

**NORTH BAY WATER REUSE AUTHORITY
NORTH BAY WATER RECYCLING PROGRAM
MARIN, SONOMA, AND NAPA COUNTIES**

Final Addendum Cultural Resources Survey Report
Sonoma Valley County Sanitation District Service Area
McGill Road Alignment

Prepared for the
North Bay Water Reuse Authority

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STATEMENT OF CONFIDENTIALITY

This report identifies the locations of cultural resources in the vicinity of the North Bay Water Reuse Authority North San Pablo Bay Restoration and Reuse Project in Marin, Sonoma, and Napa counties. Disclosure of this information to the public may be in violation of both federal and state laws. Federal regulations applicable to the proposed project include, but may not be limited to, Section 304 of the National Historic Preservation Act (16 United States Code [U.S.C.] 470w-3) and the Archaeological Resources Protection Act (16 U.S.C. Section 470h). The applicable state regulations include, but may not be limited to, Government Code Section 6250 et seq. and Section 6254 et seq. Disclosure of site location information to individuals other than those meeting the U.S. Secretary of the Interior's professional standards or the California State Personnel Board criteria for Associate State Archaeologist or State Historian II violates the California Office of Historic Preservation records access policy.

SUMMARY OF FINDINGS

This cultural resources document has been prepared as an addendum to the Cultural Resources Survey Report prepared for the North San Pablo Bay Restoration and Reuse Project (Koenig and Brewster, 2011). This report describes the project and cultural resources investigation, including background research and a surface survey, completed for Sonoma Valley County Sanitation District McGill Road Alignment south of the City of Sonoma. Due to Federal funding, this report has been prepared to comply with Section 106 of the National Historic Preservation Act, as amended. The United States Department of the Interior, Bureau of Reclamation is the federal lead agency. The Area of Potential Effects (APE) includes areas, surface and subsurface, that could be directly or indirectly affected by the proposed project.

Results of the records search indicate that no archaeological resources or historic-period resources of the built environment have been previously recorded within or within a ¼-mile radius of the McGill Road Alignment APE. ESA completed a surface survey on April 23, 2012 and no cultural materials or other cultural indicators were identified.

A review of geologic maps indicates the APE extends through Holocene and Pleistocene alluvium deposits. The Holocene alluvial context combined with surface site distribution indicates that the APE in this corridor is moderately sensitive for deeply-buried archaeological resources; however deeply-buried sites have yet to be identified in this immediate vicinity and previous subsurface testing in the vicinity has not revealed any deeply-buried materials.

It does not appear that McGill Road Alignment will adversely affect historic properties including archaeological resources. There appears to be a low potential for undocumented archaeological resources to be uncovered during project implementation.

It is the Bureau of Reclamation's policy to avoid cultural resources whenever possible. If buried cultural materials are encountered during construction, it is Reclamation's policy that work stop in that area until a qualified archaeologist evaluates the nature and significance of the find and that Reclamation will be notified pursuant to 36 CFR Part 800.13(b).

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Introduction

The North Bay Water Reuse Authority (NBWRA or Authority) is proposing the North San Pablo Bay Restoration and Reuse Project [hereafter referred to as the North Bay Water Recycling Program (NBWRP)]. The basic purpose of the NBWRP is to provide recycled water for agricultural, urban, and environmental uses as an alternative to discharging recycled water into San Pablo Bay and to expand the recycled water system region-wide. The water supply for the NBWRP would be tertiary-treated recycled water generated by four wastewater utilities: Las Gallinas Valley Sanitation District (LGVSD); Novato Sanitary District (Novato SD); Sonoma Valley County Sanitation District (SVCSD); Napa Sanitation District (Napa SD); and one water agency, Sonoma County Water Agency (SCWA), all located in the North San Pablo Bay region of California (**Figure 1**).

This cultural resources document has been prepared as an addendum to the Cultural Resources Survey Report prepared for the NBWRP (Koenig and Brewster, 2011). A revised pipeline route alignment, the McGill Road Alignment, is proposed by the SVCSD for inclusion in Phase I of the NBWRP. The McGill Road Alignment was not analyzed during the project-level assessment completed for the EIR/EIS. This report describes the project and cultural resources investigation completed for the McGill Road Alignment, which is located in Sonoma County south of the City of Sonoma.

On March 20, 2009 Congress authorized and appropriated partial funding for the design and construction of the proposed project under PL102-575, Title XVI. Based on this authorization and appropriation, U.S. Department of Interior, Bureau of Reclamation (Reclamation) will provide a percentage of NBWRP construction cost. Due to Federal funding, this report has also been prepared to comply with Section 106 of the National Historic Preservation Act (NHPA), as amended. Reclamation is the federal lead agency under the National Environmental Policy Act (NEPA).

The purpose of this cultural resources study, in accordance with Section 106 of the NHPA, is to:

- identify cultural resources, including prehistoric and historic-period archaeological resources, buildings, structures, and places of importance to Native Americans located within the McGill Road Alignment Area of Potential Effects (APE) of the proposed project;
- preliminarily evaluate cultural resources within the McGill Road Alignment APE according to the criteria set forth by the NHPA;
- determine whether the proposed project will have an adverse affect on potential historic properties; and

This study was completed by Heidi Koenig who has an M.A. in Cultural Resources Management, is a Registered Professional Archaeologist, and has 13 years of archaeological experience throughout California. Ms. Koenig meets the Secretary of Interior's Professional Qualification Standards for archaeologist.

Project Location and Description

Project Overview

The McGill Road Alignment is located in the south part of unsectioned Pueblo Lands of Sonoma as shown on the Sonoma USGS 7.5-minute topographic quadrangle. SVCSD proposes construction of approximately 800 feet of 6-inch in diameter recycled water pipeline that would connect the system from the Watmaugh Road Alignment to Highway 12. The McGill Road Alignment would serve existing agricultural users. The pipeline would be installed within the road right of way.

Project Components

Consistent with the methodology described for the approved NBWRP, trenching would include clearing of the construction site, saw cutting of the pavement where applicable, trench excavation, pipe installation, backfill operations, and re-paving where applicable. The construction corridor would vary depending on resource and easement constraints. Sufficient space would be available to allow the contractor to cast the spoil to the side of the trench, install the pipe, and backfill the trench using the spoil. Pipes will be staged along the alignment in advance of the pipeline installation. The estimated trench width is an average of 30 inches and an estimated trench depth of 56 inches; however the dimensions will vary with the location along the route and the diameter of the pipeline. The area of direct ground disturbance however assumes a maximum width of 4 feet and a vertical depth of up to 8 feet. To accommodate the area of direct impact as well as staging and work areas the road right-of-way to a depth of 8 feet below ground surface is proposed.

Horizontal directional drilling will be used to cross Highway 12. Using a horizontal drill rig, the pipeline is installed in two stages: (1) a small diameter pilot hole is directionally drilled along a designed path, and (2) the pilot hole is then enlarged to a diameter that would accommodate the pipeline and the pipeline would be pulled back through the enlarged hole. The directional drill pits would be a maximum of 5 feet wide x 20 feet long x 5 feet deep.

Area of Potential Effects

The APE for the proposed project is defined as “the geographic area or areas within which an undertaking may directly or indirectly cause alterations in the character or use of historic properties, if any such properties exist” (36 CFR 800.16[b]). The APE is shown on **Figure 2**.

The archaeological APE has been determined as the area of direct impact for the proposed project including areas of ground disturbance, staging areas, access, and work areas. The APE consists of 0.4 acres. An APE of a 50-foot wide corridor (25-foot radius from centerline) has been designated to accommodate for staging, spoils, and work areas. Trenching will average 30 inches wide and 56 inches deep. The area of direct ground disturbance however assumes a maximum width of 4 feet and a vertical depth of up to 8 feet for trenching. Ground disturbance for the directional drill

pits is 5 feet wide x 20 feet long x 5 feet deep with an assumption of a maximum depth of 20 feet below ground surface for the crossing.

The architectural/structural APE for the NBWRP is 25 feet from the centerline of the pipeline. Use of heavy equipment (e.g., a large bulldozer) typically generates vibration levels of 0.089 peak particle velocity (PPV) at a distance of 25 feet. Therefore, at peak construction vibration levels of 0.089, construction activities would not exceed the construction vibration damage threshold of 0.12 PPV for buildings extremely susceptible to vibration damage (FTA, 2006).

Environment

Sonoma County, located north of the San Francisco Bay, has a diverse and unique physical setting, including mountain ridges, hills, and valleys, which are replete with forests, oak woodlands. Land use in the area includes low density rural communities, agriculture and viticulture, grazing land, and open space. The McGill Road APE extends from the Watmaugh Road alignment along a compacted gravel road through vineyards. The alignment crosses Highway 12 to connect with existing pipeline.

Geology

The McGill Road APE is located in Sonoma Valley, which is in the Coast Ranges geomorphic province. The Sonoma Valley is a northwest-trending alluvial valley typical of the Coast Ranges. The valley is bound to the west by the Sonoma Mountains and to the east by the Arrowhead Mountains. The basement rocks of this area consist primarily of the Franciscan Assemblage, which is overlain with more recent volcanic flows of the Sonoma Volcanics. The Franciscan Assemblage contains primarily greenstone (altered volcanic rocks), basalt, chert (ancient silica-rich ocean deposits), and sandstone that originated as ancient sea floor sediments. The Sonoma Volcanics represent more recent flows and are typically a more weather resistant rock which forms most of the ridges and upper regions of the area.

The underlying geologic units in the APE are surficial deposits made up of unconsolidated sediments eroded from the surrounding bedrock units. These units are locally mapped as Holocene and Pleistocene alluvium (USGS, 2006). The distal edges of Holocene alluvial fans—when adjacent to older deposits (Pleistocene alluvial fans)—have a high potential to yield archaeological resources because Pleistocene alluvial fans represent surfaces that have been stable for a long period of time. Surface soils and more rarely, archaeological resources may be buried beneath younger, modern sediments; thus, when excavations occur in these environments, the potential to uncover buried resources is increased. The APE crosses a fan of Holocene Alluvium along the Fowler and Sonoma creek corridor west of the SVCSD WWTP, which includes approximately 800 feet of the McGill Road APE. No buried archaeological sites have been uncovered in this part of Sonoma Valley; however two sites (CA-SON-1348 and CA-SON-2098) are located in a similar geologic context further north. Augering conducted near the recorded location of CA-SON-1304 (approximately 1 mile south of the McGill Road APE) did not uncover a deeply-buried subsurface component to the site. The Holocene alluvial context combined with surface site distribution indicates that the APE in this corridor is moderately

sensitive for deeply-buried archaeological resources; however deeply-buried sites have yet to be identified in this immediate vicinity and previous subsurface testing within 1 mile has not revealed any deeply-buried materials.

Cultural History

A prehistoric context, review of archaeological research in the vicinity, an ethnographic overview, and a historic context are provided in the CRSR (Koenig and Brewster, 2011).

Methods and Results

Efforts to identify cultural resources in the APE consisted of archival research and a field survey.

Records Search Methods

A records search was conducted at the Northwest Information Center (NWIC) of the California Historical Resources Information System at Sonoma State University in April 2008 (File No. 07-1558) and updated in December 2010 (File No. 10-0546), April 2011 (File No. 10-0941), and April 2012 (File No. 11-1124).

The records were accessed by utilizing the Sonoma, California USGS 7.5' topographic quadrangle, in the Pueblo Lands of Sonoma landgrant. The review consisted of the McGill Road Alignment APE and a ¼-mile radius buffer. Previous surveys and studies and archaeological site records were accessed as they pertained to the APE. Records were also accessed and reviewed in the *Directory of Properties in the Historic Property Data File for Sonoma County* for information on sites of recognized historical significance within the *National Register of Historic Places*, the *California Register of Historical Resources*, the *California Inventory of Historic Resources* (1976), the *California Historical Landmarks* (1996), and the *California Points of Historical Interest* (1992).

Other resources reviewed include: 1867 A.B. Bowers, Map of Sonoma County; 1876 Pueblo Lands of Sonoma Plat Map; 1877 Thos. H. Thompson & Co., Historical Atlas Map of Sonoma County; and 1898 Reynolds & Proctor, Illustrated Atlas of Sonoma County, and the 1951 USGS topographic quadrangle of Sonoma, California.

Records Search Results

No archaeological studies have been previously conducted either within or immediately adjacent to the APE. No archaeological sites have been previously identified within a ¼-mile radius of the McGill Road Alignment APE. The nearest archaeological sites are approximately ½-mile to the south. CA-SON-2316/H (P-49-002806) is located ½ mile to the south and includes a circa 1880 residence as well as a prehistoric midden deposit with shell fragments, heat-affected rock, obsidian debitage, and tool fragments (Evans, 1998). CA-SON-135 (P-49-002053), located ½-mile to the north, is a shellmound; no additional information is recorded (Nelson, 1909).

Native American Contact

Reclamation will be completing Native American consultation in accordance with Section 106 of the NHPA.

Survey Methods

The surface survey consisted of intensively walking the APE in narrow (5–10 meter wide) transects. Prior to fieldwork, aerial, topographic, and geologic maps were examined. Because the pipeline will be installed primarily within existing graveled roadways, unpaved shoulders and adjacent areas were surveyed.

Survey Findings

Surface visibility adjacent to the graveled roadways was good (approximately 80%). Soil consisted of medium brown compact silty clay with gravel intrusions. No archaeological resources or other evidence of past human use and occupation was identified during the surface survey effort.

Conclusions

No architectural or structural resources eligible for listing in the National Register, including buildings, structures, or objects, were located in the McGill Road Alignment architectural APE. Additionally the McGill Road alignment will not have any above-ground components that would indirectly impact the viewshed.

No archaeological resources were located in the archaeological APE during the surface survey efforts.

A review of geologic maps indicates the APE extends through Holocene and Late Pleistocene alluvium deposits. The Holocene alluvial context combined with surface site distribution indicates that the APE in this corridor is moderately sensitive for deeply-buried archaeological resources; however deeply-buried sites have yet to be identified in this immediate vicinity and previous subsurface testing in the region has not revealed any deeply-buried materials.

It does not appear that McGill Road Alignment of the NBWRP will adversely affect historic properties including archaeological resources. There appears to be a low potential for undocumented archaeological resources to be uncovered during project implementation.

Recommendations

It is the Bureau of Reclamation's policy to avoid cultural resources whenever possible. If buried cultural materials are encountered during construction, it is Reclamation's policy that work stop in that area until a qualified archaeologist can evaluate the nature and significance of the find and that Reclamation will be notified pursuant to 36 CFR Part 800.13(b). Additional survey and

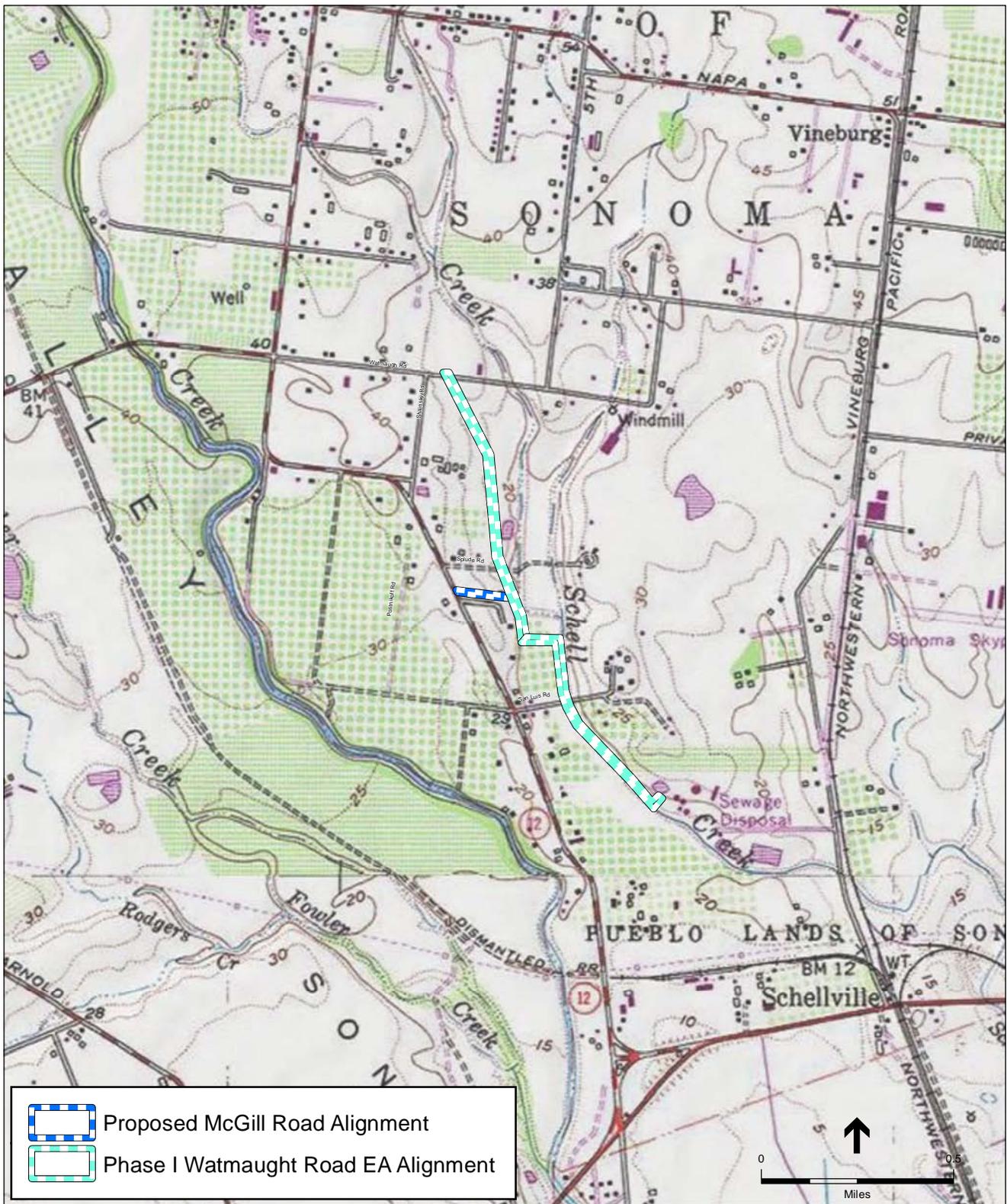
assessment will be required if the project changes to include areas not previously included in the APE.

If potential human remains are encountered, all work shall halt and the SCWA and the Bureau of Reclamation will be contacted. The SCWA will contact the county coroner in accordance with Public Resources Code Section 5097.98 and Health and Safety Code Section 7050.5. If the coroner determines the remains are Native American, the coroner will contact the Native American Heritage Commission (NAHC). As provided in Public Resources Code Section 5097.98, the NAHC will identify the person or persons believed to be most likely descended from the deceased Native American. The most likely descendent will make recommendations for means of treating, with appropriate dignity, the human remains and any associated grave goods as provided in Public Resources Code Section 5097.98.

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FIGURES



SOURCE: ESA, 2012

NBWRA North Bay Water Recycling Program. 206088
Figure 1. SVCSD McGill Road Alignment
 Location Map



NBWRA North Bay Water Recycling Program. 206088
Figure 2. SVCSD McGill Road Alignment
Area of Potential Effects