to a comment letter on the original DEIR from BCDC staff requesting further information regarding the impact of withdrawing groundwater, the FEIR stated that based on studies, "water levels might be lowered about one foot in the local area around the well and the long-term pumping of the new well would not

⁵² Cnty. of Solano Dept. of Res. Mgmt., Recirculated Draft Environmental Impact Report for the Potrero Hills Landfill Expansion Project II-2 (2007) [hereinafter *Recirculated DEIR*].

affect the other ranch wells in the vicinity. In addition, no salt water intrusion impact would occur inasmuch as the brackish water in the Union Creek estuary and the underlying highly saline groundwater body is located approximately one mile to the west and the existing natural ground water flow direction would not be affected."⁵³

On February 26, 2007, the Solano County Superior Court ruled that the FEIR did not provide sufficient discussion or refer to data that supported the determination that no significant impact would result from expanded use of the Griffith-6R well and ordered the County to address the EIR deficiencies in a revised document. In response to the Court's ruling, the County prepared a Recirculated DEIR that concluded, based on tests conducted by Golder Associates Inc., the potential impacts of pumping activities at the Griffith-6R well on private wells and wetland/slough conditions would be negligible and therefore, the impact would be considered less than significant.⁵⁴ According to the Recirculated DEIR, the aquifer pump test indicates that the Griffith-6R well is capable of sustaining a continuous pumping rate of 15 gallons per minute (gpm) for the landfill's water supply needs from June through November, without affecting neighboring well users.⁵⁵ Because the total annual groundwater consumption from the Griffith-6R well will be approximately 25 percent of the average annual recharge to the lower sand unit, based on the recharge rate, the seasonal pumping of the Griffith-6R well will not significantly affect the local water balance.

In its comment letter on the DEIR, the RWQCB stated, "The conclusions drawn by Golder Associates from the aquifer pump test and the subsequent computer model simulations of well yield appear reasonable and consistent with the test data. We concur with the report's primary conclusion that privately owned water supply wells located at significant distance (2,000 feet or more) from the proposed water supply well should not be significantly impacted through seasonal water extraction from well Griffith-6R, provided that pumping rates do not exceed those evaluated in the aquifer test."⁵⁶

Special Condition II-M of the permit requires the permittee to obtain all required final approvals from the RWQCB and any other relevant agency responsible for groundwater withdrawal to ensure that the withdrawal of the water will not allow the salt water of the Marsh to intrude into fresh water aquifers, disrupt the natural subsurface flow of groundwater into the Marsh, or significantly impact water levels of surrounding water wells. In addition, Special Condition II-M requires the permittee to pump water from the well at a rate no higher than was specified in the aquifer pump tests conducted by Golder Associates Inc., which was determined by the RWQCB to not significantly impact privately owned water supply wells located at a significant distance (2,000 feet or more) from the well.

⁵³ Cnty. of Solano Dept. of Res. Mgmt., Final Environmental Impact Report for the Potrero Hills Landfill Expansion Project 2-100 (2005).

⁵⁴ Recirculated DEIR, *supra* note 52 at II-11.

⁵⁵ *Id.* at II-9.

⁵⁶ Cnty. of Solano Dept. of Res. Mgmt., Recirculated Final Environmental Impact Report for the Potrero Hills Landfill Expansion Project 2-5 (2008) [hereinafter *Recirculated FEIR*].

The Commission generally relies on the advice of the RWQCB regarding water issues, pursuant to Section 66646.1 of the McAtter-Petris Act and Section 29301 of the Marsh Act. By limiting pumping levels to the maximum rate specified in the aquifer pump tests conducted by Golder Associates Inc. and requiring that approvals from the RWQCB be obtained prior to groundwater withdrawal and that pumping levels be maintained at a rate approved by the RWQCB, the Commission finds that the withdrawal of groundwater at well Griffith-6R will “not be so extensive as to allow the salt water of the Marsh to intrude into fresh water aquifers [sic], or to disrupt the natural subsurface flow of groundwater into the Marsh” pursuant to Policy 2 of the LPP’s Water Quality section.

3. **Ecological and Aesthetic Impacts - Air Quality.** The LPP does not have any specific air quality policies, but Policy 4 of the Utilities, Facilities and Transportation Section of the LPP prohibits “significant adverse ecological or aesthetic impacts” on the Marsh.

According to the DEIR, the project site is part of the San Francisco Bay Area Air Basin (SFBAAB). 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). Each of these jurisdictions develops rules, regulations, policies and/or goals to attain the goals or directives imposed upon them through legislation. State and local regulations may be more stringent than EPA regulations.

The DEIR identified two significant air quality impacts resulting from the landfill expansion – air quality impacts associated with the expanded landfill operations and odors generated from the landfill operations. The DEIR determined that with mitigation measures, including dust control measures and compliance with the requirements of any revised BAAQMD permit, impacts from the landfill expansion would be mitigated to less than significant.⁵⁷

The DEIR identifies odors as a significant impact since odors generated from the landfill have been a source of complaints from adjacent residents, landfill odors would continue, and new sources of odors would be introduced with the landfill expansion. The DEIR requires as mitigation for odor impacts that all composting operations be relocated from the northern boundaries of the project site to the center or southern portions and that sludge processing and storage operations, and mixing and storage of high-moisture content materials combined with dry powdery materials, also occur within the center or southern portions of the site. The DEIR also requires that the landfill modify the Odor Impact Minimization Plan submitted to the Local Enforcement Agency (LEA) in April 2003, to include odor control measures for the 24-hour operation of the working face, the land application of biosolids, and the use of seasonal sludge-drying ponds. Odor control measures include increasing the frequency of cover application on the working face of the landfill, use of a 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.

⁵⁷ DEIR, *supra* note 9 at 4.9-14, 4.9-21.

Following certification of the FEIR in September 2005, the Solano County Superior Court found that the EIR was deficient with respect to air quality. In particular, the Court concluded that the DEIR under-reported the level of reactive organic gases (ROG) produced by the project and that there was a lack of substantial evidence to support the FEIR's finding that the corrected ROG levels would be adequately mitigated by the air quality mitigation measures identified in the DEIR.

In the Recirculated DEIR prepared to respond to the Court's concern, the air quality section was revised to include analysis of the project's ROG emissions and to include a discussion of the project's possible impacts related to greenhouse gas emissions. The Recirculated DEIR concludes that the landfill expansion would result in an increase in ROG emissions with landfill gas in excess of BAAQMD significance thresholds but, with mitigation measures, would be reduced to a less-than-significant level. The Recirculated DEIR includes as mitigation measures, several on-site operational changes, such as stabilizing dust emissions using water or chemical stabilizer/suppressant and monitoring water content of composing operations, as well as adherence to BAAQMD requirements.⁵⁸ On November 3, 2009, the Solano Superior Court approved the Revised Recirculated FEIR and discharged its writ of mandate previously issued to the County. With respect to the air quality impact associated with expanded landfill operations, the Commission finds that changes or alterations are within the responsibility and jurisdiction of another public agency and not BCDC. Such changes have been adopted by the County or will be adopted by the BAAQMD.

Additionally, in order for the power plant to be authorized, the landfill will need to obtain an Air Pollution Control/Permit to operate the landfill gas system from BAAQMD. BAAQMD commented on the Recirculated DEIR stating that its determination to issue a modified permit to operate the expansion project will be based on emission increases different than identified in the various EIR documents and expressed concern that the health risk may be underestimated.⁵⁹ BAAQMD also recommended that additional mitigation measures for air emissions should be considered as part of the project.

BAAQMD has indicated in conversations with Commission staff that it has not determined whether additional CEQA review is needed for the project since the application for the power plant has been withdrawn. The power plant project authorized by the Commission is based on the information evaluated in the Recirculated DEIR dated December 21, 2007, which was certified by Solano County on June 10, 2008, and found to be adequate with respect to air quality issues by the Superior Court on October 14, 2008. Based on this information, the Commission may rely on the certified FEIR regarding air quality as adequate. Special Condition II-O requires the permittee to obtain all required BAAQMD approvals prior to constructing the landfill gas-to-energy power plant. The Commission generally defers specific air quality issues to BAAQMD, the agency responsible for monitoring air quality in the Bay Area. If additional environmental review of air quality impacts is required by BAAQMD prior to the issuance of BAAQMD approvals, Special Condition II-O ensures that this review is conducted. If the review results in

⁵⁸ Recirculated DEIR, *supra* note 52 at II-26.

⁵⁹ Recirculated FEIR, *supra* note 56 at 2-21.

any changes to the project than what is authorized by this permit, those changes would require an amendment to the permit and would be reviewed by the Commission under the Marsh Act and LPP.

In addition, Special Condition II-P requires the permittee to obtain final approval of its Odor Impact Minimization Plan by the Local Enforcement Agency (LEA) to ensure that measures are undertaken to minimize odors at the site. The LEA is responsible and most knowledgeable about general landfill maintenance and operations and regularly conducts site visits and monitors landfill activities, as directed by CalRecycle and required under the "LEA Performance Standards, Evaluation Criteria, and Duties and Responsibilities." Although the LPP has no standards governing air quality, odor affects the ecological and aesthetic qualities of the Marsh, and LPP Utilities, Facilities and Transportation Policy 4 prohibits "significant adverse ecological and aesthetic impacts" on the Marsh. Therefore, the Commission finds that with Special Condition II-P requiring odor minimization measures that are acceptable to the LEA, the project is consistent with the ecological and aesthetic policies of the LPP.

D. Aesthetic Impacts on the Marsh

The Marsh Act, SMPP and the LPP require that the construction and operation of solid waste facilities in the Potrero Hills "not have significant adverse ecological impacts or aesthetic impacts on the Marsh." (PRC §29409 of the Marsh Act, Policy 7 of the Utilities, Facilities and Transportation of the SMPP, and Policy 4 of the Utilities, Facilities and Transportation section of the LPP). These policies indicate the intent of the Legislature, the Commission and the County to protect the aesthetic qualities of the Marsh, qualities that include views, odors, litter, lighting and changes to natural landscape features and topography. The Marsh Act also requires BCDC to "avoid ... a diminished quality of life resulting from the misuse of the marsh" (§29005); calls for the Marsh to be protected from "extensive human intrusion" (§29011) and "degradation by excessive human use" (§29003); and requires the LPP to have enforceable standards to "protect the visual characteristics of the marsh and, where possible, enhance the views of the marsh" (§29401(g)). Therefore, the aesthetic quality of the Marsh, including the secondary management area, is an important component of the preservation of the Marsh, and the LPP policies that protect the Marsh, such as LPP Policy 3 which requires that any change in agricultural uses "should be compatible with the preservation of the Marsh and its wildlife resources," must be read as including the protection of the Marsh's aesthetic qualities.

Potential aesthetic impacts include: impacts on views of the Marsh from Scenic State Road (SR) 12 and adjacent public and private properties from the increased landfill height and landfill operations; impacts from increased night-lighting at the site; impacts from increased litter generation; and potential impacts from new ancillary structures, such as the landfill gas-to-energy facility, power lines, visitor center buildings and four water tanks. The steady stream of truck and other vehicular traffic to and from the expanded landfill will also affect the scenic qualities of the Potrero Hills. Moreover, in its natural state, this landscape is dark at night, lit only by the moon and stars. However, the project could light up the site every night to facilitate nighttime landfill operations, altering the natural nighttime character of this landscape and views of it from nearby public lands, such as Rush Ranch.

The project is located in a valley within a horseshoe-shaped hill surrounded on the north, east and south by the Potrero Hills that provide a natural screen and obstruct views of the site from most surrounding properties. The north ridgeline that runs along the northern edge of the Phase I and Phase II site helps screen the project site from SR-12, a County-designated scenic roadway. The ridgeline ranges in elevation from 200 to 300 feet MSL and valley bottom elevations on the Phase I and Phase II landfill footprints range from 40 to 130 feet MSL.

The Southern Hills help screen the project site from Grizzly Island Road, another County-designated scenic roadway and elevations range from about 100 feet MSL in the Potrero Hills Valley to between 300 to 400 feet MSL at the highest peak along the southern ridge.

The Eastern Valley and Eastern Hills mitigation areas are contiguous with the Southern Hills parcel to the south and connect with the southeast corner of the Griffith Ranch mitigation area to the north. Elevations range from about 100 feet MSL to 380 feet MSL. A saddle-shaped break in the ridge occurs near the northwest corner of the Eastern Valley parcel. This saddle occurs approximately 400 feet east of the eastern boundary of the Phase II expansion area. The elevation of the low point of the saddle is approximately 160 feet MSL.

The existing landfill scalehouse and equipment maintenance building are only partially visible from SR-12, approximately 1 mile north of the landfill boundary. The majority of the landfill operations are not visible from SR-12 because of the intervening ridgelines and the current approved maximum elevation of 220 feet MSL for Phase I. Phase I of the landfill is currently visible from Rush Ranch.

- 1. Impacts from Increased Height of Landfill.** The expansion project authorized by Solano County allows the height of Phase I and Phase II of the landfill to be increased by 125 feet, from a current maximum of 220 feet above MSL, to 345 feet above MSL. This increased height would make the landfill visible from numerous areas throughout the County, would be a very discernible alteration of the natural landforms of Potrero Hills, and would have significant adverse impacts on the aesthetic values of the Marsh contrary to Section 29409 and other provisions of the Marsh Act, the SMPP and the LPP (cited above). This approved height is also contrary to the justification for moving the landfill from its original Solano Garbage Company location to the Potrero Hills, in order to shield the landfill operations from the public eye.

The Commission required non-agricultural operations within the Potrero Hills to be out of public sight when it approved the original quarry permit (MD 38-79, Appeal 1-79), dated October 19, 1979, on the current PHLF Phase I site within the Potrero Hills. Mining activities had taken place in the Potrero Hills prior to the Marsh Act, and the permit itself was issued prior to the existence of the LPP and was approved as a continuation of an existing use in the secondary management area. The applicant proposed to mine two separate parcels of land, known as Area A and Area B. Area A was located in the valley of the Potrero Hills and was shielded from view, while Area B was comprised of a small section of the northern hills themselves. While excavation of Area A would be hidden behind the Potrero Hills, excavation of Area B would be highly visible to the public because the applicant proposed to excavate a 177 foot high hill, reducing its height by 65 to 100 feet. Mining operations would have therefore resulted in a visible alteration to the topography of the

Potrero Hills. The Commission found that "[t]he excavation of Area "B" would be highly visible from Highway 12, while the expansion of Area "A" would not be visible from the Highway. The visual quality of the Marsh is an important aspect of the quality of the Marsh's environment, particularly given the heavily traveled nature of Highway 12." The Commission therefore denied quarry operations in Area B and approved operations in Area A, the current location of Phase I of the Potrero Hills Landfill. The denial of a Marsh Development Permit for Area B was based on Suisun Marsh Protection Plan Policies because the LPP was not completed until 1982. The Protection Plan provides, among other things, that "development in the uplands adjacent to the Marsh would...result in potential adverse ecological and aesthetic impacts."⁶⁰ The Commission incorporated Protection Plan policies into its permitting decision and denied a permit for excavation of Area B. The LPP policies were based primarily on the Protection Plan, particularly the Scenic Roadways Element of the LPP which provides that "distant view components of scenic roadways" for agricultural areas (such as the Potrero Hills) should be preserved, and LPP Agricultural Policy 3 (cited above), which provides that any continuation of existing uses in the secondary management area must be "compatible with the preservation of the Suisun Marsh and its wildlife resources." Allowing the landfill to be visible above the Potrero Hills would be inconsistent with these LPP policies.

To mitigate for the aesthetic impacts of the increased height, the County authorized the construction of an earthen berm to shield the landfill. The DEIR and Visual Impact Report submitted by the landfill both noted that the increased landfill height would be visible well above the ridgeline of the Potrero Hills.⁶¹ However, the earthen berm would significantly alter the ridgeline of the Potrero Hills, degrading public views of the Potrero Hills, and causing significant adverse aesthetic impacts on the Marsh.

Allowing the landfill to expand above the ridgeline with an earthen berm alters the natural topography of the surrounding area, significantly affecting the aesthetic values of the Marsh, and undermining the initial justification for moving the landfill to its current location. Because of the difficulty in replicating natural land forms within the constraints of landfill stability and regulatory requirements, it is likely that any visible section of the landfill will look artificial and man made.

The potential aesthetic impacts on the Marsh from the increased height of the landfill authorized by the County are analyzed using the following recognized "red flag" visual resource criteria: (a) the project is near a scenic route; (b) the area is easily accessible from a major population center; and (c) the landfill expansion will require major changes to the existing landscape.⁶²

- a. **The Project is Near a Scenic Route.** State Route 12 is a county-designated scenic highway where approximately 37,000 motorists travel past the Potrero Hills each day.⁶³ Most of these drivers are commuters making the same drive daily. Drivers and passengers who view the same landscape every day take a sort of ownership of the landscape and are increasingly sensitive to any landscape

⁶⁰ Suisun Marsh Protection Plan at 35.

⁶¹ DEIR at 4.10-6; Env'tl. Vision, Visual Resources Technical Report 3-4 (2009) [hereinafter *Visual Resources Technical*].

⁶² Smardon et al., *Foundations for Visual Resource Analysis* (1986); Visual Resources Technical Report at 2.

⁶³ Annual average Daily Traffic, Traffic Data Branch, Caltrans (2008) available at <http://traffic-counts.dot.ca.gov/2008all/r012-15i.htm>

changes. In response to a request by BCDC staff to prepare additional information on possible visual impacts resulting from the project, the permittee prepared a "Visual Resources Technical Report."⁶⁴ The Visual Resources Technical Report includes existing views and visual simulations of the proposed increased landfill height following landfill closure, capping and revegetation as well as photo diagrams illustrating the change in the landform resulting from the proposed project. The analysis concluded that "the project's overall appearance would generally look similar to the surrounding Potrero Hills in terms of its form, color and texture" and that "motorists traveling along approximately 8 miles of SR-12 would have intermittent views of the proposed project."⁶⁵ However, the visual simulations in the landfill's visual resources report demonstrate that current views from SR-12 show undulating hills with views of the sky above and between the hills, giving a clear sense of natural topography.⁶⁶ If the landfill is visible above the ridgeline it would greatly alter these views by removing the sense of rolling hills set against the sky and be a clear alteration of the Marsh's natural topography.⁶⁷

Grizzly Island Road is also a County-designated scenic highway. Drivers including fisherman, duck hunters and regular visitors to the Marsh are likely to be sensitive to changes in the surrounding topography since they visit the Marsh to enjoy and make use of its natural resources and therefore are sensitive to major topographic changes. The landfill's visual resources report indicates that the proposed project site will not be visible from Grizzly Island Road, and therefore views from this area will not be affected.

The California Coastal Commission prohibits structures in the viewshed of Highway 1 in the Big Sur Land Use Plan (LUP). There are no exceptions or mitigation measures for this policy, and it applies to all structures, roads, utilities, lighting, grading and removal or extraction of natural materials. The LUP zero visibility policy is based on the area's natural beauty and the character of Big Sur.⁶⁸ For the same reasons, the landfill should remain out of the viewshed of the scenic Potrero Hills to protect the visual resources of the Marsh. A flat, engineered berm would diminish the sense of the Marsh as a natural area, and highlight the effects of human development within the Marsh contrary to the legislative intent of the Marsh Act and the LPP. Therefore, the Commission finds that the views from a designated scenic route should be protected and the scenic view of rolling hills preserved.

- b. **The Area is Easily Accessible from a Major Population Center.** As mentioned above, State Route 12 is a county-designated scenic highway with approximately 37,000 motorists a day passing by the Potrero Hills. SR-12 also provides access to the Marsh and Potrero Hills from the City of Fairfield in a matter of minutes. Access to views of nature in its unobstructed state should be preserved for the public and for residents in Fairfield, who may wish to visit the Marsh and its facilities such as Rush Ranch and Beldon's Landing. The Rush Ranch

⁶⁴ Visual Resources Technical Report at 6-7.

⁶⁵ *Id.*

⁶⁶ *Id.* at 5.

⁶⁷ Testimony by a local resident notes that, "that dump is not supposed to be visible from any residents[sic] or by state route 12 and it certainly is." Minutes 12/1/05 p 23.

⁶⁸ Monterey County, Big Sur Coast Land Use Plan 13-14 (certified April 10, 1986)

Nature Center welcomes thousands of visitors a year who take part in the many recreational and educational activities available there.⁶⁹ The landfill's visual simulations show that the low, saddle shaped point in the hills would be completely filled in by Phase II. Visitors to Rush Ranch are likely to be sensitive to such visual changes to the surrounding topography. The Rush Ranch Nature Center offers many miles of hiking trails that are open to the public who visit the nature center to enjoy the natural landscape of the Marsh, not man-made structures foreign to the rolling landforms of the Potrero Hills. Views from Rush Ranch to the Potrero Hills will be impacted, especially from the public hiking trail, which leads from Rush Ranch to the top of Suisun Hill, where the visual impact will be greatest. The already approved height of Phase I of the landfill is 220 feet above MSL, can already be seen from Rush Ranch, and therefore would become even more visible if the landfill height increased to its permitted maximum approved by the County.

The Lawler Ranch subdivision represents the closest residential development to the proposed landfill expansion. A site visit by Commission staff indicated that the expansion approved by the County would be highly visible to residents of Lawler Ranch, and that there was little intervening landscaping and no intervening topography that would block the view of the landfill expansion from Lawler Ranch. Thus the proposed landfill expansion would result in a degradation of views from the Lawler Ranch subdivision.⁷⁰

- c. **The Project Will Require Major Changes to the Existing Landscape.** When evaluating the change to a visual environment, "vividness" and "unity" are concepts used to evaluate visual quality.⁷¹ Vividness is the memorability of the visual impression received from contrasting landscape elements as they combine to form a striking and distinctive visual pattern. One example is a strongly defined skyline.⁷² The defining characteristics of these hills are undulating ridgelines which provide a sense of separate hills running into one another, strongly contrasted against the sky. A flat berm built behind these hills would destroy the sense of undulating hills and result in a flat, uniform backdrop with little vividness or interesting contrast between the individual hills, or between the hills and the sky. Members of the public expressed similar concerns with statements such as: "we can take a valley and turn it into a hill, it certainly does change the visibility. And that is not easily mitigated,"⁷³ "this project . . . turns a valley into a hill,"⁷⁴ and "the valley is all green, everything has really turned lovely, and the garbage is just gradually filling up this little valley, and eventually it's going to stand about a hundred feet higher than the highest hill in the Potrero Hills."⁷⁵

⁶⁹ Visual Resources Technical Report at 5.

⁷⁰ As noted by one local resident, "I am currently in the process of readying my house to sell it, and I have to wait until about November when it becomes foggy so the people who buy my house do not see the carved out dump in my backyard Solano County Planning Commission Minutes 6/23/05 p. 71 ln. 18-21 in File #3 MD 88-09

⁷¹ Smardon et al., Foundations for Visual Resource Analysis (1986).

⁷² FHWA, Visual Impact Assessment for Highway Projects.

⁷³ Transcript, Commission Hearing 6/17/10 p 106, Supervisor Kondylis.

⁷⁴ Letter from Arthur Feinstein 6/2/10 in file #15 MD 88-09.

⁷⁵ Minutes 2/16/06 p#19

Unity is the degree to which the visual resources of the landscape join together to form a coherent, harmonious visual pattern. "Manmade environments with no visual relation to natural landform or landcover patterns lack this element of unity."⁷⁶ The element of unity would be lost if an earthen berm were visible behind the hills by creating an obviously man-made environment with flat, engineered topography with no relation to the undulating hills that define the natural landforms. The height of the landfill approved by the County would destroy the element of unity of the landforms that define the Potrero Hills.

Based on the foregoing analysis and information, the Commission finds that the increased landfill height and the proposed mitigation measures approved by the County would have significant adverse aesthetic impacts on the Marsh contrary to the Marsh Act and the policies of the LPP.

To address these concerns, Special Condition II-H requires the final height of both the Phase I and Phase II sites to be capped at a maximum 220 feet above MSL, which is the current permitted maximum height of the approved Phase I site, unless it can be demonstrated that any additional height will be below the sightline and not visible from selected viewpoints within the Suisun Marsh, as depicted on Exhibit E. These viewpoints include: portions of State Highway 12, Lawler Ranch, Rush Ranch, Grizzly Island Road and other areas within and adjacent to the Suisun Marsh, as determined by Commission staff. Special Condition II-H requires the permittee to submit, within 6 months of the issuance of the permit, a final grading plan showing the final elevations of the landfill for review and approval by the Commission staff, and visual simulations that depict views of the landfill from the selected viewpoints to ensure that the height is sufficiently below the sightline so that it is not visible from the specified locations or below 220 feet above MSL.

Capping the final landfill height to the permitted Phase I height, or to a height that will be below the sightline at various key locations pursuant to plan review, mitigates the significant adverse aesthetic impacts resulting from a 125-foot increase in height approved by the County. The reduction in height will ensure that the landfill expansion will not be visible from key locations such as County-designated scenic highways, SR-12 and Grizzly Island Road, from population centers such as Lawler Ranch and Rush Ranch, and will not create major changes to the existing landscape. The required visual simulations to be submitted by the permittee pursuant to Special Condition II-H ensure that the final landfill height will not degrade views of the Potrero Hills from significant vantage points consistent with the intent of the initial move of the landfill to the Potrero Hills, which was to keep it hidden from public view. The reduced landfill height will also largely reduce the need for tall temporary berms on the northern ridgeline to shield the active landfill site during construction. With the height limitation, berms may only be needed in certain lowpoint areas of the ridgeline (or possibly not needed at all), thereby greatly reducing the visual impacts from a flat, engineered man-made berm that detracts from the natural rural character of the visually prominent Potrero Hills. If berms are needed, these will only be in place temporarily if landfill trucks and other maintenance equipment rise above the ridgeline during construction. However,

⁷⁶ FHWA, Visual Impact Assessment for Highway Projects.

because the berms will be immediately removed when they are no longer needed to shield on-going operations, they will not cause permanent significant adverse aesthetic impacts on the Marsh.

The reduced landfill height will also ensure that the final landfill contour will not cause any additional significant adverse aesthetic impacts on the Marsh beyond those impacts already approved under the Phase I permit. As stated above, the Phase I landfill form is currently visible from Rush Ranch to the west, due to a break in the hills at this location, and will become more visible as the landfill height increases to its permitted maximum. By limiting the height of Phase II to the permitted Phase I height in Special Condition II-H, views from Rush Ranch will not be further diminished. The already approved height of Phase I will block the Phase II landform from Rush Ranch, and therefore the height restrictions from Condition II-H preserve the natural topography of the rolling Potrero Hills to the maximum extent feasible.

Special Condition II-H requires that the expansion of the landfill be no higher than the already permitted height of Phase I (220 feet above MSL), or below the sightline and not visible from selected viewpoints within the Suisun Marsh, as indicated by site plans that must be reviewed and approved by staff prior to construction of Phase II. The Commission therefore finds that Condition II-H ensures that the project will not result in significant adverse aesthetic impacts to the Marsh consistent with the aesthetic policies of the Marsh Act and LPP.

2. **Night-Lighting.** The current Solid Waste Facility Permit for the project limits the number of portable lights at the site to two. Night-lighting at the site has occurred since 1997. The County's approval would remove the two-light restriction and allow night-lighting at the active face of the landfill and at other operations that require light (such as composting). The DEIR found that the increase in night-lighting could be a nuisance for residences to the north and would be a significant impact.⁷⁷ According to the DEIR, the portable night-lighting would not generally be visible from the north but would be visible from the northwest because of the landform shape and location of the Potrero Hills. In addition, if the landfill mound exceeds the height of the northern ridgeline of the Potrero Hills, as currently proposed, the landfill operations and night-lighting would become visible from the north. The DEIR identifies as mitigation measures, that night-time lights not be colored and that they be shielded and directed downward to reduce glare.

The USFWS determined that increased night-lighting could affect CTS populations but that the effects of increased lighting on CTS will be minimized by using a small number of lights in a manner that avoids off-site reflection and glare, with a maximum of seven construction light plants.⁷⁸

Because night-lighting can cause an adverse aesthetic and ecological impact on the Marsh, Special Condition II-J requires night-lighting to be restricted to seven separate light units (consistent with the USFWS draft Biological Opinion for CTS effects), to have four lights per unit, and be no more than 15 feet high. Lights must also be colored and positioned to avoid excessive glare or halo effect and in operation only when the landfill facility is in operation and manned. If additional

⁷⁷ DEIR, *supra* note 9 at 4.10-6.

⁷⁸ Draft Biological Opinion, *supra* note 7 at 52.

requirements or restrictions on night-lighting are required by the USFWS to address impacts on special status species, Special Condition II-J requires these additional restrictions to be utilized prior to the use of lights. These could include the use of a specific color light or a maximum wattage.

Although the number of lights approved will increase from the current two to seven, the restrictions in Special Condition II-J address possible aesthetic impacts on the Marsh by ensuring that the lights are utilized in a manner that avoids excessive glare or halos. The DEIR found that mitigation measures such as colored and downcast lights would mitigate any potential impacts of the night-lighting to below significant. Special Condition II-J therefore includes these mitigation measures. To further reduce visual impacts, Special Condition II-H limits the final height of the landfill so that it is below the sightline. The DEIR evaluated the effect of the lights based on the County's approval that allowed the landfill to be raised above the ridgeline, up to 345 feet above MSL and concluded that "as the landfill mound exceeds the height of the northern ridgeline of the Potrero Hills, as currently proposed, the landfill operations and night lighting would become visible from the north." Because the landfill height is restricted to below the sightline, the operations and night-lighting on the active face will largely be shielded by the Potrero Hills. Therefore, with the night-lighting restrictions in place, the impacts from the increase in night-lighting will be minimal. In addition, as discussed above, these restrictions have been recommended by the USFWS to address possible ecological impacts to CTS populations.

For all these reasons, the Commission finds that based on the restrictions on night-lighting required by Special Condition II-J, the recommendation by the USFWS on this issue, and the height restriction of the landfill required by Special Condition II-H, the increase in night-lighting will not have "significant adverse aesthetic impacts" on the Marsh and any potential impact resulting from the increase in night-lighting has been reduced to a less-than-significant level.

3. **Litter.** Currently, litter is generated at the site from trash being blown from composting operations and the landfill working face, in addition to during the loading of transfer trailers during windy conditions. The project would contribute to this litter generation by increasing the volume of waste received at the site and extending the landfill's service life. Due to the generally windy conditions at the site, litter blows around on the site and onto adjacent properties, causing an adverse visual impact and a general nuisance for adjacent residences. In addition, litter in the Marsh can become a hazard to wildlife that may either ingest the litter or become entangled in it. This impact was identified as a significant one in the DEIR.⁷⁹ Offsite litter from the landfill has resulted in violation notices being issued by the Solano County Local Enforcement Agency (LEA). In response to the violation notices, PHLF has implemented a number of litter control measures that include enclosing the active portion of the landfill within litter control fences to trap wind-blown trash and contain it on-site, installing portable litter fences downwind of the

⁷⁹ DEIR, *supra* note 9 at 4.10-17.

landfill face, hiring litter pickers to collect litter on a daily basis, and installing netting and fencing or stacked cargo containers near the recyclables handling area to act as windscreens.⁸⁰

According to the DEIR, PHLF will need to update its current litter control program to ensure compliance with the Department of Resources Recycling and Recovery/CalRecycle's (formerly known as CIWMB) regulations, and will need to submit this program to the LEA for approval prior to project implementation. This program will need to indicate how litter will be controlled as a result of the anticipated increase in waste, including mitigation measures such as: (1) use of additional portable litter fencing and increasing the height of existing fencing at the landfill's working face and around the recyclables handling area; and (2) increasing the staff of the daily cleanup crew to adequately collect both on- and off-site litter. The DEIR found that with the implementation of these mitigation measures, the potential visual impacts associated with increased litter generation would be considered less than significant.

Special Condition II-K of the permit requires that the litter control program be submitted, reviewed and approved by the LEA prior to the placement of materials within the Phase II expansion area. The condition also requires that a copy of this program be submitted to the Commission for its review and approval to ensure that the program incorporates appropriate measures satisfactory to the Commission that do not cause an adverse aesthetic impacts to the Marsh. The LEA is responsible and most knowledgeable about general landfill maintenance and operations and regularly conducts site visits and monitors landfill activities, as directed by CalRecycle.

Because the FEIR found that mitigation measures would reduce visual impacts associated with increased litter generation to less than significant, and Special Condition II-K ensures that these mitigation measures (and possibly others) be incorporated in an approved litter control program, the Commission finds that the project will not have "significant adverse aesthetic impacts" on the Marsh, with respect to litter generation.

4. **New Ancillary Structures.** The structures authorized by the County's permit that could result in adverse aesthetic impacts include: (1) a new landfill gas-to-energy facility located near the existing gas flare, south of the operations facilities, that would occupy approximately 4 acres; (2) upgrades to existing PG&E transmission lines, including replacement of approximately 45 existing power poles and the possible installation of 10 new power poles; (3) installation of a new visitor center and two moveable remote-area trailers; and (4) construction of four water storage tanks on the northern ridgeline between Phase I and Phase II.

- (a) **Landfill Gas-to-Energy Facility.** The DEIR evaluated the impacts of a new, approximately 3- to 5-acre landfill gas-to-energy facility near the existing gas flare and determined that because the location is "within an area that includes a number of buildings and is screened from offsite areas by intervening hills, no adverse visual impacts would be anticipate [sic] with its construction and operation."⁸¹ The Visual Resources Technical Report, prepared by PHLF, evaluated a 1-acre landfill gas-to-energy facility near the existing gas flare and

⁸⁰ *Id.* at 4.10-2.

⁸¹ *Id.* at 4.10-16.

found that “[d]ue to existing topographic conditions, the power plant site is not visible from the off-site public viewpoints addressed in this study, therefore it is not the subject of detailed evaluation.”⁸²

The new landfill gas-to-energy facility will be constructed within the existing Phase I landfill footprint, near the gas flare that includes a number of existing buildings and screened from offsite areas by intervening hills. The facility will be limited in height and scale so that it does not rise above the hills and is tucked away within the existing landfill operations. Special Condition II-I requires that plans for all ancillary structures, including the gas-to-energy facility, be submitted to the Commission for review and approval prior to construction and that the structures be designed so that they are shielded and hidden within the Potrero Hills, and not visible from the Marsh, including the use of appropriate color, size and scale. During plan review, the Commission will ensure that the size and scale of the gas-to-energy facility does not cause an adverse aesthetic impact on the Marsh. Because the FEIR found that “no adverse visual impacts would be anticipate [sic] with [the landfill gas-to-energy facility] construction and operation” and Special Condition II-I ensures that this occurs, the Commission finds that the landfill gas-to-energy facility will not result in an significant adverse aesthetic impact on the Marsh.

- (b) **Power Lines.** Policy 1(c) of the Utilities, Facilities and Transportation section of the LPP states:

“Within the Marsh, new electric lines for local distribution should be installed underground unless undergrounding would have a greater adverse environmental affect on the Marsh than above-ground construction, or the cost of underground installation would be so expensive as to preclude service. Any distribution line necessary to be constructed above ground should have all wires at least six feet apart.”

With respect to the upgrades to existing power lines and the installation of additional lines, the DEIR primarily evaluated the extension of power line from the existing PG&E line to a power plant located north of the Phase II expansion area. The location of the power plant has been moved to the Phase I footprint, near the landfill maintenance operations and administration area, in response to comments from BCDC staff and other agencies. The DEIR states, “If the power plant is constructed at the alternative site near the landfill maintenance operations and administration area, a power line would extend from this plant to the PG&E line, following the same alignment along the ridgeline as the power line for the preferred power plant location. The visual impacts associated with power line installation would be considered less than significant.”⁸³ The Visual Resources Technical Report did not evaluate the possible visual impacts from the power lines.

Special Condition II-L requires all new power lines to be underground unless undergrounding would have a greater adverse environmental effect on the Marsh than above-ground construction, or the cost of underground installation

⁸² Visual Resources Technical Report, *supra* note 61 at 3.

⁸³ DEIR, *supra* note 9 at 4.10-16.

would be so expensive as to preclude service, as more thoroughly discussed in Section III-E below. If above-ground lines are needed, the permittee will need to demonstrate to the Commission how these power lines would be consistent with Special Condition II-L of this permit and the LPP policies, and how these lines would not result in a significant adverse aesthetic impact on the Marsh. Special Condition II-L requires any request for above-ground power lines to include visual simulations that illustrate the possible aesthetic impacts caused by the power lines. These will be reviewed by Commission staff during plan review, prior to approving any above-ground construction. By requiring power lines be underground except in limited situations and by requiring a review of any aesthetic impacts resulting from above-ground power lines, the Commission finds that the construction of the power lines will not result in a significant adverse aesthetic impact on the Marsh [a more detailed discussion of electric lines can be found in Finding F].

- (c) **New Visitor Center Structures.** Neither the DEIR nor the Visual Resources Technical Report evaluated possible aesthetic impacts from the new visitor center structures. The project involves installing an approximately 14-foot-high, 1,440-square-foot, double-wide trailer with generator power to function as a visitor center, located near the entrance to the landfill. The trailer will be located near the existing landfill office trailers, within the "campus" area of the Phase I active landfill site that, according to PHLF, will be shielded by the adjacent hills. Large viewing windows will be installed along the east, south and west sides of the trailer and an Americans with Disabilities Act (ADA)-compliant access ramp will be added. In addition, up to two, 14-foot-high and 480-square-foot moveable remote-area trailers will be located within the active landfill site to allow viewing of the on-going landfill operations.

Because the new visitor center structures will be located within the Potrero Hills, scaled and designed to blend in with the Marsh surroundings, and reviewed pursuant to Special Condition II-I and the plan review condition, Special Condition II-A, the Commission finds that these structures will not result in a significant adverse aesthetic impact on the Marsh.

- (d) **Water Tanks.** The DEIR determined that the construction of four new water tanks located along the peak of the northern ridgeline between the Phase I/Phase II sites would result in a significant visual impact.⁸⁴ The water tanks would be approximately 20-feet-in-diameter and 12-feet-tall, each storing up to 15,000 gallons of water. To mitigate for this impact, PHLF will construct an approximately 10-foot-high sloped earthen berm to screen the tanks from the west, north and east. According to the DEIR, the berm would be vegetated with non-native grasses to ensure that it visually blends with the surrounding vegetation. The Visual Resources Technical Report did not evaluate the potential visual impacts resulting from the four new water tanks.

According to the landfill, the location of the water tanks is necessary because it is located near the Griffith-6R well where the water will be withdrawn for storage. The proximity of the tanks to the well minimizes the need for additional water pipelines to be constructed within the [Marsh] and across areas

⁸⁴ DEIR, *supra* note 9 at 4.10-17.

of the landfill that cannot be penetrated. Although the tanks will be on the north side of Potrero Hills, the tanks will be screened by an earthen berm that will be vegetated to ensure that it visually blends with the surrounding vegetation and will be minimal in size. Plans for the water tanks and the screening berm must also be submitted, reviewed and approved by or on behalf of the Commission pursuant to plan review approval required in Special Condition II-I.

For the reasons discussed above, the Commission finds that, with the special conditions included in the permit and the mitigation measures required, construction of the ancillary structures will not result in a significant adverse aesthetic impact on the Marsh.

E. Water Quality

The following policies in the Water Quality section of the LPP apply to impacts on water quality:

Policy 3 states, "Disruption or impediments to runoff and stream flow in the Suisun Marsh watershed should not be permitted if it would result in adverse effects on the quality of water entering the Marsh. Riparian vegetation in the immediate Suisun Marsh watershed should be preserved, and stream modification permitted only if it is necessary to ensure the protection of life and existing structures from floods. Only the minimum amount of modification necessary should be allowed in such cases."

Policy 4 states, "The development of industrial facilities adjacent to or upstream from the Marsh should not be permitted if they have the potential to cause significant adverse impacts on the water quality of the Suisun Marsh. Activities that could significantly alter the temperature, salinity or turbidity of the water should be prohibited. Industrial facilities that will increase the potential for spills of toxic and hazardous materials should not be permitted unless it is established that spills of such materials will not represent a significant threat to the Marsh.

Policy 6 states: "Riparian vegetation in the immediate Suisun Marsh watershed should be preserved due to its importance in the maintenance of water quality and its value as Marsh-related wildlife habitat. Stream modification should only be permitted if it is proved necessary to ensure the protection of life and existing structures from floods and only the minimum amount of modification necessary should be allowed."

Policies 3 and 6 of the LPP water quality section protect riparian vegetation and prohibit stream modifications unless necessary to protect life and existing structures from floods in the watershed of the Suisun Marsh. The Marsh Act and the SMPP define the watershed as "the immediate watershed of the Marsh upland from the secondary management area ... including those creeks, streams, channels or other water areas in the County of Solano that are tributary to, or flow into, the Marsh." (PRC §29104 and SMPP, p. 32). Therefore, these restrictions apply within the watershed of the Marsh, but not within the primary or secondary management areas of the Marsh itself.

The Marsh Act requires that within the Marsh, the LPP must contain enforceable standards "to minimize soil erosion ... and restore rather than disrupt natural patterns and volumes of surface runoff" (PRC §29401(h)), and "to protect riparian habitat and to prevent waterway modification or vegetation removal that increases sedimentation or runoff in or into the marsh, to an extent that a significant adverse environmental impact will occur in the marsh." (PRC § 29401(i)). These standards have been incorporated into the LPP through Chapters 9 and 31 of the County's General Plan and Zoning Ordinances.⁸⁵ These ordinances protect streams and riparian vegetation in the Marsh itself. The Drainage and Flood Control Ordinance protects riparian habitat and prohibits sedimentation and runoff that adversely impact the Marsh from designated channels in the watershed (§9-4(b)). The Grading and Erosion Control Ordinance requires that "every effort must be made to preserve natural channels and drainageways," (§31-300(n)) and that filling, grading, or excavating watercourses and removing riparian vegetation "shall be allowed only where no reasonable alternative is available and where allowed, shall be limited to the minimum amount necessary." (§31-300(o)).

Section 31-201(g) exempts from the permit process sanitary landfills "as authorized in the zoning ordinance, for which a use permit has been granted by Solano County where the operation and conduct thereof is being carried out in accordance with an approved plan for grading and erosion and sediment control and the project does not block or divert any natural drainage way..." Because the expansion diverts Spring Branch Creek, a natural drainage way, the exemption does not apply. Furthermore, Section 31-201 requires projects that are exempted from the permit process to comply with the design principles and standards section (Section 31-300 quoted above), which prohibits stream modification unless there are no reasonable alternatives. The LPP therefore requires every effort to be made to preserve natural channels and drainageways, and allows filling, grading or excavating watercourses or removing riparian vegetation only if there are no reasonable alternatives, and only the minimum amount of modification necessary in such cases.

1. **Existing Conditions and Phase II Project Description.** The project site is located two to three miles upstream of the brackish Suisun Marsh. An ephemeral surface water runoff channel, Spring Branch Creek, exists along the southern edge of the valley and runs from east to west. Spring Branch Creek is formed from two smaller waterways to the east and south, which drain from the hills into swales that continue to the headwaters of the creek. Spring Branch Creek flows west into First Mallard Branch, a tributary of Cutoff and Suisun Sloughs.

The initial move of the landfill into an existing quarry in the Potrero Hills that previously modified Spring Branch Creek was never appealed to the Commission (MD-82-19, U-82-56). According to PHLF, U.S. Army Corps of Engineers 404 permits were issued in 1988 and 1995 to relocate the original stock pond that was located in the center of the Phase I landfill footprint and construct a concrete- or asphalt-lined surface runoff drainage channel along the 4,400-foot-length of the

⁸⁵ The County has moved the provisions in Chapter 9 Drainage and Flood Control Ordinance and Chapter 31 Grading and Erosion Control Ordinance into a new Chapter 31 Grading, Drainage, Land Leveling and Erosion Control Ordinance. However these changes to the LPP ordinances have not yet been approved by the Commission. Therefore, pursuant to PRC §29418, the provisions of Chapters 9 and 31 apply to this appeal until they are approved by the Commission.

south side of the Phase I landfill footprint.⁸⁶ Final discharge of the Phase I surface area runoff is to Spring Branch Creek to the west and an unnamed drainage to the northwest of the site. Spring Branch Creek downstream of the landfill flows into the stockwater pond constructed offsite by the permittee in 1995. No residential or commercial structures are located within the project drainage area.⁸⁷

The expansion project involves relocating the eastern portion of Spring Branch Creek that falls within the Phase II footprint to the southern edge of the landfill. The project involves constructing a buttress fill along the southern edge of the landfill expansion area and allowing water that now flows in Spring Branch Creek to carry flow from the eastern Potrero Hills Valley south around the landfill. The main creek flow will be routed into an approximately 6,500-foot-long pre-cast concrete pipeline placed at the bottom of the soil buttress area and built in segments of approximately 200-600 feet every three to five years, as each landfill cell is filled. The downstream end of the pipeline will be located in the center of the Phase I landfill and the ultimate eastern end of the pipeline will be near the southeast corner of the Phase II area. The pipeline will be bedded in native soil and overtopped entirely with soil materials approximately 75 feet deep. Once the pipeline is constructed beneath the buttress, a surface channel will be created on top of the buttress area to carry runoff from the southern hillsides and the landfill. This channel will merge with the flow discharging from the pipeline near the western outlet of the pipe. Each rise of the buttress area constructed as the adjacent zone of the landfill is built to higher elevations will contain a similarly constructed channel. A permanent drainage channel, with a long-term, stable channel lining will be constructed on top of the buttress when the final landfill cap is installed.

Sediment control berms and water collection basins are placed down-slope of fill areas. Periodically, during late summer, the silt accumulated in the basins is removed. Under the Phase II project, a new silt-control basin will be constructed within the temporary silt-control basins downgradient from the easternmost active landfill cell. This new basin will trap the silt in the runoff to divert it from active landfill areas. The east basin will be moved eastward to a similar configuration as each new landfill cell is constructed to the east. This east basin is equipped with a diesel-operated pump during the wet weather season to allow the ponded water to be pumped into the drainage channel located at the south edge of the landfill. The section of channel where the pump discharge will occur will be appropriately lined to prevent scouring of the channel. When the east basin is to be relocated, the ponded water will be removed, and the silt and walls of the basin will be excavated as part of the cell construction.

2. **Spring Branch Creek.** Although dry for much of the year, in wet weather, Spring Branch Creek flows through the Potrero Hills and empties into First Mallard Slough. Spring Branch Creek is identified in the *Suisun Marsh Preservation Plan Supplement* as one of eleven streams in the Suisun Marsh Area. The Science Panel Report identified Spring Branch Creek as a stream, with riparian vegetation and a bed and bank and supports this characterization with photographic evidence. In addition, the Solano County General Plan depicts Spring Branch Creek with the

⁸⁶ Potrero Hills Landfill, Inc., Project Description: Potrero Hills Landfill Phase II Expansion Project 29 (2007) [hereinafter *Project Description*].

⁸⁷ DEIR, *supra* note 9 at 4.4-7.

symbol for "stream and creek." The terms stream and creek are used interchangeably in both legal and non-legal definitions. Spring Branch Creek is shown as an intermittent stream on every USGS topographic map depicting the Potrero Hills. The California Department of Fish and Game (CDFG) defined Spring Branch Creek as a jurisdictional water, meaning that it is either a river, lake or stream. PHLF applied for a Streambed Alteration Agreement, which was approved as a matter of law. The United States Army Corps of Engineers identified Spring Branch Creek as an intermittent stream in at least two separate documents (both of which are public notices describing the project). These documents define the tributaries of Spring Branch Creek as streams as well. Both documents also note the presence of riparian vegetation.

Although the landfill disputes the classification of Spring Branch Creek as a stream or creek and the presence of riparian vegetation along its banks,⁸⁸ the maps and documents provided by state and federal agencies, and the information provided by the Commission's Scientific Panel Report support the finding that Spring Branch Creek is a protected waterbody under the LPP, with some riparian vegetation along its banks.

3. **Water Quality Impacts and Mitigation Measures.** The DEIR identified two significant impacts to hydrology and water quality, as a result of the proposed expansion project: (1) increased soil erosion potential from the modification of drainage patterns and removal of vegetation that could affect the water quality of local drainages (such as Spring Branch Creek); and (2) degradation of surface water quality by the increase in size of the disturbed landfill operation area and contact with refuse, leachate or biosolids. The DEIR concluded that these impacts could be mitigated to less than significant levels.

According to the DEIR, impacts caused by increased soil erosion would be mitigated by compliance with State Water Resources Control Board regulations governing treatment, storage, processing and disposal of solid waste. These measures include implementation of Best Management Practices (BMPs) during cell construction that include: diversion of storm water runoff with temporary swales or interceptor ditches; retention of existing vegetation wherever possible; stabilization of barren soils with jute netting or geotextile fabric; application of straw or mulch after seeding; installation of silt fencing to direct runoff from construction areas; and use of plastic sheets or tarps to cover stockpiled soils. To address impacts on surface water quality, the DEIR identifies as mitigation measures the preparation of a revised Surface Water Monitoring Program and Erosion and Sedimentation Plan for the expansion, and compliance with required regulatory permits. As indicated in the hydrology report prepared by Swanson Hydrology & Geomorphology, dated September 8, 2010, which is discussed below, changes have been incorporated into the project to avoid or minimize the potential for increased soil erosion and degradation of surface water quality. Accordingly, the erosion and surface water quality impacts identified in the DEIR have been avoided or mitigated to a less than significant level. Other drainage and erosion control requirements are within the jurisdiction of the County or other agencies and not BCDC.

⁸⁸ Spring Branch Creek Regulatory Assessment, LSA Associates, September 8, 2010; Geomorphic and Ecological characteristics of Spring Branch Creek, Swanson Hydrology and Geomorphology, September 8, 2010.

The Commission generally relies on the advice of the RWQCB regarding water quality issues. Under Section 66646.1 of the McAteer-Petris Act and Section 29301 of the Marsh Act, PHLF will need to obtain a National Pollutant Discharge Elimination System (NPDES) permit, a Waste Discharge Requirements permit, and a Water Quality Certification from the Regional Water Quality Control Board (RWQCB) prior to initiating the landfill expansion. Applications for these permits have been submitted to RWQCB and are currently under review but have not been issued. Special Condition II-N of the permit requires that all approvals from the RWQCB be obtained prior to construction to ensure the project will not impact water quality.

4. **Diversion of Spring Branch Creek - Water Quality Policies under the LPP.** The DEIR found that the impacts of diverting Spring Branch Creek were limited to soil erosion, surface and ground water quality impacts, and that as mitigated, the modification of the Creek would not have a significant adverse environmental impact. However, the Commission must also determine whether the expansion project is consistent with LPP ordinances that require: (1) "every effort must be made to preserve" Spring Branch Creek (§31-300(n)); (2) that "no reasonable alternative is available" to filling, grading, and excavating Spring Branch Creek and removing riparian vegetation; and (3) if filling, grading, or excavating or removing riparian vegetation in Spring Branch Creek is allowed, it is "limited to the minimum amount necessary." (§31-300(o)).

The scientific panel report evaluated the impacts on Spring Branch Creek. It notes that the "Phase II landfill expansion effectively eliminates the natural, remaining upper Spring Branch Creek watershed and permanently reconfigures the Spring Branch Creek valley" and "[t]hese changes will disrupt and impede watershed runoff and stream flow, alter the creek's water temperature, and have the potential to affect other water quality parameters such as turbidity and salinity."⁸⁹ The report finds that the upstream channelization and relocation of Spring Branch Creek will decrease its ecological value and have repercussions, likely negative, on the lower watershed as it flows west into Suisun Marsh at First Mallard Slough.

In response to Commission and public comment and consistent with the LPP ordinance, Commission staff requested the landfill to evaluate a project alternative that avoids Spring Branch Creek, resulting in a smaller landfill footprint located just north of the natural creek. According to PHLF, a smaller landfill area that avoids Spring Branch Creek would result in a loss of approximately 30% of landfill capacity and a 45% reduction in revenue, while the reduction in costs from the smaller footprint would be approximately 10%.⁹⁰ The Phase II expansion area is approximately 167 acres and a reduced size that does not directly impact Spring Branch Creek would be approximately 117 acres. The landfill states that, "reduction in the project size by limiting use of drainage areas (prohibiting relocation) and thus substantially shortening the project life by approximately one-third of the project life is not a reasonable alternative..."⁹¹ They state:

"The scope of the proposed landfill project provides for the necessary financial returns to support Waste Connection, Inc.'s (the Company) decision to proceed with the project. Based on an assess-

⁸⁹ Scientific Panel Report, *supra* note 4 at 3-6 and 3-10.

⁹⁰ PHLF Alternate Analysis Supplement, sent by email, September 20, 2010, p.3.

⁹¹ PHLF Analysis Supplement 1, sent by email September 23, 2010, p.1.

ment of gross revenues over the estimated life of the facility, and given that the alternate project design may be as much as 10 years shorter, the percent reduction is approximately 45% from the proposed project to the smaller landfill project. This greater percent reduction than the overall landfill physical size reduction is based on the significant loss of economy-of-scale realized in the extended out-years of the complete proposed project. Many of the landfill components are completely paid-off during the earlier years of a landfill development, and the greater financial return to justify the risk of proceeding with the project is realized by the financial gains of a complete project scope.⁹²

According to PHLF, "the company's decision to proceed is based on the initial assessment of estimated financial return for the full Phase II expansion project for the Potrero Hills Landfill, a return commensurate with the risks associated with the project – a substantial risk reflective of the risks in establishing or expanding solid waste management facilities."⁹³ PHLF cited the following risk factors likely to affect the profitability of its operation:

- Assurance of permitted capacity;
- Renewal of all environmental/operating permits (potential challenges);
- Maintaining a long-term customer base;
- Maintaining sufficient customers to pay for the landfill operations;
- Costs of landfill construction materials (now and in the future);
- Competition from other landfills which affect disposal pricing and volumes;
- Changes in government regulations which can impact operations and environmental controls (i.e., fuel costs; alternate fuel mandates, labor costs; insurance costs; groundwater monitoring; landfill gas collection and control; leachate collection, storage, and disposal; equipment upgrades to meet air quality standards; increased habitat protection requirements; stratification of the waste stream and separate management techniques;
- Changes in waste management technologies (i.e., waste transformation);
- Changes in recycling mandates;
- Changes in population growth and waste generation per capita;
- Litigation costs;
- New/expanded resource recovery activities (permits, equipment, etc.);
- Government/ Agency fees (increases, new fees, etc);
- Economic activity which influences disposable quantities and customer business;
- Potential regulations which restrict or designate waste volume;

⁹² *Id.*

⁹³ *Id.* at 2.

- Limitations and/or destinations (flow control);
- Land availability and price;
- Mitigation requirements and costs;
- Post-closure requirements and costs;
- Cost of financing; market availability of capital funds; and
- Compliance with land use and permit conditions which exceed regulatory requirements⁹⁴

PHLF also noted that, "A reduction on the order of 30% of the PHLF capacity or the equivalent of a 45% reduction in gross revenues as a result of a small landfill area is of such a magnitude that the business decision to expand cannot be justified. Such a draconian reduction makes the project infeasible in every sense of the word."⁹⁵

In response to the Commission's staff request for information to support PHLF's determination that a 30% reduction in capacity by avoiding Spring Branch Creek is an unreasonable alternative, PHLF provided the return on equity (ROE) for several other landfill companies to compare with their own parent company (Waste Connections, Inc.). According to PHLF, Waste Connections, Inc., has about half the ROE of Waste Management's (8.6 versus 18.6) and another large company, Veolia North America, exceeds Waste Connection's ROE by more than 5%. PHLF states that "These figures support the financial analysis that Potrero Hills Landfill must be expanded to the proposed project to allow it (and Waste Connections) to effectively compete in the market with similar size companies."⁹⁶

PHLF also provided some information on the profit margins of large firms in the solid waste industry:

"Waste Connections, Inc. and Waste Management, Inc., (the largest sector company) both tend to have similar net profit margins of approximately 9%. The next tier of companies is much lower, with Republic Services being at 4.72%, Veolia North America at 2.86% and WCA at less than 0.1% net profit margin. These figures (from the most recent financial reporting period) indicate that the industry as a whole has little margin for error when entering a new market or expanding within existing markets. A poor performing site, or a location that can not meet the Company's requirements for a healthy business, can have impacts beyond its own business unit."⁹⁷

Based on the confidential nature of the material, PHLF was unable to provide more detailed revenue information to Commission staff on the effect on their profit margins if they were required to avoid Spring Branch Creek with a smaller landfill footprint as an alternative. Therefore, the staff relied on the information provided by PHLF indicating that the reduction in capacity and gross revenues from the reduced footprint, and the long-term risks involved in the landfill's operation, make

⁹⁴ PHLF, October 1, 2010.

⁹⁵ *Id.* at 3.

⁹⁶ *Id.*

⁹⁷ *Id.*

it unreasonable to protect Spring Branch Creek by further reducing the size of the landfill.

PHLF also noted a number of other reasons why preserving Spring Branch Creek was not a reasonable alternative. According to PHLF, man-made improvements such as an engineered bank protection feature to reduce natural soil erosion and possible impacts to the landfill waste mass, possible use of check-dams, energy dissipaters, and/or sediment traps needed to reduce the velocity of flows during peak storm and run-off events, may be needed if Spring Branch Creek was left in its natural state.⁹⁸ PHLF added that, "there is also the potential for run-off from the proposed landfill surface that would not be considered natural as compared to the creek watershed in its existing condition."⁹⁹

PHLF has also submitted a revised hydrology report, prepared by its consultant, Swanson Hydrology & Geomorphology, to further support their claim that the re-channelization of Spring Branch Creek would actually improve water quality.¹⁰⁰ According to the report,

"Upper Spring Branch Creek is experiencing accelerated soil erosion and sediment production as evidenced by gully erosion. Although the marsh is buffered from receiving sediments by four in-channel detention basins along the Spring Branch downstream of the Phase II project area, existing conditions projected into the future will produce excessive sediment. The closure plan for Phase I and the proposed Phase II expansion would replace the eroding system with stabilized drainage works and detention basins. The watershed area above the Phase II expansion area will be left intact but with better management under a Range Management Plan (RMP). Thus, the proposed project is designed to buffer the marsh and lower Spring Branch from excess sedimentation."¹⁰¹

The report goes on to state that, "in terms of ecological value, the gullies in upper Spring Branch watershed do not display characteristics of stream channels supportive of riparian habitat, woody riparian vegetation cover such as willow, and morphological features such as pools, riffles, floodplain benches and substrate."

With regard to its effort to preserve Spring Branch Creek and other waterways affected by the project, PHLF noted that it:

"made significant effort to preserve natural channels and drainageways. Within the property limits that are controlled by Potrero Hills Landfill, there are numerous, un-named, channels and drainageways which will be preserved as part of the Mitigation and Monitoring Plan. There will also be enhancements to return certain channels and drainageways back to a natural setting (i.e., the work that is planned

⁹⁸ PHLF Alternative Analysis, sent by email September 13, 2010, p. 4.

⁹⁹ *Id.*

¹⁰⁰ "Geomorphic and Ecological Characteristics of Spring Branch in the Potrero Hills Landfill Site Phase 2 Expansion Area - Supplemental Report to 2005 SH+G Report," Swanson Hydrology & Geomorphology, September 8, 2010, p. 4.

¹⁰¹ *Id.*

for the Director's Guild site to restore a natural channel flow is but one example). The only channel/drainageway that is being impacted is but a small portion of that body called Spring Branch Creek within the Phase II limits. The remaining reaches of Spring Branch Creek and all of its tributaries and watershed features outside of Phase II are being preserved.¹⁰²

Based upon the information available to the Commission, the information and statements made by PHLF in response to staff requests to evaluate the feasibility of a smaller landfill expansion project, and the information provided in the DEIR that with mitigation measures, diverting Spring Branch Creek would not have a significant environmental impact on surface water quality, the Commission finds that restricting the project to avoid Spring Branch Creek is not a reasonable alternative, that filling, grading, excavation and removing riparian vegetation in Spring Branch Creek is limited to the minimum amount necessary to proceed with the project, and that every effort has been made to preserve Spring Branch Creek's natural channels and drainageways as required by the LPP.

F. Electric Lines and New Roads

1. **Electric Lines.** The following policy in the Utilities, Facilities and Transportation section of the LPP applies to the construction of new electric lines:

Policy 1(c) states, "Within the Marsh, new electric lines for local distribution should be installed underground unless undergrounding would have a greater adverse environmental affect on the Marsh than above-ground construction, or the cost of underground installation would be so expensive as to preclude service. Any distribution line necessary to be constructed above ground should have all wires at least six feet apart."

According to the DEIR, the landfill is not served by the PG&E power grid. The landfill uses on-site diesel generators to produce the electricity used for exterior lighting, office needs, equipment maintenance building needs, landfill gas extraction, surface water pumping, and leachate control.¹⁰³ In order to capture the increase in landfill gas resulting from the landfill expansion, PHLF will construct a landfill gas-to-energy facility that will convert landfill gas to electricity (up to 10 megawatts) and deliver the generated electricity to the PG&E power grid. The landfill gas-to-energy facility will be located near the existing gas flare, just past the landfill entrance on the Phase I site (see Exhibit A). Existing PG&E power lines extend from Branscombe Road, pass through neighboring farmland and branches into two directions. Westward, it runs along the hill ridge, north of the landfill, toward Scally Road to serve three local residences. The eastward leg of the power line connects to the Explosives Technology facility located at the east end of the Potrero Hills. The approximately 2.2 miles of power lines in the area involve approximately 45 existing poles.

The existing power lines do not have sufficient voltage or current-carrying capacity to transmit the projected amount of electrical power generated by the expanded landfill. The project involves installing approximately 6,800 feet of power lines and other supporting facilities to connect the new landfill gas-to-energy power plant to

¹⁰² PHLF, September 28, 2010.

¹⁰³ DEIR, *supra* note 9 at 4.5-2.

existing PG&E power lines located along the northern edge of the landfill site and upsizing power lines to accommodate the increase in current-carrying capacity. The DEIR found that the disruption of electrical service to existing PG&E customers resulting from the upsizing of the power lines would not result in significant public utility impacts since these disruptions are expected to be temporary, if they occur at all.¹⁰⁴

Special Condition II-L requires all power lines to be installed underground unless undergrounding would have a greater adverse environmental effect on the Marsh than above-ground construction, or the cost of underground installation would be so expensive as to preclude service, pursuant to Policy 1(c) of the Utilities, Facilities and Transportation section of the LPP. If above-ground power lines are necessary, the permittee is required to demonstrate how these power lines would be consistent with Special Condition II-L and the LPP policies. By limiting the installation of above-ground power lines to only those allowed under the LPP policy through Special Condition II-L, the Commission finds that the project is consistent with the policies of the Utilities, Facilities and Transportation section of the LPP.

2. **New Roads.** The following policy in the Utilities, Facilities and Transportation section of the LPP applies to the construction of new roads:

Policy 1(e) states, "New roadways (highways, primary and secondary roads) and rail lines that form barriers to movement of terrestrial wildlife should not be constructed in the Suisun Marsh or in adjacent uplands necessary to protect the Marsh..."

The permittee initially proposed to use an approximately 30-foot-wide and 400-foot-long bypass road comprised of two lanes adjacent to the existing Potrero Hills Lane, as auxiliary access when necessary to cope with transportation interruptions. The bypass lanes are currently graveled and unpaved.

The bypass road was included in the DEIR. During the 2005 use permit revision process, Solano County found it unnecessary to include the bypass road in the permit since the DEIR found that the use of the road would not have a significant impact, that it was an existing historically-used road and, therefore, the LPP policy regarding new roads was not applicable.

The permittee has subsequently removed this component from the project. Therefore, the use of the bypass road has not been reviewed for consistency with the LPP and is not authorized.

G. Recreation and Marsh Access

The following policies in the Recreation and Marsh Access section of the LPP apply to recreational uses and public access:

Policy 2 states, "Land should also be purchased for public recreation and access to the Marsh for such uses as fishing, boat launching and nature study. These areas should be located on the outer portions of the Marsh near the population centers and easily accessible from existing roads. Improvements for public use should be consistent with protection of wildlife resources."

¹⁰⁴ *Id.* at 4.5-5.

Policy 5 states, "Recreational activities that could result in adverse impacts on the environmental or aesthetic qualities of the Suisun Marsh should not be permitted. Levels of use should also be monitored to insure that their intensity is compatible with other recreation activities and with protection of the Marsh environment..."

Special Condition II-B requires the permittee to create a 57,000-square-foot overlook on the closed Solano Garbage Company landfill site with up to six parking spaces, interpretive signage, approximately five benches, a bicycle rack, two trashcans, and a portable toilet (see Exhibit B). The purpose of the overlook is to provide an interpretive site that can provide information about the Marsh and its importance as a managed and protected ecological area. The site will also provide an opportunity for the public to enjoy views of the marsh from an area that is sufficiently removed from the Marsh to limit potential impacts of public access on the marsh environment. A proposed public access overlook was reviewed by BCDC's Design Review Board (DRB) at a public meeting on December 7, 2009, and in response to the DRB's comments, the overlook was revised to be less constructed and the proposed structures were reduced and scaled-back to fit in with the more natural surroundings of the Marsh. These changes are consistent with Policy 2 of the Recreation and Marsh Access section of the LPP requiring improvements to be consistent with protection of wildlife resources.

A concern regarding the safety of placing a public access overlook at the closed landfill was raised at the DRB meeting. According to PHLF, the final capping installation and closure modifications at the site were completed in 1998 and during the 10+ years since the final cover was completed, regular maintenance of the final surface has been conducted. The Solano County LEA inspects the site regularly. During the most recent annual inspections conducted in 2008 and 2009, the LEA found that there were no areas of concern related to environmental controls, grading and final cover, drainage and erosion control, and site security.¹⁰⁵ The installation of an overlook area and allowance for public access has been designed to avoid impacts to the final cap.

In addition to the overlook, Special Condition II-B requires the permittee to place dedicated easements over approximately 12,200 linear feet (2.31 miles) of existing dirt roads and trails within the Southern Hills parcel that could be used in the future as public access, should a connection over neighboring private parcels be obtained in the future (see Exhibit C).

In addition to the public access areas, Special Condition II-C requires the permittee to provide a total of \$300,000 in funds over a 25-year period to the Solano Land Trust, to help fund public access improvements and services at the Rush Ranch site. The funds will be distributed in the following manner: (1) \$100,000 within the first five years of Phase II operations; and (2) \$200,000 over the next twenty years. No less than \$10,000 will be given in any given year, and pursuant to an agreement between the PHLF and Solano Land Trust, if the landfill ceases to operate as a solid waste disposal facility, the payment agreement will terminate and be deemed complete.

Special Condition II-A has been included to require final plan review approval of the public access overlook to ensure that the public access improvements required in Special Condition II-B-2 and the recreational activities at the site do not "result in

¹⁰⁵ Memorandum from James Dunbar, P.E., Potrero Hills Landfill to Ming Yeung, BCDC, Re: Closed Solano Garbage Company Landfill, (April 29, 2010).

adverse impacts on the environmental or aesthetic qualities of the Suisun Marsh" and that the intensity of use is "compatible with other recreation activities and with protection of the Marsh environment", as required in the LPP policies. In addition, Special Condition II-B-3 and II-B-4 require the public access areas to be permanently guaranteed and recorded so that they are reserved into the future, and Special Condition II-B-5 requires that the areas be maintained.

Based on the amount of public access provided by the permittee and the special conditions of the permit requiring final plan review approval of the public access improvements to ensure that they are compatible with the Marsh, permanent guarantee of the public access spaces, and future maintenance of the area, the Commission finds that the project is consistent with the Recreation and Marsh Access section of the LPP.

- H. **Design Review Board.** On December 7, 2009, the Commission's DRB reviewed a proposed public access overlook at the closed Solano Garbage Company site. At the time, the proposed improvements included one overlook area at the top of the hill, several benches, wind structures, signage affixed by large gabion basket structures, and a parking area, trashcan and bicycle rack. The DRB asked several questions related to: (1) the landfill site; (2) topography in the vicinity; (3) access to the proposed overlook; (4) proposed amenities such as lighting and restrooms; and (5) clarification of the proposed design for gabion baskets that would support proposed signage. At the meeting and afterwards in correspondence directed to staff, the DRB members expressed a desire to have the design details work with the natural landscape to reduce the visual impact of the public access improvements. The DRB asked staff to work with PHLF to develop a design that was more scaled-back and that fit with the natural surroundings. One DRB member recommended trash receptacles and restrooms at the parking area and suggested that soil testing be done since the area is to be used for public access.

The design has been refined in response to the DRB comments to create two public access overlook spaces and to use more natural elements in the design (such as boulders and custom-designed benches for seating and a corten steel retaining wall as a windbreak). The overlook will also include a portable toilet in the parking area. The final design of the public access is subject to final plan review by BCDC staff.

- I. **Environmental Review.** Solano County is the lead agency for the project under CEQA. The County prepared a Draft Environmental Impact Report (DEIR) for the Project in 2003. The DEIR identified approximately 24 significant adverse impacts from the landfill expansion, including impacts to wildlife, habitats and aesthetic resources. However, the DEIR concluded that, with mitigation, each impact could be reduced to less than significant levels. These impacts and mitigation measures are summarized in Table 1.

The County certified the Final EIR (FEIR) and modified the landfill's existing marsh development permit (MD-88-09) to authorize expansion of the landfill on September 13, 2005. The FEIR for the landfill expansion was challenged in Solano County Superior Court, and was set aside by the court for the failure to adequately analyze the impacts of the project on water supply, air quality and project alternatives on February 6, 2007 (Protect the Marsh et. al v. County of Solano, Case No. FCS026839).

BCDC Appeal No. 1-05 of the County's marsh development permit (MD-88-09) was postponed pending final approval of the FEIR. The County revised the portions of the FEIR found inadequate by the court, and certified the Revised FEIR in June 2008.

However, the Revised FEIR was set aside again by the court on October 14, 2008 for failing to adequately analyze the "no project alternative" regarding the use of the Hay Road Landfill in Solano County for locally generated solid waste. The County revised the FEIR again to address the use of the Hay Road Landfill as an alternative to the expansion of the facility at Potrero Hills. On November 3, 2009, the court approved the Revised Recirculated FEIR and discharged its writ of mandate previously issued to the County.

As discussed above, the Commission has adopted and incorporated into the Commission permit special conditions that will reduce to a level of insignificance all possible substantial adverse environmental impacts associated with the aspects of the project that are within the Commission's jurisdiction, including impacts related to special-status species, wildlife, aesthetics, air quality, and water quality. For these impacts, the Commission finds that the project, as conditioned, will avoid or minimize to less-than-significant, all significant adverse environmental impacts. With respect to other significant impacts identified in the FEIR, the changes or alterations necessary to avoid or substantially lessen the impacts have been adopted by the County of Solano or will be adopted by the public agency with responsibility and jurisdiction over those impacts. Therefore, the Commission finds that the project, as conditioned, is consistent with the requirements of CEQA.

- J. **Conclusion.** For all the above reasons, the Commission finds, declares, and certifies that, subject to the special conditions stated herein, the project authorized herein is consistent with the Suisun Marsh Preservation Act and the Solano County Local Protection Program.

IV. Standard Conditions

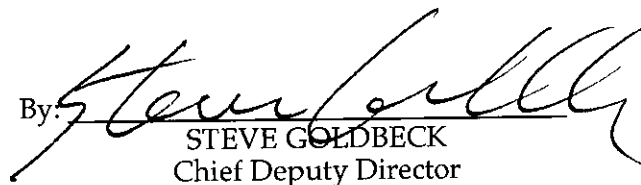
- A. **Permit Execution.** This permit shall not take effect unless the permittee executes the original of this permit and return it to the Commission within ten days after the date of the issuance of the permit. No work shall be done until the acknowledgment is duly executed and returned to the Commission.
- B. **Notice of Completion.** The attached Notice of Completion and Declaration of Compliance form shall be returned to the Commission within 30 days following completion of the work.
- C. **Permit Assignment.** The rights, duties, and obligations contained in this permit are assignable. When the permittee transfers any interest in any property either on which the activity is authorized to occur or which is necessary to achieve full compliance of one or more conditions to this permit, the permittee/transferor and the transferee shall execute and submit to the Commission a permit assignment form acceptable to the Executive Director. An assignment shall not be effective until the assignee executes and the Executive Director receives an acknowledgment that the assignee has read and understands the permit and agrees to be bound by the terms and conditions of the permit, and the assignee is accepted by the Executive Director as being reasonably capable of complying with the terms and conditions of the permit.
- D. **Permit Runs With the Land.** Unless otherwise provided in this permit, the terms and conditions of this permit shall bind all future owners and future possessors of any legal interest in the land and shall run with the land.

- E. **Other Government Approvals.** All required permissions from governmental bodies must be obtained before the commencement of work; these bodies include, but are not limited to, the U. S. Army Corps of Engineers, the State Lands Commission, the Regional Water Quality Control Board, the Bay Area Air Quality Management District, and the city or county in which the work is to be performed, whenever any of these may be required. This permit does not relieve the permittee of any obligations imposed by State or Federal law, either statutory or otherwise.
- F. **Built Project must be Consistent with Application.** Work must be performed in the precise manner and at the precise locations indicated in the materials submitted to the Commission, as such may have been modified by the terms of the permit and any plans approved in writing by or on behalf of the Commission.
- G. **Life of Authorization.** Unless otherwise provided in this permit, all the terms and conditions of this permit shall remain effective for so long as the permit remains in effect or for so long as any use or construction authorized by this permit exists, whichever is longer.
- H. **Commission Jurisdiction.** Any area subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission under either the McAteer-Petris Act or the Suisun Marsh Preservation Act at the time the permit is granted or thereafter shall remain subject to that jurisdiction notwithstanding the placement of any fill or the implementation of any substantial change in use authorized by this permit. Any area not subject to the jurisdiction of the San Francisco Bay Conservation and Development Commission that becomes, as a result of any work or project authorized in this permit, subject to tidal action shall become subject to the Commission's "bay" jurisdiction.
- I. **Changes to the Commission's Jurisdiction as a Result of Natural Processes.** This permit reflects the location of the shoreline of San Francisco Bay when the permit was issued. Over time, erosion, avulsion, accretion, subsidence, relative sea level change, and other factors may change the location of the shoreline, which may, in turn, change the extent of the Commission's regulatory jurisdiction. Therefore, the issuance of this permit does not guarantee that the Commission's jurisdiction will not change in the future.
- J. **Violation of Permit May Lead to Permit Revocation.** Except as otherwise noted, violation of any of the terms of this permit shall be grounds for revocation. The Commission may revoke any permit for such violation after a public hearing held on reasonable notice to the permittee or their assignees if the permit has been effectively assigned. If the permit is revoked, the Commission may determine, if it deems appropriate, that all or part of any fill or structure placed pursuant to this permit shall be removed by the permittee or their assignees if the permit has been assigned.
- K. **Should Permit Conditions Be Found to be Illegal or Unenforceable.** Unless the Commission directs otherwise, this permit shall become null and void if any term, standard condition, or special condition of this permit shall be found illegal or unenforceable through the application of statute, administrative ruling, or court determination. If this permit becomes null and void, any fill or structures placed in reliance on this permit shall be subject to removal by the permittee or their assignees if the permit has been assigned to the extent that the Commission determines that such removal is appropriate. Any uses authorized shall be terminated to the extent that the Commission determines that such uses should be terminated.

L. **Permission to Conduct Site Visit.** The permittee shall grant permission to any member of the Commission's staff to conduct a site visit at the subject property during and after construction to verify that the project is being and has been constructed in compliance with the authorization and conditions contained herein. Site visits may occur during business hours without prior notice and after business hours with 24-hour notice.

Executed in San Francisco, California, on behalf of the San Francisco Bay Conservation and Development Commission on the date first above written.

WILL TRAVIS
Executive Director
San Francisco Bay Conservation and
Development Commission

By: 
STEVE GOLDBECK
Chief Deputy Director

SG/MY/ra

cc: U.S. Army Corps of Engineers, Attn: Regulatory Functions Branch
San Francisco Bay Regional Water Quality Control Board,
Attn: Certification Section
Environmental Protection Agency

* * * * *

Receipt acknowledged, contents understood and agreed to:

Executed at _____
Permittee

On _____ By: _____
Title

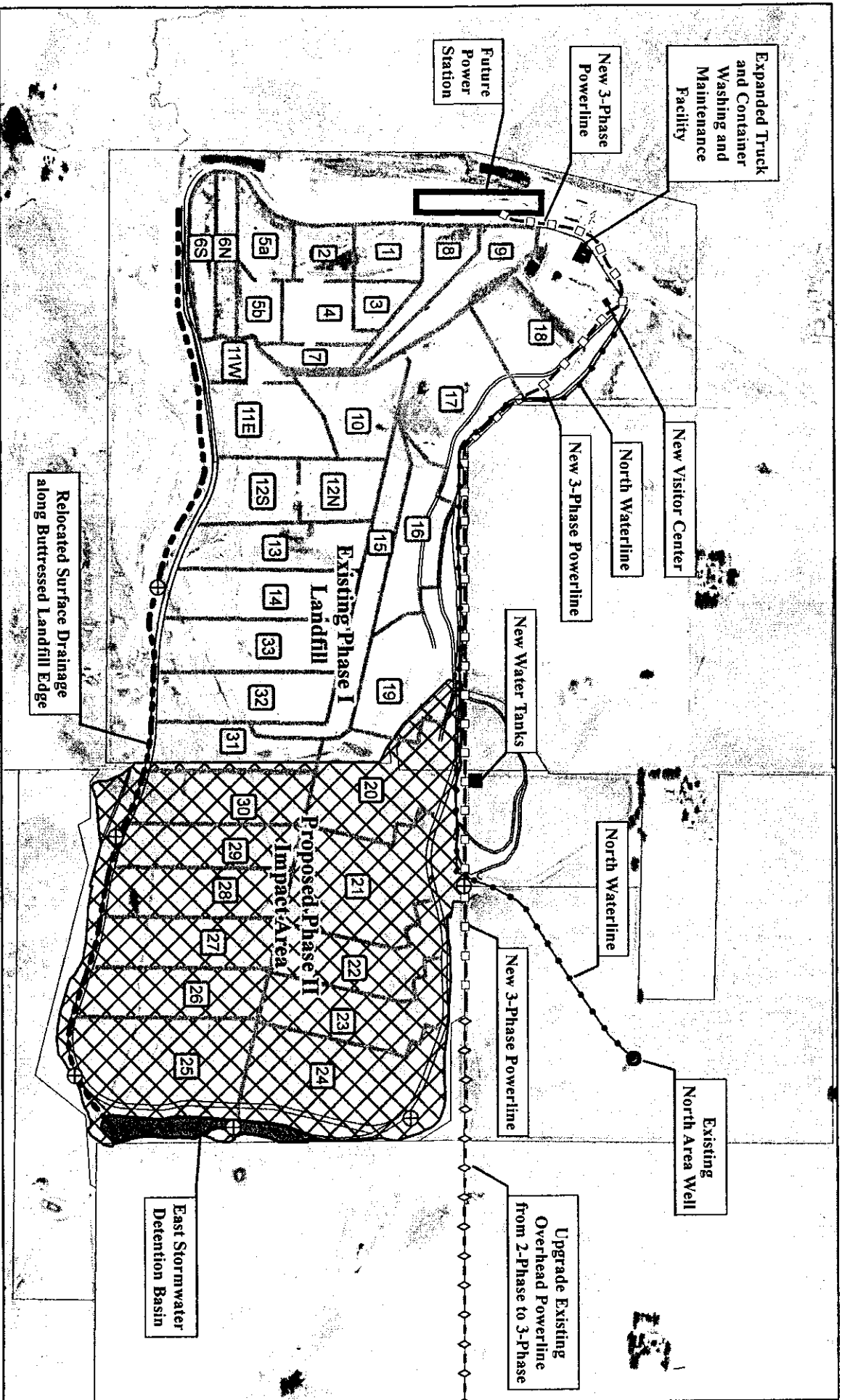
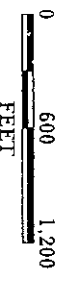








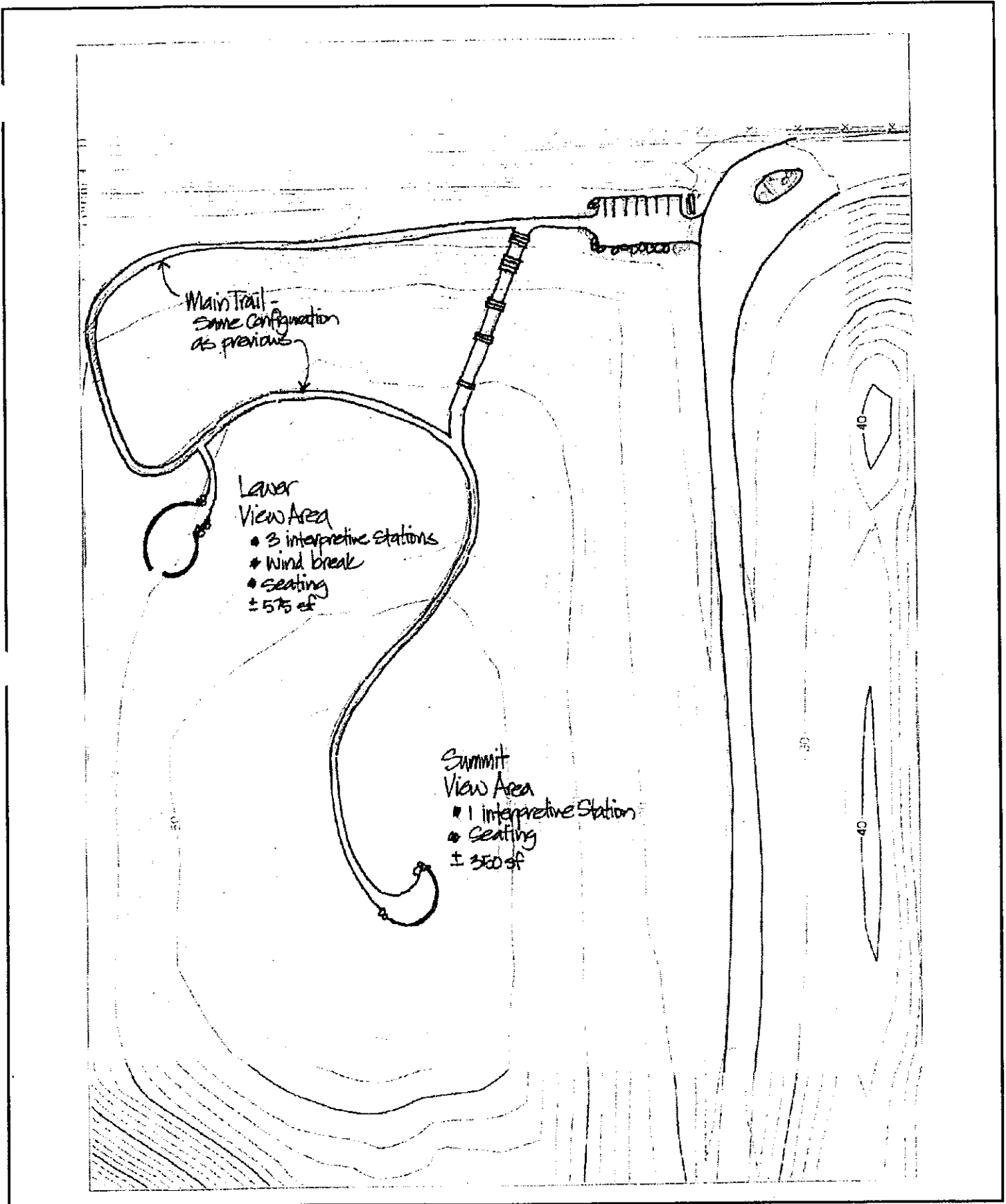
EXHIBIT A

Potrero Hills Landfill Phase II Expansion

Proposed Phase II Project



-  CELL BOUNDARY AND NUMBER 1
-  RELOCATED SOUTHWESTERN SURFACE CHANNEL
-  NEW 3-PHASE POWERLINE
-  EXISTING 2-PHASE OVERHEAD LINE/UPGRADE TO 3-PHASE
-  NORTH WATERLINE
-  PROPOSED GROUNDWATER MONITORING WELL (TYPICAL)



Source: HLA Group, 2010.

Not to Scale



EXHIBIT B - Public Access Site Plan for Solano Garbage Company Overlook
Potrero Hills Landfill Phase II Expansion

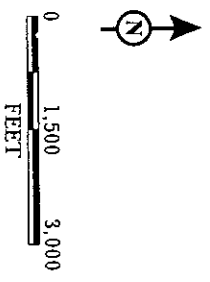
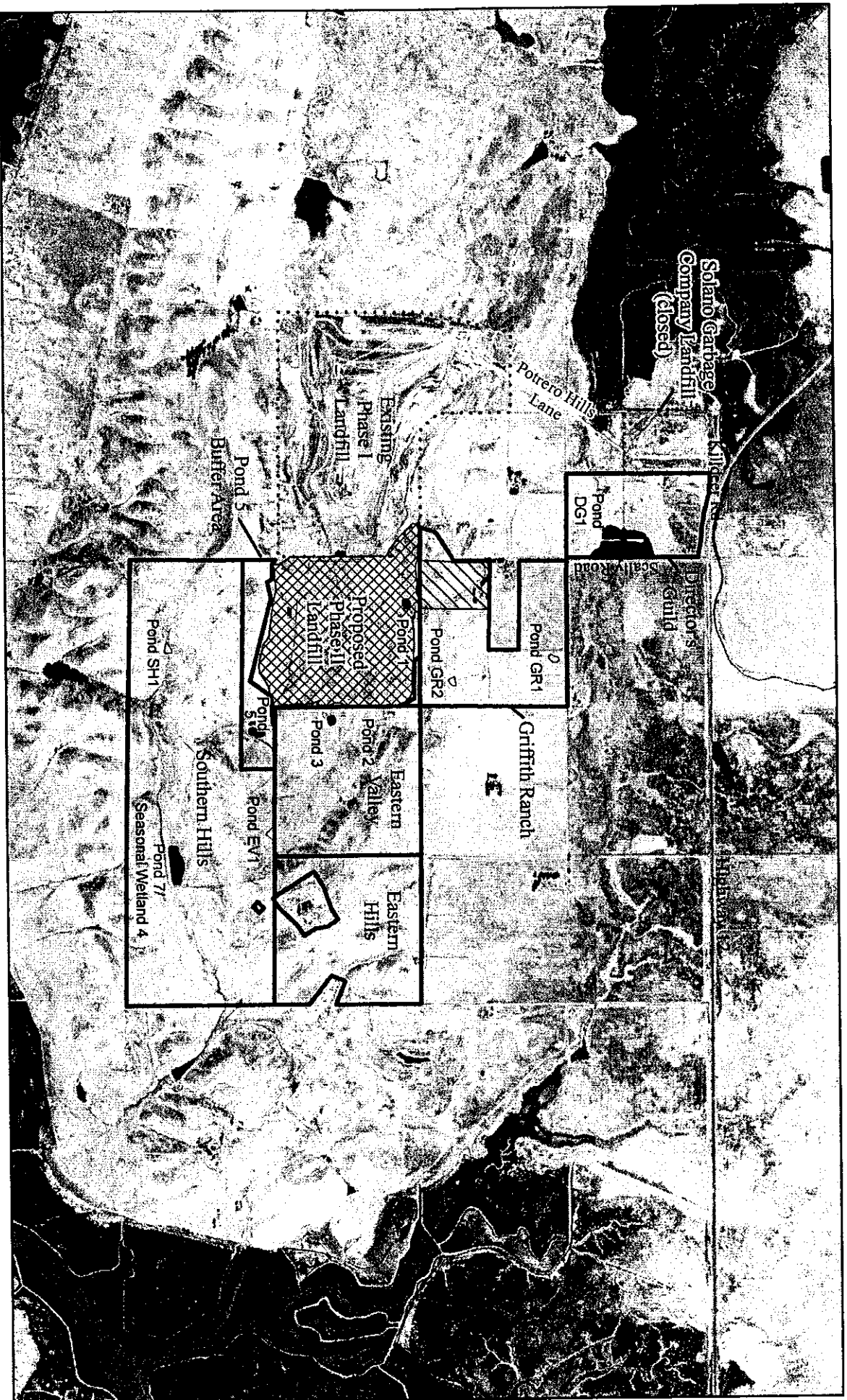


Source: ESRI 2010, ESP 2010, LSA 2009.



- Existing On-site Unpaved Roads
- ▭ Potrero Hills Landfill Parcels

EXHIBIT C - Public Access Plan for Southern Hills Trail Easements
Potrero Hills Landfill Phase II Expansion









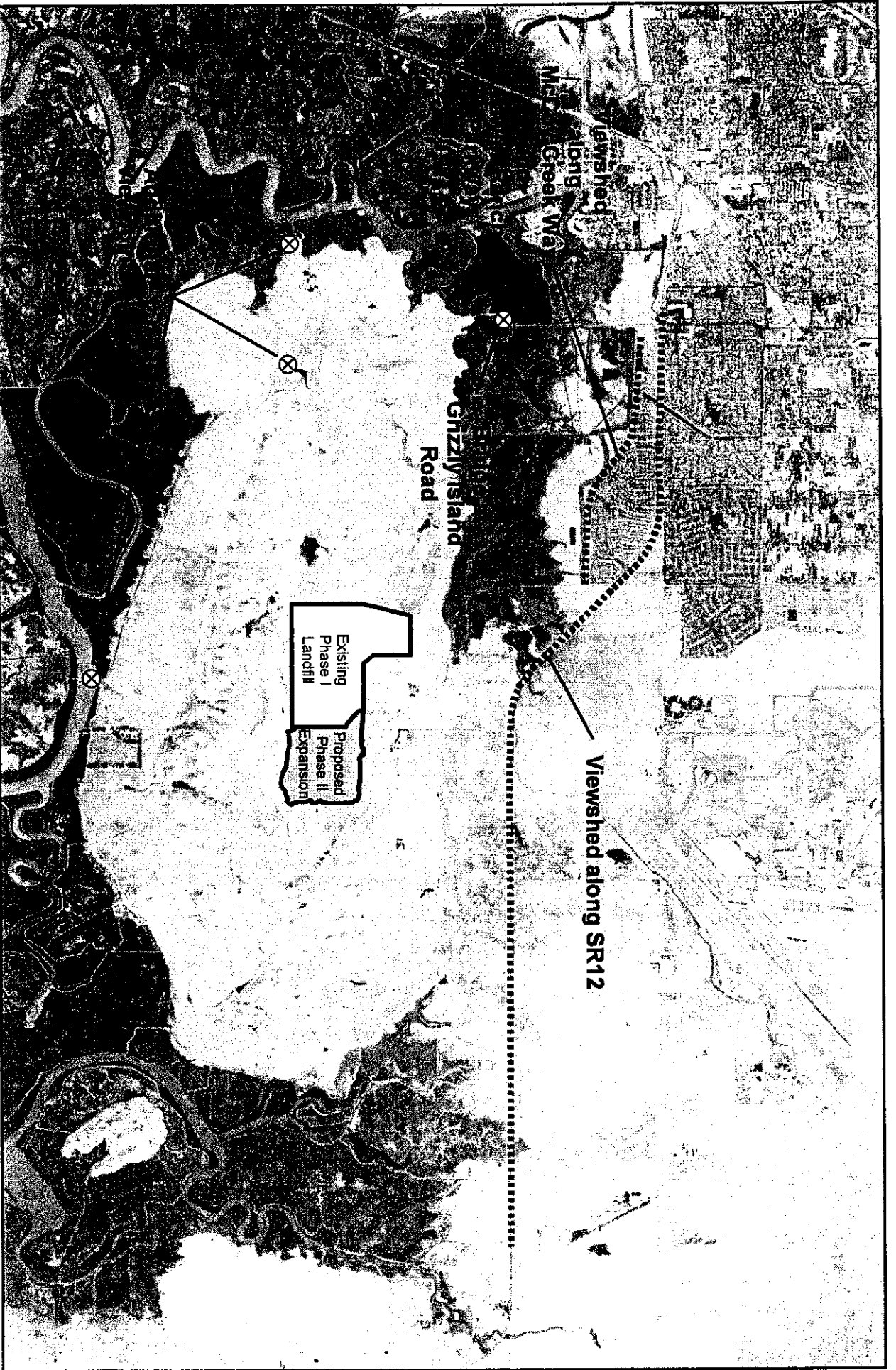
-  Proposed Phase II Impact Area
-  Mitigation Area
-  Other Land Owned or Leased by Landfill
-  Future Dedicated Open Space
-  Existing Onsite Pond
-  Proposed Mitigation Pond

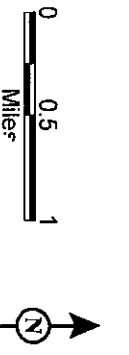
EXHIBIT D

Potrero Hills Landfill Phase II Expansion

Proposed Project Site and Mitigation Areas



Source: ESRI 2010, ESP 2010, Environmental Vision 2010.



- ⊗ Viewpoints
- ▭ Existing Phase I Landfill
- ▭ Proposed Phase II Expansion
- Viewsheds

EXHIBIT E - Viewshed and Viewpoint Locations

Portero Hills Landfill Phase II Expansion

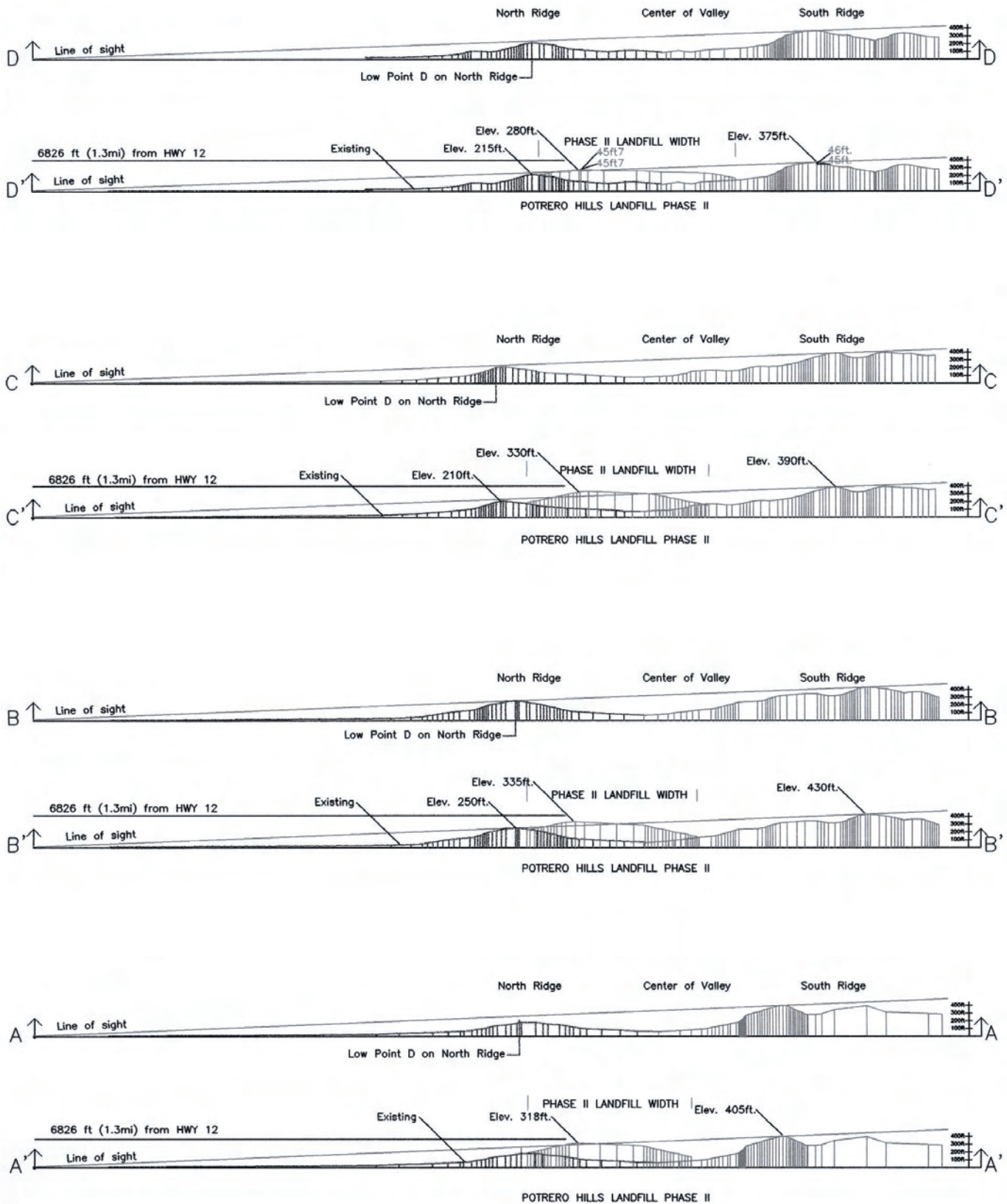
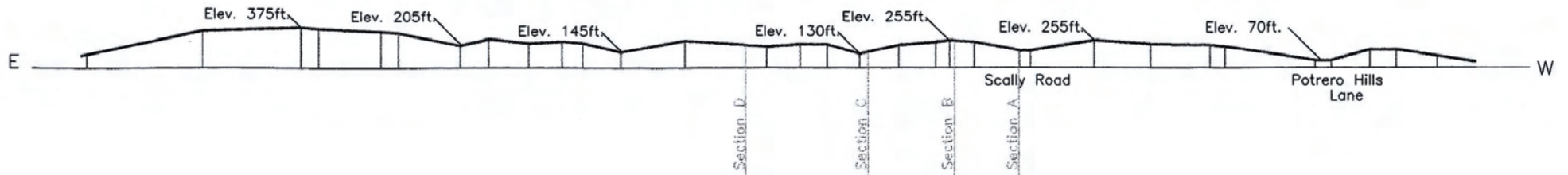


Exhibit N - Cross Sections of Existing Ridgelines and Phase II Landfill
Potrero Hills Landfill Phase II Expansion

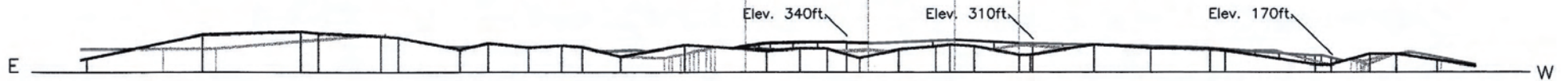
Silhouette of Potrero Hills North Ridge



Silhouette of Potrero Hills North (Brown) and South (Green) Ridgelines

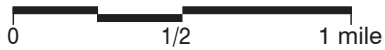
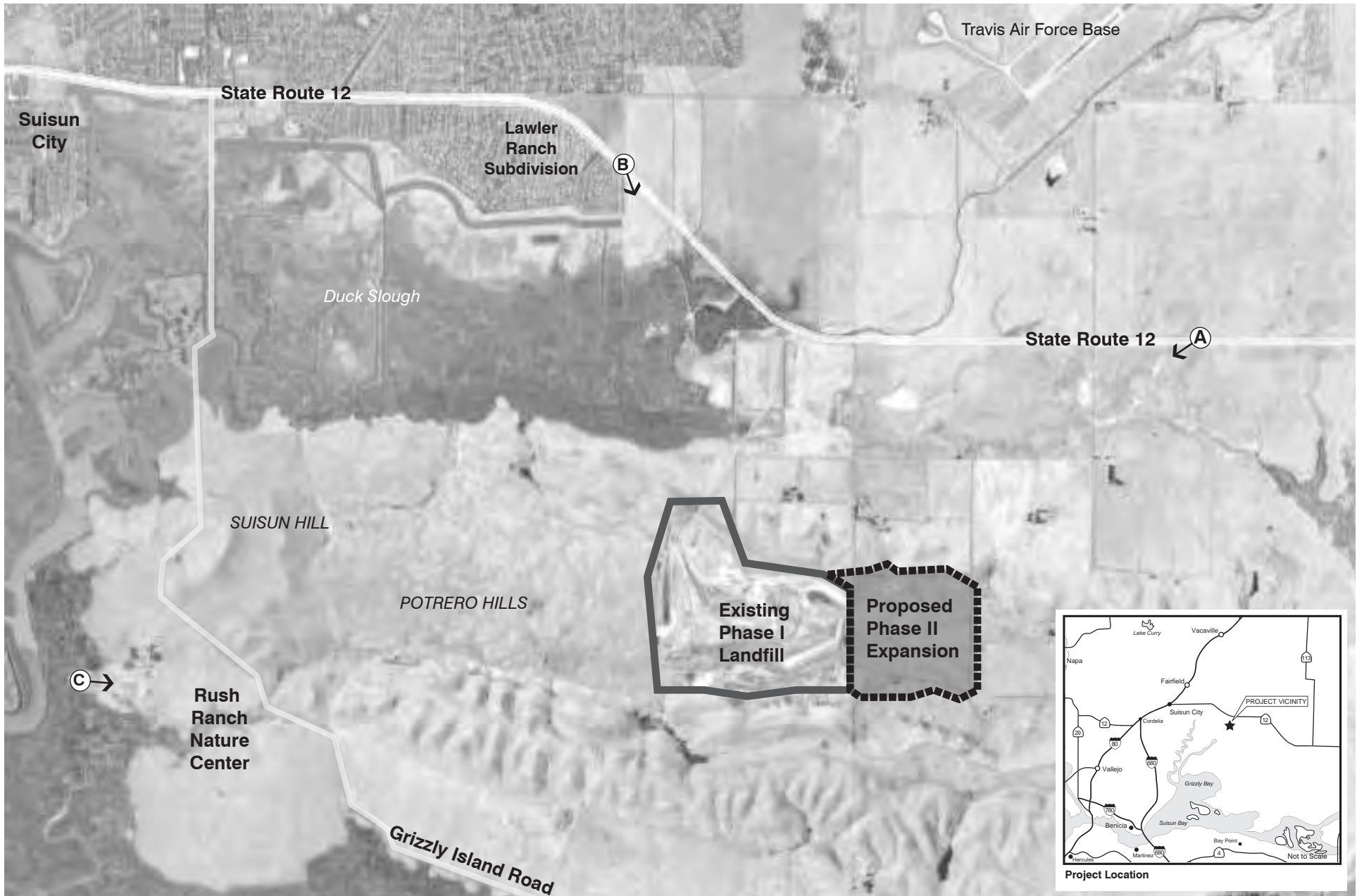


Silhouette of Phase II Landfill (Blue) Added to North and South Ridgeline Silhouettes



Source: Environmental Stewardship & Planning, Inc. 2002

Exhibit O - Ridgeline Profiles Looking South from Highway 12
Potrero Hills Landfill Phase II Expansion



(A) → Simulation Viewpoint



Photo Diagram with Proposed Project - State Route 12 looking southwest (Viewpoint A)

Notes: Refer to EXHIBIT P for viewpoint location.
 All distances and elevations are approximate.

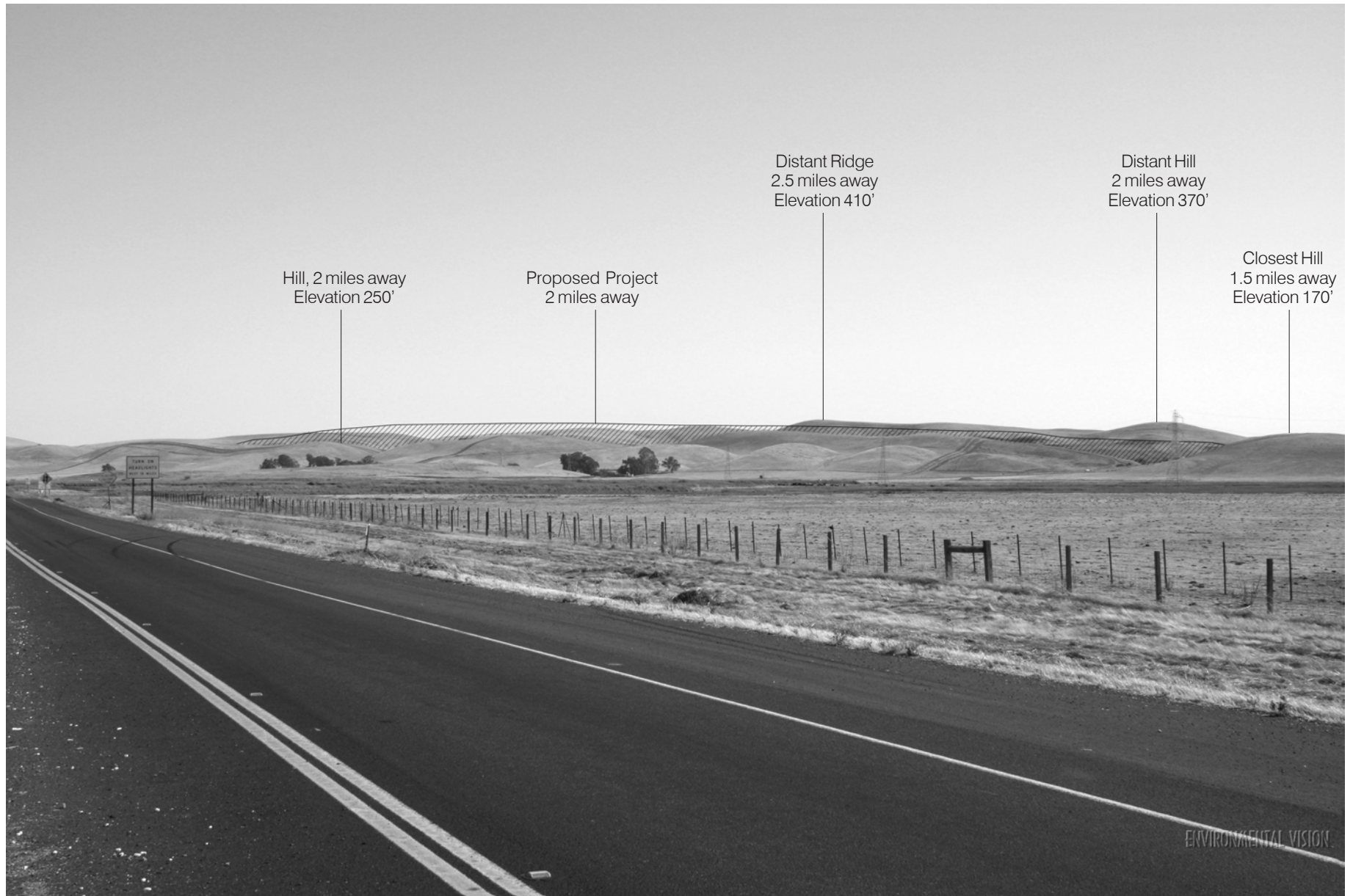


Photo Diagram with Proposed Project - State Route 12 looking southeast (Viewpoint B)

Notes: Refer to EXHIBIT P for viewpoint location.
 All distances and elevations are approximate.



Photo Diagram with Proposed Project - Marsh Trail looking east (Viewpoint C)

Notes: Refer to EXHIBIT P for viewpoint location.
 All distances and elevations are approximate.



Existing View from State Route 12 looking southwest (Viewpoint A)



Visual Simulation of Proposed Project

Note: Refer to EXHIBIT P for viewpoint location

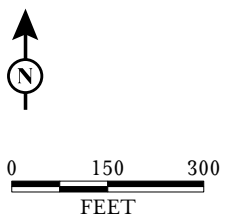
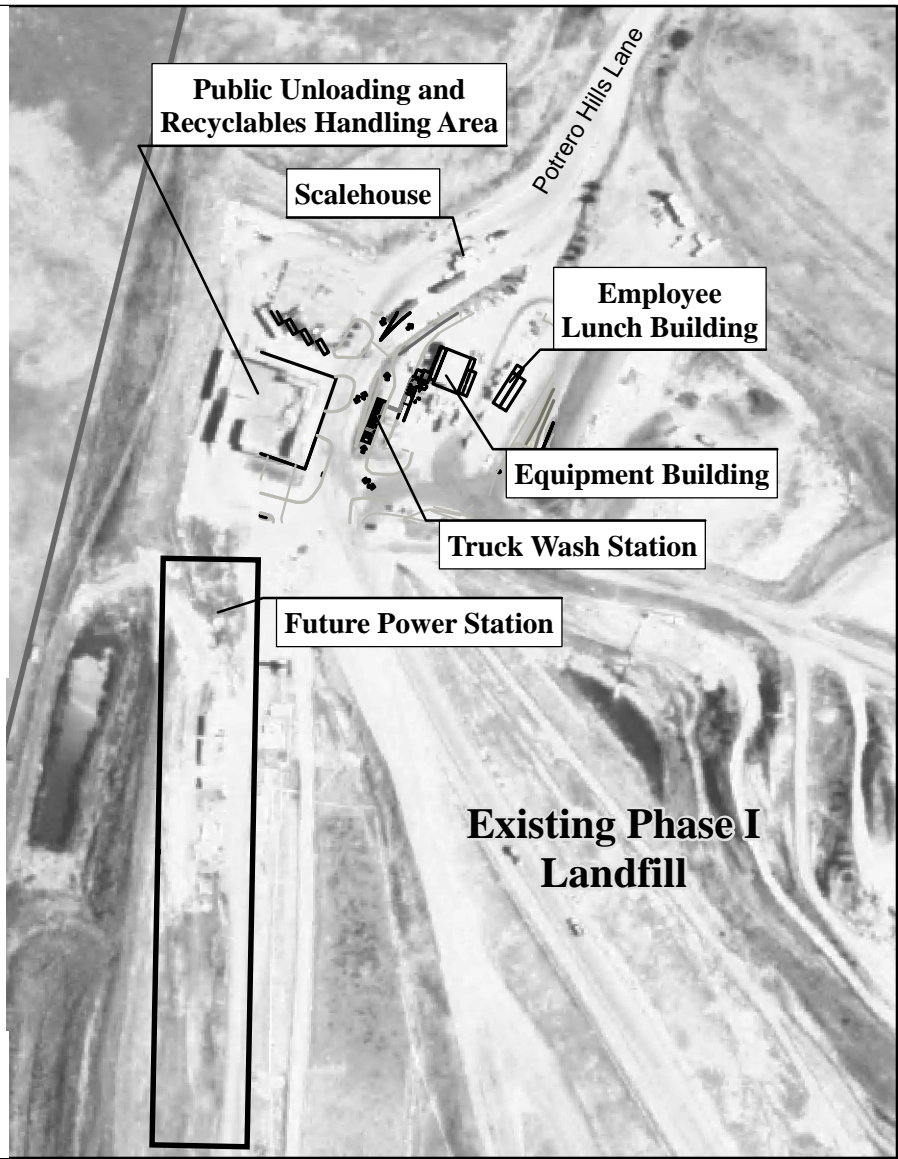
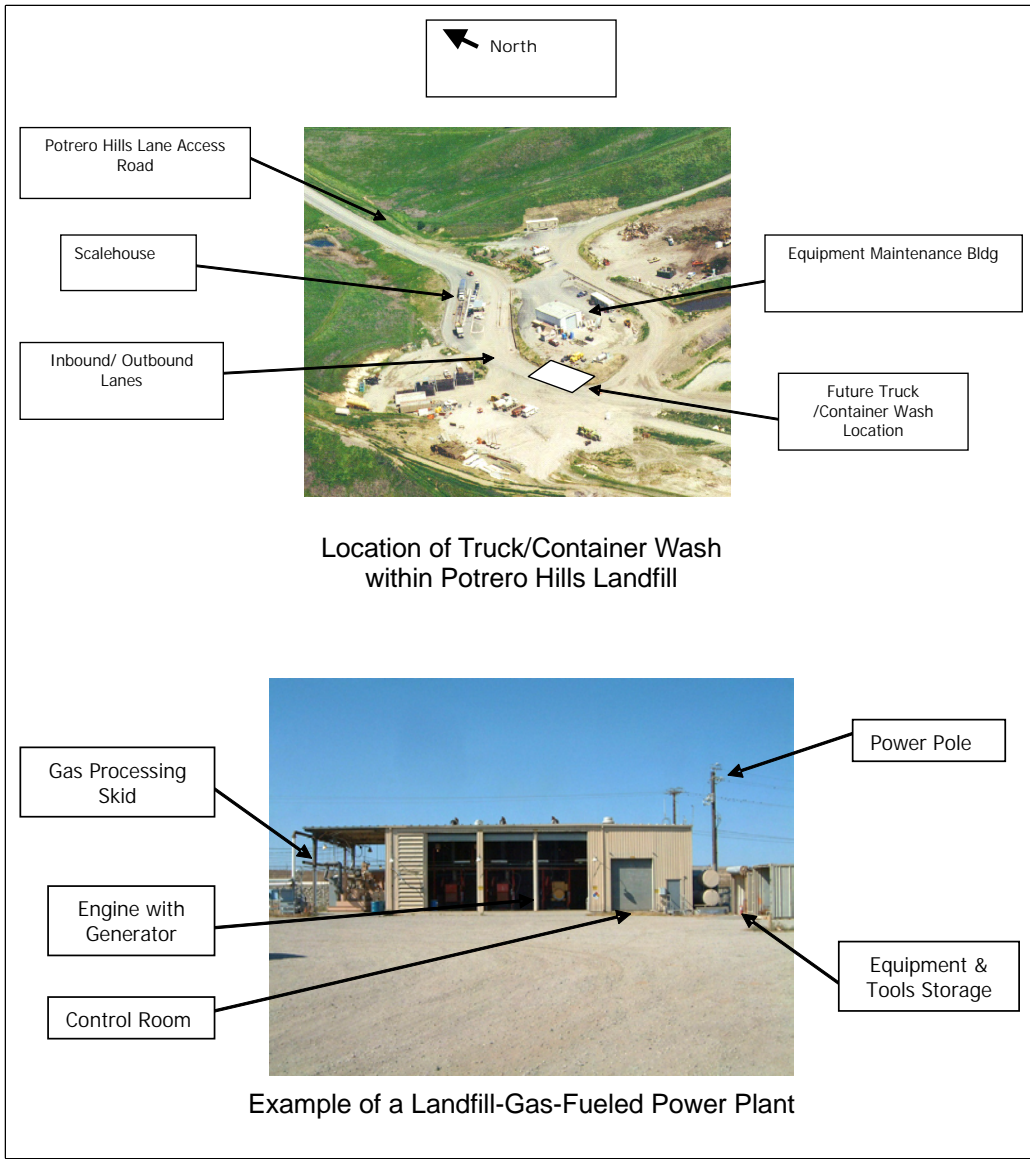


EXHIBIT U

Potrero Hills Landfill Phase II Expansion

New Ancillary Structures

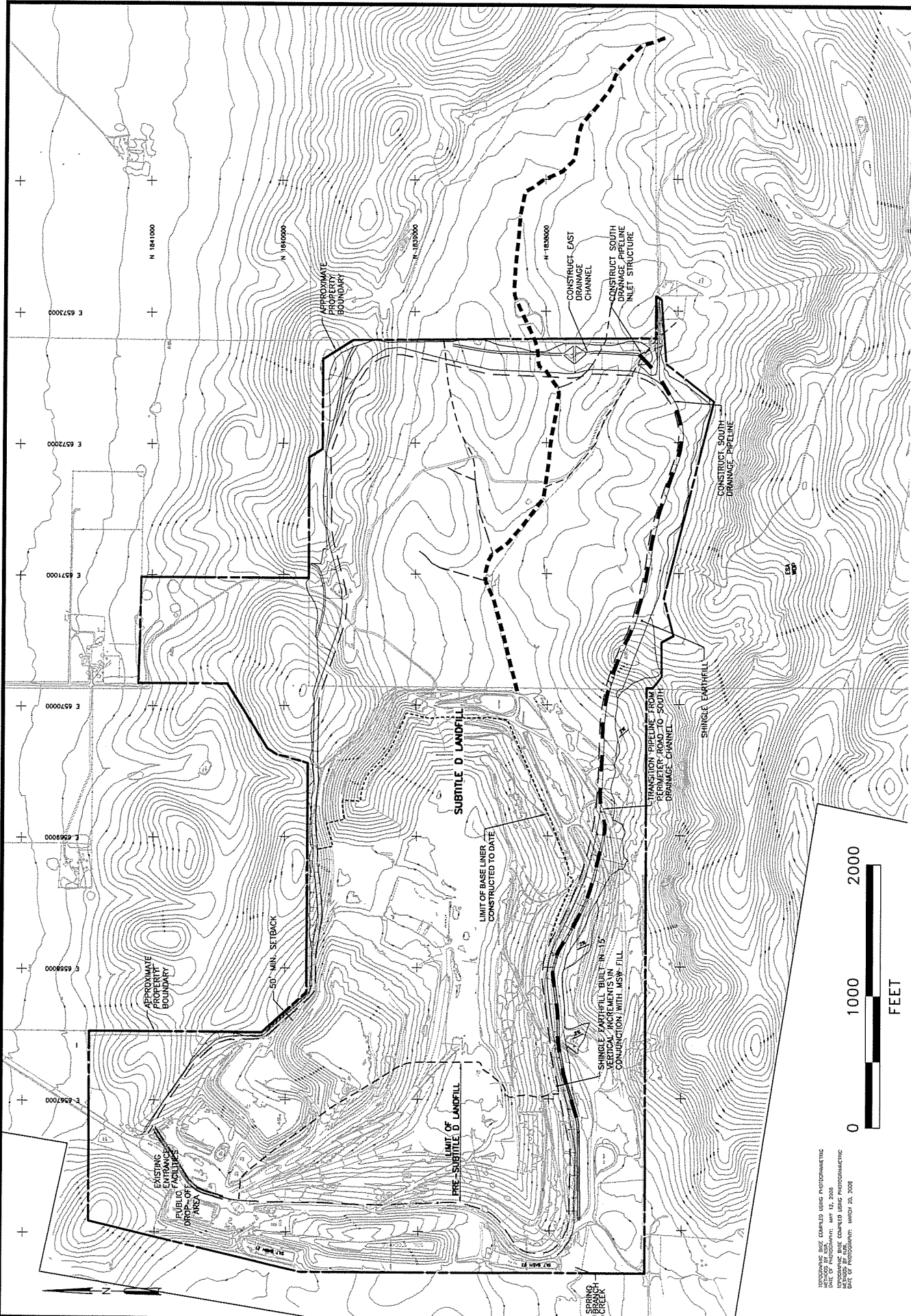


EXHIBIT V
SOUTHERN SLOPE BUTTRESS
FILL AND PIPELINE
POTRERO HILLS LANDFILL

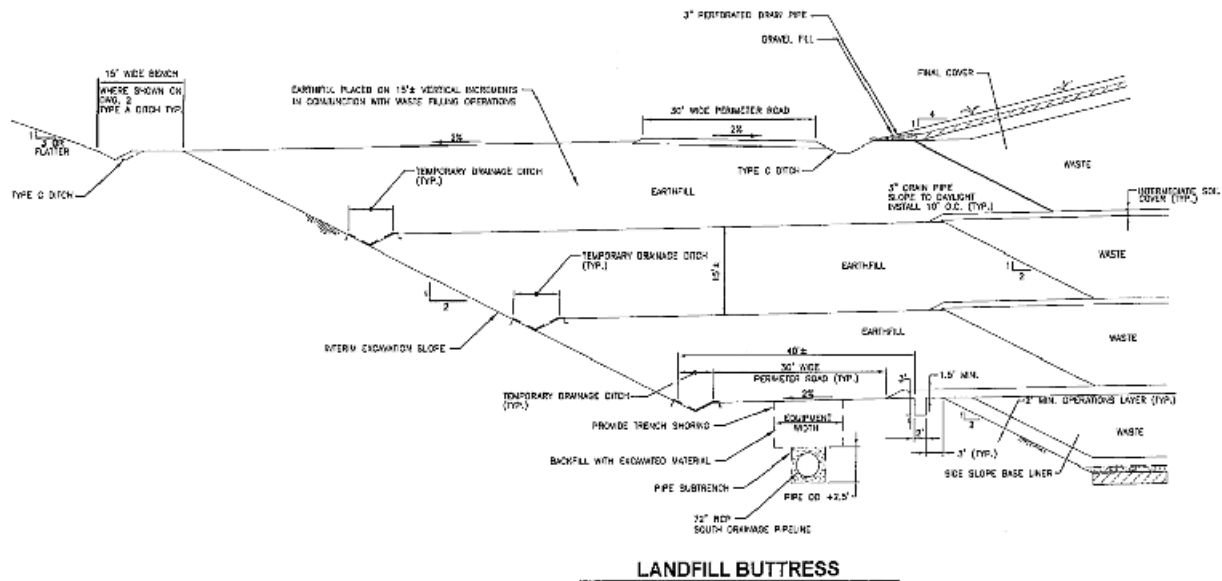
- CELL BOUNDARY
- LEGEND
- - - - - LIMIT OF PRE-SUBTILE D LANDFILL
 - - - - - LIMIT OF BASE LINER CONSTRUCTED TO DATE
 - - - - - SPRING CREEK AND TRIBUTARIES
 - - - - - SOUTH DRAINAGE PIPELINE

VERTICAL SCALE COMPARED USING PHOTOGRAMMETRY
 DATE OF PHOTOGRAPHY: MAY 12, 2005
 HORIZONTAL SCALE COMPARED USING PHOTOGRAMMETRY
 DATE OF PHOTOGRAPHY: JANUARY 20, 2005

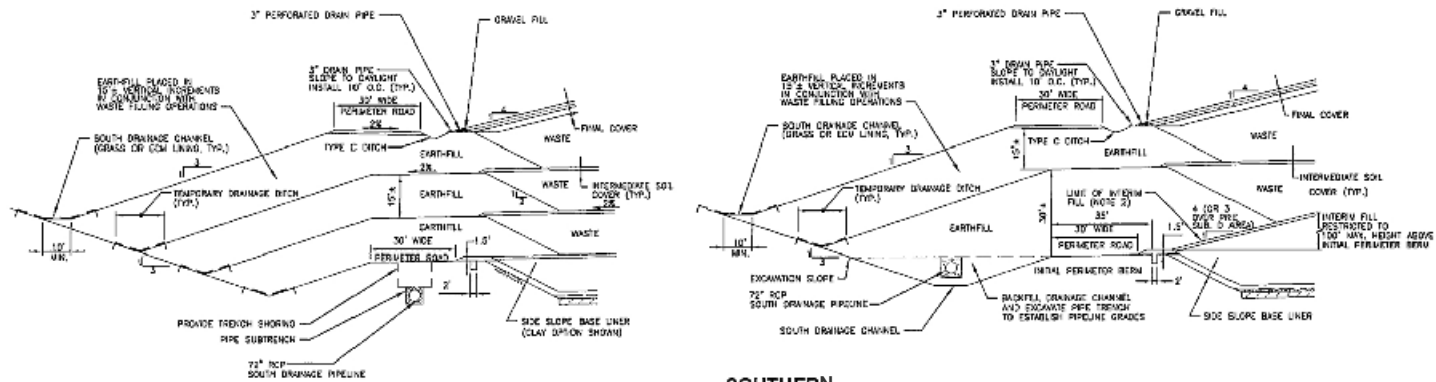


PROJECT No: DB3-97475 CADD REV. DATE: 5/28/10

Drawing Title: BUTTRESS FILL AND PIPELINE POTRERO HILLS LANDFILL



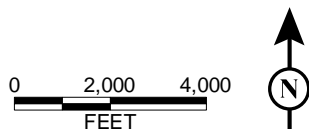
LANDFILL BUTTRESS



SOUTHERN PERIMETER BUTTRESS

LANDFILL BUTTRESS AND PERIMETER BERM POTRERO HILLS SANITARY LANDFILL

Apr 12, 2010 - 8:23am
Project No. 03307475 - F.I.E. No. F13-IMP- CADD JOB DATE 03/26/10



**EXHIBIT W - Landfill Buttress and Perimeter Berm Cross Sections
Potrero Hills Landfill Phase II Expansion**



SWANSON HYDROLOGY+ GEOMORPHOLOGY
500 Seabright Ave, Suite 202 Santa Cruz, CA 95062
PH 831.427.0288 FX 831.427.0472

Exhibit X : Photos of project area in Potrero hills: looking west, (top) towards the existing landfill, note the discontinuous gully; looking east, (bottom) towards proposed landfill extension. Channel in bottom photo is incised and has little flow despite recent rains. (Photos taken March, 2005)

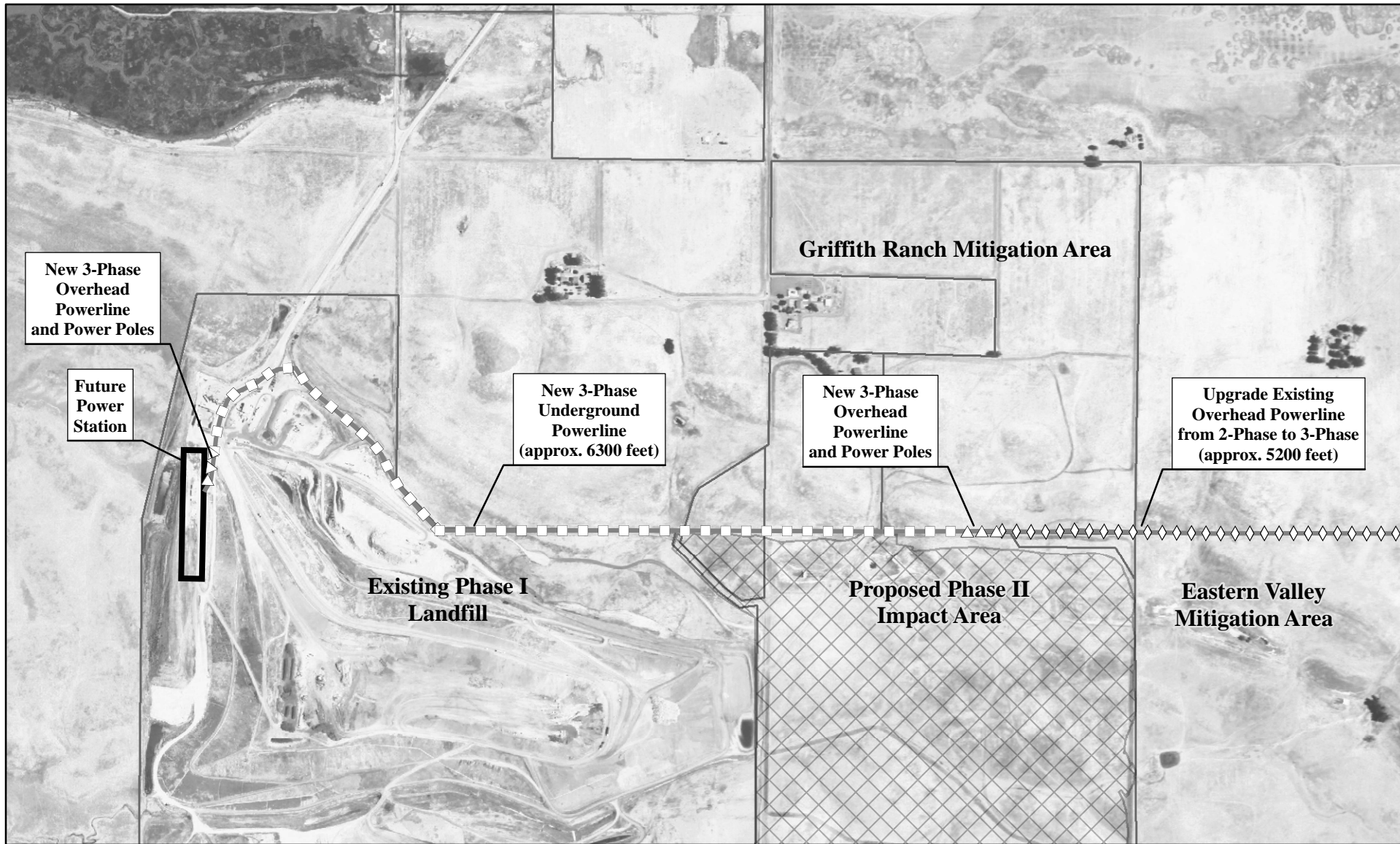


EXHIBIT Y



- ◇◇◇◇ EXISTING 2-PHASE OVERHEAD LINE/UPGRADE TO 3-PHASE
- △△△△ NEW 3-PHASE OVERHEAD POWERLINE
- NEW 3-PHASE UNDERGROUND POWERLINE

Potrero Hills Landfill Phase II Expansion

New Electric Lines



View looking southwest along Potrero Hills Lane from roadway northwest of Guidotti Property.

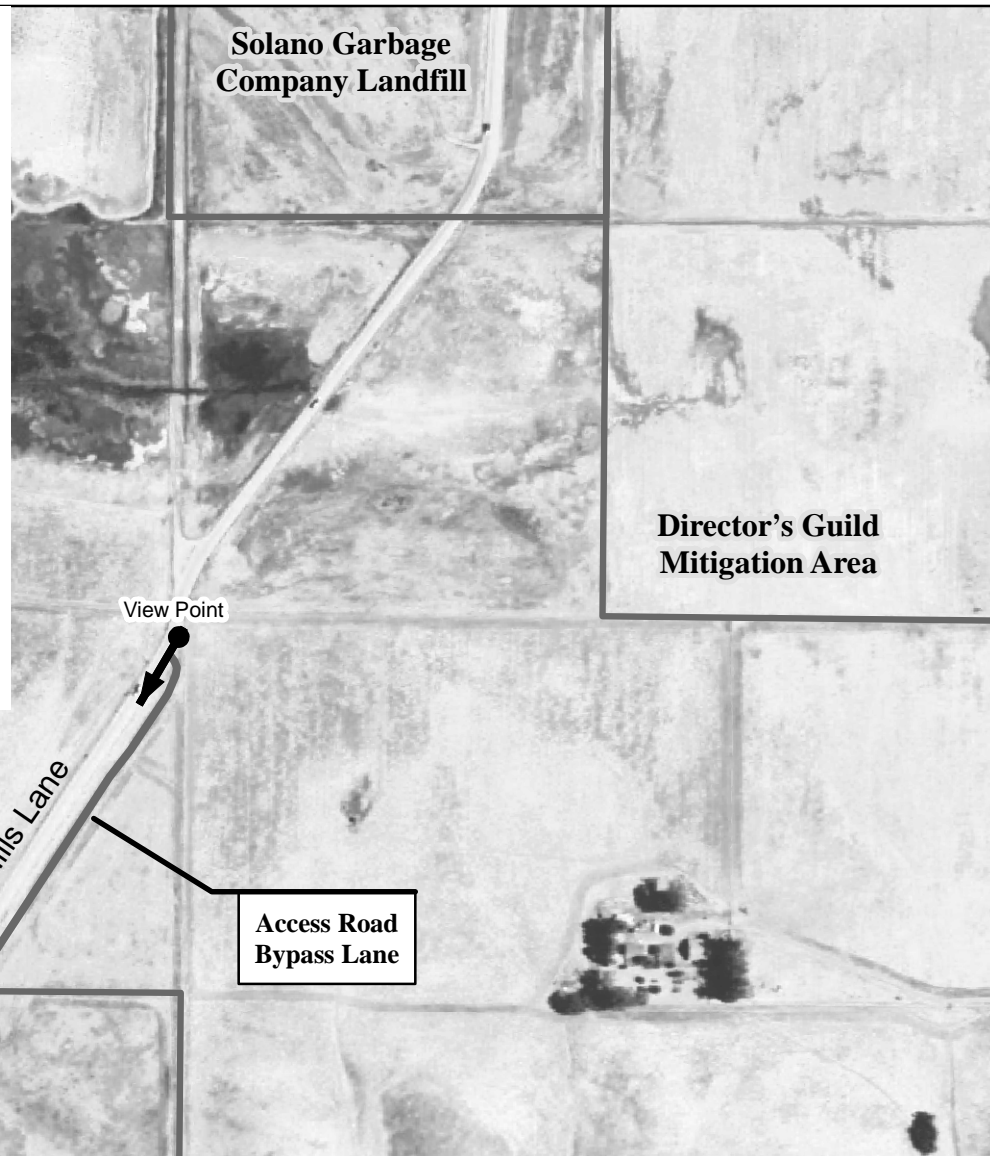


EXHIBIT Z



Potrero Hills Landfill Phase II Expansion

Potrero Hills Lane Bypass



Department Of Resource Management
675 Texas Street, Suite 5500
Fairfield, CA • 94533
Planning Division
(707) 784-6765

Land Use Permit No. U-88-33
Marsh Development Permit No. MD-88-09
(Revision No. 2)

POTRERO HILLS LANDFILL EXPANSION PROJECT

(permittee)

Expand the existing Potrero Hills Landfill from 320 acres to 580 acres, increase the maximum height of the landfill from 220 feet to 345 feet, and modify landfill operations currently permitted under the existing permits.

(Land use, location and zone district)

In addition to the zoning regulations, the building laws and other ordinances, the conditions of granting this permit, if any, are attached.

Granting or conditional granting of this permit does not release the permittee from complying with all other county, state or federal laws. Failure to comply with all the aforementioned provisions and conditions will be cause for the revocation of this Permit by the County Planning Commission.

Failure, neglect or refusal to exercise this Permit within a period of one (1) year from the date of granting thereof, shall automatically cause the same to become and remain null and void.

Date Granted June 9, 2009

SOLANO COUNTY BOARD OF SUPERVISORS

Issued by: _____

Date _____

Birgitta E. Corsello, Director
Resource Management

**CONDITIONS OF APPROVAL FOR MODIFICATION TO
LAND USE PERMIT NO. U-88-33 and
MARSH DEVELOPMENT PERMIT NO. MD-88-09
of
POTRERO HILLS LANDFILL**

Continued from Previous Use Permit

1. The modification of use shall be established and operated in accord with the plans submitted with the application for approval of Major Revision 2 to Use Permit/Marsh Development Permit No. U-88-33/MD-88-09, March 1, 2002, except as amended herein.
2. Potrero Hills Landfill, Inc. shall be responsible for fulfilling all conditions applicable to Combined Use Permit/Marsh Development Permit U-88-33/MD-88-09, as modified. The requested modifications to this permit shall become effective, by signature of the Director of Resource Management, only in the event that the applicant acknowledges acceptance and agreement to all conditions herein stated.
3. The requested modifications to this permit shall become effective only by signature of the Director of the Department of Resource Management.
4. As long as Potrero Hills Lane remains an access route to the PHLF landfill site, the conditions of MD-90-01 permitting development and maintenance of such access shall be incorporated, as approved, as part of Use Permit U-88-33.
5. Any changes made to Bay Conservation and Development Commission (BCDC) Marsh Permit No. 38-79 by BCDC that affect Solano County RP-84-02 (revised) shall be incorporated as part of RP-84-02 (revised) by a minor revision process or by approval of the Director of Resource Management.
6. The permittee shall reimburse the Department of Resource Management pursuant to Solano County Code Section 11-111 for the Department's cost of monitoring, enforcing and verifying compliance with the terms of the permits.
7. The site design and operations shall meet the specifications and provisions of Solid Waste Facility Permit (SWFP) No. 48-AA-0075 and any revisions thereto as approved by the California Integrated Waste Management Board (CIWMB). Any changes or amendments to the design and/or operation of the facility proposed or required by the agencies which regulate this site shall be reported to the Department of Resource Management, Divisions of Planning and Environmental Health, by the permittee prior to proposed enactment and as soon as possible after being informed of the proposed changes.
8. Change(s) in the permitted operation and/or facilities deemed significant or substantial by the Director of Resource Management, shall require an application for an amended Use Permit/Marsh Development Permit for continuance of the permitted activity.
9. Subsequent to approval of these modifications to these permits, review of the permitted operation may be set for hearing by the Planning Commission every two years or, at the discretion of the Commission, this reconsideration may take place more frequently, or on an ad-hoc as-needed basis. Triggers for reconsideration include, but are not limited to:

1. More than five odor complaints from different sources in a one-month period of time.
2. More than five litter complaints from different sources in a one-month period of time.
3. Issuance of a Notice of Violation by any permitting agency.

These hearings may be held for the purpose of modifying any conditions previously imposed or adding conditions that may be required to guarantee the continued validity of the findings made by the Planning Commission for approval of the combined permit. New or revised conditions may include but shall not be limited to, the imposition of requirements for the modification, closure, and/or removal of facilities, operations, materials or equipment from the premises affected by these permit(s), within thirty days of notification, or the requirement that appropriate guarantees to secure such changes or removals be filed and maintained.

Any condition modified or added shall have the same force and effect as if originally imposed. This periodic review shall be for project facilities or any part thereof, and each review, although to be accomplished in accordance with CEQA, shall not be considered a separate project under CEQA. The review of the permitted operation and the imposition of amended or additional requirements shall not be unreasonably applied such that the long term, continued viability of the Potrero Hills Landfill is unreasonably constrained or unreasonably limited.

10. By signature affixed to these permit(s), the permittee(s) and their successors in interest agree that the County of Solano, its officers and employees shall not be responsible for injuries to property or person arising from exercise of these permit(s). The permittee(s) shall defend, indemnify and hold harmless the County of Solano, its officers or agents and employees from all claims, liabilities, losses, or legal actions arising from any such injuries, and from all actions, approvals and conditions associated with issuance of these permit(s) and from all associated actions, approvals and conditions. The permittee(s) shall reimburse the County for all legal costs and attorneys' fees related to litigation based on the issuance of and/or interpretation of these permit(s). This agreement is a covenant that runs with the land and shall be binding on all successors in interest of the permittee(s).
11. Non-compliance with the approved use permit/marsh development permit or any condition(s) set forth therein shall be cause for revocation by the Planning Commission of said permit(s), and for payment of applicable bonds to the County.
12. Subsections (j) and (m) of Section 28-53 and (i) and (l) of Section 28-52 of the Solano County Code concerning revocation of and minor revisions to use permits and marsh development permits are expressly made applicable to these permits. Upon any revocation, permittee(s) shall reclaim the site in accordance with conditions of the permit(s) and the closure requirements. If necessary, the County may resort to any security to accomplish such reclamation. In addition, any term or condition of this Use Permit/Marsh Development Permit and any violation of this combined permit may be enforced by injunction issued by the Superior Court upon suit by the County. In the event of any permit(s) revocation, the permittee(s) shall submit within 90 days a report to the Department of Resource Management fully describing their reclamation of the site. The permittee(s) shall make periodic reports, as required by the Department of Resource Management, on the progress and conclusion of site reclamation procedures.

13. The permittee(s) shall comply with all applicable Federal, State and local enactments, laws, and regulations, as they now exist and as they may be amended. A copy of correspondence concerning any enforcement action shall be provided to the Department of Resource Management. Compliance with any enforcement action shall be summarized in the annual compliance report.
14. The permittee(s) shall obtain any necessary permits from the Transportation Department and/or the Building and Safety Division, as pertinent, prior to construction, erection, enlargement, altering, repairing, moving, improving, removing, converting, or demolishing any building or structure, fence, retaining wall, or roadway regulated by Solano County Ordinance.
15. Each spring, the permittee shall monitor all areas affected by the project for eroding or slumping areas. Permittee shall monitor revegetated areas annually for complete and successful ground cover. The permittee shall maintain, recontour and revegetate as necessary eroding, slumping, poorly revegetated or other problem areas attributed to this project which could result in sedimentation of the nearby drainages and/or Suisun marshlands for the life of the project. These activities shall conform with the requirements of the County Grading Ordinance, the recommended mitigation measures of the previous Certified EIR for Potrero Hills Landfill and the Negative Declaration for the 1989 application for this project, and the requirements of BCDC's Marsh Permit No. 38-79 and the landfill Closure Plan(s).
16. The permittee(s) shall allow the enforcement personnel of any regulatory agency with enforcement jurisdiction over the site to have access to the permitted site.
17. The permittee(s) shall implement the Mitigation Monitoring and Reporting Program of 1996, and any future modifications thereof, in order to mitigate or avoid the significant environmental effects identified in the 1996 FCEIR. Failure to implement a mitigation measure to reduce impacts could result in revocation of or modification to the combined permit.
18. The permittee(s) shall comply with prior Conditions of Approval Nos. 55 through 73 of U-88-33/MD-88-09 (entitled Quarry Operation Provisions") as contained in Marsh Development Permit No. MD-88-09/Use Permit No. 88-33/Reclamation Plan No. RP-84-02 (revised) granted October 24, 1989, and which are incorporated herein by reference.
19. The 1996 Marsh Development permit is already considered exercised, pursuant to Section 28-52 (i)(2) of the Solano County Code. The permittee(s) shall on January 31 of each year submit to the Planning Division and to the Environmental Health Services Division an annual compliance report to document compliance with the SWFP and conditions contained in this permit, as modified, including remaining site life and items contained in the MMRP.
20. Prior to any new activities authorized by these modifications to combined Use Permit/Marsh Development Permit No. U-88-33/MD-88-09, the permittee shall submit an adjustment to the surety bond or other guarantee acceptable to the County of Solano, if deemed necessary by the County, to cover the portion of the cost estimate described in Condition 17 that corresponds to the mitigation associated with said new activities.

21. The permittee shall not alter the northern ridgeline of the Potrero Hills site and shall contour all existing and proposed fill areas once completed to blend with the surrounding terrain.

22. To protect the landfill site from significant wind and water erosion and to preserve agricultural soils and the upland grassland habitat that will be disturbed during the project life, the permittee shall, in compliance with the Solano County Grading and Erosion Control Ordinance, ensure that all of the following conditions are met:
 - a. The permittee shall restrict soil disturbances outside the actual landfill boundaries to only the amount needed for soil stockpiles and for a firebreak as specified by the Suisun Fire Protection District.
 - b. Top soil shall be stockpiled and seeded for later use as a final cover to be placed on completed filled surfaces.
 - c. The landfill site shall be reclaimed and covered in modules to minimize the disturbed area. Modules shall be filled in sequence to reduce amount of land disturbed at any one time.
 - d. Completed fill areas shall be reseeded with grasses that provide good cover in the short term for erosion control and will be suitable for grazing and wildlife uses in the long term. The mix of seeds shall be evaluated and approved by the Department of Resource Management.
 - e. Once fill of a module has been completed, a soils analysis shall be conducted and the results provided to the Department of Resource Management. Soil amendments shall be added by the permittee to the completed fill surfaces if deemed necessary by the Department of Resource Management in consultation with the Cooperative Extension or Soil Conservation Service.
 - f. A grazing management system shall be instituted in the (post) closure period. Its primary objective will be to maintain erosion protection; its secondary objective will be to provide grazing and wildlife habitat. The grazing management plan shall be approved by the Department of Resource Management prior to implementation. The permittee shall seek advice from the Cooperative Extension or a range management consultant for the grazing plan.

Grazing shall be prohibited the first two years after revegetation is complete unless prior approval is obtained for a specific period of time and number of animals; grazing thereafter shall be managed to prevent overgrazing and shall not be allowed in riparian habitats.

23. To protect the use of onsite and adjacent off-site habitat by wildlife, the permittee shall ensure that all of the following conditions are met:
 - a. All equipment, including temporary equipment, is fitted with working mufflers and spark arrestors.
 - b. The golden eagle site in the eucalyptus grove south of the site shall be monitored in cooperation with DFG (on a periodic basis as access permits) to evaluate the

current use of the site for nesting and to evaluate any disturbances to the eagles' use of the site caused by landfill activities.

- c. If golden eagle nesting is eliminated or disturbed by landfill activity, a financial contribution in an amount determined by DFG to be adequate to mitigate these impacts shall be made to the raptor enhancement program of the DFG for raptor habitat improvements in another area of the Suisun Marsh.
24. To compensate for increased use and wear on County roads, the permittee shall ensure that the following conditions are met:
 - a. Internal landfill roads used by the public and disposal vehicles shall be paved or covered with broken asphalt, concrete, or gravel.
 - b. Payment to the Department of Transportation for its costs to clean mud from the landfill tracked onto County roads adjacent to the site shall be due thirty (30) days after billing by the Department of Transportation.
 25. The permittee shall maintain both a Comprehensive General Liability and Workers' Compensation insurance policy in the minimum amount of \$1,000,000 each during the term of this permit. Evidence of such coverage shall be filed with the County and shall comply with the requirements of the County Risk Manager.
 26. The permittee shall have an approved hazardous materials release response plan and emergency spill contingency plans for on-site incidents.
 27. The permittee shall check for and pick up litter along the entire length of access roads from the landfill to Highway 12 on a weekly basis, or more frequently if deemed necessary by Solano County LEA. The site and access shall be kept as litter free as possible, depending on weather conditions.
 28. The permittee shall provide a water supply approved by the Division of Environmental Health Services for its employees.
 29. To protect the landfill's drainage features and adjacent surface waters from adverse impacts from surface water runoff or leachate, the permittee shall ensure that all of the following conditions are met:
 - a. A minimum of two feet of suitable clay soil underlies the landfill site.
 - b. All perimeter ditches are constructed outside of waste management units.
 - c. A leachate collection and removal system is installed and maintained.
 - d. All erosion control features are inspected weekly during periods of wet weather (generally October 15 through April 30).
 - e. Surface water collection sumps and silt barriers are constructed and maintained and surface water drainage from the entire surface of the landfill is monitored on a periodic basis in accordance with WDRs.

- f. Groundwater monitoring wells are installed, sampled, and maintained in accordance with WDRs.
 - g. Approvals are obtained from the RWQCB prior to acceptance or disposal of designated or liquid wastes.
 - h. A water contamination contingency plan is developed.
 - i. All completed modules meet final requirements of the RWQCB and SWFP.
 - j. All completed modules and other disturbed areas that are no longer in use are revegetated.
 - k. No hazardous wastes shall be deposited.
30. To protect the Suisun Marsh Watershed from runoff from excavated areas, the permittee shall ensure that all of the following conditions are met:
- a. Sediment control berms and basins are placed down slope of fill areas, and
 - b. Surface runoff is diverted away from and around fill areas.
31. To protect public health and safety and the natural environment from the threat of fire, the permittee shall ensure that all of the following conditions are met:
- a. A minimum thirty-foot wide firebreak is constructed around active areas as approved by the Fire District.
 - b. Working mufflers or spark arrestors are used on all on-site vehicles, including temporary equipment.
 - c. Sufficient, readily accessible, water and stockpiled soil are available on-site for fire suppression, and
 - d. Equipment operators are trained in fire suppression techniques.
32. Waste handling protocols shall be continued by the applicant as approved by the Department of Resource Management for materials separated or salvaged on site for offsite recycling or disposal where, because of the nature and/or minimal quantity of such materials, no permit from the LEA or RWQCB would be required (e.g.; separated cardboard stored in open bins in the public disposal area). Waste/recyclables reporting must be conducted in a manner that is approved by the Department of Resource Management to address the diversion needs of the Planning and LEA permitting requirements.
33. Use Permit/Marsh Development Permit U-88-33/MD-88-09 shall be valid until the CIWMB has determined that landfill closure is complete in compliance with the SWFP. Other land uses may be considered, subject to the modification (including imposition of additional conditions and restrictions) and revocation provisions of conditions Nos. 8, 9, 11, and 17.

Additional Conditions of Approval

34. The landfill design shall substantively conform to the drawings submitted March 1, 2002, except as amended herein.

35. Power lines installed on the project site shall be placed underground unless the project applicant can show that the underground installation would be so expensive as to preclude service, consistent with the requirements of Policy 1(c) of the Utilities, Facilities and Transportation section of the Suisun Marsh LPP. If power lines are constructed above ground, the wires shall be placed at least six feet apart. If above ground installation is proposed, the project applicant shall provide justification prior to issuance of a building permit.
36. Prior to initiation of ground disturbing activities, a determination shall be made regarding vernal pool crustaceans. If impact avoidance of vernal pool crustaceans is feasible, a 250-foot buffer shall be established around the perimeter of wetlands that provide suitable habitat for vernal pool crustaceans. Suitable habitat and buffer areas shall be clearly identified in the field by staking or flagging, and no project activity shall occur within the marked areas.

If complete avoidance of vernal pool crustacean habitat is not feasible, the project applicant and the U.S. Army Corps of Engineers shall initiate consultation with the USFWS under Section 7 of the Endangered Species Act. Mitigation for the loss of these species shall include the following:

Aquatic Habitat: Offsite mitigation in a USFWS-approved mitigation bank or preserve area (e.g., North Suisun Mitigation Bank proposed by Wildlands Inc. located north of Highway 12 and south of the Travis Air Force Base) shall occur at a ratio of 3:1 preservation of large pool/pond habitat areas and 1.5:1 construction/restoration of large pool/pond habitat areas; and 4:1 preservation and 2:1 construction/restoration in other high-quality sites.

Buffer Zones: Buffer zones include the immediate natural contributing watershed to the individual pool/swale/pond plus a minimum of 100 feet from the watershed boundary. Development or loss of upland within contributing watershed/buffer areas will be mitigated through preservation of vernal pool habitat under the following formula:

Effects to 50 percent or less of the buffer area: Mitigation Area = (buffer impacted/total watershed) x (area of affected wetland habitat)

Effects greater than 50 percent of the buffer area: If greater than 50 percent of the watershed will be permanently affected, a 1:1 mitigation shall be required for the affected wetland.

37. Mitigation for tiger salamanders shall include four components that address impacts on the various life stages of this species. The first component mitigates impacts on terrestrial (aestivation) habitat on the project site; the second component mitigates impacts on the aquatic breeding and larval development habitats; the third component compensates for impacts on terrestrial (aestivation) habitat for off-site pools whose watershed/terrestrial buffer would be affected by the proposed project; and the fourth component includes protection measures to minimize mortality of adults and larvae prior to and during construction, as well as during project operation. The project applicant shall develop a detailed plan for implementing these components; the plan shall be approved by the County, CDFG and USFWS prior to initiation of ground-disturbing activities.

All mitigation sites for California tiger salamanders must be located within the known range of the California tiger salamander in southern Solano County (i.e., roughly between the Potrero Hills area and the Jepson Prairie area to the north).

Component 1 – Terrestrial Habitat

The project applicant shall preserve in perpetuity an off-site parcel as mitigation for impacts on the California tiger salamander and its terrestrial habitat. The entire expansion area encompassing 210 acres provides essential habitat for tiger salamanders; therefore, the minimum size of the mitigation parcel shall be 210 acres.

Minimum criteria for off-site mitigation areas include the following:

- i. The site must be documented to support California tiger salamanders or be within 2,000 feet of a known breeding pond.
- ii. If there is no breeding habitat onsite, there must be no impassable barrier between the mitigation site and the known breeding pond.
- iii. The known breeding pond must be on land that is preserved as open space in perpetuity and managed as native wildlife and plant habitat.

All mitigation sites for California tiger salamanders must be located within the known range of the California tiger salamander in southern Solano County (i.e., the area roughly between the Potrero Hills area and the Jepson Prairie area on the north).

Sites with high potential for enhancement and restoration through activities such as constructing breeding ponds and increasing the carrying capacity of the upland terrestrial habitat (e.g., eliminating ground squirrel control) will adequately mitigate impacts at a 1:1 ratio (210 acres).

Sites with low potential for enhancement and restoration shall require larger ratios to mitigate impacts on tiger salamanders. The increased ratio will range from 1.5:1 to 3:1 and shall be determined by the County, CDFG and USFWS. Some characteristics of sites with low potential for enhancement and restoration may include sites greater than 2,000 feet but less than 3,000 feet from a known breeding pond, sites with a passable barrier to dispersal between the known breeding pond and the mitigation site, sites with minimal opportunities for creation of additional breeding ponds, and sites with permanent water bodies that support non-native predators such as exotic fish and bullfrogs.

CDFG and USFWS must approve the proposed parcel as suitable habitat and acceptable for mitigation. The project applicant shall document the conditions on the site so that the appropriate mitigation ratio can be applied.

A conservation easement shall be placed on the mitigation parcel or parcels, establishing the land as wildlife habitat in perpetuity. The conservation easement must be completed prior to the initiation of ground-disturbing activities on the proposed project site. A habitat management plan shall be developed for the mitigation area that stipulates allowable activities on the site (e.g., grazing) and details enhancements to be completed on the site to improve the breeding and terrestrial habitat for tiger salamanders. The habitat management plan shall be submitted to CDFG, USFWS and the County for approval. The project applicant shall provide a secure source of funding

to ensure completion of the enhancement activities on the site and provide for the long-term maintenance of the site.

Component 2 – Aquatic Breeding Habitat

Pond 5 shall be avoided during landfill construction. Upstream of the pond (east side of the pond), the extent of the watershed shall be designated as a buffer zone. On the west side of the pond, a 300-foot buffer shall be established. Neither staging nor construction shall occur within the buffer zone, nor shall any ancillary facilities be located or constructed within the buffer zone for the life of the project. The existing dilapidated barn west of Pond 5 provides upland terrestrial habitat for tiger salamanders and shall be avoided (left in disrepair) during landfill expansion and operation. Although this pond will be preserved, impacts on the upland buffer around the pond shall be subject to the compensation terms described in Component 3 below.

A minimum compensation ratio of 2:1 shall be applied to Ponds 1 and 4 (1.22 acres) that provide aquatic breeding habitat for California tiger salamanders. A minimum of 0.61 acre of aquatic breeding habitat shall be preserved on the off-site mitigation site. An additional 0.61 acre of aquatic breeding habitat designed for tiger salamanders also shall be created on the off-site mitigation site. The combined acreage of Ponds 1 and 4 is 0.61 acre. Ponds 1 and 4 fall within the project footprint and will be removed during landfill development (the berm on Pond 4 was removed in 2000).

All aquatic habitat either preserved or created must have a hydroperiod sufficient to allow completion of California tiger salamander metamorphosis during an average rainfall year. Ponds must hold water for at least 12 weeks during winter and early to mid-spring. This will require that the watershed of the mitigation site be appropriately sized, as determined through a study of the hydrology on the site, to support all mitigation ponds preserved or created on the mitigation site.

Component 3 – Upland Buffers of Off-Site Ponds

Compensatory mitigation for the permanent loss of terrestrial buffer/watershed habitat for off-site ponds whose terrestrial buffers/watersheds would be affected by the proposed project shall be mitigated in addition to direct losses, as described in Component 2 above.

- i. For purposes of this EIR, terrestrial buffer zones include the immediate natural contributing watershed to the individual pond or a 1,000-foot radius from the pond, whichever is larger.
- ii. Development or loss of terrestrial habitat within the terrestrial buffer/contributing watershed shall be mitigated through construction of aquatic breeding habitat. Mitigation acreage shall be determined under the following criteria:
 - Effects to 50 percent or less of the buffer area
 - $\text{Mitigation Area} = (\text{buffer impacted}/\text{total watershed}) \times (\text{area of affected wetland habitat})$
 - Effects to greater than 50 percent of the buffer area
 - If greater than 50 percent of the watershed would be permanently affected, 1:1 mitigation is required for the affected aquatic habitat.

For this project, the buffer zones for Ponds 2, 5, and 6 would be affected by the proposed landfill development. Applying the formula above, an additional 0.16 acre of

aquatic breeding habitat shall be preserved on the off-site mitigation areas as compensation for impacts on the adjacent ponds and their terrestrial buffers used for aestivation. The total acreage of aquatic breeding habitat to be preserved and created at the mitigation site shall be 1.38 acres (1.22 acres for the loss of ponds on the project site plus 0.16 acre for impacts on the associated terrestrial buffer of adjacent off-site ponds).

Component 4 – Protection Measures and Avoidance

- a. A salamander-proof barrier (e.g., fence or curb) shall be erected around the perimeter of the landfill expansion site to prevent salamanders from moving onto the expansion area during ground-disturbing activities and operation of the landfill. The barrier also would help direct the salamanders to areas where breeding ponds are preserved. The project applicant shall submit plans for a barrier design with their mitigation plan for approval by the County, USFWS and CDFG.
- b. Pond 1 and the Spring Branch Creek channel are located within the footprint of the expanded landfill and would be affected by landfill construction. To avoid potential impacts on larval salamanders in these aquatic features, all construction activities in and around Pond 1 and the Spring Branch Creek channel shall occur in late summer or early fall (August 1–October 15) when no standing is water present. Conducting activities at this time of year shall avoid mortality of larval salamanders that could be developing in the pond or creek. Construction activities at Pond 1 and Spring Branch Creek shall be completed prior to the onset of the first rain of the season. The pond and creek shall be backfilled with soil, or excavated and drained to prevent their use as a breeding habitat during the life of the landfill. Once the aquatic habitats have been filled or excavated, additional construction activities can proceed in the vicinity of Pond 1 or Spring Branch Creek at any time of year.
- c. A biological monitor shall conduct an employee training session for all operators and managers involved in ground clearing and landfill cell construction prior to the initiation of ground-disturbing activities. The purpose of the training is to inform the workers of the sensitive resources onsite, the resources that are being avoided, and the measures being implemented to avoid tiger salamanders and other sensitive resources. A biological monitor with appropriate permits from CDFG and USFWS shall be onsite during initial ground-disturbing activities to move or salvage and possibly relocate any adult salamanders unearthed during earth-moving activities. Once the initial ground-disturbing activities are completed, the monitor shall make periodic (monthly) checks of the site to document compliance with the protection measures. Monitoring visits shall continue through the first rainy season after the initial ground disturbance.
- d. The project applicant shall investigate the feasibility of moving adult tiger salamander from the expansion area to the mitigation area prior to ground-disturbing activities. The project applicant shall consult CDFG and USFWS regarding this activity.
- e. Ponds in the eastern valley survey area (Ponds 2, 6, and 7) shall be left intact and shall continue to provide breeding habitat for California tiger salamanders. Upland areas that provide terrestrial habitat also shall be left intact. No borrow areas or ancillary facilities shall be constructed outside the designated expansion area or within areas designated for avoidance.

Ground squirrel control, if required, shall be limited to only the expansion area. No ground squirrel control by poisoning, trapping, shooting, or other methods shall be allowed outside the expansion area or within the buffer around Pond 5.

All Tiger Salamander mitigations shall occur prior to ground disturbance.

38. Prior to construction activity, focused pre-construction surveys shall be conducted by the project applicant for burrowing owls where suitable habitat is present within 75 meters of the construction areas. Surveys will be conducted no less than 14 days and no more than 30 days prior to commencement of construction activities and surveys will be conducted in accordance with CDFG protocol (CDFG 1995).

If no occupied burrows are found in the survey area, a letter report documenting survey methods and findings will be submitted to CDFG for review and approval, and no further mitigation will be necessary.

If occupied burrows are found, disturbance to the burrows shall be avoided by providing a buffer of 50 meters during the non-breeding season (September 1 through January 31) or 75 meters during the breeding season (February 1 through August 31). In addition, a minimum of 6.5 acres of foraging habitat shall be preserved contiguous with each occupied burrow (CDFG 1995).

If impacts to occupied burrows are unavoidable due to their location within the landfill footprint, onsite passive relocation techniques approved by CDFG shall be used to encourage owls to move to alternative burrows in the local vicinity that are outside of the impact area. However, no occupied burrows shall be disturbed during the nesting season unless a qualified biologist verifies through non-invasive methods that juveniles from the occupied burrows are foraging independently and are capable of independent survival. Mitigation for foraging habitat for relocated pairs will follow guidelines provided in the California Burrowing Owl Consortium Guidelines (1993) which range from 6.5 to 19.5 acres or replacement habitat per pair.

Surveys shall be conducted no less than 14 days and no more than 30 days prior to commencement of construction activities. Passive relocation techniques shall be implemented as necessary and mitigation for foraging habitat shall occur prior to initiating ground-disturbing activities.

39. If project activity would commence during the raptor nesting season (February 15 to September 15), preconstruction surveys shall be conducted in areas of suitable nesting habitat within 500 feet of project activity. Surveys will be conducted no less than 14 days and no more than 30 days prior to commencement of project activity. If no active nests are found, no further mitigation will be required.

If active nests are found, disturbance of the nest shall be avoided by establishment of a 500-foot exclusion buffer. No project activity shall occur within the buffer area until a qualified biologist confirms that the young have fledged from the nest or the adults abandon the nest on their own. Orange construction fencing shall be installed around the buffer area to prohibit access by site personnel and equipment. Weekly monitoring of the nest by a qualified biologist shall be conducted to determine when the young fledge. Daily monitoring will be required to document that a nest has been abandoned. Construction activities can commence once the young have fledged.

Surveys shall be conducted no less than 14 days and no more than 30 days prior to commencement of project activity. If active nest are found, no activity shall occur until the young have fledged.

40. Prior to the initiation of ground-disturbing activities at the site, the project applicant shall create a minimum of 3.96 acres of seasonal wetlands (2:1 ratio) at a suitable off-site mitigation site to compensate for the loss of seasonal wetlands on the site. In addition, a minimum of 0.88 acre of stream channel (2:1 ratio) shall be preserved and enhanced at an off-site location as mitigation for impacts on waters of the United States. The project applicant shall develop a mitigation and monitoring plan that details the mitigation design, wetland planting design, maintenance and monitoring requirements, reporting requirements, and success criteria for the off-site mitigation area and stream enhancement area. This plan shall be approved by the Corps, RWQCB, and CDFG prior to implementation. The mitigation and monitoring plan must be completed and approved, the off-site wetland creation and enhancement areas purchased, and wetland creation and enhancement activities must be initiated before wetlands on the project site can be disturbed.

The project applicant shall create a minimum of 2.98 acres of waters of the State at an off-site location. This amount represents a 2:1 mitigation ratio for impacts on waters of the State. The applicant shall develop a mitigation and monitoring plan that details the mitigation design, wetland planting design, maintenance and monitoring requirements, reporting requirements, and success criteria for the off-site mitigation area. This plan shall be approved by RWQCB and CDFG prior to implementation. The mitigation and monitoring plan must be completed and approved, the off-site wetland creation area purchased, and wetland creation and enhancement activities must be initiated before wetlands on the project site can be disturbed.

All wetland mitigation sites shall be located within southern Solano County between Potrero Hills and Jepson Prairie.

All created, preserved, and enhanced wetlands shall be monitored annually for a minimum term of 5 years, or as specified in the permits. Annual monitoring of each site shall include (a) observations of existing and developing problems and recommendations for remedial actions, (b) an assessment of creation of wetland habitats, (c) a formal wetland delineation in Year 5, (d) notation of invasive exotic species, and (e) photo-documentation. Monitoring visits shall be made in winter and spring of each year, and quantitative data shall be collected in spring. Annual reports shall be submitted each fall to the Corps and the County for review. At the end of the 5-year monitoring period, the Corps and the County shall review the reports and determine whether the success criteria have been met. If the success criteria have not been achieved at the end of the 5-year monitoring period, remedial measures shall be identified in consultation with the County, Corps, RWQCB, and CDFG.

A conservation easement shall be established on the off-site mitigation areas to preserve these areas in perpetuity. The County or other public resource agency shall hold the easement to ensure retention of this land in perpetuity.

The project applicant shall provide financial assurances of a type (i.e., bond, letter of credit) and amount to be determined by the permitting agencies and the County, to ensure successful implementation of the mitigation and monitoring plan. The bond (or other financial assurance) must be deposited with the appropriate permitting agency

prior to initiating ground-disturbing activities on the project site. The applicant also shall provide a long-term funding mechanism for the maintenance of the wetlands in the conservation easements in perpetuity.

As an alternative to creating and preserving wetland and waters, mitigation credits equal to 4.84 acres may be purchased in an approved bank within Solano County as mitigation for impacts on the seasonal wetlands and waters of the United States. Purchase of credits in a mitigation bank shall be subject to approval by permitting agencies and the County. The project applicant shall prepare a mitigation plan that provides detailed information about the bank. Mitigation credits must be verified by the permitting agencies and the County prior to initiation of ground-disturbing activities on the project site.

41. The final design documents for the proposed landfill expansion shall be prepared pursuant to the requirements of CCR Title 27, Section 20370. These regulations require that the final design documents for the proposed landfill expansion demonstrate the ability of the landfill to withstand ground shaking associated with the Maximum Probable Earthquake (MPE) without damage to the foundations or to the structures which control leachate, surface drainage, erosion, or gas.

In addition, the design recommendations included in the *1999 Geology and Geotechnical Engineering Evaluation* (EMCON, May 1999) for the site shall be implemented. These include the following design elements.

- a. During excavation of cut slopes, engineering geologic mapping shall be required to confirm the findings of the *1999 Geology and Geotechnical Engineering Evaluation*.
- b. MSW slopes in the Pre-Subtitle D area shall not be constructed at angles greater than 3:1 with required benching at least every 100 feet.
- c. MSW slopes in the Subtitle D area shall not be constructed at angles greater than 4:1.
- d. Site specific geosynthetic materials and geomembrane-clay interface strengths shall be confirmed by testing prior to construction in the Subtitle D area.
- e. The cover system over the Subtitle D area shall be maintained by providing a minimum interface friction angle of 24 degrees above the geomembrane and an interface shear strength (adhesion) of 200 pounds per square foot between the geomembrane and low-permeability soil under low overburden pressures. The values shall be verified during the final design of the cover system.
- f. Preliminary dewatering of the saturated sandstone above the proposed base grades shall occur.
- g. In existing slide areas, the slide material shall be removed before cell development.
- h. Provisions shall be made to repair potential surficial slides in the temporary and permanent excavation slopes. This may require buttressing, reinforcing, or repairing the slopes.

Surficial soils beneath composite-lined areas of the landfill shall be removed to minimize foundation settlements.

42. The final design documents for the proposed landfill expansion shall be prepared pursuant to the requirements of CCR Title 27, Section 21090. These regulations require that the integrity of the final slopes under both static and dynamic conditions be ensured. Section 21090 specifies maximum final slopes and minimum design requirements, and requires a slope or foundation stability report for final slopes that exceed a horizontal to vertical ratio of 3:1 for slopes in areas subject to liquefaction or unstable areas with poor foundation conditions.

In addition, the design recommendations included in the *1999 Geology and Geotechnical Engineering Evaluation* (EMCON, May 1999) for the site shall be implemented. These design recommendations are identified in Condition 7, above.

43. In order to minimize the potential for increased soil erosion on the site, the landfill expansion shall be designed in accordance with the drainage and erosion control requirements of CCR Title 27 §§20365, 20190, 21150, and 21750. CCR Title 27 requires engineered controls to limit erosion associated with facility operations. These controls typically include diversion of storm water runoff using temporary swales or interceptor ditches, retention of existing vegetation wherever possible, stabilization of barren soils with jute netting or geotextile fabric, installation of erosion-resistant layers, application of straw or mulch after seeding, installation of silt fences, berms, or hay bales to direct runoff away from construction areas, and visqueen sheets (plastic vapor barriers) or tarps to cover stockpiled soils.
44. Consistent with the requirements of CCR Title 27, Section 20365, the design of the site's surface water drainage system shall include the diversion and drainage controls necessary to intercept run-on and direct run-off, and to minimize erosion during construction and operation activities over the life of the project. This would include the implementation of Best Management Practices (BMPs) during cell construction to minimize soil erosion. These BMPs may include diversion of storm water runoff using temporary swales or interceptor ditches, retention of existing vegetation wherever possible, stabilization of barren soils with jute netting or geotextile fabric, application of straw or mulch after seeding, installation of silt fencing and berms or hay bales to direct runoff away from construction areas, and the provision of visqueen (plastic) sheets or tarps to cover stockpiled soils.
45. Prior to initiation of landfill expansion activities, the project applicant shall prepare a Revised Surface Water Monitoring Program and a revised Erosion and Sedimentation Control Plan for the proposed expansion. In addition, the project applicant shall acquire an NPDES permit, to include a revised Storm Water Pollution Prevention Plan; a Waste Discharge Permit; and a revised Use Permit/Marsh Development Permit prior to initiating landfill expansion activities
46. Prior to initiation of landfill expansion, the landfill gas monitoring and control program shall be expanded as the Phase I and II landfill mound expands, as required by CCR Title 27, Sections 20923 and 20937, in order to control landfill gas generation at the site.

The existing structure monitoring program shall continue with implementation of the Phase II Project. The structure monitoring program shall identify enclosed spaces on, within, or adjacent to the landfill that will be required to be identified in a specific listing

included in updates of the Joint Technical Document and the Landfill Closure Plan. Enclosed spaces include the equipment maintenance building, scalehouse, breakroom, and landfill office building. As the landfill is constructed sufficiently near these facilities, monitoring shall be implemented as part of the structure monitoring program.

The design and operation of the power production facilities shall comply with applicable county building permit requirements and applicable fire code and industrial process equipment standards. In addition, the facility shall comply with BAAQMD permit requirements. The processing system and storage tanks shall be located a sufficient distance from the landfill gas flare to comply with applicable fire protection codes.

47. The project applicant shall comply with the state-mandated performance standards (CCR Title 14) regarding the operation of the expanded composting facility. These standards include regular turning of the compost windrows (twice weekly), minimizing the depth of the piles, and continually monitoring the water content and pile temperature.
48. Consistent with CCR Title 27, Section 20810, the project applicant shall take adequate steps to control or prevent the propagation, harborage or attraction of flies, rodents or other vectors and to the minimize bird problems. In addition, the project applicant shall comply with any enforcement actions identified by the Local Enforcement Agency to control vectors, including implementing more frequent compaction of waste and installation of cover soils, as well as implementation of a licensed exterminator program. The project applicant shall also be required to coordinate with officials at Travis Air Force Base regarding effective bird control methods to be used at the site. This includes the continued use of bird deterrent and harassment techniques, such as the use of pyrotechnic scare devices, noise-scaring devices, and falcons to scare away gulls. An expanded bird control program shall be implemented if gulls become a nuisance, as determined through consultation with Travis Air Force Base staff and the LEA. If mosquitoes become a problem in the onsite sedimentation ponds, as determined by the LEA, the local mosquito abatement district shall be contacted to implement appropriate control measures.
49. The project applicant (PHLF) shall develop and implement a program for coordination among the applicant, the County Department of Resource Management and Travis Air Force Base (TAFB) to exchange information on conditions associated with the presence of ambient bird population associated with PHLF, and to identify the process for developing and implementing bird control strategies.

The program will require each entity to assign a liaison and will identify a method of formal contact among the participating entities. Written records of discussions and coordination efforts shall be prepared and kept on file.

- a. PHLF shall employ the services of a qualified individual to perform the duties of "Bird Coordinator" for the PHLF.
- b. PHLF shall develop a log that will be used to document current conditions associated with bird activity within and adjacent to PHLF. A preliminary document shall be prepared for review by the County Department of Resource Management and TAFB and will be finalized by PHLF pending input from these entities. The document shall include:

1. The project area (i.e., the boundaries of areas controlled by PHLF and TAFB) and its relationship to surrounding land uses.
 2. Project area land uses that may attract birds or provide permanent and seasonal habitats.
 3. General bird use characteristics of the project area.
 4. Protocols for tracking bird species, behavior and occurrence within the project area.
- c. PHLF shall develop and implement a Bird Control Program (BCP) that includes supplemental measures to be implemented dependent upon ambient bird behavior observed and reported by the County Department of Resource Management, TAFB, or PHLF. At a minimum, the BCP shall include the following provisions:
1. Maintenance of the landfill active face to smallest practical size.
 2. Falconry services of a qualified firm or individual shall be obtained and compensated by the PHLF to implement the BCP. Falconry services shall be retained on the basis of BCP implementation requirements and may require full-time (40 hours/week) falconry services with overtime on an as needed basis. Falconry services may not be necessary on a year-round basis.
 3. Any request to change or discontinue falconry services must be with the concurrence of Travis AFB and Solano County Department of Resource Management, after appropriate coordination, and only after a successful test and trial period agreed to in advance by both Travis AFB and Solano County Department of Resource Management.
 4. Protocols for coordination among PHLF, the County Department of Resource Management, and TAFB to exchange information and conditions associated with the presence and nuisance of the ambient bird population associated with the PHLF and to identify the process for developing bird control strategies as may be necessary;
 5. Protocols for establishing an ongoing monitoring and reporting program for use in identifying bird use activities and pest behavior;
 6. Protocols for developing and implementing strategies to address observed pest behavior; and
 7. Protocols for monitoring and reporting the implementation and effectiveness of control strategies. Such protocols should include input from TAFB aircrews using methods agreed to and approved by the TAFB liaison.
- d. PHLF shall develop and distribute quarterly reports assessing the effectiveness of the BCP. These reports shall include data and observations compiled for the quarter, as well as any concerns from TAFB that may have been identified and

reported. The Bird Coordinator shall produce these quarterly reports with concurrence of TAFB and forward them to the County Department of Resource Management. At a minimum, these reports shall include:

1. The adequacy of the adopted abatement measures;
2. The appropriateness of the abatement measures; and
3. The need for new, modified, or different mitigation measures.

If substantive issues or suggestions are identified in any of the quarterly reports or otherwise identified through meetings and discussions with TAFB and/or the County through the coordination protocols, PHLF staff shall conduct focused studies of these subjects and develop additional control strategies as necessary. These control strategies will be presented by the Bird Coordinator for consideration at a subsequent meeting with the County Department of Resource Management and TAFB. Any such additional control strategies shall be implemented as soon as practicable, pending concurrence by the County and TAFB.

50. To ensure that the proposed increased nighttime lighting does not interfere with operations at Travis Air Force Base, lights used during nighttime landfill operations will be placed in an irregular pattern in order not to appear to be a runway. The project applicant shall notify Travis Air Force Base prior to any change in the way lighting is used for nighttime operations. In addition, a maximum of seven construction light plants will be used at the site. These would likely include four for the landfill active area, two in the composting area and one in the solidification mixing area. All lights shall be downcast.
51. For biosolids composting operations, the project applicant shall comply with CCR Title 14, Division 7, Chapter 5, as enforced by the Local Enforcement Agency and the California Integrated Waste Management Board. This includes submitting a permit application under the California Integrated Waste Management Board's tiered permitting program and complying with all of the requirements of the permit. For the use of biosolids in composting, the project applicant shall comply with EPA regulations identified under Standards for the Use or Disposal of Sewage Sludge (Title 40 Code of Federal Regulations [CFR] Part 503, known as the Part 503 regulations) and California State Water Resources Control Board General Order for General Waste Discharge Requirements for the Discharge of Biosolids to Land for Use in Agricultural, Silvicultural, Horticultural, and Land Reclamation Activities in California.
52. The following mitigation measures shall be implemented to minimize air quality-related impacts associated with expanded landfill operations:
 - a. Enclose, cover, water twice daily or apply (non-toxic) chemical suppressants to exposed stockpiles (dirt, sand, etc.)
 - b. Cover all trucks hauling loose materials or require all trucks to maintain at least two feet of freeboard.
 - c. Pave, apply water three times daily, or apply (non-toxic) soil stabilizers on all unpaved access roads and parking areas.

- d. Sweep daily (with water sweepers) all paved access roads and parking areas.
- e. Sweep streets daily (with water sweepers) if visible loose materials are carried onto adjacent public streets.
- f. Limit traffic speeds on unpaved roads to 15 miles per hour.
- g. Install sandbags or other erosion control measures to prevent silt runoff to public roadways.
- h. Replant vegetation in disturbed areas as quickly as possible.
- i. All onsite unpaved roads shall be effectively stabilized for dust emissions using water or chemical stabilizer/suppressant.
- j. All land clearing, grubbing, scraping, excavation, land leveling, grading, and cut and fill activities shall be effectively controlled for fugitive dust emissions by utilizing application of water or by pre-soaking.
- k. All operations shall limit or expeditiously remove the accumulation of mud or dirt from adjacent public streets.
- l. Following the addition of materials to, or the removal of materials from, the surface of outdoor storage piles, said piles shall be effectively stabilized for fugitive dust emissions by utilizing sufficient water or chemical stabilizer.
- m. The excavator shall use either water or petroleum-based (or other equivalent performance) palliatives (approved for use by the BAAQMD) as a dust control measure.
- n. Suspend excavation and grading activity associated with site construction operations when winds exceed 20 mph.
- o. Limit area subject to excavation, grading, and other construction activity at any one time.
- p. When shredding or chipping of wood or concrete crushing is practiced at the site, the shredding and crushing units shall be equipped with water sprays to provide control of dust. The amount of water used shall be regulated and minimized to avoid runoff, ponding, or leaching of the wood materials.
- q. Compost piles shall be water 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 shall be reduced or cease as appropriate until such time that adequate water is available.
- r. New sources of waste shall be evaluated for potential dust emissions. The specific waste handling protocols shall identify the type of dust control method that will be used. Examples include moistening the waste at the point of

generation or placing the material in plastic bags. The case-specific protocols shall 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 shall 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 site Air Permit shall be made, if deemed necessary by the BAAQMD.

Applicant shall comply with the requirements of the revised BAAQMD permit for the proposed composting operations, landfill gas power plant facility and the landfill gas collection and control system at the site. In addition, the project applicant shall comply with the requirements of a full Composting Facility Permit for the site including managing composting operations to minimize the generation of ROG emissions. This shall include monitoring the water content, pile temperature, and turning frequency in order to ensure that composting operations are effectively managed.

53. In order to minimize odor generation at the adjacent residences, all composting operations at the site shall be relocated from the northern site boundaries to the center or southern portions of the site. Sludge processing and storage operations, and the mixing and storage of high-moisture content materials combined with dry powdery materials, shall also only occur in the center or southern portions of the site.

In addition, the project applicant shall modify the Odor Impact Minimization Plan submitted to the Local Enforcement Agency in April 2003 to include odor control measures for the 24-hour operation of the working face, the land application of biosolids and the use of seasonal sludge-drying ponds. Odor control measures for the working face could include increasing the frequency of cover application, as necessary to control objectionable odors. Odor control measures for the sludge handling processes would include the use of topical applicants as an odor neutralizer at the close of sludge spreading or borrowing operations. The topical applicant would consist of a potassium solution applied to wet sludge as a topical odor neutralizer.

If sludge odor problems persist, receipt of incoming sludge shall be discontinued and the existing, onsite source of the odor shall be landfilled and covered with soil.

The project applicant shall also implement the following odor complaint response protocol:

Complaint Response Protocol

- a. Site receives complaint either verbally (phone call) or in written form.
- b. During regular business hours (8:00 AM to 5:00 PM), the Solano County Department of Resource Management shall be notified by landfill personnel at 707/784-6765 as soon as an odor complaint is received. An investigation will be conducted and an Odor Complaint Report will follow within 24 hours of receipt of initial complaint.
- c. After business hours, odor complaints received by landfill personnel shall be forwarded to the Department of Resource Management at 1-866-329-0932 as soon as they are received.
- d. Odor complaints can also be logged in at <http://www.solanocounty.com/complaints>.

- e. As soon as practicable, Solano County Department of Resource Management personnel will visit the complainant site to verify the nuisance nature of the complaint and determine if it is a short term, long term, or consistent problem.
 - f. Odor complaints investigation will be conducted as follows:
 - 1. Determine if odor is detectable by site personnel at off site complaint location. If not detectable, complete investigation by submitting Odor Complaint Report to Solano County Resource Management Department within 24 hours of receiving the complaint.
 - 2. If detectable at the complainant's site or off-site, determine the source.
 - 3. Determine if source and nature of odor is short term or long term duration.
 - 4. If short term, abate the source of odors immediately and within 24 hours and complete investigation by submitting Odor Complaint Report to Solano County Department of Resource Management within 24 hours of receiving the complaint. Continue to monitor and abate off-site odors.
 - 5. If odors reoccur and become a long-term consistent problem, determine extent and nature of off site odors. If odor source is related to weather or operations, abate the problem by taking appropriate adjustments to storage, process control, and facility improvements will be made to resolve the problem. Submit Odor Complaint Report to Solano County Department of Resource Management within 24 hours of receiving the complaint outlining the odor source and steps being taken to abate the odors. Continue to monitor and abate off-site odors.
 - g. If odors reoccur and become a long-term consistent problem, as determined by Solano County LEA personnel, an odor abatement system will be employed. The system would consist of the use of topical applicants as an odor neutralizer during sludge spreading or harrowing operations. The topical applicant would consist of a potassium permanganate solution applied to wet sludge as topical odor neutralizer.
 - h. If odor problems persist after the implementation of thee above-noted odor control measures, the LEA may require that the receipt of the incoming sludge be discontinued and existing, on-site sources of odor be land filled and covered with soil, or that the applicant enclose the composting operation inside a building.. After odor remediation is successful, the site may resume sludge receipt and drying operations.
54. In order to shield the active landfill working face from off the project site, a soil-covered berm shall be constructed on the northwestern and northern edge of the active working face prior to filling areas visible from residential areas to the northwest and SR 12 to the north. The berm shall be of sufficient height and length (approximately 10 feet in height and 50 feet in length) to ensure that the active working face is not visible from residential areas to the northwest or SR12 to the north.
55. To ensure that the proposed increased nighttime lighting does not cause adverse glare for residents, lights used during nighttime landfill operations will not be colored, and will be shielded and directed downward to reduce glare. In addition, a maximum of seven construction light plants will be used at the site. These would likely include four for the landfill active area, two in the composting area and one in the solidification mixing area. The permittee shall coordinate with neighbors in the placement of nighttime lighting in order to eliminate any impact to the neighbors.

56. In order to minimize the visual impacts associated with the installation of four metal water storage tanks along the peak of the northern ridgeline, an earthen berm shall be constructed along the northern edge of the water tanks prior to their installation. The berm shall be of sufficient height and length to ensure that the water tanks are not visible from SR12. The berm shall be vegetated with non-native grasses to ensure that it visually blends with the surrounding vegetation.
57. The project applicant shall update its current litter control program to ensure compliance with CCR Title 27, Section 20830. The updated program shall take into account the anticipated increase in waste and composting receipts and shall indicate how litter will be controlled at the recyclables handling area and public unloading area. Measures may include, but are not limited to, the following:
- use of additional portable litter fencing and increasing the height of the existing fencing at the landfill's working face and around the recyclables handling area, and
 - increasing the staff of the daily cleanup crew to adequately collect both on- and off-site litter.
 - The updated litter control plan shall be submitted to the LEA for approval prior to project implementation.
58. The project applicant shall implement the following measures for cultural resources discovered during project implementation activities.
- In the event that cultural or paleontological resources are encountered during project construction, all earth-moving activity in the specific construction area shall cease until the applicant retains the services of a qualified archaeologist or paleontologist. The archaeologist or paleontologist shall examine the findings, assess their significance, and offer recommendations for procedures deemed appropriate to either further investigate or mitigate adverse impacts on those cultural or paleontological archaeological resources that have been encountered (e.g., excavate the significant resource).
 - If human bone or bone of unknown origin is found during project construction, all work shall stop in the vicinity of the find and the County Coroner shall be contacted immediately. If the remains are determined to be Native American, the Coroner shall notify the Native American Heritage Commission. The Native American Heritage Commission shall notify the person considered to be the most likely descendant. The most likely descendant will work with the project applicant to develop a program for the re-internment of the human remains and any associated artifacts. No additional work shall take place within the immediate vicinity of the find until the identified appropriate actions have been completed.
 - Project personnel shall not collect or retain artifacts found at the site. Prehistoric resources may include, but would not be limited to, chert or obsidian flakes; projectile points; mortars and pestles; and dark friable soils containing shell and bone, dietary debris, scorched rock, or human remains. Historic resources may include, but would not be limited to, stone or adobe foundations or walls; structures and remains with square nails; and refuse deposits, including those in old wells and privies.
59. Applicant shall adhere to all requirements of the relevant permitting agencies, including the California Integrated Waste Management Board, Bay Area Air Quality Management District, California Regional Water Quality Control Board, US Army Corps of Engineers, US Fish and Wildlife, and the California Department of Fish and Game.

60. Applicant shall track recyclables non-recyclables separately and report these numbers to the County of Solano Resource Management Department. Reporting must satisfy AB 939 diversion and SWFP requirements for tonnages.
61. Recyclables shall not be included in the daily tonnage limits.
62. Consistent with CCR Title 27, Section 20810, the project applicant shall take adequate steps to control or prevent the propagation, harborage or attraction of flies, rodents or other vectors and to the minimize bird problems. In addition, the project applicant shall comply with any enforcement actions identified by the Local Enforcement Agency to control vectors, including implementing more frequent compaction of waste and installation of cover soils, as well as implementation of a licensed exterminator program. The project applicant shall also be required to implement the Bird Strike Abatement Program outlined in the MMRP prior to exercising the modified permit. This includes the continued use of bird deterrent and harassment techniques, such as the use of pyrotechnic scare devices, noise-scaring devices, and non-native falcons to scare away birds. An expanded bird control program shall be implemented if birds become a nuisance, as determined through consultation with Travis Air Force Base staff and Solano County.
63. Prior to any new activities authorized by these modifications of June 2009 to the Use Permit/Marsh Development Permit No. U-88-33/MD-88-09, the permittee shall submit an adjustment to the surety bond or other guarantee acceptable to the County of Solano, if deemed necessary by the County, to cover the portion of the cost estimate described in condition no. 67 that corresponds to the mitigation associated with said new activities.
64. During nighttime operations, a maximum of seven (7) floodlights may be used. These floodlights shall be shielded and downcast towards to focus on the work area while not creating off-site light or glare impacts. The lights shall be placed in an irregular manner so as not to be confused with the landing strips at TAFB. The site shall be open to Department of Fish and Game (DFG) personnel during nighttime operations to monitor wildlife activity.
65. Any new storage of fuel or other hazardous material shall be 1) stored in underground tanks, 2) provided that the quantity of such materials shall not exceed 2,000 gallons.
66. The permittee(s) shall implement the Mitigation Monitoring and Reporting Program (Contained within the FEIR) and any future modifications thereof, in order to mitigate or avoid the significant environmental effects identified in the FEIR. Failure to implement a mitigation measure to reduce impacts could result in revocation of or modification to the permits.
67. Prior to the issuance of the revised Use Permit/Marsh Development Permit No. U-88-33/MD-88-09 of June 2009 by signature of the Director of the Department of Resource Management, the permittee shall submit a cost estimate to the County of Solano for the mitigation and monitoring reporting program approved by the Board on June 9, 2009.
68. Prior to the issuance of Revised Use Permit/Marsh Development Permit No. 88-33/MD-88-09 of June 2009 by signature of the Director of the Department of Resource Management, the permittees shall upgrade their record keeping so that both the LEA and the Waste Board may accurately track daily, weekly and monthly tonnage amounts

and type in a timely and on-demand manner on-site. The type and manner of this upgrade is subject to approval by the LEA.

69. Suisun Marsh Public Education Project Fee. As additional mitigation for potential impacts of the Project within the secondary management area of the Suisun Marsh, which the Board finds are beyond the requirements of the California Environmental Quality Act (CEQA) as identified in the environmental impact report for the Project prepared pursuant to CEQA, the Permittee shall pay to the County of Solano a Suisun Marsh Public Education Project Fee (Suisun Marsh Fee) in the amount of \$.15 per ton of solid waste disposed of in the Potrero Hills Landfill. The Suisun Marsh Fee shall not apply to any materials that are recycled or beneficially re-used at the Permittee's landfill facility. The Suisun Marsh Fee shall be paid to the County on a quarterly basis, with the payment of the fee due on the 15th day of the month following the close of the quarter.

The Suisun Marsh Fee shall be used for the following purposes and in the following manner:

- a. Suisun Marsh Public Education Project Advisory Board. The Board of Supervisors hereby creates the Suisun Marsh Public Education Project Advisory Board (Advisory Board), which Advisory Board shall be created to assist the Board of Supervisors in the administration and implementation of the programs described in this condition which are created by the establishment of the Suisun Marsh Fee. The Advisory Board shall consist of the following seven (7) members:
1. The two (2) members of the Solano County Board of Supervisors that serve as the primary and alternate representatives, respectively, on the San Francisco Bay Conservation and Development Commission (BCDC);
 2. One (1) member appointed by BCDC;
 3. One (1) member appointed by the Permittee;
 4. One (1) member appointed by the Fairfield-Suisun Unified School District (District);
 5. One (1) member appointed by the Solano County Office of Education; and
 6. One (1) at-large member appointed by the Solano County Board of Supervisors.

The Advisory Board shall meet at least once annually, and more frequently as the Advisory Board may deem appropriate, to the discharge of its obligations to provide advisory input for the development of the programs described in b. and c. below. The Advisory Board shall also have ongoing oversight responsibility to ensure that all funds described herein are well-spent and used only for the purposes and in the manner outlined below.

- b. Public Education Project. The Suisun Marsh Fee shall be used solely for the purpose of establishing the Suisun Marsh Public Education Project (PEP), which the Board of Supervisors intends shall be a collaborative effort between the County Board of Supervisors, the District, and the Solano County Office of Education. The purpose of the PEP is to facilitate establishment of a course of study devoted to the Suisun Marsh ecosystem within the District, to provide a curriculum to explore, on a scientific basis, the Suisun Marsh. The PEP funds shall be maintained by the County as a segregated fund to be used for the purposes outlined herein.

- c. Allowed Uses of Suisun Marsh Fee Funds. The Suisun Marsh Fee funds collected pursuant to this condition shall be used solely for the following PEP purposes as determined by the Advisory Board:
 1. Curriculum Development. The Suisun Marsh Fee funds may be used for development of a PEP curriculum of study at the high school or community college level to provide for a course of study in the environmental sciences devoted to study of the Suisun Marsh ecosystem. Curriculum development may occur together or separately in the form of an academy, a course or courses at Solano Community College, or as a course of study as part of the International Baccalaureate Program administered by the District.
 2. Docent Program. Development of a Docent Program to fund training and establishment of docents, who would be available to provide historical/informational tours of the Suisun Marsh.
 3. Classroom Equipment and Resources. The purchase of classroom equipment and other educational resources necessary for curriculum development and/or the Docent Program, as determined by the Advisory Board.

70. In the event of future diminishing landfill capacity, priority for landfill space shall be given to the disposal needs of Solano County entities, including the needs of unincorporated Solano County, Solano County cities, Solano County businesses, and Solano County residents.

71. In order to exercise Use Permit 88-33/Marsh Permit 88-09, Major Revision No. 2, the permittee shall obtain a Notice to Proceed from the Director of the Department of Resource Management. One year after receipt of such Notice to Proceed, the Use Permit shall be reviewed by the Planning Commission to verify whether levels of odors, litter, and birds have been reduced below levels existing in September 2005. Odor levels shall be quantified using methodologies approved by the Department of Resource Management, based on the recommendations of a compost landfill advisory committee to be organized for the purpose of advising on compost landfill issues. If odor, litter, or bird levels have not been reduced below September 2005 levels, the Planning Commission may impose additional permit conditions that will reasonably achieve such reductions.

72. The Permittee shall fund and participate in a citizens advisory committee, to be organized by the Department of Resource Management, for the purpose of advising on solid waste issues.

73. A compliance officer shall be designated for all permitted solid waste facilities on site. It shall be the responsibility of this person to prevent the off-site migration of any airborne contaminants including but not limited to dust, odors, and PM10s, as well as litter. The responsibilities of this person shall include a monitoring and record keeping program to:
 - i. Screen all loads for potential creation of nuisance conditions and record the actions taken by the operator to immediately abate those conditions.
 - ii. Monitor and record the source of the load (e.g, solid waste, compostable materials, C & D, Alternative Daily Cover (ADC), biosolids, etc.).

- iii. Monitor and record the destination of the load or its use on site (e.g., landfilled, used for ADC, composted, etc.), or other outcome (e.g., load refused).
 - iv. Record the specific details of each load, including tonnage, type of material, and time received. Specifically record time of day of receipt of any particularly odorous load, and the time of day of disposition, e.g., time landfilled and covered.
 - v. Monitor and record wind and weather conditions throughout the hours of operation, noting times of day conditions change and any modifications to site operations to prevent nuisance conditions.
 - vi. Ensure that all food waste feedstock is incorporated within 24 hours to prevent odors.
 - vii. Ensure compliance with all requirements of any applicable entitlements regulating the generation of airborne contaminants and litter, including but not limited to Solid Waste Facility Permit, Standardized or Full Composting Permit, Odor Impact Mitigation Protocols, Air Quality District Permit to Operate, etc.
74. Any emissions reduction credits required as a condition of permits issued by the BAAQMD due to any exceedance of air quality baseline conditions shall, to the greatest extent possible, be obtained from sources within Solano County. The permittee and Solano County shall coordinate with the BAAQMD in order to identify such sources available for purchase.
75. The permittee shall check for and pick up litter on a weekly basis, or more frequently if deemed necessary by Solano County, at the following locations:
- a. All of Scally Road.
 - b. All of Kildeer Road
 - c. State Highway 12 from 0.4 miles west of Scally Road east to Nurse Slough Lane
 - d. Grizzly Island Road from 0.6 miles west of Joyce Island Road to 1.1 miles east of Joyce Island Road.
- The site, roads listed above, and off-site properties along said roads shall be kept as litter free as possible. The County shall not be charged for disposal of litter or trash picked up as a result of these activities.
76. The permittee shall control litter by implementing the following measures:
- a. The permittee shall install litter control fences to address windblown litter. Fences shall be of sufficient height, length, and number, to contain litter on site. All fencing provisions of the April 19, 2005 High Wind Operations Management Plan included as Attachment No. 8 to the Planning Commission staff report of May 5, 2005, as well as all other litter control provisions included in said plan, shall be implemented.
 - b. Litter control shall be the responsibility of the permittees compliance officer and shall be monitored by the LEA to ensure compliance with State Minimum Standards and the requirements of this Use Permit. A plan for litter control, by means of fencing, crews, adjustment of the size of working the face and use of soil cover shall be detailed in a Litter Management Plan to be included in the JTD to be adopted subsequent to approval of this Use Permit.

77. The project's increased ROG and NOx emissions shall be offset consistent with the requirements of BAAQMD Regulation 2, Rule 2-302. BAAQMD Regulation 2, Rule 2-302 Potrero Hills Landfill Recirculated Draft EIR EDAW Solano County II-27 Changes to the Draft EIR requires that the increase in both ROG and NOx emissions attributed to the project be offset before a permit authorizing the proposed landfill expansion, including a new flare, can be issued. The implementation of this rule would effectively reduce the project's ROG and NOx emissions to well below the identified significance thresholds.
78. Improve the perimeter probe monitoring system:
- a. Decrease the probe spacing from the 1996 approved 2,000 feet level to a maximum of 1,000 feet;
 - b. Where practical, installation of probes closer to the actual boundary of the waste disposal area rather than the landfill property boundary in order to more quickly identify gas migration before it migrates to a more extensive area. In some cases, the property boundary will be used because of the proximity of the waste to landfill boundary and in some cases, operational barriers may dictate the property boundary as the final probe location.
79. Install the gas collection system early in active cells, in advance of the timeframe required by BAAQMD and Title V regulatory requirements:
- a. Collect gas from the leachate recovery system in early stages of cell development for the expansion area;
 - b. Install gas collectors during filling or at the earliest opportunity when an area reaches final or intermediate grade.
3. Implement reasonable and applicable best management practices (BMPs) set forth in the upcoming California Integrated Waste Management Board (CIWMB) guidance with respect to administering the AB 32 regulations.
4. Implement additional early action measures for landfills imposed by the CARB, including early installation of control measures beyond regulatory deadlines wherever feasible.

This permit shall not take effect unless permittee signs in the space below within thirty (30) days after the date of granting hereof.

I agree to conform fully to this use permit and all of the foregoing conditions.

Permittee's Signature

Date

Permittee's Name (Please Print)

Address

City

Zip