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, September 10, 2013

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

- **CALIFORNIA LANDSCAPE CONSERVATION COOPERATIVE**
- **SAN DIEGO FORWARD: THE REGIONAL PLAN: ADDRESSING CLIMATE CHANGE WHITE PAPER**
- **MANAGEMENT STRATEGIC PLAN**

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ENVIRONMENTAL MITIGATION PROGRAM WORKING GROUP

Tuesday, September 10, 2013

ITEM # **RECOMMENDATION**

1. WELCOME AND INTRODUCTIONS (Chair Carrie Downey)

Estimated Start Time: 1:00 – 1:05

+2. SUMMARY OF JULY 9, 2013, MEETING — APPROVE

Review and approve the meeting summary of the July 9, 2013, meeting.

Estimated Start Time: 1:05 – 1:10

3. PUBLIC COMMENTS AND COMMUNICATIONS — COMMENT

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.

Estimated Start Time: 1:10 – 1:15

4. CALIFORNIA LANDSCAPE CONSERVATION COOPERATIVE (Rebecca Fris, CA-LCC Science Coordinator) — INFORMATION

The California Landscape Conservation Cooperative (CA LCC) (http://californialcc.org) is a management-science partnership created to inform and promote integrated science, natural resource management and conservation to address impacts of climate change and other stressors within and across ecosystems. Ms. Fris will discuss the goals of the CA-LCC and its current projects with an emphasis on climate change studies.

Estimated Start Time: 1:15 – 1:45

+5. SAN DIEGO FORWARD: THE REGIONAL PLAN: ADDRESSSING CLIMATE CHANGE WHITE PAPER (Allison King, SANDAG) — DISCUSSION

SANDAG will be preparing a white paper on climate change mitigation and adaptation for use in the development of San Diego Forward: The Regional Plan. Staff will present SANDAG's current climate policies and programs for EMPWG discussion on how the region may recognize and integrate habitat conservation into a climate change white paper.

Estimated Start Time: 1:45 – 2:10

+6. MANAGEMENT STRATEGIC PLAN (Ron Rempel, San Diego Management and Monitoring Program) — DISCUSSION/ ACCEPT

Ron Rempel will present the Management Strategic Plan (MSP) for discussion. The MSP is intended to establish management objectives at various scales, from regional to preserve-level, and to identify key resources for management and a system for prioritization of future funding. The draft MSP underwent public review in the spring and revision with the wildlife agencies and key stakeholders over the summer.

Estimated Start Time: 2:10 – 2:55

7. NEXT MEETING DATE AND ADJOURNMENT — INFORMATION

The next meeting of the EMPWG is scheduled for Tuesday, November 12, 2013, from 1 to 3 p.m.

Estimated Start Time: 2:55 – 3:00

+ next to an agenda item indicates an attachment

San Diego Association of Governments

ENVIRONMENTAL MITIGATION PROGRAM WORKING GROUP

September 10, 2013

AGENDA ITEM NO.: **2**

Action Requested: APPROVE

SUMMARY OF JULY 9, 2013, MEETING

Members in Attendance:
Carrie Downey (Chair), Regional Planning Committee Appointee
Mike Grim (Vice-Chair), City of Carlsbad
Bill Tippets, The Nature Conservancy
David Mayer, California Department of Fish and Wildlife
Emily Young, The San Diego Foundation
Glen Laube, Chula Vista, South County
James Whalen, Alliance for Habitat Conservation
Jeanne Krosch, City of San Diego
Michael Beck, Endangered Habitats League
Carlton Rochester, USGS
Susan Wynn, U.S. Fish and Wildlife Service
Bobbie Stephenson, County of San Diego
Teri Muzik, The Wildlife Conservation Board
Matt Adams, Building Industry Association

Others in Attendance:
Christina Schaefer, ESA
Gabriel Buhr, California Coastal Commission
Kim Roeland, City of San Diego
Megan Hamilton, San Diego Department of Parks and Recreation
Ron Rempel, San Diego Management and Monitoring Program
Yvonne Moore, SDMMP
Anne Fege, San Diego Partners for Biodiversity
Don Scoles, San Diego Habitat Conservancy
Sarah Kreja, San Diego Habitat Conservancy
Ann van Leer, LCD
Nick Buhbe, Great Ecology
Barry Martin, Western Tracking Institute
Joaquin Aganza, Friends of Hellhole Canyon
Spring Strahm, SDSU
Dan Marchalek SDSU

SANDAG Staff in Attendance:
Keith Greer, SANDAG
Sarah McCutcheon, SANDAG

ITEM #1: WELCOME AND INTRODUCTIONS

Chair Carrie Downey, Regional Planning Appointee, called the meeting to order at 1:01 p.m.

ITEM #2: SUMMARY OF MAY 14, 2013, MEETING

Bobbie Stevenson, County of San Diego, motioned to approve the meeting minutes, and Jim Whalen, Alliance for Habitat Conservation, seconded the motion. The motion carried without opposition.

ITEM #3: PUBLIC COMMENTS AND COMMUNICATIONS

Anne Fege, San Diego Partners for Biodiversity, informed that October 2013 marks the ten-year anniversary of the large 2003 wildfires. She asked the group to think about the importance of having a new set of workshops based on the information that has been learned. She thought that the members of the Environmental Mitigation Program Working Group (EMPWG) might benefit from a series of workshops or a two-day conference that brings together what has been learned in the last ten years. She and a few others would be willing to put a program together, if others thought that it would be a beneficial effort.

Susan Wynn, U.S. Fish and Wildlife Service (USFWS), announced that the USFWS Section 6 Endangered Species Act (Section 6) grants were announced on Tuesday, July 9, 2013. The San Diego County Water Authority Elfin Forest Habitat Conservation Plan (HCP) received $3 million in funding. The San Diego Mountain Ranch in East County received partial funding with a recovery grant. The Western Riverside Multiple Habitats Conservation Plan (MHCP) and Coachella Valley MHCP projects also received funding.

Mr. Whalen asked Ms. Wynn why she believes Southern California received almost a third of the available funding.

Ms. Wynn explained that it is due to the evaluation criteria favoring areas with covered species, high biodiversity, and partners with matching funds.

Mr. Whalen suggested that it could be a testament for organizations having projects lined up and ready to go in advance. It seems to pay off in benefits.

ITEM #4: *TransNet* ENVIRONMENTAL MITIGATION PROGRAM FISCAL YEAR 2014 FUNDING ALLOCATION (Susan Wynn, U.S. Fish and Wildlife Service)

The EMPWG subcommittee met to update the budget for Fiscal Year (FY) 2014. The process was similar to other years where the subcommittee reviewed the available funding and the identified needs. A table with the subcommittee's recommendations was discussed. Column A of the table showed the funding that has been spent to date. Column B of the table showed the previous year's allocations that have not yet been spent. Column C showed the proposed FY 14 budget from the Five-Year Funding Strategy for the Working Group's Information. Column D was the ad hoc recommendation for FY 14 allocations.

Ms. Wynn walked the Working Group through the changes. Regional Coordination increased in funding for some positions. However, as the costs for some positions went up, some of the overhead costs went down, and will be absorbed by the position costs. The costs overall for Regional Coordination are still fairly constant. Regional Management allocations decreased in land management implementation, but column B still has $2 million of unspent funding that can be used in FY 14. There is almost $3 million that can be spent on land management if the SANDAG Board of Directors (Board) approves the proposal. The bulk of the Regional Management money will be for the implementation of the Management Strategic Plan (MSP) through direct contracts and grants. For emergency land management, the goal is to build the account up over several years to $500,000, by adding $50,000 each year. Policies are in place to determine what qualifies as an emergency.

Funding for invasive plant species would continue, but the subcommittee did not want to spend all of the funding on planning. The subcommittee would like the bulk of the money to be spent on the groundwork to remove the invasive plant species. Funding for invasive animal species increased significantly to lend strong support for feral pig control. There is some money available through federal Section 6 funding and a comprehensive strategy is making its way through the California Environmental Quality Act and National Environmental Policy Act process. Other invasive species efforts would promote least terns and southwestern pond turtles. The next steps of the Preserve Level Management Plan Standardization would be to work with willing land managers and apply the standardization template developed by San Diego State. For the Regional Management category, United States Geological Survey (USGS) has been conducting pro-active wildfire planning and would like to start implementing their recommendations once vetted with others. Post-fire monitoring is categorized under Regional Monitoring. There is still money available to continue the vegetation monitoring project as well as for rare plants. For the vertebrates and invertebrates categories there is funding to continue work on cactus wren, gnatcatchers, and Hermes copper butterfly as well as expand the research to other species.

Ms. Wynn and Keith Greer (SANDAG) discussed that the wording might want to be changed to say, "Increase funding to address priority species identified in the MSP," to maintain flexibility in the use of the funds. Connectivity (linkages) and other species monitoring still have funding available.

A new category was added for land acquisitions funding by revenue from economic benefit. It is the recommendation of the subcommittee that the first release of funding towards land acquisition be $20 million.

Michael Beck, Endangered Habitats League, asked for a summary of the schedule and asked when the money will be released.

Mr. Greer explained that the proposal to use the $20 million in economic benefit for land acquisitions will go to the Regional Planning Committee and Transportation Committee the first Friday of September. The proposal will then go to the Independent Tax Oversight Committee the following Wednesday and will go to the Board in late September. The funding for FY 14 will be released as soon as the Board takes action. This would not occur earlier than October.

Mr. Whalen motioned to approve and Mike Grim, City of Carlsbad, seconded the motion. The motion carried without opposition.

ITEM #5: *TransNet* ENVIRONMENTAL MITIGATION PROGRAM FISCAL YEAR 2014 ECONOMIC BENEFIT FUNDING FOR LAND ACQUISITION (Keith Greer, SANDAG)

Mr. Greer presented the *TransNet* Environmental Mitigation Program FY 14 Economic Funding for Land Acquisition. Policies to implement the *TransNet* economic benefit provision went to the Board in April for approval to amend the EMP Memorandum of Agreement (MOA). SANDAG has a land management program and is now starting a land acquisition program. Per the MOA, an evaluation committee would be made up of SANDAG, USFWS, Caltrans, USGS, and California Department of Fish and Wildlife staff. This was presented only as an informational item, since some members of the EMPWG may want to apply for acquisition funding.

The EMP subcommittee would like input on the documents. The subcommittee will meet before the SANDAG committees and Board meet in September. Mr. Greer went through the draft application and the attachments that would be issued with a Call for Projects.

Teri Muzik, the Wildlife Conservation Board, asked if the appraisal process could be consistent with federal standards if there is Section 6 funding. Mr. Greer answered yes, that the application sets a minimum standard that could be flexible to be used for federal funds. SANDAG would make sure all of the appraisal instructions are consistent to meet all standards of any proposed matching funds.

The Project would be determined to be eligible and then evaluated using the criteria in the attachments to the application. Eligible projects could receive a maximum of 105 points.

Once ranked, the top projects totaling $20 million will go through the appraisal process. Those projects will go to the SANDAG committees for a recommendation and the Board for approval. If approved by the Board, the Project would then enter escrow and upon close of escrow, the title of the property would pass to grantee with a conservation easement to SANDAG. Mr. Greer asked for input from the Working Group in person or via email.

Mr. Greer received several comments and questions from the Working Group:

- Bill Tippets, The Nature Conservancy, asked if there is a plan that grantees should be consistent with when creating the resource management plan, so that it levels the playing field.

- Mr. Greer indicated that the resource management plans would use the Preserve Management Standardization Plan developed by San Diego State University (i.e., the cookbook) to develop their plans.

- Mr. Grim asked if the proposed management plans are subject to review and approval by the state and federal wildlife agencies, or just review. He also asked if resource management plans within a jurisdiction subarea plan will have time to be reviewed by the jurisdiction for adjacency or connectivity issues with existing reserves. Mr. Grim inquired as to what type of letter is expected from the grantee showing that the local jurisdiction does not object.

- Mr. Greer answered that the management plans will only be reviewed by the wildlife agencies that would provide their recommendations. The jurisdictions will receive a copy of the plan to provide comments. Mr. Greer indicated that in the past, city managers have previously submitted letters of their support for land acquisitions. The jurisdictions can submit a letter on

city letterhead expressing their approval or stating that the acquisition would not impact the city's general plan.

- Mr. Whalen commented that he has heard from some people who disagree with "special considerations" only receiving five points. Applicants are told to come forward with a match, but then they only receive five points for that. Mr. Whalen feels that that point amount should be increased.

- Mr. Greer shared that he had heard that as well and that the subcommittee will keep that under consideration.

- Megan Hamilton, County of San Diego Parks and Recreation, asked if the ongoing management costs could include biological monitoring.

- Mr. Greer answered that the costs could include biological monitoring and that the management costs should cover everything. The hope is that there are some matching funds available, so that if SANDAG puts up the cash for the acquisition, then the land manager will put up the costs for management at their expense.

- A member of the public asked if receiving a land acquisition grant excluded an organization from receiving a future land management grant.

- Mr. Greer answered that receiving one grant does not exclude you from receiving another unless the land management is completely covered by the acquisition.

- Ms. Wynn added that if the acquisition is fully funded then it should be set for day-to-day management, but something above and beyond, such as building a culvert, would still be eligible for funding.

- Scott Grimes, Endangered Habitat League, asked if it is okay if a grantee requests funding for long-term management, but they are willing to take the property in title before the funding is in place. He asked if the seller needs to wait for long-term funding beforehand, assuming it is an endowment. Lastly, Mr. Grimes asked about the mechanics of getting the money where it actually needs to go.

- Mr. Greer informed that escrow includes all costs. The more important thing is that there is a qualified land manager and qualified financial manager.

- A member of the public asked if there is any sense yet of how an applicant will be judged for coming up with an adequate land management cost. He also asked if SANDAG was assuming the costs for enforcing the conservation easement.

- Mr. Greer informed that there are a dozen ways to determine management costs; the applicant should make it as clear as possible what methodology they used. SANDAG will be responsible for enforcing the Conservation Easement. There will be a reversionary clause included in the agreement in case the property owner is not managing the property.

- Yvonne Moore, San Diego Monitoring and Management, asked if there is any way to buy land without sensitive species or habitats to encourage people to recreate on those lands.

- Mr. Greer answered that that is not an option at this time. The grants are just for purchasing habitat lands for sensitive species.

- Ron Rempel, San Diego Monitoring and Management, asked Mr. Greer if he would like Mr. Rempel and Ms. Moore to make some time available to talk to the applicants on how proposed properties fit into the MSP.

- Mr. Greer agreed that that was a good idea. He suggested setting up a workshop similar to those set up for previous Calls for Proposals. Ms. Moore has been involved with previous land management workshops for potential grantees.

ITEM #6: MOUNTAIN LION CONNECTIVITY STUDY (Dr. Winston Vickers, U.C. Davis)

Dr. Vickers presented the preliminary results of the Mountain Lion Connectivity Study for Western San Diego County; a project that was started by Walter Boyce. The study began in 2001 and initially focused on the impacts on Big Horn Sheep in San Diego County. The study has expanded to include landscape connectivity, genetics, health, and disease, and minimizing conflicts between cougars, people, and domestic animals. Seventy-nine cougars have been captured, and 71 have been collared with Global Positioning System (GPS). Twenty-seven cougars were captured west of Interstate 15 (I-15) and 44 were captured east of the I-15. A few animals traveled as far as the I-10 and 1 cougar was recorded south of the United States-Mexico border.

Dr. Vickers shared that there is a hole in the data in western San Diego where very little mountain lion activity has been recorded. A mountain lion (M103) was hit and killed by a car in Rancho Peñasquitos. M103 was significant due to a genetic study that revealed he was raised by his mother in Irvine and made his way down to an area west of the I-15. He helped to answer the question of what animals might exist or utilize lands west of the I-15.

Glen Laube, City of Chula Vista, asked what the study area was.

Dr. Vickers explained that the study area was Highway 91 to the north end of Santa Ana. The study area included Chino Hills, but no animals were found there. The study area went south to the international border and east to the San Jacinto Mountains and Saltan Sea.

Emily Young, the San Diego Foundation, asked about the gap in the data. She inquired if it was due to the absence of animals in that area, or if it was due to the lack of data. Dr. Vickers informed that the data gap was due to the lack of capture efforts west of the Cuyamacas in the study area currently funded by SANDAG.

Dr. Vickers showed a map made by The Nature Conservancy that showed two large clusters of animals that are genetically distinct. It supports evidence that the I-15 is a physical and genetic barrier to mountain lions. Mountain lions were chosen for this connectivity study because they are a wide-ranging species. Dr. Vickers explained that connectivity can refer to genetic connectivity or functional connectivity.

Half of their collared animals died during the time that they were collared which is about two years. Survival for the mountain lions seems to be lower than expected for a non-hunted species. Two-thirds of the deaths were human-related. Ernest et al. 2003 published a study showing that the lions west of the I-15 were genetically restricted and different. A published study in 2010 showed that about half of the suitable areas for mountain lions are on conserved lands, and an estimated 35 percent of suitable private land that was available in 1970 will be gone by 2030. Cougars in fragmented (<40 acres per house) or exurban habitat are at a higher risk of mortality due to restricted use. Road kill is the number one cause of death and depredation permits are the second in the study. Most road kill occurs west of I-15 and more depredations occur east of the I-15.

Chair Downey asked Dr. Vickers if data on the road kill deaths revealed whether the death was from a highway or a local street/road.

Dr. Vickers informed that there is information by road type. The deaths seem to be varied by road type, but there are some roads that have had multiple deaths. In San Diego and statewide, male cougars are three times more likely to be killed by a depredation permit than females. However, males and females are equally likely to be killed by a vehicle. As fragmentation increases, cars increase and will become the more common cause of death. Since females are just as likely to be hit by a car as a male, the populations will suffer more than if depredation were the cause.

Matt Adams, Building Industry Association, asked how many deaths occurred if cause of death for a 30-year time period was graphed.

Dr. Vickers explained that the 100 deaths recorded by road kill and depredation represented about half of the total deaths. Other causes of death are disease, illegal hunting, and fire.

Ms. Young asked if all road kill data is gathered by the agencies. She also asked what agency the road kill is reported to.

Dr. Vickers shared that the agencies do not have data on all animals that are hit. Sometimes a person will report hitting an animal, but by the time someone gets to the scene the animal is gone. Sometimes people pick up the animals and keep them as trophies, or the animal gets hit and dies later in brush.

Dr. Vickers presented a map of the core conserved habitat areas with the study area funded by SANDAG. The map helped determine the animals that should be monitored, the areas currently conserved, and the corridors that this team were assessing. The map also showed specific areas that were considered good mountain lion habitat. West of I-15 and Mission Trails Park was considered less suitable habitat due to human use and fragmentation, so those areas were not targeted.

Mr. Whalen asked if there is a way to track if the mountain lions used existing wildlife movement areas that were built under roads to travel.

Dr. Vickers explained that that is difficult to do since the GPS data is collected every five-minutes to extend the battery life. As the interval between data collection expands, you need to extrapolate the data. Animals are more likely to be hit right after or next to a crossing when there is an intersection of roads.

Camera sites were chosen from previous data, expert opinion, and looking at the landscape relative to animals. Preliminary scouting with the cameras was conducted before the study formally began. The cameras are checked monthly and are mostly managed by the Western Tracking Institute and a team of volunteers. Cameras have been set up west of the I-15 and there are sites near Deer Canyon. There are sitings up and down the west side of I-15 regularly, but 50 to 75 percent end up being bobcats or dogs. No cameras have picked up a mountain lion south of the I-8 in one year. Dr. Vickers shared the camera monitoring results.

Dr. Vickers shared the methods of capture. Bait traps were more often used since it is safer and more successful. Road killed deer is used for bait in the areas away from people and roads. That is a challenge in itself since Dr. Vickers and his team needs to acquire the deer which requires advance coordination and freezer space. They need to use deer killed in a twenty-mile radius of the bait area to reduce the potential for disease transference. Once caught, animals are sedated, collared, and samples are taken.

Field season is normally November to May. Dr. Vickers and his team started in February. He shared the data with the EMPWG.

A map was shown that displayed the amount of territory a mountain lion needs. Initial estimates are that four to eight lions would be using the study area, and that proved to be correct. Four lions were identified in that range. Males average about a 200 square mile area of use and females 80 square miles. Mortality affects the territory, since it takes about a year for a new lion to move into a deceased lion's territory.

Christina Schaefer, ESA, asked whether the higher amount of males killed by depredation permits is due to their larger range or because they are more aggressive.

Dr. Vickers explained that his hypothesis is that these are the younger males that are dispersing. Young animals in strange terrain are more likely to attack livestock animals that they happen across.

Dr. Young asked Dr. Vickers to confirm that there is no evidence in this study of mountain lions in Tijuana/Otay River Valley.

Dr. Vickers confirmed that that is correct. His hypothesis was that many of the animals come out of the Cuyamacas in the study and then move back. That is the general trend, so the southern terrain may not favor them entering that new territory.

Anne Van Leer, LCD, asked if the animals make use of the undercrossing near Valley Center Road.

Dr. Vickers explained that he was waiting to look at the data with a closer interval in collection time (i.e., less than 5 minutes).

Mr. Rempel added that there are camera sets in all three undercrossings at Valley Center Road. They have a timed sensor and a motion sensor, but there are several thousand pictures from those a week. As time goes on, there will be more time to look at the data and they should be able to see if the cat is using the undercrossing.

Dr. Vickers shared that there were mountain lions near Barona operating on both sides of the freeway. They had not crossed the freeway in the south, but had crossed it fifteen times in the north. Dr. Vickers presented a few slides to clarify.

The defined corridor areas of the MSCP seem to be functioning and mountain lions are using them, but they are taking some risks to do so, since there is much highway activity. The mountain lions will use the crossing structure regularly if they can find it. The fencing and crossing structure are necessary for an effective wildlife crossing. Most often mountain lions will cross the road where they intersect it and will not search out an undercrossing.

There is a very open arch culvert in Orange County were 150 deer movements have been recorded through the culvert. Two other identical crossings have been monitored, but have only recorded one deer using it. Culverts and passages on their own are not a guarantee that animals will use them. In another monitoring effort, there are four separated span bridges with crossings. Sixty-seven mountain lion crossings were recorded for one bridge, but zero crossings for the other. For deer, the pattern is distributed more evenly. Even when there are good crossings, mountain lions do not use them. Usually there is really old and ineffective fencing.

Bobbie Stevenson, County of San Diego, asked Dr. Vickers what his recommendation for fencing is.

Dr. Vickers informed that eight-foot fencing is standard to exclude deer with jump outs for those that get in the road. Effective for deer, but cougars will jump over it. Ten-foot fencing with two-foot jump outs are needed to be effective for mountain lions.

Mr. Whalen asked Dr. Vickers what his impression was of East County with all of the public land.

Dr. Vickers shared that the primary road kill is in the I-8 corridor. The freeway is a constraint, but many animals move across there.

Mr. Beck asked if there is modeling data that will be made into recommendations for certain areas. He asked if there was money budgeted for that and if it was part of the connectivity model.

Dr. Vickers explained that the modeling is not in the particular contract right now. Modeling can be done further along when there is more data.

Mr. Beck asked if there is a plan to take those next steps.

Mr. Rempel explained that they want detailed collar data first to fit the model to the terrain and habitat conditions, and then they will come back with recommendations on where crossings might be most effective.

Mr. Beck asked if this is part of connectivity monitoring. Mr. Rempel answered yes.

ITEM# 7: NEXT MEETING DATE AND ADJOURNMENT

The next meeting of the EMPWG is scheduled for Tuesday, September 10, 2013, from 1 to 3 p.m.

The meeting was adjourned at 2:41 p.m. by Chair Downey.

September 10, 2013

AGENDA ITEM NO.: **5**

Action Requested: DISCUSSION

SAN DIEGO FORWARD: THE REGIONAL PLAN: ADDRESSING CLIMATE CHANGE WHITE PAPER

File Number 3200300

Introduction

SANDAG will be preparing a white paper on climate change mitigation and adaptation for use in development of San Diego Forward: The Regional Plan (Regional Plan). Staff is receiving input on how to address climate change in the Regional Plan from SANDAG working groups and policy committees and the general public through the ongoing series of Regional Plan workshops.

The climate change white paper, to be completed in early 2014, will include an overview of greenhouse gas (GHG) emissions in the region, existing planning efforts, and strategies to both reduce emissions and address impacts of climate change. Within the strategies discussion, the paper will describe the interrelationships with other SANDAG planning areas. Finally, the paper will conclude with recommendations. A summary of SANDAG climate planning efforts is provided in this report, and the draft outline for the white paper is included as Attachment 1. Environmental Mitigation Program Working Group members are asked to provide feedback on the draft outline for the white paper, and input on the relationship between climate change and habitat conservation.

SANDAG Climate Change Planning

Climate change is a global problem that must be addressed at all levels of government and in all sectors of the economy. The State of California took action by adopting the Global Warming Solutions Act (Assembly Bill 32) (Nunez, 2006) (AB 32), which called for economy-wide reduction in GHG emissions to 1990 levels by 2020. As a provision of AB 32, the California Air Resources Board (CARB) is required to develop and update a Scoping Plan every five years. The first Scoping Plan was adopted in 2008, and CARB is now undertaking the first update, which will show progress toward the 2020 goal and address post-2020 actions. The 2013 Scoping Plan Update will be another resource for the development of the climate change white paper.

At a regional level, SANDAG has focused on programs and policies that regional and local governments have influence or authority over. Energy use related to transportation, electricity generation, and natural gas end-uses like space and water heating and cooking account for about 80 percent of the San Diego region's GHG emissions associated with climate change. By reducing the amount of vehicle miles traveled (VMT), using energy more efficiently, increasing our supply of

renewable resources, and expanding our transportation fuel choices, the San Diego region can do its part to achieve state climate goals, improve local air quality, and enhance our neighborhoods.

2050 Regional Transportation Plan and its Sustainable Communities Strategy

In October 2011, SANDAG adopted the 2050 Regional Transportation Plan and its Sustainable Communities Strategy (2050 RTP/SCS). The plan detailed how the region would reduce per capita GHG emissions from on-road transportation (passenger vehicles) in 2020 and 2035 to levels set by CARB. Development of an SCS and planning to meet regional GHG reduction targets were required by Senate Bill 375 (Steinberg, Chapter 728, Statutes of 2008), and the San Diego region was the first in California to produce an RTP with an SCS.

Leading up to the 2050 RTP/SCS, SANDAG developed several strategies for ways to reduce GHG emissions in the region. They included the Regional Energy Strategy (2009); Climate Action Strategy (2010); and Regional Alternative Fuels, Vehicles, and Infrastructure Report (2009).

Through the RTP/SCS, SANDAG is responsible for long-range regional planning that reduces GHG emissions attributed to passenger cars and light-duty trucks, which is typically measured in VMT. This can be achieved by:

- Better linking plans for land use, transportation, affordable housing, and sensitive resources protection with related measures, policies, and investments.
- Building smart growth neighborhoods and communities in which basic daily needs and public transit service are safely accessible on foot or by bicycle, expanding and developing new systems for low carbon modes of transportation, and reducing demand for single-occupancy-vehicle travel.

Beyond the 2050 RTP/SCS

In addition to what the agency is required to do, SANDAG has taken steps to address climate change impacts and reduce GHGs by supporting other regional and local actions, including:

- Protecting transportation infrastructure from climate change impacts such as extreme heat, sea level rise and higher storm surge, and wildfire-associated mudslides.
- Protecting energy infrastructure from climate change impacts by supporting modernization of the electricity grid, and utilizing demand response and energy efficiency measures to reduce GHGs during peak periods.
- Reducing VMT and GHG emissions from vehicles by lessening traffic congestion and promoting efficient driving practices.
- Promoting the use of low carbon alternative fuels by facilitating the process of permitting and siting electric vehicle charging and other alternative fuel infrastructure.
- Reducing energy use in residential and commercial buildings by retrofitting existing buildings and maximizing efficiency in new construction.
- Increasing the use of renewable energy by promoting installation of clean, onsite energy systems and large-scale renewable energy projects.
- Reducing water-related energy use and GHGs by integrating measures that save water and energy into building retrofit programs and using reclaimed water to decrease the amount of GHGs attributed to meeting water needs.

In addition to the communitywide measures, SANDAG and local jurisdictions can lead by example by reducing GHGs from their own operations. While municipal GHG emissions comprise only a small fraction of total climate change emissions, reducing GHGs from local government operations can save taxpayer dollars and set an example for the greater community. Many local governments are doing exactly that by developing and adopting climate action plans and other sustainability measures.

Attachment: 1. Draft Climate Change White Paper Outline

Key Staff Contact: Allison King, (619) 699-1973, allison.king@sandag.org

DRAFT Climate Change Mitigation and Adaptation White Paper Outline

I. Summary
II. Introduction
    a. Background
    b. Emissions Inventory
        i. Sources of Greenhouse Gas (GHG) Emissions:
            1. Transportation
            2. Electricity
            3. Natural Gas
            4. Water
            5. Waste
        ii. 2012 Emissions Inventory
        iii. Compare to 2006 Emissions
        iv. Forecast Emissions to 2050
    c. Climate Change Impacts in the San Diego Region
        i. Coastal Resources
        ii. Water Management
        iii. Public Health
        iv. Agriculture
        v. Biodiversity/Habitat

III. Climate Change Planning
[In general, how to address climate change, best practices, state guidance, etc.]
    a. Strategies to Reduce GHG Emissions
        i. Transportation – Reduced VMT, low carbon fuels, efficient vehicles
        ii. Electricity – energy efficiency, ZNE buildings, Distributed Generation, RPS
        iii. Natural Gas – ZNE buildings, solar hot water heating
        iv. Waste – landfill diversion, composting, recycling
        v. Water – graywater, recycled water, conservation
    b. Strategies to Prepare for Impacts of Climate Change
        i. Vulnerabilities assessment – sea level rise, wildfires, heat, drought, extreme weather, etc.
        ii. Response to vulnerabilities – design criteria for infrastructure, habitat planning, public health protection, etc.
        iii. Regional approach/consistency

IV. Existing Energy/Climate Change Planning Efforts in the San Diego Region
[What is actually happening in our region? What are SANDAG and LG's doing individually and collaboratively?]
    a. SANDAG Planning
        i. 2050 Regional Transportation Plan and its Sustainable Communities Strategy
        ii. Regional Energy Strategy
        iii. Climate Action Strategy
        iv. Energy Roadmap Program
        v. Plug-in Electric Vehicle Planning
        vi. Green Operations Manual
        vii. Capital Projects (EV chargers, sea level rise considerations)

viii. Habitat Conservation
ix. Shoreline Protection

b. Local Government Planning
i. GHG emissions inventories
ii. Climate Action Planning (mitigation and adaptation)
iii. Energy Roadmaps
iv. Climate Action Plans and Roadmap Implementation

c. Regional Collaborations
i. San Diego Regional Climate Collaborative
ii. San Diego Regional Energy Partnership
iii. San Diego Bay Sea Level Rise Adaptation Strategy
iv. Climate Understanding and Resilience in the River Valley (CURRV) – Tijuana River National Estuarine Research Reserve

V. Recommendations
a. Fill gaps in current efforts
i. SANDAG role in supporting local government efforts
ii. Data accessibility for climate planning
iii. Regional targets for California Environmental Quality Act (CEQA)
iv. Regional consistency
v. Facilitate collaboration

b. Provide direction for next steps

SANDAG planning areas to be considered throughout white paper:

- Housing
- Public Health
- Transportation
- Infrastructure/Capital Projects
- Land Use Planning
- Habitat Conservation
- Shoreline Preservation
- Borders
- Economy
- Water
- Waste

APPENDIX

A. Key Federal and State Policies
a. Presidential Climate Action Plan
b. Executive Order S-03-05 – GHG Reduction Targets
c. Assembly Bill 32 – Global Warming Solutions Act
i. 2008 Scoping Plan
ii. 2013 Scoping Plan Update
iii. Cap and Trade
d. Senate Bill 375 – Sustainable Communities and Climate Protection Act
e. Senate Bill 97 – CEQA Amendments for GHGs
f. Executive Order B-16-12 – Zero Emission Vehicles
g. Assembly Bill 758 – Comprehensive Energy Efficiency Program for Existing Buildings
h. CA Long-Term Energy Efficiency Strategic Plan
i. Executive Order S-13-08 – Climate Adaptation Strategy
j. California Climate Adaptation Strategy (2009, 2013)
k. Adaptation Planning Guide


San Diego Management & Monitoring Program
Management Strategic Plan for
Conserved Lands in Western San Diego County
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Volume 1: Overview and Approach

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Management Strategic Plan for Conserved Lands in Western San Diego County

Volume 1: Overview and Approach

August 27, 2013

Prepared For

San Diego Association of Governments (SANDAG)
401 B Street, Suite 800
San Diego, CA 92101

Prepared By

San Diego Management and Monitoring Program (SDMMP)
4165 Spruance Road, Suite 200
San Diego, CA 92101

Version 08.27.2013

San Diego Management and Monitoring Program staff:
Ron Rempel, Program Administrator
Yvonne C. Moore, Management and Monitoring Coordinator
Dr. Kristine Preston, Program Ecologist
Emily Perkins, GIS Manager

Front Cover:
Ink and watercolor by D. Preston 2013, email dustylazuli@gmail.com

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Contact Info:
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Executive Summary

Management and monitoring of preserve lands within approved or proposed large-scale conservation plans in western San Diego County has generally not been well coordinated, resulting in multiple plant and animal species and vegetation communities not receiving coordinated and appropriate levels of attention. The San Diego Management and Monitoring Program (SDMMP) was tasked with preparing the Management Strategic Plan (MSP) for the San Diego Association of Governments (SANDAG) to fulfill the need for a strategic approach to implement management and monitoring objectives in a cost-effective manner. The MSP provides a comprehensive approach for management of multiple plant and animal species within the region by establishing biological goals and measureable objectives to implement management actions. The MSP categorizes and prioritizes species and vegetation communities, identifies geographic locations for management actions, provides specific timelines for implementation, and establishes a process for coordination and implementation.

The MSP is divided into 3 volumes. Volume 1 of the MSP is intended to be an operational document, while Volume 2 contains the functional sections, and Volume 3 contains more technical information.

Vol. 1 Overview & Approach

Volume 1 includes an overview of the MSP, approach and rationale for categorizing and prioritizing species and vegetation communities and for developing management goals and objectives, characterization of the MSPA, management units (MUs), and threats/stressors, and a description of databases and the implementation process.

Vol. 2 Goals & Objectives

Volume 2 includes regional and MU management goals and objectives for species and vegetation communities, the prioritized timeline for implementation, and goals and objectives for regional threat and stressor management.

Vol. 3 Supporting Documents

Volume 3 contains the supporting documents that are part of and/or were used to develop the MSP. These include species profiles, additional methodological details and definitions, and the implementation plan format.

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1.0 Introduction

The purpose of the MSP is to provide a biologically-based foundation to support decision making and funding priorities for managing species and vegetation communities on Conserved Lands across western San Diego County.

1.1 What is the Management Strategic Plan (MSP)?

The Management Strategic Plan (MSP) is a comprehensive approach for management of multiple plant and animal species within the region. By establishing biological goals and measureable objectives, the MSP provides for a coordinated effort to implement management actions. The MSP categorizes and prioritizes species and vegetation communities, identifies geographic locations for management actions, provides specific timelines for implementation, and establishes a process for coordination and implementation. The MSP is intended to be a living document with revisions to specific sections occurring as new information becomes available or as situations change (e.g., wildfire). More comprehensive updates of the MSP will generally occur every 4 to 5 years.

1.2 What is the Purpose of the MSP and Why is it Needed?

The purpose of the MSP is to provide a biologically-based foundation to support decision making and funding priorities for managing species and vegetation communities on Conserved Lands across western San Diego County. A large portion of open space lands in western San Diego County are within an approved or proposed large-scale Natural Communities Conservation Planning (NCCP) program plan[1]. The plans (both completed and in preparation) anticipate that conservation, management, and monitoring will transcend plan boundaries (i.e. the plans are subregional plans and in aggregate comprise a large portion of a regional plan). Each of these conservation efforts focuses on assembling, managing, and monitoring an interconnected preserve system for the persistence of rare and sensitive species and vegetation communities. Although a large amount of preserve lands have been assembled to date, management and monitoring of the preserve lands has generally not been well coordinated. This has resulted in multiple plant and animal species and vegetation communities not receiving coordinated and appropriate levels of attention.

With the passage of the *TransNet* Ordinance, funding now exists through the Environmental Mitigation Program (EMP)[2] to support conservation planning efforts by providing a coordinated approach to managing and monitoring rare and sensitive species

[1] These are the San Diego Multiple Species Conservation Plan (MSCP), San Diego Multiple Habitats Conservation Plan (MHCP), and proposed San Diego North County Plan (NCP).
[2] Go to www.keepsandiegomoving.org for more information on the *TransNet* EMP.

and vegetation communities across the region and across plan boundaries. In 2012, the San Diego Association of Governments (SANDAG) Independent Taxpayer Oversight Committee (ITOC) included the EMP in its triennial efficiency audit. The audit recommended that SANDAG staff:

"Continue efforts and establish timelines for developing comprehensive and coordinated strategic plans and measurable program objectives related to the Regional Habitat Conservation Fund program activities and efforts including the following:

- *Providing ITOC and other oversight bodies a timeframe to have these plans implemented with high-level activities and tasks needed, milestones and assignment of staff "owners" responsible for task completion as warranted;*
- *Developing performance measures that measure progress and success while also linking strategic plans and objectives to funding priorities; and ensuring impediments identified via the 2011 draft needs assessment are adequately addressed*[3]*."*

The San Diego Management and Monitoring Program (SDMMP) was tasked with preparing the MSP for the SANDAG to fulfill the need for a strategic approach to implement management and monitoring objectives in a cost-effective manner. While the primary purpose of the MSP is to assist with directing and evaluating the efficiency of *TransNet* EMP funding, this can only be done in the larger context of evaluating and prioritizing the existing threats, opportunities, and challenges at the regional and local level. Nothing in the MSP is intended to replace the existing obligations or requirements of local preserve managers and/or jurisdictions enrolled in the NCCP program. Instead the MSP is intended to provide a roadmap for the efficient use of funds to leverage existing funding and to assist with regional open space planning efforts.

It should be noted that the MSP was not developed to assign responsibilities for specific management objectives but rather to identify "what" and "where" management is needed. ***The "where" in many instances is often preserve specific and, as a result, may be interpreted to imply that a specific entity has responsibility for achieving specific objectives. This is not the intent of the MSP when it identifies the specific "where" for some objectives.***

[3] Sjobergevashenk Consulting Inc. 2012. *TransNet* Independent Taxpayers Oversight Committee: Fiscal Year 2012 Triennial Performance Audit. Chapter 4, Pages 66-71. Sacramento. March 8, 2012.

1.3 What Geographic Area does the MSP Cover?

The MSP area (MSPA) encompasses the plan areas for the San Diego Multiple Species Conservation Plan (MSCP), San Diego Multiple Habitats Conservation Plan (MHCP), proposed San Diego North County Plan (NCP) and select lands immediately to the east of these plan areas (primarily City of San Diego Public Utility Lands). The remaining land to the east will be included once the East County plan is further developed. The MSPA was divided into eight management units (MUs) and named as described in Vol. 1, Section 2.0. While there are over 260,000 acres of land that are conserved through various mechanisms (e.g., easements, fee title ownership, irrevocable offers of dedication, etc.; collectively "Conserved Lands") in the MSPA, the assembly of the preserve system is only partially completed. The MSP only addresses Conserved Lands (Figure 1-2) within the MSPA. As additional lands are conserved they will be incorporated into updates of the MSP.

1.4 What Species are Included in the MSP?

There are a total of 110 species included in the MSP, comprised of 108 covered species from the MSCP, MHCP, and NCP, plus 2 additional species of concern (*Fremontodendron mexicanum* and *Monardella stoneana*; see Vol. 1, App. A). Ten additional species were initially evaluated but excluded from the MSP because the data available indicated they no longer occur in the MSPA, had insufficient data to develop management goals and objectives, or because taxonomic revisions lumped them with more common taxa so that the species is no longer considered a conservation priority. The 110 species included in the MSP consist of 57 plants, 6 invertebrates, 1 fish, 3 amphibians, 5 reptiles, 30 birds, and 8 mammals.

1.5 How Does the MSP Relate to Other Strategic Plans?

There are four other regional comprehensive strategic plans completed or being completed for western San Diego County that feed into the MSP[4]. These strategic plans are described below.

- Invasive Plant Strategic Plan (CBI et al. 2012) - The Invasive Plant Strategic Plan (IPSP) includes a review of the impact levels of 55 invasive plant species that are actively managed by control programs in the region. Of the 55 invasive plant species, 29 were categorized into 5 management levels and prioritized for near-

[4] Existing strategic plans can be downloaded from the SDMMP website. Go to: http://sdmmp.com/reports_and_products/Reports_Products_MainPage.aspx

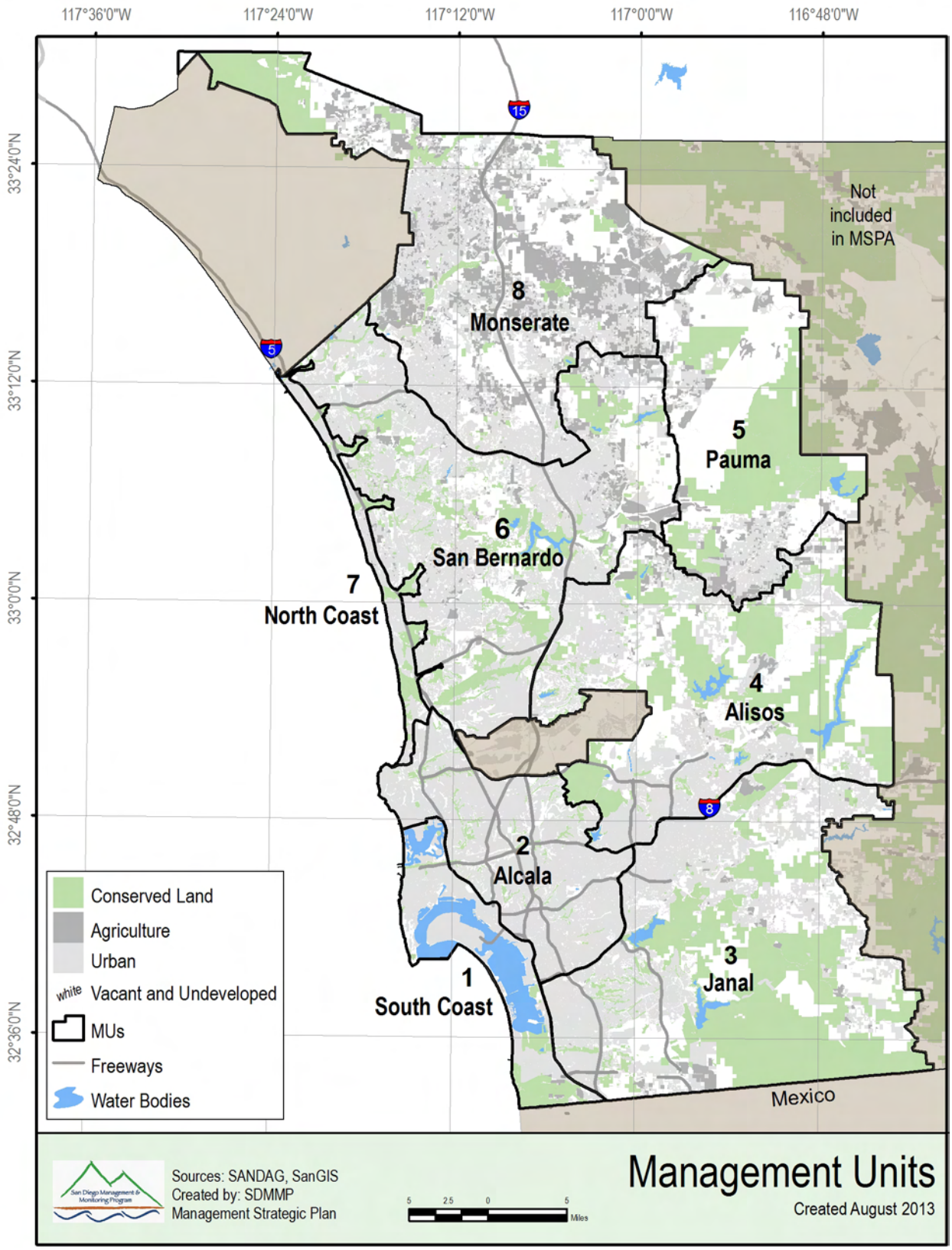

Figure 1-1. Conserved Lands within the MSP Area (MSPA).

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term management and monitoring. A regionally funded effort to coordinate the removal of Level 1 and 2 invasive plants identified in the IPSP is currently being pursued. Level 4 and 5 invasive plants should be addressed by local land managers at specific sites where MSP species are impacted. Level 3 plants may be addressed and/or funded at either the local or regional level. Future updates of the MSP will include an analysis and maps showing the locations where invasive plants identified in the IPSP are impacting MSP species.

- Connectivity Monitoring Strategic Plan (SDMMP 2011) – The Connectivity Monitoring Strategic Plan (CMSP) provides goals and objectives for monitoring whether the preserve system is connected for three functional groups: large animals, small animals, and birds. Many of the objectives under the CMSP have been implemented or are on-going. Preliminary results and suggested actions from the connectivity monitoring studies have been incorporated into the MSP. A review of monitoring results is planned for the end of 2013 and an update of the CMSP will be incorporated into the Monitoring Strategic Plan discussed below and future updates of the MSP.

- Monitoring Strategic Plan (SDMMP *in progress*) – A Monitoring Strategic Plan (MNSP), which includes connectivity monitoring, is being developed by the SDMMP. The MNSP will include goals and objectives for monitoring status and trends in species occurrences and vegetation communities along with collection of covariate data characterizing environmental conditions and threats, and an assessment of the effect of MSP management actions implemented. Monitoring will help inform decision-makers on the effectiveness of management actions as part of an adaptive management approach and research development of best management practices (BMPs). This information will be directly relevant in updating and formulating new management goals and objectives to be incorporated into updates of the MSP.

- Fire and Wildlife Strategic Plan (USGS *in progress*) – A Fire and Wildlife Strategic Plan (FWSP) is being developed by the USGS to identify at-risk resources with implementable management actions that fall into three categories: pre-suppression, suppression, and post-suppression activities. The MSP includes broadly written management objectives for species threatened by fire. Future updates of the MSP will include specific objectives and actions identified in the FWSP.

1.6 How Does the MSP Relate to Preserve Management Plans?

The MSP does not replace the need for preserve management plans, daily maintenance activities at existing preserves, or prior obligations negotiated with the wildlife agencies.

The MSP establishes priorities and goals and objectives which are advisory and meant to be consistent with the intent of regional plans, but there may be preserve-level management concerns and obligations that are not addressed in the MSP but which are still important to fulfill. The MSP should be used to inform the development and implementation of preserve management plans, annual work plans, and/or area specific management directives (ASMDs). The entities preparing management plans should use the MSP to help determine whether any significant occurrences of species are known to occur on their preserves, review the goals and objectives for species and vegetation communities, collaborate on the implementation of regional and local objectives, and use the outcomes of regional efforts to inform and augment their management activities.

There is universal agreement by the stakeholders (see Vol. 1 definitions) that management and monitoring needs to be implemented efficiently, strategically, and coordinated between the various land owners. In that vein, it was acknowledged that there was a need to develop guidance on the preparation and implementation of preserve management plans for individual preserves as well as regional goals and objectives (i.e., MSP). These two guidance documents, along with the regional habitat plans (i.e., MSCP, MHCP and proposed NCP) together should provide the foundation for preserve managers to develop site specific management plans. A diagram showing the relationship between the MSP and preserve management plans is presented in Figure 1-3. The MSP will be implemented in many instances through preserve management plans utilizing ASMDs.

1.7 Who Will Use the MSP and What is Included?

The MSP is intended to be used by individuals who (1) set and/or fund management priorities, (2) seek an overall regional strategy, (3) are developing land management plans, and/or (4) are implementing on-the-ground management actions at the management unit or preserve level. The MSP is divided into three volumes.

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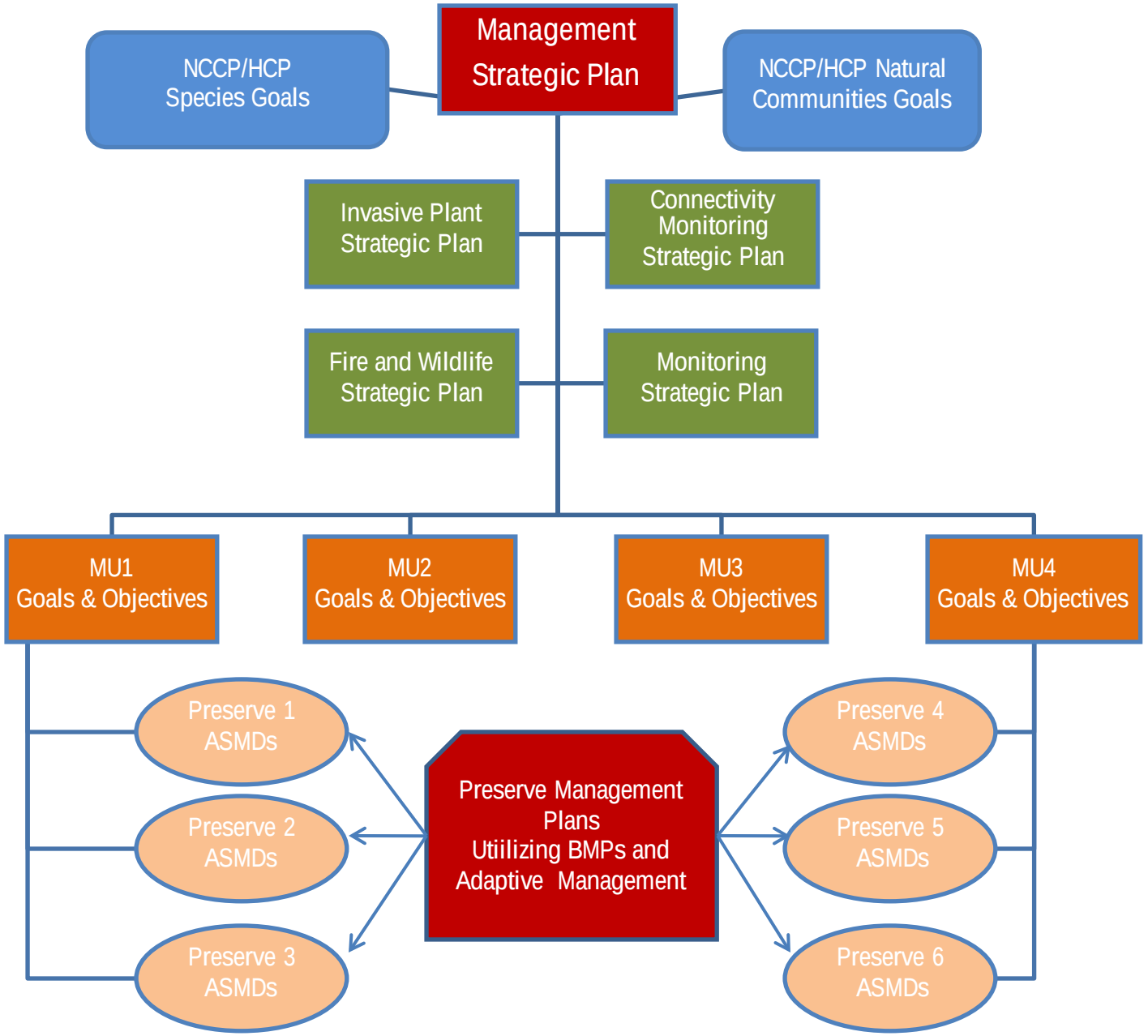

Figure 1-2. Diagram showing the relationship of the MSP to preserve management plans. Note that only 4 of 8 MUs are included in the example.

1.8 GUIDE TO VOLUME 1

Volume 1 of the MSP is intended to be an operational document, while Volume 2 contains the functional sections, and Volume 3 contains more technical information. The sections included in Volume 1 provide the background information for the MSP.

Section 1.0 describes the MSP and its purpose, provides a map of the geographic area, a list of species included, and the relationship of the MSP to other strategic plans and preserve management plans.

Section 2.0 includes a description of the approach used to develop the MSP, including how the MSPA and MUs were identified and characterized, how the MSP species list and background information were compiled, how the MSP species were categorized and prioritized for management, and how goals and objectives were developed for species, vegetation communities, and threats/stressors.

Section 3.0 includes descriptions of the environmental setting for the entire MSPA and each MU, including land use, Conserved Lands, landowners, vegetation communities, and hydrologic conditions.

Section 4.0 includes a description of the databases used to maintain data collected by the various strategic plans. These databases include the Conserved Lands Database (CLD), MSP Species Master Occurrence Matrix (MSP-MOM), Strategic Plan Tracking Database (SP-Tracker), and South Coast Muti-Taxa Database (SC-MTX) and web portal.

Section 5.0 includes the process for implementing the MSP and a description of the roles and responsibilities for the primary organizations directly involved in implementation.

Section 6.0 includes a discussion of the limitations of the data available and provides recommendations regarding steps to improve future versions of the MSP.

At the end of Volume 1 is a list of **acronyms** and **definitions** used in the MSP, **acknowledgements**, and the **appendices.**

Appendix 1A includes a list of MSP species, sorted by taxa (i.e., plants, invertebrates, fish, amphibians, reptiles, birds, and mammals) and Latin name. Also provided are the conservation plan(s) the species are covered under, federal and State designation(s), and MSP management categories.

Appendix 1B includes a list of MSP species sorted by management focus groups (i.e., Species or Vegetation Management) and categories (i.e, SL, SO, SS, VF, and VG). The

page numbers and MUs where goals and objectives for each species can be found in Volume 2 are also provided. This same list is included as a quick species index at the beginning of Volume 2.

Appendix 1C includes the management categorization, criteria, and rationale for each MSP species. A description of the headings for Appendix 1C is provided in Vol. 1, Section 2.0 Approach. MSP species are sorted by management focus groups and categories.

Appendix 1D provides the implementation prioritization of objectives over a 5-year planning horizon. Management objectives were abbreviated for the table; the full text can be found in Volume 2, Sections 2.0 and 3.0. MSP species are sorted by management focus groups and categories. This same appendix is included in Volume 2 as App. 2A.

Appendix 1E provides the references for all three volumes. This same appendix is included in Volumes 2 and 3.

The entire MSP can be reviewed at:
http://www.sdmmp.com/reports_and_products/Management_Strategic_Plan.aspx