

RESPONSE TO THE SCIENTIFIC PANEL REVIEW REPORT

Chapter 3

**VEGETATION RESOURCES AND
GRAZING MANAGEMENT**

**POTRERO HILLS LANDFILL PHASE II EXPANSION
SOLANO COUNTY, CALIFORNIA**

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San Francisco Bay Conservation and Development Commission

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TABLE OF CONTENTS

| | <u>Page</u> |
|---|-------------|
| 1.0 INTRODUCTION..... | 3-1 |
| 1.1 PROJECT BACKGROUND | 3-2 |
| 1.2 ORIGINAL MITIGATION PROPOSAL (MMP)..... | 3-2 |
| 1.3 REVISED MITIGATION PROPOSAL | 3-5 |
| 2.0 METHODS | 3-7 |
| 2.1 VEGETATION RESOURCES AND GRAZING MANAGEMENT | 3-7 |
| 2.2 SPRING BRANCH CREEK | 3-7 |
| 3.0 RESPONSES | 3-9 |
| 3.1 IMPACT EVALUATION | 3-9 |
| 3.2 MITIGATION EVALUATION..... | 3-18 |
| 3.3 SCIENTIFIC PANEL REVIEW REPORT APPENDICES | 3-29 |
| 3.3.1 Appendix D2a Clarifications | 3-29 |
| 3.3.2 Appendix D2b Clarifications | 3-32 |
| 4.0 REFERENCES..... | 3-33 |
| 4.1 LITERATURE REVIEWED | 3-33 |
| 4.2 LITERATURE CITED | 3-33 |
| 4.3 PERSONAL COMMUNICATIONS..... | 3-34 |
| 5.0 REPORT PREPARATION | 3-35 |
| 5.1 LSA ASSOCIATES, INC..... | 3-35 |
| 5.2 JANE VALERIUS ENVIRONMENTAL CONSULTING..... | 3-35 |
| 5.3 ENVIRONMENTAL STEWARDSHIP AND PLANNING, INC..... | 3-35 |

APPENDIX. Definitions of Range Management Terms

FIGURES

| | |
|--|------|
| Figure 1: Potrero Hills Landfill Parcels | 3-3 |
| Figure 2: Special-Status Plant Locations – Phase II Expansion Parcel | 3-13 |
| Figure 3: Special-Status Plant Locations - Director’s Guild Parcel | 3-15 |

TABLES

| | |
|--|-----|
| Table A: Mitigation Acreage and Type by Parcel – Original (2006) MMP Version | 3-5 |
| Table B: Revised Mitigation Acreage and Type by Parcel – Increased Griffith Ranch Plan | 3-6 |

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1.0 INTRODUCTION

As part of the San Francisco Bay Conservation and Development Commission's (BCDC) review of the Marsh Development Permit for the Phase II Potrero Hills Landfill (PHLF) expansion, an independent review was conducted by a panel of scientists of the biological resource impacts and mitigation for the proposed project (Airola et al., 2007). Chapter 3 of the review document provides the results of an analysis, conducted by Pamela C. Muick, Ph.D., of the impacts of the Phase II expansion project on vegetation resources and mitigation measures proposed by PHLF. As part of the proposed mitigation for the PHLF Phase II expansion project (see full mitigation proposal below for more details), a draft Grassland Management Plan (GMP) was prepared by LSA Associates on March 10, 2006 (LSA, 2006a). The primary goal of this plan is to maintain and enhance biodiversity on the mitigation parcels, using livestock grazing and other management activities.

Dr. Muick reviewed the draft GMP (LSA, 2006a) and provided several comments in a July 31, 2006, conference call with the preparer, Richard Nichols, M.S. (licensed as Certified Rangeland Manager #45 by the State Board of Forestry). During the call, Dr. Muick and Mr. Nichols agreed on several points that would be addressed in a revision to the draft GMP. These points of agreement included specifying additional range improvements (fences, water sources) to improve livestock grazing distribution, removal of trash and metallic (but not woody) debris, fencing of seasonal wetlands for special management, providing more specific biodiversity and invasive weed control goals and actions, specifying grazing lease criteria, and providing more information based on additional interviews with grazing operators. Additional comments from Dr. Muick included extending the GMP to the capped landfill and concerns over the feasibility of livestock grazing on the Griffith Ranch because of the PHLF proposal to use part of it for energy production. These comments were not addressed in the revised GMP because they were beyond the scope of the GMP, which was intended solely to address the mitigation lands proposed by PHLF. Requirements for revegetation of the landfill cap are specified by the California Integrated Waste Management Board and Regional Water Quality Control Board and will be implemented according to the descriptions contained in the PHLF Joint Technical Document and Final Closure Plan.

This conversation was followed by provision of a draft scientific review document dated August 28, 2006 (Airola et al., 2006). In Chapter 3 of that document, Dr. Muick commented extensively on issues that were not discussed previously because they were beyond the scope of the GMP. These comments were beyond the scope of the GMP because they addressed: (1) other documents such as the Mitigation Monitoring Plan and Environmental Impact Report, (2) habitats other than grasslands, and (3) other lands not proposed for mitigation. Accordingly, it was not appropriate to address these comments in the revised GMP, but they are addressed below in response to the final review document (Airola et al., 2007). The comments that Dr. Muick acknowledged were addressed in the revision of the GMP dated February 5, 2007 (LSA, 2007) are not discussed further.

1.1 PROJECT BACKGROUND

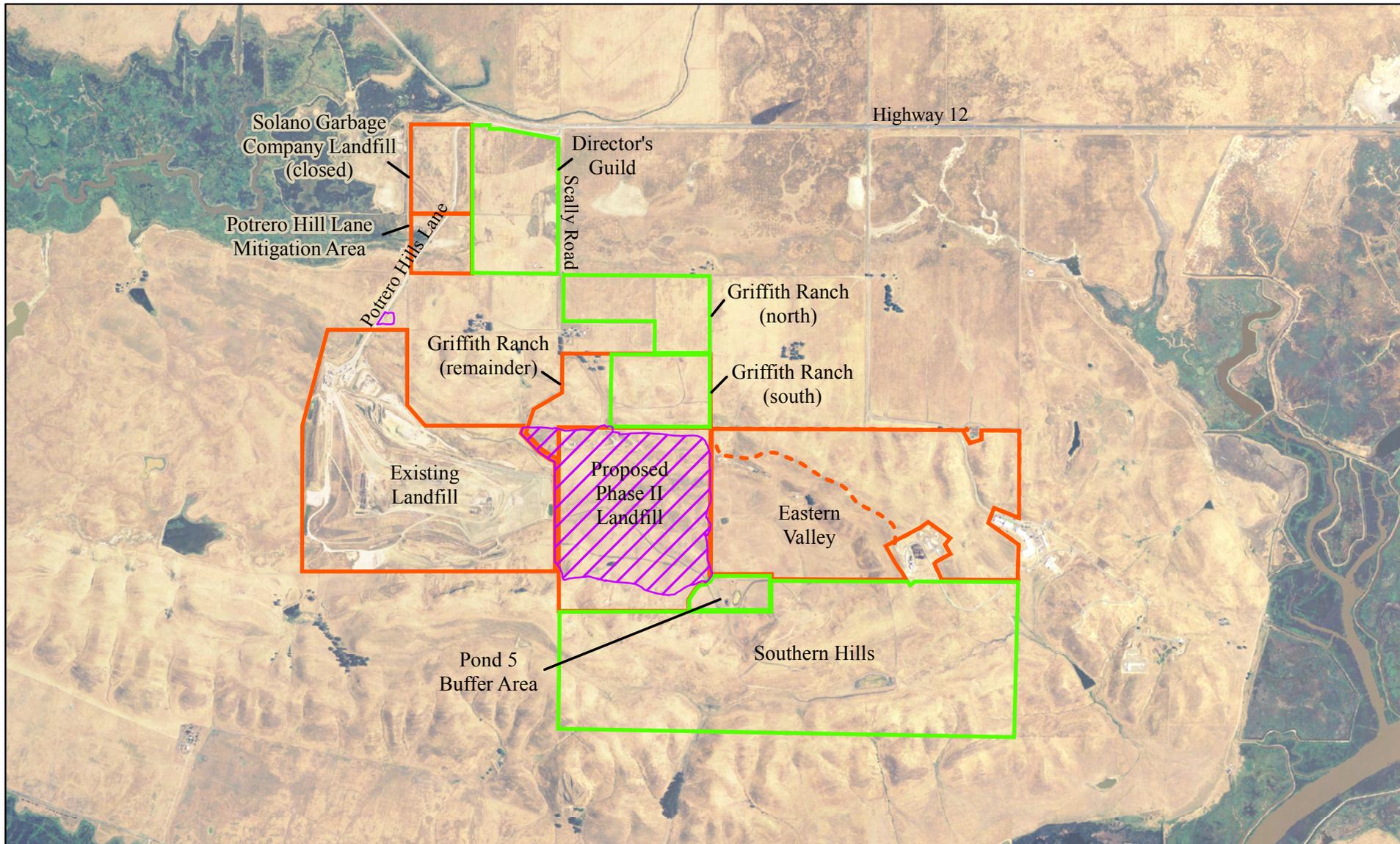
Figure 1 shows the layout of the Phase I (current) landfill, the footprint of the proposed Phase II impact area, and the proposed mitigation lands. The proposed landfill expansion will result in the conversion of 167.63 acres¹ of primarily non-native grassland, which includes the filling approximately 2.42 acres of Section 404 jurisdictional wetlands and other waters of the U.S., 0.076 acre of isolated waters of the State, and 0.61 acre of pond habitat. All mitigation lands proposed as part of the project will be managed for the benefit of plant and wildlife habitat in perpetuity through a conservation easement and will have a management endowment.

1.2 ORIGINAL MITIGATION PROPOSAL (MMP)

The original mitigation proposal described in the mitigation and monitoring plan (MMP) for the project (LSA and ESP, 2006) and analyzed by the scientific review panel included the following mitigation components:

- Preservation of upland habitat totaling 517.08 acres on the Southern Hills, Pond 5 Buffer, Griffith Ranch, and Director's Guild parcels,
- Preservation of 0.79 acres of existing California tiger salamander (CTS) breeding habitat and 8.83 acres of potential CTS breeding habitat on the Southern Hills, Pond 5 Buffer, and Director's Guild parcels (9.62 acres total),
- Creation of an additional 0.73 acres of CTS breeding habitat on the Southern Hills (1 pond) and Griffith Ranch (1 pond) sites, and restoration of 0.42 acre of potential CTS breeding habitat in the playa pool on Director's Guild,
- Preservation of 5.52 acres of seasonal wetland on the Southern Hills and Griffith Ranch parcels, and 53.10 acres on the Director's Guild parcel,
- Creation of 4.07 acres of seasonal wetlands on the Griffith Ranch parcel,
- Preservation of 1.86 acres of waters of the U.S. on the Southern Hills and Director's Guild parcels, and
- Creation of 1.80 acres of waters of the U.S. on the Griffith Ranch and Director's Guild parcels.

¹ The size and configuration of the Phase II landfill has changed since the preparation of BCDC's Final Scientific Review Report. In the Final Scientific Review Report, the landfill foot print and adjacent impacted area was designed to be 178.34 acres; however, the current design will only result in the conversion of 167.63 acres.



-  PROPOSED PHASE II IMPACT AREA
-  MITIGATION AREA
-  OTHER LAND OWNED BY LANDFILL
-  SURVEYS ON THIS PARCEL LIMITED TO WEST OF DASHED LINE

FIGURE 1

*Potrero Hills Landfill
Phase II Expansion*

Potrero Hills
Landfill Parcels

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Table A summarizes the total area of upland and aquatic mitigation by parcel as outlined in the original MMP.

Table A: Mitigation Acreage and Type by Parcel – Original (2006) MMP Version

| | CTS Upland Habitat | | CTS Pond Habitat | | Seasonal Wetlands | | Waters of the U.S. | | Total (acres) |
|--------------------------|--------------------|---------------|------------------|---------------|-------------------|--------------|--------------------|---------------|---------------|
| | Preserve | Preserve | Create | Preserve | Create | Preserve | Create | | |
| Southern Hills | 421.11 | 0.34 | 0.35 | 5.25 | 0.00 | 1.65 | 0.00 | 428.70 | |
| Pond 5 Buffer Area | 17.65 | 0.45 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 18.10 | |
| Griffith Ranch | 57.85 | 0.00 | 0.38 | 0.27 | 4.07 | 0.00 | 1.03 | 63.60 | |
| Director's Guild | 20.47 | 8.83 | 0.42 | 53.10 | 0.00 | 0.21 | 0.77 | 83.80 | |
| Total | 517.08 | 9.62 | 1.15 | 58.62 | 4.07 | 1.86 | 1.80 | 594.20 | |
| Mitigation Ratio* | 2.1:1 | 15.8:1 | 1.9:1 | 28.5:1 | 2.0:1 | 4.2:1 | 4.1:1 | | |

*preserved/created: impacted

Total Impact Area = 244.93 acres, Wetland Impact area = 2.42 acres, Pond Impact Area = 0.61 acres (Ponds 1 and 4), Upland Impact Area = 241.9 acres

1.3 REVISED MITIGATION PROPOSAL

Since the preparation of the 2006 MMP, PHLF has made modifications to the location of the power plant and sedimentation basin on Griffith Ranch (*i.e.*, the proposed relocation of a landfill gas-powered electrical generation facility and sedimentation basin from the Griffith Ranch to the existing and proposed landfill areas). As a result of these modifications, additional areas will be incorporated into the mitigation lands for this project, namely additional upland habitat in the southern portion of the Griffith Ranch parcel and creation of an additional CTS breeding pond at the former power plant site. The revised project description and mitigation plan will be detailed in a revised mitigation and monitoring plan (to be developed in response with PHLF's formal consultation with USFWS). This revised plan has not been reviewed by the scientific review panel. Based on this revised project description and mitigation plan, the mitigation components would be as follows:

- Preservation of upland habitat totaling 565.29 acres on the Southern Hills parcel, Pond 5 Buffer, Griffith Ranch and Director's Guild parcels;
- Preservation of 0.79 acre of existing CTS breeding pond and 8.83 acres of potential breeding pond habitat on the Southern Hills parcel, Pond 5 Buffer, and Director's Guild parcel (9.62 acres total);

- Creation of an additional 1.08 acres of breeding pond on the Southern Hills (1 pond) and Griffith Ranch (2 ponds) parcels, and restoration of 0.42 acre of potential breeding pond in the playa pool on the Director’s Guild parcel;
- Preservation of 5.52 acres of seasonal wetland on the Southern Hills and Griffith Ranch parcels, and 53.10 acres on the Director’s Guild parcel;
- Creation of 4.07 acres of seasonal wetlands on the Griffith Ranch parcel;
- Preservation of 1.86 acres of waters of the U.S. on the Southern Hills and Director’s Guild parcels, and;
- Creation of 1.80 acres of waters of the U.S. on the Griffith Ranch and Director’s Guild parcels.

Table B summarizes the total area of upland and aquatic mitigation acreage by parcel for the revised mitigation plan.

Table B: Revised Mitigation Acreage and Type by Parcel – Increased Griffith Ranch Plan
 (Highlighted cells reflect changes from the values in Table A. Note that the highlighted cells reflect increased mitigation areas/mitigation ratios.)

| | CTS Upland Habitat | | CTS Pond Habitat | | Seasonal Wetlands | | Waters of the U.S. | | Total (acres) |
|--------------------------|--------------------|---------------|------------------|---------------|-------------------|--------------|--------------------|---------------|---------------|
| | Preserve | Preserve | Create | Preserve | Create | Preserve | Create | | |
| Southern Hills | 421.11 | 0.34 | 0.35 | 5.25 | 0.00 | 1.65 | 0.00 | 428.70 | |
| Pond 5 Buffer Area | 17.65 | 0.45 | 0.00 | 0.00 | 0.00 | 0.00 | 0.00 | 18.10 | |
| Griffith Ranch | 106.06 | 0.00 | 0.73 | 0.27 | 4.07 | 0.00 | 1.03 | 112.16 | |
| Director’s Guild | 20.47 | 8.83 | 0.42 | 53.10 | 0.00 | 0.21 | 0.77 | 83.80 | |
| Total | 565.29 | 9.62 | 1.50 | 58.62 | 4.07 | 1.86 | 1.80 | 642.76 | |
| Mitigation Ratio* | 3.4:1 | 15.8:1 | 2.5:1 | 28.5:1 | 2.0:1 | 4.2:1 | 4.1:1 | | |

* preserved/created:impacted

Total Impact Area = 167.63 acres, Wetland Impact area = 2.42 acres, Pond Impact Area = 0.61 acres (Ponds 1 and 4), Upland Impact Area = 164.60 acres

2.0 METHODS

2.1 VEGETATION RESOURCES AND GRAZING MANAGEMENT

The primary preparer of responses regarding the grazing management issues, Richard Nichols is licensed by the State Board of Forestry as Certified Rangeland Manager #45. Mr. Nichols conducted a literature review of pertinent information (see Section 4.0 References). He conducted additional interviews with grazing lessees of the Griffith Ranch, Director's Guild, and Southern Hills parcels regarding past livestock operations, recent actual livestock use, and range improvement conditions and needs (see Section 4.3, Personal Communications below). A range analysis was conducted to determine preliminary livestock carrying capacity levels (see Appendix for definitions). Rangeland forage production estimates (pounds of dry matter per acre) were obtained from Ecological Site Descriptions from the Solano County soil survey (Soil Conservation Service, 1977) which are groupings of soil types with similar productivity levels. Ecological Sites were mapped and acreages calculated for each grazing unit after grouping applicable soil types from digitized maps of the Soil Survey (Soil Conservation Service, 1977). An Excel spreadsheet was then used to calculate carrying capacity based on total forage production for each Ecological site and accounting for a target residual dry matter level of 750 pounds per acre and consumption of 780 pounds of dry matter per animal unit month.

Senior botanist, Eva Buxton, has conducted botanical surveys on the PHLF parcels since 1998. She provided input to the vegetation resources section based on her personal knowledge of the site and professional experience dealing with issues related to sensitive plants and habitats.

2.2 SPRING BRANCH CREEK

The information presented in this response regarding the Spring Branch Creek was prepared by consulting botanist Jane Valerius, Principal of Jane Valerius Environmental Consulting. The evaluation of the creek and wetlands in the Potrero Hills Valley is based on her personal experience of conducting plant surveys and delineations of wetlands and waters of the U. S. for the Phase II Expansion Area, the Eastern Valley, Southern Hills, Griffith Ranch and Director's Guild parcels. Ms. Valerius' initial site experience on Phase II began in the year 2000. She conducted surveys for rare plants with Ms. Dianne Lake, botanist, from March to August 2000. In June 2000, she assisted in the delineation of wetlands and waters of the U.S. with Lane Carr with LSA for the Phase II Expansion Area. In August 2003, she assisted in the delineation of wetlands and waters of the U. S. for the Eastern Valley and Southern Hills parcels with LSA wetland specialist Chip Bouril. In the spring and summer of 2004, she assisted in surveys for rare plants for the Eastern Valley and Southern Hills with other LSA botanists.

Most recently Ms. Valerius conducted a site visit to review the Phase II Expansion Area and Eastern Valley with Mr. Chip Bouril on July 31, 2007 to review the watercourses and wetland areas on these parcels. The specific focus was the Spring Branch Creek watershed. The purpose of the site visit was to review the comments made by Dr. Pamela Muick in the scientific review panel report (Airola et al., 2007).

During the July 2007 field surveys, Ms. Valerius and Mr. Bouril walked the Phase II Expansion Area and the Eastern Valley area and conducted a delineation of wetlands and waters of the U.S. using the Corps' new Arid West Supplement (U.S. Army Corps of Engineers, 2006). The Corps' Rapanos decision was also kept in mind when analyzing the site. Mr. Bouril has prepared a revised delineation using the new wetland data sheets.