

California Native Plant Society

South Coast Chapter

14 April 2023

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SUBJECT: South Coast California Native Plant Society Comment on DEIR Portuguese Bend Landslide Remediation in the City of Rancho Palos Verdes, SCH No. 2020110212

Dear Mr. Drago –

I'm writing as President of the South Coast chapter of the California Native Plant Society (SCCNPS) to present SCCNPS consensus comment on the impacts of planned work to mitigate the Portuguese Bend Landslide to native vegetation.

The SCCNPS is one of 35 local chapters that form the state-wide organization whose mission is to protect California's native plants and their natural habitats, today and into the future, through science, education, stewardship, gardening, and advocacy. Since 1965 we have worked closely with decision-makers, scientists, and local planners to advocate for well-informed and environmentally friendly policies, regulations, and land management practices.

The proposed Portuguese Bend Landslide Mitigation Project (Project) covering three construction and installation phases raises concerns that will impact the coastal sage scrub ecosystem. This ecosystem provides considerable aesthetic value to the Palos Verdes Peninsula while delivering environmental value to endangered species that cannot be replaced. The area also is a part of the Pacific Flyway and would impact the area's contribution to the migration path. The SCCNPS considers the PBLC as the largest example of existing California native plants within the South Coast chapter and want to express concerns regarding the proposed Project and its impacts.

Below are the major areas of concern:

1) Issues of Timing and Success in Revegetation

Mitigation Measure MM-BIO-4 states, "Temporary impacts to native vegetation will be restored with native vegetation appropriate to the physical condition of the site within 60 days of the completion of construction." A 60-day time frame is present throughout the DEIR for other restoration timelines but it is not realistic since native vegetation is optimally installed in cooler and wetter fall and winter weather. For example, requiring installation within 60 days if the construction finishes in June would result in high plant mortality due the hot summer weather.

Some of the difficult revegetation called for in the DEIR may require installation inside the



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optimum planting window. We suggest the DEIR not promise unlikely or infeasible timelines for the start of revegetation. Revegetation must necessarily consider the time to source and grow plant materials, which can be considerable.

Finally, consideration should be given to revegetation phases that follow mitigation phases: For example, revegetation of infilled surface fractures might occur before the end of the construction phase. If schedule allows, this will give parts of the remediation project an advance start on revegetation and it will give revegetation practitioners on-the-site experience.

Revegetation plans should have a success criterion (such as XX percent native plant coverage achieved for YY species with a persistence of ZZ years). We found no such success or failure criterion provided in the DEIR and we provide further comment in section 9 of this letter.

2) Section 4.1 Aesthetics

Existing Corrugated Metal Pipes

We could find no disposition within the DEIR for the existing drainage pipes on site, except “The proposed project also includes installing new surface water improvements and refurbishing existing pipes to minimize the soil erosion loss and stormwater ponding and infiltration that contributes to landslide movement.” (Section 5.1.1). However, review of the details of the DEIR finds that the pipes being refurbished appear to only be those that go underneath PV Drive S. The DEIR should plan for those existing metal pipes that are still unused to be removed from the area. Existing corrugated metal and plastic pipes that are no longer needed should be removed from the site, for aesthetic and safety reasons.

Scenic Quality

Section 4.1.3 identifies “32.93 acres of Exotic Woodland” among the vegetation. Section 3.4.4 Exotic Woodland, further identifies this primarily as “largely dominated by cyclops acacia, with some areas being co-dominated by cyclops acacia and Peruvian pepper tree (*Schinus mole*).” It goes on to say, “A total of 2.88 acres of this habitat is located within the anticipated Project permanent impact areas and 0.75 acre within the anticipated Project temporary impact areas.” There is an opportunity to remove Exotic Woodland adjacent to project sites to the benefit of scenic quality and environmental health that the DEIR should consider. Removal of competing invasive species will also make native revegetation in disturbed areas easier.

3) Section 3.4.2.1 Surface Drainage Swales

The DEIR is insufficient in details when it comes to the swales and their revegetation. The description of the Surface Drainage Swales in section 3.4.2.1 on page 3-21 does not describe the type of geotextile material that would be used in the swales, the amount of topsoil or silt deposit that would be placed on top of the gravel filled geo cells, or the source of the topsoil or silt deposit. The type of geotextile fabric is only referenced in drawings 10A and 10B of Appendix F: Hydrology and Water Resources Technical Report, and in Appendix F there is no description of the functional properties of the product requiring the reviewer to source information not included in the DEIR or in its appendices to determine the functional properties of the swales and their suitability for revegetation. For example, the specification for the swale lining appears to be “8oz/YD NON WOVEN GOTEXTILE” (Appendix F, Drawing 10 A and 10B) so determination of its permeability or impermeability requires an online search and a guess at the correct result.



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One such search result is “Featuring some of the highest flow rates in its class, it’s the perfect **geotextile filter fabric for drainage** applications. This fabric is extremely permeable, allowing water to go through, making it the ideal fabric to use for things like retaining walls, french drains, and other landscaping jobs.” (<https://sandbaggy.com/products/non-woven-filter-fabric-8-oz-landscape-fabric-toughest-on-the-market?variant=39540039712873>). There is no discussion of root penetration.

In this instance information that should be easily accessible in the DEIR was not only buried in an appendix but was still insufficient to allow for analysis of the project design. *See generally San Joaquin Raptor Rescue* (2007) 149 Cal.App.4th 645, 659 (EIR should not force public and decision makers to “sift through obscure minutiae or appendices” to determine the “fundamental baseline assumptions” used for the environmental analysis); *Vineyard Area Citizens for Responsible Growth v. City of Rancho Cordova* (2007) 40 Cal.4th 412, 442 (county could not rely on information not actually incorporated or described and referenced in the EIR).

The DEIR should have clearly indicated in section 3.4.2.1 that the geotextile layer to be implemented is permeable or impermeable as this differentiation is a critical element of the project. A permeable geotextile layer may offer structural support to the swales, allow most of the precipitation to run off during rain events, and would prevent the swales from retaining subsurface water which would be detrimental to the establishment of native vegetation, but this alone is not sufficient to allow success with revegetation. The DEIR is very vague with the implementation details of revegetation, other than stating that it will take place. There is no drawing or other description of anticipated special modifications to planting sites to improve success and there is no citation of other relevant projects that have had success revegetating CSS through the geocell + geotextile structure.

The SCCNPS has doubts that revegetation of the swales will be successful because of the geotextile layer, gravel infill (and 10” rock armoring in places) and the physical constraints of the cells but acknowledges that with a permeable geotextile material, **appropriate amounts of topsoil**, and perhaps planting wells cut through the geotextile that it may be possible in certain cases, particularly near the tops of the sides but plants will still struggle to establish.

The description and drawings of the swales should indicate the amount of topsoil to be placed over the gravel filled geo cells and a drawing should illustrate the minimum requirements for topsoil and appropriate rooting depth plus call outs for geocell / geotextile modifications to improve revegetation. The soil depth will be a large determining factor in the success of revegetation efforts with a greater depth allowing for a more substantial root mass. The SCCNPS does not think that the bottom and near-bottom sides of the swales will be possible to revegetate because at times of high-water flow, soil will be scoured from the swale.

Current drawings do not show any topsoil above the geocell material, except where it is secured at the top of the swale, nor do they show modifications for planting success. Therefore, current plans are inadequate for revegetation.

Our concerns are based in part on our own practical experience but also because **no prior similar installation is cited in the DEIR with a demonstrated success**. The picture of turf grass covering a swale installation in Appendix 10b and elsewhere is misleading in the extreme since it is dissimilar, non-native, vegetation. A case study (https://www.jenhill.com/wp-content/pdf/Geoweb_channel_cs_crestwoodswale.pdf) shows the exact turf grass illustration figure used in the DEIR and claims success in a Los Angeles area park. However, the park has



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completely different environmental conditions and plant materials and is therefore not a valid point of comparison.

City consultants made verbal note of the Coyote Hill Landfill restoration in Orange County which is said to have used a 4-1/2' soil depth, even though in that case it was over an impermeable layer. ("Because coastal sage scrub includes deep-rooting plants, four and a half feet of soil was added on top of the Coyote Canyon Landfill to accommodate the habitat." <https://thetollroadsblog.com/2014/05/23/californias-first-successful-native-habitat-restoration-on-a-closed-landfill-celebrates-20th-anniversary/>).

Generally, topsoil should be recovered during the construction of the swales and this native topsoil should be used as the top layer of soil when covering the geo cells and other remediation activities. This would preserve the seedbank as well as the mycorrhiza and other soil biota that would improve the success of revegetation of CSS species. The DEIR makes no clear statement about use of topsoil.

Finally, there appear to be some incorrect assumptions that CSS root depths are generally shallow that are taken from a 1968 study and cited elsewhere in the DEIR. We address those more thoroughly in item 6) of this letter and determine that the only applicable finding from that study is that the roots of *Atriplex lentiformis* can reach to at least 5.5'.

4) Section 3.4.2.2 Flow Reduction Area

The SCCNPS is surprised that a 10-acre area is designated as a flow reduction area since this seems like a large area, visually, and obtrusive upon the landscape. The aesthetics of this area should be discussed, but are not. The SCCNPS is additionally concerned that CSS plants will not establish and thrive in the flow reduction area (detention basin area). As designed, with 3-foot-deep (Appendix F, drawing 10A) soil to be seasonally inundated, the result will likely be an anaerobic mess of dead plants if CSS is planted. If the soil is sufficiently deep, over 10-feet deep, some riparian species could thrive.

We have additional concerns that planned maintenance activities in the detention basin area ("...regular maintenance would be needed to remove fine soil particles") will not allow establishment of mature native vegetation. The maintenance activities are noted nowhere else in the DEIR and should be addressed as to their impact on any reestablished species.

5) Section 3.4.2.4 Subsurface Drainage System (hydraugers)

The subsurface drainage systems (hydraugers) are acknowledged to be the primary means of addressing the landslide since "water pressure below the PBL...is believed to be the main contributor to landslide movement".

While hydraugers have the advantage of a small footprint compared to swales and detention basins they require "grading of access points and work platforms" (appendix F, page 3) for both up-gradient and down-gradient hydraugers as well as equipment access to perform the grading and installation. Given the localized high disturbance, some of their locations are poorly chosen to protect sensitive and unique habitat. Specifically, locations A5 and A6, located on Inspiration Point, are in very specialized maritime / coastal plant communities. Refer to Appendix A for a list of plants that were observed at Inspiration Point in March of 2023. As noted elsewhere in this



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letter and demonstrated by the paucity of findings cited in the DEIR, there has been a failure to fully identify populations of rare plants

Additionally, we have a concern that regular large vehicle access to drain tanks will create a large continuously-disturbed area that will not allow vegetation recovery. This is particularly true for Inspiration Point where the preferred growing areas for rare plants are limited in extent. Based on the foregoing, the SCCNPS strongly advises that locations A5 and A6 be changed to avoid coastline habitat disturbance.

Tank Screening

Section 3.4.2.4 states, “Both aboveground tank options (vertical and horizontal) can be painted in color schemes that are visually complimentary to the surrounding setting of the Preserve. Opportunities to physically screen the aboveground tanks...will also be explored.” We caution that screening of the tanks should not involve the use of plant materials not within the native plant community. Choices appear to be limited. Lemonade Berry could effectively screen the tanks, but it would take many years to grow to an appropriate size from a 1-gallon pot.

6) Section 4.3.3.2 Vegetation Communities and Land Cover Types

The McDonald and Hughes 1968 study cited on page 4.3-9 to back up the claim that the “Root depth of species within this habitat are typically shallow and fibrous” occurred in floodplains near Yuma Arizona, which is not indicative of the climate or vegetation communities of Rancho Palos Verdes. The only species in this study that is present in Coastal Sage Scrub (CSS) is *Atriplex lentiformis*. In the study it was found that this species performed better when the water table was dropped to 5.5’ and that plants were less vigorous when the water table was raised to 3.5’, suggesting that this species was able to access water at a depth of 5.5’ and that raising the water level may have created conditions that were averse to the needs of this species. The purpose of this study was not to determine optimal conditions for the growth of the plants, but to determine the water use of various floodplain species to show that the removal of these species would make more water available for agricultural uses. Both the characterization that this study is representative of CSS communities in coastal southern California and the analysis of the results are greatly flawed.

7) Section 4.3.3.4 Special-Status Biological Resources

CNPS CNDDDB search showed 24 species with the potential to occur on the project site while the DEIR identifies 23 species. Additionally, the main body of the DEIR does not disclose which species were determined to be absent. While this information is included in Appendix C, it should be included in the DEIR to avoid the need to sift through the appendices to determine which species was not included for analysis. This study did not identify *Orcuttia californica* for analysis, which is not only a 1B.1 species but is also listed as endangered under the federal and state endangered species acts. While this annual species may have been identifiable in August in a year with substantial precipitation; it would likely have not been identifiable by August of 2022.

Under section 4.3.3.4 Special-Status Biological Resources on page 4.3-12 the DEIR states that “After the literature review and the reconnaissance-level survey, it was determined that seven species are absent from the Biological Survey Area.” The main body of the DEIR does not



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justify why these species were determined to be absent from the project area, again requiring referencing Appendix C for the determination that these species were determined to be absent due to lack of habitat. The biological resource assessment should disclose the habitat type required by these species, and this information should be included in the DEIR. Of these seven species *Lasthenia glabrata* ssp. *coulteri*, *Nama stenocarpa*, are annual species that would not have been present during the August surveys. The timing of the surveys would likely not have been able to identify the presence of *Aphanisma blitoides*, *Crossosoma californicum*, *Dithyrea maritima*, *Dudleya virens* ssp. *insularis*, *Horkelia cuneata* var. *puberula*, *Lasthenia glabrata* ssp. *coulteri*, *Nama stenocarpa*, *Navarretia prostrata*, and *Phacelia stellaris*.

Regarding species determined as absent or with a low potential to occur, the biological resources assessment states that five vegetation communities were observed but does not preclude the possibility that small areas of other habitats are present given that “100 percent coverage transects were not conducted” (section 3.6 pg 34 of appendix C). Additionally, the fact that a taxa does not have a historical occurrence within five miles of the project site does not preclude the possibility that there may be undocumented occurrences, especially in areas that have not been well surveyed. According to CNDDDB, *Crossosoma californicum*, which was determined to have a low potential for occurrence, has a known location just outside the primary staging area, but this species would not have been identifiable during the August survey. Had the survey been timed differently it may have been able to identify the known populations of *Aphanisma blitoides* within the project site, although the survey did not record the known populations of *Atriplex pacifica* within the project site despite being identifiable during the time of the survey.

CNPS review of the bloom periods of the special status species that have the potential to occur in the project area suggests that a minimum of three surveys would be needed to identify the baseline conditions of these resources. Given the relatively large number of special status species to occur on the relatively small project site, floristic surveys as recommended by CDFW guidelines should be performed prior to project approval.

“Conduct botanical field surveys in the field at the times of year when plants will be both evident and identifiable. Usually this is during flowering or fruiting. Space botanical field survey visits throughout the growing season to accurately determine what plants exist in the project area. This usually involves multiple visits to the project area (e.g., in early, mid, and late-season) to capture the floristic diversity at a level necessary to determine if special status plants are present. The timing and number of visits necessary to determine if special status plants are present is determined by geographic location, the natural communities present, and the weather patterns of the year(s) in which botanical field surveys are conducted.”

Please also see item 10) for additional information on rare plants found within the project boundaries but missing from the DEIR.

8) 4.6.8.1 Regulatory Compliance Measures

Any fiber rolls (wattles) used for erosion control or to control pollutants in stormwater runoff described in RCM WQ-1 on page 4.6-18 should not contain poly netting, as this netting can contribute to microplastic pollution and can entrap wildlife.



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9) 7.0 Mitigation and Monitoring and Reporting Program

Mitigation Measure Bio-1 (table 7-A on page 7-3) states that pre-construction surveys in May or June could capture all species with moderate to high likelihood of occurrence, although *Lycium brevipes* var. *hassei* would likely not be identifiable until June. Therefore, surveys for these species should occur in June. The rationale for listing a taxa as absent or having a low potential to occur is not sufficient to determine that they would not be present on the project site, especially given the timing and thoroughness of the field surveys. All special status species identified in the desktop review, including *Orcuttia californica* which was not included in the DEIR, should be included in pre-construction surveys, likely requiring three surveys. Mitigation measures for the potential loss of these species should not be deferred, and options for mitigation of the loss of this species should have been included in the DEIR.

The development of a restoration plan for CSS described in Mitigation Measure BIO-7 should not be deferred. This plan should have been clearly outlined and included in the DEIR to allow for the input of the public and of experts in the field of CSS restoration. This restoration plan should include a list of the species to be used in the restoration efforts. The source of the seed or transplants to be used and whether certain species would be anticipated to be planted from seed or from nursery grown transplants should be outlined in this plan. Best practices call for all seed to be collected on site to maintain the genetics of the vegetation.

The restoration plan should also include required performance criteria and a monitoring schedule to ensure the success of restoration. This plan should disclose whether irrigation would be implemented and outline the irrigation schedule that would be necessary for establishment, and if any infrastructure for irrigation would need to be installed on the project site. The plan should also indicate how many years plantings would be required to be irrigated and a plan for the removal of any infrastructure once plantings are established. Success criteria could include percent cover or a percentage of established transplants. The Bowler 2000 study on Coastal Sage Scrub restoration suggests a minimum of 80% combined cover by the fifth year after replanting. (Bowler, P.A., 2000. Ecological restoration of coastal sage scrub and its potential role in habitat conservation plans. *Environmental Management*, 26, pp. S85-S96.)

10) Rare Plants Findings

Along Inspiration Point, six CNPS ranked rare plants (*Aphanisma blitoides*, *Lycium californicum*, *Atriplex pacifica*, *Phacelia hubbyi*, and *Cistanthe maritima*) and numerous locally uncommon native plants occur (see species list in Appendix A, this letter). The installation and proposed access routes of hydrauger tank A5 and tank A6 on the sides of Inspiration Point would significantly impact these six rare plants and other locally uncommon native plants.

A survey conducted on March 23, 2023, showed that *Aphanisma blitoides* (spring annual), *Lycium californicum* (perennial), *Atriplex pacifica* (spring to summer annual), *Phacelia hubbyi* (spring annual), and *Cistanthe maritima* (spring annual) are present throughout Inspiration Point and occur in the footprint as well as along the proposed access routes.



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In addition, Inspiration Point contains one of only two known populations of *Cistanthe maritima* on the Palos Verdes Peninsula, and it occurs directly in the proposed access route for hydrauger tank A5. Disturbance from this project threatens the survival of these rare plants on Inspiration Point. To reduce impacts to these rare plants and ensure the long-term survival of their populations on Inspiration Point, the relocation of hydrauger tank A5 and tank A6 to sites away from Inspiration Point is advocated.

Thank you for the opportunity to provide comments. If you have any questions or concerns regarding SCCNPS's comments, please feel free to contact SCCNPS at your convenience. Our President can be reached during business hours at 310-336-1796 and the chapter can be emailed at southcoastcnps@gmail.com.



Brent Morgan
President, South Coast Chapter, California Native Plant Society



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Appendix A: Inspiration Point Species List (2023)

(*CNPS ranked rare plants; ^locally uncommon to the Palos Verdes Peninsula)

1. *Rhus integrifolia*
2. *Lupinus succulentus*
3. *Dipterostemon capitatus* subsp. *capitatus*
4. *Phacelia hubbyi**
5. *Cryptantha clevelandii* var. *florosa*
6. *Aphanisma blitoides**
7. *Pholistoma racemosum*^
8. *Encelia californica*
9. *Lycium californicum**
10. *Salvia columbariae*^
11. *Dudleya lanceolata*
12. *Hesperocnide tenella*
13. *Opuntia oricola*
14. *Eschscholzia californica*
15. *Papaver heterophyllum*^
16. *Cylindropuntia prolifera*
17. *Artemisia californica*
18. *Phacelia viscida* var. *viscida*
19. *Atriplex pacifica**
20. *Malacothrix saxatilis* var. *tenuifolia*
21. *Malacothrix coulteri*^
22. *Deinandra fasciculata*
23. *Stipa lepida*
24. *Cistanthe maritima**

Rare Plants Present on Inspiration Point, March, 2023

- Cistanthe maritima* (CNPS rank 4.2)
- Phacelia hubbyi* (CNPS rank 4.2)
- Lycium californicum* (CNPS rank 4.2)
- Aphanisma blitoides* (CNPS rank 1B.2)
- Atriplex pacifica* (1B.2)



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Appendix B: DEIR Quick Reference Questions

Note to the reader: This is not intended as a comprehensive list. Detailed comments, questions, and recommendations are found within each section.

1) Issues of Timing and Success in Revegetation

1A. Please clarify the revegetation schedule to avoid issues of inadequate timing and poor timing (to align revegetation with optimum growing periods).

1B. Please state the success criteria for revegetation.

1C. Please state the expected revegetation schedule to achieve success.

2) Section 4.1 Aesthetics

2A. Please state plans for existing CMP plastic pipe.

2B. Please address the need for invasive and exotic vegetation removal adjacent to sites disturbed by this project.

3) Section 3.4.2.1 Surface Drainage Swales

3A. Please define the properties and modifications of the geotextile and geocell materials, topsoil coverage, and other related practices in such a way that the viability of revegetation can be assessed.

3B. What other planting conditions are required to ensure viability of revegetation in the swales?

3C. What other projects have used the geocell + geotextile layup and successfully revegetated?

3D. What other projects have used the geocell + geotextile layup and successfully revegetated with CSS?

3E. Please plan for the use of topsoil in the remediation project.

4) Section 3.4.2.2 Flow Reduction Area

4A. Please address the need for a 10-acre basin more generally and incorporate it into the 4B. aesthetics portion of the DEIR.

4C. Please address the viability of a CSS ecosystem on 3-1/2 feet of seasonally-inundated soil as called for in the DEIR.

4D. Please address how regular maintenance to remove fine silt particles will not interfere with any reestablished vegetation.

5) Section 3.4.2.4 Subsurface Drainage System (hydraugers)

5A. Please address the thoroughness of rare plant identification as it pertains to placement of A5 and A6.

6) Section 4.3.3.2 Vegetation Communities and Land Cover Types

6A. Since the McDonald and Hughes study appears to be incorrectly applied, please remove it as a point of reference.

7) Section 4.3.3.4 Special-Status Biological Resources

7A. Please address the absence of *Orcuttia californica* from the DEIR.

7B. Please address the optimum timing and frequency for observation of each of the 24 species with potential to occur.

7C. Please address compliance with CDFW guidelines for botanical field surveys.



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8) Section 4.6.8.1 Regulatory Compliance Measures

8A. Please address compliance regarding fiber wattle construction.

9) Section 7.0 Mitigation and Monitoring and Reporting Program

9A. Please plan for survey of all special status species identified in the desktop review, including *Orcuttia californica* which was not included in the DEIR, to be included in pre-construction surveys, likely requiring three surveys.

9B. Please plan and start collection efforts for CSS restoration.

9C. Please establish success criteria for the revegetation with comparison to the Bowler 2000 study.

10) Rare Plants Findings and Appendix A: Inspiration Point Species List (2023)

10A. Given the rare plants and habitat along the coastline, our strong recommendation is to relocate hydroaugers A5 and A6. Please consider alternate locations for hydroaugers A5 and A6.



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