



Questions & Answers about *Deinandra conjugens* (Otay Tarplant)

What is Otay tarplant?

Deinandra conjugens (Otay tarplant) is a member of the sunflower family of plants (Asteraceae) that is found only in portions of San Diego County, California and Baja California, Mexico.

Otay tarplant ranges from 2 to 10 inches in height and produces small clusters of yellow flowers. This plant is generally associated with clay soils, grassland, open coastal sage scrub, and maritime succulent scrub habitats.

Otay tarplant is known as a self-incompatible plant. This means a particular Otay tarplant cannot be fertilized by its own pollen. Viable seeds are formed only when cross-pollination occurs from another Otay tarplant with a different genetic makeup.



Credit: Gjon Hazard - U.S. Fish and Wildlife Service

For long-term conservation of Otay tarplant adequate gene flow between populations must be maintained to ensure the greatest diversity of genetic material.

A variety of pollen and seed dispersers play important roles in sustaining Otay tarplant.

Status of Otay Tarplant

The U.S. Fish and Wildlife Service (Service) listed Otay tarplant as threatened, under the Endangered Species Act (Act), in 1998. At the time the plant was listed it was estimated that about 70 percent of the habitat that supported the plant was lost to development or conversion of land to agriculture. Historically, there were about 25 documented populations of Otay tarplant, almost all of them in San Diego County; only one population was documented in Baja California, Mexico.

The size of any particular population of Otay tarplant can vary widely over time depending on what portion of seeds germinate in any given year. Populations of Otay tarplant have ranged from as small as a single plant to more than one million plants.

Threats to Otay tarplant

When the Service listed Otay tarplant under the Act threats to the plant's existence included loss, alteration, and degradation of habitat from urban and agricultural development, and invasion of non-native plants.

A number of the historic populations have been reduced, eliminated, or otherwise impacted by development. It is now estimated that 18 populations of Otay tarplant exist.

Currently, almost all of the known populations of Otay tarplant in San Diego County are found within the boundaries of the County's Multiple Species Conservation Program (MSCP); specifically, the subarea plans for the City of Chula Vista, City of San Diego, and County of San Diego. We determined that implementation of the MSCP would not jeopardize the continued existence of Otay tarplant.

In 2002, critical habitat was designated for Otay tarplant on approximately 6,330 acres of land in San Diego County. Areas included in the designation contain habitat that supports standing plants and seed banks.

Although a number of activities that are required as part of the MSCP and its Subarea Plans will aid in the conservation of Otay tarplant, we determined that additional actions may be needed to recover the plant to the point where protection under the Act is no longer needed. These additional activities will be undertaken by the Service or other willing entities.

Participating MSCP jurisdictions must continue to implement the conservation measures as specified under their respective Subarea Plans to protect Otay tarplant; however, they are not required to implement additional measures identified in the recovery plan.

Questions and Answers about the Recovery Plan:

What is a recovery plan?

The Act requires the preparation of recovery plans for listed species unless such a plan would not contribute to their conservation. Recovery plans detail the actions necessary to achieve self-sustaining, wild populations

of listed species so they will no longer require protection under the Act. A recovery plan is an advisory document. Cooperation from private landowners is voluntary.

Who prepares a recovery plan?

Depending on the species, plans are prepared by Service biologists, a panel of recognized experts under the direction of a Service employee or an appropriate consultant contracted by the Service. Regional Directors are responsible for approving recovery plans for listed species occurring in their region.

The Recovery Plan for Otay tarplant was prepared by a Service biologist with assistance from other Service staff and non-Service personnel who are knowledgeable about the plant's biology and ecology.

What is the objective of the Recovery Plan for Otay tarplant?

The objective of the recovery plan is to ensure the long-term viability of Otay tarplant so that it can be removed from the Federal List of Threatened and Endangered Species.

It is the Service's goal to use the best available scientific and commercial information in developing appropriate recovery actions. In developing the final recovery plan the Service solicited public comments and information, and submitted the draft plan to three experts as part of the peer review process.

What is needed to recover Otay tarplant?

Actions needed to recover Otay tarplant include stabilizing and protecting known populations; managing and monitoring conserved areas; developing appropriate management plans for conserved areas; conducting additional studies on the biology and ecology of Otay tarplant; and developing a seed banking strategy to facilitate nursery

propagation of plants for use in enhancing or introducing Otay tarplant within its historic range.

When will Otay tarplant be considered for delisting?

Otay tarplant could be considered for delisting when the following criteria have been met:

- Known populations in areas targeted for conservation through the framework of the MSCP and its subarea plans are permanently managed
- Monitoring indicates that reserve areas are providing adequate suitable habitat to sustain populations of Otay tarplant and the pollinators that support it.
- Sufficient numbers of seeds representing the range of genetic variability of Otay tarplant are collected and securely stored.
- Actions needed to conserve Otay tarplant that are outlined in the MSCP and its subarea plans are fully implemented
- The genetic variation of Otay tarplant is maintained across its range.

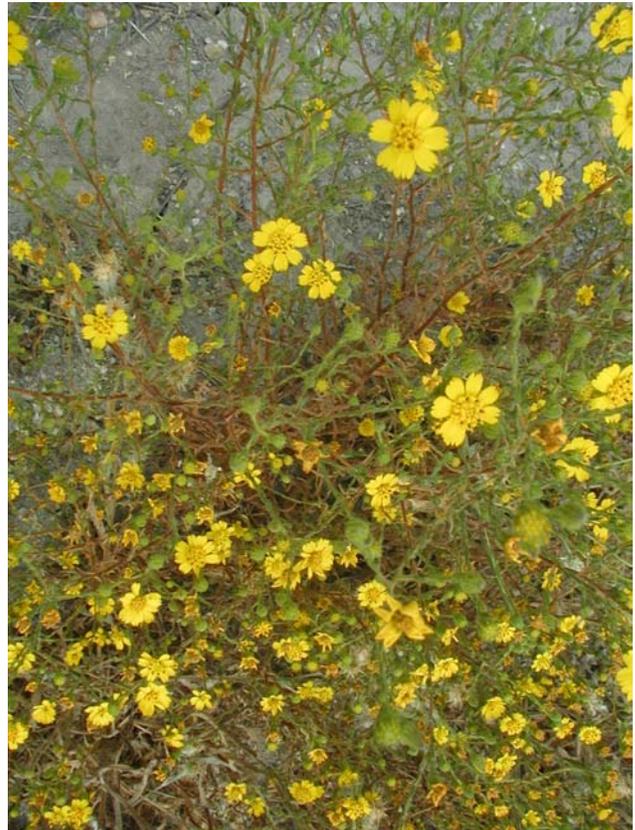
It is anticipated that monitoring of Otay tarplant populations will be necessary for at least 21 years, to determine if recovery criteria have been met. The monitoring period is anticipated to incorporate three drought cycles.

Who is responsible for implementing a recovery plan?

The Service has the responsibility for implementing recovery plans, and only Federal agencies are required to take part in the effort.

Do recovery programs work?

Yes, but recovery is a challenge that takes time. The participation of a variety of groups, including Federal, State, and local agencies, Tribes, and private landowners is essential to the successful recovery of threatened and endangered species.



Credit: Gjon Hazard – U.S. Fish and Wildlife Service

How can I get a copy of the plan?

The recovery plan is available online at

<http://endangered.fws.gov/recovery/index.html#plans>

You may also request a hard copy of the plan by contacting the Carlsbad Fish and Wildlife Office at telephone number 760/431-9440.