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# MEETING NOTICE AND AGENDA

## ENVIRONMENTAL MITIGATION PROGRAM WORKING GROUP

The Environmental Mitigation Program Working Group may take action on any item appearing on this agenda.

Tuesday, September 11, 2018

1 to 3 p.m.

SANDAG, 7th Floor Conference Room  
 401 B Street, Suite 800  
 San Diego, CA 92101

***Please take the elevator to the 8th floor to access the meeting room.***

Staff Contact: Kim Smith  
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 kim.smith@sandag.org

### AGENDA HIGHLIGHTS

- **AD HOC COMMITTEE RECOMMENDATION: FY 2019-2020 WORK PLAN AND FY 2019 ANNUAL FUNDING**
- **STATUS OF SAN ELIJO LAGOON RESTORATION PROJECT**
- **IMPLEMENTATION OF THE INVASIVE PLANT SPECIES STRATEGIC PLAN**

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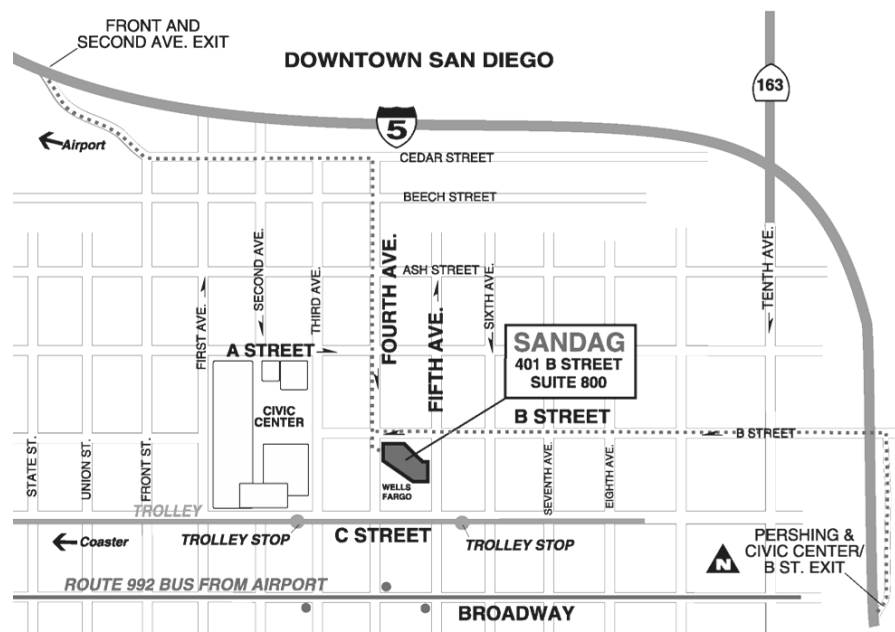
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# ENVIRONMENTAL MITIGATION PROGRAM WORKING GROUP

Tuesday, September 11, 2018

| <b>ITEM NO.</b> |  | <b>RECOMMENDATION</b>  |
|-----------------|--|--|
| 1.              | <b>WELCOME AND INTRODUCTIONS</b> (Chair, Kristine Alessio, City of La Mesa)  | Estimated Start Time<br>1 – 1:05 p.m.                              |
| +2.             | <b>APPROVAL OF MEETING MINUTES</b><br>The Environmental Mitigation Program Working Group (EMPWG) is asked to review and approve the minutes from its May 8, 2018, meeting.   | <b>APPROVE</b><br>Estimated Start Time<br>1:05 – 1:10 p.m.         |
| 3.              | <b>PUBLIC COMMENTS/COMMUNICATIONS/MEMBER COMMENTS</b><br>Members of the public shall have the opportunity to address the EMPWG on any issue within the jurisdiction of SANDAG that is not on this agenda. Anyone desiring to speak shall reserve time by completing a Request to Comment form and giving it to the Clerk prior to speaking. Public speakers should notify the Clerk if they have a handout for distribution to working group members. Public speakers are limited to three minutes or less per person. EMPWG members also may provide information and announcements under this agenda item.    | Estimated Start Time<br>1:10 – 1:15 p.m.                           |
| <b>REPORTS</b>  |  |  |
| +4.             | <b>AD HOC COMMITTEE RECOMMENDATION: FY 2019–2020 WORK PLAN AND FY 2019 ANNUAL FUNDING</b> (Kim Smith; Susan Wynn, U.S. Fish and Wildlife Service)<br>The EMPWG is asked to recommend to the Regional Planning Committee to recommend the proposed FY 2019-2020 Work Plan for regional management and monitoring and allocate \$4 million in funding for FY 2019. In addition, a status of the new Memorandum of Agreement for the implementation of the Environmental Mitigation Program will be provided.   | <b>RECOMMEND</b><br><br>Estimated Start Time<br>1:15 – 1:35 p.m.   |
| ☐               | <b>ENDANGERED SPECIES ACT; PROPOSED REVISIONS TO THE REGULATIONS</b> (Susan Wynn, U.S. Fish and Wildlife Service)<br>In August of 2018, the U.S. Fish and Wildlife Service and the National Oceanic and Atmospheric Administration's National Marine Fisheries Service jointly proposed revisions to regulations that implement portions of the Endangered Species Act. Susan Wynn will provide an update on these changes. Additional information can be found at <a href="https://fws.gov/endangered/improving_ESA/regulation-revisions.html">fws.gov/endangered/improving_ESA/regulation-revisions.html</a> | <b>INFORMATION</b><br><br>Estimated Start Time<br>1:35 – 1:50 p.m. |
| ☐               | <b>STATUS OF SAN ELIJO LAGOON RESTORATION PROJECT</b> (Doug Gibson, San Elijo Lagoon Conservancy)<br>The San Elijo Lagoon Restoration project is part of Phase 1 of the Interstate 5 North Coast Corridor Program, which also includes improvements to the rail and highway. Doug Gibson will provide a status update on the progress of the restoration.  | <b>INFORMATION</b><br><br>Estimated Start Time<br>1:50 – 2:05 p.m. |

- |   |   |
|---|---|
| <p>7.       <b>IMPLEMENTATION OF THE INVASIVE PLANT SPECIES STRATEGIC PLAN</b><br/> <b>(Jason Giessow, Dendra, Inc.)</b></p> <p>In September 2012, an Invasive Plant Management Strategy was developed through <i>TransNet</i> Environmental Mitigation Program funding. Jason Giessow will provide an update on the implementation of the Invasive Plant Management Strategy</p> | <p><b>INFORMATION</b></p> <p>Estimated Start Time<br/> 2:05 – 2:40 p.m.</p>               |
| <p>8.       <b>CONTINUED PUBLIC COMMENTS</b></p> <p>If the five-speaker limit for public comments was exceeded at the beginning of this agenda, other public comments will be taken at this time. Subjects of previous agenda items may not again be addressed under public comment.</p>  | <p><b>Estimated Start Time</b><br/> <b>2:40 – 2:45 p.m.</b></p>                           |
| <p>9.       <b>UPCOMING MEETINGS</b></p> <p>The next EMPWG meeting is scheduled for Tuesday, November 13, 2018, at 1 p.m.</p>   | <p><b>INFORMATION</b></p> <p><b>Estimated Start Time</b><br/> <b>2:45 – 2:50 p.m.</b></p> |
| <p>10.      <b>ADJOURNMENT</b></p>  |   |

+ next to an item indicates an attachment

**San Diego Association of Governments**  
**ENVIRONMENTAL MITIGATION**  
**PROGRAM WORKING GROUP**

September 11, 2018

AGENDA ITEM NO.: **2**

**Action Requested: APPROVE**

MAY 8, 2018, MEETING MINUTES

File Number 3200100

**Please Note:** Audio file of the meeting is available on the SANDAG website at sandag.org, on the Environmental Mitigation Program Working Group (EMPWG) webpage.

Chair Terry Sinnott (City of Del Mar) called the meeting of the EMPWG to order at 1 p.m.

1. WELCOME AND INTRODUCTIONS

The attendance sheet for the meeting is included.

2. APPROVAL OF MEETING MINUTES

Action: Upon a motion by James Whalen (Alliance for Habitat Conservation) and a second by Deborah Mosely (County of San Diego), the EMPWG approved the minutes from the January 9, 2018, meeting. Yes: Chair Sinnott, Susan Wynn (U.S. Fish and Wildlife Service), David Mayer (Dept. of Fish and Wildlife), Candace Wo (The San Diego Foundation), Cheryl Goddard (City of Chula Vista), Michael Beck (Endangered Habitats League), David Nagy (Caltrans), Robert Fisher (United States Geological Survey), and Trish Smith (The Nature Conservancy). Abstain: None. Absent: Army Corps of Engineers, Building Industry Association, City of Carlsbad, City of Poway, City of San Diego, City of Santee, San Diego Conservation Network, U.S. Forest Service, and Wildlife Conservation Board.

3. PUBLIC COMMENTS/COMMUNICATIONS/MEMBER COMMENTS (DISCUSSION)

Robert Fisher (USGS) mentioned that the USGS will publish three papers on the following topics: An evaluation of road risk assessment for reptiles state wide, drought and arroyo toads in San Diego county, and a habitat model for golden eagles.

**CHAIR'S REPORT**

4. RECOGNITION OF OUTGOING ENVIRONMENTAL MITIGATION INFORMATION PROGRAM WORKING GROUP CHAIR (INFORMATION)

Chair Sinnott is stepping down as chair of the EMPWG and Kristine Alessio, Vice Mayor of La Mesa, will become the new chair. By profession, Ms. Alessio is a lawyer and real-estate developer, and she is also passionate about conservation.

## REPORTS

### 5. SANDAG 2018 TITLE VI PROGRAM WORKING GROUPS SURVEY INFORMATION (INFORMATION)

SANDAG staff distributed a short demographic survey to the members of the EMPWG to support the development of the 2018 Title VI Program. As the region's Metropolitan Planning Organization, SANDAG is required to update the Title VI Program every three years per FTA Circular 4702.1B. One component of the program is a table summarizing demographic information of working groups that help inform transportation-related decisions. Members of the EMPWG were asked to complete the voluntary survey to capture this information.

Action: This item was for information only.

### 6. DRAFT FY 2018 *TransNet* TRIENNIAL PERFORMANCE AUDIT REPORT STATUS (INFORMATION)

SANDAG staff presented the responses and recommendations from the draft 2018 *TransNet* Triennial Performance audit. Additionally, staff addressed the Environmental Mitigation Program (EMP) recommendations and outlined a timeline to address the recommendations.

Action: This item was for information only.

### 7. REQUEST FOR FORMATION OF AN AD HOC COMMITTEE FOR DISCUSSION/ FY 2019 – 2020 WORK PLAN AND FY 2019 ANNUAL FUNDING (DISCUSSION/POSSIBLE ACTION)

The EMPWG asked to approve the formation of an ad hoc committee for the development of the FY 2019 – 2020 Work Plan for regional management and monitoring, and the annual allocation of funding for FY 2019. Ms. Wynn, Mr. Beck, Mr. Mayer, Mr. Fisher, Matt Adams (Building Industry Association), Mr. Whalen, and Ms. Mosely volunteered to be a part of the ad hoc committee. Ms. Wynn volunteered to chair the ad hoc committee.

### 8. *TransNet* ENVIRONMENTAL MITIGATION PROGRAM: LAND MANAGEMENT GRANT PROGRAM DRAFT PROJECT RANKINGS FOR NINTH CYCLE OF GRANT FUNDING (RECOMMEND)

The EMPWG formed an ad hoc committee to review, prioritize, and make a funding recommendation on applications received under the ninth call for projects for land management grants. A total of 39 grant applications were received. The EMPWG made a recommendation to the Regional Planning and Transportation Committees regarding the recommended list of projects for funding for the ninth cycle of the *TransNet* EMP's Land Management Grants Program.

Action: Upon a motion by Ms. Wynn and a second by Mr. Whalen, the EMPWG approved the ad hoc committee's recommendation for funding of the 9th cycle of land management grants. For project #7 (Mission Bay Park) under the Long-term Species and Habitat Recovery Category, funds no longer need to be allocated from Task 1 for predator control because the Federal Aviation Administration will be able to fund this task. Ms. Wynn motioned to leave the recommendation with the funds as was originally proposed for this specific task.

Yes: Mr. Beck, Mr. Mayer, Ms. Smith, Mr. Fisher, David Nagy (Caltrans), Candice Wo (San Diego Foundation), Ms. Mosely, Lance Criley (U.S Forest Service). No: None. Abstain: None. Absent: Army Corps of Engineers, Building Industry Association, City of Carlsbad, City of Poway, City of San Diego, City of Santee, San Diego Conservation Network, U.S. Forest Service, and Wildlife Conservation Board.

9. PILOT OPEN SPACE ENFORCEMENT EFFORTS (INFORMATION)

In 2018, staff from the City of Carlsbad and the City of San Diego implemented a year-long pilot project that assessed approaches of enforcement in open space areas. Park Ranger Melanie Fontana and Officer Julie Dratt from the City of San Diego and Captain Mickey Williams from the City of Carlsbad presented the approaches and results of their efforts, which were funded in part by the Environmental Mitigation Program.

10. UPCOMING MEETINGS

The next EMPWG meeting is scheduled for Tuesday, July 10, 2018, at 1 p.m.

Chair Alessio adjourned the meeting at 2:30 p.m.

| REPRESENTATION                                       | JURISDICTION / ORGANIZATION     | NAME                  | MEMBER / ALTERNATE | ATTENDING |
|--|---------------------------------|-----------------------|--------------------|-----------|
| Environmental Mitigation Program Working Group Chair | Councilmember, City of Del Mar  | Hon. Terry Sinnott    | Chair (outgoing)   | Y         |
| Environmental Mitigation Program Working Group Chair | Councilmember, La Mesa          | Hon. Kristine Alessio | Chair (incoming)   | Y         |
| South County Subregion                               | City of Chula Vista             | Cheryl Goddard        | Member             | Y         |
|  | City of Chula Vista             | Dai Hoang             | Alternate          | N         |
| North County Coastal Subregion                       | City of Carlsbad                | Rosanne Humphrey      | Member             | N         |
|  | City of Oceanside               | Jeff Hunt             | Alternate          | N         |
| North County Inland Subregion                        | City of Poway                   | Oda Audish            | Member             | N         |
|  | City of Poway                   | Carol Rosas           | Alternate          | N         |
| East County Subregion                                | City of Santee                  | Melanie Kush          | Member             | N         |
|  | City of Santee                  | Christina Rios        | Alternate          | N         |
| City of San Diego Subregion                          | City of San Diego               | Alyssa Muto           | Member             | N         |
|  |                                 | Kristen Forburger     | Alternate          | N         |
| County of San Diego Subregion                        | County of San Diego             | LeAnn Carmichael      | Vice Chair/Member  | N         |
|  |                                 | Deborah Mosley        | Alternate          | Y         |
| Other Public Agencies                                | Army Corps of Engineers         | Kyle Dahl             | Member             | N         |
|  |                                 | Vacant                | Alternate          | N/A       |
|  | U.S. Forest Service             | Kirsten Winter        | Member             | N         |
|  |                                 | Lance Criley          | Alternate          | N         |
|  | Caltrans                        | Bruce April           | Member             | N         |
|  |                                 | David Nagy            | Alternate          | Y         |
|  | Department of Fish and Wildlife | David Mayer           | Member             | Y         |
|  |                                 | Hans Sin              | Alternate          | N         |
|  | U.S. Fish and Wildlife Service  | Susan Wynn            | Member             | Y         |
|  |                                 | David Zoutendyk       | Alternate          | N         |
|  | USGS                            | Robert Fisher         | Member             | Y         |
|  |                                 | Carlton Rochester     | Alternate          | N         |
| Wildlife Conservation Board                          | Peter Perrine                   | Member                | N                  |           |
|  | John Walsh                      | Alternate             | N                  |           |
| Non-Profits  | Endangered Habitats League      | Michael Beck          | Member             | Y         |
|  |                                 | Scott Grimes          | Alternate          | N         |
|  | San Diego Conservation Network  | Anne Harvey           | Member             | N         |
|  |                                 | Vacant                | Alternate          | N/A       |



|          |                                   |              |           |     |
|----------|-----------------------------------|--------------|-----------|-----|
|          | The Nature Conservancy            | Trish Smith  | Member    | Y   |
|          |                                   | Cara Lacey   | Alternate | N   |
|          | The San Diego Foundation          | Candace Wo   | Member    | Y   |
|          |                                   | Cami Mattson | Alternate | N   |
| Business | Alliance for Habitat Conservation | James Whalen | Member    | Y   |
|          |                                   | Nick Doenges | Alternate | N   |
|          | Building Industry Association     | Matt Adams   | Member    | N   |
|          |                                   | Vacant       | Alternate | N/A |

**San Diego Association of Governments**  
**ENVIRONMENTAL MITIGATION**  
**PROGRAM WORKING GROUP**

September 11, 2018

AGENDA ITEM NO.: **4**

**Action Requested: RECOMMEND**

AD HOC COMMITTEE RECOMMENDATION: FY 2019–2020 WORK PLAN  
AND FY 2019 ANNUAL FUNDING

File Number 1200300

**Introduction**

In May, the Environmental Mitigation Program Working Group (EMPWG) formed an ad hoc committee to review and recommend updates to the FY 2019–2020 Work Plan for regional land management and monitoring and propose an annual funding allocation for FY 2019.

**Discussion**

***Key Considerations***

The *TransNet* Extension Ordinance and Expenditure Plan, approved by voters in 2004, includes the Environmental Mitigation Program (EMP), which provides funding to mitigation habitat impacts from regional and local transportation projects and provides funding for regional land management and biological monitoring.

Each year, the SANDAG Board of Directors allocates \$4 million toward implementation of regional land management and biological monitoring pursuant to a Memorandum of Agreement (MOA) with state and federal agencies on the implementation of the EMP. This would be the last allocation of regional funding for management and monitoring under the executed MOA.

The two-year Work Plan for FY 2019–2020 is based on the objectives and priorities included in the Management Strategic Plan. This Work Plan outlines the overarching goals, areas of emphasis, and key milestones for regional management and monitoring. The proposed funding levels for FY 2019 are consistent with the adopted *TransNet* MOA. An updated MOA for the next ten years of the program is being developed and will be presented at a future EMPWG meeting for discussion/action.

***Recommendation***

The EMPWG is asked to recommend to the Regional Planning Committee to recommend the proposed FY 2019-2020 Work Plan for regional management and monitoring and allocate \$4 million in funding for FY 2019.

**Next Steps**

Pending approval from the EMPWG, the proposed management and monitoring FY 2019–2020 Work Plan and budget for FY 2019 totaling \$4 million will be presented to the Independent Taxpayer Oversight Committee and the Regional Planning and Transportation Committees for recommendation for approval to the Board of Directors in October 2018. Staff would implement the Work Plan with the approved budget for FY 2019.

Attachments: 1. Proposed FY 2019–2020 Work Plan  
2. Proposed Ad Hoc FY 19 Funding Allocation

Key Staff Contact: Kim Smith, (619) 699-6949, [kim.smith@sandag.org](mailto:kim.smith@sandag.org)

***TransNet* Environmental Mitigation Program:  
Regional Management and Monitoring FY 2019–2020 Work Plan**

**Introduction**

The *TransNet* Extension Ordinance and Expenditure Plan, approved by the voters in November 2004, include the Environmental Mitigation Program (EMP) which provides funding to mitigate habitat impacts from regional and local transportation projects, and provides funding for regional land management and biological monitoring. The EMP is a unique component of the *TransNet* Extension Ordinance in that it goes beyond traditional mitigation for transportation projects by including a funding allocation for habitat acquisition, management, and monitoring activities to help implement the regional habitat conservation plans. This funding allocation is tied to mitigation requirements and the environmental clearance approval process for projects outlined in the Regional Transportation Plan and to implement the Habitat and Open Space policy objectives developed as part of San Diego Forward: The Regional Plan.

Each year, the SANDAG Board of Directors allocates \$4 million to implement regional land management and biological monitoring pursuant to a Memorandum of Agreement with state and federal agencies on the implementation of the EMP. In 2013, a technical document entitled *Management Strategic Plan (MSP) for Conserved Lands in Western San Diego County* was developed to increase the efficient use of both the *TransNet* funding as well as other outside local, state, and federal funds. The MSP has several elements dealing with species management, wildlife connectivity, wildfires and regional monitoring that will promote the purpose of the *TransNet* EMP. The MSP is available at [sdmmp.com/msp\\_doc.php](http://sdmmp.com/msp_doc.php).

The purpose of the strategic plan is to identify and prioritize actions that are needed to ensure the persistence of key wildlife species, maintain ecosystem processes, and maintain healthy natural communities in an efficient and integrated manner across the region in the context of a changing ecosystem due to wildfires, habitat type conversion, and climate change.

***FY 2019–2020 Strategic Goals and Areas of Emphasis***

To guide the development of the annual allocation of regional management and monitoring funds, a set of strategic goals have been approved by the SANDAG Board of Directors to implement the MSP. These strategic goals identify long-term areas of achievement that should remain relatively unchanged on an annual basis. Supporting these strategic goals are the areas of emphasis and achievement milestones, which will be updated each year to highlight particular areas of focus for the coming year and as measure of success.

**Strategic Goals**

- 1. Promote key sensitive species'** persistence and resiliency through management actions to prevent extirpation and extinction.
- 2. Promote native vegetation communities'** persistence and resiliency through the development and implementation of strategies to maintain and increase habitat quality.
- 3. Improve wildlife movement** through the identification of critical linkage areas and implementation of strategies to enhance the physical and genetic connectivity of species throughout rural and urban landscapes.
- 4. Promote regional coordination** through the facilitation and coordination with existing land management efforts, development of best management practices, and leveraging existing funding.

## **Areas of Emphasis and FY 2019–2020 Milestones**

The highest priorities for SANDAG during FY 2019–2020 are the Areas of Emphasis as follows:

### **1.0 Promote Key Sensitive Species**

#### **1.1 Priority Rare and Endemic Plants Recovery**

The MSP has identified 32 rare plant species that could either be entirely lost within San Diego County, where significant occurrences of the species could be lost, or where species specific management actions are needed to ensure persistence.

##### *Achievement Milestones FY 2019–2020*

- Continue providing regional coordination for Inspect and Manage Rare Plant Monitoring. Work with land managers and contractor to survey for 14 MSP priority rare plants in 2019 and 9 in 2020 and identify threats and management needs.
- Analyze rare plant monitoring data collected in 2014-2018. Provide recommendations for monitoring and management and develop best management practices for land managers.
- Incorporate results of rare plant monitoring, genetic studies, regional population structures, conceptual models, and best management practices to develop the MSP Seed Collection, Banking and Bulking Plan and MSP Rare Plant Management Plan for 8 priority rare plant species to prioritize and guide management actions.
- Coordinate with Marine Corps Air Station Miramar on the results of their **willowy monardella** demographic monitoring and hydrologic studies. Develop assessments at current and historic locations and suitable habitat on Conserved Lands to address the effects of hydrologic modification on the species and the potential for expansion of occurrences. Use this information to design future surveys for this species.

##### *Prior Achievements*

- *Between 2014 and 2017, 809 surveys were conducted for 29 priority rare plant species per the MSP “Inspect and Manage” objective, and approximately 250 to 300 surveys were conducted in 2018. Plant occurrences have been monitored by land managers, volunteers and contractors to SANDAG. These data are incorporated into a regional database to inform management actions.*
- *Land managers have implemented management actions identified during rare plant surveys conducted in 2014-2018 using a mix of internal funds and grants, including grants from the EMP Land Management Grant program.*
- *During 2016 to 2018, genetic material from 6 priority rare plant species was collected and analyzed to better inform management decisions. In 2018, a workshop was held with land managers and experts to further develop plans to better manage these species.*
- *In 2018, technical support was provided to a non-profit group’s study to identify and describe soil and vegetation relationships for 5 rare plant species and provided habitat modeling to identify geographic areas that could enhance regional population structure and resilience and allow range shifts in response to climate change.*

## 1.2 Priority 1 Vertebrates Recovery

The MSP has identified 19 rare vertebrate species that could either be entirely lost within San Diego County, where significant occurrences of the species could be lost, or where species specific management is needed to ensure persistence. Another 28 species are included as priorities for vegetation focused management. Eleven of these 47 rare vertebrate species have been prioritized for regionally supported 2019–20 vertebrate recovery management.

### *Achievement Milestones FY 2019–2020*

#### *Amphibians*

- Provide coordination for region-wide **arroyo toad** surveys based on the regional monitoring strategy being developed by USGS. Continue supporting land managers on the implementation of priority management actions. Update surveys conducted in 2002-2003 in the MSCP area and 2016-2017 in North County and other MSP areas. Collect additional genetic material for analysis.

#### *Reptiles*

- Continue to monitor and enhance occurrences of previously translocated **southwestern pond turtles** at Sycuan Peak ER (Sweetwater watershed) and Rancho Jamul ER (Otay watershed). Identify, manage, and translocate southwestern pond turtles to additional sites in the San Dieguito and San Diego River watersheds to build the population to sustainable levels.

#### *Birds*

- Continue to support management of cactus nurseries, **coastal cactus wren** habitat restoration, and fire management to protect cactus wren habitat in North and South County.
- Complete the five-year **coastal cactus wren** study to assess population status, reproduction, dispersal, survival, food availability and habitat quality in South County in order to provide specific management recommendations to recover populations and enhance resilience during drought periods.
- Conduct surveys and collect genetic material from **coastal cactus wrens** in San Pasqual Valley. Analyze the collected genetic material and previously collected material from South County for nestling diet analysis and to determine if populations have recovered from reductions in genetic variability and population size.
- In 2019–2020, provide regional coordination for **coastal California gnatcatcher** range-wide surveys, repeating efforts carried out in 2016 and analyze the data.
- Complete the five-year study on **golden eagles** to monitor movement, habitat use, and population demographics. Develop and implement management recommendations.
- Repeat **least Bell's vireo** surveys conducted in the Tijuana River Valley in 2017 to assess changes to vireo populations and measure how vegetation is responding to shot-hole borer damage.
- Complete the five-year study to evaluate the status of the **southwestern willow flycatcher** along the San Luis Rey River and survey additional

watersheds with the potential to support the species. Develop and implement management recommendations.

- Continue to provide technical support to implement priority management actions for the **western burrowing owl** as identified in the management plan completed in 2017.
- Working with partners, participate in the Statewide **Tricolored Blackbird** survey effort to document presence/absence, estimated numbers, and habitat characteristics. Coordinate with land managers to restore suitable habitat and determine management needs.

#### *Mammals*

- Support land managers in the implementation of management recommendations from the previously completed study on **Townsend's big-eared bat** and **pallid bat** roosts and foraging sites.

#### *Prior Achievements*

##### *Amphibians*

- *In previous years, surveys for **arroyo toad** have been conducted in the Management Strategic Plan Area (MSPA) to assess current distribution and status, particularly in the North County area, but also in other core areas throughout the MSPA. Development of a draft implementation plan and regional monitoring strategy are currently underway.*

##### *Reptiles*

- *Between 2009 and 2018, invasive aquatic species were removed at Sycuan Peak ER and Rancho Jamul ER to expand occurrences of the **southwestern pond turtle**. Starting in 2016, efforts expanded to explore additional translocation receptor and donor sites in other watersheds. Four receiver sites and four donor sites were identified in the San Diego River and San Dieguito River watersheds and invasive species management is being conducted for near future translocation efforts.*

##### *Birds*

- *Between 2010 and 2017, a cactus nursery was maintained in North County for use in restoring **coastal cactus wren** habitat. Currently, a small cactus nursery, primarily managed by volunteers, also exists at Rancho Jamul ER for use in restoring habitat in South County.*
- *In 2015, a habitat restoration plan was completed for the **coastal cactus wren** in South County and land managers are implementing high priority management actions identified.*
- *In 2015, a five-year study was started to assess **coastal cactus wren** reproduction, dispersal, survival, food availability and habitat quality in South County in order to provide specific management recommendations to recover populations and enhance resilience during drought periods.*
- *In 2018, the data analyses were completed from the post-fire **coastal California gnatcatcher** study conducted in 2015-16 and regional monitoring study conducted in 2016.*
- *In late 2014, a five-year study was initiated to delineate foraging areas and population demographics of the **golden eagle**. The study has yielded*

*significant new information on the movement and use patterns of over 20 golden eagles in Southern California and Mexico. These data have been used to develop a habitat model and identify areas important for foraging and nesting eagles.*

- *In 2017, an assessment of breeding **least Bell's vireos** in the Tijuana River Valley and other drainages was completed to examine the effects of extensive riparian habitat damage from the newly emerging threat of shot-hole borer-fusarium complex. Results indicated least Bell's vireo populations continue to persist.*
- *In 2015, a five-year study was begun to evaluate the status of the **southwestern willow flycatcher** along the San Luis Rey River and its importance as a source population for maintaining willow flycatcher populations in the MSP area.*
- *Since 2010, funding from outside sources has been provided for studies of **western burrowing owl** reproduction, survival, prey base, dispersal, and burrow characteristics, and SANDAG has provided technical support for habitat suitability modeling. In 2017, an implementation plan was finalized.*

#### *Mammals*

- *In 2016-2018, a study to identify the location of key **Townsend's big-eared band** and **pallid bat** roosts and foraging sites was completed and an implementation plan to help land managers to implement site-specific management recommendations is being developed.*

### **1.3 Priority 1 Invertebrates Recovery**

The MSP has identified five rare invertebrate species that could be entirely lost within San Diego County. Another two species are included as priorities for vegetation focused management.

#### *Achievement Milestones FY 2019–2020*

- Continue **Hermes copper butterfly** monitoring and habitat assessments to document status and assess habitats and threats. Continue monitoring effectiveness of translocations and develop best management practices for captive rearing. Implement high priority management actions from the management plan. Work with partners to develop and implement a monitoring plan that will track long term status, habitat and threats to this species.
- Continue **Harbison dun skipper** host plant, adult, larval and hibernaculum surveys, and habitat assessments. Implement high priority management actions from the management plan.
- In 2019 continue to conduct surveys for **Quino checkerspot butterfly** and map host plant distribution to develop a metapopulation model to guide development of a monitoring plan and identify management opportunities to increase connectivity and enhance populations. Prepare a Quino Habitat Checkerspot butterfly monitoring plan and begin regional monitoring in 2020. Develop interim Quino checkerspot management plan and implement high priority actions. Develop and include in MSP Seed Collection, Banking and Bulking Plan for Quino checkerspot forbs and host plants and implement to restore habitat. Support U.S. Fish and Wildlife Service (USFWS) efforts to captive rear larvae and translocate to reestablish and augment wild populations.



- Provide technical support to land managers for implementation of vegetation and species monitoring and management for vernal pool invertebrate species, **San Diego fairy shrimp** and **Riverside fairy shrimp** (and western spadefoot toad where suitable conditions are present).

*Prior Achievements*

- *In 2016, surveys were conducted for three rare butterfly species (**Quino checkerspot, Harbison’s dun skipper and Hermes copper**) building upon previous monitoring and research work to collect data to develop management implement plans.*
- *In 2017–2018 draft management implementation plans were completed for **Hermes copper and Harbison’s dun skipper**.*
- *In 2017 and 2018, the USFWS, in conjunction with partners, translocated **Quino checkerspot butterfly** larva to three locations at the San Diego National Wildlife Refuge and one location at the Lonestar West mitigation site.*

#### 1.4 General Stressors and Threats Management

There are numerous existing and newly emerging threats in the San Diego region that need ongoing management for the long-term persistence of MSP species (see Volume 2 of MSP).

*Achievement Milestones FY 2019–2020*

- Provide technical support for the management of tern sites at Mission Bay Park to support successful breeding of **California least tern**.
- Provide technical support for the eradication of **feral pigs** in San Diego County.
- Finalize an **Invasive Animal Plan** with a strategy and bio-control methods for the prioritization and management of invasive animal species in San Diego County. Complete and implement an invasive animal database and early detection rapid response system.
- In collaboration with statewide efforts, continue to provide funding for **shot hole borer-Fusarium complex** monitoring, management, and research and education to formulate and implement management actions.
- Implement management actions based on the recommendations from the completed **Argentine ant and urban runoff** studies.
- Provide technical assistance to **model habitat suitability for MSP species** under alternative future climate change scenarios. Conduct a spatially explicit **vulnerability assessment** of potential climate change impacts to Conserved Lands across the MSP area. Model response of animal occurrences to climate variability.

*Prior Achievements*

- *Between 2012 and 2016, support was provided for **California least tern predator control** at Mission Bay Park and other nesting sites to fill a gap in funding during the non-breeding season.*
- *Since 2014, technical support and funding has been provided for a collaborative effort by the state and federal agencies to eradicate **feral pigs** in San Diego County.*

- Ongoing invasive species management includes removal of non-native aquatic animal species during surveys for arroyo toad and southwestern pond turtle. Other **invasive animals** (e.g. golden spotted oak borer, shot-hole borer-fusarium complex, Argentine ants, etc.) have been detected in the County and are causing damage to MSP species and their habitats.
- In 2017, an **Invasive Animal Plan** was initiated with a strategy and bio-control methods for the prioritization and management of invasive animal species in San Diego County.
- In 2014–2016, protocols for detecting **Argentine ants** and for monitoring **urban runoff** were developed and tested.
- Technical assistance was provided to model habitat suitability for MSP species under alternative future climate change scenarios. Completed modeling the response of plant occurrences to climate variability.

## 2.0 Promote Native Vegetation Communities

### 2.1 Vegetation Community Monitoring and Recovery

Vegetation communities serve as habitat for priority plant and animal species and as surrogates for ecosystem health. Changes in the vegetation communities due to fires, invasive species, droughts, climate change, and other factors may be causing a landscape level change to these communities.

#### *Achievement Milestones FY 2019–2020*

- Continue to develop and implement the **regional vegetation monitoring** strategy to determine ecological integrity of coastal sage scrub, chaparral, and riparian and oak woodlands in the San Diego region.
- Initiate the development of a **grazing plan** by coordinating with land managers on using grazing as a large-scale management tool to control invasive non-native grasses and forbs and restore ecological integrity and benefit MSP species in coastal sage scrub and grassland habitat.

#### *Prior Achievements*

- In 2015 and 2016, a study was conducted at 462 plots in western San Diego County to determine the recovery of **California gnatcatchers and coastal sage scrub vegetation** following 2003, 2007, and 2014 wildfires.
- Starting in 2016, a **pilot regional vegetation monitoring study** is being developed to measure the responses of **coastal sage scrub, chaparral, and grassland** vegetation communities to changing environmental conditions (e.g. climate, fire). The pilot study is based on work previously carried out between 2007 and 2014 by San Diego State University to implement and evaluate field based and landscape-scale remote sensing **monitoring methods** for coastal sage scrub, chaparral, and grassland vegetation communities, and workshops held to develop conceptual models and vegetation monitoring goals and objectives.
- Completed adaptive management actions as part of the **South County Grasslands Project** to increase native grass and forb composition and bare ground components of grasslands and coastal sage scrub using layered

treatments (e.g., mowing, herbicide, fire, and seeding) on four preserve areas of ≥500 acres.

## 2.2 Proactive Wildfire Planning and Management

Large wildfires in 2003 and 2007, plus more recent smaller wildfires, have severely impacted MSP species populations and their habitats and continues to be a threat that needs management pre- and post-fire and during suppression.

### *Achievement Milestones FY 2019–2020*

- Support preparation of a **Fire Ignition Reduction Plan** with specific recommendations to prevent wildfire ignitions affecting Conserved Lands in the MSP area.
- Develop a regional MSP **Resource Avoidance Areas Map** integrated into fire agencies' Wildland Fire Decision Support Systems and preparation of Preserve Fire Management Plans for Conserved Lands.
- Support establishment of a **Wildland Fire Resource Advisor Program** for locally-owned lands that integrates with federal and state programs.

### *Prior Achievements*

- *Began conducting studies on the effects of wildfires on the preserve system after the 2003 wildfires. In 2013, conducted a fire workshop to gather input on general management actions that can be undertaken pre- post- and during a fire. In 2015, additional workshops were held to gather input from experts on wildfire management actions for MSP species.*
- *Starting in 2017, coordinated with land managers to gather information on existing fire response plans and priority resources to begin developing the regional MSP Resource Avoidance Areas Map.*

## 2.3 Invasive Plant Species Management

Invasive plants pose a threat to existing native plants and increase the risk of wildfires by changing the natural ecosystem. In 2012, an Invasive Plant Strategic Plan was completed for managing invasive plant species in San Diego County.

### *Achievement Milestones FY 2019–2020*

- Continue to work with the County of San Diego Department of Agriculture, Weights, and Measures to implement the Invasive Plant Strategic Plan.

### *Prior Achievements*

- *In 2015 through 2018, the County of San Diego Department of Agriculture, Weights, and Measures began implementing the Invasive Plant Strategic Plan across multiple land ownerships in San Diego County and using a mix of funding including EMP funds.*
- *Through the land management grant program, land managers have been supported in efforts to remove invasive plants on Conserved Lands throughout the MSP to benefit MSP priority species.*

## 2.4 Updated Vegetation Mapping

Vegetation mapping of the County is essential for tracking changes in vegetation cover on Conserved Lands through time.

### *Achievement Milestones FY 2019–2020*

- No milestones are included in the FY19-20 workplan at this time.

*Prior Achievements*

- *A vegetation classification system was developed, and a vegetation map was produced for western San Diego County in 2012, with further refinements in 2014.*

**2.5 Enforcement**

Non-authorized use of the preserve system continues to cause impacts to MSP species and their habitats and increase the costs of habitat maintenance and restoration.

*Achievement Milestones FY 2019–2020*

- Support preserve managers and land owners in enforcement of unauthorized activities on open space lands. Work with local jurisdictions to evaluate and promote opportunities to work with local law enforcement staff.

*Prior Achievements*

- *Since 2010, support has been provided to preserve managers and land owners on open space lands through the use of law enforcement agents at the California Department of Fish and Wildlife, San Diego County Sheriff's Department, City of Carlsbad, and City of San Diego.*

**2.6 Preserve Level Management Plan Standardization**

Integration of the MSP goals and objectives into preserve level management plans will provide better coordination between regional and preserve level data collection and MSP land managers management and monitoring efforts.

*Achievement Milestones FY 2019–2020*

- No milestones are included in the FY19-20 workplan at this time.

*Prior Achievements*

- *Beginning in 2015, protocols were developed, and surveys conducted by contractors and these data were used to prepare standardized preserve level management plans in collaboration with land managers for two preserve complexes in the Western Otay Mesa and the South Crest areas.*

**2.7 Land Management Implementation (e.g., grants)**

The EMP Land Management Grant Program has been an important source of funding for implementing management actions to benefit MSP species and their habitats in the San Diego region.

*Achievement Milestones FY 2019–2020*

- Develop a 10th cycle of land management grants focusing on implementation of the MSP.

*Prior Achievements*

- *There have been 9 cycles of land management grants to-date. Since 2006, 117 projects and over \$16 million in EMP dollars have been awarded for projects across western San Diego County that have benefitted rare plant and animal species and that have committed matching funds totaling over \$10 million leveraged from other local, state, and federal sources.*

## 2.8 Emergency Land Management Fund

An Emergency Land Management Fund has been established for use in large-scale emergency situations impacting MSP species and their habitats and or which known management options are available.

### *Achievement Milestones FY 2019–2020*

- Continue to incrementally build the emergency land management to increase it to \$500,000.

## 3.0 Improve Wildlife Movement

### 3.1 Wildlife Corridor and Linkages Monitoring

Species need to move to maintain population size and genetic diversity. In a landscape fragmented by urban development and linear infrastructure, restrictions to movement could result in a risk of extinction or extirpation.

### *Achievement Milestones FY 2019–2020*

- Work with land managers to implement management actions based on the results of studies that evaluated the genetic connectivity of **horned lizards** throughout the MSP.
- Continue monitoring the status and movement of **mountain lions** in the San Diego region to evaluate the long-term trends and responses to corridor improvements. Collaborate with Orange and Riverside Counties to improve regional connectivity. Test deterrent methods to reduce livestock losses in areas of the County with high depredation pressures.
- Complete the study to determine the movement of **mule deer** using genetic DNA fingerprinting at prioritized areas in the North County using the same techniques as used in South County and across State Route 67 (SR 67).
- Work with partners to develop and implement a region-wide **camera monitoring strategy** for wildlife.
- Continue the study begun in 2014 to determine the locations and movement of **American badgers** in western San Diego County, assess habitat and threats, and examine ways to improve badger connectivity and reduce mortality. Prepare a specific management plan with recommendations for badger habitat management and for connectivity enhancement within the MSPA.
- Continue to support and work with partners to implement the existing **linkage improvement** recommendations from previous studies at prioritized locations in San Diego County.
- Support local efforts to implement the **State Route 94** (SR 94) and **SR 67** Wildlife Infrastructure Plans.

### *Prior Achievements*

- *Updated the existing linkage improvement recommendations from previous studies and begin implementing improvements at prioritized locations in San Diego County.*
- *Since 2012, the genetics of **San Diego fairy shrimp**, partially funded by outside sources, have been studied to determine connectivity between vernal pool basins and possible hybridization with a more common fairy shrimp*

species and to develop conservation and management recommendations. Results thus far have indicated that there is low level of genetic connectivity between pools.

- In 2016, genetic material was collected from **Harbison's dun skipper** to determine population genetic structure to inform development of an implementation plan.
- Completed the evaluation of genetic connectivity of **horned lizards** throughout the MSP area using outside funding sources.
- In 2014, a genetic study was finalized for the **coastal cactus wren** that found many distinct genetic clusters, relatively small effective population sizes, and low genetic diversity in small populations in San Diego County (particularly South County).
- In 2014, a genetic study was completed for the **coastal California gnatcatcher** using outside funding sources that found highly connected populations throughout most of its known range in Southern California.
- From 2011 through 2016, data were collected on **American badger** distribution, abundance, and connectivity within the MSPA using a mix of funding. In 2018, completed the protocol and a plan for use of telemetry in American badgers funded in previous years.
- Since 2012, a jointly funded study has been conducted on **mountain lion** movements and mortality in the MSP area using GPS collars to track the movement of individual lions. Results show the two largest sources of mortality in San Diego County are vehicle collisions and livestock depredation permits. In 2018, began a study to evaluate the long-term trends and responses to corridor improvements, in addition to improve regional connectivity between San Diego, Orange and Riverside Counties. It also will test deterrent methods to reduce livestock losses in areas of the County with high depredation pressures.
- In 2016, a southern **mule deer** genetic study was completed that determined connectivity of populations across Highway 67.
- In 2012 and 2013, a study tested the use of **motion triggered cameras** to detect **small vertebrate use** of eight wildlife underpasses in San Diego County.
- Since 2011, the functionality of **linkages** between core areas has been evaluated for the South County area. This work tiered off earlier studies conducted in 2002 and 2003 on MSCP corridors. In 2016, an evaluation of linkages between cores was initiated for the North County and other areas within the MSP area that have not yet been reviewed.
- In 2014 and 2015, a non-profit funded by outside sources evaluated connectivity between Conserved Lands along the **SR 94** and developed management recommendations to improve wildlife movement across the road. In 2013, SDSU students developed a conceptual design for an undercrossing structure at a key wildlife movement corridor on SR 94.
- Completed the **SR 67 Wildlife Infrastructure Improvement Plan** that will enhance connectivity across the highway and in the surrounding area.

## 4.0 Promote Regional Coordination.

### 4.1 – 4.5 San Diego Management and Monitoring Program

The San Diego Management and Monitoring Program (SDMMP) was established by SANDAG in 2008 to provide a regionally coordinated, scientific approach to management and biological monitoring of rare plant and animal species on Conserved Lands in San Diego County. The SDMMP is the first program of its kind to help bring cities, counties, wildlife agencies, military, consulting firms, education, and non-profit entities together to develop and implement regional land management and biological monitoring objectives across Natural Community Conservation Planning boundaries. The SDMMP is fully funded by SANDAG and is embedded with the San Diego Field Office of the USGS. There are currently five positions in the SDMMP, which include the Program Administrator, Management and Monitoring Coordinator, Senior Ecologist, Geographic Information System (GIS) Manager, and Data Manager.

#### *Achievement Milestone FY 2019–2020*

- Fund and fill the following positions as needed: SDMMP Program Administrator, Management and Monitoring Coordinator, Senior Ecologist, GIS Manager, and Data Manager.
- Implement the updated MSP and all incorporated strategic plan elements (Connectivity, Fire, Monitoring).
- Support the SDMMP and stakeholders in MSP implementation by creating and managing GIS viewers, maps and map layers, webpage content, data analysis, and databases.
- Collaborate with the military and other regional conservation planning programs to promote intra- and inter- regional habitat conservation planning in Southern California.
- Provide a quantitative and qualitative assessment on the status of regional management and monitoring efforts.
- Hold regular meetings with stakeholders to collaborate on regional management and monitoring projects.
- Provide regional science support and data analysis of regional management and monitoring data.
- Update and manage the Conserved Lands Database.
- Refine the output products of the regional database, increase availability of data sets to preserve managers, and provide pre-formatted data reports to interested stakeholders.
- Incorporate all data from regional biological assessments into the regional master occurrence database for analysis.

#### *Prior Achievements*

- *Regular meetings held with a network of over 315 partners from over 84 different federal, state, local, non-profit, private, and university entities.*
- *Developed a centralized database with interactive GIS map viewers for regional data, reports, and tracking of progress, available on the SDMMP Web Portal. Go to <http://portal.sdmmp.com>*

- *Prepared a Connectivity Monitoring Strategic Plan through partner workshops and collaboration, January 2011.*
- *Produced the draft MSCP Status Report summarizing 13 years of monitoring, finalized by the wildlife agencies in 2012.*
- *Worked with partners on the Invasive Plant Strategic Plan development (2012) and implementation.*
- *Developed the MSP in collaboration with partners, August 2013 and updated in 2017. Held numerous MSP workshops and trainings for stakeholders in 2014.*
- *Provided technical support and coordinated and implemented regional monitoring and management projects.*
- *Provided regular support to partners including GIS data and maps, habitat suitability models, study design development, data analysis, field datasheets and protocols, data management, meeting facilitation, trainings, and website content management.*

#### **4.6 Conserved Lands Database Management**

The SDMMP has assumed management of the Conserved Lands Database under GIS Support.

*Achievement Milestone FY 2019–2020*

- Continue to update the Conserved Lands Database as more lands are acquired.

#### **4.7 Administrative & Science Support**

*Achievement Milestone FY 2019–2020*

- Provide regional science, technical support and data analysis of regional management and monitoring data and reports. Work with outside entity to develop regional metrics to track health of the preserve system and present to the public.



## Draft Ad Hoc FY 19 Funding Allocation

| A   | B  | C                             | E                  | F                     | G  |
|-----|--|-------------------------------|--------------------|-----------------------|--|
| #   | Strategic Goal                                 | Approved Prior Years FY 06-17 | Available Budget   | Ad Hoc Recommendation | Comments   |
| 1   | <b>Promote key sensitive species</b>           |                               |                    |                       |  |
| 1.1 | Rare and Endemic Plant Monitoring and Recovery | \$1,115,000                   | \$0                | \$325,000             | Continue to facilitate monitoring by local jurisdictions and contract a consultant to fill the gaps in monitoring for Fiscal Year 2019.                              |
| 1.2 | Vertebrate Monitoring and Recovery             | \$5,955,000                   | \$187,065          | \$830,935             | Include funding for a cactus nursery to have source material to promote cactus wren habitat recovery.  |
| 1.3 | Invertebrate Monitoring and Recovery           | \$1,010,000                   | \$106,465          | \$113,535             | Continue to work with contractors on rare butterfly monitoring and management.   |
| 1.4 | Other Species Monitoring (Priority 2 species)  | \$490,000                     | \$681              | \$0                   | Phase out this funding category. No additional funding proposed.   |
| 1.4 | General Stressors and Threats Management       | \$1,555,000                   | \$0                | \$155,000             | Continue to work with partners to finalize the Invasive Animal Plan; work with land managers to implement protocols from the Argentine ant and urban runoff studies. |
|     | <b>Subtotal</b>                                | <b>\$10,125,000</b>           | <b>\$294,212</b>   | <b>\$1,424,470</b>    |  |
| 2   | <b>Promote native vegetation communities</b>   |                               |                    |                       |  |
| 2.1 | Vegetation Community Monitoring and Recovery   | \$1,145,000                   | \$220,236          | \$54,764              | Continue with regional vegetation monitoring protocol development and testing.   |
| 2.2 | Pro-active Wildfire Planning and Management    | \$3,000,000                   | \$401,377          | \$0                   | No additional funding needed.  |
| 2.3 | Invasive Plant Species Management              | \$990,000                     | \$0                | \$400,000             | Continue to work with County of San Diego Agriculture to strategically reduce invasive species in the region.  |
| 2.4 | Updated Vegetation Mapping                     | \$850,000                     | \$2,455            | \$0                   | No additional funding needed. Start vegetation mapping in FY 2020.   |
| 2.5 | Enforcement                                    | \$1,000,000                   | \$605,706          | \$0                   | No additional funding needed. Work with local jurisdictions to start multiple pilot efforts.   |
| 2.6 | Preserve level management plan standardization | \$450,000                     | \$27               | \$0                   | No additional funding needed.  |
| 2.7 | Land Management Implementation (e.g., grants)  | \$15,710,000                  | \$0                | \$800,000             | Start 10th cycle of the land management grants in FY 2020.   |
| 2.8 | Emergency Land Management Fund                 | \$350,000                     | \$400,000          | \$0                   | No additional funding needed.  |
|     | <b>Subtotal</b>                                | <b>\$23,495,000</b>           | <b>\$1,629,801</b> | <b>\$1,254,764</b>    |  |
| 3   | <b>Improve wildlife movement</b>               |                               |                    |                       |  |
| 3.1 | Wildlife Corridor and Linkages Monitoring      | \$1,945,000                   | \$12,010           | \$95,766              | Continue to work with partners and contract a consultant to implement the range-wide camera monitoring strategy for wildlife.  |
|     | <b>Subtotal</b>                                | <b>\$1,945,000</b>            | <b>\$12,010</b>    | <b>\$95,766</b>       |  |
| 4   | <b>Promote regional coordination</b>           |                               |                    |                       |  |
| 4.1 | Program Administrator                          | \$1,770,000                   | \$269,922          | \$210,000             | Continue work under existing contracts for FY 2019.  |
| 4.2 | Management & Monitoring Coordinator            | \$1,650,000                   | \$28,884           | \$160,000             | Continue work under existing contracts for FY 2019.  |
| 4.3 | Biologist                                      | \$1,070,000                   | \$27,473           | \$200,000             | Continue work under existing contracts for FY 2019.  |
| 4.4 | GIS Support                                    | \$1,085,000                   | \$168,159          | \$200,000             | Continue work under existing contracts for FY 2019.  |
| 4.5 | Database Development and Support               | \$910,000                     | \$2,560            | \$270,000             | Continue work under existing contracts for FY 2019.  |
| 4.6 | Conserved Lands Database Management            | \$275,000                     | \$78,290           | \$0                   | No additional funding needed.  |
| 4.7 | Administrative & Science Support               | \$675,000                     | \$0                | \$185,000             | Continue work under existing contracts for FY 2019.  |
|     | <b>Subtotal</b>                                | <b>\$7,435,000</b>            | <b>\$575,289</b>   | <b>\$1,225,000</b>    |  |
|     | <b>TOTAL FUNDING STRATEGY</b>                  | <b>\$43,000,000</b>           | <b>\$2,511,311</b> | <b>\$4,000,000</b>    |  |