

NACIMIENTO WATER PIPELINE OAK TREE MITIGATION

2025 STATUS REPORT



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PROJECT DESCRIPTION

The Nacimiento Water Project (NWP and Project) was implemented to provide a reliable supplemental water source for a variety of uses within San Luis Obispo County. Project implementation began in January 2008 and was substantially complete by January 2010. The NWP was constructed under the San Luis Obispo County Flood Control and Water Conservation District (District) to deliver supplemental raw water supply to various agencies within San Luis Obispo County. The pipeline and associated facilities are located in northern San Luis Obispo County and stretch from Lake Nacimiento to the City of San Luis Obispo. The project included construction of facilities and pipelines to deliver additional water to several San Luis Obispo County cities and unincorporated communities in order to supplement existing groundwater and surface water supplies.

MITIGATION REQUIREMENTS FOR IMPACTS TO OAK TREES

During project development, it was determined that project activities would result in the unavoidable trimming and removal of individual oak trees and oak woodland. Robust mitigation requirements were developed to compensate for these impacts under the California Environmental Quality Act (CEQA), as well as state law and local ordinances including the State Assembly Bill 242 (1999), San Luis Obispo County Oak Woodlands Management Plan (2003), and the City of Paso Robles Oak Tree Preservation Ordinance.

Oak tree mitigation requirements are outlined in the Environmental Impact Report (EIR) and Oak Tree Mitigation and Monitoring Plan (OTMMP). Pertinent information from these documents is listed below:

ENVIRONMENTAL IMPACT REPORT

Section 5.7 of the NWP EIR outlines impacts to biological resources, including measures to mitigate impacts to oak trees:

- BR-10 (i): *Individual oak trees that cannot be avoided and must be removed within habitat types other than oak woodlands shall be replaced at a 4:1 replacement ratio in accordance with the County's mitigation policy for loss of individual oak trees.*
- BR-10 (j): *For every area of oak woodland habitat that is removed, oak woodland habitat shall be restored onsite or replaced offsite at an agreed upon offsite location with an equal area (3:1 replacement ratio).*
- BR-10 (k): *Offsite replacement for oak woodlands shall be at locations that currently support disturbed or nonnative habitats. Each of the four oak woodland habitat types that would be disturbed shall be replaced or restored with a similar density of oak trees by species as found in the impacted habitats. The Flood Control and Water Conservation District (FCWCD) shall prepare a detailed oak woodland restoration plan for this project. The VRRP shall contain detailed information on oak woodland replacement and address any issues of concern. Areas suitable for creation of oak conservation areas for replacement offsite shall be evaluated. Feasibility of purchasing land for oak conservation areas shall be evaluated.*
- BR-10 (l): *Specifically on Camp Roberts and Camp San Luis Obispo, compliance with the Camp Roberts Integrated Natural Resources Management Plan (INRMP) is required as follows:*
 - *Hand digging, mechanical digging, and blade work are prohibited under the drip lines of standing live or dead oak trees; if digging under the drip lines of oaks is unavoidable, any damage that ensues will be subject to mitigation (replacement);*
 - *3:1 replacement for damaged or removed oaks;*
 - *Collection of acorns from the area of impacted oaks, planting at densities approved by CA ARNG, planting during January-February, watering if necessary;*
 - *Minimum of five (5) years of monitoring, 3:1 survivorship ratio, preparation of annual monitoring reports, and compliance with all other INRMP oak management stipulations.*

OAK TREE MITIGATION AND MONITORING PLAN (OTMMP)

Per mitigation measure BR-10 (k) of the EIR, an oak tree mitigation and monitoring plan was developed as a condition of the project. This document provides guidelines for the implementation of mitigation as well as monitoring requirements

for direct and indirect impacts to oak trees and oak woodlands. Furthermore, it provides the framework for performance criteria and completion of mitigation requirements. The following is direct language from the OTMMP.

Section 3.4: Oak Tree Mitigation Monitoring, outlines required information for the annual oak tree mitigation and monitoring reports:

- *Summary description of the monitoring methods, including data collection and analysis; An overview of the mitigation planting effort, including a general discussion of site conditions, changes since previous report, and quantitative statistics (average growth by species and survival percentages); Analysis of success in relation to performance standards; Color photographs of the planting areas taken from the established photo locations on the ground and standardized with respect to direction, lens type, etc.; A map of the area with relevant features; Copies of all data sheets employed in the data gathering; and discussion of any corrective actions needed or undertaken (including weed control, protective cage maintenance, and replanting).*

Section 4.3: Performance Criteria and Completion of Mitigation Requirements, outlines the criteria required for completion of the mitigation effort.

- *Oak seedlings planted to offset the impacts by the NWP at offsite locations or on Camp Roberts' property will meet the following performance criteria. These criteria are consistent with CCWA's mitigation performance criteria. The duration of the monitoring will be seven years or when the oak plantings have: A basal diameter of 2 inches or a height of 6 feet; Survived one year without protective cages; and survived two years without supplemental watering or irrigation.*
- *Once the performance criteria have been met for an individual oak tree, annual monitoring for that individual will cease. The oak tree will be photographed and its tree tag and weed mat removed. Its successful completion will be documented in the annual Oak Tree Mitigation and Monitoring report.*

OAK TREE REMOVALS

The total number of oak tree removals requiring mitigation was determined by reviewing project plans, consultant monitoring logs, project completion reports and internal records; this total is listed below in Table 1.

TABLE 1: OAK TREE REMOVALS AND REQUIRED MITIGATION RESULTING FROM NWP

	Oak Impacts Requiring Mitigation	Mitigation Required
Coast Live Oak	35	117
Blue Oak	167	510
Valley Oak	13	40
TOTAL	215	667

MITIGATION EFFORTS TO DATE

2013-2016 Camp Roberts Plantings

In coordination with Camp Roberts staff, County staff initiated oak tree mitigation efforts at Camp Roberts in 2013. Appropriate planting areas within the military base were selected along the alignment of the newly constructed pipeline. From 2013-2016, County staff installed and maintained over 700 acorns and/or saplings. Above-ground and below-ground

caging was installed, and plantings were irrigated, mulched and otherwise maintained. Despite continuous monitoring and maintenance, the effort was largely unsuccessful due to prolonged drought during this time and access limitations due to the planting areas being within an active military base. On multiple occasions, staff were unable to monitor or irrigate plantings over several summer months due to military operations, causing the failure of those plantings. In 2016, a military exercise resulted in a brush fire on the base that wiped out the largest mitigation planting area. Subsequently, the County determined that Camp Roberts was not a feasible location for these mitigation efforts. The inconsistent ability to access the sites during frequent military operations prevented maintenance and irrigation efforts necessary to support the young oaks and sapling mortality was consequently high. When County staff returned to the sites to retrieve the caging materials in October 2020, thirty tree plantings were still surviving in the mitigation areas within Camp Roberts.

2022-present Duveneck

Mitigation efforts were reinitiated in 2022 at the County-owned 'Duveneck' parcel (APN 033-231-035) on Vaquero Road in Templeton. This parcel, identified in the NWP EIR as a oak tree mitigation receptor site, is approximately 80 acres comprised of rangeland, dry farmed crops, and fragmented blue oak woodland that is managed by County Parks and Recreation. The initial planting (Phase 1) of blue oaks commenced in February 2022 and was followed by a subsequent planting (Phase 2) of in January 2024. Additional replacement oaks were planted opportunistically within the Phase 1 area since 2022. To date, 460 blue oak trees have been planted at this location.

Mitigation efforts are ongoing at the Duveneck property. Annual maintenance has focused on mulching, weed maintenance, caging to protect from herbivory, and supplemental irrigation in summer months. Irrigation efforts have focused on irregular, deep watering to promote the development of a taproot and frequency has tapered annually to promote tree establishment. Public Works Environmental staff conducted tree count surveys in September of 2025 to assess the status of the oak tree mitigation plantings at the Duveneck parcel. Mitigation efforts are separated into phase 1 (initial planting in 2022) and phase 2 (second planting in 2024). Below is a comprehensive status update for both sites.

Phase 1: Phase 1 of oak tree mitigation at the County owned Duveneck parcel commenced with the planting of 325 blue oak trees in February of 2022. Oak trees at this location occur on a gentle north facing slope of rangeland adjacent to an existing stand of mature blue oak trees on a neighboring property. This adjacent stand was used to determine appropriate oak tree planting density. Trees were planted in a natural mosaic pattern throughout the gentle slope and a temporary irrigation system was installed to supply supplemental water. Blue oaks were approximately 1 year old at the time of planting and grown in deep tree pots to promote the development of a taproot. All trees were provided above and below ground caging, regular weeding, and mulched with locally sourced wood chips. Replanting occurred in the winter of 2023 to replace any dead trees throughout the site. These efforts were accompanied by the additional planting of 27 trees to increase density throughout phase 1.

Currently, Phase 1 shows many signs of success, with the County's recent survey finding 275 trees alive out 352, or 78.1% (table 2). The evidence of success is further indicated by the 128 trees that have attained >12" in vertical height. This quantitative metric was chosen to describe trees that exhibit signs of establishment and self-sufficiency. Blue oaks over 12" had their irrigation emitters plugged in the spring of 2025 and flourished throughout the summer without supplemental water, further supporting evidence of their establishment. The remaining trees <12" were irrigated once a month in the summer of 2025. The County plans to remove all irrigation from phase 1 in fall/winter 2026 as overirrigating can be detrimental to the long-term success of the site. Ongoing maintenance for the spring and summer of 2026 will focus on fixing and enlarging above ground caging, hand weeding and line trimming around trees, and adding supplemental mulch where needed.

Phase 2: Phase 2 of oak tree mitigation at the County owned Duveneck parcel commenced in January 2024 with the planting of 108 blue oak trees. Planting strategies followed similar guidelines to phase 1 except for planting density, which was lowered due to the south facing aspect the site occupies. Replanting efforts occurred in the winter of 2025 to replace any dead trees at the site.

Blue oak trees at phase 2 were irrigated once every three weeks in the summer of 2025 and beginning to show signs of establishment, as evidenced by above ground shoot growth. September tree count surveys found 75 trees alive out of 108, or 69.4% (table 2). Ongoing management of the site will focus on replanting the 33 dead trees in the winter of 2026, weed abatement, and supplemental mulching as needed. Oak trees at phase 2 will receive water approximately once a month in the summer of 2026.



FIGURE 1: PRE-PLANTING CONDITION OF DUVECK PROPERTY

TABLE 2: DUVECK OAK TREE COUNTS (SEPTEMBER 2025)

	Alive	Dead	>12" Tall	Survival Percentage
Phase 1	275	77	128	78.10%
Phase 2	75	33	N/A	69.40%
Total Tree Counts	350	110	N/A	76.10%

FUTURE MITIGATION LOCATIONS

The County continues to explore mitigation opportunities to reach the required goals of the project. As outlined in the OTMMP, the following four locations have been identified as potential sites for required oak tree mitigation.

Santa Margarita Regional Park

- *“Santa Margarita Lake Regional Park has several thousand acres designated as open space which may be suitable for a percentage of the oak plantings. The planting sites at this location are limited by some areas’ inaccessibility during the establishment period.”*

Heilmann Regional Park

- *“Heilmann Regional Park in Atascadero may be most suitable for blue oak planting as blue oak woodlands exist within the park. Approximately 10 to 15 acres may be suitable for mitigation planting.”*

Duveneck Parcel

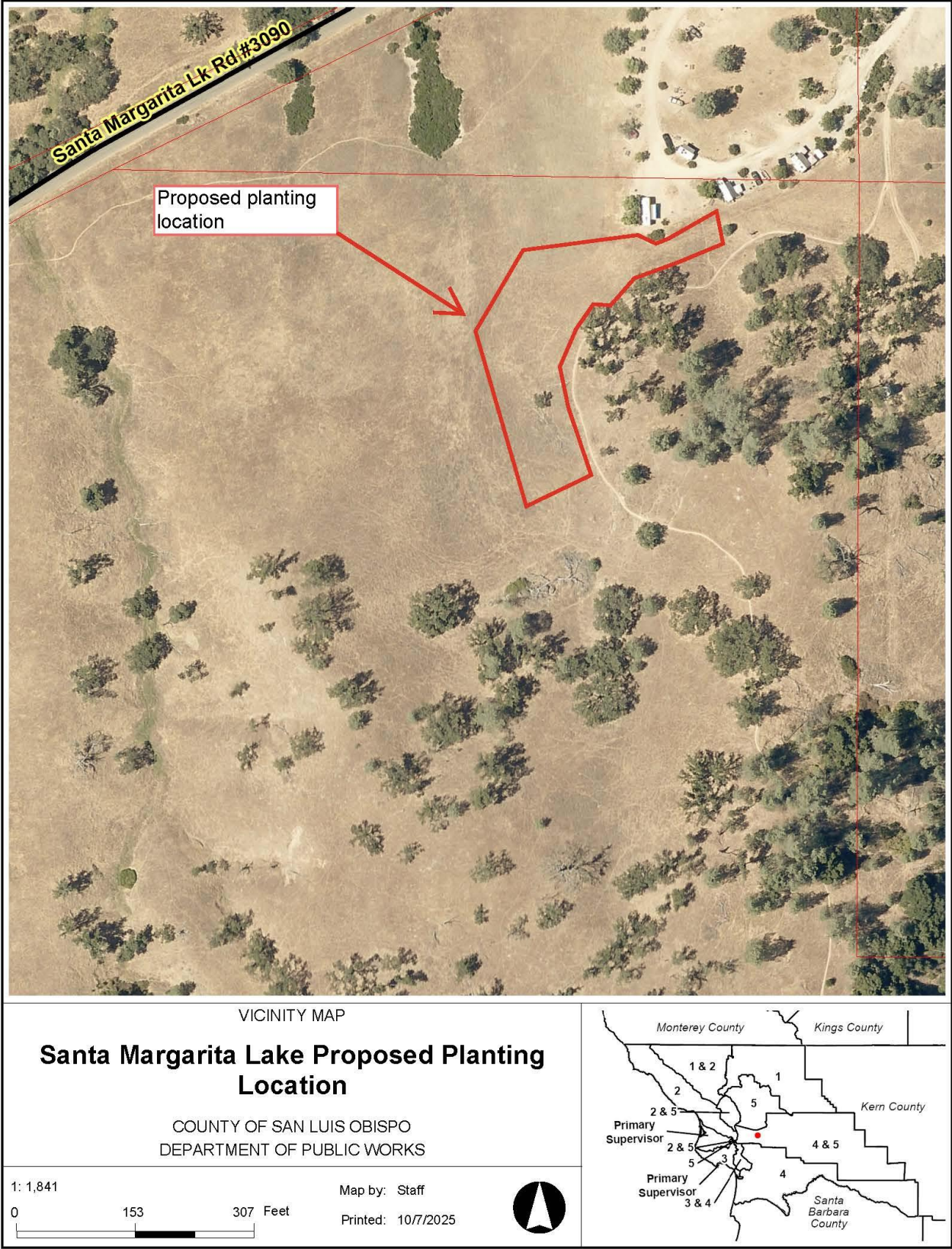
- *“Duveneck property in Templeton was recently donated to the County of San Luis Obispo and has valley oaks on the lower river terrace, and possibly blue oaks on the upland slopes of the property. Approximately 10-14 acres may be suitable for mitigation planting.”*

City of San Luis Obispo Property

- *“A 50 acre parcel (PPN 073-291-003) owned by the City of San Luis Obispo near the Cuesta Tunnel’s south portal currently supports oaks and woodland habitat. Approximately 20 to 25 acres may be suitable for mitigation planting.”*

Based on the options described by the OTMMP, the County has identified Santa Margarita Regional Park as the best location for reaching the required mitigation goal. This County-owned parcel (APN 070-391-009) at Santa Margarita Regional Park is managed by County Parks and is immediately adjacent to a campground and hiking trail for public use. The property is comprised mainly of rangeland and mixed oak woodland, with blue oak, coast live oak, and valley oak occurring on sloped terrain throughout the parcel. Mitigation efforts at this site would focus on expanding woodland habitat adjacent to the existing oak woodlands near the Grey Pine Loop Trail.

FIGURE 2: SANTA MARGARITA LAKE PLANTING AREA



SUCCESS CRITERIA AND CONCLUSION

Completion of the NWP oak tree mitigation requires the replacement of 667 oak trees. Accounting for the 30 trees that survived at the Camp Robert's planting from 2013, there remains a deficit of 627 replacement trees to reach the goal. To date, the Duveneck parcel in Templeton has been largely successful, with 350 blue oak trees currently alive on site. Phase 1 oak trees at Duveneck will be maintained and monitored until spring of 2029 and phase 2 oak trees will be maintained and monitored until spring of 2031.

As stated in the Oak Tree Mitigation and Monitoring Plan:

Oak seedlings planted to offset the impacts by the NWP at offsite locations or on Camp Roberts' property will meet the same performance criteria. These criteria are consistent with CCWA's mitigation performance criteria. The duration of the monitoring will be seven years or until such a time that the oak plantings have:

- *A basal diameter of 2 inches;*
- *A height of 6 feet;*
- *Survived two years without protective cages; and*
- *Survived two years without supplemental watering or irrigation.*

The Environmental Division of Public Works continues to seek additional offsite mitigation on County owned property at Santa Margarita Lake. Project completion will be contingent on replacing the required 667 required trees and maintaining 75 percent survival throughout the monitoring period.

DUVENECK SITE PHOTOGRAPHS



FIGURE 2: PHASE 1 CONDITIONS (SEPTEMBER 2025)



FIGURE 3: BLUE OAK ESTABLISHMENT IN PHASE 1 (SEPTEMBER 2025)



FIGURE 4: BLUE OAK ESTABLISHMENT IN PHASE 1 (SEPTEMBER 2025)



FIGURE 5: LOOKING TOWARDS WEST SIDE OF PHASE 2 (SEPTEMBER 2025)



FIGURE 6: LOOKING TOWARDS EAST SIDE OF PHASE 2 (SEPTEMBER 2025)

SANTA MARGARITA SITE PHOTOGRAPHS



FIGURE 7: LOOKING NORTH FROM GREY PINE TRAIL AT POTENTIAL PLANTING AREA (SEPTEMBER 2025)



FIGURE 8: LOOKING SOUTH AT POTENTIAL PLANTING AREA (SEPTEMBER 2025)