

April 16<sup>th</sup>, 2018

Charles Pooler, City Planner  
City of Sand City, 1 Pendergrass Way, Sand City, CA 93955

**Subject: Draft Environmental Impact Report (DEIR) for South of Tioga**

Dear Mr. Pooler,

I wish to point out an error of omission in the DEIR, and I wish to recommend a course of action to correct the circumstances that led to the error and the likely consequences had the error not been recognized.

The biology section of the DEIR fails to recognize that the project area overlaps with the second largest population of a federally endangered plant – the Monterey Gilia or “Sand Gilia”, *Gilia tenuiflora* ssp. *arenaria*.

**Background:**

- The endangered taxon is a subspecies. Thus, *Gilia tenuiflora* ssp. *arenaria* (GITEA) is federally endangered, whereas *Gilia tenuiflora* ssp. *tenuiflora* (GITET) is not endangered, and is not a special-status species of any kind.
- The entire known range of GITEA is contained approximately between Watsonville and Pebble Beach.
- GITEA was listed by the USFWS as “endangered” in 1992. The Federal Register specifically lists “commercial and residential development” in Sand City as one of the factors warranting the listing.
- The Tioga GITEA population was identified in the 2003 USFWS “Recovery Plan for Seven Coastal Plants and the Myrtle’s Silverspot Butterfly”.
- The Tioga GITEA population was mapped in the 2008 USFWS “5-Year Review: Summary and Evaluation” for “Monterey Gilia (*Gilia tenuiflora* ssp. *arenaria*)”. See Attachment A to this comment.
- The Tioga GITEA population is mapped in the California Natural Diversity Database (CNDDB) with a polygon that overlaps the “South of Tioga” Project Area. This database is a standard resource routinely used by biological consultants to discover the location of special status species within project areas. The Tioga GITEA polygon in CNDDB has been in the database for at least a decade; and it was still in the database when I last checked it in about April or May 2017.
- USFWS management of GITEA recognizes probable genetic differences between coastal dune populations and inland populations, and specifically seeks to protect the occurrences of GITEA on the coastal dunes (USFWS 5-yr review 2008).
- The Tioga GITEA population is thus crucial to the management of GITEA as a whole, because it is the largest known population of the GITEA in the specifically recognized coastal dune area.
- On May 5<sup>th</sup> 2017, unaware of the “South of Tioga” development project, I mapped 189 clusters of GITEA (approximately 1000 plants) in the general area south of Tioga Ave. See Attachment B to this comment. My survey was part of an informal regional effort to verify the continued existence of numerous small historically known populations of GITEA. During this effort, I completed 67 miles of survey transects, focused solely on GITEA, documenting 1335 GITEA clusters.
- On May 17<sup>th</sup> 2017, biologists for the “South of Tioga” DEIR surveyed the area and failed to detect any GITEA (DEIR Appendix D). They reported a small number of GITET (not GITEA) at a

different location within the project area (apparently not where I had found GITEA 12 days earlier).

- Between May 20<sup>th</sup> and 25<sup>th</sup> 2017, I documented GITEA still in flower at several other sites nearby.
- Released on March 1<sup>st</sup>, 2018, the DEIR listed GITEA as a “special-status plant with low to very low potential to occur on the site”. Given the two USFWS reports cited above, this was a fundamentally incorrect statement, and was knowable as such by standard procedures used by consultants.
- On April 13<sup>th</sup> 2018, in order to double-check my identification of GITEA, I visited the South of Tioga project area with David Styer, a widely recognized local amateur native plant expert. We readily found many tens of GITEA in a short 200 ft walk. The plants we examined had densely glandular stems and stigmas generally among the anthers (the stigma tips slightly exceeding the anthers, but the stigma bases generally below the anthers); these are two key indicators of GITEA versus GITET. See Attachment C to this comment.
- The DEIR does not identify any mitigation and monitoring plans for GITEA, because the consultant failed to find the GITEA that were there.

Standard mitigation and monitoring measures (MMMs) could be planned. But is my informed and emphatic opinion that **standard mitigation and monitoring measures would be insufficient**, for two reasons:

- The project’s impacts will likely alter human influence through the entire Tioga GITEA population, and not just within the project area.
- Standard MMMs for GITEA have failed at nearby sites subject to very similar development pressures. I know of three substantial populations of GITEA that were subject to MMMs that did not work. In one case, the population appears to be extirpated (I searched several times, including once with professional local expert botanist Bruce Delgado). In another case, the population is declining, and was about a quarter of its original size when I last checked. The causes of these failures were – in my opinion - two factors that are very much at play South of Tioga: (1) ice-plant encroachment, (2) oversight by a small jurisdiction with potentially insufficient resources to assure perpetual success of native plant preservation through standard MMMs, let alone comply with the basic requirements of a Mitigation Monitoring & Reporting Program. A third case was a restoration that apparently never took hold, because no plants were present a few years after the 5-year MMM period expired (I would argue that this could have been prevented generally by a more holistic approach to regional GITEA management, and specifically by better initial site selection).

My primary recommendation is that approval of the project should be conditioned on a **pre-determined** plan for city-wide assurance of the viability of GITEA populations within the city. The plan itself should be developed with USFWS involvement **before project approval**, to minimize risk of an inadequate plan being developed. The plan should be far more substantial than has been the case for many GITEA MMMs in the region:

- The spatial extent of the plan should include at least the entire range of the current Tioga population of GITEA. This extends well beyond the currently defined Project Area. A portion of this range is exemplified in Attachment B, but I am aware of additional historic occurrences nearby (e.g. just north of Tioga).
- The plan should include active protection measures that extend beyond the standard conservation easement and fencing, it should include managed pedestrian access (optimal

GITEA habitat typically involves some level of site disturbance; total public exclusion would probably be inadvisable) and extensive interpretive signage. Any fencing should be complimentary to natural environments and connote celebration of nature. Chain-link or orange plastic would be unacceptable. Ranch-style post-and-rail would be acceptable. Durable post-and-rail imitations would be acceptable.

- The plan should include restoration measures, such as removal of ice-plant. Restoration measures should be trialed in small areas first, in case they do more harm than good.
- The plan should include long-term monitoring of invasive species that may decrease ground cover to the point of displacing GITEA. Invasive plants need to be removed to maintain high quality GITEA habitat. A point of reference is the fenced off mitigation sites such as the Sand Dollar Preserve site west of Target, OSH and Costco where slender iceplant (*Conicosia pugioniformis*) is now aggressively invading with no apparent mechanism to slow its advance in this mostly high-quality habitat area. (S. Worcester, pers. comm.)
- The plan should require annual consultation with USFWS and a list of interested parties including myself and other local environmental scientists.
- The plan should have a perpetual element, e.g. by amending the city's General Plan to incorporate long-term management of GITEA within the city through regular monitoring and pre-planned response to any problems that may be detected. (Note: I could not find the city's General Plan on the city's web site.)
- The plan should require preparation of regular reports that are published in PDF format on a web site. The reports should be comprehensive, with maps and graphs, not merely tables of plant counts. Maps should include sequences of historical and recent aerial imagery, as well as some indication of GITEA distribution. Graphs should indicate historic and recent trends in GITEA abundance, both locally and regionally.

In responding to these comments on the DEIR, I further recommend that a working group be convened to not only formulate an appropriate **pre-approval** plan of action in relation to the South of Tioga project, but also to plan more strategically for preserving and celebrating GITEA in Sand City in general as the city moves forward. The city should solicit any interested parties to be eligible to participate in the working group. I would like to participate. USFWS should also be a participant, of course.

I also recommend that any biological consultant formally engaged in the above work be required to publicly submit evidence of the specific ways in which their **prior experience with GITEA has been successful, in terms of the actual numerical trajectory of the plant populations themselves.**

Sincerely,

Fred Watson, PhD

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\*These comments should not be construed as representing the official opinion of CSUMB.

Cc:

**USFWS** (responsible agency for GITEA). Leilani Takano, Assistant Field Supervisor

**CDFW** (cited in DEIR). Brandon Sanderson, Environmental Scientist

**State Parks** (nearby public reserve owner). Steve Bachman. Senior Park & Recreation Specialist

**MPRPD** (nearby public reserve owner). Rafael Payan PhD, General Manager

Attachment A to Watson comment: reproduced from USFWS 2007

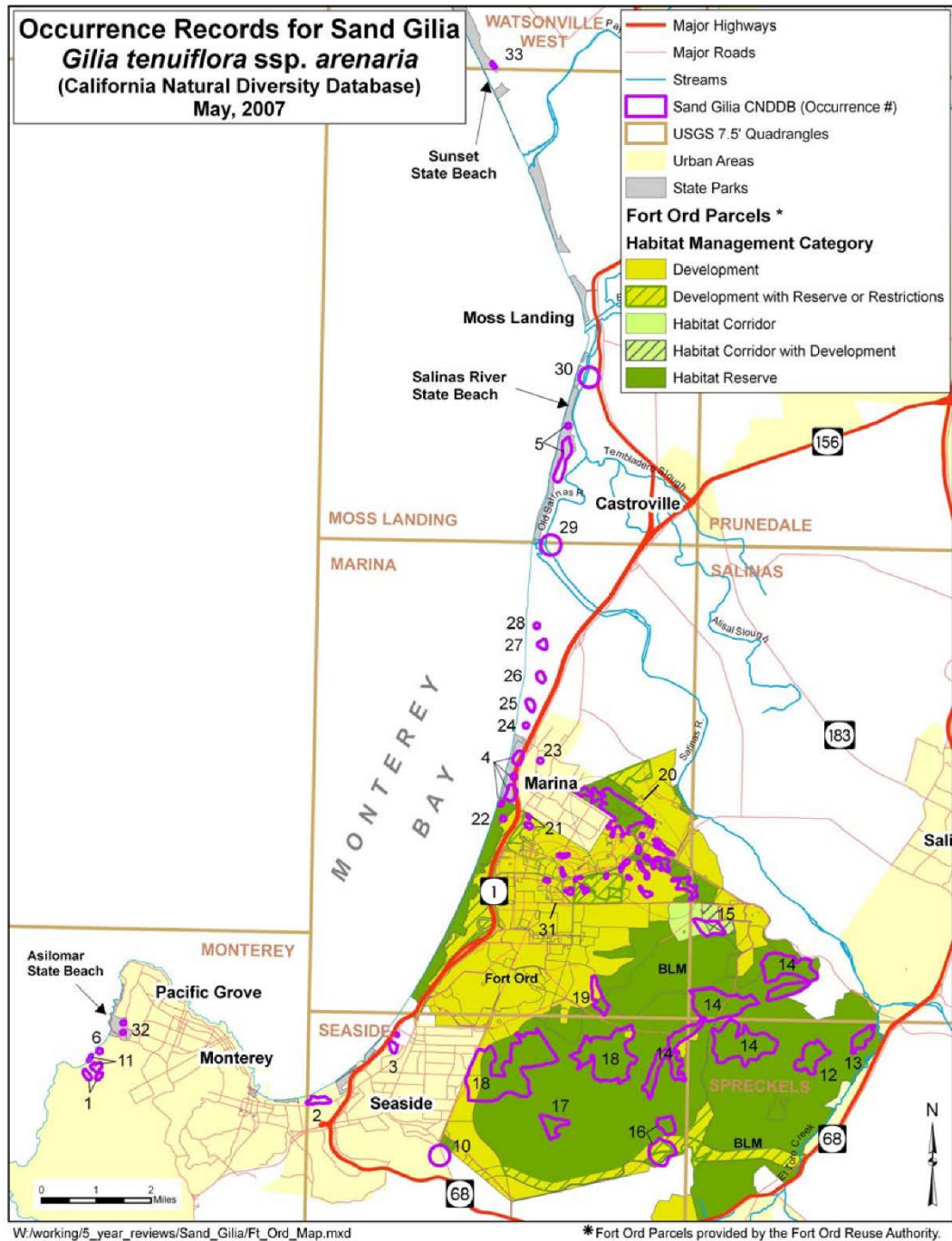
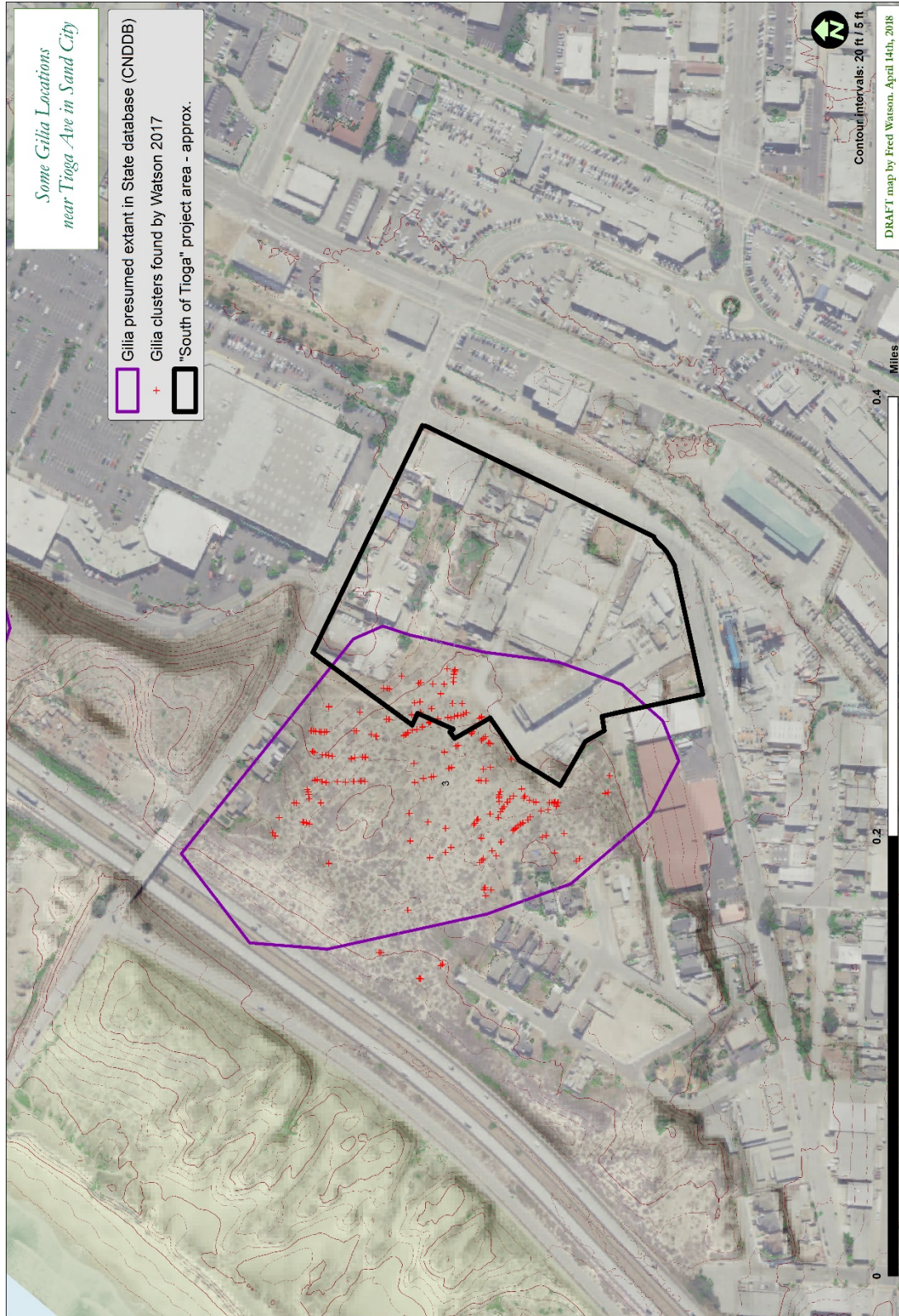


Figure 1. Occurrence records for *Gilia tenuiflora arenaria* and future land use designations on former Fort Ord (derived from CNDDDB 2007 and the Fort Ord Reuse Authority).



## Attachment B to Watson comment: an original map



Attachment C – photos of GITEA South of Tioga, April 13<sup>th</sup>, 2018



(F. Watson)



(D. Styer)



(D. Styer)