

August 13, 2015

Mr. Steve Kinsey
California Coastal Commission
45 Fremont Street, #2000
San Francisco, CA 94105

Subject: Monterey Bay Shores Resort Project—Compliance with Coastal Development Permit Conditions (Dispute Resolution for CDP A-3-SNC-98-114)

Dear Mr. Kinsey:

This letter contains my comments on Security National Guaranty’s (“SNG”) Dune Restoration Plan (“DRP”), which is required prior to issuance of a Coastal Development Permit for the Monterey Bay Shores Resort Project (“Project”). Specifically, I address the portions of the DRP that have implications on the western snowy plover, which is a federally threatened shorebird known to occur on the Project site.

I am an environmental biologist with 21 years of professional experience in wildlife ecology and natural resources management. To date, I have served as a biological resources expert for over 100 projects throughout California. My experience in this regard includes assisting various clients with evaluations of biological resource issues, preparing biological resource assessments, and submitting comments (or testimony) on projects undergoing environmental review. My educational background includes a B.S. in Resource Management from the University of California at Berkeley, and a M.S. in Wildlife and Fisheries Science from the Pennsylvania State University.

The comments herein are based on an extensive review of scientific literature, documents in the administrative record, and the knowledge and experience I have acquired during more than 21 years of work in the field of natural resources management.

Proposed Habitat Enhancement and Restoration Measures

Special Condition 3(d) requires Dune Restoration Plans that contain special provisions to explicitly enhance snowy plover habitat as part of dune restoration activities. By definition, habitat enhancement benefits the species of interest. One of the overarching flaws with the DRP is that it fails to provide scientific evidence demonstrating the measures proposed by SNG would benefit the snowy plover. According to the DRP:

“[t]he western snowy plover typically nests on flat, barren to sparsely vegetated sandy substrate and nests are frequently located near objects such as grass clumps or pieces of driftwood... This plan will implement measures to enhance plover habitat on site including by achieving the habitat features described above.”¹

¹ DRP, p. 4.

Thus, SNG indicates it will enhance plover habitat by “achieving” flat, barren to sparsely vegetated sandy substrate, with opportunities for nesting near objects such as grass clumps or pieces of driftwood. However, those conditions currently exist across most of the Project site (Figure 1). Achieving conditions that currently exist is not habitat enhancement. Although iceplant removal is a habitat enhancement and restoration measure, the Project would still result in a net loss in snowy plover habitat, in part due to the extensive grading and construction that would occur in the foredune and secondary dune area. The habitat “enhancement” measures proposed in the DRP do not offset the Project’s contribution to snowy plover habitat loss.



Figure 1. Google Earth imagery of the Project site (demarcated by red lines).

In the “Western Snowy Plover” section of the DRP the author states:

“[t]he management program includes approximately 20.38 acres restored to foredune, secondary dune, back dune management areas (Figure 1). Of the 20.38 acres to be restored to native coastal habitat, about 14.18 acres around the periphery of the development will be protected in perpetuity by recorded conservation/open space easements and protected, as depicted on Figure 3.”²

This statement is misleading for several reasons. First, it implies 20.38 acres of the site require “restoration” to provide native coastal habitat. However, much of the Project site

² *Ibid.*

currently contains native coastal habitat that is used by plovers. The DRP fails to provide scientific evidence that SNG's proposed "restoration" activities would improve habitat conditions for snowy plovers in those areas.

Second, the DRP's claim that 20.38 acres would be restored appears to be overinflated. According to the DRP, restoration activities would occur in Management Area 2 (6.86 acres) and Management Area 3 (9.88 acres).³ That equates to 16.74 acres.

Third, some of the 16.74 acres that would be "restored" would be surrounded by infrastructure (e.g., parking lot, roadways) on the east side of the resort.⁴ Consequently, those areas will be unsuitable for plovers no matter how successful SNG's restoration efforts are. "Restored" areas in the southern portion of the site also would be unsuitable for plovers because the resort and planted vegetation would present a barrier (e.g., impair beach access). The U.S. Fish and Wildlife Service's ("USFWS") Recovery Plan states: "Page and Stenzel (1981) found that nests were usually within 100 meters (328 feet) of water, but could be several hundred meters away when there was no vegetative barrier between the nest and water. They believed the absence of such a barrier is probably important for newly-hatched chicks to have access to the shore."⁵

Lastly, installation of a biofiltration basin does not qualify as restoration, as suggested on page 7 of the DRP.

Topographic Undulations

The DRP indicates: "[s]mall sand mounds and topographic undulations (no greater than 4 feet) will be incorporated into the gradual slope with the intent of creating planting areas for strand vegetation and providing some newly created refuge for western snowy plovers that may use the area for nesting."⁶ The DRP does not provide any scientific evidence substantiating the proposed measure as being biologically meaningful to snowy plovers. According to literature published by SNG, the contouring would be designed to create "sheltered hollows that provide protection from the sea winds for visitors and wildlife alike."⁷ Contouring that attracts visitors would not benefit the snowy plover (and could possibly function as an ecological trap).⁸

³ *Ibid*, pp. 7-8.

⁴ *Ibid*, Figure 4.

⁵ United States Fish and Wildlife Service. 2007. Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (*Charadrius alexandrinus nivosus*). Sacramento, California. p. 12.

⁶ DRP, p. 7.

⁷ SNG. Monterey Bay Shores [web site]. Available at: <http://www.montereybayshores.com/PDF/Eco_Overview.pdf>. (Accessed 2014 Dec 6). p. 8.

⁸ An ecological "trap" an area where an animal settles to breed because conditions at the time of settlement seem appropriate. However, either because natural conditions change, or humans change them, the animal has made a mistake and either dies or has reduced reproductive output. Thus the animal is, in essence, lured into what turns out to be poor-quality habitat. See Robertson BA, JS Rehage, A Sih. 2013. Ecological novelty and the emergence of evolutionary traps. *Trends in Ecology & Evolution* 28:552-560.

Avoidance and Minimization Measures Are Not Habitat Enhancement

The DRP discusses SNG's intent to remove iceplant from the Project site. The DRP then claims that it has incorporated "[a]dditional special habitat restoration and enhancement provisions" to accomplish seven objectives that apply to the snowy plover.⁹ However, nowhere in the DRP could I find the "additional special habitat restoration and enhancement provisions," nor could I find evidence substantiating the likelihood that the seven objectives would be met. The subsequent section contains my comments on the seven objectives listed in the DRP.

1. "Prevent take of the Smith's blue butterfly and western snowy plover ensured by on-site monitoring by the approved biologist and implementation of immediate measures to protect any species identified on site;"
 - Monitoring (of limited scope and duration) by one project biologist, and implementation of the proposed protection measures (e.g., fencing), does not ensure take is prevented. As the USFWS has pointed out in its two letters (April 2014 and May 2015), the Project is expected to result in take of plovers because it would exacerbate numerous threats (e.g., increased human presence and types of disturbance) that are known to cause take of plovers. As a result, I concur with the USFWS that SNG's proposed avoidance and minimization measures would not prevent take of snowy plovers.
2. "Assist in the recovery of those species on site, in the Sand City area, and regionally;"
 - Page 26 of the DRP is less certain about SNG's assistance in plover recovery. It states SNG's biologist: "*may* also participate in larger patrol/resource management efforts focused on plover recovery in Sand City and the Monterey region." Moreover, the almost all of the techniques listed in the DRP are avoidance and minimization measures, which are very different from recovery measures. Ultimately the DRP does not identify specific actions that demonstrate SNG would assist in the recovery of the snowy plover.
3. "Avoid, if feasible, or, if not, minimize significant damage or degradation to western snowy plover critical habitat so that any such habitat impact does not rise to the level of "significant habitat modification or degradation where it actually kills or injures wildlife by significantly impairing essential behavioral patterns, including breeding, feeding or sheltering." 50 C.F.R. § 17.3;"
 - This is an avoidance and minimization measure only, not a habitat restoration and enhancement measure as the DRP suggests.
 - There is considerable scientific evidence that the activities associated with the Project would impair essential behavioral patterns,¹⁰ especially because the avoidance and minimization measures proposed in the DRP are not consistent with those from the scientific community. As a result, SNG's claim that it would

⁹ DRP, pp. 4-5.

¹⁰ United States Fish and Wildlife Service. 2007. Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (*Charadrius alexandrinus nivosus*). Sacramento, California. xiv + 751.

avoid and minimize impacts to essential behavioral patterns is not credible. This issue is confounded because the DRP lacks a monitoring component to determine whether essential behavioral patterns are being impaired by the Project.

4. “Minimize grading in western snowy plover critical habitat by limiting grading to 90 days in the construction period, conduct pre-grading surveys by a qualified biologist (to insure no plovers nest in the area), and avoid grading, if feasible during the breeding season;”
 - This is an avoidance and minimization measure only, not a habitat restoration and enhancement measure as the DRP suggests. Moreover, it does not prevent grading during the snowy plover breeding season if SNG determines it is not economically feasible to do so. Thus the DRP allows SNG to grade critical habitat during the breeding season, which increases the probability that take will occur.
5. “Restore and enhance western snowy plover critical habitat so that it provides enhanced characteristics and features designed to be attractive to plovers for breeding and nesting;”
 - The DRP fails to provide scientific evidence that the measures proposed by SNG would make the Project site more attractive to plovers. This issue is confounded by the DRP’s incorporation of inappropriate success criteria (discussed below).
6. “Employ an approved on-site biologist to survey and monitor plover and butterflies and to implement plan measures to protect, restore and enhance their respective habitats;”
 - This is an avoidance and minimization measure only, not a habitat restoration and enhancement measure as the DRP suggests.
7. “Implement the predator management plan ... to protect the western snowy plover from take by predators, the greatest present threat to the plover;”
 - The proposed predator management plan lacks substance and provides few assurances that it would be effective in protecting plovers (discussed further below).

The “Sensitive Species” section of the DRP concludes with the statement that: “[m]easures will be undertaken prior to, and during, grading and construction, as part of dune restoration and enhancement activities, and during long-term protection, maintenance, and monitoring tasks. These provisions are consistent with applicable state and federal agency requirements for these species.”¹¹ The CCC, USFWS, Pt. Blue, and others all have concluded that the Project is likely to result in the “take” of snowy plovers, despite SNG’s preparation of a Habitat Protection Plan (“HPP”).¹²

¹¹ DRP, p. 5.

¹² California Coastal Commission. 2014. Staff Report Addendum for W10a Application A-3-SNC-98-114 (Monterey Bay Shores Resort). Prepared April 8, 2014 for April 9, 2014 Hearing. p. 6. *See also* USFWS, 2014 Apr 7 letter to the California Coastal Commission, p. 4. *See also* USFWS, 2015 May 13 letter to the California Coastal Commission, p. 3. *See also* Point Blue Conservation Science, 2014 Apr 1 letter to the California Coastal Commission, pp. 1 and 2.

Consequently, the USFWS has advised SNG to prepare a Habitat Conservation Plan (“HCP”) and apply for an incidental take permit.¹³ SNG has refused to prepare a HCP and apply for an incidental take permit. SNG’s HPP, as currently presented, is not a viable substitute for a federally approved HCP and a federally issued incidental take permit. The avoidance measures set forth in the DRP (and HPP) will not prevent take, and thus the Project would not comply with provisions of the Endangered Species Act.

Surveys

The DRP indicates the approved biologist will conduct surveys for western snowy plover prior to, and throughout, the breeding season (March through September) and prior to, during, and after construction and annually thereafter.¹⁴ However, the DRP does not identify the survey methods, including search techniques, search area, timing, frequency, and level of effort. Because the DRP does not specify the survey protocols, it is impossible to assess the value of the proposed surveys in protecting snowy plovers and their nest sites.

Protection Measures

Seasonal Nesting Protection Zones

The DRP provides for two seasonal nesting protection zones on the lower beach strand.¹⁵ The DRP does not identify the size of the nesting protection zones, nor does it map them (as claimed on page 22 of the DRP). Nevertheless, nesting protection zones designed to protect nest sites from Project disturbance activities do not qualify as a habitat enhancement measure.

Although the DRP fails to identify the size(s) and location(s) of the nesting protection zones, SNG’s draft HPP indicates the protection zones would be 1 to 2 acres in size and designed to attract nesting snowy plovers while allowing for lateral access along the beach.¹⁶ Scientific evidence indicates 1 to 2 acres is insufficient to protect nesting snowy plovers. Muir and Colwell (2010) studied the response of incubating plovers to an observer approaching the nests. Incubating plovers ceased incubation and left nests when an observer approached to within a mean distance of 80 ± 33 meters.¹⁷ This led Muir and Colwell to conclude that fencing erected to minimize human disturbance should be placed such that people cannot approach closer than 100 meters (328 feet). This conclusion has two important ramifications on the Project:

¹³ *Ibid.*

¹⁴ DRP, p. 10.

¹⁵ DRP, p. 21.

¹⁶ HPP, p. 4-15.

¹⁷ Muir JT, MA Cowell. 2010. Snowy Plovers Select Open Habitats for Courtship Scrapes and Nests. *Condor* 112(3):507-510.

1. a “nesting protection zone” must be at least 2.47 acres to prevent human disturbance to incubating plovers;¹⁸ and,
2. the Project design precludes the ability to establish a 2.47-acre “nesting protection zone”—or even a 1-acre “nesting protection zone”—that is ≥ 100 meters away from the resort pathways.¹⁹

The DRP states: “if necessary, additional expansion areas [protection zones] of up to two acres will be provided within the area bounded by the 10 MSL contour line on the sandy beach and the two resort beach trails on the north and south (with a 25 foot buffer), respectively, while facilitating lateral and vertical beach access.”²⁰ As discussed above, scientific evidence indicates a nesting protection zone needs to be at least 2.47 acres to prevent human disturbance to incubating plovers. Therefore, SNG’s proposal for a 2-acre protection zone is insufficient to prevent take of plovers. Furthermore, SNG’s proposed measure does not appear to be feasible because: (1) the property contains only 4.03 acres of beach and coastal strand above the mean high water mark; and (2) the Project site is not big enough to allow lateral and vertical beach access while also providing at least three nesting protection zones free from human disturbance.

Regulation of Beach Activities

According to the DRP, SNG would “[a]uthorize the biologist to monitor and, in coordination with the construction manager, resort operator or property owner, regulate activities that may significantly and adversely affect the snowy plover during the breeding season (e.g., redirect lighting away from plover nesting).”²¹ This measure is too vague to be considered an effective mitigation strategy. The DRP needs to identify the suite of activities that would be subject to potential regulation (e.g., dog walking, fishing, pedestrian access) besides lighting (which SNG has already claimed would not affect plovers).

According to the DRP the approved biologist will establish pet restrictions.²² The DRP provides no information on the restrictions that might be established, the variables that would trigger pet restrictions, and the enforcement mechanism that would ensure compliance. Dogs on beaches can pose a serious threat to western snowy plovers during both the breeding and nonbreeding seasons.²³ Unleashed pets, primarily dogs, sometimes chase snowy plovers and destroy nests.²⁴ Repeated disturbances by dogs can interrupt

¹⁸ 328 ft x 328 ft = 2.47 acres

¹⁹ Maximum distance between resort pathways leading to the beach is 708 ft, which leaves a 52-foot wide sliver of beach that is ≥ 328 ft from a pathway. 52 ft x 124 ft (distance between high tide line and bluff) = 0.15 acre.

²⁰ DRP, p. 23.

²¹ *Ibid*, p. 10.

²² *Ibid*, p. 22.

²³ United States Fish and Wildlife Service. 2007. Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (*Charadrius alexandrinus nivosus*). Sacramento, California. xiv + 751.

²⁴ *Ibid*.

brooding, incubating, and foraging behavior of adult western snowy plovers and cause chicks to become separated from their parents.²⁵ Pet owners frequently allow their dogs to run off-leash even on beaches where it is clearly signed that dogs are not permitted or are only permitted if on a leash.²⁶ Enforcement of pet regulations on beaches by the managing agencies is often lax or nonexistent.²⁷ For example, managers of the Coal Oil Point Reserve in Santa Barbara County noted that posting of the leash law and attempts to educate pet owners were ineffective at reducing disturbance to snowy plovers.²⁸

The DRP indicates beach-raking will be prohibited during the western snowy plover breeding season.²⁹ Beach-raking and debris (e.g., driftwood) collection remove habitat features for both plovers and their prey, and precludes nests from being established.³⁰ Therefore, allowing beach-raking during the non-breeding season would adversely affect plovers during both seasons (breeding and non-breeding).

Litter Control

The DRP states: “a litter control plan is required as part of this plan and the predator management plan.”³¹ However, the DRP does not include a litter control plan. The only information provided in the DRP is that: (a) SNG will install signs informing visitors that they are required to “pack out” their garbage; (b) trash receptacles would be inaccessible to wildlife; and (c) there will be “regular” trash removal. These measures are insufficient to prevent direct harm to snowy plovers and their habitats due to the accumulation of litter. Any attempt to maintain snowy plover habitat must include periodic sweeps of the Project area to remove litter.

Adaptive Management

The U.S. Department of the Interior defines adaptive management as “a decision process that promotes flexible decision making that can be adjusted in the face of uncertainties as outcomes from management actions and other events become better understood.”³² In discussing adaptive management, Morrison (2002) added:

1. “The concept of adaptive management or adaptive resource management is

²⁵ *Ibid.*

²⁶ *Ibid.*

²⁷ *Ibid.*

²⁸ University of California, Santa Barbara Natural Reserve System. 2001. Snowy Plover Management Plan (SPMP) – 2001. Available at: <<http://coaloilpoint.ucnrs.org/SnowyPloverProgram.html>>. (Accessed 16 Nov 2014). *See also* Lafferty KD, D Goodman, CP Sandoval. 2006. Restoration of breeding by snowy plovers following protection from disturbance. *Biodiversity and Conservation* 15:2217-2230.

²⁹ DRP, p. 22.

³⁰ United States Fish and Wildlife Service. 2007. Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (*Charadrius alexandrinus nivosus*). Sacramento, California. xiv + 751.

³¹ DRP, p. 22.

³² Williams BK, RC Szaro, CD Shapiro. 2009. Adaptive Management: The U.S. Department of the Interior Technical Guide. Adaptive Management Working Group, U.S. Department of the Interior, Washington, DC.

- centered primarily on monitoring the effects of land-use activities on key resources and then using the monitoring results as a basis for modifying those activities to achieve the project’s goals (Walters 1986; Lancia et al. 1996).”
2. “Adaptive management is not a trial-and-error approach.”
 3. “Attempting to fix a problem after implementation is quite different from developing an action plan prior to the start of a project.”
 4. “Regardless of the specific approach, adaptive management offers a structure whereby clear goals are established and then monitored—and specific actions for responding to deviations are planned at the *outset* of the project.”³³

The “adaptive management” approach outlined in the DRP violates each of these concepts, and thus it does not constitute true adaptive management. Furthermore, the purpose of adaptive management is to improve long-term management outcomes, by recognizing where key uncertainties impede decision-making, seeking to reduce those uncertainties over time, and applying the lessons learned to subsequent decisions.³⁴ SNG has no basis for deferring to adaptive management as the solution because there are no *key uncertainties* to address; the response can already be predicted with reasonable certainty. For example, there is substantial scientific literature that documents how snowy plovers respond to habitat fragmentation and anthropogenic sources of disturbance; therefore there is no need to implement adaptive management to figure that out. If SNG continues to point to adaptive management as the solution it must apply the concept correctly by developing specific hypotheses, thresholds that trigger changes in management practices, and other means for implementing the feedback loops that define the concept.

Construction Minimization Measures

SNG claims that the Project has been designed to avoid grading within Management Area 1, “the only area in which plovers have been sighted during the last 20 years.”³⁵ SNG’s claim is misleading and incorrect:

- Survey efforts have been limited primarily to Management Area 1. Therefore, the relative lack of nest site detections in Management Area 2 may be largely a function of survey effort.
- Plovers *have* nested in Management Area 2 over the past 20 years. In 2014 a nest was discovered on the bluff-top portion of the Project site.³⁶ Furthermore, one of

³³ Morrison ML. 2002. Wildlife Restoration: Techniques for Habitat Analysis and Animal Monitoring. Island Press: Washington (DC).

³⁴ Walters, C. J. 1986. Adaptive management of renewable resources. Macmillan, New York, New York, USA.

³⁵ DRP, p. 15.

³⁶ USFWS. 2015 May 13 letter to the California Coastal Commission, p. 2.

the nine nesting attempts documented on the site in 2015 occurred as a recently hatched brood, suggesting it may have been from a nest in Management Area 2.³⁷

- Even if most nest sites occur in Management Area 1, plovers use Management Area 2 for sheltering and foraging.³⁸

Contrary to SNG's claim that it would avoid grading previously occupied snowy plover habitat, CCC Staff concluded all historic nesting habitat for snowy plovers would be removed by the Project.³⁹

Construction Protection Measures

The DRP allows grading to occur during the snowy plover breeding season. To protect plovers outside of the grading area SNG proposes a temporary fence and signage that will be erected "no more than 20 feet beyond the limit of grading in order to assure that construction activities do not encroach into habitat areas except for the limited habitat area within Management Area 2 for a period not to exceed 90 days in the construction period."⁴⁰ Allowing construction activity within 20 feet of a snowy plover nesting area would undoubtedly result in nest abandonment, disturbance, or another form of take.⁴¹ Furthermore, a temporary fence has little value as a take avoidance measure because snowy plovers have precocial chicks that leave the nest within hours after hatching.⁴² Snowy plover chicks from nests on the Project site or adjacent areas would be susceptible to direct (e.g., crushing) and indirect (heightened vigilance that precludes normal foraging activities) impacts from Project construction activities. The only reliable way to prevent those impacts is to prohibit construction activities during the entire snowy plover breeding season.

Coordination with Sand City and State Parks

According to the DRP: "[t]he Permittee will coordinate with Sand City and State Parks in the management, protection and recovery of plovers along the Sand City coastline."⁴³ I concur that coordination with the City and State Parks is necessary to assure appropriate protection and management of snowy plovers and their habitat. Scientific studies have shown that the abundance of a species within a habitat patch can be dependent not only

³⁷ Personal communication with Carleton Eyster, Pt. Blue Conservation Science.

³⁸ *Ibid.*

³⁹ California Coastal Commission. 2014. CDP Application Hearing, Staff Report Addendum for W10a Application A-3-SNC-98-114 (Monterey Bay Shores Resort). Prepared April 8, 2014 for April 9, 2014 Hearing. p. 97.

⁴⁰ DRP, p. 20.

⁴¹ Muir JT, MA Cowell. 2010. Snowy Plovers Select Open Habitats for Courtship Scrapes and Nests. *Condor* 112(3):507-510. *See also* Rodgers JA Jr, ST Schwikert. 2002. Buffer-Zone Distances to Protect Foraging and Loafing Waterbirds from Disturbance by Personal Watercraft and Outboard-Powered Boats. *Conservation Biology* 16(1):216-224.

⁴² Precocial chicks are well developed, feed themselves, run about, and regulate their body temperature.

⁴³ DRP, p. 24.

on the processes within the patch, but also on the processes in the surrounding matrix.⁴⁴ This is especially true for the western snowy plover, which has broods that may travel along the beach as far as 6.4 kilometers (4 miles) from their natal area.⁴⁵

State Parks has expressed concern about indirect impacts of the Project to snowy plovers that breed at Fort Ord Dunes State Park (Park). State Parks believes the Project could result in greater enforcement needs at the Park, and that the Project may inhibit its ability to meet the conservation goals and thresholds identified in its pending HCP.⁴⁶ Despite these issues, the only stated requirement of the Applicant's coordination program is: "evaluation of the feasibility of obtaining conservation easements or other habitat protection agreements with neighboring landowners designed to enhance the existing plover protection and recovery."⁴⁷ SNG's proposal to evaluate the feasibility of obtaining conservation easements does not constitute an effective coordination program. As a result, the DRP must identify definitive actions SNG will take to assist State Parks and Sand City in protecting the regional snowy plover population.

Success Criteria

The DRP establishes inappropriate success criteria as a way to excuse SNG from meeting the goal of having plovers occupy the site after Project development. It states:

"Success criteria establish standards for species and habitat conservation goals. Here, documented plover nesting on the lower beach and strand area at numbers above those recorded since 2008 (2-3 nesting attempts and the fledging of 1-3 juveniles per year) within five (5) years after the resort is opened would be considered successful in increasing active plover use of the site. However birds are highly mobile and may not return to a site on their own volition, regardless of habitat restoration efforts.

Therefore, habitat restoration efforts should be evaluated by an alternative criterion. For the purposes of this plan, if snowy plover are not observed using the restored habitat areas within five (5) years after construction, success of the habitat restoration effort will be defined by documenting that the proposed native coastal strand vegetation goals for Management Areas 1 and 2 have been established."⁴⁸

The purported success criteria for snowy plover are entirely inappropriate. The DRP first suggests that the specific goal is to increase plover use of the Project site. In then

⁴⁴ Baillie SR, WJ Sutherland, SN Freeman, RD Gregory, E Paradis. 2000. Consequences of Large-Scale Processes for the Conservation of Bird Populations. *Journal of Applied Ecology* 37(Suppl. 1):88-102.

⁴⁵ United States Fish and Wildlife Service. 2007. Recovery Plan for the Pacific Coast Population of the Western Snowy Plover (*Charadrius alexandrinus nivosus*). Sacramento, California. xiv + 751.

⁴⁶ California Coastal Commission. 2014. CDP Application Hearing, Staff Report Addendum for W10a Application A-3-SNC-98-114 (Monterey Bay Shores Resort). Prepared April 8, 2014 for April 9, 2014 Hearing. California Department of Parks and Recreation, 2014 Apr 1 letter to the California Coastal Commission.

⁴⁷ DRP, p. 24.

⁴⁸ DRP, p. 32.

identifies the success criteria as more than 2-3 nesting attempts and the fledging of 1-3 juveniles per year within 5 years after the resort is opened. However, the Plan immediately discredits these success criteria as being appropriate because: “birds are highly mobile and may not return to a site on their own volition, regardless of habitat restoration efforts.” This is a spurious argument. As the DRP acknowledges, the western snowy plover typically nests on flat, barren to sparsely vegetated sandy substrate.⁴⁹ Therefore, there is no scientific basis to use the vegetation goals (which include an increase in vegetation cover over time) as an index of habitat restoration “success” for snowy plover—especially because habitat suitability is dependent on many factors beyond vegetation.⁵⁰ As reported by Morrison (2002): “*the success of a restoration project should be judged by how wildlife species respond to it.*”⁵¹

Snowy plovers are highly faithful to breeding and wintering sites across years.⁵² As a result, a 5-year span without snowy plovers successfully nesting on the site would not only demonstrate failure to meet the stated goal of increasing plover use of the Project site, but also would demonstrate a decline from existing conditions. In no way could this be considered a contribution to regional recovery efforts for the western snowy plover in the Monterey Bay Area, as the DRP suggests.⁵³

Predator Management

SNG’s Predator Management Plan (“PMP”) states: “[t]he approved biologist will monitor the site for predation, identify predators that are impacting the plover, and record any avian or mammalian predator behavior as a basis for determining the appropriate control measure.”⁵⁴ The potential efficacy of this measure cannot be evaluated because the PMP does not identify the methods that would be implemented to accomplish the aforementioned tasks.

The PMP indicates a biologist will evaluate the effectiveness of predator monitoring and control methods; however, there is no information on how the evaluation would be accomplished.⁵⁵ The PMP then states: “[s]pecific quantitative success criteria for predator monitoring and control cannot be defined because the types and numbers of predators may vary widely from year to year. There are a number of other factors that

⁴⁹ DRP, p. 4. [emphasis added].

⁵⁰ Morrison ML, BG Marcot, and RW Mannan. 2006. *Wildlife-Habitat Relationships: Concepts and Applications*. 3rd ed. Washington (DC): Island Press. 493 p.

⁵¹ Morrison ML. 2002. *Wildlife Restoration: Techniques for Habitat Analysis and Animal Monitoring*. Island Press: Washington (DC). p. 1.

⁵² California Coastal Commission. 2014. CDP Application Hearing, Staff Report Addendum for W10a Application A-3-SNC-98-114 (Monterey Bay Shores Resort). Prepared April 8, 2014 for April 9, 2014 Hearing. USFWS, 2009 May 6 letter to the California Coastal Commission, p. 94. *See also* Warriner JS, JC Warriner, GW Page, LE Stenzel. 1986. Mating system and reproductive success of a small population of polygamous Snowy Plovers. *Wilson Bulletin* 98:15-37.

⁵³ DRP, p. 6.

⁵⁴ DRP, p. 59.

⁵⁵ DRP, p. 63.

contribute to the success or failure of plover nesting attempts, including food availability or natural elements such as wind, tides, and rain.”⁵⁶ This is an indefensible argument and an excuse for SNG to avoid implementation of an effective predator control plan. The affect of variables mentioned in the PMP (e.g., variation in predator abundance and climatic variables) could be distinguished through statistical analysis and a sampling scheme that incorporates control sites. Doing so would enable success criteria, such as:

1. Nest depredation by predators at the Project site will not exceed 10% of that at control sites.
2. Predator control efforts at the Project site will reduce the mean abundance of predators X, Y, and Z by 50% over baseline levels within 5 years of implementation.

Conclusion

The DRP lacks substance and fails to provide evidence that it would result in “self-functioning, high quality habitat in perpetuity,” as required by Special Condition 3(a). It also fails to provide scientific evidence that it would explicitly enhance snowy plover habitat, as required by Special Condition 3(d). These issues are confounded by the lack of appropriate success criteria (Special Conditions 3[h.3] and 3[i]); specific survey protocols (Special Condition 3[h.3]); and adaptive management procedures (Special Condition 3[h.4]).

Based on my review of the administrative record, including plans and other documents provided by SNG, it is my conclusion that the Project, as currently proposed, would not restore and protect dune habitat, nor would it enhance habitat values for the western snowy plover.

Sincerely,



Scott Cashen, M.S.
Senior Biologist

⁵⁶ *Ibid.*