

**APPENDIX B**

**Biological Resources Data**





## Memorandum

**TO:** DTSC  
**CC:** Heidi Rous and Mike Harden  
**FROM:** Steve Nelson and Crysta Dickson  
**RE:** **BIOLOGICAL RESOURCES – SUPPORT ANALYSIS FOR INTERIM REMOVAL MEASURE WORK PLAN**

**DATE:** September 23, 2009

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### Southern Tarplant – Field Study Methodology

The following presents the field study methodology that was conducted by PCR biologists in surveying the project site for southern tarplants.

While surveying in the field and mapping southern tarplant, a 4-meter (13.1 feet) rule was used to separate polygons for mapping purposes. This distance used is a mapping tool based on the detectability of the plants, the general accuracy of the Global Positioning System (GPS), and time constraints. This heuristic criterion is not specifically tied to southern tarplant biology (i.e., reproductive biology or seed dispersal) and thus is not intended to reflect reproductively isolated sub-populations, the total extent of the southern tarplant seed bank, or any other feature of the species life history. To obtain these estimates, all individuals were either directly counted in a polygon/point location or were estimated by using a clumped counting and extrapolation method, which involved counting individual plants in small areas of a polygon/point location, then extrapolating out over other areas of the polygon/point location, until a total was obtained. Most of the polygon/point location estimates were independently made by two biologists, and then compared for consistency. Polygons/point locations were mapped with the GPS unit, by drawing polygons on 7.5-minute USGS quadrangle maps, or by a combination of the two. Professional judgment and experience were used to delineate these polygons/point locations based on the detectability of the species.

### Southern Tarplant – Mitigation Strategy

The following address the mitigation strategy for the southern tarplant that will be impacted by the proposed Interim Removal Measure Work Plan.

The California Coastal Act, Section 30107.5, defines an Environmentally Sensitive Habitat Area (ESHA) as, “any area in which plant or animal life or their habitats are either rare or especially valuable because of their special nature or role in an ecosystem which could be easily disturbed or degraded by human activities and developments.” ESHA definitions are often based on the presence of rare habitats or on areas that supports populations of rare, sensitive, or especially valuable species or habitats. Rare species include those that are listed under the California or Federal Endangered Species Acts, those that are listed as 1B or 2 by the California Native Plant Society (CNPS), and those for which there is other compelling evidence of rarity such as published academic studies. The southern tarplant is a CNPS List 1B.1 species which is considered “seriously endangered in

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California (over 80 percent of occurrences threatened/high degree and immediacy of threat)” under the CNPS. Under the Coastal Act, ESHA is to be avoided and buffered from development impacts and that providing mitigation is not sufficient justification for allowing development with avoidable impacts to ESHA. In accordance with Section 30240, the only allowable “development” within ESHA is “resource dependent” such as restoration or nature studies.

It is PCR’s concern that without a strategy in place for approaching the southern tarplant issue, the project could find itself in a compromising position with the California Coastal Commission (CCC) in the future if the species is impacted prior to consulting with the CCC. To further complicate the issue, while the species meets the definition of an ESHA, the ASCON site has been identified in the City’s LCP as being on the State’s Superfund list of hazardous waste sites and is ordered to be remediated under the Imminent and Substantial Endangerment Determination and Order and Remedial Action Order (“Order”) under Health and Safety Code sections 25358.3(a), 25355.5(a)(1)(B), 58009 and 58010 (Docket No. I & SE-RAO 02/03-018). Based on our conference call on August 24 with DTSC staff, DTSC indicated that the Order “trumps” ESHA and that it is inevitable that the on-site population of this species is going to be impacted. However, regardless of the Order, this is considered a potentially significant impact under CEQA unless mitigated. As such, PCR drafted the following proposed mitigation measures in the MND to reduce potential impacts below significance:

One or more of the following mitigation measures shall be implemented to reduce potentially significant impacts to the southern tarplant to a less than significant level. Every effort shall be made to first avoid, then minimize, and then, finally, restore any southern tarplant that will be potentially impacted by the Project. Each of the mitigation measures listed below shall be conducted as part of an on-site or off-site or combination thereof, mitigation program:

- A qualified biologist shall flag all populations of southern tarplant prior to construction activities, at a minimum, in accordance with PCR’s 2009 mapped locations of the southern tarplant. The locations of southern tarplant shall be flagged with stakes and orange flagging (or similar materials) as to clearly identify all “no equipment zones” by construction personnel. If additional areas of southern tarplant are identified during the flagging, these populations shall be flagged also.
- To every extent feasible, the Project shall avoid the flagged locations of southern tarplant.
- Prior to construction activities, construction crews shall be made aware of the locations of the “no equipment zones” and provided a map which identifies these areas.

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- During construction activities, the “no equipment zones” shall be periodically monitored by a qualified biologist to ensure crews stay outside of these zones.
  - If southern tarplant is identified within the construction footprint and the plants cannot be avoided, the plants shall be counted and retained in place until they die back and the seed can be collected. The plant seed shall be stored in brown paper bags in a cool location until they have fully dried out and the seeds dehisced.
  - Every effort shall be made to identify an appropriate off-site conservation area within the local watershed that will accept the seed for broadcasting within a suitable and comparable-sized receptor site to ensure a 1:1 ratio is met to the number of individuals and habitat impacted.
  - The Applicant shall provide the conservation area with the appropriate man-power/funding or endowment to ensure the southern tarplant is established and can be monitored and preserved in perpetuity.
  - If a local conservation area cannot be located, the Applicant shall locate a suitable on or off-site receptor site for the southern tarplant as determined by a qualified biologist.
  - The seeds shall be broadcast by hand within the receptor site during the next appropriate growing season. The seeds shall not be stored longer than two years as the viability of the seed dramatically drops off after one year. Planting shall occur prior to the rainy season to avoid dispersal of seed or erosion of the seeded area.
  - Temporary irrigation shall be installed during the first year of mitigation if needed, or as otherwise determined appropriate by a qualified biologist.
  - The receptor site shall be monitored annually for success by a qualified biologist. Plant growth shall be monitored on a yearly basis for three years (during the blooming season) to determine when the plants have established a minimum 1:1 ratio to the individuals and habitat impacted.
  - If it is determined at the end of three years that the plants have not established a 1:1 ratio, then plants shall be grown from the local seed stock and transplanted to meet the 1:1 ratio or the implementation of adaptive management activities, as recommended by a qualified biologist.

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- Once survivability of the plants can be confirmed and the 1:1 ratio met, success of the mitigation area shall be considered complete.
  - Annual reports funded by the Project Applicant, shall be prepared by a qualified biologist approved by the DTSC and submitted to DTSC and/or other reviewing agencies, as determined appropriate by DTSC, by October 31 each year.
  - Prior to the completion of the mitigation activities, a conservation easement or similar legal instrument shall be placed on the mitigation site in perpetuity. In addition, the mitigation site shall be managed long-term by a management entity approved and/or recommended by the appropriate reviewing agency (i.e., CDFG).

**From:** Tony Bomkamp [mailto:tbomkamp@wetlandpermitting.com]  
**Sent:** Wednesday, August 05, 2009 12:35 PM  
**To:** Crysta Dickson  
**Subject:** RE: Southern Tarplant

Crysta,

I think Fred's update is fairly accurate with the addition of a population of over 5,000 in Long Beach and a population of over 5,000 in Seal Beach that is part of a restoration project. His take on potential threats seems reasonable, though I would note that any meaningful populations within the Coastal Zone will be protected either through full avoidance (e.g., ESHA determination) or mitigation such as we have done for Boeing in Seal Beach. I believe your biggest challenge will be to find suitable receptor sites that function biologically while also allowing for long-term preservation.

Tony

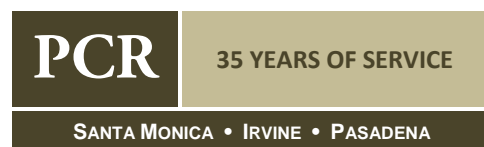
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**From:** Crysta Dickson [mailto:c.dickson@pcrnet.com]  
**Sent:** Wednesday, August 05, 2009 11:18 AM  
**To:** tbomkamp@wetlandpermitting.com  
**Cc:** Steve Nelson  
**Subject:** FW: Southern Tarplant

Hi Tony – Thank you again for your help yesterday - not only confirming the species I.D. for us, but your insight on regulating and mitigating the species has really helped us.

I'd also like to pick your brain on your knowledge of the distribution/threats/impacts of the species regionally. We are trying to make a determination of cumulative impacts. The information we have re: species occurrence so far has been limited to the CNDDDB and what Fred provided to us. Can you expand on this for us? We'd like to make sure we've exhausted all resources to determine the true distribution and population numbers on this species in the region. I know you mentioned a population you recently found in Long Beach. Also your thoughts on the known populations and their potential future threats or any future projects that will impact a known population. I've included Fred's email that I let you read yesterday below.

*Kind Regards,*  
Crysta Dickson  
*Senior Biologist II*



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**From:** Maile Tanaka [mailto:smaile2602@yahoo.com]  
**Sent:** Tuesday, July 28, 2009 7:33 PM  
**To:** Crysta Dickson; Stephanie Gasca; Steve Nelson  
**Subject:** Southern Tarplant

Here's what Fred said.

**From:** Fred Roberts [mailto:antshrike@cox.net]  
**Sent:** Tuesday, July 28, 2009 12:20 PM  
**To:** Maile Tanaka  
**Subject:** Re: Plant Question

Hi Maile,

I am familiar with southern tarplant. Some of the CNDDDB records need to be re-examined. A few are duplicates reported by different parties but overall it presents a reasonable picture on tarplant status. Southern tarplant is an interesting contradiction in conservation since it is a fairly tough plant and can persist in pretty disturbed habitat but some how we have lost a lot of it (most of it probably). Historically it was fairly widespread and probably was found in virtually every mesic coastal grassland and along every alkaline ditch or estuary border in the southern LA Basin.. It was most abundant in the SE Los Angeles Basin between the Palos Verde Peninsula and Newport Beach and Irvine. Many of the Los Angeles Co. populations have been extirpated. The majority of the remaining populations are in Orange County.

According to a Status Review I wrote up (Roberts 2000, Southern Tarplant (*Hemizonia parryi* ssp. *australis*) Priliminary Status and Distribution Summary of U.S. Populations) and a study on Bolsa Chica (Roberts 2007, Southern Tarplant: West Lower Bench, Bolsa Chica Mesa, Orange Co., California, prepared for the Bolsa Chica Land Trust), t about thirty percent of the known populations are extirpated and an additional 40 percent have clearly identifiable threats. This is comparable with the level of extirpation and threat with many State and Federal species.

Orange County has about 26 populations, or over one third of all reported populations. These account for about 85 percent of all individuals ever reported for the plant and represent the highest number of remaining populations anywhere in southern California. There are only three very large populations that have over 5,000 plants and all three are from Orange Co. (UCI, Talbert Park, and Canada Chiquita). There were at least six medium-sized populations with 1,000-5,000 individuals with 4 of the 6 in Orange Co. (Hellman Ranch, Mile Square Park [although this population has potentially been moved?], Newport Bay Regional Park, and Mason Regional Park [this site once had tens of thousands of plants but restoration to willow woodland has apparently created a population crash so it may be much smaller today]).

In 2006, I had the opportunity to do a more comprehensive survey of Bolsa Chica and we found about 2,500 plants, about 5 times the size previously reported, so this site is now considered one of the larger populations. Some additional populations have been found recently in Orange Co. in fairly fragmented habitat and the whole thing could use an updated review. However I think

the trend has not changed. Populations are generally declining due to lose of habitat. The UCI population especially needs review. It once had thousands of plants SE of the main campus but I suspect that based on the present habitat impacts, that plants are still there but could probably be counted in the hundreds, not thousands. I don't know the scale of your population, but generally I consider populations with 400 plants or less as being very small. Populations of 400-1,000 plants are small, 1,000-4,999 are moderate in size, and 5,000 or larger are either large (or huge in the case of Canada Chiquita). However, due to the overall loses rangewide even small populations have conservation value. Definitely populations with over 1,000 plants should be considered significant at a regional scale.

Hopefully that helps.

On Jul 28, 2009, at 9:20 AM, Maile Tanaka wrote:  
Hi Fred,

I have a plant question for you. Are you somewhat familiar with southern tarplant? Do you know how the population trends are doing in Orange County region and within the distribution for the plant? On the CNPS site, it says it's State Rank is S2 (6-20 occurrences OR 1,000-3,000 individuals OR 2,000-10,000 acres) and based on that and CNDDDB occurrences, I'm trying to figure out roughly what the regional populations may be and how this species is doing so I can determine how significant a population on one of our sites is.

Any information you can provide is appreciated!

Thanks,  
Maile

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