



401 B Street, Suite 800
 San Diego, CA 92101-4231
 (619) 699-1900
 Fax (619) 699-1905
 www.sandag.org

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, July 10, 2012

1 to 3 p.m.

SANDAG, 7th Floor Conference Room
 401 B Street
 San Diego, CA 92101-4231

Staff Contact: Keith Greer
 (619) 699-7390
 Keith.Greer@sandag.org

AGENDA HIGHLIGHTS

- **RECOMMENDATION FOR ALLOCATION OF FY 2013 MANAGEMENT AND MONITORING FUNDING**
- **SOUTH COASTAL – MULTI-TAXA DATABASE**
- **STATUS REPORT ON MANAGEMENT PLAN STANDARDIZATION**

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ENVIRONMENTAL MITIGATION PROGRAM WORKING GROUP

Tuesday, July 10, 2012

ITEM #	RECOMMENDATION
1. WELCOME AND INTRODUCTIONS (Chair, SANDAG Board Member, Carrie Downey, City of Coronado Council Member)	APPROVE Estimated Start Time: 1:00 – 1:10
+2. SUMMARY OF MAY 8, 2012, MEETING Review and approve the meeting summary of the May 8, 2012, meeting.	COMMENT Estimated Start Time: 1:10 – 1:15
3. PUBLIC COMMENTS AND COMMUNICATIONS Members of the public shall have the opportunity to address the Environmental Mitigation Program Working Group (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 Speak" form and giving it to the EMPWG coordinator prior to speaking. Public speakers should notify the EMPWG coordinator if they have a handout for distribution to EMPWG members. Public speakers are limited to three minutes or less per person. EMPWG members also may provide information and announcements under this agenda item.	DISCUSSION/ POSSIBLE ACTION Estimated Start Time: 1:15 – 1:45
+4. RECOMMENDATION FOR ALLOCATION OF FY 2013 MANAGEMENT AND MONITORING FUNDING (Susan Wynn, U.S. Fish and Wildlife Service) At the May 8, 2012, EMPWG meeting, an Ad Hoc Committee was formed to develop a recommendation on the allocation of management and monitoring funding for FY 2013. Susan Wynn chaired the meeting and will present the Ad Hoc Committee's recommendations.	INFORMATION/ DISCUSSION Estimated Start Time: 1:45 – 2:15
5. SOUTH COASTAL – MULTI-TAXA DATABASE (Keith Greer, SANDAG, Yvonne Moore, San Diego Management and Monitoring Program) As part of its FY 2012 funding recommendation to the SANDAG Board of Directors, the EMPWG recommended development of a centralized database for storage, retrieval, and analysis of data on regional management and monitoring. Working with the U.S. Geological Survey, the San Diego Management and Monitoring Program has completed the first phase of the database and will share their progress and next steps.	INFORMATION/ DISCUSSION Estimated Start Time: 2:15 – 2:55
6. STATUS REPORT ON MANAGEMENT PLAN STANDARDIZATION (Dr. Rebecca Lewison and Dr. Douglas Deutschman, San Diego State University) Drs. Lewison and Deutschman of San Diego State University's Institute for Environmental Management and Monitoring will provide a status report on the progress made on the standardization of land management plans for open space preserves, including past and pending workshops and future activities leading towards completion of a draft plan in December.	

7. NEXT MEETING DATE AND ADJOURNMENT

The next meeting of the EMPWG has been scheduled for Tuesday, September 11, 2012, from 1 to 3 p.m.

Tentative Topics: Presentation and release of Invasive Management Strategy, Invasive Species Maps, and Regional Vegetation Maps.

INFORMATION

Estimated Start Time:
2:55 – 3:00

+ next to an item indicates an attachment

San Diego Association of Governments
ENVIRONMENTAL MITIGATION PROGRAM
WORKING GROUP

July 10, 2012

AGENDA ITEM NO.: **2**

Action Requested: APPROVE

SUMMARY OF MAY 8, 2012, MEETING

Members in Attendance:

Carrie Downey (Chair), City of Coronado
Bruce April, Caltrans
Michael Beck, Endangered Habitats League
Robert Fisher, U.S. Geological Survey
Anne Harvey, San Diego Conservation Network
Jeanne Krosch, City of San Diego
Jim Lyons, City of Poway
Michelle Mattson, Army Corps of Engineers
David Mayer, CA Department of Fish and Game
David Means, Wildlife Conservation Board
Bobbie Stephenson, County of San Diego
Bill Tippets, The Nature Conservancy
Jim Whalen, Alliance for Habitat Conservation
Susan Wynn, U.S. Fish and Wildlife Service
Emily Young, The San Diego Foundation

Others in Attendance:

Cathy Chadwick, EDI
Michael Drennan, Weston
Rob Furey, REC
Lisa Haws, Sycuan
Barbara Kus, U.S. Geological Survey
Vivi Mai, City of Carlsbad
Yvonne Moore, San Diego Management and Monitoring Program
Tom Oberbauer, AECOM
Ron Rempel, San Diego Management and Monitoring Program
Terry Rodgers, City of Santee
Kristine Schindle
Marcus Spiegelberg, CNLM

SANDAG Staff in Attendance:

Keith Greer, SANDAG
Katie Levy, SANDAG
Rob Rundle, SANDAG

ITEM #1: WELCOME AND INTRODUCTIONS

Chair Carrie Downey, City of Coronado Councilmember, called the meeting to order at 1:04 p.m.

ITEM #2: FEBRUARY 14, 2012, MEETING SUMMARY

Michael Beck, Endangered Habitats League, motioned to approve the meeting summary from February 14, 2012, and Bill Tippetts, The Nature Conservancy, seconded the motion. The motion carried without opposition.

ITEM #3: PUBLIC COMMENTS AND COMMUNICATIONS

Robert Fisher, U.S. Geological Survey (USGS), noted that a USGS report was recently released on post-wildfire recovery and includes information on vegetative response to fires and evidence that re-burning is leading to coastal sage scrub habitat loss. USGS research for this report was provided, in part, by *TransNet* Environmental Mitigation Program (EMP) funds. Keith Greer, SANDAG, added that this report was distributed to the Environmental Mitigation Program Working Group (EMPWG) with the agenda packet.

ITEM #4: RECOMMENDATIONS FOR NEXT *TransNet* ENVIRONMENTAL MITIGATION PROGRAM LAND MANAGEMENT GRANT CYCLE

Mr. Greer noted that at the February 14, 2012, EMPWG meeting, an Ad Hoc Committee was formed to develop a recommendation on the timing for the next cycle of the EMP Land Management Grants.

Susan Wynn, U.S. Fish and Wildlife Service, presented the Ad Hoc Committee's recommendations as Vice Chair Mike Grim, City of Carlsbad, Chair of the Ad Hoc Committee was not able to attend the EMPWG meeting.

Ms. Wynn stated that the Ad Hoc Committee reviewed a variety of alternatives for timing options. She noted that the Ad Hoc Committee recommendation is included in Item 4, Attachment 1 of the agenda packet. The recommended timeline is to have the EMPWG recommend a Call for Projects to the SANDAG committees in the fall in order to have the actual Call for Projects released by November 2012. The rest of the evaluation, recommendation, approval, and contracting process will then lead to contract execution by fall 2013.

A November 2013 Call for Projects date also will allow for several pending guidance documents to be available to applicants, including invasive species maps, regional vegetation maps, and the management strategic plan. The Ad Hoc Committee also discussed how to get more feedback from grant applicants and recommended that applicants will need to be available to answer questions on the date that the Evaluation Committee meets. This will aid the evaluation and recommendation process as the committee will be able to obtain direct answers to questions that arise in the evaluation process.

Chair Downey recommended that the questions and responses during this review process be recorded to have on file. Mr. Greer acknowledged that this can be done. Mr. Greer added the next Call for Projects will need to detail how prevailing wages applies to requested grant funds and proposed matching funds. Emily Young, The San Diego Foundation, suggested that the application also should require explanations regarding the use of interns and volunteers. Mr. Beck commented that the Ad Hoc Committee discussed the possibility of making grant applications available online for future grant cycles.

Mr. Greer noted that if the EMPWG moved forward with the Ad Hoc Committee's proposed timeline, this would allow enough time to start the SANDAG committee process.

Jim Whalen, Alliance for Habitat Conservation, motioned that the EMPWG adopt the timeline as proposed by the Ad Hoc Committee, and recommended that the Regional Planning Committee (RPC) recommend to the Board of Directors to approve the evaluation criteria and application as attached in the agenda packet, and release the Call for Projects for this land management grant cycle. Ms. Wynn seconded the motion and the motion carried without opposition.

ITEM #5: DRAFT FY 2012 *TransNet* TRIENNIAL PERFORMANCE AUDIT REPORT AND RESPONSES TO RECOMMENDATIONS (PAUL FROMER, ITOC)

In accordance with the *TransNet* Extension Ordinance, the Independent Taxpayer Oversight Committee (ITOC) conducts a triennial performance audit of SANDAG *TransNet*-funded projects. At its March 14, 2012, meeting, ITOC was presented with the draft performance audit report.

Mr. Greer provided results from the second annual audit as related to the EMP. The auditor's main concerns included SANDAG difficulty on securing coastal wetland acquisitions and the number of credits received for acquisitions, the lack of strategic plan for regional habitat conservation, and allocation of economic benefits concept. All of these concerns were known and being actively worked on by SANDAG staff.

To address these concerns, the auditors made six major recommendations for the EMP (found on page 41 of the agenda packet):

- 1) Continue efforts to work with wildlife agencies and negotiating with regulatory permitting agencies related to coastal wetland opportunities and wetland mitigation banks.
- 2) Track local streets and roads, and regional mitigation activity expenditures separately.
- 3) Continue efforts for developing comprehensive and coordinated strategic plans and measureable program objectives. Provide ITOC timeframe of tasks and milestones including draft Management Strategic Plan by November 2012 and draft Monitoring Strategic Plan in 2013, which will link operational efforts with funding.
- 4) Clarify and define how to apply the economic benefit concept and develop corresponding methodologies. This will be presented to the EMPWG within the next few months.
- 5) Continue efforts and establish timeline to develop information systems to share habitat management and monitoring results to serve as a single source of EMP information. Information will be provided at the July 10, 2012, EMPWG meeting on the South Coast Multi-Taxa Database.

- 6) Strengthen conservation efforts in its regional entity role by preparing a succession plan, establish a central monitoring function to oversee and coordinate activities, and finalize efforts to establish a strategic plan and measureable program objectives.

Mr. Greer clarified that these recommendations need to be completed within the next three years before the next audit cycle.

In response to Ms. Young's question, Ron Rempel, San Diego Management and Monitoring Program responded that the South Coast Multi-Taxa Database could include information from other regions if funding is provided to have their data included.

Bruce April, Caltrans, asked if the EMP role has evolved to include addressing regional commitments as a result of the *TransNet* EMP. Mr. Greer stated the auditors recommendations were to ensure efficiency of *TransNet* EMP funds and adding goals and objectives for EMP funds would help with the strategic allocation of funding regional management and monitoring priorities. Moreover, the auditors recognized many of their recommendations were already in progress.

Mr. Greer reviewed the auditors' findings on the EMP land management grants program. As part of the larger SANDAG grants program, positive remarks were received on the grant coordination team, application processes being fair, open, and competitive, written contracts, and requiring submission of quarterly reports and invoices.

The recommendations applicable to the land management grant program included identifying clear goals to track progress on the effectiveness of projects and streamlining grant processes. SANDAG will be conducting an internal audit of all the *TransNet* grant programs, which should address the issues related to established SANDAG processes that can cause delays.

In response to Mr. Beck's question, Mr. Greer stated that the internal SANDAG audit may look at the grant program or select individual grant programs. However, other grant programs follow the same general processes as the EMP land management grant program.

Dave Mayer, Department of Fish and Game, asked whether other grant programs have to go through similar committee processes. Mr. Greer noted that some programs go to the Transportation Committee instead of the RPC, but all grant programs use similar evaluation criteria and committees recommendations during the Call for Projects and evaluation process.

Mr. Beck asked when the *TransNet* audit report will be presented to the Board of Directors. Mr. Greer explained that the audit report is currently in draft format until approved by ITOC and then brought to the Board of Directors at the end of June.

Chair Downey noted that EMPWG members could send any comments to Mr. Greer.

ITEM #6: PROCESS TO DETERMINING FY 2013 FUNDING ALLOCATIONS

Mr. Greer provided information on the process to make a recommendation to the SANDAG Board of Directors on FY 2013 funding allocations for management and monitoring. Mr. Greer

recommended that, as done in previous grant cycles, an Ad Hoc Committee be formed to discuss funding needs and propose a recommendation for the full EMPWG to refine.

Vice Chair Grim notified Chair Downey that he could not chair this Ad Hoc Committee due to a conflict.

Mr. Beck, Dr. Fisher, Mr. Tippets, Mr. Mayer, Mr. Whalen, and Ms. Wynn also volunteered to serve on the Ad Hoc Committee. Mr. Greer stated the Ad Hoc Committee would meet in June 2012 and report back to the EMPWG at the July 10, 2012, meeting.

ITEM #7: STATE-OF-THE-PRESERVE REPORT

Mr. Rempel discussed the opportunities and options available for the creation of a “State-of-the-Preserve” report to document development progress of San Diego regional habitat preserves, objectives, and desired outcomes.

Building on the last 15 years, the State-of-the-Preserve report could be similar in format to SANDAG’s State of Commute report (a copy of this report was provided to members of the Working Group). The State-of-the-Preserve report could provide a regional view on the status of the preserves including the approved plans, pending plans, opportunities and challenges, and important areas for future focus.

Mr. Whalen commented the State-of-the-Preserve report will prevent institutional memory loss and would be a good way to reflect areas of improvements to the regional preserve from the inception. Ms. Young agreed and stated it would help understand key successes in the preserve assembly, the roles of agencies, non-governmental organizations, and allocation of public and private funding.

Mr. Tippets noted his concern that from a land manager point of view, while it is important to have a regional report on successes, there are several reporting requirements in place that may contain redundant information. Ms. Wynn explained that the State-of-the-Preserve report would build off existing data and information, but be aggregated at the regional level. Moreover, the State-of-the-Preserve report would not be a report that land managers have to provide, instead it would be a report that could provide information to cities’ council members and other decision-makers on their regional investments into the habitat preserve system.

Chair Downey commented that city council members generally want more information on the need for habitat conservation and specifically land management. She recommended that the State-of-the-Preserve report be biannual and provide information on goals and objectives, plans to accomplish goals, metrics for measureable progress, and the reason why programs and projects were implemented.

Mr. Beck stated that the State-of-the-Preserve report should include information on particular species that are important in the region such as the gnatcatchers. Additionally, there are broader implications on how the State-of-the-Preserve report compares to other California Natural Communities Conservation Program efforts.

Ms. Young asked how the State-of-the-Preserve report relates to the Strategic Plan. Mr. Rempel explained that the Strategic Plan shows the details on how and when to spend funds, whereas the State-of-the-Preserve report would discuss the more general challenges and status of the habitat preserve. Mr. Greer added that the Management Strategic Plan and Monitoring Strategic Plan are planning documents for land managers, while the State-of-the-Preserve report is a simpler, graphic-driven report that can be easily understood by the public.

Mr. Mayer commented that public members are most interested in the end goals and objectives of the preserve and what is within their immediate vicinity. Chair Downey added that the public members will want to know the definition of "success."

Dr. Fisher suggested a timeline be included with illustrations to portray the preserve before and after *TransNet* funding. Ms. Young recommended that any other existing data on the co-benefits of the preserve also would be helpful. Cathy Chadwick, EDI, added that the State-of-the-Preserve report be accessible to the general public and include information on participation of active users and volunteers of preserve areas.

Mr. Greer clarified that the intention of discussions today was whether there was interest in creating a State-of-the-Preserve report and solicit ideas. The report would occur only after the completion of the Management and Monitoring Strategic Plans were drafted.

ITEM #8: NEXT MEETING DATE AND ADJOURNMENT

The next meeting is scheduled for Tuesday, July 10, 2012, from to 1 to 3 p.m. The meeting was adjourned at 2:12 p.m. by Chair Downey.

San Diego Association of Governments
ENVIRONMENTAL MITIGATION PROGRAM
WORKING GROUP

July 10, 2012

AGENDA ITEM NO. : **4**

Action Requested: DISCUSSION/POSSIBLE ACTION

RECOMMENDATION FOR ALLOCATION OF FY 2013 MANAGEMENT
AND MONITORING FUNDING

File Number 3200100

Introduction

In March 2008, a Memorandum of Agreement was signed between SANDAG, U. S. Fish and Wildlife Service, California Department of Fish and Game, and Caltrans, which allows for the release of \$4 million a year for regional management and monitoring activities. Each Fiscal Year the SANDAG Board of Directors will allocate the funding for specific activities, taking into consideration recommendations from the Environmental Mitigation Program Working Group (EMPWG) via the Regional Planning Committee.

On May 8, 2012, the EMPWG established an Ad Hoc Committee to discuss and make a recommendation to the full EMPWG on the allocation of funding for FY 2013. Keith Greer, SANDAG, stated the Ad Hoc Committee would meet in June 2012 and report back to the EMPWG at the July 10, 2012, meeting.

Discussion

The Ad Hoc Committee met on June 12, 2012, in person, and again on June 29 via telephone to discuss a recommendation on the allocation of funds for FY 2013, including an update to the Five-Year Funding Strategy. The Ad Hoc Committee consisted of EMPWG members Michael Beck, Robert Fisher, Bill Tippets, David Mayer, Jim Whalen, and Susan Wynn who chaired the committee. SANDAG contractors Ron Rempel and Yvonne Moore of the San Diego Management and Monitoring Program, and SANDAG staff Mr. Greer also were present.

The Ad Hoc Committee recognized that significant progress has been made in the last year and the text in the Five-Year Funding Strategy needed to be updated, as well as allocation of funds for FY 2013.

The Ad Hoc Committee focused both on the status of existing funded projects, funding from past allocations that have not been encumbered ("available budget"), and future needs for making their recommendations. The recommendations are shown in Attachment 1 in ~~strikeout~~/underline. Page 12, of Attachment 1 shows the recommendation allocation of funds for FY 2013 in yellow highlight.

Two new tasks are shown in red text: Database Development and Pro-active Wildfire Planning and Management. The first new task would be a continuation of work done to create a publically accessible centralized database (i.e., South Coast Multi-Taxa Database). The second task would be to engage in pro-active efforts to identify key resources at risk from future wildfires and activities to decrease their loss due to major wildfires.

Ms. Wynn and the members of the Ad Hoc Committee will discuss their recommendations and funding allocations.

Attachment: 1. Five-Year Funding Strategy for Management and Monitoring Ad Hoc Committee Recommendations

Key Staff Contact: Keith Greer, (619) 699-7390, Keith.Greer@sandag.org

Five-Year Funding Strategy for Management and Monitoring

December 15, 2006, Revised November 18, 2011

Background

This attachment provides specific details on the activities and funding allocations related to management and monitoring under the *TransNet* Environmental Mitigation Program. This includes a conceptual five-year funding strategy (page 12) to serve as a future blueprint for management and monitoring activities and funding allocations.

Regional Coordination

Coordination is required to comprehensively identify gaps in resources, knowledge, leveraging funds, and developing cost-effective programming. ~~In 1997, a committee of federal, state, and local agencies and non-profits met together to coordinate the general information needs of the Natural Communities Conservation Program (NCCP). They concluded that, "there currently is no broadly recognized formal mechanism for research coordination and communication of existing and new information to managers (Stine, 1997¹). Currently, there is an effort to close the gap in the regional coordination of management and monitoring.~~ SANDAG, through its Regional Conservation Fund, ~~has assisted~~ is assisting with the coordination of the habitat preserve activities at a regional level, to address this issue. Coordination is required to comprehensively identify gaps in resources, knowledge, leveraging funds, and developing cost-effective programming.

Starting in Fiscal Year 2009, SANDAG began to fund the development of the San Diego Management and Monitoring Program (SDMMP) to facilitate regional coordination of management and monitoring. The SDMMP is a science-based program seeking to provide a coordinated approach to management and biological monitoring of lands in San Diego that have been conserved through various programs, including the Multiple Species Conservation Program (MSCP), the Multiple Habitats Conservation Program (MHCP), the *TransNet* Environmental Mitigation Program (EMP), and various other conservation and mitigation efforts.

SDMMP is comprised of five contracted functions as follows:

Program Administrator

The SDMMP was established to provide a coordinated scientific approach to management and biological monitoring of lands in San Diego that have been conserved through various programs including the MSCP, the MHCP, the *TransNet* EMP, and various other conservation and mitigation efforts.

¹ Stine, P. 1997. *Research Guidance to Address the Needs of Land Managers*. Available at www.nrm.dfg.ca.gov/FileHandler.ashx?DocumentID=15548

The Program Administrator is the primary lead for the SDMMP. An independent contractor is in place until September 2014 to provide overarching administrator functions to coordinate among federal, state, and local agencies and non-profits, to assist in leveraging funding, and to guide regional monitoring efforts. Until a regional funding source is identified, the Program Administrator will be an independent contractor of SANDAG.

Role and functions of the Program Administrator:

- Develop and facilitate the implementation of regional management and monitoring strategic plan(s) that provide for uniformity in data gathering, analysis and archiving, and prioritization of specific monitoring activities based on available budget and specific needs of individual species and habitats.
- Implementation of the Connectivity Strategic Plan to address the goals, objectives, and prioritized list of actions for three functional taxa groups. Work with federal and state agencies, local universities, and taxa experts to implement the plan, including recommending contractors that could accomplish the prioritized list of actions, helping to define scopes of work and budgets, and pursuing grant funding.
- Development of a Management Strategic Plan to identify the necessary elements of regional land management plans, which includes an adaptive, scientifically sound framework, a process for standardization across the region to address regional management issues.
- Development and/or coordination of peer review of species-specific and vegetation monitoring protocols for key species as identified under the monitoring plans for the regional habitat conservation plans and subsequently prioritized by San Diego State University (SDSU (Regan et al., 2008²)).
- Provide guidance to SANDAG and the Wildlife Agencies on the need/desirability for the development of a comprehensive summary of the “state-of-the-preserve” report. This report would be used by SANDAG decision-makers, Wildlife Agency staff, and the general public for discussion on how the regional preserve system is working.
- Serve as the point of contact and technical expert for SANDAG on the coordination and facilitation of land management and monitoring efforts in the region to aid land managers with cost-effective, best management practices, focusing multi-agency collaborative efforts, prioritizing and guiding management and monitoring efforts through incentive-based approaches.
- Coordinates with the Wildlife Agencies, SANDAG, local jurisdictions and stakeholders regarding administration of the SDMMP, including priorities, funding opportunities, grant proposals, scopes of work, and strategic implementation of regional management and monitoring.

Management and Monitoring Coordinator

² Regan, H.M., L.A. Hierl, J. Franklin, D.H. Deutschman, H.L. Schmalbach, C.S. Winchell, and B.S. Johnson. Species prioritization for monitoring and management in regional multiple species conservation plans. *Diversity and Distributions*, 14(4): 262-271, 2008.

The Management and Monitoring Coordinator is the lead for bringing the regional management and monitoring efforts into close coordination, ensuring that monitoring data is used to inform management of preserves, that monitoring efforts are focused at providing the data needed by preserve managers, and that management actions implemented by preserve managers will, in aggregate, help achieve species and habitat goals.

Specific Roles and Responsibilities include:

- ~~Utilize existing (or establish additional)~~ Provide leadership, coordination, and technical support for land management groups to help identify regional management issues (management/focal species, invasive species, habitats and threats/stressors, etc.), identify priorities for management actions based on priorities, risk levels, and other considerations.
- ~~Identify land managers for each preserve area by watershed, utilize their experience to identify~~ Develop cost-effective methods to address specific threats/stressors and identify appropriate technical assistance to help land managers.
- Work with ~~an advisor group and~~ land managers to develop a multi-year budget to address high-priority actions identified in the strategic plan (including invasive species) and establish a timeframe for periodic review of management actions and evaluate their success at meeting specific objectives.
- Develop a regional Geographic Information System (GIS) database of management action locations including habitat restoration efforts, location of invasive species at individual preserves, and edge effects (increased urban runoff which modifies habitats, illegal trails, trash dumping, etc.) common to multiple preserves. Track efforts including costs and evaluate their success.
- Work with ~~an advisor group,~~ land managers, public agencies, and stakeholders within the watershed to allocate available funding for implementation of priority actions identified in the strategic plan. Review budgets annually.
- ~~Oversee and manage contracts for funded projects.~~
- Coordinate the collection and analysis of regional monitoring data throughout San Diego County. ~~with an emphasis on permitted jurisdictions within the NCCP.~~
- Coordinate with the wildlife agencies on monitoring priorities.
- Coordinate and make recommendations for future grant proposals.
- Work with the wildlife agencies and science advisors to develop training workshops for field data collection efforts.
- ~~Prepare and oversee the work plan for the supporting biologist/scientist.~~

This position ~~would be~~ is—an independent contractor and reports to the Program Developer/Administrator with oversight from SANDAG.

Biologist/Scientist

The Biologist/Scientist will provide the science support for the Management and Monitoring Coordinator and the Program Administrator. This position will be the lead for on-the-ground activities and evaluations of activities.

Specific Roles and Responsibilities include:

- Providing biological input for updating the five-year horizon monitoring and adaptive management program documents.
- ~~Organizing workshops to obtain input from scientists on priority monitoring and adaptive management needs.~~
- Literature review and synthesis.
- Synthesizing and analyzing monitoring data.
- Reviewing biologically-based management practices.
- Designing monitoring strategies/protocols (including cost analyses) for monitoring Risk Group 2 species (and any other species identified as a priority monitoring species).
- Developing a prioritized research needs list.
- Preparing grant proposal to help implement elements of the adaptive management and monitoring programs and identified research needs.
- Assisting with the design and coordination of the connectivity monitoring efforts.
- Assist with the design and coordination of the rare plant monitoring efforts.
- ~~Developing a matrix of similarities/differences in preserve management issues including habitats and species.~~
- ~~Identifying mechanisms to engage preserve managers' participation in preserve management coordination efforts/meetings; preparing synthesized and analyzed data sets utilizing the Multi-Taxa Database and using the products to inform the stakeholders on the benefits and use of the database to help inform management and monitoring efforts.~~

The San Diego Association of Governments (SANDAG) and the U.S. Geological Survey (USGS), Biological Resources Division has entered into an Agreement to fund this position, which will support the SDMMP.

Geographic Information System and Database Support

The GIS Specialist would take data collected by the region and incorporate them into a GIS for analysis. This GIS Specialist will prepare maps, collect spatial data, and assist with regional sharing of GIS data. The Database Specialist would ~~also initiate~~ be in charge of the collection of digital and hard copy management and monitoring data, input of data into a centralized database, data analysis, and support to the public. The South Coast Mutli-Taxa Database, –a regional database

being developed for management and monitoring data, that could will serve as a regional hub for information collection, analysis, and sharing. SANDAG and the USGS Survey, Biological Resources Division has entered into an Agreement to fund both GIS and Database Specialists to assist the SDMMP.

The USGS also will provide additional contract services for the development of the next phase of enhancement to the South Coast Mutli-Taxa Database. This includes transfer of datasets, creation of a public portal for the direct enter of data via the Internet, development of online report and analysis, creation of a metadata library on the source material, and connect to other database. Web entry of data.

Administrative and Science Support

Implementing a countywide effort to coordinate the coordination and logistical functions of land managers and biological monitoring will require administrative support (office space, computers, administration, etc.) SDMMP is currently leasing/occupying space at USGS

In addition, management and monitoring are complex tasks that require a wide range of skills and technical expertise. The SDMMP, the jurisdictions, and the wildlife agencies may require and specific scientific support to address key issues that arise. It is envisioned that the science support would be a short-term, specific issue assist that could come from local universities, federal, and state research agencies, or species-specific experts.

Regional Management

Lands preserved as part of the regional habitat conservation plans need to be actively managed to retain and, in many cases, enhance their quality as habitat for the covered species. The Environmental Mitigation Program Working Group identified a preliminary list of regional management issues as part of a regional needs assessment in 2005. These included invasive plants, invasive animals, off-road vehicle impacts, use of grazing as a management tool, fire management, and restoration of native habitats, erosion, and control of runoff.

Conserved Lands Database

This completed project developed a GIS data layer of all the existing lands conserved in San Diego County. The data layer was reviewed by regional stakeholders and land managers. Future activities include adding more information on the management and monitoring activities associated with each parcel and keeping the database current. SANDAG and SDMMP staff will collaborate on the final development of the Conserved Lands Database in Fiscal Year 2013, after which the SDMMP staff will be responsible for its maintenance.

Regional Land Management Grants

Since 2006, SANDAG has solicited land management grants from land managers around the region to provide funding to address regional habitat management issues such as, invasive species, post-fire wildlife recovery, habitat restoration, access control, and litter removal. This program is designed to provide critical funding to address management efforts that, if left unaddressed, could lead to regional impediments to protecting habitats and endangered species. The focus of these grants has been on weed removal and habitat restoration to help specific imperiled species, and

general land stewardship. [Future focus of grants will be on the implementation of the Management Strategic Plan currently under development \(draft to be completed in November 2012\).](#)

Emergency Land Management Actions

Emergencies can arise in the course of the management of land that need to be addressed promptly or severe ramifications could occur. This funding allotment would allow a small contingency of funds to be reserved to address emergencies where no other funding source exists. The funding would only be used if findings could be made to the satisfaction of the SANDAG Executive Director with the support of an oversight committee comprised of committees made up of the U.S. Fish and Wildlife Service (USFWS), California Department of Fish and Game (CDFG), *TransNet* EMP Program Manager, and an at-large member of the EMPWG representing land managers. This process was approved by the SANDAG Board of Directors on January 28, 2011.

Invasive Plant Species Management

This project has been initiated and would create a strategic plan(s) for invasive weed removal. Timing and allocations of the funds would be established in the strategic plan(s). This multi-year effort would identify the key species and priority areas, and methods to address invasive species in the region. The goal is to identify where funding would most efficiently be spent to address invasive species.

Invasive Animal Species Management

Similar to invasive weeds, several non-native, exotic animal species have been impacting the regional preserve system. Species like bullfrogs and red-eared slider turtles are displacing native amphibian species. Cowbirds, a non-native bird that parasites the nest of other birds, have been shown to decrease the populations of endangered bird species in San Diego. This task would allow funds to be made available to address the removal of these species and enhance the population of native fauna.

[Current efforts have included work with the U.S. Department of Agriculture for predator control in Mission Bay and Batiquitos Lagoon to promote endangered species. Future work would extend these efforts at Mission Bay \(work at Batiquitos Lagoon will be resumed by the CDFG\).](#)

Updated Vegetation Mapping

The existing regional vegetation database is, in some areas, over ten years old. In addition, the vegetation classifications have error rates of 35 to 45 percent (SDSU 1995), and 34 percent (USFWS 2002). This update is approximately half-way completed. A new classification system for mapping vegetation in San Diego is being finalized. The new system is more capable of tracking changes in vegetation over time and, thus, will aid land managers in tracking their management efforts. The regional habitat preserve segments within the Western area of San Diego County have started to be mapped with this new classification system. A draft of the updated vegetation map will be available in the fall of 2012.

Open Space Enforcement

Illegal off-highway vehicle use, dumping of litter, hunting, and other illegal uses impact the open space areas set aside for habitat conservation and legal public recreation. A one-year pilot project with the Sheriff's Department Off-Road Enforcement Team and the CDFG has been completed and the Game Enforcement Branch will determine the success of the increased presence of enforcement as an effective means to deter illegal uses in open space. The results of this one-year effort indicated the success of additional enforcement, but there is a need to determine a better methodology to quantify the success. SANDAG staff is working with land managers and enforcement personnel to determine this methodology.

Preserve-Level Management Plan Standardization

Standardization of Natural Resource Management Plans is critical to assure coordination among the region's land managers. A standardized plan or template would identify and prioritize the specific species populations and vegetation communities to be managed in a given area and identify activities, specific to individual regions, core areas, or linkages of the jurisdiction, that address specific covered species requirements and the individual preserve objectives. The standardized plan will include recommendations and protocols for how to collect this type of data and how the preserve manager could adapt their management as new information is provided from monitoring or changes in methodologies. The goal would be to develop a unified resource management plan that is grounded in an adaptive management framework. Staff is working with SDSU to pilot a standardized management plan for five preserves throughout the region.

A draft template will be completed this fall with a final in December 2012. Future tasks could include testing the templates key reserves, developing and testing baseline survey protocols, and evaluation of anthropogenic factors affecting preserve performance to inform for preserve management, and other recommendations forthcoming from the pending work.

Pro-Active Wildfire Planning and Management

In 2003 and again in 2007, San Diego experienced catastrophic wildfires. Over 300,000 acres of habitat was burned within regional open space preserves in San Diego County. Preliminary analysis of post-fire wildlife and habitat data indicate that some species and habitats are not recovering or are very slow to recover and may require significant amounts of management to return the ecosystem function to pre-fire conditions.

Pro-active efforts to identify high-priority areas that are at risk from future wildfires and to coordinate this information to the land managers and fire control personnel will provide greater conservation during a future fire, reducing impacts on specific species and habitats.

Efforts will include 1) analysis of fire behavior models, micro habitat conditions, species occurrence, and other data sets to develop spatial explicit maps to identify areas that are of highest importance to reduce impacts of wildfires, 2) in collaboration with local fire agencies, development of strategic actions to reduce the impacts of fire (prior, during, and after a wildfire event), and 3) testing brush thinning methods to protect key resource areas while minimizing impacts.

Regional Monitoring

Lands preserved as part of the regional conservation plans need to be actively monitored to evaluate their success at effectively conserving the covered species and maintaining the processes

that allow for their persistence. Contractors are in various stages of updating the biological monitoring plans for the MSCP, which can serve as a model for all other San Diego conservation plans. Significant investment has occurred with several monitoring efforts listed below. There is a need for the development of a “science forum” to discuss and vet the next steps for the monitoring of vegetation communities, California gnatcatcher, post-fire monitoring, and coastal cactus wren prior to new fieldwork. The following lists of actions are needed to address biological monitoring in the region.

Post-Fire Monitoring and Recovery

Approximately 300,000 acres were burned in the Cedar and Otay Fires in San Diego County in the fall of 2003. This included approximately half of the natural lands of the County of San Diego MSCP planning area. The USGS, in coordination with the USFWS, CDFG, and County of San Diego, have completed a five-year study on the impacts of these massive fires, and resultant changes in vegetation communities, vegetation structure, and prey availability over the period beginning in 2005. The USGS also has pre-fire data (some dating back to 1995) from within the footprint of both the Cedar and Otay Fires providing for an excellent pre- and post-burn analysis.

What has been learned from these studies has helped refine future post-fire monitoring efforts. Specifically, the five-year funding strategy envisions ~~continued-completing~~ monitoring small vertebrate communities that have not recovered since the fires, completing a 4th year of monitoring for riparian birds located in the 2007 burn areas and control sites, and a synthesize of data collected across all species taxa on the fire responses to develop adaptive management actions that will be implemented to manage for diversity following similar future fire events. This work is already funded and no additional funds are required.

Vegetation and Landscape Monitoring

Monitoring the conditions of the vegetation provides a surrogate for the conditions of the habitat of endangered species. Monitoring has been started through SDSU ([Duetschman and Stow 2011](#)³) to look at the most efficient and cost-effective approaches towards monitoring the vegetative conditions of the open space lands. This is especially critical since the 2003 and 2007 wildfires. The following activities are envisioned for the five-year strategic plan:

³ Doug Deutschman and Doug Stow 2011. Five-Year Workshop on Vegetation Monitoring. December 8, 2011.

- A comparative analysis of the vegetation conditions to other vegetation monitoring data to determine the repeatability, compatibility, and increase the same size of the current efforts.
- A direct comparison of various vegetation monitoring efforts and techniques (multiple field, vs. remote sensing) to determine the cost effectiveness of these approaches to establish a best management practice.
- Development of a working group to discuss the results of the various techniques, their scientific and statistical strengths and weaknesses, the results in relation to the goals and objectives of the vegetation community monitoring, and cost, needed expertise, and practical application of each method.
- Development of standardized protocols for future vegetation monitoring efforts.

Rare and Endemic Plant Monitoring and Recovery

This activity would provide standardization for the required monitoring of rare and endangered plants in the NCCP preserves. The analysis of 11 years of rare plant monitoring data has been completed by the USGS under contract to SANDAG. In 2010, SANDAG convened an expert oversight committee to assist in the development of the rare plant protocol monitoring development. A draft was prepared for testing of the perennial ~~the~~ species. The next steps for this activity include:

- Develop a scope of work to implement the draft perennial plant monitoring protocols starting in spring 2013. The methods and data will be evaluated and the protocols refined as necessary.
- Re-convene the expert oversight committee to assist with the development of annual plant species protocols.
- Develop a scope of work to implement the draft annual plant protocols in spring 2014.
- Train land managers to utilize the protocols.

Vertebrate Monitoring

The following species and activities have been identified for vertebrate monitoring:

- **California Gnatcatcher Monitoring.** As the flagship species of the NCCP, monitoring of the California Gnatcatcher is required for the regional preserves. The USFWS has developed a new protocol for conducting California Gnatcatcher monitoring. The protocol was peer reviewed and monitoring was completed in 2002 (Orange County and parts of San Diego County), 2004 (MSCP areas only) using this new protocol, and 2007 and 2009 throughout the San Diego region. Information provided by these efforts has led to the conclusion that monitoring for this species could be reduced to once every three years redirecting efforts to other taxa. Additional analysis of the data is ongoing and a scientific peer review would be completed in 2013 to evaluate what questions can be used. This work would be used in conjunction with genetic work on connectivity being done by the USGS with existing federal funding.
- **California Coastal Cactus Wren Monitoring and Recovery.** As a result of the extensive wildfires in 2003 and 2007, patches of cactus used by the California cactus wren have

dwindled by an estimated 50 to 80 percent. Reestablishing cactus habitat for the wren has been identified as a priority for this species' recovery. Through the EMP, SANDAG will work with land managers, including the San Diego Zoo's Institute for Conservation Research and the National Wildlife Refuge, to promote mapping of the remaining cactus patches, propagation of new cactus, and strategic planting to aid recovery.

Starting in Fiscal Year 2012, a multi-county coalition was developed to assess the genetic structure and connectivity of the cactus wren throughout Southern California. Lead by USGS and in part funding by SANDAG, the genetic variability of this species is being mapped. Preliminary data shows an unusual difference in the southern San Diego County population of this species. Future work will include using museum records to determine the extent and the timing of any differentiation of the genetic difference. This result could result in a separate strategy for management connectivity for the wren in different parts of the Southern California and especially southern San Diego.

- ***Burrowing Owl Monitoring.*** Burrowing owls have been reported to be on the decline across the majority of their range for over a decade. The decline is recognized by ornithologists working in California, where it is a Species of Special Concern, and in San Diego, the decline could be described as precipitous. The San Diego Bird Atlas reports that only 8 of the 28 localities prior to 1997 still have owls. Burrowing owls also are a covered species under the San Diego MSCP, as well as other Habitat Conservation Programs. Systematic surveys in southern San Diego County were completed in 2010, and the results indicated a general lack of understanding of why owls occur where they do. A coordination committee led by the SDMMMP, lead to joint efforts by USFWS, CDFG, SDSU, and the San Diego Zoological Society to determine methods to increase burrowing owl habitat.
- ***Golden Eagle Monitoring.*** Golden Eagles are a covered species under the San Diego MSCP and there is an ongoing concern about maintaining the plan-identified number of nesting pairs. Important information needed on an ongoing basis includes annual occupancy of territories, nest pair reproduction, and source of recruitment of new birds to the nesting populations. In addition, to improve focused management of eagle foraging areas (during the rearing of young), specific information on where each eagle nesting pair is needed. Golden eagle monitoring will be done in partnership with other golden eagle monitoring efforts to the extent feasible. Multiple techniques (telemetry, nest site inspections, and genetics) will be utilized to obtain needed data.

Invertebrate Monitoring

The following species and activities have been identified for vertebrate monitoring:

- ***Rare Butterfly Monitoring.*** San Diego County contains several rare butterflies that are declining for unknown reasons. These butterflies are part of the regional open space system and additional monitoring is needed to determine the distribution, abundance, and threats to their populations and habitat. Currently, survey work is being ~~conducted~~ completed for the Thorne's hairstreak and Hermes copper butterflies. Both of these species were dramatically impacted by the 2003 and 2007 wildfires. The data will allow directed management activities as appropriate for the species. Additional work is envisioned for the rare Harbison's dun skipper another species protected by the regional habitat conservation plans.

- **Fairy Shrimp Monitoring.** San Diego contains two species of endangered fairy shrimp (San Diego and Riverside fairy shrimp) and a third species that is considered a “weedy” species that is co-located within these endangered species. Recent scientific research has indicated that the weedy species of fairy shrimp may be hybridizing with the endangered fairy shrimp increasing the risk to these endangered species. Additional monitoring and management is required to determine the extent of this emerging threat.

Wildlife Corridor Monitoring

It well understood in the scientific literature that fragmentation and isolation of open space areas will lead to the extinctions of native species. Maintain the connectivity between open space and enhancing existing connections is critical. ~~Currently the~~The SDMMP ~~have~~ worked with specific experts to design a strategy for wildlife corridor monitoring that includes specific objectives and a scope of work and key steps are identified in the Connectivity Monitoring Strategic Plan (SDMMP, 2011⁴). ~~Several steps in implementing next steps include implementation of this strategic plan are already underway and include~~through tracking of larger faunal species (e.g., mountain lions), genetic analysis of populations to assess current connectivity (California gnatcatcher, southern mule deer, and cactus wren and evaluation of current linkages and including looking atanalysis of impediments in existing linkages (e.g., structural barriers).

Next steps in implementing the Connectivity Strategic Plan include:

- Analysis of the connectivity between and within management units for small animals (e.g., reptiles, amphibians, and small mammals, etc.) utilizing remote cameras in conjunction with genetic analysis to inform the need for and opportunities for improving small animal connectivity between reserves and management units.
- Analysis of badger connectivity: The badger is an important terrestrial species in the grassland and shrub natural communities in San Diego County and is an MSCP-covered species. It is a species that is highly sensitive to habitat fragmentation, but also a species that has positively responded to improvements in connectivity. The connectivity strategic plan identified a multi-step process for evaluating and improving (as needed) connectivity for this species. The first phase was to determine the areas currently occupied by badgers to evaluate the feasibility of locating and placing transmitters on badgers to gather information on areas important for badger habitat connectivity. This phase has been completed and areas with badger populations have been identified. The next step in implementing this portion of the strategic plan is to develop a capture and radio tracking plan that maximizes the opportunity to obtain critical information on badger movement areas, but minimizes adverse impacts to badgers from conducting the study.
- Expansion of wildlife corridor linkage assessment into other areas of the regional open space preserve system. The work done in Fiscal Year 2012 by the USGS will be expanded into other key linkages identified in the regional preserve system to evaluate the movement and use by a various species.

⁴ San Diego Management and Monitoring Program, 2011. Connectivity Monitoring Strategic Plan for the San Diego Preserve System. Available at www.keepsandiegomoving.com/Libraries/EMP-doc/Connectivity_Monitoring_Strategic_Plan.sflb.ashx

- Development and implementation of recommendations to improve linkages along State Route 94 (SR 94). Large blocks of conserved habitat run from the Otay River Valley northward to Interstate 8. SR 94 bisects this area and there are several areas where installation of wildlife crossing would improve connectivity and reduce road kills of wildlife. The feasibility (potential design options and cost) of installation of a wildlife crossing(s) structure will be evaluated. The linkage evaluation and monitoring studies will provide additional direction on where and how to improve linkages for wildlife.

Other Wildlife Monitoring

San Diego State ([Regan et al., 2008⁵](#)) has conducted a peer review of the monitoring plan for the region and has indicated a prioritization for various faunal monitoring. The key wildlife species (priority 1) have been addressed above. There are several priority 2 wildlife species that also should be addressed. The specific species and scope of the study would still need to be established prior to initiating the monitoring over the coming years.

⁵ [Regan, H.M., L.A. Hierl, J. Franklin, D.H. Deutschman, H.L. Schmalbach, C.S. Winchell, and B.S. Johnson. Species prioritization for monitoring and management in regional multiple species conservation plans. *Diversity and Distributions*, 14\(4\): 262-271, 2008.](#)

5-YEAR FUNDING STRATEGY

Recommended FY 13 Allocations

		Approved Prior FYs	Available Budget	Proposed YR-1	Approved YR-1	Approved YR-2	Approved YR-3	Approved YR-4	Proposed YR-5
	REGIONAL COORDINATION	FY06-12	As of Sept 1	FY 13	FY 13	FY 14	FY 15	FY 15	FY 16
1	Program Developer/Administrator	\$750,000	\$0	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
2	Management & Monitoring Coordinator	\$1,050,000	\$279,724	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
3	Biologist	\$150,000	\$16,943	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
4	GIS Support	\$300,000	\$52,529	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
5	Database <i>Development and</i> Support	\$200,000	\$0	\$280,000	\$130,000	\$130,000	\$130,000	\$130,000	\$130,000
6	Administrative & Science Support	\$185,000	\$84,007	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000	\$90,000
	Subtotal Regional Coordination	\$2,450,000		\$970,000	\$820,000	\$820,000	\$820,000	\$820,000	\$820,000
	REGIONAL MANAGEMENT								
7	Conserved Lands Database Management	\$225,000	\$42,454		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
8	Land Management Implementation	\$11,315,000	\$0	\$2,000,000	\$2,000,000	\$1,740,000	\$1,690,000	\$1,690,000	\$1,690,000
9	Emergency Land Management Fund	\$200,000	\$200,000		\$50,000	\$50,000	\$50,000	\$50,000	\$50,000
10	Invasive Plant Species Management	\$375,000	\$187,543		\$125,000	\$0	\$0	\$0	\$0
11	Invasive Animal Species Management	\$225,000	\$38,458	\$45,000	\$0	\$125,000	\$125,000	\$125,000	\$125,000
12	Updated Vegetation Mapping	\$850,000	\$0		\$0	\$0	\$0	\$0	\$0
13	Enforcement	\$370,000	\$32,762		\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
14	Preserve level management plan standardization	\$225,000	\$0	\$75,000	\$0	\$0	\$0	\$0	\$0
15	<i>Pro-active Wildfire Planning and Management</i>		\$0	\$150,000					
	Subtotal Regional Management	\$13,785,000		\$2,270,000	\$2,375,000	\$2,115,000	\$2,065,000	\$2,065,000	\$2,065,000
	REGIONAL MONITORING								
16	Post Fire Monitoring and Recovery	\$2,300,000	\$0		\$0	\$0	\$0	\$0	\$0
17	Vegetation and Landscape Monitoring	\$495,000	\$136	\$150,000	\$0	\$165,000	\$165,000	\$165,000	\$165,000
18	Rare and Endemic Plant Monitoring and Recovery	\$450,000	\$0	\$65,000	\$0	\$150,000	\$0	\$0	\$0
19	Vertebrate Monitoring and Recovery	\$1,715,000	\$125,136	\$150,000	\$355,000	\$300,000	\$500,000	\$500,000	\$500,000
	- California Gnatcatcher/Cactus Wren		\$0						
	- Burrowing Owl		\$0						
	- <i>Golden Eagles</i>		\$0						
20	Invertebrate Monitoring and Recovery	\$480,000	\$21,607	\$100,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
	- Rare Butterfly Monitoring		\$0						
	- Fairy Shrimp		\$0						
21	Wildlife Corridor and Linkages Monitoring (including genetic studies)	\$650,000	\$36,187	\$295,000	\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
22	Other Species Monitoring (e.g. priority 2 species)	\$490,000	\$470,000		\$150,000	\$150,000	\$150,000	\$150,000	\$150,000
	Subtotal Regional Monitoring	\$6,580,000		\$760,000	\$805,000	\$1,065,000	\$1,115,000	\$1,115,000	\$1,115,000
	TOTAL FUNDING STRATEGY	\$22,815,000	\$1,587,486	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000	\$4,000,000

Note: Some activities will require implementation over multiple years.