

Petaluma 2016 Urban Recycled Water Expansion Project

Petition for Change

Attachment 1: San Francisco Bay Regional Water Quality Control Board
Comments

Pat Collins

From: Allen, Blair@Waterboards <Blair.Allen@waterboards.ca.gov>
Sent: Wednesday, June 22, 2016 5:04 PM
To: Pat Collins
Cc: Frazier, Scott@Waterboards; Balgobin, David@Waterboards
Subject: RE: City of Petaluma Proposed RW expansion: Petition for Change

Pat –

Thank you for the contact information.

I checked with Scott Frazier. Very knowledgeable and helpful.

Scott will be the correct person to send the completed forms to.

With respect to consultation with the Regional Water Board, we can consider that done.

You consulted with me, and I in turn consulted with staff in our NPDES Permits Division, who manage the NPDES Permit that regulates City of Petaluma's discharges of treated municipal wastewater to the surface waters of the Petaluma River.

To summarize our consultation conclusion, review by SFBay Regional Water Board staff finds no anticipated adverse impacts to instream beneficial uses resultant from the project, and staff have no objections to the proposed recycled water project proceeding forward.

With respect to completing the Petition for Change and related 'Environmental Information for Petitions' form, you can include my name and contact information, as the Regional Water Board staff consulted with. My complete name and title and contact information is in my signature block below.

In reviewing the 'Environmental Information for Petitions' form you forwarded, I did not see a question or blank space specifically asking for Regional Water Board contact information or conclusions reached. Perhaps at the 'additional information' box, on page 2 of 4, at the end of the "Coordination with Regional Water Quality Control Board" section. If desired, you could include this email as well.

Oh, one other minor note. Our Regional Water Board case files are electronic. The key index is by the case 'Facility', also called Place. The Facility Name for this case is: "Petaluma City Recycled Water Program", and the Facility Number/Place Number is 248081. I suspect you may have no particular need for these file details, but if perchance you needed to review our files for this case, that would be the key index number to start with. I will file this email to that file.

I trust the above information is suitable to answer your inquiry and help move this recycled water project along toward completion.

Please feel welcome to contact me again.

(PS. I decided to cc State Water Board contacts Scott Frazier and David Balgobin, since they have both helped out so far, and maybe useful for them to be in the loop here with us.)

Sincerely,

Blair Allen, P.E.
Water Resources Control Engineer
Watershed Management Division
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400, Oakland, California, 94612
ballen@waterboards.ca.gov -- 510.622.2305

From: Pat Collins [mailto:Pat.Collins@ghd.com]
Sent: Wednesday, June 15, 2016 11:08 AM
To: Allen, Blair@Waterboards
Subject: RE: City of Petaluma Proposed RW expansion: Petition for Change

Hi Blair –

When we spoke the other day, you asked for a contact person at the State Board who handles the Petition for Change applications. The City of Petaluma provided:

Scott Frazier
Senior Environmental Scientist
State Water Resources Control Board
Division of Water Rights
Permitting and Licensing Section – North Bay Unit
1001 I Street | P.O. Box 2000 | Sacramento, CA 95812
Phone: 916.341.5289 | Fax: 916.341.5400 | Scott.Frazier@waterboards.ca.gov

As I mentioned, the Petition for Change application includes a form: Environmental Information for Petitions, which includes a requirement for Regional Board consultation on page 2. I've attached an interim version of the Environmental Form that I'm currently working on. This form is just for information and is subject to revision, as the City has not seen it yet.

So, I'm wanting to initiate consultation with the Regional Board, make sure you have everything needed for your review, and hoping to receive an email or some kind of documentation of the outcome of the consultation.

Thanks very much,
Pat
707-236-1540

From: Allen, Blair@Waterboards [mailto:Blair.Allen@waterboards.ca.gov]
Sent: Tuesday, June 14, 2016 2:50 PM
To: Pat Collins
Subject: RE: City of Petaluma Proposed RW expansion: Petition for Change

Pat –
I asked around.
State Board staff David Balgobin sent me the reply below.
I've worked with David before. He's good. You're lucky.
I replied to David that I would forward his contact info to you.
So, herewith. Give him a call or email.

Hi Blair;
I'm the PM for the City of Petaluma – please just direct any financing related questions to me.
thanks



David A. Balgobin, PE
Water Resource Control Engineer
Division of Financial Assistance, Water Recycling Funding Program
State Water Resources Control Board
1001 "I" Street, 16th Floor, Sacramento, CA 95814
(916) 322-6042 | david.balgobin@waterboards.ca.gov

Blair Allen, P.E.
Water Resources Control Engineer
Watershed Management Division
San Francisco Bay Regional Water Quality Control Board
1515 Clay Street, Suite 1400, Oakland, California, 94612
ballen@waterboards.ca.gov :- 510.622.2305

From: Pat Collins [<mailto:Pat.Collins@ghd.com>]
Sent: Friday, June 03, 2016 4:19 PM
To: Allen, Blair@Waterboards; Gunter, Melissa@Waterboards
Subject: City of Petaluma Proposed RW expansion: Petition for Change

Hi Blair and Melissa –

Xavier recommended I be in touch with either of you about my question, so I'm including you both in case.

The City of Petaluma is applying to the State Board for expansion of their recycled water system, and as part of this application, they need to file a Petition for Change. The Petition for Change application has an Environmental Information Form which requires consultation with the Regional Board "regarding the potential effects of the proposed change on water quality, fish, wildlife, and other instream beneficial uses" (Title 23 section 794(b)).

I'd like to talk to someone at the Regional Water Board who would be doing this consultation, to make sure it is required in this particular situation, and if required, the type of information which the Board needs to see.

Would you let me know who I could speak to regarding this? Or just give me a call if it is one of you: 707-236-1540.

Thanks very much,
Pat

Pat Collins
Senior Project Manager

GHD
Front Desk: 707-523-1010 | Direct: 707-236-1540 | C: 707-483-2185 | VOIP: 841540 | E: pat.collins@ghd.com
2235 Mercury Way, Suite 150, Santa Rosa, CA 95407 USA | www.ghd.com

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Petaluma 2016 Urban Recycled Water Expansion Project

Petition for Change

Attachment 2: California Department of Fish and Wildlife Comments

Pat Collins

From: Adair, Randi@Wildlife <Randi.Adair@wildlife.ca.gov>
Sent: Thursday, June 30, 2016 1:41 PM
To: Pat Collins
Cc: Weightman, Craig@Wildlife; Gray, Corinne@Wildlife
Subject: RE: City of Petaluma Proposed Recycled Water Expansion: Petition for Change

Hi Pat,

I apologize for the delay. I took a look at the Petition and have no comments at this time. It appears the City will be notifying the Department for a 1602 agreement. We will work with the City at that time to address any impacts related to infrastructure.

Thanks, and have a great day.

*Randi Adair, Senior Environmental Scientist Supervisor
South Coast and Timberland Conservation Unit, Bay Delta Region
California Department of Fish and Wildlife
7329 Silverado Trail, Napa, CA 94558
Randi.Adair@wildlife.ca.gov
(707) 944-5596*

From: Pat Collins [mailto:Pat.Collins@ghd.com]
Sent: Thursday, June 30, 2016 11:31 AM
To: Adair, Randi@Wildlife
Cc: Weightman, Craig@Wildlife; Gray, Corinne@Wildlife
Subject: FW: City of Petaluma Proposed Recycled Water Expansion: Petition for Change

Hi Randi –

I just got an email back saying that Craig is on vacation until July 11th, and providing your name.

Could you check on this request for CDFW review of a Petition for Change?

Thanks,
Pat

From: Pat Collins
Sent: Thursday, June 30, 2016 10:47 AM
To: 'Craig.Weightman@wildlife.ca.gov'
Cc: 'corinne.gray@wildlife.ca.gov'
Subject: FW: City of Petaluma Proposed Recycled Water Expansion: Petition for Change

Hi Craig –

I spoke to you about this request on June 6th, and you suggested that I call Corinne. I left her a couple of messages, but haven't heard back. Also, sent this email last week.

Could you check on this? The City of Petaluma is just about completed with all its other application materials both for the State Board's Division of Drinking Water and the Division of Financial Assistance, and this is the last thing outstanding.

This small project will reduce the potable water demand for the City, won't substantially reduce flows into the Petaluma River (see attached), and shouldn't take long for someone to review.

Thanks very much,
Pat

Pat Collins
Senior Project Manager

GHD

Front Desk: 707-523-1010 | Direct: 707-236-1540 | C: 707-483-2185 | VOIP: 841540 | E: pat.collins@ghd.com
2235 Mercury Way, Suite 150, Santa Rosa, CA 95407 USA | www.ghd.com

From: Pat Collins
Sent: Wednesday, June 22, 2016 3:54 PM
To: 'Corinne.Gray@wildlife.ca.gov'
Subject: FW: City of Petaluma Proposed RW expansion: Petition for Change

Hi Corinne –

Craig recommended I be in touch with you regarding the Department's review of Petaluma's Petition for Change.

The City of Petaluma is applying to the State Board for expansion of their recycled water urban irrigation system, and as part of this application, they need to file a Petition for Change. The Petition for Change application has an Environmental Information Form which requires consultation with CDFW. The form indicates a requirement for CDFW consultation in the box on the bottom of page 4. I've attached an interim version of the Environmental Form that I'm currently working on. This form is just for information and is subject to revision, as the City has not seen it yet.

So, I'm wanting to initiate consultation with CDFW (if required), make sure you have everything needed for your review, and hope to receive an email or some kind of documentation of the outcome of the consultation.

If you have questions, the file manager at the State Board Division of Water Rights is:

Scott Frazier
Senior Environmental Scientist
State Water Resources Control Board
Division of Water Rights
Permitting and Licensing Section – North Bay Unit
1001 I Street | P.O. Box 2000 | Sacramento, CA 95812
Phone: 916.341.5289 | Fax: 916.341.5400 | Scott.Frazier@waterboards.ca.gov

Would you give me a call at 707-236-1540?

Thanks very much,
Pat

Pat Collins
Senior Project Manager

GHD

Front Desk: 707-523-1010 | Direct: 707-236-1540 | C: 707-483-2185 | VOIP: 841540 | E: pat.collins@ghd.com
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Petaluma 2016 Urban Recycled Water Expansion Project

Petition for Change

Attachment 3: Archaeological Resources Review by Anthropological
Studies Center



1801 East Cotati Avenue
Rohnert Park, CA 94928-3609

707.664.2381 • fax 707.664.4155
www.sonoma.edu/asc

Pat Collins
Senior Project Manager

12 May 2016

GHD
2235 Mercury Way, Suite 150
Santa Rosa, CA 95407

Re: Archaeological Resources Review for the 2016 Urban Recycled Water System Expansion Project, Petaluma, Sonoma County, California

Dear Ms. Collins:

At your request, the Anthropological Studies Center (ASC) conducted an archaeological resources records search and made appropriate Native American contacts for the proposed Urban Recycled Water System Expansion Project as part of environmental review documentation requested by the City of Petaluma (City) under the California Environmental Quality Act (CEQA). The records search and Native American contacts ("Task 1" of the *Proposal to Conduct an Archaeological Resources Review for the 2016 Urban Recycled Water System Expansion Project, Petaluma, Sonoma County, California* of 7 January 2016) comprised three main parts: a records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System (CHRIS); a further records search of publications and maps at ASC for ethnographic and archaeological resources and background information; and communication with the Native American Heritage Commission (NAHC) to request a review of the Sacred Lands File and contact information for the appropriate tribal communities, who ASC then contacted regarding the project. Based on the results of the records search and Native American contacts, this report concludes with an assessment of the sensitivity of the project area for buried archaeological resources.

PROJECT AREA (PA) AND STUDY AREA (SA)

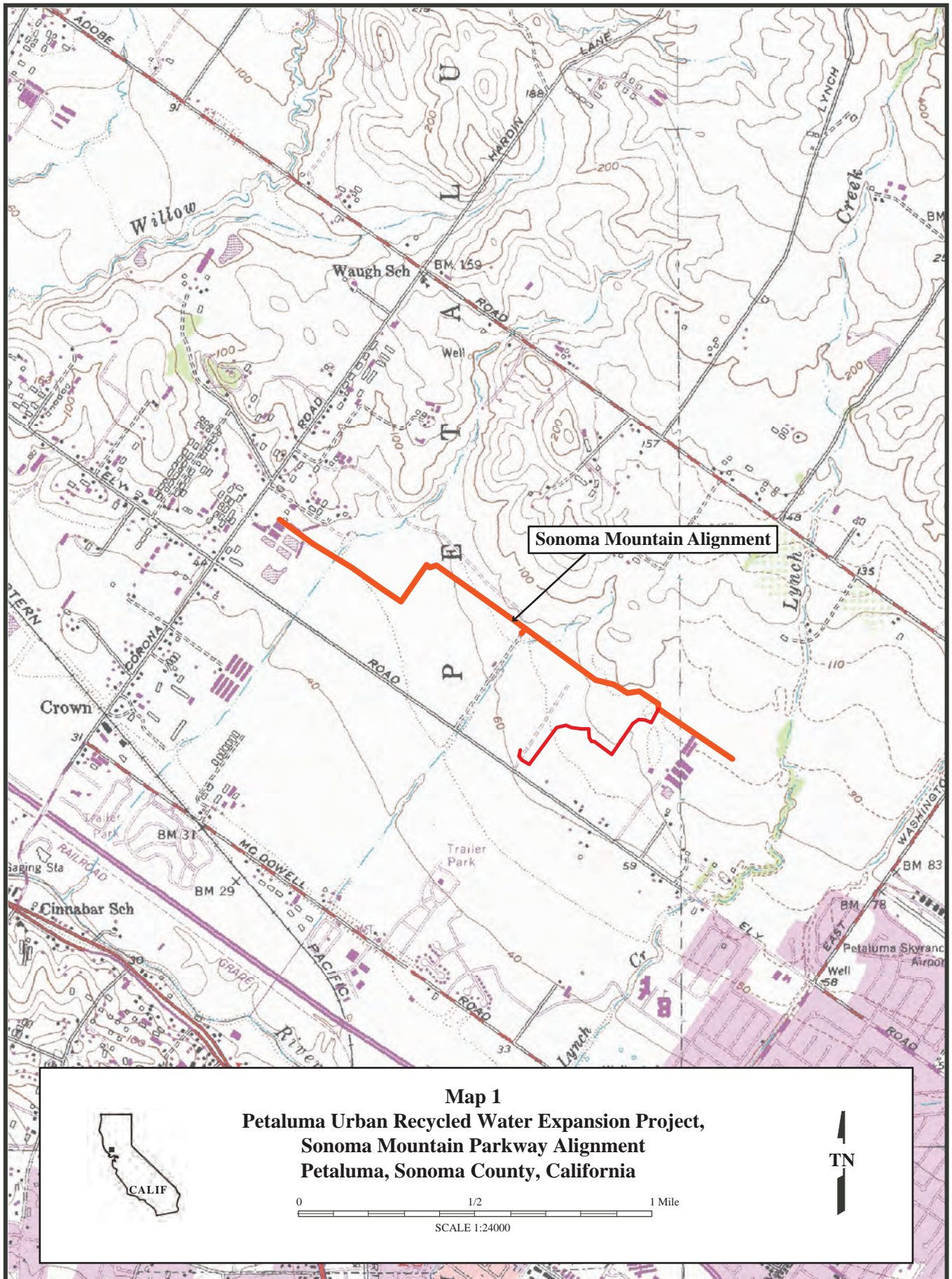
The project consists of two pipeline segments consisting of approximately 14,000 linear feet (ft.) of new line. The 8,400-ft. Sonoma Mountain alignment is located adjacent to housing developments bounded by Corona Road on the northwest and E. Washington Boulevard on the southeast approximately halfway between Old Adobe Road and Sonoma Mountain Parkway. The line will run east within Riesling Road, turn north within Dover Lane and continue east within open field north of housing developments. A small spur of 3,200-ft. will connect to Matzen Ranch Circle, run southwest along Pembridge Street, west on Eagle Street, southwest on Rainer Circle, and end on Danby Court. The Sonoma Mountain Parkway alignment runs both within existing road and cross-country. Within developed areas, the construction zone will stay within the roadway. Cross-country, the construction zone will be 10 ft. wide (5 ft. on either side of the pipeline). This alignment will cross Capri Creek using jack and bore method. Depth of construction for the bore will be a 10 ft. maximum. The remainder of the construction has a maximum depth of 6 ft. Connecting lines to the new line may require up to 20 linear ft. of ground disturbance perpendicular to the line.

The Oakmead alignment will run through an existing Business Park development for approximately 2,300 ft. The pipeline will be entirely within City streets and the construction zone will be limited to the roadway. Each property adjacent to the pipeline will require a connector that may disturb the ground for up to 20 ft. perpendicular to the pipeline.

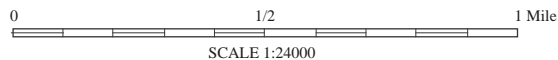
The proposed project will involve compliance with the California Environmental Quality Act (CEQA). The CEQA lead agency is the City of Petaluma. The Project Area (PA) consists of the construction zone for both proposed alignments. Both PA locations (Map 1 and 2) are located within unsectioned portions of the Petaluma land grant, as depicted on the 1954 (photo-revised 1980) USGS 7.5 *Cotati, Glen Ellen, and Petaluma River, California* quadrangles (USGS 1954a, b, c).

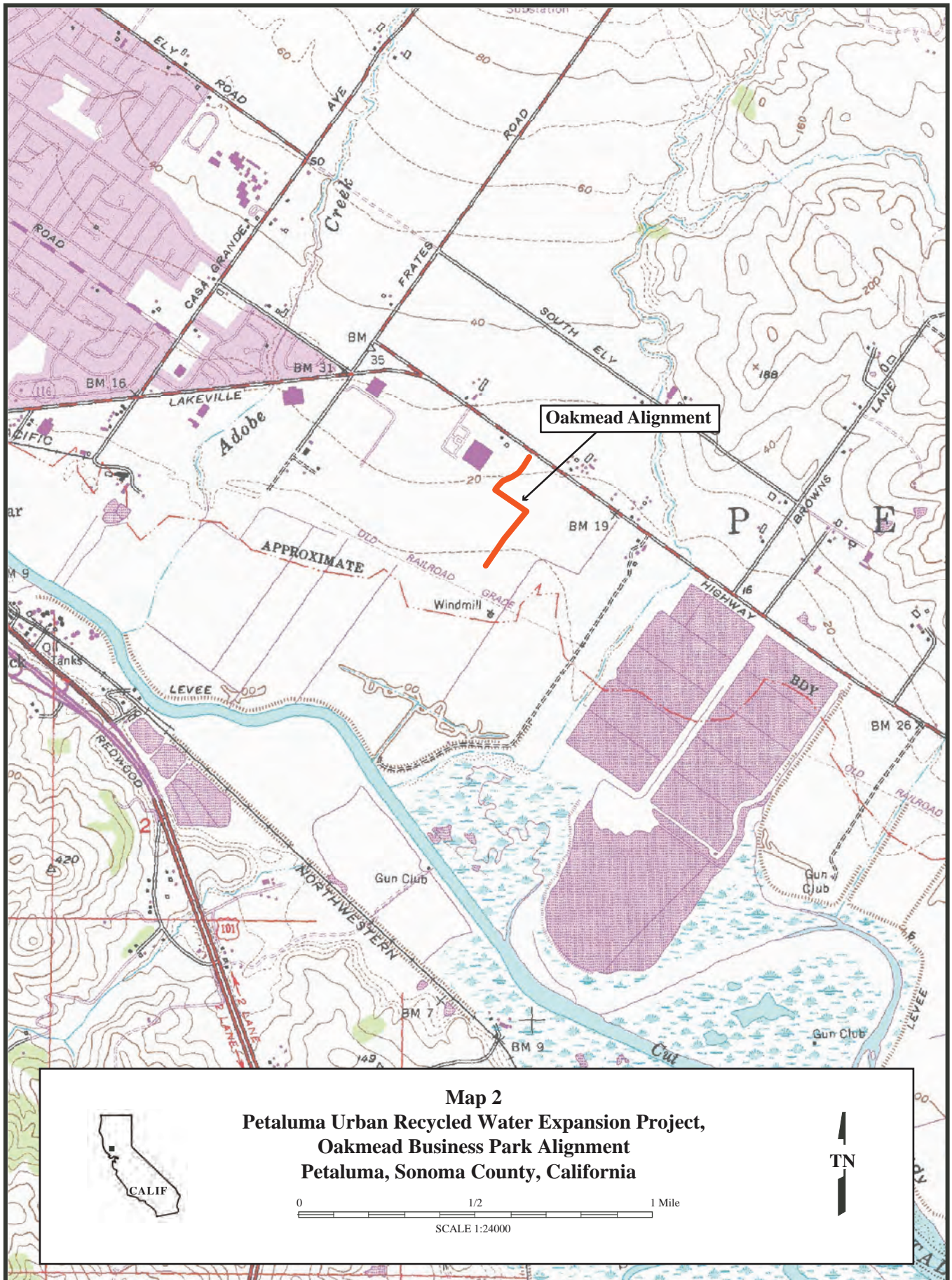
The Study Area (SA) comprises the proposed PA and a 0.25-mile buffer surrounding it, deemed sufficient to capture any known archaeological resources likely to be affected by the project or to indicate the potential for unknown resources that might be affected.

The proposed Project Areas are located east of Petaluma within the Petaluma River Valley, between the Sonoma Mountains on the east and coastal hills on the west. Elevation of the Sonoma Mountain Project Area ranges from 50 to 100 ft. above mean sea level (amsl) and the Oakead PA from 10 to 35 ft. amsl (USGS 1954a, b, c). Both Project Areas are geologically composed of Quaternary alluvium deposits from the Pliocene to Holocene, consisting of unconsolidated and semi-consolidated river terrace deposits (Jennings et al. 1977). Soils in the PAs are composed predominantly of Clear Lake clay. Within the Sonoma Mountain Alignment, these include drained soil found on 2 to 5 percent slopes, drained sandy substratum found on 0 to 2 percent slopes, and loam found on 0 to 5 percent slopes. A small section of Diablo Clay



Map 1
Petaluma Urban Recycled Water Expansion Project,
Sonoma Mountain Parkway Alignment
Petaluma, Sonoma County, California





USGS Petaluma River, Calif. (1954, PR1980)

found on 15 to 30 percent slopes is mapped within the alignment near Capri Creek (USDA 2016). Clear Lake clay soils tend to be poorly drained basin and fan alluvium derived from volcanic and sedimentary rock (USDA 2016). Diablo soils are well drained residuum weathered from calcareous shale (USDA 2016). The Oakmead alignment is also located within Clear Lake clay, drained sandy substratum found on 0 to 2 percent slopes (USDA 2016).

Natural vegetation within the Sonoma Mountain PAs is consistent with coastal prairie scrub mosaic. This is described as a dense community of bunchgrasses with a lower layer of annual and perennial forbs usually covering 100 percent of the ground surface. Dominant species include Oatgrass and red fescue (Küchler 1977:30-31). Within the Oakmead PA, vegetation is consistent with a coastal saltmarsh. This community consists of perennial graminoids and succulent forbs with algae present in frequently flooded areas. Glasswort and cordgrass are the dominant species (Küchler 1977:24). Corona Creek and Capri Creek, both perennial water sources, cross the Sonoma Mountain alignment and drain to the Petaluma River 1.5 miles away. Lynch Creek is located near the southern end of the alignment. An unnamed tributary of the Petaluma River flows east of the Oakmead alignment and joins the Petaluma River marsh 0.5 mile southeast.

RECORDS SEARCH METHODS

The records search examined the following documents:

- NWIC maps (USGS 7.5-minute topographic base maps with NWIC annotations) and descriptive records keyed to them, to identify recorded archaeological sites, recorded archaeological surveys, and recorded historic-period resources of the built environment (buildings, structures, and objects) within the SA. NWIC, affiliated with the California Office of Historic Preservation (OHP), is the official State repository for records and reports on prehistoric and historical archaeology and the historical built environment for 18 northern California counties, including Sonoma County. ASC searched the NWIC maps and associated documents on 28 April 2016.
- The California Department of Parks and Recreation's (DPR's) *California Inventory of Historic Resources* (1976) and the OHP's *Historic Properties Directory* (HPD, updated 5 April 2012), to identify California Historical Landmarks, California Points of Historic Interest, and California historic properties that are listed in, or determined to be eligible for listing in, the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR) that are located within the SA.
- Historic-period maps (*diseños*, General Land Office [GLO] maps, and 19th- and early-20th-century USGS 15- and 7.5-minute topographic maps), to identify historic-era buildings, structures, objects, and areas of archaeological sensitivity located within the SA that are not recorded in CHRIS, DPR, or OHP records.

- *Handbook of North American Indians, Volume 8: California*, to identify ethnographic village locations located within the SA.
- Assorted publications and reports on local and regional prehistory, history, ethnography, and archaeology available at ASC, Sonoma State University, and online.

RECORDS SEARCH RESULTS

CULTURAL RESOURCES IN THE PA

The records search indicated that there are no previously recorded cultural resources in either PA.

CULTURAL RESOURCES IN THE SA

Sonoma Mountain Alignment

The records search indicated that there are two recorded cultural resources within the 0.25-mile SA buffer. P-49-002840 is the closest recorded resource, located 500 ft. southwest of the western end of the alignment. The resource consists of a chicken ranch complex recorded in 2001 (Chattan 2001a) that includes a main house, a workshop/stable, a barn, and a chicken house. The next closest resource is P-49-002302, located 0.25 miles north of the alignment. The site consists of a prehistoric midden containing shell, fire affected rock, and obsidian and chert flakes and a hammerstone (Alvarez et al. 1989).

P-49-001172 (CA-SON-1248/H) is located just beyond the SA radius 0.3 miles from the eastern end of the alignment. The multi-component site consists of a prehistoric habitation site containing bowl mortars, including one that had been ritually killed, hammerstones, chert and obsidian debitage, fire affected rock, and cores. The historic-era portion of the site includes a Victorian era house with associated farm buildings from the early 1890s (Roscoe 1979a).

Five additional sites are located within a 1-mile radius of the PA and consist of historic-era ranch complexes and prehistoric habitation sites.

Table 1. Recorded cultural resources within 0.25 mile of the Sonoma Mountain PA

Site	Type	OHP Status	Recorder	Relation to PA
P-49-001172/CA-SON-1248/H	prehistoric habitation site and historic-era ranch	NA	Roscoe 1979a	0.3 mile southeast of eastern end of alignment
P-49-002302	prehistoric habitation site	NA	Alvarez et al. 1989	0.25 mile north of alignment
P-49-002840	historic-era chicken ranch complex	NA	Chattan 2001a	500 ft. southwest of the western end of the alignment

Oakmead Alignment

The records search indicated that there are three recorded cultural resources within the 0.25-mile SA buffer. The closest resource to the PA is P-49-002904, the Masciorini Ranch, located approximately 500 ft. from the PA on the east and south. The Ranch was originally recorded in 2001 and consisted of a house, garage, a collapsed barn, chicken hatchery, wash room, irrigation ditches, pump house, and livestock ramp built at the turn of the 20th century (Hilton 2001). The site was re-recorded in 2004 as a 246-acre ranch dating to 1907 and added ornamental trees and plants, a milking shed, and a landing on the Petaluma River. The house was said to be an excellent example of the Prairie style architecture popular from 1900 to 1920 (Marvin and Kelley 2004). The site was evaluated at this time and appeared eligible for listing to the National Register under Criterion A for its close association with activities that defined the agricultural identity of Sonoma County. In 2005, the California State Historic Preservation Officer (SHPO) concurred with this finding (Pulcheon 2006). The site was updated again in 2006 after monitoring and preconstruction testing that did not locate any significant deposits (Pulcheon 2006). The site record was updated most recently in 2007 when monitoring of re-roofing of the main residence took place (Pulcheon 2008).

A spur of the Northwestern Pacific Railroad (P-49-0002834) is recorded 475 ft. south of the alignment. The spur originated in Petaluma and terminated at the Donahue landing, running through the Masciorini Ranch (P-49-002904). The line stopped at a station near the loading chutes on the property. The rails and ties of the line have been removed and did not appear eligible to the National Register at the time of recording in 2004 (Kelley et al. 2005a:17; Parsons 2002:13). This resource was slated to be removed as part of the Ellis Creek Water Recycling Facility Project (ECWRF); it is unclear if this was completed (Kelley et al. 2005:10).

P-49-002905 was originally recorded in 2002 as a World War II radar facility consisting of a concrete building with associated concrete pads for communications towers that had been removed (Hilton 2002). The site was revisited in 2004 by Kelley and Pulcheon, who corrected the record to state that the building was not related to military operations, but was operated by the Federal Aviation Administration to aid aerial navigation and was decommissioned in 1978 (Kelley and Pulcheon 2004). The facility is located 0.45-miles south of the alignment. The resource was evaluated by LSA in 2005 and appeared ineligible due to age (Kelley et al. 2005a:17). A pump house associated with the site was slated to be removed during the ECWRF project; it is unclear if this was completed (Kelley et al. 2005:10).

An informally recorded resource, C-757, was reported to the NWIC by a local citizen in 1990 as containing bones, large quantities of shell, and charmstones. The site was not located in 2002 by Hilton, and the property was not accessible during a 2004 survey (Kelley et al. 2005a:7). The site appears to have been located a mile southeast of the Oakmead PA within the Ellis Creek Water Recycling Facility and adjacent property to the southeast and may have been partially destroyed by the creation of the facility.

Table 2. Recorded cultural resources within 0.25 mile of the Oakmead PA

Site	Type	OHP Status	Recorder	Relation to PA
P-49-002834	historic-era railroad segment	ineligible due to integrity	Parsons	450 ft. southwest of the alignment
P-49-002904	historic-era ranch complex	determined eligible , SHPO concurrence, not in HPD	Hilton 2001; Marvin and Kelley 2004; Pulcheon 2006, 2008	500 ft. east and south of the alignment
P-49-002905	FAA facility	ineligible due to age	Hilton 2002; Kelley and Pulcheon 2004	0.45 mile southwest of the alignment

STUDIES IN THE SA

Sonoma Mountain Alignment

Fourteen recorded cultural-resources studies have been conducted within the SA, four of these cover portions of the Sonoma Mountain PA (approximately 40 percent of the PA) (Table 3; Map 3).

Table 3. Recorded Cultural-resources Studies in the Sonoma Mountain SA

Study No.	Date	Author	Associated Resources	Relation to PA
S-1347	1978	Keitzer	None	380 ft. northwest of alignment
S-1531	1979	Hayes	None	within middle section of alignment
S-1845	1979b	Roscoe	P-49-001172	0.1 miles southeast of alignment
S-7904	1986	Chavez	None	within middle section of alignment
S-11343	1989	Stewart	P-49-002302	275 ft. north of alignment
S-12721	1990	Flynn and Roop	None in SA	375 ft. west of alignment
S-12849	1991	Roop	None in PA	270 ft. southeast of alignment
S-23804	2001b	Chattan	P-49-002840	500 ft. southeast of alignment
S-24828	2002	Schroder and Origer	None	0.2 miles east of alignment
S-25191	2002	McKale and Allen	None	within middle section of alignment
S-25350	2002	Douglass and Origer	None	0.2 miles east of alignment
S-29722	2004	Chattan	None	440 ft. east of alignment
S-29811	2004	Quinn and Beard	None	within southern section of alignment
S-32896	2007	Evans	None	0.15 miles south of alignment

Oakmead Alignment

Ten recorded cultural-resources studies have been conducted within the SA, one of these covers the entire Oakmead PA (Table 4; Map 4).

Table 4. Recorded Cultural-resources Studies in the Oakmead SA

Study No.	Date	Author	Associated Resources	Relation to PA
S-2135	1980	Roop	None in SA	immediately northeast of alignment
S-2290	1980	Collins	None	covers entire PA
S-2370	1980	Origer and Roscoe	None is PA	adjacent to northern end of alignment
S-16049	1994	Jordan	None	adjacent to northern edge of alignment
S-25396	2002	Parsons	P-49-002834; P-49-002904; P-49-002905	350 ft. east and south of alignment
S-29658	2005a	Kelley et al.	P-49-002834; P-49-002904; P-49-002905	350 ft. east and south of alignment
S-29935	2005b	Kelley et al.	P-49-002834; P-49-002904; P-49-002905	350 ft. east and south of alignment
S-30869	2005c	Kelley, Pulcheon, et al.	P-49-002834; P-49-002904; P-49-002905	350 ft. east and south of alignment
S-33899	2006	Jones	P-49-002904	0.28 miles southeast of alignment
S-45356	2014	Billat	None	600 ft. northwest of alignment

PREHISTORIC CONTEXT

Fredrickson (1974) outlined an analytical framework for interpreting the prehistory of the San Francisco Bay area and North Coast Ranges. He divided human history in California into three broad periods: the Paleoindian period, the Archaic period, and the Emergent period. The scheme used sociopolitical complexity, trade networks, population, and the introduction and variations of artifact types to differentiate between cultural units. The significance of prehistoric sites rests partly on their ability to help archaeologists explain the reasons for these changes in different places and at different times in prehistory. This scheme, with minor revisions (Fredrickson 1994) remains the dominant framework for prehistoric archaeological research in the region.

The earliest documented human occupation in California, the Paleoindian period (ca. 10,000 to 6,000 B.C.), was a time of variable climate, rising sea levels, and other broad-scale environmental change. People lived in small, highly mobile groups, moving through broad geographic areas and leaving relatively sparse archaeological remains.

With the more stable climate of the long Archaic period (6,000 B.C. to A.D. 1,000), people gradually became more sedentary, new groups entered the area, and regional distinctions developed. The Archaic has been divided into three subperiods (Lower, Middle, and Upper), based on changes in sociopolitical complexity, trade networks, populations, and the introduction of new artifact types (Fredrickson 1974, 1994). Many of the archaeological sites in the North Coast Ranges were first used in the Middle and Upper Archaic, when populations were increasing and groups moved into new areas to exploit a more diverse range of resources. By the Upper Archaic period, beginning around 500 B.C., mobility was being replaced by a more sedentary adaptation that included a reliance on intensive acorn processing and storage. Numerous small villages and the beginnings of a more complex society and economy characterize the end of this period.

During the Emergent, or Late, period (ca. A.D. 1,000 to the historic era), social complexity developed toward the contact-era settlement pattern of large, central villages where political leaders resided, with associated hamlets and specialized-activity sites. Innovations associated with the period include the bow and arrow, small corner-notched projectile points, and a diversity of beads and ornaments. Archaeological sites dating to this period are common throughout the North Coast Ranges. Types include sites of ritual significance, such as rock art locations. Other sites are small resource-processing areas marked by flaked-stone tools or milling equipment such as mortars and pestles, and by debris (debitage) from manufacturing and using stone tools. Still others are moderate- to large-sized occupation sites marked by midden soils, dietary bone and shell, and a diversity of artifacts.

ETHNOGRAPHIC CONTEXT

Ethnographic literature indicates that at the time of historic contact, the study area was located within the territory of Coast Miwok speakers (Barrett 1908:309; Kelly 1978:415; Kroeber 1925:274). The people collectively referred to as the Coast Miwok are understood by ethnographers to be several distinct groups who spoke different dialects of the Penutian language stock. The primary sociopolitical unit was the village community, which was overseen by one or more chiefs (Kelly 1978:414). The Coast Miwok built above-ground conical dwellings constructed of a grass-covered frame of two forked, inter-locking poles of willow or driftwood, with a slightly excavated central hearth. Large villages had a sizable sweathouse and often other ceremonial houses (Kelly 1978:417). North of the Coast Miwok was the Pomo linguistic group. Northeast were the Wappo and the Patwin, while south and southeast were the Costanoan (Ohlone) and Miwok. Hostility to neighboring tribes based on boundary transgressions is mentioned, although amicable trading relationships based on clamshell beads did exist (Kelly 1978: 418).

Coast Miwok settlements focused on bays and estuaries, at the mouths of fresh watercourses, or along perennial interior streams. The Coast Miwok economy was based on fishing, hunting and gathering wild plants and animals. The activities revolved throughout a seasonal cycle, during which people traveled throughout their territory to make use of resources. Seasonal forays would have been made to gather marine foods at the coast or bay shore. Acorns were gathered in season and stored for use throughout the year. While many large “shell heaps” are recorded in the vicinity of the project areas, the closest recognized ethnographic village to the Sonoma Mountain PA is *tuchayelin*, *etem*, or *petaluma*. *Etem* was located at the town of Petaluma, while *tuchayelin* was a mile northwest of the town of Petaluma. *Petaluma* was located on a low hill east of Petaluma creek at a point 3.5 miles northeast of the town of Petaluma, which would place it within the eastern SA (Barrett 1908:310-311). The closest village to the Oakmead PA may be *wotoki*, located on the west bank of the Petaluma River near Donahue’s Landing about 3.5 miles southeast of Petaluma (Barrett 1908:310; Kelly 1978:415; Kroeber 1925: 274).

The Coast Miwok population diminished dramatically during the mission era, and the group was further impacted following secularization in the early 1830s. Coast and Bay Miwok peoples as a cultural group were landless until 1920, when the federal government established a 15.1-acre rancheria near Graton for Bay and Coast Miwok and local Southern Pomo families. The federal government terminated the rancheria in 1958 and dispersed the lands to three families. After a long legal and political battle, federal recognition was restored, and the multi-cultural native organization became the Federated Indians of Graton Rancheria (FIGR 2015).

HISTORIC CONTEXT

The earliest overland exploration of the San Francisco Bay Area was conducted by the Fages-Crespi Expedition in 1772 (Cook 1957:131). The Anza-Font Expedition reached the East Bay hills in 1776 (Cook 1957). The first mission in the region was established the following year

in San Francisco (Mission Dolores). Mission Sonoma, closest to the SA, was not established until 1823.

European explorers first traveled the Petaluma River in 1776, when Ferdinand Quiros and his party passed through the area. In 1819, Father Mariano Payéras visited the Llano de los Petalumas, or the Plain of the Petaluma Indians (Gudde 1998:287). In 1834, Mariano Vallejo began the construction of his adobe home about 4 miles east of the present-day town, within his 66,622-acre Rancho Petaluma before it was formally granted to him by Governor Figueroa. After the Mexican-American War and the 1848 Treaty of Guadalupe Hidalgo, the grant was confirmed to Vallejo. As settlers arrived in the 1850s, Vallejo sold off most of his land (Hoover et al. 1990:478-479).

During the Gold Rush, hunters' camps and trading posts appeared on the banks of the river. The town was laid out and the post office established in 1852, and the city was incorporated in 1858 (Durham 1998:679). In the early 1850s, the Petaluma Valley became an important production area for grain and vegetables; by the 1870s it had become well known as a center of the poultry industry (Hoover et al. 1990:478, 482-483). In 1879, Lyman Byce invented the first practical chicken incubator and caused a sensation at the Sonoma–Marin Agricultural Society Fair. In 1898, the first commercial hatchery in Sonoma County, called Pioneer Hatchery, was located on 418 Sixth Street in Petaluma and employed Byce's incubators. By 1915, Petaluma was one of the major eggs suppliers in the state (Heig 1982:109-113). That same year, the California Highway Commission planned and began construction on what would become Highway 101 through downtown Petaluma along the current Petaluma Boulevard corridor. Today, downtown Petaluma is a mixed-use industrial, commercial and residential area that has retains its historic character and sense of community.

The earliest map depicting the PAs depicts the Sonoma Mountain PA as rural farmland owned by J. Long, William D. Mann, and Thomas J. Bryan in 1877 (Thompson 1877). The Oakmead alignment is depicted within similar rural land adjacent to the San Francisco and Northwestern Pacific Railroad line within lands owned by George Campbell (Thompson 1877). In 1898, both PAs are still depicted within rural agricultural land, though the Sonoma Mountain PA has been sub-divided into numerous smaller parcels, while the Oakmead alignment is owned by Lucy Campbell (Reynolds and Proctor 1898). Not much had changed within either PA by the early 20th century (USGS 1914, 1916). By 1942, the rail line south of the Oakmead alignment appears to have been abandoned (USGS 1942). Between 1954 and 1980, both PAs were partially developed (USGS 1954a-e). Large residential subdivisions within and adjacent to the Sonoma Mountain PA followed, with most housing built between 1993 and 2004. The Oakmead alignment was partially developed between 1980 and 1993, and further development of the business park occurred between 1993 and 2002.

NATIVE AMERICAN CONTACTS

The author contacted the Native American Heritage Commission (NAHC) on 29 April 2016 and requested a review of the Sacred Lands File for information on Native American cultural resources in the study area. A response was received on 13 May 2016. The author has conducted recent projects within Sonoma County and contacted Greg Sarris, Gene Buvelot, and Buffy McQuillen of The Federated Indians of Graton Rancheria regarding the project on 12 May 2016 prior to receiving the NAHC list. Marjorie Mejia of Lytton Rancheria of California was contact on 13 May 2016 after the list was received. No response has been received as of the date of this report. Correspondence received after this date will be forwarded under separate cover. Copies of this correspondence are provided in Appendix A.

BURIED ARCHAEOLOGICAL RESOURCE SENSITIVITY

The likelihood that an area includes surface or buried archaeological remains is referred to as its sensitivity. Landform and physical processes play a fundamental role in the creation, preservation, burial, and eventual discovery of archaeological sites in much of California (Meyer and Rosenthal 1997; Meyer and Rosenthal 2007).

Ample rainfall and associated runoff in the study area cause erosion that destroys archaeological sites, and deposition that preserves them. Although the presence of known archaeological sites is an indicator of the sensitivity of the general landscape, the results of the records search and NAHC review of the Sacred Lands File reflect only available information on resources that have already been documented. Predictions of an area's sensitivity are based on additional factors, including geological and soil conditions determined from existing maps and environmental factors based on terrain-surface modeling. The relatively low spatial resolution of available map data and recent alterations to waterways and other landscape features create problems for this analysis (Meyer, Kaijankoski, and Rosenthal 2011:126).

Both project PAs lie entirely on Quaternary alluvium dating from the Pliocene through the Holocene, overlaid by Clear Lake and Diablo soils—heavy textured, poorly drained clays (Jennings 1977; USDA 2016). The age and composition of these deposits affects their potential to contain buried sites. Landforms that developed in the Pleistocene have little potential for buried archaeological remains, because the surface and sediments below it formed prior to human occupation of North America (Meyer and Rosenthal 2007:15). Landforms that developed in the Holocene, however, may contain buried archaeological remains, as the sediments that comprise them accumulated during the time that humans were present (Meyer and Rosenthal 2007).

The age of the underlying geological formations in both PAs may date to the Holocene, indicating the possibility of archaeological material. Clear Lake soils are usually too wet for a portion of the year to make good long term or permanent settlements; however, they are located

adjacent to water sources and marshland, which may have been used for temporary hunting or fishing camps in dry months. This would indicate that Clear Lake soils generally have a low potential to contain buried features associated with sustained, long term occupation.

However, combining this information with surrounding landscape features and known resources categorizes the overall sensitivity for buried prehistoric archaeological resources within both study areas as **moderate**. The Sonoma Mountain PA is found on slightly higher ground, further from marshland, and evidence of prehistoric habitation is located nearby, indicate increased sensitivity. The Oakmead PA is on the verge of Petaluma River marshland and was likely inundated for parts of the year. This would indicate a slightly lowered sensitivity in this location.

OVERALL PA SENSITIVITY

As discussed above, the sensitivity for buried prehistoric archaeological resources is considered **moderate** for both PAs. However, there is **high** sensitivity for surface prehistoric and historic-era resources within undeveloped portions of the Sonoma Mountain PA, and a **high** sensitivity for subsurface historic-era archaeological resources in both PAs. Historic-era structures are depicted within the PAs on historic maps, and the presence of the Massciorini Ranch as well as several other historic-era chicken ranches in the area indicate the potential for resources related to this period of occupation.

AUTHORSHIP AND CONTACT

This study was completed under the supervision of Dr. Adrian Praetzelis, Registered Professional Archaeologist (RPA) and Director of the Anthropological Studies Center at Sonoma State University. This letter report was prepared by ASC Staff Archaeologist Kate Erickson Green, M.A., RPA.

If you have any questions about this report, please contact me at (707) 664-2878.

Sincerely,



Kate Erickson Green, M.A., RPA
Staff Archaeologist
Anthropological Studies Center
Sonoma State University

REFERENCES CITED

Alvarez, Susan, Suzanne Stewart, and William Stillman

- 1989 Archaeological Site Record for CA-SON-1803/P-49-002302. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Barrett, S.A.

- 1908 The Ethno-geography of the Pomo and Neighboring Indians. *University of California Publications in American Archaeology and Ethnology* 6(1): 1-332. Berkeley, California.

Billat, Lorna

- 2014 *FCC Wireless Telecommunications Bureau Collocation Submission Packet SR Wholesale/FN03XC340A (S-45356)*. EnviroWest LLC, Woodland Hills, Utah. Prepared for Spring Spectrum, Granit Bay, California. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Chattan, Cassandra

- 2001a Archaeological Site Record for P-49-002840. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

- 2001b *A Cultural Resources Evaluation of the Property Located at 619 Ely Road, Petaluma, Sonoma County, California (S-23804)*. Archaeological Resource Service, Petaluma, California. Prepared for Waterford Associates. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

- 2004 *A Cultural Resources Evaluation of the Property Located at 763 Corona Road, Petaluma, Sonoma County, California (S-29722)*. Archaeological Resource Service, Petaluma, California. Prepared for Ron Herrerias, Petaluma. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Chavez, David

- 1986 Petaluma Center Project, Santa Rosa Junior College (S-7904). Letter report to EIP Associates, San Francisco, California, dated 28 February 1986. David Chavez and Associates, Mill Valley, California. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Collins, Gloria L.

- 1980 *An Archaeological Reconnaissance of the Harcourt, Brace, Jovanovitch Property, Sonoma County, California (S-2290)*. Cultural Resource Facility, Sonoma State University, Rohnert Park, California. Prepared for Keegan and Coppin Company, Inc. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Cook, S.F.

- 1957 *The Aboriginal Population of Alameda and Contra Costa Counties, California. University of California Anthropological Record* 16(4):131-156. Berkeley, California.

Douglass, Toni F., and Thomas M. Origer

- 2002 *A Cultural Resources Survey of the Property Located at 385 Ormsby Lane, Petaluma, Sonoma County, California (S-25350)*. Tom Origer and Associates, Rohnert Park, California. Prepared for Anna Nicole Griffith, Petaluma. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Durham, David L.

- 1998 *California's Geographic Names. A Gazetteer of Historic and Modern Names of the State*. Word Dancer Press, Clovis, California.

Evans, Sally

- 2007 *A Cultural Resources Evaluation for the Capri Creek Channel Maintenance Project, at Sonoma Mountain Parkway, Petaluma, Sonoma County, California (S-32896)*. Archaeological Resource Service, Petaluma, California. Prepared for Southern Sonoma County Resource Conservation District. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Federated Indians of Graton Rancheria (FIGR)

- 2016 *Culture*. Available online at www.gratonrancheria.com (accessed 11 May 2016).

Flynn, Katherine and William Roop

- 1990 *Cultural Resources Evaluation of the Proposed Zone IV Water Delivery System, City of Petaluma, Sonoma County, California (S-12721)*. Archaeological Resource Service, Petaluma, California. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Fredrickson, David

- 1974 *Cultural Diversity in Early Central California: A View from the North Coast Ranges. Journal of California Anthropology* 1(1):41-53.

- 1994 Archaeological Taxonomy in Central California Reconsidered. In *Toward a New Taxonomic Framework for Central California Archaeology: Essays by James A. Bennyhoff and David A. Fredrickson*, assembled and edited by Richard E. Hughes, pp. 91–103. Contributions of the University of California Archaeological Research Facility No. 52. Berkeley.

Gudde, Erwin G.

- 1998 *California Place Names: The Origin and Etymology of Current Geographical Names*. Fourth edition, revised and enlarged by William Bright. University of California Press, Berkeley and Los Angeles.

Hayes, John F.

- 1979 *An Archaeological Investigation of the Gatti Nursery Property, AP #137-07-16, Petaluma, California (S-1531)*. The Cultural Resources Facility, Sonoma State University, Rohnert Park, California. Prepared for Richard Gatti, Petaluma. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Heig, Adair

- 1982 *History of Petaluma: A California River Town*. Scottwall Associates, Petaluma, California.

Hilton, Steven M.

- 2001 Archaeological Site Record for P-49-002904. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.
- 2002 Archaeological Site Record for P-49-002905. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Hoover, Mildred Brooke, Hero Eugene Rensch, Ethel Grace Rensch, and William N. Abeloe

- 1990 *Historic Spots in California*. Fourth edition, revised by Douglas E. Kyle. Stanford University Press, Stanford, California.

Jennings, C. W., R. G. Strand, and T. H. Rogers

- 1977 *Geologic Map of California. California*. 1:750,000 scale. Division of Mines and Geology.

Jones, E. Timothy

- 2006 *History and Historic American Building Survey Photo Documentation of P-49-002904 (The Masciorini Ranch), Ellis Creek Water Recycling Facility Project, Petaluma, Sonoma County, California (S-33899)*. LSA Associates, Inc., Point Richmond, California. Prepared for Department of Water Resources and Conservation, Petaluma, California. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Jordan, Leigh

- 1994 Highway 116 Roadway Rehab and Improvement of Drainage Facilities, Overlay with Shoulder Backing, Upgrading of Safety Features, P.M. 36.5 to P.M. 39.3, Sonoma County California (EA 17371K)(S-16049). Letter report to Caltrans District 4 Environmental Branch, Oakland, California, dated 12 May 1994. Anthropological Studies Center, Sonoma State University, Rohnert Park, California. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Keitzer, Suzanne

- 1978 *An Archaeological Investigation of the Abetoni Property Proposed Subdivision, 901 Ely Road North, Sonoma County, California (S-1347)*. The Anthropology Laboratory, Sonoma State University, Rohnert Park, California. Prepared for Gordon F. Ornelles. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Kelley, John, Judith Marvin, Randy Groza, and Christian Gerike

- 2005a *Supplemental Cultural Resources Evaluations for the Ellis Creek Water Recycling Facility Project, Petaluma, Sonoma County, California (S-29658)*. LSA Associates, Inc., Point Richmond, California. Prepared for Department of Water Resources and Conservation, Petaluma, California. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

- 2005b *Addendum to Supplemental Cultural Resources Evaluations for the Ellis Creek Water Recycling Facility Project, Petaluma, Sonoma County, California (S-29935)*. LSA Associates, Inc., Point Richmond, California. Prepared for Department of Water Resources and Conservation, Petaluma, California. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Kelley, John and Andrew Pulcheon

- 2004 Archaeological Site Record for P-49-002905. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Kelley, John, Andrew Pulcheon, and Christian Gerike

- 2005 *Historic Property Treatment Plan for the Ellis Creek Water Recycling Facilities Project, Petaluma, Sonoma County, California (S-30869)*. LSA Associates, Inc., Point Richmond, California. Prepared for Department of Water Resources and Conservation, Petaluma, California. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Kelly, Isabel

- 1978 Coast Miwok. In *California*, edited by Robert F. Heizer, pp. 414-425. Handbook of North American Indians, Vol. 8, William C. Sturtevant, general editor. Smithsonian Institution, Washington, D.C.

Kroeber, Alfred L.

- 1925 *Handbook of the Indians of California*. Bureau of American Ethnology Bulletin 78. Smithsonian Institution, Washington, D.C. Reprinted 1976 by Dover, New York.

Küchler, A.W.

- 1977 *The Map of the Natural Vegetation of California*. University of Kansas, Lawrence.

Marvin, Judith, and John Kelley

- 2004 Archaeological Site Record for P-49-002904. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

McKale, George, and James Allen

- 2002 *A Cultural and Paleontological Resources Study for the Proposed Petaluma Junior High School (S-25191)*. LSA Associates, Inc., Pt. Richmond, California. Prepared for Benson Lee, Consulting, Berkeley, California. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Meyer, Jack, and Jeffery S. Rosenthal

- 1997 Archaeological and Geoarchaeological Investigations for Stage 2 of the East Sonora Bypass Project State Route 108, Tuolumne County, California. Anthropological Studies Center, Sonoma State University, Rohnert Park, California.

- 2007 Geoarchaeological Overview of the Nine Bay Area Counties in Caltrans District 4. Far Western Anthropological Research Group, Inc., Davis, California. Prepared for California Department of Transportation, District 4, Oakland, California.

Meyer, Jack, Philip Kaijankoski, and Jeffrey S. Rosenthal

- 2011 A Geoarchaeological Overview and Assessment of Northwest California: Cultural Resources Inventory of Caltrans District 1 Rural Conventional Highways: Del Norte, Humboldt, Mendocino, and Lake Counties. Far Western Anthropological Research Group, Inc., Davis, California. Prepared for California Department of Transportation, District 1, Eureka, California.

Origer, Thomsas M., and Katie Stanton Roscoe

- 1980 *A Cultural Resources Study of the Proposed Frates Ranch Project Area, Petaluma, Sonoma County, California (S-2370)*. Anthropological Studies Center, Sonoma State University, Rohnert Park, California. Prepared for Don Laidlaw and Associates, Environmental Consultants, Santa Rosa, California. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Parsons

- 2002 *Water Recycling Facility Project Cultural Resources Technical Report, City of Petaluma, California (S-25396)*. Parsons. Prepared for City of Petaluma. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Pulcheon, Andrew

- 2006 Archaeological Site Record for P-49-002904. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.
- 2008 Archaeological Site Record for P-49-002904. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Quinn, James P., and Vicki R. Beard

- 2004 *A Cultural Resources Survey of 60-Acres of the Pfendler Parcel Between Adobe Road and Sonoma Mountain Parkway, Petaluma, Sonoma County, California (S-29811)*. Tom Origer and Associates, Rohnert Park, California. Prepared for Brelje and Race, Santa Rosa, California. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Reynolds and Proctor

- 1898 *Illustrated Atlas of Sonoma County, California*. Reynolds and Proctor, Santa Rosa. Available online at: www.davidrumsey.com (accessed 12 May 2016).

Roop, William

- 1980 *Archaeological Reconnaissance of Napa to Petaluma Pacific Telephone Cable Undergrounding Route, Napa and Sonoma Counties, Part Two – Sonoma County Line to Lakeville Highway (S-2135)*. Archaeological Resources Service, Novato, California. Prepared for Pacific Telephone, Sacramento, California. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.
- 1991 *A Cultural Resources Evaluation of the Cottonwood Golf Club, and the Redwood Empire Sports Associates (RESA) Projects, Petaluma, California (S-12849)*. Archaeological Resource Services, Petaluma, California. Prepared for Parks and Recreation Department and Planning Department, Petaluma, California. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Roscoe, James

- 1979a Archaeological Site Record for CA-SON-1248/H/P-49-001172. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.
- 1979b *An Archaeological Investigation of the Peter Olsen Property, A.P. Nos. 136-080-01 and -07, Sonoma County, California (S-1845)*. The Cultural Resources Facility, Sonoma State University, Rohnert Park, California. Prepared for Scenic Land Properties, Inc. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Schroder, Sue-Ann, and Thomas M. Origer

- 2002 *A Cultural Resources Survey for a Minor Subdivision at 529 Ely Road, Sonoma County, California (S-24828)*. Tom Origer and Associates, Rohnert Park, California. Prepared for Kevin and Janet Kinahan, Petaluma. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Stewart, Suzanne B.

- 1989 *An Archaeological Study of the Lands of Cittadini, 804 Corona Road, Petaluma, Sonoma County, California (S-11343)*. Anthropological Studies Center, Rohnert Park, California. Prepared for Ronald Cittadini, Petaluma. On file, Northwest Information Center, California Historical Resources Information System, Sonoma State University, Rohnert Park, California.

Thompson and West

- 1878 *Historical Atlas Map of Sonoma County, California*. Thompson & West, San Francisco, California. Available online at: www.davidrumsey.com (accessed 12 May 2016).

United States Department of Agriculture (USDA)

- 2016 *Custom Soil Resource Report for Solano County, California*. Natural Resources Conservation Service, Washington, D.C. Available online at <http://websoilsurvey.sc.egov.usda.gov/App/HomePage.htm>. (accessed 12 May 2016).

United States Geological Survey (USGS)

- 1914 *Petaluma, California, Quadrangle Map*. 15-minute series, 1:62,500 scale. U.S. Geological Survey, Washington, D.C.
- 1916 *Santa Rosa, California, Quadrangle Map*. 15-minute series, 1:62,500 scale. U.S. Geological Survey, Washington, D.C.
- 1942 *Petaluma, California, Quadrangle Map*. 15-minute series, 1:62,500 scale. U.S. Geological Survey, Washington, D.C.
- 1954a *Cotati, California, Quadrangle Map*. 7.5-minute series, 1:24,000 scale. (photorevised 1980). U.S. Geological Survey, Washington, D.C.
- 1954b *Glen Ellen, California, Quadrangle Map*. 7.5-minute series, 1:24,000 scale. (photorevised 1980). U.S. Geological Survey, Washington, D.C.
- 1954c *Petaluma River, California, Quadrangle Map*. 7.5-minute series, 1:24,000 scale. (photorevised 1980). U.S. Geological Survey, Washington, D.C.
- 1954d *Petaluma, California, Quadrangle Map*. 15-minute series, 1:62,500 scale.. U.S. Geological Survey, Washington, D.C.
- 1954e *Santa Rosa, California, Quadrangle Map*. 15-minute series, 1:62,500 scale. U.S. Geological Survey, Washington, D.C.

APPENDIX

NAHC/Organization Correspondence

Sacred Lands File & Native American Contacts List Request

Native American Heritage Commission

1550 Harbor Blvd, Suite 100
West Sacramento, CA 95691
916-373-3710
916-373-5471 – Fax
nahc@nahc.ca.gov

Information Below is Required for a Sacred Lands File Search

Petaluma Urban Recycled Water Expansion Project

Project: _____

Sonoma

County: _____

Cotati/Petaluma River

USGS Quadrangle Name: _____

5N/4N

7W

5N: 16,17,21,

Township: _____ **Range:** _____ **Section(s):** 22, 36 4N:1

Anthropological Studies Center

Company/Firm/Agency: _____

1801 E. Cotati Avenue

Street Address: _____

Rohnert Park

94928

City: _____ **Zip:** _____

707-664-2878

Phone: _____

707-664-4155

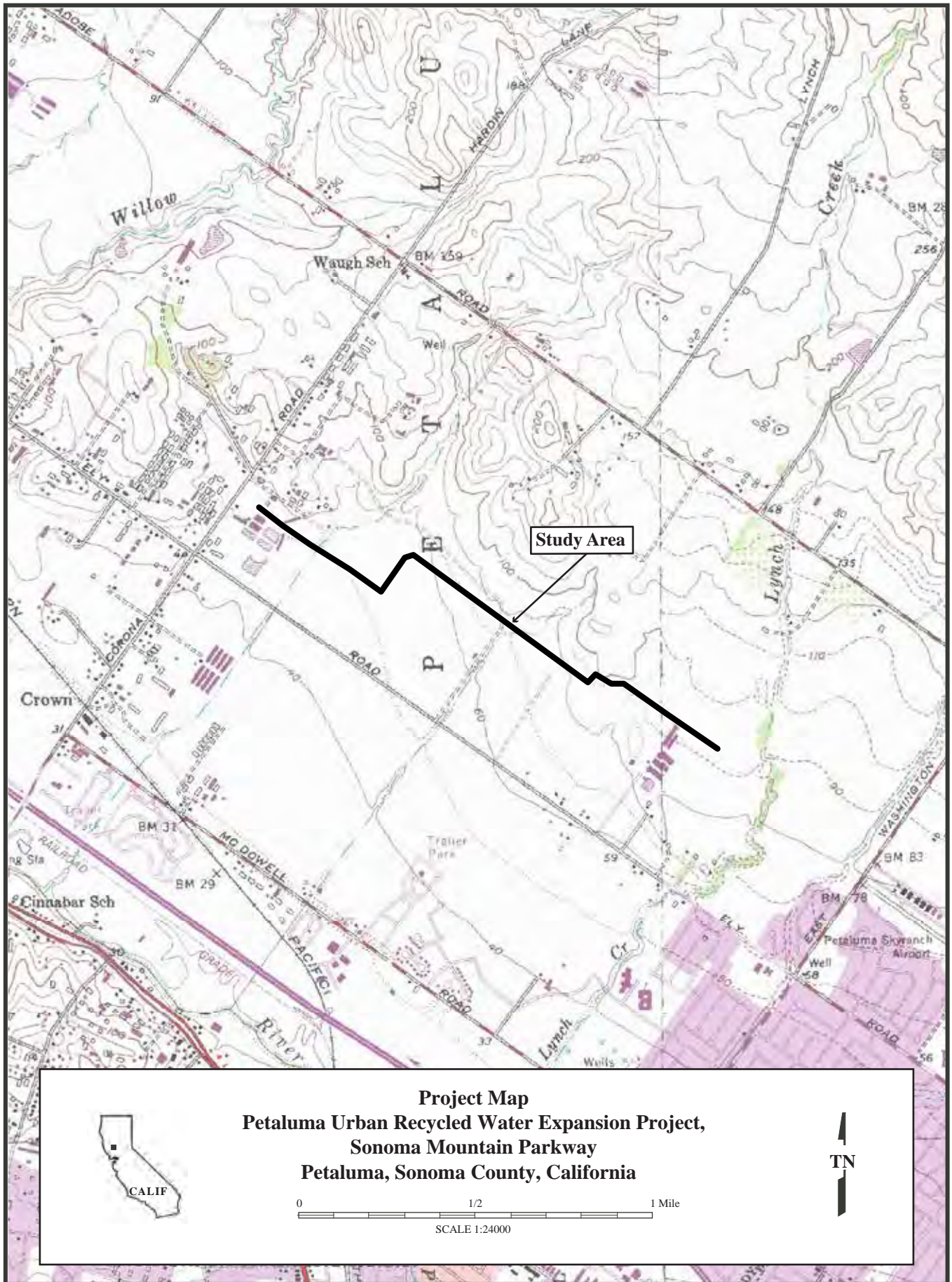
Fax: _____

kate.green@sonoma.edu

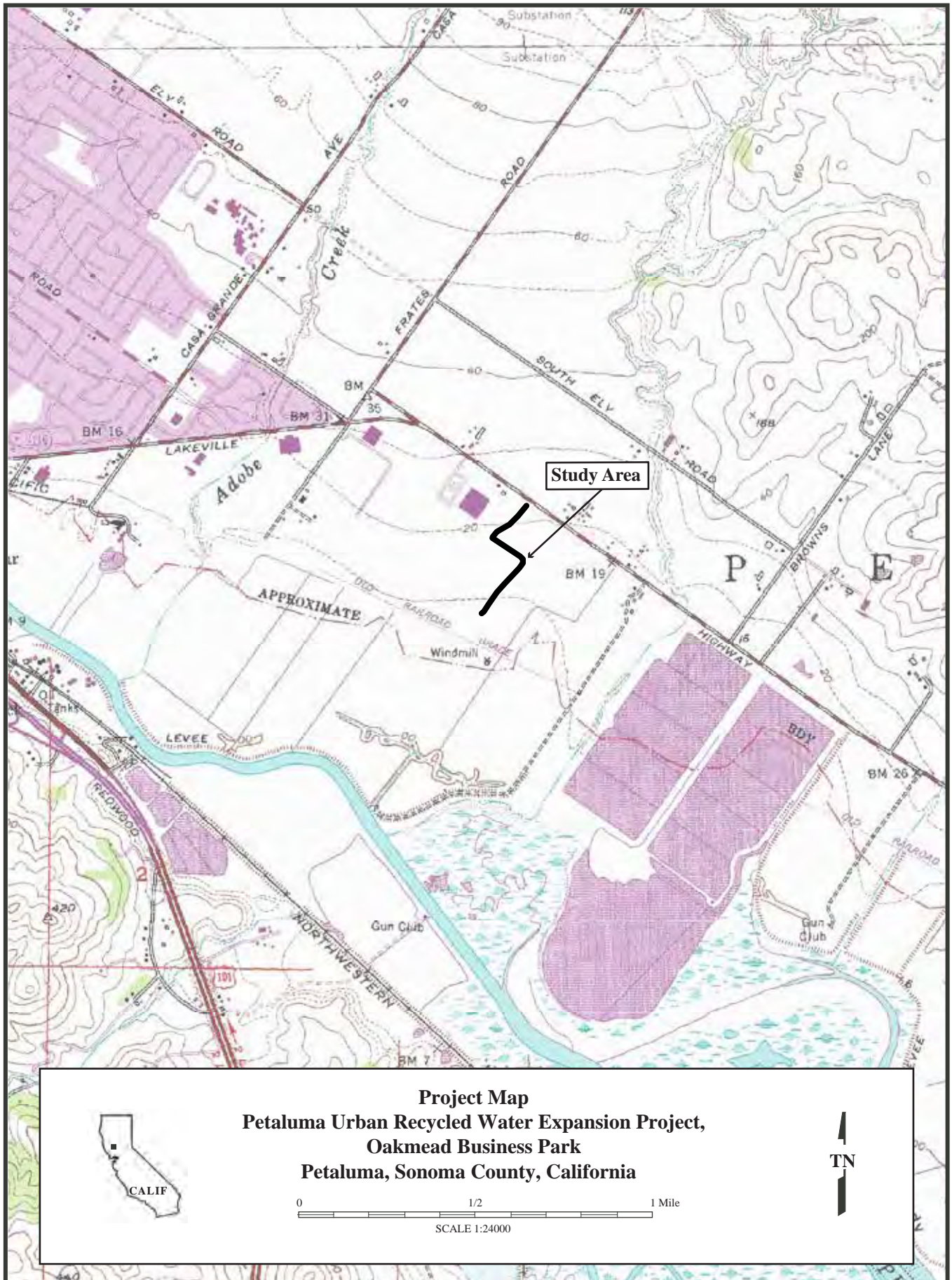
Email: _____

Project Description:

The project consists of two pipeline alignments consisting of approximately 14,000 linear feet of new line. The Sonoma Mountain alignment is located adjacent to housing developments bounded by Corona Road on the northwest and E. Washington Boulevard on the southeast approximately halfway between Old Adobe Road and Sonoma Mountain Parkway. The Sonoma Mountain alignment will cross a creeks using a jack and bore method. The Oakmead alignment follows Pine View Way and Cypress Road, within existing roadway. Both alignments are within the City of Petaluma, Sonoma County. One segment of the project is in T5N R7W and Sections 16,17 21, 22. The other segment is within T5N R7W Section 36 and T4N R 7W Section 1.



USGS Cotati, Calif. (1954, 1980)



USGS Petaluma River, Calif. (1954, 1980)

NATIVE AMERICAN HERITAGE COMMISSION

1550 Harbor Blvd., Suite 100
West Sacramento, CA 95691
(916) 373-3710
Fax (916) 373-5471



May 13, 2016

Kate Green
ASC

Sent by Email: kate.green@sonoma.edu
Number of Pages: 3

Re: Petaluma Urban Recycled Water Expansion Project, Cotati/Petaluma River, Sonoma County

Dear Ms. Green:

A record search of the Native American Heritage Commission (NAHC) *Sacred Lands File* was completed for the area of potential project effect (APE) referenced above with negative results. Please note that the absence of specific site information in the *Sacred Lands File* does not indicate the absence of Native American cultural resources in any APE.

I suggest you contact all of those listed, if they cannot supply information, they might recommend others with specific knowledge. The list should provide a starting place to locate areas of potential adverse impact within the APE. By contacting all those on the list, your organization will be better able to respond to claims of failure to consult. If a response has not been received within two weeks of notification, the NAHC requests that you follow-up with a telephone call to ensure that the project information has been received.

If you receive notification of change of addresses and phone numbers from any of these individuals or groups, please notify me. With your assistance we are able to assure that our lists contain current information. If you have any questions or need additional information, please contact via email: Sharaya.souza@nahc.ca.gov.

Sincerely,

A handwritten signature in black ink, appearing to read "Sharaya Souza".

Sharaya Souza
Staff Services Analyst

**Native American Contacts
Sonoma County
May 12, 2016**

Federated Indians of Graton Rancheria
Greg Sarris, Chairperson
6400 Redwood Drive, Ste 300 Coast Miwok
Rohnert Park , CA 94928 Southern Pomo
(707) 566-2288 Office
(707) 566-2291 Fax

Federated Indians of Graton Rancheria
Gene Buvelot
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gbuvelot@gratonrancheria.
(415) 279-4844 Cell
(707) 566-2288 ext 103

Lytton Rancheria of California
Marjorie Mejia, Chairperson
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Santa Rosa , CA 95403
margiemejia@aol.com
(707) 575-5917
(707) 575-6974 - Fax

This list is current only as of the date of this document and is based on the information available to the Commission on the date it was produced.

Distribution of this list does not relieve any person of statutory responsibility as defined in Section 7050.5 of the Health and Safety Code, Section 5097.94 of the Public Resource Section 5097.98 of the Public Resources Code

This list is only applicable for contacting local Native Americans with regard to cultural resources assessment for the proposed Petaluma Urban Recycled Water Expansion Project, Coatai/Petaluma River, Sonoma County.



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Rohnert Park, CA 94928-3609

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Buffy McQuillen, THPO
Federated Indians of Graton Rancheria
P.O. Box 1086
Santa Rosa, CA 95402

12 May 2016

Re: Archaeological Resources Review for the 2016 Urban Recycled Water Expansion Project,
Petaluma, Sonoma County, California

Dear Ms. McQuillen,

The Anthropological Studies Center (ASC) at Sonoma State University has been contracted by GHD to do a records search for the proposed Urban Recycled Water System Expansion Project in Petaluma. The project consists of two pipeline segments consisting of approximately 14,000 linear feet (ft.) of new line. The 8,400-ft. Sonoma Mountain alignment is located adjacent to housing developments bounded by Corona Road on the northwest and E. Washington Boulevard on the southeast approximately halfway between Old Adobe Road and Sonoma Mountain Parkway. The Sonoma Mountain Parkway alignment runs both within existing road and cross-country. Within developed areas, the construction zone will stay within the roadway. Cross-country, the construction zone will be 10 ft. wide (5 ft. on either side of the pipeline). This alignment will cross Capri Creek using jack and bore method. Depth of construction for the bore will be a 10 ft. maximum. The remainder of the construction has a maximum depth of 6 ft. Connecting lines to the new line may require up to 20 linear ft. of ground disturbance perpendicular to the line.

The Oakmead alignment will run through an existing Business Park development for approximately 2,300 ft. The pipeline will be entirely within City streets and the construction zone will be limited to the roadway. Each property adjacent to the pipeline will require a connector that may disturb the ground for up to 20 ft. perpendicular to the pipeline.

The proposed project will involve compliance with the California Environmental Quality Act (CEQA). The CEQA lead agency is the City of Petaluma. The State Water Resources Control Board will also be reviewing the project.

The project areas, near Petaluma, Sonoma County, lie within unsectioned portions of the Petaluma land grant, as depicted on the 1954 (photo-revised 1980) USGS *7.5 Cotati, Glen Ellen, and Petaluma River, California* quadrangles. I have included maps of the project areas below.

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We would like to invite the Federated Indians of Graton Rancheria to comment on this project. If the tribe would like to consult on this project, please contact me at your earliest convenience by phoning (707) 664-2878 or via email to kate.green@sonoma.edu .

Sincerely,

A handwritten signature in cursive script, appearing to read "Kate Green", followed by a horizontal line.

Kate Green, M.A., RPA
Staff Archaeologist

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Greg Sarris, Chairperson
Federated Indians of Graton Rancheria
P.O. Box 1086
Santa Rosa, CA 95402

12 May 2016

Re: Archaeological Resources Review for the 2016 Urban Recycled Water Expansion Project,
Petaluma, Sonoma County, California

Dear Mr. Sarris,

The Anthropological Studies Center (ASC) at Sonoma State University has been contracted by GHD to do a records search for the proposed Urban Recycled Water System Expansion Project in Petaluma. The project consists of two pipeline segments consisting of approximately 14,000 linear feet (ft.) of new line. The 8,400-ft. Sonoma Mountain alignment is located adjacent to housing developments bounded by Corona Road on the northwest and E. Washington Boulevard on the southeast approximately halfway between Old Adobe Road and Sonoma Mountain Parkway. The Sonoma Mountain Parkway alignment runs both within existing road and cross-country. Within developed areas, the construction zone will stay within the roadway. Cross-country, the construction zone will be 10 ft. wide (5 ft. on either side of the pipeline). This alignment will cross Capri Creek using jack and bore method. Depth of construction for the bore will be a 10 ft. maximum. The remainder of the construction has a maximum depth of 6 ft. Connecting lines to the new line may require up to 20 linear ft. of ground disturbance perpendicular to the line.

The Oakmead alignment will run through an existing Business Park development for approximately 2,300 ft. The pipeline will be entirely within City streets and the construction zone will be limited to the roadway. Each property adjacent to the pipeline will require a connector that may disturb the ground for up to 20 ft. perpendicular to the pipeline.

The proposed project will involve compliance with the California Environmental Quality Act (CEQA). The CEQA lead agency is the City of Petaluma. The State Water Resources Control Board will also be reviewing the project.

The project areas, near Petaluma, Sonoma County, lie within unsectioned portions of the Petaluma land grant, as depicted on the 1954 (photo-revised 1980) USGS *7.5 Cotati, Glen Ellen, and Petaluma River, California* quadrangles. I have included maps of the project areas below.

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We would like to invite the Federated Indians of Graton Rancheria to comment on this project. If the tribe would like to consult on this project, please contact me at your earliest convenience by phoning (707) 664-2878 or via email to kate.green@sonoma.edu .

Sincerely,

A handwritten signature in cursive script that reads "Kate Green".

Kate Green, M.A., RPA
Staff Archaeologist

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Gene Buvelot
Federated Indians of Graton Rancheria
P.O. Box 1086
Santa Rosa, CA 95402

12 May 2016

Re: Archaeological Resources Review for the 2016 Urban Recycled Water Expansion Project,
Petaluma, Sonoma County, California

Dear Mr. Buvelot,

The Anthropological Studies Center (ASC) at Sonoma State University has been contracted by GHD to do a records search for the proposed Urban Recycled Water System Expansion Project in Petaluma. The project consists of two pipeline segments consisting of approximately 14,000 linear feet (ft.) of new line. The 8,400-ft. Sonoma Mountain alignment is located adjacent to housing developments bounded by Corona Road on the northwest and E. Washington Boulevard on the southeast approximately halfway between Old Adobe Road and Sonoma Mountain Parkway. The Sonoma Mountain Parkway alignment runs both within existing road and cross-country. Within developed areas, the construction zone will stay within the roadway. Cross-country, the construction zone will be 10 ft. wide (5 ft. on either side of the pipeline). This alignment will cross Capri Creek using jack and bore method. Depth of construction for the bore will be a 10 ft. maximum. The remainder of the construction has a maximum depth of 6 ft. Connecting lines to the new line may require up to 20 linear ft. of ground disturbance perpendicular to the line.

The Oakmead alignment will run through an existing Business Park development for approximately 2,300 ft. The pipeline will be entirely within City streets and the construction zone will be limited to the roadway. Each property adjacent to the pipeline will require a connector that may disturb the ground for up to 20 ft. perpendicular to the pipeline.

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Sincerely,

A handwritten signature in cursive script that reads "Kate Green".

Kate Green, M.A., RPA
Staff Archaeologist

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Marjorie Mejia, Chairperson
Lytton Rancheria of California
437 Aviation Boulevard
Santa Rosa, CA 95403

13 May 2016

Re: Archaeological Resources Review for the 2016 Urban Recycled Water Expansion Project,
Petaluma, Sonoma County, California

Dear Ms. Mejia,

The Anthropological Studies Center (ASC) at Sonoma State University has been contracted by GHD to do a records search for the proposed Urban Recycled Water System Expansion Project in Petaluma. The project consists of two pipeline segments consisting of approximately 14,000 linear feet (ft.) of new line. The 8,400-ft. Sonoma Mountain alignment is located adjacent to housing developments bounded by Corona Road on the northwest and E. Washington Boulevard on the southeast approximately halfway between Old Adobe Road and Sonoma Mountain Parkway. The Sonoma Mountain Parkway alignment runs both within existing road and cross-country. Within developed areas, the construction zone will stay within the roadway. Cross-country, the construction zone will be 10 ft. wide (5 ft. on either side of the pipeline). This alignment will cross Capri Creek using jack and bore method. Depth of construction for the bore will be a 10 ft. maximum. The remainder of the construction has a maximum depth of 6 ft. Connecting lines to the new line may require up to 20 linear ft. of ground disturbance perpendicular to the line.

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We would like to invite the Lytton Rancheria of California to comment on this project. If the tribe would like to consult on this project, please contact me at your earliest convenience by phoning (707) 664-2878 or via email to kate.green@sonoma.edu.

Sincerely,

A handwritten signature in black ink that reads "Kate Green" followed by a long horizontal flourish.

Kate Green, M.A., RPA
Staff Archaeologist

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