

Appendix C2

# Review of BRA for Proposed Development at The Village at Corte Madera

# Review of Biological Resources Assessment for the Proposed Development at The Village at Corte Madera

**Prepared for:**

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## Introduction

Olofson Environmental, Inc. (OEI) has reviewed the Biological Resources Assessment prepared by WRA, Inc. (“Assessment”; February 2015) for the proposed development at The Village at Corte Madera shopping center in the Town of Corte Madera, Marin County, California (“Project”). The Assessment provided an analysis of the natural community and special-status species issues for the Project, identified potential impacts to special-status species and sensitive biological resources that could be caused by the Project, and recommended actions to reduce or eliminate adverse impacts. The OEI team reviewed the Assessment to evaluate the sufficiency of the approach and conclusions, and to provide any additional information that might be relevant.

The Project includes the expansion of an existing shopping center and the paving and landscaping of approximately 5.14 acres of an adjacent gravel parking lot. Much of the area surrounding the Project location is urban and dominated by commercial development. However, there are “sensitive environmental areas” immediately to the north and east of the site. To the north is the Corte Madera Shorebird Marsh, a 34-acre muted tidal marsh constructed in 1983 to provide wildlife habitat and flood control capacity. To the east is the Corte Madera Marsh Ecological Reserve, a 620-acre tidal salt marsh complex. Between the Project location and the Corte Madera Marsh Ecological Reserve is a 72-acre open space area that is currently slightly-elevated fill with ruderal vegetation and seasonal wetlands.

The Assessment established a 6.9-acre Study Area consisting of the gravel parking lot and immediately surrounding area (**Figure 1**). The Assessment identified five biological communities, 34 plant species and five wildlife species within the Study Area, and determined that six special-status wildlife species have a moderate or high potential to occur there. The Assessment concluded that the Project would not likely cause significant impacts to sensitive biological communities, special-status plant species, or special-status wildlife species, provided specific measures were implemented to avoid adjacent coastal salt marsh habitat and to protect wildlife and water quality. The OEI review team concurs with the conclusions of the Assessment. Comments on the Assessment are provided below.

## Review Team

The OEI review team was comprised of three senior level field biologists, including Jen McBroom (team leader), Jesse Reeb, and Anastasia Ennis. Each of the team members has extensive experience working in wetlands around the San Francisco Bay Estuary and the expertise to comment on potential impacts to the biological resources that may occur within the Study Area. Qualification summaries for the team members are provided as **Attachment 1**.

## Approach

The review team members each read the Assessment, highlighting and commenting on topics related to their specific areas of expertise, and particularly considering the completeness and accuracy of the Assessment. After a brief discussion among the team members, the team leader summarized the comments into this report.

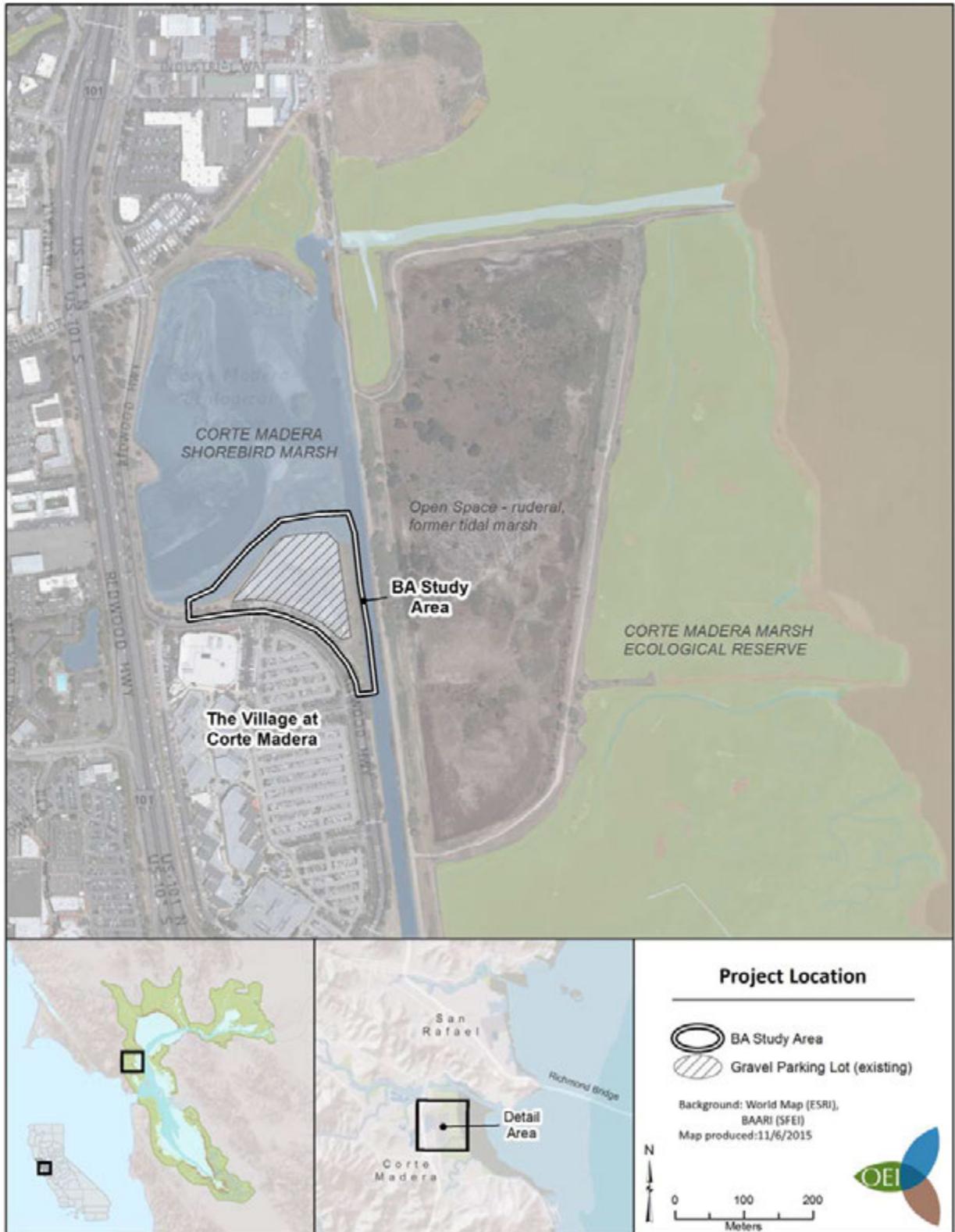


Figure 1. Map of the Project location and surrounding area.

## Comments

### Completeness

The review team found no omissions in consideration of special-status species or biological resources that may potentially occur within the Study Area. All potentially occurring special-status species and biological resources were included in the evaluation of habitat suitability and potential species presence in the Study Area and appropriate data and literature were consulted.

One omission was identified in the assessment of potential impacts of the Project. The Project's proposed additional landscape and lighting structures could provide perching and roosting areas for avian predators, including some of the special-status species listed in Section 4.2.2 of the Assessment, such as the white-tailed kite and peregrine falcon, as well as red-tailed hawks and corvids. An increase in avian predators could impact birds potentially nesting within the Corte Madera Shorebird Marsh, such as American avocets and black-necked stilts, as well as special-status species such as the Samuel's song sparrow. The potential impacts of use by avian predators should be considered in the placement and installation of these structures.

### Accuracy

The review team found the information presented in the Assessment to be generally correct. However, the team noted a few points of clarification worth mentioning for two of the more sensitive species discussed in the report – the salt marsh harvest mouse (SMHM) and the California Ridgway's rail.

***Salt Marsh Harvest Mouse*** – The Assessment recommends assuming potential presence for SMHM in marsh portions of the Study Area to ensure that no take occurs, because of the species' status as federally and state listed as endangered in Section 5.3 (pg. 25). However, earlier in the document (Section 4.2.2, pg. 22), the Assessment classified the SMHM as having moderate potential to occur, while noting that the occurrence of the species is highly unlikely.

It should be clarified that a “moderate potential to occur” designation for the species is recommended based on known California Natural Diversity Database (CNDDB) records of occurrence in the vicinity of the Study Area, and the marginal/limited habitat suitability present at the Study Area. As the document currently reads, moderate potential was selected not based on potential to occur criteria, but upon listing status and project risks if take were to occur.

***California Ridgway's Rail*** – The Assessment determined that the federally and state protected subspecies California Ridgway's rail (*Rallus obsoletus obsoletus*; formerly California clapper rail, *Rallus longirostris obsoletus*) was unlikely to occur in the Study Area (pg. 23). The review team concurs that Ridgway's rails are unlikely to occur, and offers the following more detailed justification and clarification for the determination.

Ridgway's rails are known to occur in relatively high numbers in the tidal wetlands to the east of the Study Area, as discussed in Section 4.2.2 (pg. 23). In fact, based on protocol-level surveys conducted by OEI in 2015, the nearest Ridgway's rail observation to the Study Area is approximately 500 meters away in the Corte Madera Marsh Ecological Reserve (CMMER) (**Figure 2**). The marshes within the CMMER complex represent high-quality tidal marsh habitat with fairly dense populations of Ridgway's rails (McBroom, 2015). However, the high quality habitat within the CMMER is disconnected from the Study Area by approximately 350 meters of upland habitat, which is occupied by many mammalian predators. Additionally, the habitat within the Study Area is inadequate to

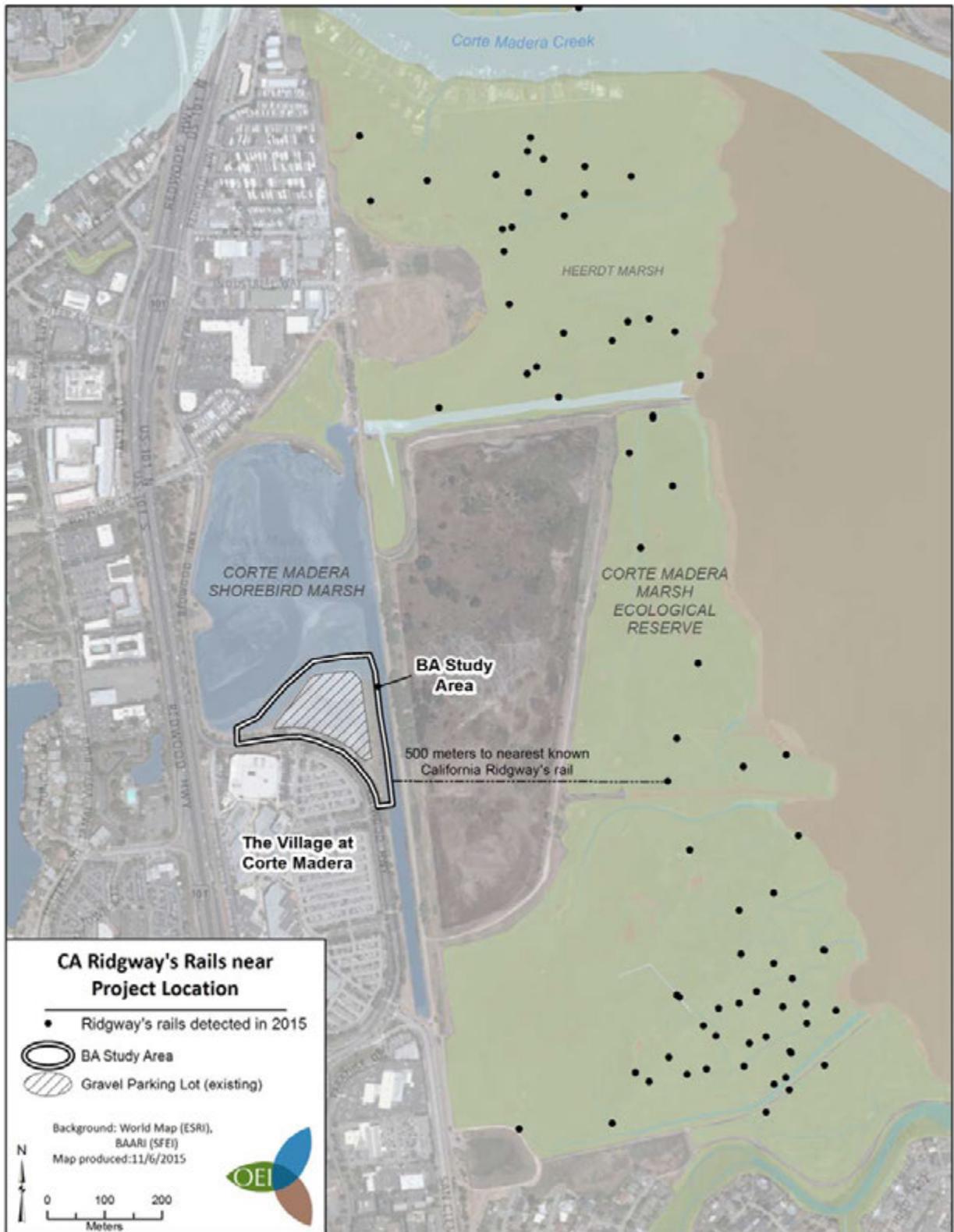


Figure 2. Map of California Ridgway's rail observations in the vicinity of the Project location and study area.

support Ridgway's rails, as it lacks daily tidal flows and the heterogeneity of vegetation required to support rails.

The Assessment erroneously determines that rail presence is unlikely because "dispersal to Shorebird Marsh from nearby occupied areas would involve leaving high-quality habitat for poorer habitat." Though the lack of suitable habitat in the Study Area does make it highly unlikely that any rails would disperse there, in general, it cannot be assumed that lesser quality habitat will not be visited during a dispersal event from an extremely high-density marsh. In fact, if the rail population is at carrying capacity, juvenile rails will be forced to leave the high-quality habitat in search of less densely-occupied marsh. Thus noted, the rail population in the marshes at the CMMER have declined in the past year and are likely not at carrying capacity. Rail detections in Heerdt Marsh, located in the northern portion of the CMMER, declined from 45 rails detected in 2014 to 19 rails detected in 2015 (McBroom, 2015). Ultimately, the lack of a regular tidal regime as well as suitable vegetation excludes the Study Area as an area where Ridgway's rails are likely to occur.

### **Issues**

In general, the review team determined that the Assessment had carefully considered potential impacts to the biological resources and sensitive-status species that could potentially occur in the Study Area. However, the review team identified the following issues that should be addressed in future planning for the project:

- The avoidance measures recommended for protection of the SMHM in Section 5.3 (page 26) of the Assessment could be improved to better protect any mice that could be present at the site. In particular, the specifications on the exclusion fencing should be modified to use appropriate materials, height, and edging methods to exclude mice. Our specific recommendations are in the section below.
- The Assessment does not consider the potential impacts of increased avian predator activity with the installation of lighting and landscaping in the parking lot. The increased presence of raptors has the potential to impact the success of breeding birds or SMHM in the Study Area.

### **Recommendations**

The OEI review team recommends implementing the following changes to the avoidance measures to protect any SMHM that may be present on site:

- The work area should be separated from the surrounding natural vegetation by a temporary exclusion fence made of, or covered with, smooth heavy plastic sheeting rather than plastic silt fencing so that SMHM cannot climb over the fence using textured material.
- The exclusion fence should be at least three feet in height and at least 12 inches higher than the highest adjacent vegetation with a maximum of four feet in height.
- The exclusion fence bottom should be buried at least four inches deep so that SMHM cannot crawl under the fence.
- The vegetation buffer should be cleared by hand from the outside in (i.e. from the lesser quality habitat toward the better quality habitat).

Additionally, the OEI review team recommends the consideration of installing roosting and landing deterrents (e.g. bird control spikes) on top of lighting structures to prevent avian predation.

## References

McBroom, J. (2015). *California Ridgway's Rail Surveys for the San Francisco Estuary Invasive Spartina Project*. Oakland: Olofson Environmental, Inc.

**Attachment 1: Review Team Qualifications**



## Jen McBroom

Senior Biologist, Program Manager

### EXPERTISE

- Permit Application
- Habitat Restoration
- Habitat Assessment
- Special-status Species Surveys
- Plant Identification
- Environmental Training
- Biological Monitoring
- GIS Mapping & Database Management

### EDUCATION

B.S., Wildlife and Conservation Biology,  
University of California, Davis, Cum Laude  
2001.

### CERTIFICATIONS

U. S. Fish & Wildlife Service 10(a)(1)(a) permit  
for California Ridgway's rail (TE-118356)

California Department of Fish and Wildlife  
Scientific Collecting Permit (SC-10601)

California Department of Fish and Wildlife  
Memorandum of Understanding (MOU) for  
California Ridgway's rail and California  
black rail surveys

Wetlands Delineation Course, San Francisco  
State University, Romberg Tiburon Center

Alameda Whipsnake Workshop. Livermore,  
CA.

California Native Grass Association, Grass  
Identification Workshops, 2013

Jepson Herbarium, California Plant Families  
Workshop, 2011

Cartographic Design for GIS, Elkhorn Slough  
Training Program, 2012

Spatial Analysis and Modeling Course, Elkhorn  
Slough Training Program, 2013

### PROFESSIONAL HISTORY

Ridgway's Rail Program Manager, Olofson  
Environmental, Inc., 2007–present

Field Technician, Olofson Environmental, Inc.,  
2005–2007

Senior Research Assistant, San Francisco  
Estuary Institute and University of  
California, Berkeley, 2001–2005 (seasonal)

Field Research Assistant, Smithsonian Tropical  
Research Institution and University of  
California, Los Angeles, 2004

Field Research Intern, University of Hawaii  
Pacific Cooperative Studies Unit, 2003–2004

### REPRESENTATIVE EXPERIENCE

Jen McBroom has over 10 years of experience working with birds in the tidal wetlands of the San Francisco Bay Area. Ms. McBroom is the lead investigator on a United States Fish and Wildlife Service 10(a)(1)(A) Recovery Permit for the California Ridgway's rail and a State of California Memorandum of Understanding (MOU) for both the California Ridgway's rail and the California black rail. She has performed biological research, impact analysis, permit assessment, and report preparation in support of both small and large-scale projects involving special-status species. Ms. McBroom also has extensive knowledge of GIS, including the acquisition of data, geospatial data management and analysis, and cartographic design.

Ms. McBroom is one of the leading experts in California Ridgway's rail monitoring. She has been permitted to conduct call-count surveys since 2002 and has conducted hundreds of surveys over the last decade. Additionally, Ms. McBroom has conducted many habitat assessment surveys to determine whether breeding rails are likely to be present at the site. She has designed and led trainings in survey methods for Ridgway's rails and other secretive marsh birds for local, state, and federal agencies and other survey organizations.

As a wildlife biologist, Ms. McBroom has conducted numerous surveys for special-status species, including California Ridgway's rail, California black rail, and Alameda song sparrow. She has conducted avian count surveys, nest searches, behavioral observations, diet studies, and mist-netting operations in the salt marshes of California and forests of Panama and Hawai'i. In association with these bird surveys, Ms. McBroom has also conducted surveys to evaluate the vegetation, invertebrates, and other habitat characteristics, including tidal elevation surveys using a transit-level tripod and a water level data logger.

Ms. McBroom possesses expert skills in GIS data collection and management, as well as cartographic design and map preparation. Additionally, Ms. McBroom is experienced with remote sensing, including the acquisition of data, the processing of aerial photos, and the mapping of vegetation using both manual and automatic interpretation techniques.

### PUBLICATIONS

Day, Lainy B., **Jennifer T. McBroom**, Barney A. Schlinger. 2005.  
Testosterone activates courtship display but does not alter plumage  
in golden-collared manikins (*Manacus vitellinus*). Society for  
Behavioral Neuroendocrinology.



## Jesse Reeb

### Wildlife Biologist

#### EXPERTISE

- Environmental Training
- Biological Monitoring
- Environmental Inspection
- Plant Identification
- Compliance Management
- Post-Construction Monitoring
- Habitat Restoration

#### EDUCATION

B.S., Environmental Science. Evergreen State College, Olympia, Washington.

#### CERTIFICATIONS

U. S. Fish & Wildlife Service 10(a)(1)(a) permit for Alameda whipsnake (TE-01769B-0)

U. S. Fish & Wildlife Service 10(a)(1)(a) permit for San Francisco garter snake (TE-01769B-0)

U. S. Fish & Wildlife Service 10(a)(1)(a) permit for California tiger salamander Central DPS (TE-01769B-0)

California Department of Fish and Wildlife (CDFW) Scientific Collecting Permit (SC-102727)

CDFW Memorandum of Understanding for take of 10(a)(1)(A) species – scientific and education research purposes related to conservation of the species

OSHA Hazardous Waste Operations and Emergency Response Certification (40-Hour) (12111171178)

U.S. Fish & Wildlife Service Salt Marsh Harvest Mouse Trapping. Newark, CA.

Alameda Whipsnake Workshop. Livermore, CA

#### PROFESSIONAL HISTORY

Wildlife Biologist, Olofson Environmental, Inc., Oakland, CA, 2014–Present

Associate Biologist, Insignia Environmental, Palo Alto, CA, 2013–2014

Field Biologist, LSA Associates, Point Richmond, CA, 2012–2013

Lead Biologist, SFPUC, The Shaw Group/CB&I, San Mateo, CA, 2012

Habitat Restoration Technician, West Coast Wildlands, South San Francisco, CA, 2007–2012

Wildlife Biologist, Swaim Biological, Hayward, CA, 2008–2010

#### REPRESENTATIVE EXPERIENCE

Jesse Reeb has over 10 years of experience working with wildlife, primarily birds, reptiles, and amphibians, throughout the San Francisco Bay Area and Pacific Northwest. Mr. Reeb holds a United States Fish and Wildlife Service 10(a)(1)(A) Recovery Permit for Alameda whipsnake, San Francisco garter snake, and California tiger salamander. Additionally, he has over five years of professional experience performing environmental and biological monitoring to ensure compliance of construction activities with environmental permits and regulations. Mr. Reeb has also developed environmental awareness training materials and conducted training programs for project personnel.

Mr. Reeb has performed biological research, impact analysis, permit assessment, and report preparation in support of both small and large-scale projects involving special-status species and sensitive resources. As a biological monitor on large-scale infrastructure projects, Mr. Reeb has performed monitoring duties of power-line reconductoring, substation construction, and underground conduit installation, as well as railway, culvert, and bridge construction in highly sensitive habitats. He has performed pre-construction target species surveys, fish salvage activities during in-water work, and prepared daily, weekly, and monthly compliance reports.

As a wildlife biologist, Mr. Reeb has conducted numerous surveys and trapping studies for special-status species, including California tiger salamander, California red-legged frog, San Francisco garter snake, Alameda whipsnake, San Francisco dusky-footed woodrat, and salt marsh harvest mouse. In support of a large salvage project, Mr. Reeb safely trapped and relocated 136 tiger salamanders. He also is 40-hour HAZWOPER certified and has provided biological monitoring services in support of remediation projects.

Mr. Reeb has assisted on numerous habitat restoration projects throughout the greater Bay Area, helping to create enhanced habitats for native plants and sensitive wildlife species. He has mapped and developed eradication strategies for invasive plant populations, assisted in implementation of planting efforts, and monitored long-term vegetation composition and health status.

Mr. Reeb has also spent four field seasons with the United States Forest Service as a wildlife biologist. He has conducted avian point counts and assisted on bird-banding projects in Alaska, Idaho, Costa Rica, and the Yukon with the United States Forest Service, Hermann Institute of Biological Studies, and the Yukon Bird Club.



## Anastasia Ennis, M.S.

Biologist, Molecular Ecologist, Conservation Geneticist

### EXPERTISE

- Vegetation Surveys and Monitoring
- Molecular Genetics
- Avian Surveys and Monitoring
- Vertebrate Trapping and Handling
- Field Coordination

### EDUCATION

M.S. Candidate, Romberg Tiburon Center for Environmental Studies/San Francisco State University, San Francisco, CA

B.S., Cornell University, Animal Science with a minor in Natural Resources, Ithaca, NY, Cum Laude

### CERTIFICATIONS

U.S. Fish & Wildlife Service Endangered Species Section 10 permit: California Ridgway's rail (RIRA) call count surveys

U.S. Fish & Wildlife Service Endangered Species Section 10 permit: Salt marsh harvest mouse tissue sample collection

California Native Grass Identification, California Native Grasslands Association, Point Reyes, CA, June 2013

U. S. Sailing Basic Powerboat Certification, California Maritime Academy, April 2012

Wetland Restoration Monitoring Techniques, Romberg Tiburon Center, San Francisco State University, Tiburon, CA, September 2011

### PROFESSIONAL HISTORY

Field Biologist, Olofson Environmental, Inc., Oakland, CA, 2011–present

Biological Intern, California State University, Stanislaus, Boron, CA 2011

Golden Gate Raptor Observatory Intern, National Park Service, Sausalito, CA 2010–2011

Field Assistant, San Francisco Estuary Institute, Oakland, CA 2010

Aquatic Biologist, California Academy of Sciences, San Francisco, CA 2009–2010

Animal Resource Center Intern, San Francisco Zoological Society, San Francisco, CA 2007–2009

### REPRESENTATIVE EXPERIENCE

Anastasia Ennis is a wildlife biologist with over five years of experience conducting fieldwork and wildlife surveys in a variety of ecosystems. Ms. Ennis has molecular laboratory skills related to her Master's thesis research studying population genetics.

Ms. Ennis has conducted vegetation surveys in a variety of ecosystems. In San Francisco Bay tidal marshes she has surveyed for invasive oysters, mapped invasive cordgrass, identified sites for restoration plantings, and performed habitat assessment monitoring surveys for California Ridgway's rail. In conjunction with a trail camera study to monitor populations of threatened Mohave ground squirrels in the western Mojave Desert, she conducted shrub surveys, estimating herbaceous cover and identifying plants to species. As an undergraduate she conducted research for field courses in the deciduous forests of Central New York state and analyzed human and elephant impacts on *Acacia* woodlands in Kenya.

Her interest in tidal marsh conservation in the San Francisco Bay and fascination with the breadth of questions that can be answered by genetic analysis led her to begin a graduate degree studying population genetics of the endangered salt marsh harvest mouse, endemic to the San Francisco Bay. In pursuit of her degree she has gained experience writing grant and permit applications, extracting and sequencing DNA, and analyzing molecular sequence data. She has participated in salt marsh harvest mouse trapping surveys, collecting hair and fecal samples for genetic analysis. The results of her research can be applied to restoration design of habitat connectivity to maintain genetic diversity.

Ms. Ennis has additional animal trapping experience with ground squirrels in the Mojave Desert and raptors in the Marin Headlands, where she also conducted migration counts and radio telemetry. Prior to her experience as a raptor trapper and bander, she worked with a variety of taxa at the San Francisco Zoo and the Steinhardt Aquarium at the California Academy of Sciences, where she developed expert animal handling and husbandry skills. Ms. Ennis is comfortable managing personnel due to her experience scheduling, training, and working alongside hundreds of volunteers at the Golden Gate Raptor Observatory, San Francisco Zoo, and California Academy of Sciences. She has also honed her public speaking and presentation skills as an environmental educator at these institutions

### PUBLICATIONS

Ennis, Anastasia & Peggy Olofson. "Die Salzsumpf-Erntemaus (*Reithrodontomys raviventris*). Ein einzigartiger Nager in Gefahr." *Rodentia Kleinsäuger-Fachmagazin*. Vol. 80. July/August 2014.