Historic Resources Evaluation Avenue Water Treatment Plant, Ventura, California

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1. Introduction

This report was prepared for the purpose of assisting the City of Ventura, California, in their compliance with the California Environmental Quality Act (CEQA) as it relates to historic resources, and Section 106 of the Historic Preservation Act of 1966, in connection with proposed improvements to the Ventura Avenue Water Treatment Plant and related facilities. The treatment plant is located at 5895 N. Ventura Avenue in the City of Ventura. A submerged dam, diversion and intake building are located at Foster Park, roughly one mile to the northwest of the treatment plant. [Figure 1]

The project as presently being considered consists of two phases:

Phase I:

- The Administration Building will retained and used for operations and lab functions, and will be unaltered except for the removal of the ramp on the northern side of the building.
- The sedimentation basin and flocculator on the western side of the building will be removed for the construction of new treatment facilities. The filter tanks will be retained, but decommissioned and abandoned in place.
- The sedimentation basin and flocculator on the eastern side of the Administration Building will remain. They will either be abandoned in place or modified to accommodate a public art project which is not currently designed.
- The front of the property will be landscaped.
- At Foster Park, several new wells will be constructed within the park, and new pumps added to existing wells on the western side of the river.

Phase II:

- A new Administration Building will be constructed to the west of the existing Administration Building.
- The existing Administration Building will be adapted for either: (1) dead storage, with no modification to the building's interior or exterior; or (2) limited public education functions, and modified in accordance with the appropriate standards for historic buildings.
- At Foster Park, the surface diversion and intake building will be removed. Several new wells will be constructed within the park.

This report will assess the historical and architectural significance of this property in accordance with the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR) Criteria for Evaluation. It will also assess significance based on the City of Ventura landmarks criteria. A determination will be made as to whether adverse environmental impacts on historic resources may occur as a consequence of the proposed project, and mitigation measures recommended, as appropriate.

The Area of Potential Effect (APE) for this project, as required for Section 106 evaluation, is the Avenue Water Treatment Plant site and an area defined by the Foster Park Submerged Dam, plus 100 feet in all directions.

This report was prepared by San Buenaventura Research Associates of Santa Paula, California (Mitch Stone, Preservation Planner; Judy Triem, Historian), for URS Corporation of Santa Barbara, California, and is based on a field investigation and research conducted in February-May, 2002 with additional research and evaluation conducted in August, 2003. The conclusions contained herein represent the professional opinions of San Buenaventura Research Associates, and are based on the factual data available at the

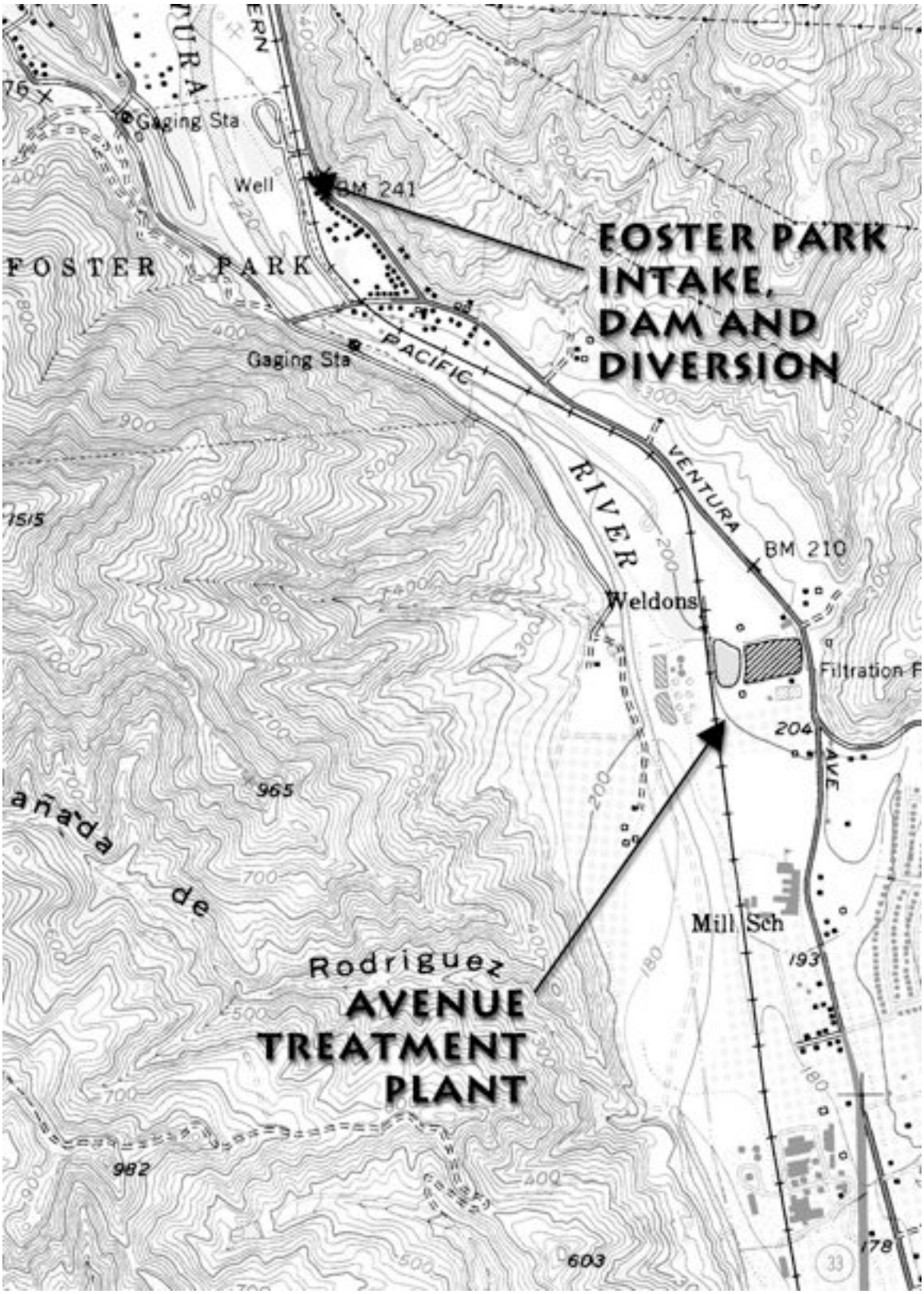

FIGURE 1. Location Map.
Source: USGS 7.5' Quadrangle, Ventura, 1951 revised to 1967.

time of its preparation, the application of the appropriate local, state and federal regulations, and best professional practices.

2. Administrative Setting

Section 106 of the Historic Preservation Act of 1966 requires that federally-funded agencies "...take into account the effect of [an] undertaking on any district, site, building, structure, or object that is included in or eligible for inclusion in the National Register." The National Park Service promulgates the criteria and standards for determining eligibility for the National Register of Historic Places (NRHP); the procedures for determining adverse effects on historic resources are contained in the Federal Register at 36 CFR 800 (Protection of Historic Properties). Properties may qualify for NRHP listing if they:

A. are associated with events that have made a significant contribution to the broad patterns of our history; or
B. are associated with the lives of persons significant in our past; or
C. embody the distinctive characteristics of a type, period, or method of construction or that represent the work of a master, or that possess high artistic values, or that represent a significant and distinguishable entity whose components may lack individual distinction; or
D. have yielded, or may be likely to yield, information important in prehistory or history.

The California Environmental Quality Act (CEQA) requires evaluation of project impacts on historic resources, including properties "listed in, or determined eligible for listing in, the California Register of Historic Resources [or] included in a local register of historical resources." A resource is eligible for listing on the California Register of Historical Resources if it meets any of the criteria for listing, which are:

1. Is associated with events that have made a significant contribution to the broad patterns of California's history and cultural heritage;
2. Is associated with the lives of persons important in our past;
3. Embodies the distinctive characteristics of a type, period, region, or method of construction, or represents the work of an important creative individual, or possesses high artistic values; or
4. Has yielded, or may be likely to yield, information important in prehistory or history.

The California Register may also include properties listed in "local registers" of historic properties. A "local register of historic resources" is broadly defined in §5020.1 (k), as "a list of properties officially designated or recognized as historically significant by a local government pursuant to a local ordinance or resolution." Local registers of historic properties come essentially in two forms: (1) surveys of historic resources conducted by a local agency in accordance with Office of Historic Preservation procedures and standards, adopted by the local agency and maintained as current, and (2) landmarks designated under local ordinances or resolutions. (Public Resources Code §§ 5024.1, 21804.1, 15064.5)

By definition, the California Register of Historic Resources also includes all "properties formally determined eligible for, or listed in, the National Register of Historic Places," and certain specified State Historical Landmarks. The majority of "formal determinations" of NRHP eligibility occur when properties are evaluated by the State Office of Historic Preservation in connection with federal environmental review procedures (Section 106 of the National Historic Preservation Act of 1966). Formal determinations of eligibility also occur when properties are nominated to the NRHP, but are not listed due to owner objection.

According to the NRHP guidelines, the "essential physical features" of a property must be present for it to convey its significance. Further, in order to qualify for the NRHP listing, a resource must retain its integrity, or "the ability of a property to convey its significance."

The seven aspects of integrity are: Location (the place where the historic property was constructed or the place where the historic event occurred); Design (the combination of elements that create the form, plan, space, structure, and style of a property); Setting (the physical environment of a historic property);

Materials (the physical elements that were combined or deposited during a particular period of time and in a particular pattern or configuration to form a historic property); Workmanship (the physical evidence of the crafts of a particular culture or people during any given period of history or prehistory); Feeling (a property's expression of the aesthetic or historic sense of a particular period of time), and; Association (the direct link between an important historic event or person and a historic property).

The relevant aspects of integrity depend upon the National Register criteria applied to a property. For example, a property nominated under Criterion A (events), would be likely to convey its significance primarily through integrity of location, setting and association. A property nominated solely under Criterion C (design) would usually rely primarily upon integrity of design, materials and workmanship. The California Register procedures include similar language with regard to integrity.

The minimum age criterion for the National Register of Historic Places (NRHP) and the California Register of Historic Resources (CRHR) is 50 years. Properties less than 50 years old may be eligible for listing on the NRHP if they can be regarded as "exceptional," as defined by the NRHP procedures, or in terms of the CRHR, "if it can be demonstrated that sufficient time has passed to understand its historical importance" (Chapter 11, Title 14, §4842(d)(2))

3. Impact Thresholds and Mitigation

Although CEQA and Section 106 describe impact thresholds and methodologies for mitigation in different language, they both represent essentially the same standard of analysis.

Section 106

The criteria for determining adverse effects on historic resources are established by the National Historic Preservation Act of 1966, and by standards published by the National Park Service in connection with the National Register of Historic Places. According to the Act, "An adverse effect is found when an undertaking may alter, directly or indirectly, any of the characteristics of a historic property that qualify the property for inclusion in the National Register in a manner that would diminish the integrity of the property's location, design, setting, materials, workmanship, feeling, or association. Consideration shall be given to all qualifying characteristics of a historic property, including those that may have been identified subsequent to the original evaluation of the property's eligibility for the National Register. Adverse effects may include reasonably foreseeable effects caused by the undertaking that may occur later in time, be farther removed in distance or be cumulative." (36 CFR 800.5 (a)(1))

California Environmental Quality Act

According to PRC §21084.1, "a project that may cause a substantial change in the significance of an historical resource is a project that may have a significant effect on the environment." The Public Resources Code broadly defines a threshold for determining if the impacts of a project on an historic property will be significant and adverse. By definition, a substantial adverse change means, "demolition, destruction, relocation, or alterations," such that the significance of an historical resource would be impaired (PRC §5020.1(6)). For purposes of NRHP eligibility, reductions in a resource's integrity (the ability of the property to convey its significance) should be regarded as potentially adverse impacts.

Further, according to the CEQA Guidelines, "an historical resource is materially impaired when a project... [d]emolishes or materially alters in an adverse manner those physical characteristics of an historical resource that convey its historical significance and that justify its inclusion in, or eligibility for, inclusion in the California Register of Historical Resources [or] that account for its inclusion in a local register of historical resources pursuant to section 5020.1(k) of the Public Resources Code or its identification in an historical resources survey meeting the requirements of section 5024.1(g) of the Public Resources Code, unless the public agency reviewing the effects of the project establishes by a preponderance of evidence that the resource is not historically or culturally significant."

The lead agency is responsible for the identification of "potentially feasible measures to mitigate significant adverse changes in the significance of an historical resource." The specified methodology for determining if impacts are mitigated to less than significant levels are the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings* and the *Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (1995), publications of the National Park Service. (PRC §15064.5(b)(3-4))

4. Historical Setting

San Buenaventura Mission (1782-1869)

The first attempt to design a water system for human consumption in the Ventura area was a complicated engineering feat undertaken by the Mission fathers, using Chumash Indians as laborers. The water was brought to the mission grounds between 1792 and 1815 by constructing an approximately seven mile-long aqueduct using gravity flow from a dam at or near the junction of San Antonio Creek and the Ventura River. The aqueduct was a stone and mortar wall supported by heavy buttresses, built according to Roman designs. The large stone and mortar sections were built primarily across canyon openings and creeks. The rest of the aqueduct, or *zanja*, was an open ditch along the hillsides. Only portions of the aqueduct remain today, with the largest extant sections at Weldon Canyon and Cañada Larga Road.

The water was brought to the Mission grounds by gravity flow, where it was taken through pipes and open ditches to *lavenderias* and fountains for domestic use. A filtration building was constructed west of the Mission quadrangle to clarify the water. Unfiltered water was taken by pipe to a *lavenderia* for washing clothes or for irrigating the mission gardens. The filtered water, it is believed, was taken by mission tile pipe to a reservoir behind the church. This reservoir, constructed of mission-made brick and Roman mortar, held a volume of approximately 4,000 gallons (Browne, 1982: 31).

This water system remained in place until the heavy storms of 1860-61, some of the most destructive on record, which damaged the system extensively. Afterwards, according to one account, repairs were made and a flume built, following the same course as the original ditch, to carry water to a higher point on the hillside where a second reservoir was constructed. Other accounts reported that repairs were not made, and that water was hauled in barrels from the river to Ventura residents.

Following the city's incorporation in 1866, the town trustees set themselves to the task of constructing a water system more suitable to the needs of a growing community. The first water franchise to provide water to the town of San Buenaventura for a fifty year period was granted to Jose Arnaz, Victor Ustusaustegui and Francisco Moleda on January 4, 1869. On June 26, 1871, this franchise was assigned to Thomas R. Bard and A.A. Chaffee, who in 1874 assigned it to the Santa Ana Water Company (Stetson, 1964: II-1).

Santa Ana Water Company (1870-1901)

The Santa Ana Water Company incorporated on January 10, 1870, for the purpose of building a dam on the San Buenaventura River and distributing the water through pipes and other means for irrigation purposes and to supply the town of San Buenaventura. The Trustees of the corporation were Walter S. Chaffee, Thomas R. Bard and William S. Patterson.

In February of 1874, the company had acquired all rights, titles, and interests of the Catholic Church to the water and ditches, flumes and aqueducts formerly operated by the Mission. The franchise to provide water to the City of San Buenaventura was provided to the Santa Ana Water Company on March 26, 1874. Minutes from the Board of Trustees meeting of March 12, 1875, stated the company's intentions "to negotiate a loan of $16,000... [so that] work can be carried on in laying pipe to reservoir on Cañada Larga." The site of this reservoir, or even whether it was constructed, is unknown. (Minute Book of Santa Ana Water Company 1870-1887)

The company built a new ditch, higher up the hillside than the previous Mission ditch, to transport water from San Antonio Creek to a reservoir above Poli Street. The winter rains made continuous repairs necessary, so that by 1888 the first metal pipeline was built along Ventura Avenue to supply water to the ranches along the avenue and to the town. Two earthen reservoirs were built by the company in 1888 on a 17.36 acre portion of the Weldon Tract purchased from W.R.H. Weldon, Hannah I. Weldon and Jane A. Weldon. These reservoirs, with a capacity of two million gallons, occupied the site of the present Kingston Reservoir, and received water through a ditch and flume system built along the Ventura River to an intake upriver. (Wood, 1942: 2; Grant Deed, book 23, p. 514; Schedule of Property, 1895).

An irrigation network, called the Power Ditch Irrigation System, was constructed along Ventura Avenue by the Santa Ana Water Company, and was originally independent from the city water system. Water was diverted to the ditch from the Ventura River near Foster Park, and was conveyed by flume and ditch to the Power Reservoir, located behind the Avenue School. Water was distributed by flumes and ditches from the reservoir for irrigation and power use (Stetson, 1964: II, 2-3).

In 1890 the Ventura Land and Water Company was organized as a subsidiary of the Santa Ana Water Company. Its purpose was to deal in lands and other issues in which the Santa Ana Water Company might have an interest. One of these interests was water-driven electricity generation. The company built a waterwheel adjacent to the Avenue Mill, diverting water to the generator at night when the mill was non-operational. Eventually another dam and ditch were constructed for this purpose. On July 25, 1890, the Ventura Land and Power Company was granted a franchise by the Ventura County Board of Supervisors to supply electricity to the county.

During this time, many city residents expressed dissatisfaction with the quality of the water supply, especially after storms, when the Ventura River would dump muddy water into the ditches and pipes. In 1895, the Ventura Land and Water Company offered to sell the water system to the city. City voters approved the sale of bonds to fund the takeover, but the bonds were withdrawn because clear title to the land could not be obtained. (Peterman, 1959: 2)

Ventura County Light and Power Company (1901-1906)

In May, 1901 the Santa Ana Water Company was taken over by a Los Angeles-based corporation, the Ventura County Light and Power Company. The acquisition included the water rights to the Ventura River, the reservoirs, pipelines, and franchises in Ventura, as well as the electric light and power plant systems. Management of the company was transferred to Ventura in 1902, and E.P. Foster elected president. Continued poor service led the city in 1905 to again attempt to take over the water and power company. A bond was approved by the voters, but challenged by the company. The courts ruled that the city had exceeded the bonded indebtedness limits contained in the city's charter, and invalidated the bond issue.

Ventura County Power Company (1906-1917)

Before taking over the Ventura County Light and Power Company in 1906, this company, formed in 1903, had been operating gas, electric, and water services in Ventura, Santa Paula and Oxnard. In 1906-07, the company began constructing a submerged dam at Casitas Narrows, in Foster Park, approximately one mile north of the three small reservoirs which would later become Kingston Reservoir, along with a 36-inch concrete pipeline to the reservoirs, replacing the open ditch and flume. Another reservoir extant at that time, Power Reservoir, was located behind the present day Avenue School.

The submerged dam, constructed of reinforced concrete, was built to intercept the underflow through the gravel in the Ventura River channel and to bring it to the surface in order to supplement surface runoff available for diversion for use by the city. Construction began on the western side of the river and continued across the channel for 973 feet to the east. The structure varied in depth from six feet to 50 feet, depending on the depth to bedrock under the riverbed. Because of increased cost and construction difficulties associated with the deeper bedrock at the eastern end of the site, the project was never

entirely completed, and a 300 foot gap remained at the eastern end. The date construction ceased ranges from 1907 to 1911, depending on the source (Peterman, 1959:13; Lippincott, 1934).

At the time the dam was constructed, perforated clay pipelines were buried on the upstream side of the dam. Apparently three perforated lines were constructed in total, two at the bedrock level and one closer to the surface. The water collected by these lines was transferred by gravity to an intake building housing a 32 foot deep wet well, where it was outflowed to the treatment plant by gravity and electric pumps.

By 1910, three small "city reservoirs" on the Cañada Larga site occupied the location of the present Kingston Reservoir. After 1929, these three reservoirs would be combined into the one large reservoir extant today. The Pacific Light and Power Corporation, a regional company operated by Pacific Electric Railway magnate Henry Huntington, acquired a controlling interest in the Ventura County Power Company in 1914. (Ventura County Power Company, 1910) [Figure 2]

Southern California Edison Company (1917- 1923)

In 1917 Southern California Edison Company acquired the business, franchise, and property of the Pacific Light and Power Corporation, including the water distribution systems of the Ventura Power Company as well as their electric and gas businesses. In 1921, Southern California Edison requested authorization to increase rates. Hearings before the Railroad Commission, the regulatory agency for power companies at that time, brought out the many difficulties the company was having providing consistent services to Ventura residents. These problems included the "lack of pressure in many part of the city, the presence of silt, fish and eels, bad tastes and odors..." (Wood, 1942: 4). The Edison Company made extensive improvements, including replacing pipeline, constructing new reservoirs and pumping plants, and the institution of a new metering system. Another result of the 1921 hearings was the acquisition of the water system by the City of Ventura in May, 1923, including the three small reservoirs on the 17 acre Cañada Larga property.

City of Ventura (1923 to present)

After taking over the operation of the water system, the City of Ventura immediately began to make improvements. One of the first tasks was to drill wells in various locations and to install pumps. Three wells were installed in the gap at the uncompleted end of the submerged dam in order to draw on water held in storage underground in the gravels above the dam and to intercept the underflow through the gap.

Prior to this time, the city's entire water supply came from the Ventura River. Despite these new wells, shortages continued, however, especially of the higher-quality domestic water. An increase in oil development in the Ventura River Valley increased water demand, especially for industrial use. Oil wells drilled in the Ventura River bottom lands, together with the discharge of waste water, impregnated the ground waters with mineral salts, leaving much of the groundwater unfit for domestic consumption.

During the 1930s, city officials began planning for a water treatment plant to correct the recurring problem of poor water quality. In 1936 the city Engineering Department began to study the most economical location for such a plant. The study recommended a site adjacent to the Kingston Reservoir, located six miles north of Ventura, in the Ventura River Valley.

In May, 1938 an application was filed for a Public Works Administration grant to construct a water works project to provide soft water to the city. Following assurances that the grant would be approved, the city hired the Los Angeles architectural and engineering firm of Taylor and Taylor to design and supervise construction of the treatment plant. In November of 1938, the final plans were completed for the treatment plant and the reconstruction of Kingston Reservoir for the storage of untreated water. That same month, the PWA grant was approved, and bids were opened in December of 1938 for the construction of the plant and reservoir improvements. The construction contract was awarded to Gates and Huntley of Los Angeles. Land adjacent to the Power Reservoir was purchased by the city for the treatment plant, sludge beds, wash water basin, and other improvements.

FIGURE 2. Ventura County Power Co. Facilities at Cañada Larga
Source: Book of Ventura Avenue Showing Location of Ditches, Flumes, Pipe-lines, Reservoirs and other Property of the Ventura County Power Company, March 1910 (with later pencil notations).

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Three other segments of the water treatment program built in 1939 included the construction of a raw water pipe line from the Kingston reservoir to the city limits for irrigation purposes; the roofing over the Power Reservoir to protect the treated water from algae growth; and the concrete lining of the Weldon Channel north of the reservoirs to prevent bank erosion. Changes to the water treatment process undertaken by the city during the 1950s and 1970s resulted in minor alterations to the facility. [Photo 1]

5. Site Description

The descriptions of buildings and structures on the site are keyed to Figure 3.

[1] Administration Building. The administration building is square in plan (40 by 40 feet), three stories in height plus a basement with a one story (97 by 12 foot) wing attached on the west side and is constructed of reinforced concrete with a grout lock brick exterior, painted white. The low steel-framed hipped roof of Spanish clay tile roof is capped with a four-sided cupola that repeats the rounded arches found in the windows of the second floors. Louvered wood vents are located within the arches. The Spanish Colonial Revival style building is symmetrical in design with a centered entry flanked by wood frame windows. A hipped roof covers the recessed entry supported by wrought iron brackets. The second floor features three round radiating arched multipaned double hung wood windows evenly spaced across the front (east) elevation. The third floor (east elevation) is divided from the second by a stringcourse and features a grouping of five narrow rectangular openings on each side with a single decorative vent in the middle. All of these openings serve as vents. The narrow vents have been covered with plywood. Decorative brick is used to create a cornice line. [Photo 2]

The one-story long rectangular-plan wing features a low gable roof covered with Spanish clay tiles with exposed rafters under the shallow eaves. The rectangular wood windows are organized in three groups of three windows each across the front (east) elevation. The windows run across the entire west elevation, interrupted by a four-paned glass and wood door in the middle. Most all of the wood windows on the west side have been replaced with aluminum windows within the original openings. Three wood and glass doors are located on the west side. The upper half of the west side of the building is covered with wide horizontal wood siding and corbeled wood pilasters. The lower half is constructed of brick.

On the north side of the building is a concrete loading ramp extending up to the second floor, with a large round arched paneled recessed entrance door flanked by two round arched multi-paned wood windows. Above the entrance is a decorative brick vent with five narrow openings on either side, repeating the design on the front of the building. Underneath the ramp are three segmented arched openings with radiating brick. A wrought iron railing extends the length of both sides of the ramp. [Photo 3]

The west (rear) elevation consists of two, flat roofed concrete block wings, probably added between 1958 and 1973. The small northern addition (electrical equipment room) features metal-framed windows. The southern addition is long and narrow and open on the north side for chlorine tank storage enclosed behind a metal fence. Above the additions are three evenly spaced rectangular wood windows. Five narrow vent openings are repeated under the roofline. Two contain their original louvered vents, and three are covered with plywood. [Photo 4]

The interior of the building was altered with the addition of dropped ceilings and dividing walls. The first floor of the building houses a laboratory and administrative offices. The second floor was originally used as a chemical storage area. The third floor held large wash-water storage tanks, which were removed after 1952. The basement contains a workshop and pipe gallery.

[2] Treatment and Settling Basins. On the north and south sides of the administration building are large reinforced concrete basins for treating raw water from the reservoirs. These basins are surrounded by brick walls painted white and capped with red brick. Metal catwalks with pipe railings extend over the basins. The water treatment process consists of several steps. The first step is the coagulation and flocculation basin. The second step is the sedimentation process where the water stands in quiet pools for settling out

PHOTO 1. Overview of Avenue Water Treatment Plant, facing west, circa 1940 (Ventura County Museum of History and Art).

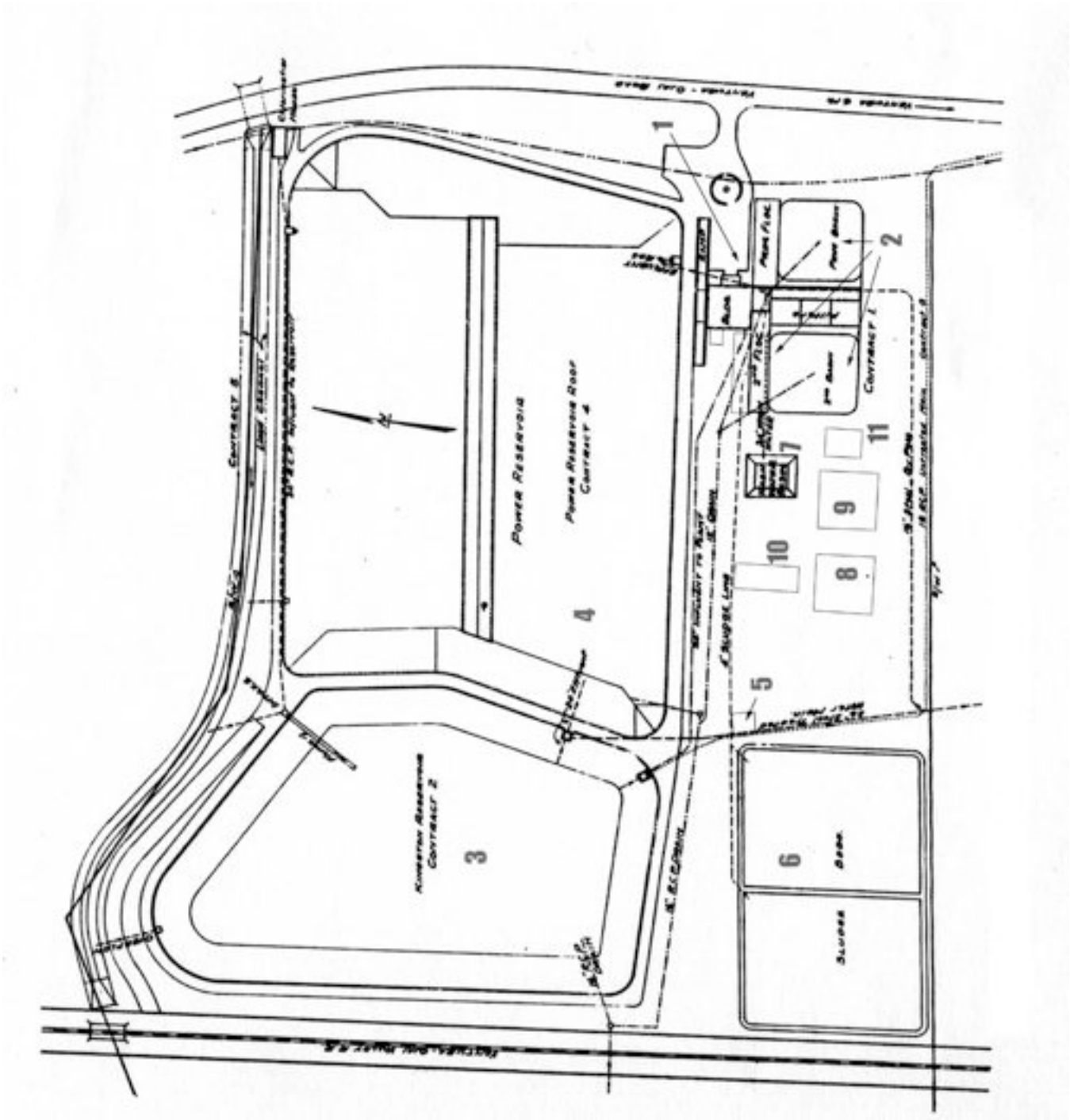

FIGURE 3. Site Plan.
Source: Plan of Improvements, 1939 (later buildings and structures added).

of sediments. The third step is the clarification process where the water is passed through filter beds. Following the filtration, the final step is the disinfection process.

The primary flocculator basin measures roughly 22 by 81 feet, and 12 feet deep. The secondary flocculator basin measures approximately 18 by 98 feet and 12 feet deep. The primary clarifier measures 75 by 75 feet and 14.5 feet deep. The secondary clarifier measures approximately 75 by 75 feet, and 14.5 feet in depth. The three filter basins measure roughly 79 by 24 feet and 11 feet in depth. During revisions to the plant in 1973, the circular sludge collector was replaced in the rear basin. [Photos 5, 6, 7, 8]

[3] Kingston Reservoir. This reservoir site consisted of three small earthen reservoirs when the city acquired the water system in 1923. In 1929 the two northern reservoirs were joined into one reservoir, leaving a dike between the resulting northern and southern reservoirs. Plans were made in 1931 to combine the reservoirs and to reline and reconstruct them in concrete, but apparently these plans were not carried out until 1939. The present reservoir is an irregular shaped structure, approximately 420 feet long by 285 feet wide at the top, sloping sides, 18.5 feet deep, set in a cut and rolled fill embankment with a ten foot berm around the edge. The walls and base are of six inch reinforced concrete with weep holes. The storage capacity is eleven million gallons. The reservoir includes an inlet, outlet, valves and piping. A concrete outlet box located in the reservoir delivers raw water for irrigation purposes. Two pumps are also housed in the outlet box which deliver the influent to the treatment plant. The reservoir was named after W.R. Kingston, a previous owner of the land. [Photo 9]

[4] Power Reservoir. The first Power Reservoir was built probably in the 1880s as part of the Power Ditch Irrigation System serving farmers along Ventura Avenue. It was located behind the present day Avenue School. This unfenced reservoir also doubled as “swimming hole” for children living along the Avenue. During the 1930s, the land was deeded back to E.P. Foster, and the earthen reservoir filled in and the site planted with lemons (Percy, 1978: 24).

The present Power Reservoir was built in 1939. It is a concrete lined, covered reservoir measuring 500 by 336 feet, with a maximum depth from the floor to column tops of 29 feet. The roof support system consists of 491 precast concrete, 14 by 14 inch columns, each weighing up to 5,100 pounds; and 93, 12 by 12 inch columns on the slopes (Nutter, 1939: 415).

The roof is low-pitched, with hipped and gabled ends, with a gabled monitor ridge ventilator running the length of the roof from east to west and covered with corrugated metal. An 18 foot high screen was constructed around the base at the curb of the reservoir. The corrugated metal roof material was replaced with a ribbed steel roof in 1994. At the same time, new stainless steel strengthening plates were added to the columns internally. [Photo 10]

[5] Chlorination and Booster Pumping Station (Valley Vista Building). This square plan building has a very low gable roof. The building is covered with masonite panels and has a wood and glass door and a double hung woodframe window. It was built circa 1952. [Photo 11]

[6] Sludge Beds. These open beds with earth berms were built in 1939 as part of the treatment plant and are located south of the Kingston Reservoir. [no photo]

[7] Washwater Basin No 1. Located behind the treatment plant and south of the Power Reservoir is this basin with raised concrete sides and a metal pipe railing. This basin was built in 1939 and measures 40 by 46 feet and 7 feet deep. [Photo 12]

[8] Washwater Basin No. 2. This concrete 54 by 54 foot basin was constructed circa 1952 as a waste brine basin. It is 5.5 feet deep. [Photo 13]

[9] Shop and Storage Building. This ribbed steel metal building with a low-pitched gable roof, 50 by 55 feet in plan, was constructed in 1973 over the former Sea Water Basin. [Photo 12]

[10] Garage. This partially open-sided corrugated metal building, approximately 20 by 60 feet in plan, appears on this site by 1973, but based on visual evidence, was probably constructed elsewhere and moved to its current location. [Photo 13]

[11] Sludge Dewatering Unit. This open-sided building constructed in 1973 has a metal gable roof over a concrete slab foundation supported by steel posts. [Photo 12]

[12] Foster Park Submerged Dam. This reinforced concrete dam was constructed beginning in 1906-07 by the Ventura Power Company. Construction began on the western side of the Ventura River and extended across the channel 973 feet to the east, at depths varying from five feet on the western end to 65 feet deep at the eastern end. The date of completion was between 1907 and 1911, depending on which source is accepted. [No Photo]

[13] Foster Park Intake Building. This rectangular plan building was built at some point between 1906 and 1911, along with and directly on top of the submerged dam. It is constructed of poured in place concrete and has a flat roof. The building rests on a high perimeter foundation with an attached stairway and railing leading up to the landing and entrance. Three steel doors are located on the southern elevation, along with a steel stairway. A steel electrical mast is located on the roof. Three galleries, including a 32.5 foot deep wet well located inside the building, serve as an impounding area for water transferred through the outflow pipeline to the treatment plant. Underground inflows have apparently been added and disconnected from the building during its service life. Some reconstruction of the facility occurred after the floods of 1969. [Photo 14]

[14] Foster Park Surface Diversion. The surface diversion structure is located upstream from the submerged dam. The intake is an exposed concrete channel approximately three feet wide and ten feet long, containing steel sluice gates that replaced earlier wooden gates. The date of construction is uncertain, but it appears to have been in service at least as early as 1938. The diversion no longer supplies water to the intake building. [Photo 15]

6. Eligibility of Historic Resources

For purposes of the following significance and eligibility discussion, the term “property” refers to all of the building and structures on both the water treatment plant and Foster Park sites, as summarized in Table 1, below. Although these sites are not physically contiguous, they are both functionally and historically related, and best understood and evaluated as a single unit.

National and California Registers: Significance and Eligibility

The property may be eligible under NRHP **Criterion A** (CRHR Criterion 1), for its close association with the history of water development in the City of Ventura over a 125-year span, and its singular role in these events. Establishing a reliable and acceptable water supply became a critical issue for the Ventura community with the establishment of Mission San Buenaventura. These issues, which were addressed with only limited success by a series of private water suppliers, were ultimately solved with the construction of the city’s first modern water treatment plant on this site in 1939.

No other property in the Ventura area appears to be more representative of the city’s lengthy water development history. The existing Kingston Reservoir was an enlargement of three smaller reservoirs built on this site, two of which date to 1888 or earlier, when the water system was developed by the Santa Ana Water Company, and the Foster Park diversion an early effort to increase supply. However, the primary significant historical event with which this property is associated is the construction of a modern water treatment plant, which solved the city’s long-standing quality and reliability issues. Without the construction of this plant and its related facilites, Ventura would have been far less able to take advantage of the growth and development opportunities which were presented by the postwar era.

The period of historical significance for the majority of the existing buildings and structures on the

property is 1906 to 1952, which encompasses the period of construction of the submerged dam and intake building, the current plant facilities and the relatively minor improvements to the system made during the early 1950s.

The property does not appear to be potentially eligible under NRHP **Criterion B** (CRHR Criterion 2), as it is not known to be associated with any individuals of historic importance.

The property, and in particuar the treatment plant, may be eligible under NRHP **Criterion C** (CRHR 3) as a scarce example of a waterworks facility constructed with PWA funding. The distinctive characteristics of this engineering facility include the use of Spanish Colonial Revival architecture, as well as the components of the plant (buildings, basins and reservoirs) all combining to represent the latest in water quality engineering technology in 1939. When the Power Reservoir roof was constructed, covering four acres and supported by a system of 4,000 precast concrete units, it was identified in a contemporary engineering trade journal as being "a project of notable importance." (Nutter, 1939: 413)

The project architects were Taylor and Taylor of Los Angeles, a firm consisting of brothers Edward Gray Taylor and Ellis Wing Taylor. Edward Taylor studied architecture and engineering at Columbia University in New York before opening an office in Los Angeles in 1912. Both men had been employed by Donald Douglas and designed the original buildings of the Douglas aircraft factory in Santa Monica. Edward Taylor worked as an architect until the early 1940s, and died in 1946. Ellis Taylor died in 1951. No information was located to suggest that the architects should be regarded as "masters," in terms of the NRHP criteria. (Withey, 1956: 590)

NRHP **Criterion D** (CRHR Criterion 4) is not applicable in this report because it refers to archaeology.

Integrity Discussion

The property as a whole possesses integrity of **location** (the property has not been moved). The Administration Building has retained its integrity of **design**, **materials** and **workmanship**; only minor, unobtrusive and reversible alterations and additions have occurred to the building. The remaining buildings and engineering structures (water basins, submerged dam, intake building, and reservoirs) have also largely retained their integrity of design and materials, although the addition of a small number of new buildings and structures in 1973 (storage, garage, washwater basin, and sludge dewatering unit) somewhat diminishes the physical relationship between the historic buildings and structures. The reconstruction of the roof on Power Reservoir in 1994 also somewhat diminished this structure's integrity of design and materials.

The **setting** (physical environment of a historical property) is largely intact. The property was constructed in a rural setting, in which it continues to reside today, with the exception of the relatively recent intrusion of the nearby Ojai Freeway (SR 33). The property has retained its integrity of **feeling** (a property's expression of the aesthetic or historic sense of a particular period of time) and its **association** (the direct link between an important historic event or person and a historic property) because the property has continued to be used actively for its original purpose.

This property has retained a sufficient level of integrity to be regarded as eligible for listing on the NRHP under criteria A and C. Properties which are eligible for the NRHP are also presumptively eligible for the CRHR. The contributing and noncontributing buildings and structures are summarized in Table 1, below.

Table 1: Summary of Potentially Eligible Buildings and Structures

No.	Name	Date	Contributor
1.	Administration Building	1939	Yes
2.	Treatment and Settling Basins	1939	Yes
3.	Kingston Reservoir	1888-1939	Yes
4.	Power Reservoir	1939	Yes
5.	Chlorination Station	c1952	Yes
6.	Sludge Beds	1939	Yes
7.	Washwater Basin No. 1	1939	Yes
8.	Washwater Basin No. 2	c1952	Yes
9.	Shop/Storage Building	1973	No
10.	Garage	1973	No
11.	Sludge Dewatering Unit	1973	No
12.	Submerged Dam	c1906-11	Yes
13.	Intake Building	c1906-11	Yes
14.	Surface Diversion	pre-1938	Yes

Local Landmark: Significance and Eligibility

Section 2.430.150 of the Ventura Municipal Code sets out the following criteria for designation of a city landmark:

A landmark means any real property such as building, structure, or archaeological excavation, or object that is unique or significant because of its location, design setting, materials, workmanship or aesthetic feeling, and is associated with:

1. Events that have made a meaningful contribution to the nation, state or community;
2. Lives of persons who made a meaningful contribution to national, state or local history;
3. Reflecting or exemplifying a particular period of the national, state or local history;
4. Embodying the distinctive characteristics of a type, period, or method of construction;
5. The work of one or more master builders, designers, artists or architects whose talents influenced their historical period, or work that otherwise possesses high artistic value;
6. Representing a significant and distinguishable entity whose components may lack individual distinction;
7. Yielding, or likely to yield, information important to national, state or local history or prehistory.

The Avenue Water Treatment plant and related facilities appear to be eligible for listing as a City Landmark under criterion (1). This site represents 125 years of continuous water development history in the City of Ventura, from the Santa Ana Water Company's pioneering efforts in the 1870s, through a succession of private water and power companies, and its eventual acquisition by the City of Ventura and improvement with PWA funds in 1939. The development of reliable water sources for domestic, agricultural and industrial purposes was essential to the city's successful growth and development. This importance was expressed by the construction of the modern treatment plant in 1939, a significant event in that history that solved the problem of poor water quality that had plagued the city's water system since its inception.

The treatment plant also appears to be eligible for listing as a City Landmark under criterion (4). The prominent three-story administration building surrounded by basins and reservoirs reflects an industrial waterworks building with an impressive Spanish Colonial Revival design. Partially funded by a Public Works Administration (PWA) grant, this project was the largest in terms of cost built in the City of Ventura and perhaps in the county as a whole. Other city PWA projects included the Post Office, Ventura Junior High School and Ventura Junior College, Ventura High School and County Hospital Isolation Ward.

The PWA was one of several programs established by Congress during the Depression. Between 1933 and 1939, 26,000 federal and nonfederal projects were constructed not only to relieve unemployment, but "to provide decent housing for the poor, to bring better public buildings of all types to Americans, to modernize America through roads, water systems and electricity, and to wrest from private interests the right to operate public utilities." (Short, 1986: VII) The water treatment plant is an excellent example of a well-designed public building that addressed the long-standing need of modernizing the Ventura water system.

7. Project Impacts

The properties evaluated in this report and identified in Table 1, above, should be regarded as historic resources for CEQA and Section 106 purposes. The impacts for Phase 1 of the proposed project will be addressed as specifically as the project description allows. Due to the currently less defined nature of Phase II, these impacts will be addressed at a programmatic level. Additional impact assessment may be required for Phase I and Phase II, when additional information becomes available.

Phase I Impacts

Impact 1a. The removal of the western sedimentation basin, flocculator and delivery ramp will result in a substantial loss of design integrity, and to a more limited extent, integrity of feeling and association, for the water treatment plant. This is due to a reduced ability to interpret the functional relationships between these features and the operation of the water treatment plant as a whole. This activity should be regarded as an adverse impact on an historic resource which can be mitigated.

Impact 1b. The removal of the western sedimentation basin and flocculator may result in structural and/or design alterations to the adjacent Administration Building to which they are closely related visually, and physicially attached. This activity should be regarded as an adverse impact on an historic resource which can be mitigated.

Impact 1c. The construction of new water treatment facilities in accordance with a currently unspecified design may result in the loss of historic features and/or the introduction of elements which are out of character with the historic property, and therefore a reduction in integrity of design for the water treatment plant. This activity should be regarded as an adverse impact on an historic resource which can be mitigated.

Impact 1d. The functional abandonment of the eastern sedimentation basin and flocculator and its potential modification to accommodate a public art project will result in a reduction of feeling and association integrity for the water treatment plant, due to a reduced ability to interpret the functional relationships between these features and the operation of the water treatment plant as a whole. A loss of design integrity may also result, depending on the design of the public art project. This activity should be regarded as an adverse impact on an historic resource which can be mitigated.

Phase II Impacts

Impact 2a. The construction of a new Administration Building of an unspecified design will likely result in a reduction in design integrity for the water treatment plant as a whole.

Impact 2b. The adaptive reuse of the Administration Building may result in the loss of historic features within the building which are important to interpreting its historic function, as well as requiring structural modifications which are out of character with the building.

Impact 2c. The removal of the Foster Park Diversion and Intake Building will result in a loss of design integrity for the property and reduce the ability to interpret the functional

relationships between these features and the operation of the water treatment plant as a whole.

8. Mitigation and Residual Impacts

A principle of environmental impact mitigation is that some measure or combination of measures may serve to reduce adverse impacts. In reference to mitigating impacts on historic resources, the CEQA Guidelines state:

> Generally, a project that follows the *Secretary of the Interior's Standards for the Treatment of Historic Properties with Guidelines for Preserving, Rehabilitating, Restoring, and Reconstructing Historic Buildings or the Secretary of the Interior's Standards for Rehabilitation and Guidelines for Rehabilitating Historic Buildings* (1995), Weeks and Grimmer, shall be considered as mitigated to a level of less than a significant impact on the historical resource. (PRC §15064.5 (b)(3))

These standards and the supporting literature describe the principles of historic preservation as well as accepted methodologies for carrying out preservation, restoration and rehabilitation projects. The documentation of a resource in preparation for its demolition, for example, would not comply with the *Secretary of the Interior's Standards,* although documentation of a resource in connection with its relocation to another suitable site arguably may. In direct reference to documenting historic resources as a mitigation technique, the CEQA Guidelines state:

> In some circumstances, documentation of an historical resource, by way of historic narrative, photographs or architectural drawings, as mitigation for the effects of demolition of the resource will not mitigate the effects to a point where clearly no significant effect on the environment would occur. (PRC §15126.4 (b)(2))

Implied by this language are circumstances where documentation may mitigate impacts to less than significant levels. The conditions under which this may be said to have occurred are not specified in the Guidelines.

Taken in total, the language in the CEQA Guidelines encourages mitigation of impacts on historic properties to conform with the *Secretary of the Interior's Standards,* but also appear to leave open the potential for reducing impacts to levels below significance thresholds by means other than the application of the *Standards*. A logical resolution of the language in the CEQA Guidelines is to consider the level of eligibility of the property, as well as by what means it derives its significance, in determining the appropriate level and type of mitigation to be employed, and in concluding whether residual impacts will exist after mitigation.

In general practice, mitigation programs for impacts on historic resources tend to fall into three broad categories: documentation, design and interpretation. Documentation techniques involve the recordation of the site according to accepted professional standards, such that the data will be available to future researchers. Design measures could potentially include direct or indirect architectural references to the historic property, e.g., the incorporation of historic artifacts, into the new development, or relocation of the historic property. Interpretative measures might include commemorating a significant historic event or the property's connection to historically significant themes.

Section 106 of the Historic Preservation Act requires a federal agency to "consult with the [State Historic Preservation Officer] and other consulting parties... to develop and evaluate alternatives or modifications to the undertaking that could avoid, minimize or mitigate adverse effects on historic properties. (36 CFR 800.6(a)). Beyond this general mandate, the federal regulations are nonspecific with respect to assigning types and levels of mitigation to adverse effects, which ultimately are resolved by means of the agency consultation process described in the federal code. However, the linkages between Section 106 and the *Secretary of the Interior's Standards* found elsewhere in the statutes implies that the employment of these

standards towards the resolution of adverse impacts is the most appropriate methodology to be utilized in the Section 106 process.

Because this property derives its significance and eligibility primarily from both the historical and architectural importance of property, a mitigation program should concentrate on design and interpretive measures. The following measures should to be incorporated into the project design, mitigation program, and/or environmental document produced for this project. These mitigation measures are based on the project as described in Section 1 of this report. Should the project description change, further analysis and evaluation will be required.

The following mitigation measures are recommended for Phase I:

Mitigation 1. In consultation with a qualified historic preservation professional, all historically significant buildings and structures and features listed in Table 1 which will be modified or removed should be documented in accordance with HABS/HAER standards. This documentation should include archival quality photographs of exterior features, elevations and significant interior features. Scaled, "as built" site plan and floor plans should also be produced where existing plans or records will not suffice. The documentation package will be archived at an appropriate location to be determined by the city.

Mitigation 2. In consultation with a qualified historic preservation professional, produce an onsite and/or offsite interpretive plan for the property focused on the history of water in Ventura in general and the role of the Avenue Water Treatment Plant in particular. The interpretative plan may consist of but not be limited to monuments, plaques or other publicly-available, permanent displays of pertinent historical information. To the greatest extent feasible, the proposed public art project planned for the site should be combined with the interpretive plan in a manner which conforms to the *Secretary of the Interior's Standards for the Treatment of Historic Properties,* and aids in the interpretation of the historic themes.

Mitigation 3. To the greatest extent feasible, all modifications to historic building and structures on the property should be undertaken in conformance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. These alterations should not unncessarily destroy historic materials or architectural features that characterize the property. Particular attention should be given to addressing any structural and architectual issues related to the removal of the ramp on the northern side of the Administration Building and the western sedimentation basins. These plans should be prepared in consultation with a qualified historic preservation professional.

The following mitigation measures are recommended for Phase II:

Mitigation 4. In consultation with a qualified historic preservation professional, all historically significant buildings and structures listed in Table 1 which will be modified or removed should be documented in accordance with HABS/HAER standards. This documentation should include archival quality photographs of exterior features, elevations and significant interior features. Scaled, "as built" site plan and floor plans should also be produced where existing plans or records will not suffice. The documentation package will be archived at an appropriate location determined by the city.

Mitigation 5. To the greatest extent feasible, the construction of the new administration building, and alterations to the existing Administration Building required meet seismic requirements and for adaptive reuse, should be undertaken in conformance with the *Secretary of the Interior's Standards for the Treatment of Historic Properties*. These plans should be prepared in consultation with a qualified historic preservation professional.

9. Sources

Bennett, Leland G. "The Ventura River Story." Ventura, CA: Ventura River Municipal Water District, 3/13/1967.

Brovarney, Dorothy E. "Canada Larga: History and Preservation of the Mission San Buenaventura Aqueduct." *Ventura County Historical Society Quarterly*. 3 (Spring 1987) 3-28.

Browne, Robert O. "San Buenaventura Mission Water System." Unpublished report, 1972, updated 1982 with information from other sources.

City of Ventura, Sketch of Casitas Submerged Dam, April 15, 1922, #22C-1, located in city engineering office.

City of Ventura, Sketch of Ventura City Reservoirs, March 8, 1922, #22-C-2, located in city engineering office.

City of Ventura, Map of Ventura City Water Works, Foster Park, showing location of wells, pipe lines, etc., July, 1924, #24-D-6, located in city engineering office.

City of Ventura, Map Showing Kingston Reservoir and Test Holes Dug to Determine Elevations of Ground Water. October 11, 1930, #30-D-31, located in city engineering office.

City of Ventura, Plat of Facilities at Avenue Plant, Treatment Plant and Reservoirs, #46-D-6, located in city engineering office.

City of Ventura, Plans for Power Reservoir Roof, April 1939, # 39-D-F, located in city engineering office.

City of Ventura, Plat of Facilities at Avenue Plant, Treatment Plant and Reservoir, #58-D-18, located in city engineering office.

City of Ventura, Plan of the Reconstruction and Lining of Kingston Reservoir, December 1930, #30-D-33, located in city engineering office.

Grant Deed, W.R.H. Weldon, Hannah L. Weldon and Jane A. Weldon to Santa Ana Water Company, Feb. 23, 1888. Book 23, page 514, Located at Ventura County Museum of History and Art Library.

Lippincott, J.B. Report on Future Water Supply for Ventura, California. Los Angeles: J.B. Lippincott Engineering Offices, May 1934.

Nutter, Ben E. "Four Thousand Precast Concrete Units Support a Reservoir Roof." *Western Construction News*. December 1939.

Percy, Eugene Foster. "All Swimmers Welcome to the Reservoir." *Ventura County Historical Society Quarterly*. 2 (Winter 1978) 17-24.

Peterman, L.S. "Ventura County Kilowatts, 1870-1907." *Ventura County Historical Society Quarterly*. 3 (May 1959) 2-13.

Peterman, L.S. "Ventura County Kilowatts, Post 1907." *Ventura County Historical Society Quarterly*. 4 (August 1959) 2-12.

Railroad Commission of the State of California. "Report on the Results of Operation of the Ventura Water System Owned and Operated by the City of San Buenaventura, California." Fiscal years ending June 30, 1940 and 1941, Special Study No. R-21. San Francisco, California, February 2, 1942.

Richardson, Joe. Telephone interview with former city engineering department employee and professor of water science at Ventura College, August, 2003.

Santa Ana Water Company Minute Book, 1870 to 1888, located at Ventura County Museum of History and Art Library.

Schedule of the Property of the Santa Ana Water Company Included within its System of Water Works. May 20, 1895. Located in Santa Ana Water Company files in Ventura City Clerk's office.

Short, C.W. & Brown, R. Stanley. *Public Buildings: Architecture Under the Public Works Administration, 1933-39, Vol. I,* reprint by A Da Capo Paperback, 1986.

Stetson, Thomas M. Review of Water Rights of the City of Ventura in the Ventura River System. Los Angeles: Thomas M. Stetson Civil and Consulting Engineers, March 2, 1964.

Swan, Walter S. "Ventura to Soften Water as Part of $338,000 Development Program." *Western City*. October 1939.

Ventura County Power Company. "Book of Ventura Avenue Showing Location of Ditches, Flumes, pipe-lines, Reservoirs and other Property of the Ventura County Power Company, March 1910." Located in engineering department, Ventura City Hall.

Ventura County Star Free Press, April 3, 1939.

Withey, Henry and Withey, Elsie. *Biographical Dictionary of American Architects (Deceased)*. Los Angeles, CA. 1956.

Wood, Hugh M. "Discussion of the History and Accomplishments of the Ventura Water System." Ventura, Ca.: Radio "Know your City" Program, May 20, 1942.

PHOTO 2. Front (eastern) elevation, Administration Building, facing northwest (30 April 2002).

PHOTO 3. Northern and western elevation, Administration Building, Power Reservoir in foreground, facing southeast (30 April 2002).

PHOTO 4. Rear (western) elevation, Administration Building, facing east (30 April 2002).

PHOTO 5. Primary Flocculator/East Sedimentation Basin, facing south (30 April 2002).

PHOTO 6. Secondary/West Flocculator, facing east (30 April 2002).

PHOTO 7. West Sedimentation Basin, facing east (30 April 2002).

PHOTO 8. Filter Beds, facing north (30 April 2002).

PHOTO 9. Kingston Reservoir, facing north (30 April 2002).

PHOTO 10. Power Reservoir, facing north (30 April 2002).

PHOTO 11. Chlorination and Booster Pumping Station/Valley Vista Building, facing southwest (30 April 2002).

PHOTO 12. Wash Water Basin No. 1, Shops and Storage Building, Sludge Dewatering Unit at rear, facing south (30 April 2002).

PHOTO 13. Washwater Reclamation Basin No. 2, garage in foreground, facing southwest (30 April 2002).

PHOTO 14. Foster Park Intake Building, viewed from southeast. (30 April 2002).

PHOTO 15. Foster Park Surface Diversion, viewed from west. (30 April 2002).