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January 19, 2006

Mr. Peter M. Douglas  
Executive Director  
California Coastal Commission  
45 Fremont Street  
San Francisco, CA 94105

Re: Oceano Dunes State Vehicular Recreation Area (ODSVRA) Technical Review Team  
(TRT) Fifth Annual Report

Dear Mr. Douglas:

On June 17, 1982, prior to certification of San Luis Obispo County's Local Coastal Program, the South Central Regional Coastal Commission conditionally approved coastal development permit 4-82-300 to allow DPR to construct entrance kiosks and fencing. Numerous amendments have been put into place since 1982. As required by the conditions and findings in Permit Amendment No. 4-82-300-A5, I am transmitting this 5<sup>th</sup> Annual Report to the park Superintendent and the Executive Director to characterize the progress of the TRT over the 2005 calendar year in meeting its responsibilities as outlined within the permit. Because the Technical Review Team was not able to achieve a quorum at either its December 20, 2005 or January 18, 2006 meetings this report represents the opinion of the facilitator and not necessarily that of the TRT. I have used my best efforts to characterize the range of viewpoints presented by members of the TRT who did attend these most recent meetings, but because of a lack of a quorum, this report has not been formally "adopted" by the TRT as an advisory body. In this regard, the Commission may receive individual communication from TRT members further outlining their perspectives on the monitoring and management issues facing the ODSVRA.

### **Context**

The TRT held three formal meetings during 2005 – on January 10, 2005 to approve and transmit the previous Annual Report, on February 11, 2005 to initiate work prior to the beginning of the 2005 nesting season and discuss issues related to expanding enclosures and prioritizing research and management activities, and on April 8, 2005 to review enhancement measures and assess snowy plover fledgling rates. The TRT also sought to meet on December 20, 2005 to review the 2005 Nesting Season report, 2005 Predator Management Report and conclude its business for the year. A quorum was not reached for this meeting, so no formal decisions were made. However, members did take the opportunity to discuss pertinent issues on an informal basis. In addition, several TRT members also attended workshops focusing on the Habitat Conservation Plan being prepared for six coastal park units within San Luis Obispo County.

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**Exhibit 1 (1 of 18)**  
2005 Annual Report Cover Letter



**California Coastal Commission**

4-82-300-A5 (ODSVRA) Annual Review

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### Summary of Activities and Accomplishments – 2005

The TRT held a total of four meetings during 2005, three of which garnered a quorum to conduct business. The final meeting in December of 2005 was held as an informational meeting to review the 2005 Nesting Report, preliminary Annual Report and provide feedback to the facilitator and technical consultants. The 2005 Nesting Report found that Snowy Plovers had a successful season. California Least Terns did not have as successful season as the 2004 season, but fared better than the nesting success of other areas within their range. The following three paragraphs provide details regarding the findings of the report.

“Staff of Oceano Dunes State Vehicular Recreation Area (ODSVRA) and Point Reyes Bird Observatory Conservation Science (PRBO) monitored breeding California least terns (*Sterna antillarum brownii*)(terns, least terns) and western snowy plovers (*Charadrius alexandrinus*)(plovers) at ODSVRA, San Luis Obispo County, California in 2005. California least terns (least tern, tern) produced a minimum of 20 juveniles during a season when the only other two active breeding sites between San Francisco Bay and Ventura County experienced very poor productivity (fledging only one juvenile). Snowy plovers (plover) had a successful season and produced 82 juveniles, making a contribution to population growth and recovery.”

All tern nests but one (located in the open riding area at Arroyo Grande creek) were inside a large seasonally fenced enclosure in the southern portion of the vehicle riding area. There was a minimum of 47 breeding pairs. Of the 59 nests, 29 (66.1%) hatched. Of the 20 nests that failed, 7 were abandoned pre-term (prior to expected hatch date), an additional 4 were abandoned but unknown whether pre- or post-term, 4 were lost to unknown causes, 1 was depredated and 1 nest failed when the “chick” died during hatch. Sixty-six chicks hatched and all were banded with a yellow over green split-color plastic band on the right leg and an aluminum U.S. Fish and Wildlife Service (USFWS) band on the left leg. Color tape was placed on the USFWS band to create combinations unique to each brood. A minimum of 20 tern chicks are known to have fledged from identifying color banded juveniles in the field.

“There was a minimum of 116 breeding plovers (65 males and 51 females). Thirty-six banded birds were documented as breeding; twenty of these were banded as chicks and fledged from ODSVRA from 2002 – 2004. There were a total of 107 known nesting attempts. Seventy-nine nests were in the southern riding area seasonal enclosure (Southern Enclosure), 22 were at Oso Flaco, 4 were from unknown locations (and detected by presence of broods), and 2 were southeast of the Southern enclosure. Eighty of the 103 nests from known locations hatched for a clutch hatching rate of 77.7%. Of the 23 nests that failed, 11 were abandoned pre-term 4 were abandoned post-term, 7 failed due to unknown causes and 1 was depredated. Of the 204 hatching chicks, 197 were banded and the fate of 7 un-banded chicks is known (none fledged). **Eighty-two of the 204 chicks are known to have fledged for a chick fledging rate of 40.2%. One chick fledged per breeding male is the estimated number needed to prevent the population from declining (USFWS 2001). In 2005, an estimated 1.26 fledglings per male provide for population growth. (Emphasis added)**



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### Key Issues

The TRT discussed several important issues related to its role as defined by Coastal development Permit 4-82-300-A5. These issues included:

- ◆ Research and Management Priorities of the TRT and Scientific Subcommittee
- ◆ Assessment of the cause of reduction in Snowy Plover Fledging Rates in 2004
- ◆ Expanding the Southern Exclosure North to Pole 6 on a Year-Round Basis
- ◆ Participation in HCP Process
- ◆ Need for TRT to Continue to Function in an Advisory Capacity to the Superintendent and Commission

As with previous years, the ODSVRA undertook its review of monitoring and management efforts based upon the recommendations of its Scientific Subcommittee and its own staff familiar with the resources present within and adjacent to the Park. The group spent several meetings reviewing the status of ongoing research and management priorities and determined that for the remainder of 2005 and beyond, that the following studies were of the highest priority for completion.

- Completion of the Night Riding Studies;
- Completion of Studies regarding Wintering Snowy Plovers and Other Shorebirds; and,
- Completion of fish and alternative access feasibility studies.

With regard to causes of reduction in snowy Plover Fledging Rates in 2004, the TRT received feedback from the Scientific Subcommittee that the 2004 rates may not reflect a particular problem encountered during the year, but that the 2002 and 2003 breeding seasons had much higher rates than average. It is important to note that the change may have been just part of normal population variability. During 2004, fledging rates declined throughout the recovery area, not just in the ODSVRA. It was also possible that some predation may have increased in 2004. Nocturnal predation may have played a role in nest abandonment but could not readily be observed. These questions placed further importance on the Predator Management Plan that was completed later in the year.

With regard to expanding the Southern Exclosure north to Pole 6, the Scientific Subcommittee advised the TRT that while a review of the habitat conditions and breeding results suggested that year-round closures benefit breeding plovers and terns, that the closures we not implemented in a manner that allows for statistical testing or data-based conclusions regarding an optimal approach. The recommendations from the Scientific Subcommittee regarding the nesting report (see below) provide specific recommendations on how to address this uncertainty.

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### Research Priorities

The second of two Night Riding studies has been completed and distributed to the TRT and Scientific Subcommittee in September 2005. No formal discussion of the recommendations of the study has taken place at the TRT level. While the Scientific Subcommittee had an opportunity to discuss the results during its December meeting, the discussion focused on preparing their 2005 plover/tern recommendations and comments. Some of the key observations and opinions from this study are as follows:

1. There was a higher degree of reaction by shorebirds to an approaching vehicle at night than day.
2. The energetic costs to shorebirds from disturbance by vehicles at ODSVRA may be an important management issue that warrants consideration.
3. Vehicles traveling on the waveslope at sporadic, variable speeds (often exceeding 15 mph) and making sudden changes in direction, seem to pose an even greater risk of collision with shorebirds than vehicles traveling steadily above the speed limit in a straight path.
4. Shorebirds using ODSVRA, especially snowy plovers and sanderlings, were surprisingly tolerant of vehicles passing very nearby, often not reacting at distances that were less than the minimum distance required to actually observe the reaction from the survey vehicle (~ 3m).
5. In a related study conducted during the daytime at a public beach where vehicles are not allowed, wintering snowy plovers reacted to disturbances (incl. humans, dogs, equestrians) at an average of approximately 40 m (K. Lafferty 2001). In comparison, snowy plovers reacted to oncoming vehicles during the day at an average of approximately 29 m, suggesting that the high regularity of vehicular activity at ODSVRA may result in acclimatization by birds.
6. The apparent acclimatization by shorebirds to passing vehicles increases the risk of collision by vehicles driven out of compliance with beach regulations (i.e., exceeding the posted speed limit).
7. Several challenges inherent with the directive methods for the daytime disturbance reaction component resulted in a small sample size for assessing the degree of disturbance by normal recreational activity to roosting flocks of snowy plovers. Due to these problems and the resulting small sample size, results from the disturbance portion of this component lack the integrity necessary to compare with other studies or be used as the basis for management decisions.

This study will be formally discussed by the Scientific Subcommittee during their February 2006 conference call.

The Wintering Shorebird study was also completed in September of 2005. This study was distributed to the TRT and Scientific Subcommittee in September 2005. No formal discussion

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of the recommendations of the study has taken place at the TRT level. It came to the following ten general conclusions<sup>1</sup>.

- 1 As expected, potential (including actual) disturbance levels were greater in the Vehicle than Non-Vehicle area on both weekdays and weekends with a much greater difference on weekends than weekdays.
- 2 Mean daily densities per km of all shorebird species combined and of Snowy Plovers were greater in the Non-Vehicle area, where disturbance levels were lower. At both areas density of all shorebird species combined was greater at low tide.
- 3 Within the more heavily disturbed Vehicle area at high tide, the mean number of shorebirds and Snowy Plovers per km were negatively related to disturbance levels, but this pattern was not apparent at low tide.
- 4 The mean proportion of all shorebirds combined that were foraging was greater in the Vehicle area, the area with greater disturbance. This may have occurred because there were important foraging resources for shorebirds in the Vehicle area, because roosting behavior was limited by disturbance levels, or because birds were more energetically stressed and compensated by foraging more.
- 5 Snowy Plover foraging behavior may have been influenced by tide in the Non-Vehicle area but not in the Vehicle area.
- 6 A greater mean proportion of focal birds was disturbed in the Vehicle area than in the Non-Vehicle area, with a much greater difference on weekends, probably as a result of the higher level of potential disturbances.
- 7 At high tide when beach habitat was reduced, a greater proportion of focal birds was disturbed than at low tide, probably because they had to compete more with recreationalists for space.
- 8 Focal birds in the Vehicle area allowed potential disturbance agents to approach more closely before fleeing than in the Non-Vehicle area. This pattern may be influenced by habituation to disturbance, or the increased costs of fleeing associated with chronically high levels of disturbance.
- 9 In the Vehicle area, numerically uncommon types of disturbance elicited reactions at the greatest distances whereas in the Non-Vehicle area, the more common disturbance agents elicited reactions at the greatest distances, suggesting that shorebirds may have been habituated to the high levels of disturbance in the Vehicle area. Increased habituation may increase the chance of bird-vehicle collisions.
- 10 The majority of banded Snowy Plovers (65.5%) recorded in the study area were from natal sites within the study area or other parts of Recovery Unit 5; the remainder (32.7%) were from other Pacific Coast natal sites. Plovers seen only in the Non-Vehicle area moved shorter distances among blocks than plovers seen exclusively in the Vehicle area. The reasons for this are unknown but could be related to greater disturbance levels in the Vehicle area.

In mid-2005, the ODSVRA also initiated its feasibility study of alternative access opportunities. The Superintendent indicated that this study is proceeding on schedule and that it is anticipated to be completed in September of 2006. Studies and water quality sampling at the mouth of Arroyo Grande Creek are also ongoing.

<sup>1</sup> These conclusions are provided from a scientific perspective and not necessarily from a regulatory or operational standpoint.

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Under Special Condition 5 of the CDP, the permit indicates that selecting the priority research and management questions and projects, the TRT should consider 1) information provided by the USFWS and include appropriate management techniques for the western snowy plover, California least tern, and steelhead trout; 2) appropriate management techniques for protecting water quality and dune habitats from potential pollutants; 3) the success of past revegetation efforts and potential need for continuing or expanding these efforts, including expansion of vegetation enclosures; and, 4) conduct comprehensive long term monitoring and comparative analysis of resource impacts (CDP pp. 8-9). The recommendations above and management efforts outlined below, and the results of the 2005 Plover/Tern Nesting Report provide strong evidence that priority research and management actions are having a positive impact on plovers and terns within the park boundaries. Ongoing water quality sampling and monitoring of the Arroyo Grade Creek estuary is providing additional technical and management insights into issues related not only to the steelhead trout, but also to the tidewater goby, recently discovered to reside in this habitat.

Overall, the TRT noted that these research and management efforts had significant relevance to the completion of the Habitat Conservation Plan (see below) and could contribute site specific information that would further inform habitat conservation efforts at a regional level.

At the ODSVRA level, the completion of these studies contributed to the ongoing effort by the Superintendent to implement specific operational and management measures within the park that serve to directly or indirectly minimize impacts on shorebirds. These measures include:

- Enforcement of camping and day use capacity limits consistent with the CDP (1000 camping vehicles, 2,580 street-legal day use vehicles, and 1,720 off-highway vehicles).
- Restricting non-street legal OHV use and camping to only 3 miles of beach (non-bird season only).
- Enforcement of 15 MPH beach speed limit. Additional signage has been installed. Volunteers assist with portable and adjustable speed limit signage on beach that can be moved with the tides to give the drivers a better indication of the speed limit, especially important during busier use periods. Speed enforcement by radar will be implemented in mid-summer 2005. More will be done to educate the public about the importance of voluntary compliance with the beach speed regulation.
- Public outreach and education. Park brochure and informational flyers, the FM radio station, Off Road PALS (Police Athletic League) activities directed at youth rider safety and orientation, ASI (ATV Safety Institute) certification program to provide ATV safety orientation and training, ATV and Sandrail rental concessionaires and employees providing safety and orientation training and also attending resource management and protection training.
- All Oceano Dunes District staff attend annual snowy plover/least tern and resource orientation and training annually.
- The creation of a "Volunteer Dune Patrol", made up of volunteers from the riding community that assist the ODSVRA staff with public outreach and education regarding our resource management and public safety programs.
- Dog leash law enforcement.

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- Maintenance of an off-beach vehicle corridor, parallel to the beach to allow north/south vehicle traffic flow, to assist in relieving the volume of vehicle traffic directly on the beach during high tides.
- Maintenance of vehicle corridors, perpendicular to the beach, at intervals along the beach to assist vehicles to enter the dunes from the beach.
- Maintenance and enforcement of areas restricted to off highway motor vehicle recreation (1.5 miles of beach at Oso Flaco and Arroyo Grande Creek). These areas are closed entirely to motor vehicles.
- Maintenance and enforcement of areas restricted to non-street legal vehicles 1.5 miles of beach from Grand Avenue to beach post #2).
- Improved regulatory signage throughout the SVRA.
- Improved response and care for sick and injured birds. A bird care way station is set up at the ranger station where resource staff care for sick and injured birds until they can be transferred to an animal care facility. Most often birds become sick, or injured as a result of non-recreation related problems.
- Limiting special events to back dune areas.
- Limiting motion picture and still photography filming to controlled areas, with resource and law enforcement monitors.

Additional studies were also completed during the year. The Department transmitted to the Scientific Subcommittee and TRT "*Nesting of the California Least Tern and Snowy Plover at Oceano Dunes State Vehicular Recreation Area, San Luis Obispo, California 2005 Season*" prepared by the Department, which includes as attachments the 2005 ODSVRA Predator Management Reports prepared by the USDA Wildlife Services and the UC Santa Cruz Predatory Bird Research Group. These documents were reviewed by the Scientific Subcommittee, which forwarded its recommendations to the TRT for their review and comment at the December meeting. Those recommendations and the TRT's commentary are provided in subsequent paragraphs within this correspondence.

The results and recommendations of the priority research completed during 2005 were provided to the TRT in the October and agendized for the TRT meeting in December. However, no formal review and commentary was made by the TRT due to an inability to achieve a quorum to conduct business at its last meeting of the year. The Scientific Subcommittee is considering these reports at its January meeting and will provide commentary and/or recommendations as it sees fit. In the future, both the TRT and the Scientific Subcommittee should continue to be afforded the opportunity to formally comment on priority research studies, preferably before the nesting season gets underway (March 1).

Separate and aside from the TRT process, State Parks sponsored two public workshops on April 19, 2005 and June 8, 2005. These workshops were attended by a broad array of stakeholders from throughout San Luis Obispo County and provided an opportunity for an interactive discussion of the HCP, its focus, and issues important to the public engaged with issues relevant to the HCP. Several members of the TRT attended one or both of these meetings.

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ODSVRA use factors for the 2004 and 2005 calendar years were 1,763,948 and 2,041,935 visitors respectively indicating an overall increase in usage of approximately 277,987 individuals. The levels of staffing were comparable between the two years. Overall use statistics are included in Attachment 2. A number of attachments are provided for additional details on the reports and recommendations contained within this 5<sup>th</sup> Annual Report.

### **Scientific Subcommittee Recommendations and TRT Commentary on the 2005 Plover/Tern Breeding Report**

The Scientific Subcommittee (SSC) met on December 8, 2005 to review and provide recommendations on the 2005 Plover/Tern Breeding Report. Upon review of the 2005 report, the Scientific Subcommittee determined that overall, it was a good plover season at ODSVRA, with more than one fledged chick per male. The least tern chick fledging rate at ODSVRA declined, and the species had poor reproductive success elsewhere. While the reduced least tern reproductive success has generally been attributed to nearshore ocean conditions and reduced fish (prey) abundance, the SSC cautions that not all data at all least tern breeding sites fully support this theory. For example, some chicks at ODSVRA and San Diego that did not fledge seemed to be growing fine but just disappeared. Least tern research could benefit from the input of a scientist with oceanographic background.

The group reviewed each of the recommendations, focusing on particular areas of interest. Items are listed below in the order they appear in the report.

**1. Oso Flaco (continue the high level of monitoring and management)—  
Recommendation supported**

No additional comments.

**TRT Commentary:** The TRT expressed a variety of opinions regarding this recommendation. There was a general sense that the high level of monitoring and management continue and that adaptive management build on lessons learned with regard to vegetation management. However, there was a difference of opinion as to whether vegetation removal should continue.

**2. Size of southern enclosure (maintain the sized used in 2005)—Recommendation supported**

No additional comments.

**TRT Commentary:** There was a difference of opinion on the TRT regarding whether to maintain the current size of this enclosure. One viewpoint was that there was a need to consider allowing recreational access into areas such as portions of the Boneyard Enclosure that are no longer used for Tern nesting (see 2005 Report p. 50 – area east of dotted line). The rationale for this suggestion was based upon the expectation that allowing riding in the eastern portion of this area could discourage predators. The other viewpoint was that plovers may use this area and that the existence of two nests outside of the enclosure to the east would imply that such a reduction in the size of the enclosure could put plovers at risk.



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### 3. Monitoring

#### a. *Retain skilled monitors*—Recommendation Supported

This recommendation appears in each annual report, and high turnover remains a problem. ODSVRA should explain what can be done to address turnover. The SSC recognizes that a lot of the problem comes down to money. ODSVRA should invest in more PI Environmental Scientist positions.

**TRT Commentary:** This recommendation was generally supported by the TRT. However, there were concerns expressed that the turnover of skilled monitors was due to the relatively low pay scale of these seasonal positions. One member suggested reallocating the budget for this set of tasks to a more stable organization such as the Point Reyes Bird Observatory, in hopes that such an organization could provide greater continuity. Another member expressed the concern that there must be an endpoint to data collection and analysis at some point in the future. Previous suggestions to seek to upgrade the position to an “Assistant” level so that the increased pay scale might attract returning monitors are reflected in this latest recommendation.

#### b. *Continue banding Least Tern and Snowy Plover chicks*—Recommendation Supported With Weight Data to be Added to Annual Report

Chicks are weighed when they are banded. These data should be provided in the annual report. Although the precise hatching date might not always be known and even one feeding can substantially alter the weight of a chick, over time the weight data can prove useful. If these data are included in the annual report, it should be clear which chick weights represent newly-hatched individuals and which older young. Consistent water quality, fish studies, invertebrate, or other studies could also be done to accumulate sound data on the food/foraging supply. The Subcommittee will further discuss food/foraging or other studies during a subsequent meeting.

**TRT Commentary:** This recommendation received mixed support from the TRT. One member raised a concern that there was not a requirement to collect additional information and that the costs of this and other such information collection were expanding with each annual report without a demonstrated need and specific budget for additional information collection. Others present suggested that the marginal costs of collecting this additional amount of information was minimal, and that this approach was appropriate because it contributed to better opportunities for adaptive management. One member also noted that this divergence of opinion underscores the importance of prioritizing studies and management efforts.

#### c. *Continue banding Least Tern chicks to brood*—Recommendation Supported With Proposal of Banding to Individuals

Experience with banding least tern chicks at ODSVRA in 2005 indicates that it is possible to mark the bands so that individual chicks can be identified without additional stress to the chicks or undue expense. The SSC recommends that banding be done in this manner. The additional data gathered would allow monitors to



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determine exactly how long individuals persist and would help refine fledgling estimates.

**TRT Commentary:** As with the previous recommendation, this recommendation received mixed support from the TRT. One member raised a concern that there was not a requirement to collect additional information and that the costs of this and other such information collection were expanding with each annual report without a demonstrated need and specific budget for additional information collection. Others present suggested that the marginal cost of collecting this additional amount of information was minimal, and that this approach was appropriate because it contributed to better opportunities for adaptive management. A third perspective was added that at some point, it may be too costly to conduct the appropriate level of monitoring and data collection and at that point, previously open areas of the park may need to be closed because adequate management actions could not be implemented. This matter was not resolved by the TRT.

**d. *Continue monitoring least tern juveniles as well as night roost activity*—  
Recommendation Supported With Addition of Night Vision Equipment As Available**

ODSVRA should experiment with using night vision equipment for monitoring the night roost. If ODSVRA does not have suitable equipment available, ODSVRA should investigate whether CDFG wardens or other sources might be able to loan equipment for some trial runs. If suitable equipment can be found, the SSC recommends that ODSVRA purchase the equipment.

**TRT Commentary:** The TRT had diverging perspectives on this recommendation. One perspective offered was that it is unnecessary based on the completion of two night riding studies and that acquisition of such equipment will simply add to the overall costs of monitoring and management. The other perspective offered was that without a better understanding of the implications on night riding on Least Tern juveniles and night roosting activity, that night riding should be prohibited as an alternative to the proposed monitoring. ODSVRA staff indicated that the night vision equipment might be obtained from Vandenberg Air Force Base on loan. The updated recommendation reflects the perspective that night vision equipment should not necessarily be purchased at this time, without field testing its effectiveness in monitoring activities.

**e. *Option to band adult snowy plovers*—Recommendation Supported**

The limited number of band combinations means that this option should only be pursued if an emergency situation warrants, e.g., a very high rate of nest abandonment due to unknown causes.

**TRT Commentary:** There was some discussion of this recommendation by the TRT. The representative from the U.S. Fish and Wildlife Service indicated that they do not support banding of adult plovers unless there is a clear benefit that can be identified. Others questioned the criteria used to define “elevated mortality”. The TRT finally



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determined that additional language should be added to this recommendation to specify that if elevated mortality is detected in adult plovers, that the option of banding be referred back to the U.S. FWS for a determination or authorization. This additional language garnered the support of the TRT. The updated recommendation reflects the TRT's preferences.

**4. Continue predator management—Recommendation Supported As Modified**

The SSC again emphasizes the need for experienced USDA Wildlife Services personnel (see 2004 recommendation below). Predator management would also benefit from additional data dissemination and collection, as follows: 1) ODSVRA should implement a shared log of predation observances. 2) ODSVRA should consider using cameras if birds start disappearing due to unknown causes. Some predators, such as weasels, are very difficult to catch in the act any other way. Ideally, cameras would be set out at the beginning of the season so that their use can be fine-tuned. Since no evidence surfaced in 2005 of a huge predation problem plus conditions at ODSVRA are likely very hard on cameras, setting out cameras early might not be feasible. Cameras should be considered should suspected predation warrant their use. Elizabeth Copper and other researchers (e.g., USGS, Martin Ruane at Pt. Mugu, Jack Fancher at USFWS Carlsbad, Robert Patton) may be able to help with camera logistics.

**TRT Commentary:** The TRT suggested that the text of this recommendation be refined to make camera use conditional if suspected predation warrants their use. It was further suggested that if budget issues become critical, that the use of cameras be assessed to determine whether such a measure would be considered a high priority in the context of other monitoring measures.<sup>2</sup>

**5. Improve effectiveness of the perimeter fence protecting terns and plovers breeding in the Southern Enclosure and North Oso Flaco—Recommendation Supported**

The SSC notes that the fence should be at least six feet above the surface of the sand.

**TRT Commentary:** The TRT did not provide a clear preference with regard to this recommendation. State Parks officials indicated that they were seeking ways to bury the fencing deeper or increase its height as conditions warrant. But lacking a mechanism to implement this, no further actions had been taken to date. One TRT member also noted that this recommendation also relates to southern enclosure size issues within the Boneyard area discussed earlier (see discussion under

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<sup>2</sup> In addition to the commentary offered by TRT principals, one alternate member also submitted comments on the Predator Management Plan taking issue with the lethal removal of Corvids, based upon the difficulty of live trapping ravens. Their comments suggested that based upon other literature, Corvids have been successfully trapped using "drop-in" traps. A copy of the reviewer's comments have been provided to the Superintendent.

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Recommendation # 2 above). In response to further discussion with the Scientific Subcommittee, State Parks officials indicated they would be looking to extend fencing by adding longer T-posts and perimeter fencing, while still burying the fencing a full 12 inches.

**6. Use of 10 ft. x 10 ft. enclosure with net top—Recommendation Supported**

The SSC agreed that the net top must remain an option for addressing avian predation.

**TRT Commentary:** The TRT noted its support of this recommendation as it relates to U.S. FWS protocols.

**7. Enhance habitat in Southern Enclosure by distributing natural material—Recommendation Supported With Additional Research Needed**

ODSVRA should continue to enhance the southern enclosure using natural material such as driftwood and kelp. Additionally, while some tern chicks seemed to gravitate to driftwood, nothing was done specifically to record where debris was or what role it may have played in reproductive use or success. Such efforts should be implemented in a more systematic manner allowing for analysis of effectiveness.

The question remains as to whether a year-round closure in some configuration would best serve breeding plovers and terns. The 2005 plover/tern nesting report strongly suggests the value of such a closure. In a March 29, 2005, report on revised research priorities, the SSC recommended that the park conduct a controlled experiment to determine which treatment (closure, enhancement, both, or none) was optimal. Relevant discussion from that March 29, 2005, report is included in Attachment 1. The SSC recommends that the park conduct such an experiment. The experiment should focus on areas with both plovers and terns, i.e., 7 and 8.

**TRT Commentary:** There was some discussion regarding what constitutes “non-native materials”. Once clarification was provided that this referred to crushed abalone, the clarification was supported by the TRT. One TRT member reminded the TRT of a white paper that cautioned the use of debris, since it could be used as a marker for avian predators. Following the December 2005 commentary by the TRT above, the Scientific Subcommittee responded to the TRT by replacing abalone shells with natural materials in order to simplify the measure.

**8. Continue to salvage abandoned eggs and chicks when appropriate—Recommendation Supported**

The SSC notes that this recommendation from the 2005 plover/tern report is regarding captive rearing of eggs and chicks.

**TRT Commentary:** Members of the TRT indicated that this recommendation needed to be understood as pertaining to captive rearing of chicks, not additional studies.



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### 9. Conduct Study Evaluating Alternative Plover/Tern Habitat Treatment Strategies

The question remains as to whether a year-round closure in some configuration would best serve breeding plovers and terns. The 2005 plover/tern nesting report strongly suggests the value of such a closure. In a March 29, 2005, report on revised research priorities, the SSC recommended that the park conduct a controlled experiment to determine which treatment (closure, enhancement, both, or none) was optimal. Relevant discussion from that March 29, 2005, report is included in Attachment 1. The SSC recommends that the park conduct such an experiment. The experiment should focus on areas with both plovers and terns, i.e., Post 7 and 8 enclosures.

**TRT Commentary:** The Superintendent indicated to the TRT that the 7½ Revegetation Area is closed year round and contains both breeding plovers and breeding terns. The Superintendent suggested that studies be focused on this area, rather than closing a new area. The TRT determined that a rotating closure that is not necessarily permanent could address the research issues raised by the Scientific Subcommittee, while maintaining the consideration of the 7½ Revegetation Area as well. TRT members also indicated that this topic warrants further discussion with the Scientific Subcommittee. The Scientific Subcommittee met on January 17<sup>th</sup> and separated this recommendation from its previous location in item 7 above to respond to the TRT's concerns, thus providing a ninth recommendation.

### Scientific Subcommittee Review of Implementation of January 2005 Recommendations

The Scientific Subcommittee previously reviewed ODSVRA's 2004 ODSVRA Plover/Tern Nesting Report and made recommendations based upon that report (2004 Recommendations of the ODSVRA Scientific Subcommittee re: Western Snowy Plover and California Least Tern Monitoring and Management, January 13, 2005). At its December 2005 meeting, the Subcommittee requested that ODSVRA ecologist Laura Gardner review the January 2005 list of recommendations to assess implementation. This section lists those recommendations with a brief summary and describes whether each recommendation was implemented. Numbering is consistent with the January 2005 report.

#### 1. ODSVRA should request that the U.C. Santa Cruz Predatory Bird Research Group (SCPBRG) relocate its peregrine falcon hack site farther away from ODSVRA.

Although peregrine falcons are naturally occurring predators at ODSVRA, ODSVRA should request that SCPBRG consider moving its hack site farther away from plover and tern breeding sites. *Implementation attempted. This was discussed with UCSCPBRG and the hack site is at its location for sick and injured birds to be released. This site has been at its current location for 10 some years. There are several Peregrine-nesting sites much closer to ODSVRA than the hack site. This issue was raised due to a visitation of two Peregrine juveniles that were spotted at ODSVRA*

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*in 2004 season. 2005 did not show any visitation of peregrines that were released from the hack site.*

**2. Support efforts to get more experienced USDA Wildlife Services personnel.**

Experience is critical to make predator management as effective and benign as possible. The Resource Ecologist is working to have Wildlife Services hire a biologist rather than someone at the aide level, which was the level provided in 2003 and 2004. **Implementation attempted.** *Although the cost increased to ODSVRA by a tune of \$10,000, the ODSVRA Resource Ecologist was told the cost would be close to \$60,000 for a biologist and they would have to hire full-time. For the 2005 season, ODSVRA still received USDA coverage by a seasonal aide with absolutely no experience. This person was much more receptive to T&E species issues and is interested in returning for future seasons. This will help establish, hopefully, more field knowledge and support.*

**3. Take down closed pole traps that are close enough to nesting exclosures such that they present a predation problem.**

Pole traps not functioning as traps provide a perch for predators such as owls. Any such poles close enough to nesting areas to present a predation problem should come down when not in use. **Implemented.** *They were removed and then re-installed for capture of great-horned owls and other raptors. When not able to leave poles up it was a hardship on the personnel in terms of timing. However, the poles were taken down in-between events.*

**4. Install a large exclosure of no-climb fencing at Oso Flaco.**

A large area should be enclosed by no-climb fence in 2004. Such fencing should be considered experimental at this time and not tied to removing exclosures in the riding area. **Implemented.** *An approximately 70-acre area in North Oso Flaco was enclosed with no-climb fencing.*

**5. Obtain more information as to what can be accomplished at Oso Flaco to provide better nesting habitat.**

ODSVRA should obtain more information as to nest site characteristics at Oso Flaco to determine whether room really exists for more nests. It would be useful to characterize the habitat where each nest is found for a predetermined area around the nest and to see, if over time, there appears to be any correlation with nest success. Additionally, it would be useful to map Oso Flaco in terms of vegetation cover, surface topography, non-native vegetation, etc. Likewise, it would be useful to know whether ODSVRA plovers end up at the Refuge. **Not implemented.**

**6. Consider alternative approaches to least tern chick shelters.**

The Subcommittee supports the tern chick shelter recommendation in the 2004 annual report with the following text change to the fourth sentence: "In addition to the wood slat shelters, consider other designs or ~~natural~~ materials that may provide some protective cover." Any testing with alternative chick shelters must be done using a formal experimental design with sufficient replication to enable a statistical test with



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reasonable power. **Not implemented.** Tern chick shelters were not used in the 2005 nesting season. In an effort toward overall habitat enhancement, approximately 65 beach bur (*Ambrosia chamissonis*) plants, still in their pots, were placed in the 6 enclosure in an attempt to provide cover. This was an experiment to provide plant growth and some hummock development during the breeding season. These pots were removed at the end of the breeding season. (This planting experiment was unsuccessful, as none of the potted plants survived to provide cover for adult birds, chicks, or fledglings.)

**7. Implement the recommendation to band least tern chicks to brood.**

Banding to brood would assist with testing accuracy of methodology. **Implemented.** All tern chicks, in addition to a USFWS band on the left leg, received a single plastic bi-colored band (yellow over green) on the right leg. This band is unique to the ODSVRA site and year 2005. Color tape was placed on the USFWS band to create color band combinations unique to each brood

The TRT met on December 20, 2005 to discuss the 2005 Plover/Tern Breeding Report and the Scientific Subcommittees recommendations regarding monitoring and management efforts for 2006. The TRT took no formal actions due to the lack of a quorum.

**Facilitator Recommendations Regarding the Future of the TRT**

As noted earlier, the TRT met four times during 2005, and attained a quorum to do business at three of those meetings<sup>3</sup>. It also attempted to meet on January 18, 2005 but again did not achieve a quorum. During the February 2005 meeting, discussions took place regarding criteria for a successful year. There was general agreement among TRT members that prioritizing research and monitoring efforts was a critical milestone for the TRT and that once these priorities had been delineated, that most felt the work of the TRT should be brought to a close. Several individuals indicated that the completion of a public review draft of the Habitat Conservation Plan would also a milestone and that the public review process associated with that document could replace the TRT as that process moves forward.

Throughout the year, as with the previous year, meeting attendance and general interest in the TRT's role and function has waned considerably from its initial three and ½ years. This was evidenced by difficulties in setting meeting dates, achieving a quorum, communicating with TRT members, and a reduction in the number of members who were willing and able to attend face-to-face meetings. The large majority of TRT members explicitly expressed a desire to abandon the TRT as a functioning advisory group, suggesting that its role had been fulfilled, and that public involvement was available through other venues and processes, namely, the HCP process. In early 2006, one of the members indicated that his agency, the California Department of Fish and Game could no longer underwrite participation on the TRT on behalf of that agency. As a result, the TRT has only eight current members and is required to achieve a quorum of seven to conduct business. Parallel to the work of the TRT, the Scientific Subcommittee continues to fulfill its role as a scientific advisory panel, reviewing and providing expertise and guidance with regard to technical studies, monitoring activities and adaptive management related to the Park's natural resources. However, members of the TRT

<sup>3</sup> A quorum to adopt this 2005 Annual Report could not be achieved during the month of January 2006.

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believe that the two bodies operate in a related manner and if changes are made to one body, changes should also be considered for the other.

The HCP proposes establishing a Scientific Advisory Committee, which may ultimately serve to replace the Scientific Subcommittee.

Review of the permit language regarding the role and function of the TRT indicate that its primary functions are:

- ◆ To assist in building community support through problem solving, consensus building, new constituency development, and increasing understanding of the ODSVRA;
- ◆ To develop recommendations to the Superintendent of the ODSVRA regarding additional monitoring studies, adjustment to day and overnight use limits and management strategies.

Regarding the first charge, the TRT has: 1) provided and improved linkages between business, environmental and conservation organizations, park users, residents and local government and the Superintendent and Park staff; 2) reduced the degree of contention among its members through the adoption of a problem statement governing its role, and provided a forum for the discussion and tolerance of differing perspectives regarding park management; and 3) increased understanding of the social, technical and scientific dynamics which influence use, management and monitoring of the resources present within the park. However, over the past 18 months, the TRT has seen diminishing returns with regard to progress in these areas and many members have voiced a concern that the time invested is not yielding noticeable results in terms of furthering these objectives. Consensus regarding balancing OHV use and resource protection within the park continues to be elusive. In the broader regional context, there is greater potential for consensus over the provisions of the Habitat Conservation Plan for the coastal park units within San Luis Obispo County than for these same issues at ODSVRA in and of itself.

With regard to the second charge, the TRT has largely focused more on reviewing and commenting on the recommendations of the Scientific Subcommittee than deliberating its own recommendations regarding monitoring and management strategies. While there have been some differences of opinion among the TRT regarding some of the Scientific Subcommittee's recommendations, the TRT has been largely supportive of their technical advice and perspective over the last three to four years. In addition, the Park Superintendent has taken an active role in tailoring use restrictions and enforcement efforts to be responsive to the annual nesting reports and Scientific Subcommittee recommendations.

Finally, the ODSVRA, in collaboration with the Coastal Division is in the process of preparing a public review draft of a Habitat Conservation Plan that would address threatened and endangered species needs in ODSVRA and five other park units within San Luis Obispo County. This draft is anticipated to be released to the public some time in the latter part of 2006.

With these factors in mind, it is clear that changes are warranted to modify the TRT's form and function to better reflect its intended purpose, to engender improved participation, and to serve as a linkage to the upcoming draft HCP expected to be released later in 2006. The Coastal Commission representative to the TRT has suggested that in order to eliminate the TRT, a transition plan should be developed to identify how and what might replace it. In this regard,

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it would be advisable to form an HCP Working Group as a subcommittee of the TRT to provide a linkage between the TRT, those aspects of the draft HCP that relate to ODSVRA operations and management efforts, and public participation in the HCP review and approval process. Such a working group should include one member representing park users, one member representing conservation interests, and one member from the broader public (either business or resident) plus a liaison from the Scientific Subcommittee.

The recommendations outlined below can be accomplished by straightforward revisions to its current Charter. This approach is intended to accomplish the mission of the TRT and refine its operation and focus responsive to current conditions and the evolving HCP process over the coming year. This approach does not require that the Coastal Development Permit language be modified in any substantive way. However, given the inability of California Department of Fish and Game staff to participate on the TRT given budget and personnel constraints, the membership language within the CDP should probably be modified to reflect this situation. The suggested changes to the Charter are as follows:

1. TRT Responsibilities: Refocus the TRT's responsibilities on constructive participation in the HCP development, review and approval process by adding new language to Charter Sec. B (3) to read:
  - (3) Evaluate monitoring results and reevaluate monitoring protocols contained in the ODSVRA annual reports for the habitat Monitoring System; reports on the breeding, nesting, and fledgling success of the western snowy plover and California least tern populations in the ODSVRA; and other reports related to the environmental impacts of recreational activities, including public review drafts of any Habitat Conservation Plans that propose coverage for the ODSVRA.and Charter Sec. B (6) to read:
  - (6) Assist the ODSVRA Superintendent in building community support for management and restoration efforts through problem solving, consensus building, new constituency development and increasing understanding about the ODSVRA and the role of the Habitat Conservation Planning process in its operational and management functions.
2. Quorum Issues: Change the definition of a quorum from 70% of its members to 50% of its sitting members (exclusive of vacancies) (Charter Sec. D. (3))
3. Meeting Frequency: Augment the current language regarding meeting frequency to allow meetings of designated working groups to qualify as TRT meetings (Charter Sec. D. (2))
4. Working Groups: Add language to Charter Section G., Other Subcommittees, working Groups and Task Forces, to formalize an "HCP Working Group" as a qualifying subcommittee of the TRT with the responsibility to implement revisions to Charter sections B (3) and B (6) noted above.

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5. Annual Reports: Add language to Charter Section H (3), Annual Reports, to provide for the reporting of the HCP Working Group input to the HCP process as a part of the Annual Report. {DON'T AGREE...CLARIFICATION NEEDED}

These recommendations need to be balanced with the feelings by some members of the TRT that regular attendance by all designated members should be a priority; the primary reason for reducing the quorum factor is largely based upon some members not placing a priority on attendance. In addition, the designation of one or more working groups need to reflect their advisory (to the TRT), rather than decision making nature.

**Concluding Remarks:**

As can be seen from the above discussion, considerable research, and adaptive management activity has taken place at ODSVRA during 2005. Much progress has been made in completing the research that is necessary for continued management and monitoring. This concludes the 5<sup>th</sup> Annual Report of the TRT. Should you have any questions regarding its contents or conclusions, please feel free to contact me at your convenience

Sincerely,



John C. Jostes,  
TRT Program Facilitator

JCJ/

cc: Paula Hartman  
Andrew Zilke

**Enclosures:**

1. List of Current TRT Members and Alternates (Attachment 1)
2. Report on 2005 Breeding Season and Attachments and the attached 2005 Predator Management Report (Attachments 2)
3. Scientific Subcommittee recommendations on Western Snowy Plover/California Least Tern monitoring and management. (Attachment 3)
4. 2005 Night Riding Study (Attachment 4)
5. 2005 Wintering Shorebirds Study (Attachment 5)
6. Superintendent's Transmittal Letter for 2005 Night Riding and Wintering Shorebird Studies (Attachment 6)
7. Lower Arroyo Grande Creek Monitoring Report (Attachment 7)
8. Copies of the TRT Meeting Summaries from its 1/12/05, 2/11/05, and 4/8/05 (Attachment 8)

**\* Enclosures are available for review at the February 9, 2006 Public Hearing, or by requesting copies from Commission staff.**



**2005 Recommendations and Comments of the ODSVRA Scientific Subcommittee re: Western Snowy Plover and California Least Tern Monitoring and Management (revised January 18, 2006):**

**A. INTRODUCTION**

The ODSVRA Scientific Subcommittee members discussed the 2005 ODSVRA plover/tern nesting report (*Nesting of the California Least Tern and Snowy Plover at Oceano Dunes State Vehicular Recreation Area, San Luis Obispo County, California 2005 Season*) at their December 8, 2005, and January 17, 2006, meetings. Doug George, of PRBO Conservation Science, also participated. Julie Vanderwier or another USFWS representative was unable to participate in either call, but all Subcommittee members had an opportunity to comment on the report.

The members' recommendations and comments on the 2005 ODSVRA plover/tern nesting report are provided in Section B of this report; background discussion is provided as needed. Section C lists the recommendations made by the Subcommittee in January 2005 and describes whether each recommendation was implemented for the 2005 season.

**B. 2005 PLOVER/TERN REPORT**

Prior to discussing the recommendations in the 2005 ODSVRA plover/tern nesting report, the SSC discussed the results of the 2005 breeding season. Overall, it was a good plover season at ODSVRA, with more than one fledged chick per male. The least tern chick fledging rate at ODSVRA declined, but was still good and among the highest in the state. The species had a slightly below average reproductive year statewide. While one of the suggested explanations for reduced least tern reproductive success has been diminished food availability, the SSC cautions that this is not always a valid assumption and should be supported by additional data. Growth rate data from San Diego this season suggested that the terns were growing at a normal rate and that another explanation for high chick mortality should be considered. Predation was also significant at some sites. Monitoring of foraging in San Francisco Bay reportedly indicated no changes in prey availability this year over the last two. Least tern research could benefit from the input of a scientist with oceanographic background.

The Subcommittee provided the following comments on the 2005 ODSVRA plover/tern nesting report. The group reviewed each of the recommendations, focusing on particular areas of interest. Items are listed in the order they appear in the report. Recommendation 9 is a separate recommendation from the Subcommittee that does not appear in the 2005 ODSVRA plover/tern nesting report.

**1. Oso Flaco (continue the high level of monitoring and management)—  
Recommendation supported**

No additional comments.

**2. Size of southern enclosure (maintain the sized used in 2005)—Recommendation supported**

No additional comments.

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### 3. Monitoring

#### a. Retain skilled monitors—Recommendation Supported

This recommendation appears in each annual report, and high turnover remains a problem. ODSVRA should explain what can be done to address turnover. The SSC recognizes that a lot of the problem comes down to money. ODSVRA should invest in more PI Environmental Scientist positions.

#### b. Continue banding Least Tern and Snowy Plover chicks—Recommendation Supported With Weight Data to be Added to Annual Report

Chicks are weighed when they are banded. These data should be provided in the annual report. Although the precise hatching date might not always be known and even one feeding can substantially alter the weight of a chick, over time the weight data can prove useful. If these data are included in the annual report, it should be clear which chick weights represent newly-hatched individuals and which older young. Consistent water quality, fish studies, invertebrate, or other studies could also be done to accumulate sound data on the food/foraging supply. The Subcommittee will further discuss food/foraging or other studies during a subsequent meeting.

#### c. Continue banding Least Tern chicks to brood—Recommendation Supported With Proposal of Banding to Individuals

Experience with banding least tern chicks at ODSVRA in 2005 indicates that it is possible to mark the bands so that individual chicks can be identified without additional stress to the chicks or undue expense. The SSC recommends that banding be done in this manner. The additional data gathered would allow monitors to determine exactly how long individuals persist and would help refine fledgling estimates.

#### d. Continue monitoring least tern juveniles as well as night roost activity—Recommendation Supported With Addition of Night Vision Equipment As Available

ODSVRA should experiment with using night vision equipment for monitoring the night roost. If ODSVRA does not have suitable equipment available, ODSVRA should investigate whether CDFG wardens or other sources might be able to loan equipment for some trial runs. If suitable equipment can be found, the SSC recommends that ODSVRA purchase the equipment.

#### e. Option to band adult snowy plovers—Recommendation Supported

The limited number of band combinations means that this option should only be pursued if an emergency situation warrants, e.g., a very high rate of nest abandonment due to unknown causes.

### 4. Continue predator management—Recommendation Supported As Modified

The SSC again emphasizes the need for experienced USDA Wildlife Services personnel (see 2004 recommendation below). Predator management would also benefit from additional data dissemination and collection, as follows: 1) ODSVRA should implement a shared log of predation observances. 2) ODSVRA should consider using cameras if birds start disappearing due to unknown causes. Some predators, such as weasels, are very difficult to catch in the act

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2005 Scientific Subcommittee Recommendations



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any other way. Ideally, cameras would be set out at the beginning of the season so that their use can be fine-tuned. Since no evidence surfaced in 2005 of a huge predation problem plus conditions at ODSVRA are likely very hard on cameras, setting out cameras early might not be feasible. Cameras should be considered should suspected predation warrant their use. Elizabeth Copper and other researchers (e.g., USGS, Martin Ruane at Pt. Mugu, Jack Fancher at USFWS Carlsbad, Robert Patton) may be able to help with camera logistics.

**5. Improve effectiveness of the perimeter fence protecting terns and plovers breeding in the Southern Enclosure and North Oso Flaco—Recommendation Supported**

The SSC notes that the fence should be at least six feet above the surface of the sand.

**6. Use of 10 ft. x 10 ft. enclosure with net top—Recommendation Supported**

The SSC agreed that the net top must remain an option for addressing avian predation.

**7. Enhance habitat in Southern Enclosure by distributing natural material—Recommendation Supported With Additional Research Needed**

ODSVRA should continue to enhance the southern enclosure using natural material such as driftwood and kelp. Additionally, while some tern chicks seemed to gravitate to driftwood, nothing was done specifically to record where debris was or what role it may have played in reproductive use or success. Such efforts should be implemented in a more systematic manner allowing for analysis of effectiveness.

**8. Continue to salvage abandoned eggs and chicks when appropriate—Recommendation Supported**

The SSC notes that this recommendation from the 2005 plover/tern report is regarding captive rearing of eggs and chicks.

**9. Conduct Study Evaluating Alternative Plover/Tern Habitat Treatment Strategies**

The question remains as to whether a year-round closure in some configuration would best serve breeding plovers and terns. The 2005 plover/tern nesting report strongly suggests the value of such a closure. In a March 29, 2005, report on revised research priorities, the SSC recommended that the park conduct a controlled experiment to determine which treatment (closure, enhancement, both, or none) was optimal. Relevant discussion from that March 29, 2005, report is included in Attachment 1. The SSC recommends that the park conduct such an experiment. The experiment should focus on areas with both plovers and terns, i.e., Post 7 and 8 enclosures.

**C. REVIEW OF IMPLEMENTATION OF SCIENTIFIC SUBCOMMITTEE RECOMMENDATIONS MADE IN JANUARY 2005**

The Scientific Subcommittee previously reviewed ODSVRA's 2004 ODSVRA plover/tern nesting report and made recommendations based upon that report (2004 Recommendations of the ODSVRA Scientific Subcommittee re: Western Snowy Plover and California Least Tern Monitoring and Management, January 13, 2005). At its December 2005 meeting, the Subcommittee requested that ODSVRA ecologist Laura Gardner review the January 2005 list of recommendations to assess implementation. This section lists those recommendations with a

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brief summary and describes whether each recommendation was implemented. Numbering is consistent with the January 2005 report.

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**2. Support efforts to get more experienced USDA Wildlife Services personnel.**

Experience is critical to make predator management as effective and benign as possible. The Resource Ecologist is working to have Wildlife Services hire a biologist rather than someone at the aide level, which was the level provided in 2003 and 2004. **Implementation attempted.** *Although the cost increased to ODSVRA by a tune of \$10,000, the ODSVRA Resource Ecologist was told the cost would be close to \$60,000 for a biologist and they would have to hire full-time. For the 2005 season, ODSVRA still received USDA coverage by a seasonal aide with absolutely no experience. This person was much more receptive to T&E species issues and is interested in returning for future seasons. This will help establish, hopefully, more field knowledge and support.*

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**4. Install a large exclosure of no-climb fencing at Oso Flaco.**

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Likewise, it would be useful to know whether ODSVRA plovers end up at the Refuge. **Not implemented.**

**6. Consider alternative approaches to least tern chick shelters.**

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## Attachment 1. Excerpts from the March 29, 2005, Scientific Subcommittee Meeting Summary

### Year-round Closure

Although the 2004 ODSVRA plover/tern nesting report (*Nesting of the California Least Tern and Snowy Plover at Oceano Dunes State Vehicular Recreation Area, San Luis Obispo County, California 2004 Season*) did not formally recommend a year-round closure for winter 2004/2005, the report did support consideration of such a closure (see page 19). ODSVRA implemented habitat enhancement measures recommended by the 2004 ODSVRA plover/tern nesting report as follows:

- Approximately 75 plants with and without 1- and 5-gallon fiber pots were dispersed within the 6 and 7 enclosure. The plants were installed prior to the fences going up, and some were vandalized (removed). ODSVRA staff GPS'd the remaining plants.
- Driftwood and seaweed was dispersed within the 6, 7, and 8 enclosure.
- All materials were placed in a random pattern.

ODSVRA did have an 11-acre enclosure in winter 2003/2004 and an enclosure of less than four acres in winter 2004/2005. Review of the habitat conditions and breeding results suggests that the year-round closure benefits breeding plovers and terns, but the closures were not implemented in a manner that allows statistical testing for biologists to draw conclusions as to whether the year-round closure is the optimal management approach. Likewise, no data are available to evaluate the success of the enhancement measures in comparison to either a year-round closure or to neither approach (e.g., no year-round closure and no enhancement).

The SSC recognizes that a year-round closure poses potential conflicts with OHV recreation, but the available data do not allow for a scientifically-based recommendation for or against a particular habitat management strategy. Although the year-round closure seemed to benefit breeding success, it is possible that the enhancement measures implemented by ODSVRA this year could be just as effective. Because available data are inconclusive, the SSC recommends scientific evaluation of year-round closure and enhancement measures as a new research priority.

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### Revised Research Priorities

In a report issued in December 2002, the SSC identified the following research priorities:

1. Night riding
2. Wintering snowy plovers and other shorebirds
3. Invertebrates
4. Vegetation/Soils Management
5. Fish Surveys
6. Water Quality

Details of these priorities are found in the December 2002 Recommended Studies report. Since that time, ODSVRA has overseen implementation of the night riding and wintering shorebirds studies. Draft reports for each of those studies are expected in April and May of this year,

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respectively. A graduate student is currently conducting some invertebrate research at ODSVRA. ODSVRA has also been implementing intensive fisheries surveys in Arroyo Grande Creek. Those surveys have already expanded the understanding of fish populations and habitat conditions in the park. Follow-up surveys at Arroyo Grande Creek for tidewater goby and steelhead as well as in Oso Flaco and Pismo Creeks are planned this year as well. Considering the work that has been conducted since 2002, the SSC recommends that ODSVRA consider the following new research priorities:

**1. Evaluate Alternative Plover/Tern Habitat Treatment Strategies**

No quantitative data exist to scientifically evaluate which of the following nesting habitat treatments result in the highest nesting success rate:

1. Leaving nesting habitat open to vehicles in the winter, and not enhancing the habitat at the start of the breeding season
2. Leaving nesting habitat open to vehicles in the winter, and then enhancing the habitat at the start of the breeding season with vegetation, driftwood, and other materials
3. Closing nesting habitat to vehicles in the winter
4. Closing nesting habitat to vehicles in the winter and enhancing the habitat at the start of the breeding season<sup>1</sup>

A three-year study should be designed and implemented to test the above treatments. Three years is likely the minimal study time needed to collect statistically meaningful data. Treatment sites would need to be large enough so that it is unlikely that plovers are readily moving among sites. Sites would probably need to be large enough to accommodate a minimum of 10 breeding plover pairs per site. A formal proposal for this study should be made available for SSC and TRT review.

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<sup>1</sup> This is a 2x2 treatment matrix: "With and without winter closure" crossed with "with and without enhancement." 1=no closure, no enhancement, 2=no closure, enhancement, 3=closure, no enhancement, and 4=closure, enhancement. Without all four treatments, the analysis cannot test for interactions and properly assess the relative effects of the treatments of interest.

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Executive Director or the Commission.

4. **Assignment.** The permit may be assigned to any qualified person, provided assignee files with the Commission an affidavit accepting all terms and conditions of the permit.
5. **Terms and Conditions Run with the Land.** These terms and conditions shall be perpetual, and it is the intention of the Commission and the permittee to bind all future owners and possessors of the subject property to the terms and conditions.

### III. SPECIAL CONDITIONS OF APPROVAL

1. **Scope of Permit.** This permit amendment replaces Special Conditions 3B, 3D, and 6 of CDP 4-82-300. This permit amendment also authorizes the institution of interim vehicle (street-legal, off-highway vehicle, and camping) limits at the ODSVRA, and the establishment of an ODSVRA Technical Review Team, for an initial one-year period from the date of approval of the revised conditions and findings.
2. **Renewal of Permit.** Annually, the Commission shall review the overall effectiveness of the Technical Review Team in managing vehicle impacts at the ODSVRA. If the Commission is satisfied with the review, this amendment will remain in effect for an additional year. A longer permit term may be requested in the future. Otherwise, an alternative approach to resource management, or set of management measures, may be instituted through this review process.
3. **Interim Vehicle Limits.**
  - a. **Interim Day-Use Vehicle Limits.** Except as qualified by 3d, interim limits on motor vehicle use on the beaches and dunes of Oceano Dunes SVRA shall be no more than 2,580 street-legal vehicles per day. This limit does not include off-highway vehicles, or street-legal vehicles attributable to allowed overnight camper use within the ODSVRA.
  - b. **Interim Camping Limits.** Except as qualified by 3d, interim limits on overnight motor vehicle use on the beaches and dunes of Oceano Dunes SVRA shall be no more than 1,000 camping units (i.e. 1,000 street-legal vehicles) per night. This limit does not include off-highway vehicles or street-legal vehicles attributable to allowed day-use within the ODSVRA.
  - c. **Interim Off-Highway Vehicle Limits.** Except as qualified by 3d, interim limits on off-highway vehicle use on the beaches and dunes of Oceano Dunes SVRA shall be no more than 1,720 off-highway vehicles at any given time. This limit does not include the street-legal vehicles used to tow or trailer the OHVs into the ODSVRA.
  - d. **Holiday Periods.** Interim street-legal and off-highway vehicle limits may be exceeded only during the four major holiday periods of Memorial Day (Saturday through Monday), July 4<sup>th</sup> (one day and any adjacent weekend days), Labor Day (Saturday through Monday), and Thanksgiving (Thursday through Sunday).

**Exhibit 3 (1 of 4)**  
Special Conditions



4. **Technical Review Team.** The Technical Review Team (TRT), advisory to the Superintendent of the Oceano Dunes State Vehicular Recreation Area, shall be established within three months, and shall meet within six months, from approval of the revised conditions and findings of this coastal development permit amendment (4-82-300-A5). A Charter for the TRT, establishing members\*, roles and procedures for the Team, shall be submitted to the Executive Director for review within one year of approval of the revised conditions and findings of this coastal development permit amendment.
- a. The Charter shall establish a specific structure and process in order for the TRT to do at least the following:
    - i. Assist in building community support through problem solving, consensus building, new constituency development, and increasing understanding about the ODSVRA; and
    - ii. Develop recommendations to the Superintendent of the ODSVRA regarding additional monitoring studies, adjustments to day and overnight use limits, and management strategies.
  - b. The Charter shall also include at least the following:
    - i. A provision to create a scientific subcommittee to identify, develop and evaluate the scientific information needed by decision-makers to ensure that the ODSVRA's natural resources are adequately managed and protected. The subcommittee shall be composed of resource experts representing the five government agencies (CCC, SLO County, USFWS, DFG, DPR) and at least two independent scientists with expertise in Western snowy plover, California least tern, steelhead trout or other species of concern, as well as ecological processes to analyze technical data and provide scientific recommendations to the TRT: and
    - ii. A provision to submit a list of proposed members of the scientific subcommittee to the Executive Director for review and approval.
  - c. The Charter shall establish a specific structure and process in order for the scientific subcommittee to do at least the following:
    - i. Recommend to the TRT the scientific studies and investigations that may be necessary to develop information needed by resource managers;
    - ii. Advise the TRT regarding the protection of the SVRA's natural resources by helping identify and review needed research measures and restoration efforts to rebuild or protect the ODSVRA natural resources;
    - iii. Evaluate monitoring results and reevaluate monitoring protocols contained in Oceano Dunes SVRA annual reports for the Habitat Monitoring System, reports on the breeding, nesting and fledgling success of the western snowy plover and California least tern populations in the SVRA, and other reports related to the environmental impacts of recreational activities;



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- iv. Provide comments on the adequacy of various scientific research studies and make management recommendations to the TRT: and
- v. Submit the full recommendations of the scientific subcommittee to the Commission and make them available to the public, as part of the annual review process required in Special Condition 2.

\* Members of the TRT shall include, but are not limited to, those listed in the Department of Park & Recreation's amendment submittal (noted on page 10-11 of this staff report) and a representative of the residential community adjacent to the ODSVRA.

5. **Annual Reports.** The TRT and the ODSVRA Superintendent shall prepare annual reports (for the period of October to September) summarizing annual recreational use and habitat trends at the Park; and highlighting the TRT's major accomplishments (including progress made towards meeting the objectives of the TRT), projects, correspondence, and recommendations as well as a summary of subcommittees, working groups, and task force activities. The first annual report shall include (1) a draft or final Charter for the TRT, and (2) a description of the process by which the TRT will rank research and management questions and priorities. The second annual report shall include (1) the final Charter for the TRT (if not submitted with the first annual report), (2) the TRT's ranking of research and management questions and priorities, and (3) a scope of work for those projects identified as the highest priority. Subsequent reports will include a status report on the progress of those projects as well as updates to research and management priorities and the corresponding scopes of work for addressing those new priorities. One component of the Commission's annual review will be to evaluate the progress of the TRT's work as measured against the submitted work plans.

In identifying and selecting the priority research and management questions and projects, the TRT shall consider information developed by the USFWS and shall include the following:

- a. Appropriate management techniques for the western snowy plover, California least tern, and steelhead trout including an evaluation of:
  - i. How the geographic location of nests, proximity of nests to foraging areas, and nest closure techniques affect the hatching and fledgling success of the species,
  - ii. What studies may be necessary to determine appropriate management techniques, or what known management techniques could be put in place, for protecting each species of concern, and
  - iii. The potential environmental, recreational and economic costs and benefits of alternative beach/dune habitat protection strategies.
- b. Appropriate management techniques for protecting water quality and dune habitats from potential pollutants that might result from motor vehicle fluids or other contaminants that might enter the ODSVRA and ocean through polluted runoff or direct discharges; and

**Exhibit 3 (3 of 4)**  
Special Conditions



- c. The success of past revegetation efforts within the ODSVRA and the potential need for continuing or expanding those efforts, including expansion of vegetation exclosures.
- d. Conduct a comprehensive, long-term monitoring and comparative analysis of the resources impacts associated with varying levels of use, including the highest (peak-use) attendance periods.

If alternative research and management questions and projects are identified as a higher priority than those listed in a through d above, the annual reports shall discuss the basis for such a determination. Annual reports shall be submitted to San Luis Obispo County and the California Coastal Commission for informational purposes no later than January 1<sup>st</sup> of the following year. The first annual report (or portion thereof) shall be completed and submitted to the Commission no later than January 1, 2002.

## IV. FINDINGS AND DECLARATIONS

### A. Project Description and Background

#### 1. Project Location

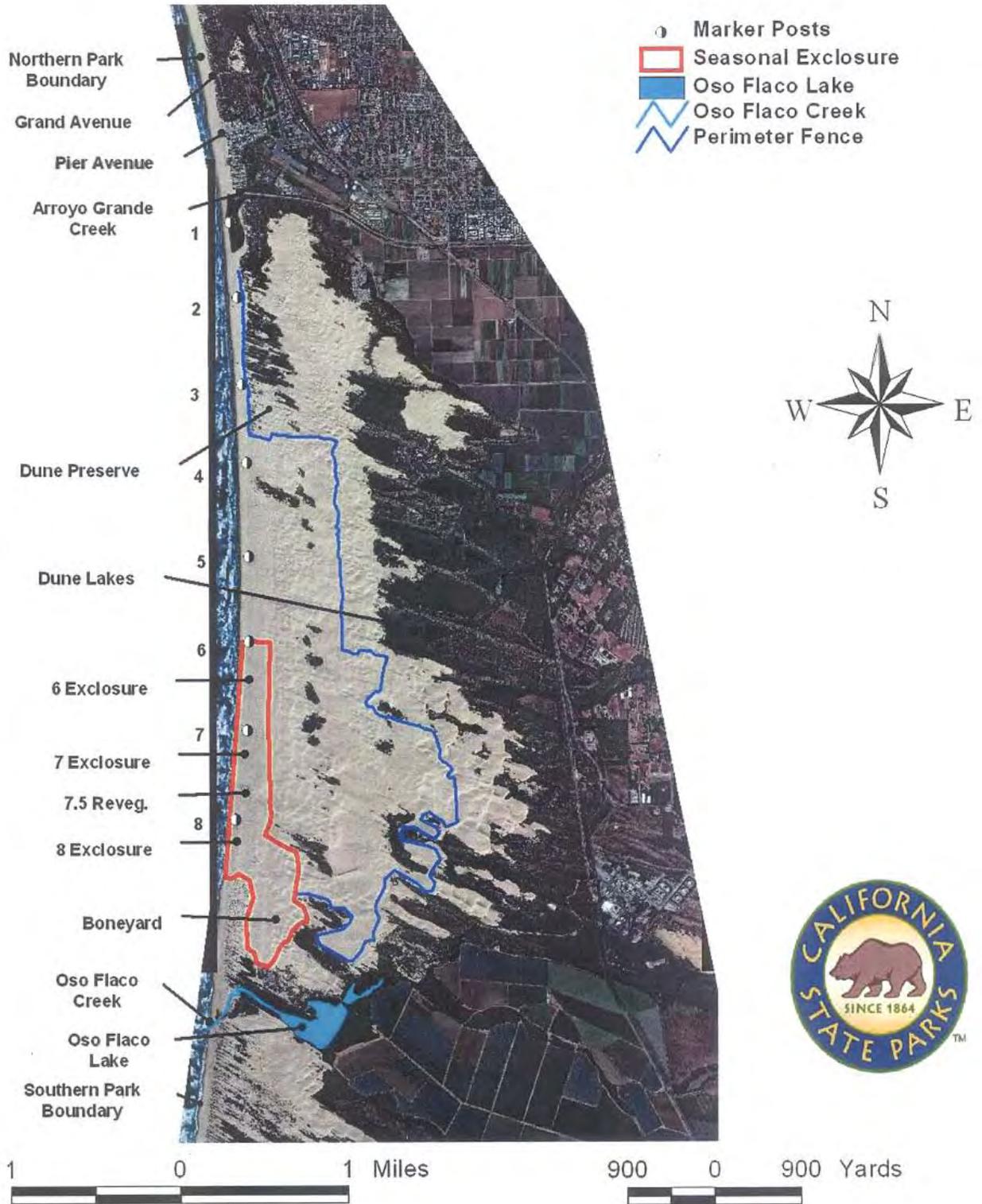
Oceano Dunes State Vehicular Recreation Area (ODSVRA), formerly Pismo Dunes SVRA (PDSVRA) is located on the central California coast along the southern coastal region of San Luis Obispo County. Primary access to this area is via Highway 101 and California State Highway 1. The ODSVRA is bordered on the north by the non-vehicular section of Pismo State Beach, on the west by the Pacific Ocean, on the south by Oso Flaco Lake and along its eastern and southeastern boundaries by the City of Grover Beach and Oceano.

ODSVRA encompasses 3,590 acres and includes approximately six miles of sandy beach; about 1,500 acres are available for OHV use. It varies in width from a few hundred yards along its northerly two miles to up to three miles wide along its southerly portion (see Exhibit 2). ODSVRA itself is divided into different regions based upon allowable activities and include areas set aside strictly for resource protection, street legal vehicle use, and a combination of street legal/off-highway vehicle use (see Exhibit 3). The separation and delineation of these specific areas was developed through the past cooperative efforts of the Coastal Commission and County of San Luis Obispo Board of Supervisors, the California Department of Fish & Game (DFG) and the California Department of Parks & Recreation (DPR).

Land use patterns of the lands adjoining the study area are characterized (from north to south) as ranging from urban commercial and industrial, and eventually shifting to rural agricultural and industrial. Specifically, along ODSVRA's narrow northern end, urban retail establishments, commercial campgrounds and urban residential land uses characterize the eastern border. Progressing south, land use is characterized by a small rural airport, a State Park dune preserve, agricultural fields, an oil refinery and its associated oil fields, and open ranch lands.



Figure 6. ODSVRA site map.



**Exhibit 4**  
ODSVRA Site Map