Appendix C

Cultural Resources Technical Memo

ESA

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memorandum

date	March 8, 2024
to	Suzan England, Utilities Engineering Manager, City of Hayward
cc	Michael Walkowiak, Managing Principal, Brown & Caldwell
from	Johanna Kahn, Senior Architectural Historian, ESA
subject	Cultural Resources Survey Report for the City of Hayward Water Pollution Control Facility Improvements Phase II Project

Introduction

This Cultural Resources Survey Report documents the methods and results of a cultural resources inventory completed for the Hayward Water Pollution Control Facility (Hayward WPCF) Improvements Phase II Project (Project). The Project is proposed by the City of Hayward (City) to rehabilitate aging infrastructure, increase peak hydraulic capacity, comply with anticipated more stringent regulations, and continue to protect the public health and environment in the service area. The Project would be seeking federal funding through the U.S. Environmental Protection Agency (USEPA) Water Infrastructure Finance and Innovation Act (WFIA) program. As a federal undertaking (i.e., a project requiring federal funding, a federal action, or issuance of a federal permit), the Project is subject to federal environmental regulations, including the National Historic Preservation Act of 1966 (NHPA), as amended (54 United States Code [U.S.C.] 306108). The USEPA is the lead agency for NHPA purposes. The Project is also subject to the California Environmental Quality Act (CEQA). The City is the lead agency for CEQA purposes. This report is a combined technical report to support environmental review and permitting at the local, state, and federal levels.

This document records the existing conditions of the Project area with regard to cultural resources, including both archaeological and architectural resources. Work performed consists of background and archival research to determine the potential to encounter buried archaeological resources during project implementation, as well as documentation and evaluation of existing cultural resources in the Project area.

Professional Qualifications

ESA Architectural Historian Johanna Kahn, M.Ar.H., and ESA Archaeologist Melissa Grijalva-Foreman were the primary authors of this report. Ms. Kahn meets the Secretary of Interior's Professional Qualification Standards (SOI PQS) for Architectural History, Architecture, and Historic Architecture. Ms. Grijalva-Foreman is an archaeologist with four years of professional experience. ESA Architectural Historian Amy Langford, Ph.D., provided documentation support. ESA Architectural Historian Becky Urbano, M.S., who meets the SOI PQS for

Architectural History and History and ESA Archaeologist Ashleigh Sims, M.A., RPA, who meets the SOI PQS for Archeology provided quality assurance and review.

Research Methods and Results

Records Search

ESA completed a records search at the Northwest Information Center (NWIC) of the California Historical Resources Information System on December 12, 2023 (File No. 23-0820). Previous surveys, studies, and site records were accessed. The purpose of the records search was to (1) determine whether known cultural resources have been recorded within the Project vicinity; (2) assess the likelihood for unrecorded cultural resources to be present based on historical references and the distribution of nearby sites; and (3) develop a context for the identification and preliminary evaluation of cultural resources.

The NWIC records search indicated that one previously recorded cultural resource (P-01-002269), the Eastshore-Grant Transmission Line, crosses over the Project area. However, it will not be impacted by the Project because it is above the vertical ceiling of the Project.

The Hayward WPFC was recorded and evaluated in 2017 (Melvin, 2017) (**Figure 1**). This record is not on file at the NWIC. It was recorded as an individual architectural resource comprising 49 buildings and structures and was found to be ineligible for listing in either the National Register of Historic Places (National Register) or the California Register of Historical Resources (California Register) under any criteria. None of the buildings or structures within the Hayward WPCF were previously evaluated as individual resources.

Native American Correspondence

ESA contacted the California Native American Heritage Commission (NAHC) on December 11, 2023, to request a search of the NAHC's Sacred Lands File (SLF) and a list of Native American representatives who may have knowledge of tribal cultural resources in the Project Area, or interest in the Project. On December 18, 2023, the NAHC provided a list of eighteen Native American representatives from eight tribes who may have knowledge of tribal cultural resources in the Project area or be interested in the Project. The SLF search was negative for sacred sites within 0.5 mile of the Project area. Formal notification was sent electronically to the eighteen representatives identified by the NAHC on December 22, 2023. The California State Water Resources Control Board (SWRCB) is anticipated to conduct tribal consultation as required under Section 106 of the NHPA. The City is anticipated to conduct tribal consultation as required under Assembly Bill (AB) 52.

Archaeological Sensitivity Assessment

This analysis uses the term 'potential' to assess the possibility of cultural resources to be present and 'sensitivity' to assess the likelihood that any possible cultural resources are significant under the California Register and would qualify as a historical resource.

As part of an archaeological sensitivity analysis, site records, historical maps, aerial photography, soil maps, and previous studies were reviewed. The historical maps and aerial imagery show that no historic-era buildings and features that could represent buried historic-era archaeological resources, such as artifact-filled wells or privies,

were present within the Project area (NWIC, 2023; USGS, 1899; 1915; 1947; 1959; NETR, 2023). Therefore, the potential for historic-era archaeological resources to be present in the Project site is low.

Based on the Holocene age of the soils and the Project's location along the shoreline of San Francisco Bay, there is the potential for buried pre-contact archaeological deposits in undisturbed portions of the Project area. However, the Project area has incurred decades of extensive soil disturbance caused by the construction, maintenance, and expansion of the WPCF. Additionally, no pre-contact or indigenous resources have been previously identified within 0.5-mile of the Project area (NWIC, 2023). Therefore, the potential for intact pre-contact archaeological resources to be present in the Project site is low.

In summary, due to the extensive disturbance and the lack of known pre-contact and historic-era archaeological resources, the Project's pre-contact and historic-era archaeological resources sensitivity is low.

Architectural Resources Analysis

Summary of 2017 Evaluation of the Hayward WPCF

The 2017 evaluation concluded that the Hayward WPCF is not individually eligible for listing in the National Register or California Register because it lacks significance under any criteria. The report's author did not explicitly evaluate the Hayward WPCF for eligibility at the local level. The Hayward WPCF was found insignificant under Criterion A/1 (event) because it "followed existing trends and patterns [regarding Bay Area municipalities constructing new wastewater treatment plants during the 1950s to conform with government regulations] and was not a leading example or otherwise historically important wastewater treatment plant" (Melvin, 2017: 20). It was found insignificant under Criterion B/2 (person) because "[r]esearch did not reveal that any individual associated with [the Hayward WPCF] has made demonstrably important contributions to history at the local, state, or national level" (Melvin, 2017: 20). The Hayward WPCF was found insignificant under Criterion C/3 (design/construction) because it is "a plant that employed common methods and followed the existing standards from the time of its original construction and early development," the "characteristics [of the International Style of architecture] are present in varying degrees in [the buildings constructed during the 1950s through 1970s], [which] are all very modest expressions of the International Style and not architecturally distinctive," and it "does not represent any of [sanitary engineer Harry N. Jenks'] innovations in the field, a particular phase of his career, or aspect of his work" (Melvin, 2017: 20). Lastly, the Hayward WPCF was found insignificant under Criterion D/4 (information potential) because it "is not a significant or likely source of important information about historic construction materials or technologies that otherwise would not be available through documentary evidence" (Melvin, 2017: 20).

The 2017 evaluation also stated that the Hayward WPCF "does not qualify as a historic district," but no discussion of historic district considerations was presented (Melvin, 2017: 20).

Updated Evaluation of the Hayward WPCF

Per California Public Resources Code Section 5024.1(g)(4), "If the survey is five or more years old […], the survey is updated to identify historical resources which have become eligible or ineligible due to changed circumstances or further documentation and those which have been demolished or altered in a manner that substantially diminishes the significance of the resource." The 2017 evaluation of the Hayward WPCF is more than five years old; therefore, it has been updated by ESA pursuant to current professional standards for eligibility

for listing in the National Register and California Register. The City applies California Register criteria to determine eligibility for local designation (City of Hayward Municipal Code Section 10-11.030). ESA has updated the 2017 evaluation of the Hayward WPCF on a California Department of Parks and Recreation 523 Series (DPR 523) update form, and it is appended to this memo (Kahn and Langford, 2024). A summary is presented below, and the reviewer is directed to the DPR 523 update form for the complete analysis.

Individual Significance

ESA concurs with the previous finding that the Hayward WPCF does not possess significance under any National Register or California Register criteria. ESA surveyed the property in early January 2024, carefully reviewed the 2017 evaluation, and conducted limited supplemental research to confirm construction dates and certain key data. We conclude that the historic context was thorough and the evaluation was well supported. The 2017 evaluation included incorrect construction dates for several subject buildings. Data provided by the City of Hayward in January 2024 included corrected construction dates for many of the buildings and structures and identified several others that were omitted from the 2017 evaluation (Carbert, 2024). This superseding data is reflected in the updated evaluation, and it does not change the conclusion that the Hayward WPCF does not appear to be individually eligible for listing in the National Register, California Register, or the City's register of designated historical resources under any criteria.

Historic District Considerations

The Hayward WPCF is located more than 2.5 miles from the any historic district listed in or eligible for listing in the National Register, California Register, or the City's register of designated historical resources. As such, it would not contribute to any known historic district. Additionally, no discontiguous historic district has been identified for which the Hayward WPCF could contribute. Furthermore, no apparent patterns emerge to suggest that there is a potential district or districts that include all or some of the buildings and structures that have reached the 45-year age threshold (i.e., those constructed in or before 1979) located within the Hayward WPCF. No two or more of these buildings and/or structures appear to meet the National Park Service's definition of a district, that is "a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development" (NPS, 1997: 5). As such, none of the age-eligible buildings or structures located within the Hayward WPCF contribute to a potential historic district.

Evaluations of Four Age-eligible Buildings and Structures

Since 2017, four buildings and structures within the Hayward WPCF have reached the 45-year age threshold for consideration as potential historical resources for the purposes of CEQA. While resources that are less than 50 years old are generally not considered potential historic properties for the purposes of NHPA Section 106, a buffer of five years (i.e., 45 years instead of 50 years) has been added to the age-eligibility guideline to allow time for program implementation. The four age-eligible buildings and structures, which are identified in **Figure 1**, have been evaluated by ESA as potential historic properties under NHPA Section 106 and/or historical resources under CEQA.

According to the 2017 evaluation and superseding data received from the City of Hayward in January 2024, these four architectural resources were constructed between 1972 and 1979 (i.e., the period of time during which additional buildings and structures have reached 45 years of age since 2017) (Melvin, 2017: Appendix B). They have been individually evaluated by ESA as potential historic properties under NHPA Section 106 and/or

historical resources under CEQA, and they have been recorded on DPR 523 form sets appended to this memo (Kahn and Langford, 2024). A summary is presented in **Table 1** below.

SOURCE: ESA, 2024; ESRI, 2024.

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*A building or structure without a number was not inventoried in 2017 and is presumed to have been constructed since that time.

Figure 1
Architectural Resources Within the Hayward WPCF

TABLE 1
ARCHITECTURAL RESOURCES WITHIN THE HAYWARD WPCF THAT HAVE BECOME AGE-ELIGIBLE SINCE 2017

Resource No.	Resource Name	Year Constructed	Historic Status Based on 2024 Evaluation
Building 20	Air Compressor Building	1972	Not individually eligible for national, state, or local listing or as a contributor to a known or potential historic district
Structure 23	Digester No. 1	1976	Not individually eligible for national, state, or local listing or as a contributor to a known or potential historic district
Building 27	Maintenance and Electrical Shop	ca. 1968-75	Not individually eligible for national, state, or local listing or as a contributor to a known or potential historic district
Building 28	Mixing and Heating Building	ca. 1975	Not individually eligible for national, state, or local listing or as a contributor to a known or potential historic district

NOTES
General: The architectural resource numbers are keyed to Figure 1.

SOURCES: Carbert, 2024; JRP Historical Consulting, 2017.

Conclusion

The Project's sensitivity to pre-contact and historic-era archaeological resources is low. Neither the Hayward WPCF nor any of the four architectural resources within it that have become age-eligible since 2017 are recommended individually eligible for listing in the National Register, California Register, or the City's register of designated historical resources under any criteria. Additionally, neither the Hayward WPCF nor any of the age-eligible buildings or structures within it contribute to a known or potential historic district eligible for listing in the National Register, California Register, or the City's register of designated historical resources. Therefore, the Hayward WPCF, Building 20, Structure 23, Building 27, and Building 28 are not considered to be historic properties for the purposes of NHPA Section 106 or historical resources for the purposes of CEQA.

References

California Native American Heritage Commission (NAHC). Sacred Lands File (SLF) and Native American Contact List. On file, ESA, December 18, 2023.

Carbert, Kyle (City of Hayward). Email to Johanna Kahn (ESA). January 8, 2024.

City of Hayward. *Hayward Municipal Code, Article 11 – Historic Preservation Ordinance*. Electronic document, https://library.municode.com/ca/hayward/codes/municipal_code, accessed December 18, 2023.

Kahn, Johanna and Amy Langford. DPR 523 Update for Hayward Water Pollution Control Facility. Prepared by Environmental Science Associates, Oakland, CA, for the City of Hayward. January 2024.

-----. DPR 523 Site Records for Building 20, Structure 23, Building 27, and Building 28 in the Hayward Water Pollution Control Facility. Prepared by Environmental Science Associates, Oakland, CA, for the City of Hayward. January 2024.

Melvin, Steven. *Historic Resources Inventory and Evaluation Report [for the] City of Hayward Recycled Water Project, Alameda County, California*. Prepared by JRP Historical Consulting, LLC, Davis, CA, for the City of Hayward. May 2017.

National Park Service. *National Register Bulletin: How to Apply the National Register Criteria for Evaluation,* 1997. Accessed January 9, 2024, https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf.

Nationwide Environmental Title Research (NETR). Available: https://historicaerials.com/viewer, accessed December 18, 2023.

National Resources Conservation Service. *Custom Soil Resource Report for Alameda County, California, Western Part.* United States Department of Agriculture, Washington, D.C. December 2023.

Northwest Information Center (NWIC). Records Search File No. File No. 23-0820. On file, ESA, December 12, 2023.

US Geological Survey (USGS)
1899 Haywards, California, Topographic 15' Quadrangle, Washington, D.C.
1915 Haywards, California, Topographic 15' Quadrangle, Washington, D.C.
1947 San Leandro, California, Topographic 15' Quadrangle, Washington, D.C.
1959 Hayward, California, Topographic 15' Quadrangle, Washington, D.C.

***Recorded by:** Johanna Kahn and Amy Langford, ESA ***Date:** January 2024 ☐ Continuation ☒ Update

***P8. Recorded by:** Johanna Kahn and Amy Langford / ESA, 180 Grand Avenue, Suite 1050, Oakland, CA 94612

***P10. Survey Type:** Reconnaissance

***P11. Report Citation**: ESA. *Cultural Resources Survey Report for the City of Hayward Water Pollution Control Facility Improvements Phase II Project.* Prepared for the City of Hayward. January 2024.

***B6. Construction History:** In January 2024, the City of Hayward confirmed the existence of all buildings and structures at the Hayward Water Pollution Control Facility (Hayward WPCF) as well as alterations identified in the 2017 evaluation by Steven Melvin of JRP Historical Consulting. The following inventory of extant buildings and structures is reproduced from the 2017 evaluation, and corrections/updates provided by the City of Hayward are shown in **bold**.

Building / Structure No.	Building / Structure Name	Built Date	Alterations
Structure 1	West Trickling Filter	1953	**1982**
Structure 2	North Primary Clarifier	1953	No known alterations
Structure 3	South Primary Clarifier	1953	No known alterations
Structure 4	Northwest Primary Clarifier	1953	Originally constructed as Secondary Mixing Tank; converted to Primary Clarifier ca. **1982**
Structure 5	Southwest Primary Clarifier	1953	Originally constructed as Primary Mixing Tank; converted to South Flotator-Thickener with retention tank and pressurization system ca. 1970; converted to primary clarifier in 2016
Structure 6	South Vacuator	1953	No known alterations
Structure 7	Digester No. 3	ca. 1953	**Modified in 2002**
Building 8	Site Waste Pump Station & Control House	ca. 1953	**Stairs added, exterior altered, and pump modified in 1967;** raw sewage pump installed ca. 1975; **HVAC system upgraded and pump replaced in 2000;** replacement windows and doors
Structure 9	Sludge Lagoon	1953	Formed from subdivision of Effluent Pond No. 1 ca. 1980-87
Structure 10	Equalization Pond	1953	Formed from subdivision of Effluent Pond No. 1 ca. 1980-87
Structure 11	Bypass Control Box	**1953**	**Modified in 1962 and 2009**
Structure 12	Digester No. 2	ca. 1961	No known alterations
Structure 13	North Vacuator	ca. 1961	Pressurization system installed ca. 1970
Structure 14	Sludge Conditioning Tank	ca. 1961	No known alterations
Structure 15	Water Reclamation Station	**2009**	No known alterations
Building 16	Storage and Maintenance Building	ca. 1961	No known alterations
Building 17	Operations Building **(also known as the Administration Building)**	ca. 1970	Additions built ca. **1981 and** 1994
Structure 18	FOG Receiving Station	ca. 2013	**Modified in 2017**
Building 19	Equipment Housing Structure	ca. 1970	**Modified in 2017**
Building 20	Air Compressor Building	1972	No known alterations
Structure 21	Gasoline Pump	ca. 1970	No known alterations
Building 22	**Southwest Primary Clarified Electrical Building**	**2017**	No known alterations

Building / Structure No.	Building / Structure Name	Built Date	Alterations
Structure 23	Digester No. 1	**1976**	No known alterations
Structure 24	**Cogeneration System Waste Heat Radiator**	**2014**	No known alterations
Building 25	Old Power Generation Station	**1982**	No known alterations; abandoned
Structure 26	**High-pressure Gas Storage Tank**	**1982**	No known alterations
Building 27	Maintenance and Electrical Shop	ca. 1968-75	Originally constructed as Sludge Dewatering Facilities; centrifuge building extension added ca. 1975
Building 28	Mixing and Heating Building	ca. 1975	**Modified in 2017**
Structure 29	Fluid Bed Reactor	ca. 1980-85	No known alterations; abandoned
Building 30	Storage Building	ca. 1980	No known alterations
Building 31	Aeration Blower Building	**2008**	No known alterations
Structure 32	Solids Contact Basins	ca. 2008	No known alterations
Building 33	Engineering Office	ca. 2016	No known alterations
Building 34	Headworks	ca. 1998	**Modified in 2021**
Building 35	Boiler Building	**2002**	No known alterations
Structure 36	Gas Conditioning Area	**2016**	No known alterations
Building 37	Warehouse	ca. 2005	No known alterations
Building 38	Cogeneration Building	ca. 2016	No known alterations
Building 39	12kV Import Export Station	ca. 2008	No known alterations
Structure 40	East Trickling Filter	ca. 2008	No known alterations
Structure 41	Trickling Filter Pumping Station	ca. 2008	No known alterations
Building 42	East Substation	ca. 2008	No known alterations
Structure 43	East Biofilter	ca. 2008	No known alterations
Building 44	Solids Thickening Building	ca. 2008	No known alterations
Structure 45	West Biofilter	ca. 2008	**Modified in 2020**
Building 46	West Substation	ca. 2008	No known alterations
Structure 47	Final Clarifier 1	ca. 2008	No known alterations
Structure 48	Final Clarifier 2	ca. 2008	No known alterations
Structure 49	Soil Bed Odor Filter	**2021**	**Earlier structure replaced in 2021**
Structure 50	**Sludge Polymer Feed System**	**2008**	No known alterations
Structure 51	Stormwater Pump Station	ca. 2008	No known alterations
Building 52	Final Clarifier Electrical Building	ca. 2008	No known alterations

Additionally, the City of Hayward confirmed the existence of the following buildings and structures within the Hayward WPCF, but not their building/structure numbers, construction dates, or locations:

- Recycled Water Storage Tank;
- Recycled Water Pump Station;
- Recycled Water Treatment System;
- Ferric Chloride Facility;
- Standby Power Generator;
- Sludge Drying Beds; and
- Heps (City of Hayward, 2024).

***B10. Significance:**

Updated Historic Context: Development of the Hayward WPCF

The following history of the development of the Hayward WPCF is an excerpt from the *Historic Resources Inventory and Evaluation Report [for the] City of Hayward Recycled Water Project, Alameda County, California* (Melvin, 2017: 16-21). Corrected construction dates were provided by the City of Hayward in January 2024 and added in brackets below.

> *In 1946, the California State Board of Public Health passed a resolution prohibiting raw sewage discharge into San Francisco Bay; the resolution also ordered municipalities to begin immediate development of wastewater treatment facilities. By 1952, the only cities not yet in compliance were Millbrae, Sausalito, and Hayward.*
>
> *In November 1950, the City of Hayward used funds from a federal loan to hire prominent sanitary engineer Harry N. Jenks as a consultant in developing its sewage treatment plant.… Constructed for approximately $2 million on 40 acres purchased from William Johnson, the plant was financed by a $1.7 million revenue bond issue passed in April 1952, later augmented by another $300,000 bond issue passed that December. Contractors Barrett & Hilp and DeLuca Construction Co. completed construction in late 1953. The Hayward Municipal Sewage Treatment Plant [as the WPCF was originally known] originally included a primary biofilter (Structure 1), a primary clarifier (Structure 3), a secondary clarifier (Structure 2), a primary mixing tank (Structure 5), a secondary mixing tank (Structure 4), a vacuator (Structure 6), a primary digester (Structure 7), a control house & pumping plant (Building 8), a hydraulic jump aerator (non-extant), an effluent box (non-extant), sludge drying beds (non-extant), … an effluent pond (Structures 9 and 10, originally designed as one of three ponds) [and a bypass control box (Structure 11)]. …*
>
> *In 1958, Hayward earmarked $835,000 for plant expansion in that year's public works bond issue. Three years later, the City of Hayward approved expansion plans submitted by Jenks, who was hired on again as a consultant. Among the additions were an additional digester (Structure 12), an additional vacuator (Structure 13), a sludge-conditioning tank (Structure 14), a large final clarifier (non-extant), and a biorainator (non-extant). The addition of a sludge conditioning tank allowed for sludge to be de-watered faster using floccule reagents and chemicals. In addition to structures related to wastewater treatment, Jenks' plans also called for the construction of a storage and maintenance building (Building 16) as well as a concrete equipment slab (non-extant, later replaced by Building 19 after 1970). The additions were constructed by Berkeley-based contracting firm C. Norman Peterson, Inc. at a cost of $882,200, well over the amount allotted three years earlier. These additions were all in place by 1966. …*
>
> *By 1969, the plant was processing on average 11 [million gallons per day, or MGD], with 16 MGD during the canning season. This level of production severely taxed the system, which had been upgraded only to handle brief peak periods of 15 MGD. The following year, the City received plans for phase I of a $15 million plant expansion drafted by John Jenks' firm, Jenks & Adamson, to meet the city's needs over the next 20 years. The plans included designs for a new operations [and administration] building (Building 17), an equipment housing structure (Building 19), [an air compressor building] (Building 20), and the conversion of the primary mixing tank (Structure 5) to a flotator-thickener. The plans additionally included designs for extensive chlorination facilities adjacent to the oxidation ponds.… These chemical facilities were urgently needed at the plant, as that June, the Bay Regional Water Quality Control Board, reacting to aerial slide photographs of brownish effluent pouring into the bay from the Hayward Outfall Channel, threatened the city with a cease-and-desist order under the provisions of the Porter-Cologne Water Quality Act. …*
>
> *The south Alameda County municipalities commissioned sanitary engineering firms Jenks & Adamson and Kennedy Engineers to draft a report outlining the most efficient method of implementing [a] sub-regional plan in 1970. Within two years, the firms had designed the inter-municipal "super sewer" at a projected construction cost of $82.42 million, which would be shared by the Alameda County sub-regional dischargers, collectively called the East Bay Dischargers Authority (EBDA).… At the same time that the EBDA "super sewer" plan was developing, the City of Hayward also planned the expansion of its own local sewage treatment facility, called the Hayward Wastewater Treatment Plant by 1975. Having received formal approval by the EBDA and the State Water Resources Control Board, the City of Hayward began implementing the $2.2 million Phase II expansion, which included the construction of an additional digester (Structure 23), a mixing and heating building (Building 28), a waste gas burner [(non-extant)], additional oxidation ponds … [a gasoline pump (Structure 21), and] a centrifuge building extension (non-extant, added to Building 27). …*

Since the mid-1970s, the plant has undergone several subsequent expansions. Somewhat minor additions to the plant include the construction of additional storage facilities [(Building 30 ca. 1980 and Building 37 ca. 2005) [, the old power generation station (Building 25) in 1982, and the high-pressure gas storage tank (Structure 26) in 1982 as well as] the renovation and expansion of the [operations and] administration building (ca. [1981 and] 1994). In the early 1980s, the plant was expanded to include a fluid bed reactor (Structure 29)... In the mid-to-late 1990s, the Headworks (Building 34) [was] constructed [, and in 2002, the boiler building (Building 35) was constructed]. In 2008, the plant completed the massive $58 million Phase I of the Water Pollution Control Facility Improvement Project. This expansion included a second trickling filter (Structure 40), two new final clarifiers (Structures 47 and 48), [aeration blower building (Building 31)], solids contact basins (Structure 32 replaced the ca. 1962 final clarifier), solids thickening facilities (Building 44), [the water reclamation station (Structure 15), the trickling filter pumping station (Structure 41), two biofilters (Structures 43 and 45), the soil bed odor filter (Structure 49), the sludge polymer feed system (Structure 50), the stormwater pump station (Structure 51), the final clarifier electrical building (Building 52)], and a 12kV electrical system (Buildings 39, 42, and 46). In 2013, the FOG (fat, oil, and grease) receiving station (Structure 18) was constructed[. In 2014, the cogeneration system waste heat radiator(Structure 24) was added. In 2016,] the [gas conditioning area (Structure 36) and the] cogeneration building (Building 38) [were] constructed, and Structure 5 was converted to the southwest primary clarifier. Building 33, the engineering office, is a temporary building erected in 2016 to oversee planning and construction. [The southwest primary clarifier electrical building (Building 22) was constructed in 2017.]

Evaluation

The Hayward WPCF was evaluated in 2017 as a single resource comprising 49 buildings and structures, and it was found to be ineligible for listing in the National Register of Historic Places (National Register) and the California Register of Historical Resources (California Register) under any criteria (Melvin, 2017). The 2017 evaluation is more than five years old; therefore, the WPCF has been re-evaluated by ESA pursuant to current professional standards for individual eligibility for listing in the National Register and California Register. The City of Hayward applies California Register criteria to determine eligibility for local designation (City of Hayward Municipal Code Chapter 10, Article 11, Section 10-11.030).

Criterion A/1 – Event. The Hayward WPCF was previously found insignificant under Criterion A/1 because it "followed existing trends and patterns [regarding Bay Area municipalities constructing new wastewater treatment plants during the 1950s to conform with government regulations] and was not a leading example or otherwise historically important wastewater treatment plant" (Melvin, 2017). Additionally, it was among the last three cities in the San Francisco Bay Area (the other two being Millbrae and Sausalito) to comply with state regulations to cease pumping raw sewage directly into the bay and construct a municipal wastewater treatment facility. Supplemental review and research conducted by ESA does not indicate that the Hayward WPCF is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States. ESA concurs that the Hayward WPCF does not appear to be individually eligible for listing under Criterion A/1.

Criterion B/2 – Person. The Hayward WPCF was previously found insignificant under Criterion B/2 because "[r]esearch did not reveal that any individual associated with [the WPCF] has made demonstrably important contributions to history at the local, state, or national level" (Melvin, 2017). (Note that design professionals are discussed under Criterion C/3.) Supplemental review and research conducted by ESA does not identify individuals from the City of Hayward who were directly and significantly associated with the facility. ESA concurs that the Hayward WPCF does not appear to be individually eligible for listing under Criterion B/2.

Criterion C/3 – Design/Construction. The Hayward WPCF was previously found insignificant under Criterion C/3 because it is "a plant that employed common methods and followed the existing standards from the time of its original construction [in 1953] and early development," the "characteristics [of the International Style of architecture] are present in varying degrees in [the buildings constructed during the 1950s through 1970s], [which] are all very modest expressions of the International Style and not architecturally distinctive," and it "does not represent any of [sanitary engineer Harry N. Jenks'] innovations in the field, a particular phase of his career, or aspect of his work" (Melvin, 2017). Of the extant buildings and structures listed in the inventory above, 11 were built in the early 1950s, four were built in the early 1960s, three were built ca. 1970, four were built between 1972 and 1979, four were built in the early 1980s, one was built in the late 1990s, and approximately 25 were built since 2000. Supplemental review and research conducted by ESA does not indicate that the Hayward WPCF embodies the distinctive characteristics of a type, period, region, or method of construction, nor does it represent the work of a master or possess high artistic values. ESA concurs that the Hayward WPCF does not appear to be individually eligible for listing under Criterion C/3.

Criterion D/4 – Information Potential. The Hayward WPCF was previously found insignificant under Criterion D/4 because it "is not a significant or likely source of important information about historic construction materials or technologies that otherwise would not be available through documentary evidence" (Melvin, 2017). Criterion D/4 typically applies to archaeological resources rather than architectural resources. When Criterion D/4 does relate to architectural resources, it is relevant when the

resource itself is the principal source of important construction-related information. The Hayward WPCF was constructed using common materials and building techniques and does not appear to have the potential to provide important information related to materials or construction types. ESA concurs that the Hayward WPCF does not appear to be individually eligible for listing under Criterion D/4.

Historic District Considerations

The 2017 evaluation of the Hayward WPCF concluded that it was not eligible for listing in the National Register or California Register as a potential historic district under any criteria; however, no discussion of district considerations was presented (Melvin, 2017).

Based on the architectural descriptions and documentation of the physical development of the Hayward WPCF presented in the 2017 evaluation, no apparent patterns emerge to suggest that there is a potential district or districts that include all or some of the age-eligible buildings and structures (i.e., 45 years or older [those constructed in or before 1979]) located within the Hayward WPCF. As noted above, the Hayward WPCF was constructed in several phases beginning in 1953, and some of the age-eligible buildings and structures are related in terms of architectural design (the majority of which reflect a simple, utilitarian style), function, and/or construction date. Despite these apparent similarities, two or more of these buildings and/or structures do not appear to meet the National Park Service's definition of a district, that is "a significant concentration, linkage, or continuity of sites, buildings, structures, or objects united historically or aesthetically by plan or physical development" (National Park Service, 1997: 5). As such, none of the age-eligible buildings or structures located within the Hayward WPCF contribute to a potential historic district. Additionally, there are no historic districts listed in or eligible for listing in the National Register, California Register, or the City of Hayward's register of designated historical resources within 2.5 miles of the Hayward WPCF; therefore, it does not contribute to any known historic district.

Integrity Analysis

In addition to being eligible for listing under at least one of the four National Register/California Register criteria, a resource must also retain sufficient integrity to convey its historical significance. There are seven aspects to consider when evaluating the integrity of a resource: location, design, setting, materials, workmanship, feeling, and association. As discussed above, the Hayward WPCF does not appear to be individually significant under any National Register or California Register criteria. Therefore, a further discussion of integrity is not presented.

Summary

The Hayward WPCF is not recommended individually eligible for listing in the National Register, California Register, or the City of Hayward's register of designated historical resources under any criteria. Additionally, no age-eligible buildings or structures in the Hayward WPCF contribute to a known or potential historic district eligible for individual listing in the National Register, California Register, or the City of Hayward's register of designated historical resources. As such, the Hayward WPCF would not be considered a historic property for the purposes of Section 106 of the National Historic Preservation Act (NHPA) or a historical resource for the purposes of California Environmental Quality Act (CEQA).

***B12. References:**

Carbert, Kyle (City of Hayward). Email to Johanna Kahn (ESA). January 8, 2024.

City of Hayward Municipal Code Chapter 10, Article 11, Section 10-11.030.

Melvin, Steven. *Historic Resources Inventory and Evaluation Report [for the] City of Hayward Recycled Water Project, Alameda County, California*. Prepared by JRP Historical Consulting, LLC, Davis, CA, for the City of Hayward. May 2017.

National Park Service. *National Register Bulletin: How to Apply the National Register Criteria for Evaluation.* 1997. Accessed January 9, 2024, https://www.nps.gov/subjects/nationalregister/upload/NRB-15_web508.pdf.

State of California — Natural Resources Agency
DEPARTMENT OF PARKS AND RECREATION

LOCATION MAP

Primary #
HRI #
Trinomial:

***Resource Name or Number:** Hayward Water Pollution Control Facility

***Map name:** San Leandro, CA

***Scale:** 1:24000

***Date of Map:** 2018

* Required Information

State of California – The Resources Agency
DEPARTMENT OF PARKS AND RECREATION
PRIMARY RECORD

Primary # _____
HRI # _____
Trinomial _____
NRHP Status Code 6Z
Other Listings _____
Review Code _____ Reviewer _____ Date _____

***Resource Name or #** (Assigned by recorder): Hayward Water Pollution Control Facility

P1. Other Identifier: Hayward Water Pollution Control Facility

***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**

***a. County**: Alameda

and (P2b and P2c or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad**: San Leandro **Date**: 1993 **T**: T3S; **R**: R3W; **Sec**: __; Mount Diablo Meridian

c. Address: 3700 Enterprise Avenue City: Hayward Zip: 94545

d. UTM: (give more than one for large and/or linear resources) Zone: _____; _____mE/ _____mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, etc., as appropriate)

APN: 439-0099-002-02

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

This 29.90-acre property at 3700 Enterprise Avenue is the site of the Hayward Water Pollution Control Facility (WPCF) (**Photograph 1**). The parcel is roughly rectangular with the oldest buildings and structures built in 1953 located in the southeast corner of the property near the intersection of Enterprise Avenue and Whitesell Street. Later modifications, additions, and replacements built between 1958 and 2008 were built around this original core area (see **Site Map**). Enterprise Avenue abuts the parcel's southern boundary, with neighboring industrial facilities located immediately to the east and north, and former oxidation ponds, sludge drying beds, and restored marshlands to the west. The facility serves the vast majority of the city of Hayward, with the exception of a portion of north Hayward, whose wastewater is treated by the Oro Loma Sanitary District (see Continuation Sheet).

***P3b. Resource Attributes:** (List attributes and codes) HP9 – Public Utility Building

***P4. Resources Present:** ☒ Building ☒ Structure ☐ Object ☐ Site ☐ District ☐ Element of District ☐ Other (Isolates, etc.)

P5b. Description of Photo: (View, date, accession#) **Photograph 1.** Overview of a portion of the Hayward Water Pollution Control Facility; camera facing west, April 21, 2017

***P6. Date Constructed/Age and Sources:**
☒ Historic ☐ Prehistoric ☐ Both
1953 (*The Hayward Daily Review*)

***P7. Owner and Address:**
City of Hayward
777 B Street
Hayward, CA 94541

***P8. Recorded by:** (Name, affiliation, address)
Steven J. Melvin & Samuel M. Skow
JRP Historical Consulting, LLC
2850 Spafford Street
Davis, CA 95618

***P9. Date Recorded**: April 21, 2017

***P10. Survey Type:** (Describe)
Intensive

***P11. Report Citation:** (Cite survey report and other sources, or enter "none.") JRP Historical Consulting, LLC, "Draft Historic Resources Inventory and Evaluation Report: City of Hayward Recycled Water Project, Alameda County, California," May 2017.

***Attachments:** ☐ None ☐ Location Map ☐ Sketch Map ☒ Continuation Sheet ☒ Building, Structure, and Object Record ☐ Archaeological Record ☐ District Record ☐ Linear Feature Record ☐ Milling Station Record ☐ Rock Art Record ☐ Artifact Record ☐ Photograph Record ☐Other (list) _____

***Resource Name or #** (Assigned by recorder): Hayward Water Pollution Control Facility

B1. Historic Name: Hayward Municipal Sewage Treatment Plant; Hayward Wastewater Treatment Plant
B2. Common Name: Hayward Water Pollution Control Facility
B3. Original Use: Sewage Treatment B4. Present Use: Sewage Treatment
***B5. Architectural Style:** Utilitarian; International
***B6. Construction History**: (Construction date, alteration, and date of alterations) Originally built in 1953 with numerous subsequent alterations and additions. See table in Section B6 on Continuation Sheet for all dates of construction, additions, and alterations

***B7. Moved?** ☒ **No** ☐ **Yes** ☐ **Unknown** **Date:** _____ **Original Location:** _____
***B8. Related Features:** _____
B9. Architect / Engineer: Harry N. Jenks, Sanitary Engineer; City of Hayward, Dept. of Public Works, Engineering Division
b. Builder: Barrett & Hilp, Contractors; DeLuca Construction Co.
***B10. Significance: Theme:** N/A **Area:** N/A
Period of Significance: N/A **Property Type:** N/A **Applicable Criteria:** N/A
(Discuss importance in terms of historical or architectural context as defined by theme, period, and geographic scope. Also address integrity.)

The Hayward Water Pollution Control Facility does not appear to meet the criteria for listing in the National Register of Historic Places (NRHP) or the California Register of Historical Resources (CRHR), nor does it appear to be an historical resource for the purposes of CEQA. This property has been evaluated in accordance with Section 15064.5(a)(2)-(3) of the CEQA Guidelines, using the criteria outlined in Section 5024.1 of the California Public Resources Code. (See Continuation Sheet.)

B11. Additional Resource Attributes: (List attributes and codes) ____

***B12. References:** *Hayward Daily Review*; City of Hayward Engineering Division, Various Plans; Martin V. Melosi, *The Sanitary City*; HistoricAerials.com; Jenks & Adamson, Various Plans; See also footnotes.

B13. Remarks:

***B14. Evaluator:** Steven J. Melvin
***Date of Evaluation:** April 2017

(This space reserved for official comments.)

(Sketch Map with north arrow required.)

INSERT

P3a. Description (continued):

For the purposes of evaluation, the buildings and structures recorded on this form have been numbered **1 – 49**, in general chronological order, with numbers **1 – 10** constituting the nine structures and one building that remain from the plant's original construction.

Structure 1, the West Trickling Filter, is located at the northwest corner of the intersection of Whitesell Street and Enterprise Avenue (**Photograph 2**). This roughly 70-foot-tall cylindrical structure measures approximately 150 feet in diameter and features a poured concrete foundation, corrugated fiberglass panels, horizontal metal rings with vertical beams that serve as the exterior frame, and a circular concrete ridge along the top. A metal spiral staircase with metal handrails is located along the west side. Influent enters the structure through a metal pump located at the base along the south side (**Photograph 3**). At the top of the structure, a rotating machine with four spinning metal arms aligned at 90 degree angles pours influent through rubber sluice grates, where the liquid trickles through and heavier solids are removed (**Photograph 4**).

Structures 2 – 5, the North, South, Northwest, and Southwest Primary Clarifiers, respectively, are located immediately west adjacent to **Structure 1** (**Photograph 5**). The four, identical, cylindrical sub-grade concrete settling basins measure roughly 80 feet in diameter and feature protective metal railings along their top perimeters. The clarifiers' interiors are divided into three compartments, with metal inner rings at their center where the influent enters, and circular weirs running parallel along the structure's interior perimeter where the effluent exits. Spinning mechanical metal rakes are located along the tops and bottoms of the structures. The bottom rakes were inaccessible at the time of this survey. Each clarifier has a metal catwalk with protective metal handrails that traverses the center.

Structure 6, the South Vacuator, is located at the center between **Structures 2 – 5** (**Photograph 5**). This cylindrical concrete structure measures roughly 35 feet in diameter and features a dome roof with a circular metal service entry, metal protective railing along the top ledge, and metal staircases with metal handrails along its north and south sides (**Photograph 6**). Metal piping is located along the north and west sides. An elevated concrete platform with protective metal railing stands immediately east adjacent.

Structure 7, Digester No. 3, is located immediately northwest of **Structure 4** (**Photograph 5**). This cylindrical concrete structure measures roughly 85 feet in diameter and features a dome roof with a circular metal service entry, metal protective railing along the top ledge, incoming and outgoing metal piping along the perimeter and the roof, and a metal staircase with metal handrails granting access to the roof on the east side (**Photograph 7**).

Building 8, the Site Waste Pump Station, is located immediately east adjacent to **Structure 7** (**Photograph 8**). This approximately 1,250-square-foot, International-style, single-story concrete building is clad in smooth stucco and features a rectangular footprint, a concrete foundation, a flat roof with parapets and roof vents, metal piping and louvered vents on the south, east, and north sides, and double glass-and-metal personnel doors on the south and north sides (**Photograph 9**). Fenestration consists of vinyl-frame, horizontal-sliding windows. The north side has an additional glass and metal door framed by brick half walls. The building features the engravings "Health" and "Progress" on the east side and "Hayward Municipal Sewage Treatment Plant" on the north side. On the east side is the basement level pumping station, with metal above-grade pumping equipment and a metal grate covering the sub-grade machinery.

Structures 9 and **10**, the Sludge Lagoon and Equalization Pond, respectively, are located near the southwest corner of the parcel (**Photograph 10**). The westernmost **Structure 9** is a former earth-lined pond that encompasses approximately 3,700 square feet. **Structure 10** is approximately 1.25 acres and features earth-lining along the interior, with concrete partitions along its outside perimeter. The Equalization Pond also has mechanical aeration equipment at the center and northeast corner as well as an adjacent concrete platform with protective metal railing (**Photograph 11**).

Structure 11, the Bypass Control Box, is located immediately north of **Structure 6**, between **Structures 2** and **4** (**Photograph 12**). This structure features a sub-grade concrete basin framed by protective metal railing, with mechanical pumping equipment and manual controls built into an adjacent concrete platform. The basin contains a large, secured metal pipe and several smaller adjacent pipes (**Photograph 13**).

Structure 12, Digester No. 2, is located immediately north of **Structure 7** (**Photograph 14**). This cylindrical concrete structure measures roughly 100 feet in diameter and features a dome roof with a circular metal service entry, metal protective railing along the top ledge, and incoming and outgoing metal piping extending between Digester No. 3 along the perimeter and the roof with metal bracing.

Structure 13, the North Vacuator, is located immediately east of **Structure 12** (**Photograph 15**). This cylindrical concrete structure measures roughly 50 feet in diameter and has a dome roof with a circular metal service entry, metal protective railing along the top ledge, and a metal staircase with metal handrails on its south side. The staircase is divided between two flights, connecting to an elevated concrete platform, with metal pumping equipment directly adjacent.

Structure 14, the Sludge Conditioning Tank, is located due west of **Structure 4** (**Photograph 16**). This cylindrical, sub-grade concrete basin is framed by protective metal railing along its top perimeter, with mechanical pumping equipment located west adjacent.

Structure 15, the Water Reclamation Station, is located west adjacent to **Structure 14** (**Photograph 16**). This station features a small shed building, two large upright metal water tanks, and six smaller suspended water tanks. This utilitarian, approximately 90-square-foot vinyl shed building has a square footprint, a low-pitched, side-gable roof, with a flush panel personnel doors and rectangular louvered vent on the east side. South adjacent to the building are two large upright metal tanks accessible by metal ladders, and to the west are two parallels rows of three smaller suspended metal tanks. Metal piping with concrete platforms framed by metal protective railing extend along the east and south sides.

Building 16, the Storage and Maintenance Building, is located directly west of **Structure 7** (**Photograph 17**). This approximately 1,300-square-foot, metal-frame building has a rectangular footprint, a front-gable roof, and raised-seam metal roofing and siding. Two flush, metal, personnel doors are located on the north side, with metal roll-up doors on the east side (**Photograph 18**). Fenestration consists of metal-frame, multi-pane, tilt-out windows on all sides. On the south side of the building is **Structure 21**, the Gasoline Pump, enclosed by chain-link fencing and sheltered by a metal shed-roof extension.

Building 17, the Operations Building, is located due east of **Structure 13** (**Photograph 19**). This approximately 7,000-square-foot, single-story, International-style, concrete building features an irregular footprint, a flat roof with parapets, and multiple bays on each side. The south-side façade features a flat-roof shelter extension supported by square concrete pillars, with a patterned brick privacy wall between the two centermost pillars. Metal-frame, floor-to-ceiling glass panels are located along the southwest corner. The main south-side entrance features double glass-and-metal doors (**Photograph 20**). The east-side extension features metal-frame, multi-pane, tilt-out windows and a concrete ramp with metal handrail (**Photograph 21**).

Structure 18, the FOG (Fat, Oil, and Grease) Receiving Station, is located between **Structures 12** and **13** to the (**Photograph 22**). This structure consists of a large, cylindrical, upright metal tank in a square concrete bed surrounded by metal piping.

Building 19, the Equipment Housing Structure, is located between **Structures 12** and **13** to the south (**Photograph 23**). This approximately 1,150-square-foot, single-story, International-style, concrete building features a generally rectangular footprint, a flat roof with parapets and metal roof vents, and multiple sets of double glass-and-metal doors flanked by metal-frame, fixed-pane windows topped by a metal-frame transom window on the south side.

Building 20, the Air Compressor Building, is located east adjacent to **Structure 14** (**Photograph 16**). This approximately 206-square-foot, single-story, metal-frame building features a square footprint, a flat roof with slight overhang, and raised-seam roofing and siding. The building features metal-frame, fixed-pane windows on the east, west, and south sides, and double, metal doors with lights and rectangular louvered vents on the north sides (**Photograph 24**). An upright metal water tank is located at the southeast corner.

Structure 21, the Gasoline Pump, is located south adjacent to **Building 16** (**Photograph 20**). The structure was inaccessible at the time of the survey as it is enclosed by chain-link fencing.

Building 22, the Chemical Feed Building, located southwest adjacent to **Structure 5** (**Photograph 25**), is an approximately 265-square-foot, single-story, metal-frame building with a square footprint, a flat roof, and raised-seam metal roofing and

siding. The building has metal piping on its east and west sides and double metal personnel doors with single lights and rectangular louvered vents on the north side.

Structure 23, Digester No. 3, is located north adjacent to **Structure 12** (**Photograph 26 P1120731**). This cylindrical concrete structure measures roughly 85 feet in diameter and covered by a dome roof with a circular metal service entry, metal protective railing along the top ledge, and incoming and outgoing metal piping extending between Digester No. 2 along the perimeter and the roof with metal bracing.

Structure 24, the Waste Gas Burner, is located immediately north of **Building 17** (**Photograph 27**). The station features a metal gasoline pump, industrial machinery, a horizontal metal fuel tank, a large, square metal generator, and a small wood utility shed with a low-pitched, side-gable roof, horizontal wood-board cladding, and a flush panel personnel door on the west side.

Building 25, the Old Power Generation Station, is located immediately northwest of **Structure 1** (**Photograph 28**). This approximately 2,200-square-foot, single-story, International-style, concrete building has a rectangular footprint, a concrete foundation, a flat roof with parapets, piping, and metal roof vents, and four symmetrical bays on the north and south sides. Each north- and south-side bay contains twin, vertical, rectangular louvered vents (**Photograph 29**). The westernmost bay on the south side of the building contains a metal personnel door with single light contained within a vertical vent. This building is no longer operational.

Structure 26, the Gas Meter Installation, is located immediately west of **Structure 12 (Photograph 30).** This structure features a horizontal fuel tank supported in a metal cradle installed in a concrete platform.

Building 27, the Maintenance and Electrical Shop, located immediately west of **Building 16 (Photograph 31)**, is an approximately 4,830-square-foot, metal-frame building with a rectangular plan, a front-gable roof, and raised-seam metal roofing and siding. A set of double metal personnel doors with a single light is located on the south side, with another similar single door toward the south end of the east side. The east side features four roll-up metal garage doors. Fenestration consists of metal-frame, horizontal-sliding windows. A row of roof vents lines the top of the roof.

Building 28, the Mixing and Heating Building, is located east adjacent to **Structure 23 (Photograph 26)**. It is an approximately 830-square-foot, single-story concrete building topped with a flat roof with parapets framed by metal protective railing, accessible from the east side by a metal staircase with metal handrails. Entrances consist of two pairs of double glass-and-metal doors on the east side. The south side contains two metal-frame, fixed-pane windows.

Structure 29, the Fluid Bed Reactor, is located immediately west of **Structures 4** and **5** (**Photograph 32**). This structure is framed by metal protective railing and consists of an approximately 560-square-foot, concrete building flanked on both sides by long rectangular basins subdivided into four cells each. Pumping equipment is located near the south end of the structure. The building is accessed by two metal personnel doors with single lights and rectangular louvered vents, located on the east side. The structure is no longer operational.

Building 30, the Storage Building, is located immediately north of **Building 16 (Photograph 33)**. It is a metal-frame building of approximately 1,075 square-feet, and has a rectangular footprint, low-pitched, side-gable roof, and raised-seam metal roofing and siding. A flush metal personnel door with a single light is located on the south side, and the east side contains a metal roll-up door. Fenestration consists of metal-frame, horizontal-sliding windows on the east and south sides.

Building 31, the Aeration Blower Building, is located immediately southwest of **Structure 29** (**Photograph 34**). This approximately 1,960-square-foot, metal-frame building has a rectangular plan, low-pitched, side-gable roof with metal roof vents, and raised-seam metal roofing and siding. The building has two flush metal personnel doors with single lights at the north end of the east side and the east end of the south side. Aeration machinery on the south side is accessed by an elevated metal platform framed by metal protective railing, and electrical equipment on the east side is elevated on concrete blocks.

Structure 32, the Solids Contact Basins, is located immediately west of **Building 31** (**Photograph 35**). This approximately 11,730-square-foot, sub-grade, concrete structure is framed by protective metal railing and consists of three basins divided by

concrete partitions and traversed by metal catwalks with metal handrails (**Photograph 36**). East-west concrete beams provide additional structural support.

Building 33, the Engineering Office, is located east of **Building 17** (**Photograph 37**). It is an approximately 800-square-foot, elevated, single-story, temporary building with a rectangular footprint, hip roof with front gable clad with composition shingles, and vertical-board siding. The symmetrical west façade features a central, multi-light, wood door with sidelights flanked on both sides by two pairs of vinyl replacement windows. The entrance is accessed by a metal staircase with metal handrails.

Building 34, the Headworks, is located immediately east of **Building 25** (**Photograph 38**). This International-style building of approximately 1,600 square-feet is one story with a rectangular footprint, poured concrete walls and foundation, a flat roof with parapets and metal roof vents, and three bays on each side. The easternmost two bays on the north side contain double glass-and-metal doors and metal I-beams protruding overhead. The east side features a flush metal personnel door and a network of pipes (**Photograph 39**). Pumps and chemical equipment are located on concrete platforms on the south side of the building.

Building 35, the Boiler Building, is located immediately west of **Building 25** (**Photograph 28**). This approximately 720-square-foot, single-story, International-style, concrete building features a generally square footprint, a flat roof with parapet, and three symmetrical bays on the east and west sides, and two bays on the north and south (**Photograph 29**). The north side contains a flush metal personnel door with a single light and an overhead louvered vent. A set of double glass-and-metal doors is located on the south side.

Structure 36, the Gas Conditioning Area, is located immediately west of **Structure 23** (**Photograph 40**). The structure consists of a complex array of metal pumps and fuel tanks installed in a concrete foundation. Some elevated tanks are accessible by attached metal ladders.

Building 37, the Warehouse, is located west adjacent to **Structure 36** (**Photograph 41**). This approximately 3,600-square-foot, single-story, metal-frame building is rectangular in plan and topped by a low-pitched, side-gable roof. The roof and walls are both made of raised-seam metal panels. On the east side are flush metal personnel doors and three metal roll-up garage doors are on the south side.

Building 38, the Cogeneration Building, is located immediately east of **Building 28** (**Photograph 42**). This approximately 3,000-square-foot, metal-frame building with a rectangular footprint has a front-gable metal-panel roof, and metal-panel siding. On the east side and south side are flush metal doors with single lights and metal overhead awnings. Windows are metal-frame, horizontal-sliding behind metal slats. Pumping and mechanical equipment are located along the south and east sides of the building.

Building 39, the 12kV Import Export Station, is east of **Structure 24** (**Photograph 43**). This rectangular, single-story concrete-block building of approximately 930 square-feet has a flat roof with parapets, and a mixture of plain and textured concrete-block siding. A strip of flush concrete wraps around the top of the building. A flush metal personnel door with single light and a metal roll-up garage door are located on the south side. A metal transformer is located west adjacent to the building on a concrete platform.

Structure 40, the East Trickling Filter, is located on the opposite side of Whitesell Street from the majority of the plant (**Photograph 44**). This cylindrical concrete structure measures approximately 220 feet in diameter and features is set on a poured concrete foundation, topped by a dome roof, and has a spiral staircase with metal handrails ascending the structure along the western side. Large metal pumping equipment is located along the eastern and southern sides. A concrete platform framed by metal protective railing is located adjacent to the south.

Structure 41, the Trickling Filter Pumping Station, is located south adjacent to **Structure 40** (**Photograph 44**). This structure contains metal piping and mechanical equipment installed in concrete foundations.

Building 42, the East Substation, is located immediately southeast of **Structure 40** (**Photograph 45**). This approximately 785-square-foot, concrete-block building is square in plan and has a flat roof with parapets and a mixture of plain and textured

concrete-block siding. A strip of flush concrete wraps around the top of the building. A set of double flush metal personnel doors and a metal roll-up garage door are located on the west side. Electrical equipment on concrete platforms are located on the north, east, and south sides.

Structure 43, the East Biofilter, is northeast of **Structure 40** (**Photograph 46**) and consists of a shallow, roughly 0.50-acre, earth-lined pit subdivided in half by an earthen berm.

Building 44, the Solids Thickening Building, is located due west of **Building 37** (**Photograph 47**). This approximately 3,650-square-foot, multi-level, concrete-block building features an irregular footprint, a flat roof with parapets, and a mixture of plain and textured concrete-block siding. A strip of flush concrete wraps around the tops of the two different levels of the building. Flush metal personnel doors with single lights are located along the west-side pop-out extension, and metal roll-up garage doors are located on the south side. Pumping equipment and chemical storage tanks are contained in a concrete bed framed by protective metal railing at the northwest corner.

Structure 45, the West Biofilter, is located due west of **Building 44 (Photograph 48).** This structure consists of a roughly 5,200-square-foot raised bed subdivided by a wood partition into two equal compartments. The walls are horizontal wood boards secured with vertical metal beams. Pumping equipment installed in concrete platforms is located east adjacent to the structure.

Building 46, the West Substation, is located immediately south of **Structure 45** (**Photograph 49**). This rectangular, approximately 500-square-foot concrete-block building has a flat roof with parapets, and a mixture of plain and textured concrete-block siding. A strip of flush concrete wraps around the top of the building. A flush metal personnel door with single light is located on the south side. A metal transformer is located near the southeast corner.

Structures 47 and **48**, Final Clarifiers 1 and 2, respectively, are located immediately west of **Building 27** (**Photograph 50**). The two, identical, cylindrical sub-grade concrete settling basins measure roughly 125 feet in diameter and have protective metal railings along their top perimeters. The clarifiers' interiors are divided into multiple compartments, with concentric metal rings where influent enters, and jagged weirs running parallel along the interior perimeter where effluent exits. Spinning mechanical metal rakes are located along the tops and bottoms of the structures. The bottom rakes were inaccessible at the time of this survey. Each clarifier is traversed by a metal catwalk with protective metal handrails.

Structure 49, the Soil Bed Odor Filter, is located immediately west of **Structure 43** (**Photograph 51**). The structure is a roughly 4,800-square-foot raised bed subdivided by a wood partition into two equal compartments. The walls are horizontal wood boards secured with vertical wood posts.

Structure 50, the No. 3 Water System, is located north adjacent to **Structure 14** (**Photograph 52**). This structure is a metal-frame shelter with raised-seam metal walls, corrugated metal shed roof and an adjacent metal-frame utility shelf with square plastic water tanks.

Structure 51, the Stormwater Pump Station, is located immediately southwest of **Structure 32** (**Photograph 53**). This structure consists of metal pumping and mechanical equipment installed in a concrete platform.

Building 52, the Final Clarifier Electrical Building, is located immediately south of **Structure 48** (**Photograph 54**). This rectangular concrete-block building has a flat roof with parapets, and a mixture of plain and textured concrete-block siding. A strip of flush concrete wraps around the top of the building. A flush metal personnel door is located on the east side. Immediately southeast adjacent to the building is an elevated concrete equipment platform with concrete stairs and protective metal railing.

*B6. Construction History (continued):

Building / Structure No.	Building / Structure Name	Built Date	Alterations
Structure 1	West Trickling Filter	1953	No known alterations
Structure 2	North Primary Clarifier	1953	No known alterations
Structure 3	South Primary Clarifier	1953	No known alterations
Structure 4	Northwest Primary Clarifier	1953	Originally constructed as Secondary Mixing Tank; converted to Primary Clarifier ca. 1972
Structure 5	Southwest Primary Clarifier	1953	Originally constructed as Primary Mixing Tank; converted to South Flotator – Thickener with retention tank and pressurization system ca. 1970; converted to primary clarifier in 2016
Structure 6	South Vacuator	1953	No known alterations
Structure 7	Digester No. 3	ca. 1953	No known alterations
Building 8	Site Waste Pump Station & Control House	ca. 1953	Raw sewage pump installed ca. 1975; replacement windows and doors
Structure 9	Sludge Lagoon	1953	Formed from subdivision of Effluent Pond No. 1 ca. 1980 - 1987
Structure 10	Equalization Pond	1953	Formed from subdivision of Effluent Pond No. 1 ca. 1980 - 1987
Structure 11	Bypass Control Box	ca. 1961	No known alterations
Structure 12	Digester No. 2	ca. 1961	No known alterations
Structure 13	North Vacuator	ca. 1961	Pressurization system installed ca. 1970
Structure 14	Sludge Conditioning Tank	ca. 1961	No known alterations
Structure 15	Water Reclamation Station	ca. 2016	No known alterations
Building 16	Storage and Maintenance Building	ca. 1961	No known alterations
Building 17	Operations Building	ca. 1970	Additions constructed ca. 1994
Structure 18	FOG Receiving Station	ca. 2013	No known alterations
Building 19	Equipment Housing Structure	ca. 1970	No known alterations
Building 20	Air Compressor Building	1972	No known alterations
Structure 21	Gasoline Pump	ca. 1970	No known alterations
Building 22	Chemical Feed Building	ca. 1970 - 1980	No known alterations
Structure 23	Digester No. 1	ca. 1975	No known alterations
Structure 24	Waste Gas Burner	ca. 1975	No known alterations
Building 25	Old Power Generation Station	ca. 1975	No known alterations; abandoned

Building / Structure No.	Building / Structure Name	Built Date	Alterations
Structure 26	Gas Meter Installation	ca. 1975	No known alterations
Building 27	Maintenance and Electrical Shop	ca. 1968 - 1975	Originally constructed as Sludge Dewatering Facilities; centrifuge building extension added ca. 1975
Building 28	Mixing and Heating Building	ca. 1975	No known alterations
Structure 29	Fluid Bed Reactor	ca. 1980 – 1985	No known alterations; abandoned
Building 30	Storage Building	ca. 1980	No known alterations
Building 31	Aeration Blower Building	ca. 1980 - 1987	No known alterations
Structure 32	Solids Contact Basins	ca. 2008	No known alterations
Building 33	Engineering Office	ca. 2016	No known alterations
Building 34	Headworks	ca. 1998	No known alterations
Building 35	Boiler Building	ca. 1993 - 2000	No known alterations
Structure 36	Gas Conditioning Area	ca. 2005 - 2009	No known alterations
Building 37	Warehouse	ca. 2005	No known alterations
Building 38	Cogeneration Building	ca. 2016	No known alterations
Building 39	12kV Import Export Station	ca. 2008	No known alterations
Structure 40	East Trickling Filter	ca. 2008	No known alterations
Structure 41	Trickling Filter Pumping Station	ca. 2008	No known alterations
Building 42	East Substation	ca. 2008	No known alterations
Structure 43	East Biofilter	ca. 2008	No known alterations
Building 44	Solids Thickening Building	ca. 2008	No known alterations
Structure 45	West Biofilter	ca. 2008	No known alterations
Building 46	West Substation	ca. 2008	No known alterations
Structure 47	Final Clarifier 1	ca. 2008	No known alterations
Structure 48	Final Clarifier 2	ca. 2008	No known alterations
Structure 49	Soil Bed Odor Filter	ca. 2008	No known alterations
Structure 50	No. 3 Water System	ca. 1981	No known alterations
Structure 51	Stormwater Pump Station	ca. 2008	No known alterations
Building 52	Final Clarifier Electrical Building	ca. 2008	No known alterations

B10. Significance (continued):

Historic Context

Post-World War II Development

After World War II, the Bay Area experienced a long period of economic, industrial, and suburban growth that manifested itself in the study area as new residential subdivisions and industrial parks. Development in this area was facilitated by the annexation of this land by the City of Hayward in the 1950s and by the construction of freeways. The I-880/Nimitz Freeway, near the eastern edge of the study area, was built in stages, beginning with the first section opening in Oakland in 1949. Work then progressed southward with the portion through the study area being the final section to open in 1958. Another major freeway project was the improvement of Highway 92 in the southern part of the study area to a four-lane divided freeway in

the 1960s, making it a principal trans-bay crossing via the San Mateo Bridge. Part of the Highway 92 improvements included freeway interchanges at Hesperian Boulevard, Industrial Boulevard, and Clawiter Road, which provided easy freeway access to those residents and businesses in the study area. New development gravitated to land along these freeways, and by the 1970s, the study area was built up with residential subdivisions and industrial buildings (**Plate 1**).[1]

Plate 1: Aerial image of western Hayward in 1968 showing the distinct division between the residential subdivisions on the right side of the image (east), and the developing industrial area on the left side.

The study area has two distinct zones divided by Industrial Boulevard/Clawiter Road: a residential zone between I-880 and Industrial Boulevard/Clawiter Road, and an industrial zone west of Industrial Boulevard/Clawiter Road. These residential areas are characterized by post-war tract subdivisions built from the late 1940s through the 1970s. These are generally laid out on curvilinear streets and cul-de-sacs rather than rectilinear grids. Some of the first of these were on Tennyson Road, West Street, and Cryer Street. Subdivision development continued to fill in this area through the 1970s, by which time it had been

[1] Kenneth T. Jackson, *Crabgrass Frontier: The Suburbanization of the United States* (New York, NY: Oxford University Press, 1985), 187, 233, 238-242; James E. Vance, Jr., *Geography and Urban Evolution in the San Francisco Bay Area* (Berkeley, CA: University of California Press, 1964), 66; Andres Duany, Elizabeth Plater-Zyberk, and Jeff Speck, *Suburban Nation: The Rise of Sprawl and the Decline of the American Dream* (New York, NY: North Point Press, 2000), 18-19; HistoricAerials.com, Historic Aerial Images, 1946, 1958, 1966, 1968, 1980.

almost completely built up. Residential development also included several mobile home parks and apartment buildings. While this part of the study area is mostly post-war era housing, some early twentieth century residences in the Mt. Eden community north of Depot Road remained. Another notable development within this residential area is Chabot College, a community college constructed in the 1960s at Depot Road and Hesperian Boulevard.[2]

Beginning the in 1950s, civic leaders such as the Hayward Industrial Commission and the City of Hayward both vigorously sought and encouraged industries to locate in Hayward. They courted specific industries and took other actions such as annexing land, building roads, and rezoning tracts for industrial purposes. The first large-scale industrial tract to be built in Hayward was the South Hayward Industrial Annex in 1957, located on Whipple Road southeast of the study area. That same year, a second industrial park was laid out on Whipple Road.[3]

The development of post-war industrial tracts in the study area lagged somewhat behind. From the end of the war to 1961, almost no new industrial development occurred. Among the few industrial properties built during the 1950s were the Hayward Water Pollution Control Facility in 1953 and an unknown industrial building along the railroad tracks on Clawiter Road about the same time. The City's efforts to transform this area west of Industrial Boulevard/Clawiter Road began in earnest in 1958 when the City of Hayward rezoned it as industrial.[4] Another main component of the plan was the construction of Industrial Boulevard, which did not previously exist. The City completed the first section of Industrial Boulevard from West Winton Avenue to Highway 92 in 1961, and from Highway 92 to Hesperian Boulevard in 1963. This project also included the improvement of Clawiter Road. Once completed, both Industrial Boulevard and Clawiter Road were wide, four-lane thoroughfares built to accommodate large truck traffic. Another important transportation improvement was the construction of two interchanges at Highway 92 at Clawiter Road and at Industrial Boulevard in the early 1960s. The final major element of the plan to industrialize this area was the demolition of Russell City in the late 1960s as discussed above, which cleared land for industrial purposes.[5] The first industrial park to open in the study area was the 100-acre Pauley-Herziger Industrial Park in 1961 at Industrial Boulevard and West Winton Avenue; industrial development of this zone proceeded at a steady pace thereafter (**Plate 2**).[6]

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[2] HistoricAerials.com, Historic Aerial Images, 1946, 1958, 1966, 1968, 1980; Jill Hupp, *Volume 1: Index to "California Highways and Public Works," 1937-1967*, California Department of Transportation, 1997, 74.

[3] City of Hayward, "City of Hayward General Plan," 2002, 2-1, 2-3; "Industrial Giant," *The Hayward Daily Review*, 17 March 1958, 2; "Four Annexations to City Draw Near," *The Hayward Daily Review*, 7 October 1954, 2; "Council is Charged With Industry Job," *The Hayward Daily Review*, 7 October 1955, 1; "South Hayward Annex Protests Fail to Kill Plan," *The Hayward Daily Review*, 12 June 1957, 1; "Industrial Street," *The Hayward Daily Review*, 13 February 1964, 32.

[4] "Milestones Recognized in Hayward," *Hayward Daily Review*, 29 September 1961, 15; "Hayward Puts Out Lures to Industry," *Hayward Daily Review*, 29 September 1961, 15; "Planner Veto Change," *Hayward Daily Review*, 10 June 1966, 9.

[5] HistoricAerials.com, Historic Aerial Images, 1946, 1958, 1966, 1968, 1980; "County Board OK's Plan on Industry Blvd," *Hayward Daily Review*, 14 December 1960, 5; "Another Industrial Boulevard Link on Tap," *Hayward Daily Review*, 3 January 1963, 9.

[6] "Milestones Recognized in Hayward," *Hayward Daily Review*, 29 September 1961, 15; "Hayward Puts Out Lures to Industry," *Hayward Daily Review*, 29 September 1961, 15; "Planner Veto Change," *Hayward Daily Review*, 10 June 1966, 9; HistoricAerials.com, Historic Aerial Images, 1946, 1958, 1966, 1968, 1980; USGS, *Hayward Quadrangle*, 1:24,000, 7.5-minute (Washington, D.C.: USGS, 1947, 1959, 1968, 1973); USGS, *San Leandro*, 1:24,000, 7.5-minute (Washington, D.C.: USGS, 1948, 1959, 1968, 1973); USGS, *Newark*, 1:24,000, 7.5-minute (Washington, D.C.: USGS, 1948, 1959, 1968, 1973).

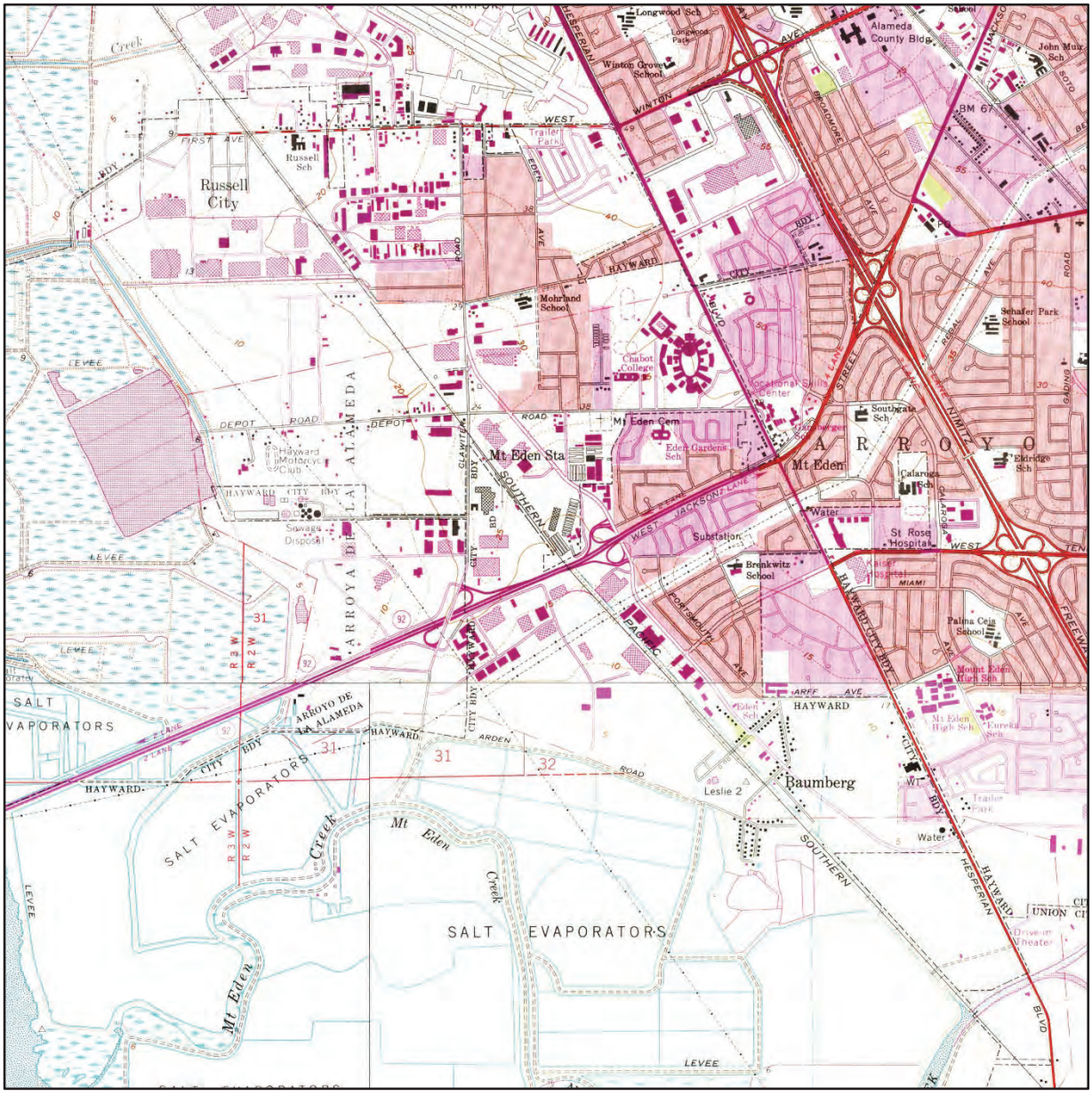

Plate 2: Portion of 1973 USGS topographic map showing development in western Hayward. The purple buildings and shaded areas indicate development that occurred between 1968 and 1973.

By 1980, some undeveloped industrial parcels remained, but the overall character of this area was clearly established by this time. It consisted of a wide range of buildings from very large tilt-up style buildings, to small, service-oriented, light industrial businesses. Similar to the residential subdivisions, the industrial tracts also exhibited curvilinear and cul-de-sac road patterns. Many of the firms also took advantage of their proximity to the railroad and built spurs to serve their businesses.[7]

Both the residential and industrial development in the study area prompted other infrastructure improvements in addition to roads. This flat, low-lying area near the bay had historically been an area with poor water drainage that led to local flooding.

[7] HistoricAerials.com, Historic Aerial Images, 1946, 1958, 1966, 1968, 1980.

In 1949, the Alameda County Flood Control and Water Conservation District (ACFCWCD) formed to build infrastructure to provide flood control and conserve water throughout Alameda County. The ACFCWCD divided the county into administrative zones corresponding to watersheds and community boundaries and proceeded to construct infrastructure that included pump stations, erosion control structures, dams, pipelines, drainage channels, levees, and creek improvements. In the study area, three flood control canals were built to carry away rain water and prevent it from pooling up: Line A, built in 1955, which begins at the intersection of West Street and Mohr Drive and flows generally west, crossing Cabot Boulevard and continuing into the bay; Line A-2, built in 1957, which crosses Arf Avenue just west of Morningside Drive and also crosses Industrial Blvd east of Baumberg Avenue; and Line A-2, built ca. 1967, which crosses West Winton Avenue west of Cabot Boulevard.[8]

Evolution of Wastewater Disposal

Modern methods for disposal of human wastewater (sewage) began during the nineteenth century as industrialization fueled population growth and became a particular challenge in urban areas throughout the United States. Advances in both water treatment and water supply systems came into being in response to inadequate, unreliable, and unsanitary wastewater facilities that largely consisted of privy vaults and cesspools. Public health officials and engineers across the country advocated for underground, city-wide sewer systems under municipal control to efficiently remove wastewater, but public support for sewer systems was slow. Beginning about 1880, a few cities began to build publicly-funded sewer systems. Over the next 40 years, sewer systems expanded so that by 1920, 87 percent of the urban population in the country was served by a sewer system. The systems were generally underground conduits that conveyed raw sewage, often along with storm water, into the nearest natural waterway. While this method improved sanitation in the developed areas, it also polluted rivers and streams, which caused health problems for those downstream, who obtained their drinking water from the same waterways, or caused other environmental damage in coastal areas.[9]

The practice of dumping raw sewage into waterways continued to be common into the twentieth century. In 1930, only 26 percent of cities with sewer systems treated their sewage and the burden of purifying wastewater for reuse fell to downstream water users, who had to implement municipal water filtration and chlorination plants. In the early decades of the twentieth century, scientists tested and experimented with sewage treatment methods such as aeration, filtration, activated sludge, and biological processes to treat wastewater. Gradually, as pressure from public health officials and concern over lawsuits from downstream users increased, cities accepted the responsibility for purifying sewage and built treatment facilities. Construction of such facilities occurred rapidly, and by World War II, nearly all urban areas had sewer systems, and sewage treatment plants were becoming universal. In 1940, over one-half of the population in the US with sewers also had treatment facilities. This number increased to 63 percent by the end of the decade. The most popular treatment methods at this time were oxidation by trickling filter and activated sludge (a process that reduced organic content of sewage). The latter method was developed in the 1910s and soon became the treatment of choice for municipal facilities because it was highly effective.[10]

Scientists and engineers developed new sewage treatment processes and improved existing ones over the next several decades, but the greatest challenges were more practical. Extensive post-war urban growth and water consumption pushed sewage plants to capacity, and civic officials struggled to keep pace. Cities either expanded existing facilities or built new ones. Funding for such frequent and costly projects presented fiscal challenges to local governments, and appeals for money were made to the federal government on the basis that clean water was also a national interest and responsibility. Congress responded by passing the Water Pollution Control Act in 1948 (amended in 1956) that provided for grants of up to 30 percent

[8] Alameda County Flood Control and Water Conservation District, "District History," available at http://www.acfloodcontrol.org/about-the-district/history-of-the-district/ (accessed April 2017); Alameda County Flood Control and Water Conservation District, "Hayward Landing Watershed Map," 2014; Alameda County Flood Control and Water Conservation District, "Old Alameda Creek Watershed Map," 2014; Andrew Otsuka, Alameda County Public Works Agency, email communication, April 17, April 18, 2017.
[9] Joel A. Tarr and Francis Clay McMichael, "The Evolution of Wastewater Technology and the Development of State Regulation: A Retrospective Analysis," in *Retrospective Technology Assessment—1976*, ed. Joel A. Tarr (San Francisco, CA: San Francisco Press, 1977), 168, 169, 174, 175, 178-181; Martin V. Melosi, *The Sanitary City* (Baltimore, MD: Johns Hopkins Press, 2000), 90-93, 149-152.
[10] Melosi, *The Sanitary City*, 161-174, 260; Tarr and McMichael, 183; James E. Alleman, "The Genesis and Evolution of Activated Sludge Technology," School of Civil Engineering, (West Lafayette, IN: 2005) http://www.elmhurst.org/DocumentView. aspx?DID=301 (accessed January 2014).

of construction costs for sewage treatment facilities. The availability of federal monies had immediate results, spurring a 62 percent increase in the construction of wastewater treatment plants. Congress continued to pass legislation to fund sewage treatment plants in the 1960s and 1970s and, by the 1980s, state funding became a third important funding source in the form of a revolving loan fund. Today, wastewater treatment plants continue to implement new treatment technologies and build new plants to keep pace with urban growth.[11]

Development of the Hayward Water Pollution Control Facility

The oldest segments of the City of Hayward's existing sewer system were reportedly constructed around 1910, with replacements, additions, and modifications performed at various times up to the present day. Initially, Hayward's sewer system contained an underground network of clay, asbestos cement, and reinforced concrete piping that formed main and lateral lines throughout the city. The pipes converged into a single outfall line in an unincorporated area of south Alameda County on the western outskirts of the city. As with other Bay Area municipalities, the city of Hayward's raw sewage was then discharged directly into the San Francisco Bay.[12]

Along with the rest of the country, California's Bay Area citizens began calling for more hygienic sewage disposal practices in the 1930s. By 1938, the City of Hayward had purchased 47 acres in the city's outlying areas for the express purposes of constructing a so-called "Sewer Farm." One of the identified plant locations was the current plant property. However, development of municipal sewage treatment facilities in Hayward would not begin in earnest until after 1950. In 1940, the neighboring Oro Loma Sanitary District immediately north of Hayward proposed the jointly funded construction of a sewage treatment plant with the City of Hayward and the Castro Valley Sanitary District. Oro Loma's proposal also included renting the treatment facilities to Hayward and Castro Valley and charging fees based on their proportional usage. After nearly a decade of consideration and cost analyses, Hayward ultimately declined the offer to collaborate with the neighboring districts in 1949. One of the deciding factors for Hayward's leaders was the very real prospect of the city's southward and westward expansion and the increased treatment needs that came with future annexations. Oro Loma and Castro Valley ultimately partnered and completed construction of the nearly $2 million wastewater treatment plant in San Lorenzo in 1951.[13]

Having decided against joint operation of the Oro Loma treatment plant, the City of Hayward now faced the urgent challenge of constructing its own municipal sewage treatment plant lest it face penalties from the State of California. In 1946, the California State Board of Public Health passed a resolution prohibiting raw sewage discharge into the San Francisco Bay; the resolution also ordered municipalities to begin immediate development of wastewater treatment facilities. By 1952, the only cities not yet in compliance were Millbrae, Sausalito, and Hayward.[14]

In November 1950, the City of Hayward used funds from a federal loan to hire prominent sanitary engineer Harry N. Jenks as a consultant in developing its sewage treatment plant. Harry Jenks graduated from the University of California, Berkeley in 1916 with a degree in sanitary engineering before he was immediately hired by the British mining firm, Burma Mines, Ltd., to design sanitation facilities for its Burmese mining camps. By the end of the decade, Jenks had published multiple articles relating to sanitation and public health in various national engineering journals. When Jenks returned to California, he joined Clyde C. Kennedy's engineering firm, where he planned and designed some of the state's earliest municipal sewage systems. In the 1920s, Jenks developed several new water and wastewater treatment processes, including biofiltration. In 1933, Jenks founded his own company in Palo Alto, and over the course of the next few decades he designed and constructed treatment

[11] Melosi, *The Sanitary City*, 172, 235, 244, 247-249, 335, 336, 381.
[12] U.S. Environmental Protection Agency, Region IX, *Final Environmental Impact Statement, Volume 1: East Bay Dischargers Authority Water Quality Management Program, Phase 1 Project* (San Francisco, CA: U.S. EPA, July 1976), III-20.
[13] "Sewage Disposal," *Hayward Daily Review*, December 15, 1932, 4; "Council Ratifies Sewer Farm Pact," *Hayward Daily Review*, October 4, 1938, 1; "Combined Sewage Plant for this Section is Urged," *Hayward Daily Review*, August 16, 1940, 1; "Hayward NOT Joining Oro Loma Treatment Plant, Council Decides," *Hayward Daily Review*, April 19, 1949, 1; "Sewage Treatment Plant Operator Tells How New Oro Loma District Installation Serves People," *Hayward Daily Review*, April 18, 1951, 3.
[14] "The Sewage Dumpers," *Hayward Daily Review*, April 7, 1952, 1

and disposal facilities in Palo Alto, Burlingame, San Mateo, Marin County, Napa, San Rafael, Petaluma, and Salinas. Jenks ultimately received 10 patents for his wastewater treatment inventions before he died in 1964.[15]

Between 1950 and 1952, the City of Hayward, Department of Public Works, Engineering Division collaborated with Harry Jenks in designing a wastewater treatment plant (**Plate 3**). Constructed for approximately $2 million on 40 acres purchased from William Johnson, the plant was financed by a $1.7 million revenue bond issue passed in April 1952, later augmented by another $300,000 bond issue passed that December. Contractors Barrett & Hilp and DeLuca Construction Co. completed construction in late 1953. The Hayward Municipal Sewage Treatment Plant originally included a primary biofilter (Structure 1), a primary clarifier (Structure 3), a secondary clarifier (Structure 2), a primary mixing tank (Structure 5), a secondary mixing tank (Structure 4), a vacuator (Structure 6), a primary digester (Structure 7), a control house & pumping plant (Building 8), a hydraulic jump aerator (non-extant), an effluent box (non-extant), sludge drying beds (non-extant), and an effluent pond (Structures 9 and 10, originally designed as one of three ponds).[16]

[15] "City Prepares to Build Sewer Treatment Plant," *Hayward Daily Review*, November 7, 1950, 1; American Journal of Public Health, "The Caste System and the Sanitary Problem" (November 1919): 838-843; Kennedy / Jenks Consultants, *Spotlights* 29, no. 1 (April 2009): 2-3; Harry N. Jenks, "Experimental Studies of Bio-Filtration," *Sewage Works Journal* 8, no. 3 (May 1936): 401-414; Kennedy / Jenks Consultants, "History," https://www.kennedyjenks.com/history/ (accessed April 2017).

[16] "City's New Sewage Plant Will Start Operations Soon," *Hayward Daily Review*, December 8, 1953, 14; "Mt. Eden Residents Plead to City to Control Sewage Plant Odors," *Hayward Daily Review*, August 16, 1954, 11; Harry N. Jenks, Consulting Sanitary Engineer, "City of Hayward, Engineering Division, Municipal Sewage Disposal Project: Yard Layout, Plant Piping," June 2, 1952, drawing no. E-62-5-4, sheet 2 and 4 of 56; HistoricAerials.com, Historic Aerial Images, 1958.

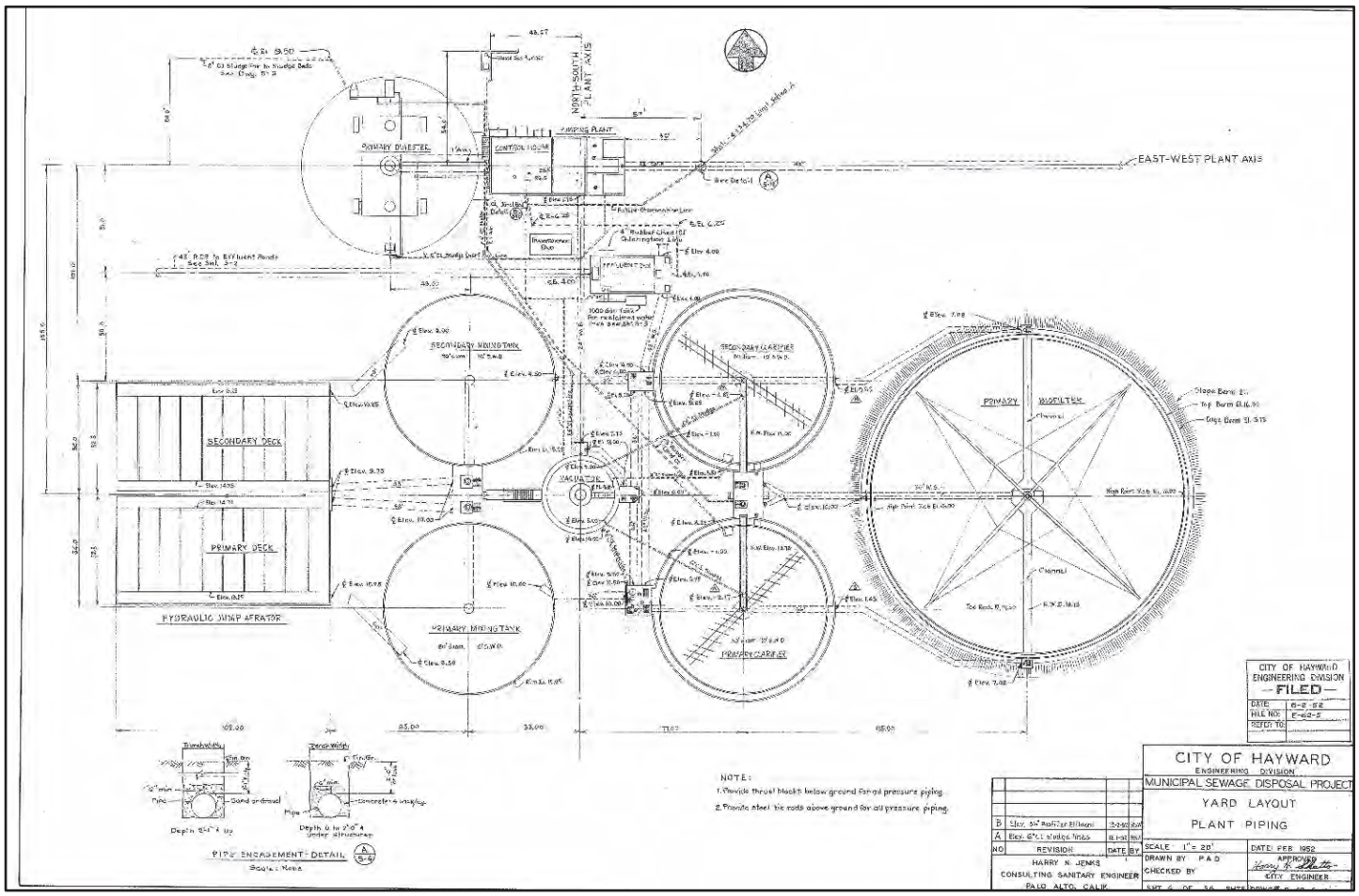

Plate 3: Original 1952 site plans for the Hayward Municipal Sewage Treatment Plant showing from right to left the biofilter, clarifiers, mixing tanks, aerators, and digesters.[17]

The plant was built to treat a daily average of five million gallons per day (MGD) through a combination of mechanical and biological processes referred to as a "complete secondary treatment process." As originally constructed, influent (raw sewage) entered the plant through the control house & pumping plant, where the heaviest solids were initially extracted. The control house also contained remote controls over all the plant's mechanical functions. Next, the biofilter processed the influent by pushing it through sand, gravel, and rocks, a process that further separated solids from liquids. The influent was then processed through two consecutive mixing tanks, which served to agitate the mixture and separate solid particles from liquid, a process that produced mixed liquor suspended solids (MLSS). After this agitation, the MLSS was then treated by two consecutive clarifiers, which functioned to further isolate solid particles from liquid by allowing sludge particles to settle into a bottom sump, floating scum to be collected with a surface rake, and effluent (treated wastewater) to be filtered out through weirs to the effluent box. In the vacuator, air was extracted from the sludge via vacuum pump, and in the hydraulic jump aerator, oxygen was reintroduced in order to increase sludge-particle digestion among aerobic digesters (oxygen-reliant microorganisms). Accelerated digestion occurred at the primary digester, in which anaerobic digesters (non-oxygen-reliant microorganisms) fed on sludge particles in an oxygen-free environment, producing methane biogas that the plant then converted to energy to run the facility. The activated sludge was either returned to the mixing tank to aid in the aerobic digestive process or removed to the sludge drying beds, where any remaining liquid either trickled out or evaporated under disinfecting solar rays. The effluent was removed to the effluent pond, where it was ultimately pumped into the San Francisco Bay through

[17] Harry N. Jenks, Consulting Sanitary Engineer, "City of Hayward, Engineering Division, Municipal Sewage Disposal Project: Yard Layout, Plant Piping," June 2, 1952, drawing no. E-62-5-4, sheet 2 and 4 of 56.

the Hayward Outfall Channel, which was constructed around the same time as the plant and doubled as a flood control channel for Alameda County Flood Control and Water Conservation District Zone 4.[18]

As the population grew and the city boundaries expanded, the City of Hayward began preparing for the plant's next major development project. As early as 1954, the city council was already discussing the construction of a second sewage treatment plant and had even surveyed a 35-acre site by 1955. This second treatment plant was never built. Instead, the City opted to enhance the processing capabilities of the existing plant by adding additional treatment structures. In 1958, Hayward earmarked $835,000 for plant expansion in that year's public works bond issue. Three years later, the City of Hayward approved expansion plans submitted by Jenks, who was hired on again as a consultant. Among the additions were an additional digester (Structure 12), an additional vacuator (Structure 13), a sludge-conditioning tank (Structure 14), a large final clarifier (non-extant), and a biorainator (non-extant). The addition of a sludge-conditioning tank allowed for sludge to be de-watered faster using floccule reagents and chemicals. In addition to structures related to wastewater treatment, Jenks' plans also called for the construction of a storage and maintenance building (Building 16) as well as a concrete equipment slab (non-extant, later replaced by Building 19 after 1970). The additions were constructed by Berkeley-based contracting firm C. Norman Peterson, Inc. at a cost of $882,200, well over the amount allotted three years earlier. These additions were all in place by 1966 (**Plate 4**).[19]

Plate 4: Hayward Wastewater Treatment Plant ca. 1962 – 1970.[20]

[18] "City's New Sewage Plant Will Start Operations Soon;" USGS, *San Leandro Quadrangle*, 1: 24,000, 7.5-minute (Washington, D.C.: USGS, 1959); "Joint Channel Use Approved," *Hayward Daily Review*, June 13, 1956, 13.
[19] "Lumber Cutting Yard Catches County Snag," *Hayward Daily Review*, October 22, 1954, 1; "Growth of a City," *Hayward Daily Review*, February 25, 1955; City of Hayward, Department of Public Works, Engineering Division, "Plans for the Construction of North Sewage Treatment Plant Expansion: Outside Sewage and Sludge Piping Layout," October 7, 1958, drawing no. E-322, sheet 12C of 100; "Sewage Plant Bids Exceed Estimates," *Hayward Daily Review*, July 13, 1961, 1; HistoricAerials.com, Historic Aerial Images, 1966.
[20] East Bay Dischargers Authority, "Water Quality Management Program, Environmental Impact Statement: Figure III-9: City of Hayward Treatment Plant," July 1976.

In the midst of construction, the Bay Area Regional Water Pollution Control Board issued new sewage treatment regulations to the City of Hayward. Although the plant's 1962 expansion would have met the new discharge requirements for nine months out of the year, the remaining three months constituted the high-volume canning season. Every summer, the Hayward sewage treatment plant struggled to keep pace with the sharp increase of sewage produced by the Hunt's Foods cannery, an annual ordeal that yielded backlogs of untreated sewage and growing complaints from Russell City and Mt. Eden residents concerning the nauseating odors. Moreover, during the busy summer months the plant typically cut corners by discharging inadequately treated wastewater into the San Francisco Bay, prompting the regional board to issue the compliance directive in July 1962. In response to the new requirements, the City of Hayward again hired Jenks to find the most cost-effective and speedy method of increasing the plant's sewage treatment capabilities. In September, Jenks submitted a request to construct two experimental, quarter-acre oxidation ponds in order for the city engineer to observe and compare the relative costs and effectiveness of natural versus mechanical oxidation processes. The experiment yielded positive results, and the City set about purchasing more land to build larger, permanent ponds. After three years of negotiations, the City acquired 235 acres of former salting ponds northwest adjacent to the plant from the prominent Marsicanos family for $603,304. The construction of four, roughly 30-acre oxidation ponds (not recorded on this form) was completed the following year by the Rio Vista-based Dutra Dredging Co. and the Fred J. Early Co. of San Francisco.[21]

By 1969, the plant was processing on average 11 MGD, with 16 MGD during the canning season. This level of production severely taxed the system, which had been upgraded only to handle brief peak periods of 15 MGD. The following year, the City received plans for phase I of a $15 million plant expansion drafted by John Jenks' firm, Jenks & Adamson, to meet the city's needs over the next 20 years. The plans included designs for a new operations building (Building 17), an equipment housing structure (Building 19), a plant air station (Building 20), and the conversion of the primary mixing tank (Structure 5) to a flotator-thickener. The plans additionally included designs for extensive chlorination facilities adjacent to the oxidation ponds (not recorded on this form). These chemical facilities were urgently needed at the plant, as that June, the Bay Regional Water Quality Control Board, reacting to aerial slide photographs of brownish effluent pouring into the bay from the Hayward Outfall Channel, threatened the city with a cease-and-desist order under the provisions of the Porter-Cologne Water Quality Act. Under the new law, the state could impose a $6,000-per-day fine and restrict all additional sewer connections against polluters, an imposition that would effectively grind new development to a halt.[22]

In addition to ordering chlorination-treatment procedures, the regional board also encouraged the City of Hayward to consolidate infrastructure with other regional dischargers, including San Leandro, the East Bay Municipal Utilities District (EBMUD), and the Oro Loma, Castro Valley, and Union City sanitary districts. This recommendation by the regional board reflected the larger objectives of the Bay Area Plan, which sought to rationalize the fragmented discharging practices of city and district treatment agencies and implement a more holistic approach to managing Bay Area wastewater. The plan's water quality standards were prerequisites that Bay Area dischargers had to meet (or plan to meet) before receiving state and federal funding for facility expansions.[23]

The south Alameda County municipalities commissioned sanitary engineering firms Jenks & Adamson and Kennedy Engineers to draft a report outlining the most efficient method of implementing the sub-regional plan in 1970. Within two years, the firms had designed the inter-municipal "super sewer" at a projected construction cost of $82.42 million, which

[21] "Halt Ordered on Water Pollution," *Hayward Daily Review*, July 19, 1962, 1; "Mt. Eden Residents Plead to City to Control Sewage Plant Odors;" "Something Smells in Washington Township," *Hayward Daily Review*, September 10, 1957, 14; "Big Smell in Area Traced to Sources," *Hayward Daily Review*, September 18, 1958, 13; "Hayward Okays Two Ponds," *Hayward Daily Review*, September 5, 1962, 13; "City Pleased with Sewage Pond Results," *Hayward Daily Review*, November 29, 1962, 11; "Big Sewage Plant for Hayward," *Hayward Daily Review*, October 12, 1965, 13; "Sewage System Contracts OKd," *Hayward Daily Review*, October 21, 1965, 14; HistoricAerials.com, Historic Aerial Images, 1966.

[22] "Federal Grant urged for Sewage Project," Hayward Daily Review, March 24, 1969; Jenks & Adamson, Consulting Sanitary Engineers, "City of Hayward, Department of Public Works, Engineering Division, Wastewater Treatment and Disposal Facilities – Stage I: Site Plan," June 1970, drawing no. E-606, sheets 1 and 2 of 62; "Sewage Requirement Draws Protests," *Hayward Daily Review*, August 17, 1969, 4; "Hayward New Water Target," *Fremont Argus*, June 26, 1970, 1.

[23] "South County Sewage Consolidation Urged," *Hayward Daily Review*, July 24, 1970, 11; "$850 Million Bay Cleanup Plan Offered," *Hayward Daily Review*, April 13, 1971,

would be shared by the Alameda County sub-regional dischargers, collectively called the East Bay Dischargers Authority (EBDA). The plan called for a 25-mile pipeline extending north from the city of Newark to the deeper bay waters west of the Oakland Airport; it was intended to eliminate all discharges into the shallower waters of the south bay. With its members sharing costs and receiving up to 80 percent in outside state and federal assistance, the EBDA began construction in 1974. Jenks & Adamson and Kennedy Engineers, who eventually merged in 1980, received $7.2 million to design and manage the project and supervise construction, in addition to the $18,000 received for earlier studies.[24]

At the same time that the EBDA "super sewer" plan was developing, the City of Hayward also planned the expansion of its own local sewage treatment facility, called the Hayward Wastewater Treatment Plant by 1975. Having received formal approval by the EBDA and the State Water Resources Control Board, the City of Hayward began implementing the $2.2 million Phase II expansion, which included the construction of an additional digester (Structure 23), a mixing and heating building (Building 28), a waste gas burner (Structure 24), additional oxidation ponds (not recorded on this form), a centrifuge building extension (non-extant, added to Building 27), and a standby support power system (Building 25).[25]

Since the mid-1970s, the plant has undergone several subsequent expansions. Somewhat minor additions to the plant include the construction of additional storage facilities (ca. 1980 and 2005) and the renovation and expansion of the administration building (ca. 1994). In the early 1980s, the plant was expanded to include a fluid bed reactor (Structure 29), and an aeration blower building (Building 31). In the mid-to-late 1990s, the Headworks (Building 34) and Boiler Building (Building 35) were also constructed. In 2008, the plant completed the massive $58 million Phase I of the Water Pollution Control Facility Improvement Project. This expansion included a second trickling filter (Structure 40), two new final clarifiers (Structures 47 and 48), solids contact basins (Structure 32 replaced the ca. 1962 final clarifier), solids thickening facilities (Building 44), and a 12kV electrical system (Buildings 39, 42, and 46). In 2013, the FOG (fat, oil, and grease) receiving station (Structure 18) was constructed, and in 2016, the water reclamation station (Structure 15) was built, the cogeneration building (Building 38) was constructed, and Structure 5 was converted to the southwest primary clarifier. Building 33, the engineering office, is a temporary building erected in 2016 to oversee planning and construction.[26]

Evaluation

The City of Hayward WPCF does not have important associations with historically significant events, patterns, or trends of development (NRHP Criterion A / CRHR Criterion 1). The plant is associated with the development of local San Francisco Bay Area wastewater treatment plants during the post-World War II era. While the WPCF is also associated with the growth and functioning of the City of Hayward, wastewater treatment plants generally fall under a class of public utility infrastructure such as sewers or electrical systems which are ubiquitous and essential for any city to function, but must be evaluated for historically significance under a wider context that goes beyond the city. To properly assesses their historical importance wastewater treatment plants must be considered relative to similar plants in other cities. With this in mind, construction of the WPCF in 1953 occurred during an era when municipalities throughout the Bay Area were building new wastewater treatment plants in response to government regulations and increasing public objection to dumping raw sewage into waterways. By the time the Hayward plant was built, it was one of the last cities in the Bay Area to come into accordance with the new rules. The

[24] "South County Sewage Consolidation Urged," *Hayward Daily Review*, July 24, 1970, 11; "Water Board Gives Blessing to Regional Waste Plan," *Hayward Daily Review*, August 23, 1972, 14; "$68 Million to Fight Water Pollution Will Be Asked," *Hayward Daily Review*, February 28, 1974, 12; " 'Super Sewer' Project Backed," *Hayward Daily Review*, March 29, 1974, 16; Kennedy/Jenks Consultants, "History."

[25] "Dischargers Board Approves Contract," *Hayward Daily Review*, February 25, 1976, 12; Jenks & Adamson, Consulting Sanitary & Civil Engineers, "East Bay Dischargers Authority, Alameda County, California, Plans for the Construction of Hayward Wastewater Treatment Facilities Improvements Project 3951: Site Plan & Layout," April 1975, drawing no. E-1702, sheets 2 and 3.

[26] Wahamaki & Corey, "City of Hayward, Alameda County, California, Plans for the Construction of Wastewater Treatment Plant Storage Building," January 1980, drawing no. E-871, sheets 1-9; Garco Building Systems, "Hayward, Quality Erectors & Construction," August 2005, drawing no. PLAN VIEW, sheets 1-13; Dennis I. Okamura, "City of Hayward, Alameda County, California, Plans for the Construction of Water Pollution Control Facility Administration Building Renovation and Expansion," November 1994, drawing no. 1301-A, sheets 1-42; HistoricAerials.com, Historic Aerial Images, 1980, 1987, 1993, 2000; City of Hayward, "City of Hayward Wastewater Collection and Treatment Service," PowerPoint presentation to Local Agency Formation Commission, July 10, 2014.

WPCF, therefore, followed existing trends and patterns in this regard and was not a leading example or otherwise historically important wastewater treatment plant, and does not meet Criterion A/Criterion1.

This property is not significant for an association with the lives of persons important to history (NRHP Criterion B/CRHR Criterion 2). Research did not reveal that any individual associated with this property has made demonstrably important contributions to history at the local, state, or national level.

Under NRHP Criterion C / CRHR Criterion 3, this property is not significant as an important example of a type, period, or method of construction, nor is it the work of a master or possess high artistic values. The WPCF does not appear to be distinctive for its architecture or its engineering and design. The WPCF has employed trickling, aeration, and activated sludge treatment since the facility was constructed in 1953. This was, and continues to be, a widely used wastewater treatment method and technology which is manifested at the WPCF by the plant design, its structures, and buildings. As a plant that employed common methods and followed the existing standards from the time of its original construction and early development, the engineering and design of WPCF is not innovative or groundbreaking in this regard. In addition to the structures and utilitarian buildings at the plant, one original building, Building 8, exhibits characteristics of the International Style. And a small number of later buildings constructed in the 1970s—Buildings 17 and 19—also exhibit characteristics of this style in varying degrees, presumably to emulate Building 8. In addition, three buildings not from the historic period—Buildings 25, 34, and 35—are also in this style. The International Style was based on functionality and expression of the building structure rather than superfluous decoration. It is characterized by concrete construction, smooth walls, ribbon windows, spandrel panels, flat roofs, and columns. While these characteristics are present in varying degrees in these buildings, they are all very modest expressions of the International Style and not architecturally distinctive.[27]

The WPCF also does not appear to be the work of a master. The City of Hayward hired sanitary engineer Harry N. Jenks to help design the original water treatment plant and Jenks continued to assist with later upgrades and construction. Jenks had a noteworthy career as a sanitary engineer, particularly for his innovations in the biofiltration wastewater treatment process in the 1920s. Jenks constructed many wastewater treatment plants during his long career, including several plants in the Bay Area. While Jenks may be considered a master sanitary engineer, construction of the Hayward plant occurred relatively late in his career, long after he had developed the biofiltration process and designed several other plants that used this process in the Bay Area. The Hayward plant does not represent any of his innovations in the field, a particular phase of his career, or aspect of his work. The WPCF, therefore, does not meet Criterion C/Criterion 3 as representative of the work of a master.

Under NRHP Criterion D / CRHR Criterion 4, this property is not a significant or likely source of important information about historic construction materials or technologies that otherwise would not be available through documentary evidence. This property also does not qualify as a historic district. Like other property types, historic districts must meet one of the four NRHP/CRHR Criterion. As discussed above, the WPCF does not meet any of the criterion for historical significance.

In addition to lacking historical significance and not meeting the criteria necessary for eligibility for listing in either the NRHP or CRHR, the numerous alterations, demolitions, and new construction at the WPCF plant throughout the years have resulted in a loss of integrity of design, materials, workmanship, setting, and feeling. These are discussed in the above historic context and itemized in the table is Section B6 above.

[27] Lee McAlester and Virginia McAlester, *Field Guide to American Houses* (New York: Alfred A. Knopf, 1988), 469-470.

Photographs (continued):

Photograph 2. Structure 1 (West Trickling Filter, center), with Building 34 (Headworks, right); camera facing south, April 21, 2017.

Photograph 3. Detail view of Structure 1 south-side pumping equipment; camera facing west, April 21, 2017.

Photograph 4. Detail view of Structure 1 roof / trickling equipment; camera facing northeast, April 21, 2017.

Photograph 5. Structure 2 (North Primary Clarifier, bottom right), Structure 3 (South Primary Clarifier, bottom left), Structure 4 (Northwest Primary Clarifier, center right), Structure 5 (Southwest Primary Clarifier, center left), Structure 6 (South Vacuator, center). The Calpine Energy facility is in the distance, camera facing west, April 21, 2017.

Photograph 6. Structure 6 (South Vacuator, center), with Structure 4 (Northwest Primary Clarifier, left), Structure 5 (Southwest Primary Clarifier, right), and Structure 1 (West Trickling Filter, background); camera facing east, April 21, 2017.

Photograph 7. Structure 7 (Digester No. 3, center), with Structure 4 (Northwest Primary Clarifier, foreground); camera facing northwest, April 21, 2017.

Photograph 8. Building 8 (Site Waste Pump Station & Control House, center right), with Structure 7 (Digester No. 3, center left) and Structure 4 (Northwest Primary Clarifier, foreground); camera facing northwest, April 21, 2017.

Photograph 9. North and east sides of Building 8; camera facing southwest, April 21, 2017.

Photograph 10. Structure 10 (Equalization Pond, center) with the neighboring Calpine Energy facility on the right; camera facing west, April 21, 2017.

Photograph 11. Detail view of concrete platform at northeast corner of Structure 10; camera facing north, April 21, 2017.

Photograph 12. Structure 11 (Bypass Control Box, center), with Structure 6 (South Vacuator, center background), Structure 2 (North Primary Clarifier), and Structure 4 (Northwest Primary Clarifier); camera facing south, April 21, 2017.

Photograph 13. Detail interior view of Structure 11; camera facing west, April 21, 2017.

Photograph 14. Structure 12 (Digester No. 2, center), with Building 19 (Equipment Housing Structure, center right); camera facing northwest, April 21, 2017.

Photograph 15. Structure 13 (North Vacuator); camera facing northwest, April 21, 2017.

Photograph 16. Structure 14 (Sludge Conditioning Tank, center), with Structure 15 (Water Reclamation Station, center background), Building 20 (Air Compressor Building, center right), Structure 4 (Northwest Primary Clarifier, foreground), and Building 27 (Maintenance and Electrical Shop, background right); camera facing northwest, April 21, 2017.

Photograph 17. Building 16 (Storage and Maintenance Building); camera facing southeast, April 21, 2017.

Photograph 18. South and east sides of Building 16, with Structure 21 (Gasoline Pump, south side of Building 16); camera facing northwest, April 21, 2017.

Photograph 19. South and west sides of Building 17 (Operations Building); camera facing northwest, April 21, 2017.

Photograph 20. Detail view of Building 17 façade; camera facing northeast, April 21, 2017.

Photograph 21. North and east sides of Building 17; camera facing southwest, April 21, 2017.

Photograph 22. Structure 18 (FOG Receiving Station, center), with Structure 12 (Digester No. 2, right) and Structure 13 (North Vacuator, left); camera facing south, April 21, 2017.

Photograph 23. Building 19 (Equipment Housing Structure); camera facing north, April 21, 2017.

Photograph 24. Building 20 (Air Compressor Building); camera facing southeast, April 21, 2017.

Photograph 25. Building 22 (Chemical Feed Building); camera facing southeast, April 21, 2017.

Photograph 26. Structure 23 (Digester No. 3, left) with Building 28 (Mixing and Heating Building, right); camera facing northwest, April 21, 2017.

Photograph 27. Structure 24 (Waste Gas Burner); camera facing northeast, April 21, 2017.

Photograph 28. Building 25 (Old Power Generation Station, center) with Structure 1 (West Trickling Filter, left) and Building 35 (Boiler Building, right); camera facing southwest, April 21, 2017.

Photograph 29. South side of Buildings 25 and 35; camera facing north, April 21, 2017.

Photograph 30. Structure 26 (Gas Meter Installation) with Structure 12 (Digester No. 2, background); camera facing southeast, April 21, 2017.

Photograph 31. Building 27 (Maintenance and Electrical Shop); camera facing northwest, April 21, 2017.

Photograph 32. Structure 29 (Fluid Bed Reactor); camera facing southwest, April 21, 2017.

Photograph 33. Building 30 (Storage Building) with Building 16 (Storage and Maintenance Building, left); camera facing northwest, April 21, 2017.

Photograph 34. Building 31 (Aeration Blower Building); camera facing northwest, April 21, 2017.

Photograph 35. Structure 32 (Solids Contact Basins) with the Calpine Energy facility in the background; camera facing northwest, April 21, 2017.

Photograph 36. Detail view of Structure 32; camera facing northeast, April 21, 2017.

Photograph 37. Building 33 (Engineering Office); camera facing northeast, April 21, 2017.

Photograph 38. Building 34 (Headworks) with Structure 1 (West Trickling Filter, background right); camera facing southeast, April 21, 2017.

Photograph 39. East side of Building 34; camera facing west, April 21, 2017.

Photograph 40. Structure 36 (Gas Conditioning Area) with Structure 23 (Digester No. 1, right) and Building 37 (Warehouse, left); camera facing north, April 21, 2017.

Photograph 41. Building 37 (Warehouse, center) with Structure 36 (Gas Conditioning Area, foreground right) and Building 44 (Solids Thickening Building, background left); camera facing northwest, April 21, 2017.

Photograph 42. Building 38 (Cogeneration Building) with Structure 24 (Waste Gas Burner, right); camera facing northwest, April 21, 2017.

Photograph 43. Building 39 (12kV Import Export Station); camera facing northeast, April 21, 2017.

Photograph 44. Structure 40 (East Trickling Filter, background) with Structure 41 (Trickling Filter Pumping Station, foreground); camera facing northeast, April 21, 2017.

Photograph 45. Structure 42 (East Substation); camera facing northeast, April 21, 2017.

Photograph 46. Structure 43 (East Biofilter); camera facing north; April 21, 2017.

Photograph 47. Building 44 (Solids Thickening Building); camera facing northeast, April 21, 2017.

Photograph 48. Structure 45 (West Bio Filter); camera facing northwest, April 21, 2017.

Photograph 49. Building 46 (West Substation); camera facing northwest, April 21, 2017.

Photograph 50. Structure 47 (Final Clarifier 1, foreground) with Building 44 (Solids Thickening Building, background center), Building 37 (Warehouse, background center right), and Building 27 (Maintenance and Electrical Shop, background far right); camera facing northeast, April 21, 2017.

Photograph 51. Structure 49 (Soil Bed Odor Filter); camera facing north, April 21, 2017.

Photograph 52. Structure 50 (No. 3 Water System, center) with Structure 14 (Sludge Conditioning Tank, right) and Structure 1 (West Trickling Filter, background left); camera facing southeast, April 21, 2017.

Photograph 53. Structure 51 (Stormwater Pump Station); camera facing west, April 21, 2017.

Photograph 54. Building 52 (Final Clarifier Electrical Building); camera facing southwest, April 21, 2017.

Site Map


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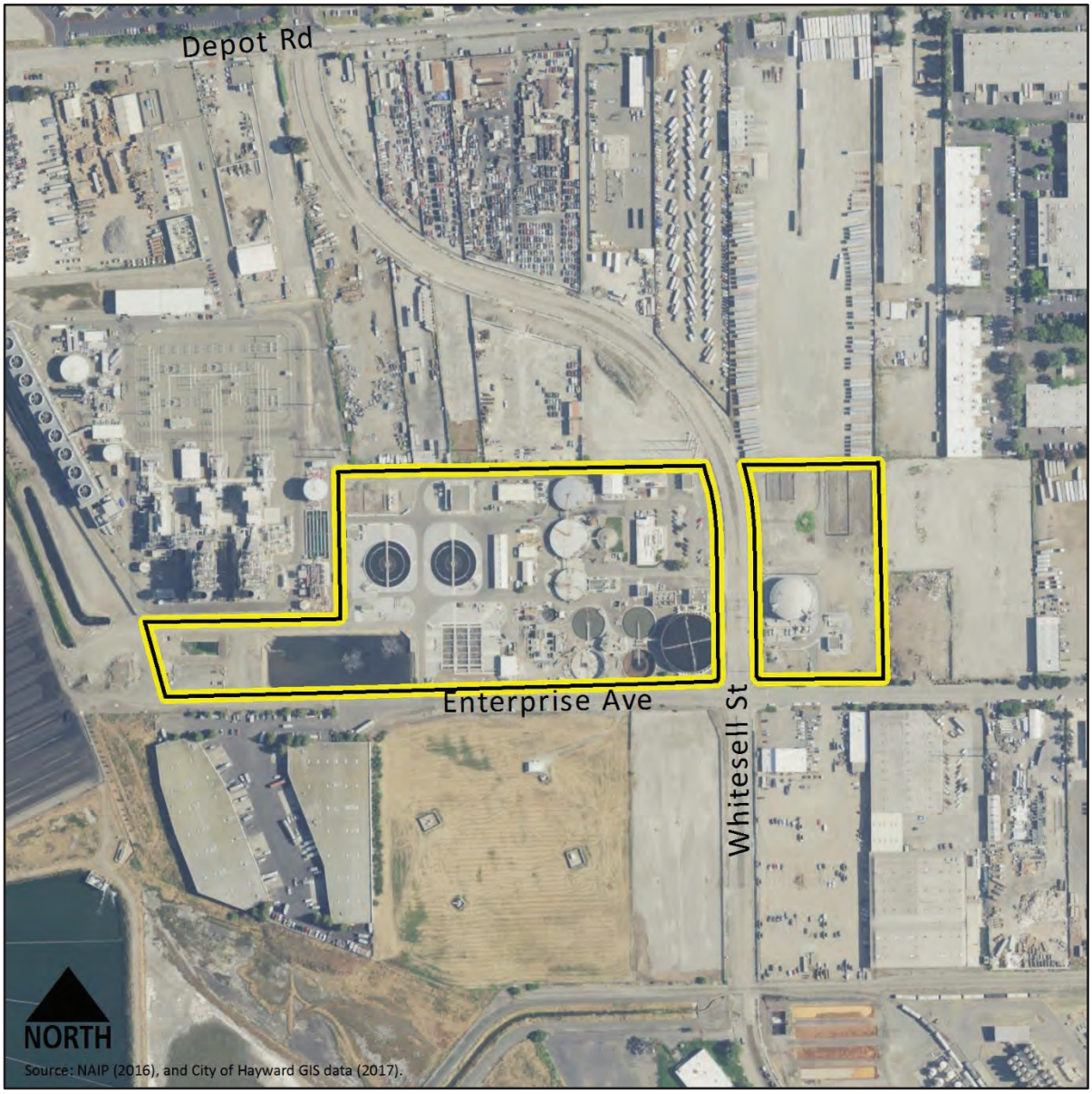
Sketch Map


Depot Rd
Enterprise Ave
Whitesell St
NORTH
Source: NAIP (2016), and City of Hayward GIS data (2017).

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 4 ***Resource Name or #:** (Assigned by recorder) Building 20
P1. Other Identifier: Air Compressor Building
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**

- ***a. County** Alameda **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
- ***b. USGS 7.5' Quad** San Leandro, CA **Date** 2021 **T** __; **R** __; __ ☐ **of** __ ☐ **of Sec** __; ____**B.M.**
- c. Address 3700 Enterprise Avenue City Hayward Zip 94545
- d. UTM: (Give more than one for large and/or linear resources) Zone 10S, 576700.53 mE/ 4165550.82 mN
- e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate) APN 439-0099-002-02

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Building 20 (Air Compressor Building) is located within the Hayward Water Pollution Control Facility (WPCF). It is a 206-square-foot, one-story, steel-frame building that currently houses two air compressors, a compressed air receiver tank, and an oil/water separator. It features a square footprint, is clad in corrugated steel panels, and is capped by a flat roof covered with metal roofing. One partially glazed and louvered metal door is located on the primary (north) façade; this was originally a pair of doors, and the other has been replaced by a fixed wood panel. One fixed, steel-sash window and one or more louvered metal panels are located on each of the side (east and west) and rear (south) façades. Building 20 was designed in a utilitarian architectural style.

***P3b. Resource Attributes:** (List attributes and codes) HP9. Public Utility Building

P5a. Photograph or Drawing

***P4. Resources Present:**
☒ Building ☐ Structure ☒ Object
☐ Site ☐ District ☐ Element of District
☐ Other (Isolates, etc.)

P5b. Description of Photo: Building 20, view facing southwest. Photo by ESA, January 2024.

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1972 (City of Hayward, 2024)

***P7. Owner and Address:**
City of Hayward
777 B Street
Hayward, CA 94541-5007

***P8. Recorded by:** (Name, affiliation, and address)
Amy Langford / ESA
180 Grand Avenue, Suite 1050
Oakland, CA 94612

***P9. Date Recorded:**
January 4, 2024

***P10. Survey Type:** Reconnaissance

***P11. Report Citation**: (Cite survey report and other sources, or enter "none.")
ESA. *Cultural Resources Survey Report for the City of Hayward Water Pollution Control Facility Improvements Phase II Project.* Prepared for the City of Hayward. January 2024.

***Attachments:** ☐NONE ☐Location Map ☒Continuation Sheet ☒Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐Other (List): _____

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** (Assigned by recorder) Building 20 ***NRHP Status Code** 6Z

B1. Historic Names: Building 20, Air Compressor Building
B2. Common Names: Building 20, Air Compressor Building
B3. Original Use: Hayward WPCF infrastructure B4. Present Use: From sign affixed to the building: "Provides air to North and South Vacuators [i.e., Structures 13 and 6, respectively], 3W Sand Filters, and Digester #1, #2, and #3 [i.e., Structures 23, 12, and 7, respectively] hot water modulating valves."
***B5. Architectural Style:** Utilitarian
***B6. Construction History:** Previous documentation of the WPCF indicates that Building 20 was constructed in 1972 and no known alterations had been made prior to 2017. Recent alterations observed by ESA staff include the replacement of one partially glazed and louvered metal door on the primary façade with a fixed wood panel.

***B7. Moved?** ☒**No** ☒**Yes** ☐**Unknown** **Date:** N/A **Original Location:** N/A
***B8. Related Features:** Building 20 is part of the larger Hayward WPCF.

B9a. Architect: Jenks & Adamson (sanitary engineer) **b. Builder**: Unknown
***B10. Significance: Theme** N/A **Area** N/A
Period of Significance N/A **Property Type** N/A **Applicable Criteria** N/A

Development of the Hayward WPCF

The following history of the development of the Hayward WPCF is an excerpt from the *Historic Resources Inventory and Evaluation Report [for the] City of Hayward Recycled Water Project, Alameda County, California* (Melvin, 2017). Corrected construction dates were provided by the City of Hayward in January 2024 and added in brackets below.

> *In 1946, the California State Board of Public Health passed a resolution prohibiting raw sewage discharge into San Francisco Bay; the resolution also ordered municipalities to begin immediate development of wastewater treatment facilities. By 1952, the only cities not yet in compliance were Millbrae, Sausalito, and Hayward.*
>
> *In November 1950, the City of Hayward used funds from a federal loan to hire prominent sanitary engineer Harry N. Jenks as a consultant in developing its sewage treatment plant.… Constructed for approximately $2 million on 40 acres purchased from William Johnson, the plant was financed by a $1.7 million revenue bond issue passed in April 1952, later augmented by another $300,000 bond issue passed that December. Contractors Barrett & Hilp and DeLuca Construction Co. completed construction in late 1953. The Hayward Municipal Sewage Treatment Plant [as the WPCF was originally known] originally included a primary biofilter (Structure 1), a primary clarifier (Structure 3), a secondary clarifier (Structure 2), a primary mixing tank (Structure 5), a secondary mixing tank (Structure 4), a vacuator (Structure 6), a primary digester (Structure 7), a control house & pumping plant (Building 8), a hydraulic jump aerator (non-extant), an effluent box (non-extant), sludge drying beds (non-extant), … an effluent pond (Structures 9 and 10, originally designed as one of three ponds) [and a bypass control box (Structure 11)]. …*

(Continued on page 3)

B11. Additional Resource Attributes: None
***B12. References:**

Carbert, Kyle (City of Hayward). Email to Johanna Kahn (ESA). January 8, 2024.

Melvin, Steven. *Historic Resources Inventory and Evaluation Report [for the] City of Hayward Recycled Water Project, Alameda County, California*. Prepared by JRP Historical Consulting, LLC, Davis, CA, for the City of Hayward. May 2017.

B13. Remarks: None

***B14. Evaluator:** Johanna Kahn and Amy Langford / ESA
***Date of Evaluation:** January 2024

(This space reserved for official comments.)

Source: Google Earth, 2024.

B10. Significance (continued):

In 1958, Hayward earmarked $835,000 for plant expansion in that year's public works bond issue. Three years later, the City of Hayward approved expansion plans submitted by Jenks, who was hired on again as a consultant. Among the additions were an additional digester (Structure 12), an additional vacuator (Structure 13), a sludge-conditioning tank (Structure 14), a large final clarifier (non-extant), and a biorainator (non-extant). The addition of a sludge conditioning tank allowed for sludge to be de-watered faster using floccule reagents and chemicals. In addition to structures related to wastewater treatment, Jenks' plans also called for the construction of a storage and maintenance building (Building 16) as well as a concrete equipment slab (non-extant, later replaced by Building 19 after 1970). The additions were constructed by Berkeley-based contracting firm C. Norman Peterson, Inc. at a cost of $882,200, well over the amount allotted three years earlier. These additions were all in place by 1966. …

By 1969, the plant was processing on average 11 [million gallons per day, or MGD], with 16 MGD during the canning season. This level of production severely taxed the system, which had been upgraded only to handle brief peak periods of 15 MGD. The following year, the City received plans for phase I of a $15 million plant expansion drafted by John Jenks' firm, Jenks & Adamson, to meet the city's needs over the next 20 years. The plans included designs for a new operations [and administration] building (Building 17), an equipment housing structure (Building 19), [an air compressor building] (Building 20), and the conversion of the primary mixing tank (Structure 5) to a flotator-thickener. The plans additionally included designs for extensive chlorination facilities adjacent to the oxidation ponds…. These chemical facilities were urgently needed at the plant, as that June, the Bay Regional Water Quality Control Board, reacting to aerial slide photographs of brownish effluent pouring into the bay from the Hayward Outfall Channel, threatened the city with a cease-and-desist order under the provisions of the Porter-Cologne Water Quality Act. …

The south Alameda County municipalities commissioned sanitary engineering firms Jenks & Adamson and Kennedy Engineers to draft a report outlining the most efficient method of implementing [a] sub-regional plan in 1970. Within two years, the firms had designed the inter-municipal "super sewer" at a projected construction cost of $82.42 million, which would be shared by the Alameda County sub-regional dischargers, collectively called the East Bay Dischargers Authority (EBDA)…. At the same time that the EBDA "super sewer" plan was developing, the City of Hayward also planned the expansion of its own local sewage treatment facility, called the Hayward Wastewater Treatment Plant by 1975. Having received formal approval by the EBDA and the State Water Resources Control Board, the City of Hayward began implementing the $2.2 million Phase II expansion, which included the construction of an additional digester (Structure 23), a mixing and heating building (Building 28), a waste gas burner [(non-extant)], additional oxidation ponds … [a gasoline pump (Structure 21), and] a centrifuge building extension (non-extant, added to Building 27) …

Since the mid-1970s, the plant has undergone several subsequent expansions. Somewhat minor additions to the plant include the construction of additional storage facilities [(Building 30 ca. 1980 and Building 37 ca. 2005) [, the old power generation station (Building 25) in 1982, and the high-pressure gas storage tank (Structure 26) in 1982 as well as] the renovation and expansion of the [operations and] administration building (ca. [1981 and] 1994). In the early 1980s, the plant was expanded to include a fluid bed reactor (Structure 29)... In the mid-to-late 1990s, the Headworks (Building 34) [was] constructed [, and in 2002, the boiler building (Building 35) was constructed]. In 2008, the plant completed the massive $58 million Phase I of the Water Pollution Control Facility Improvement Project. This expansion included a second trickling filter (Structure 40), two new final clarifiers (Structures 47 and 48), [aeration blower building (Building 31)], solids contact basins (Structure 32 replaced the ca. 1962 final clarifier), solids thickening facilities (Building 44), [the water reclamation station (Structure 15), the trickling filter pumping station (Structure 41), two biofilters (Structures 43 and 45), the soil bed odor filter (Structure 49), the sludge polymer feed system (Structure 50), the stormwater pump station (Structure 51), the final clarifier electrical building (Building 52)], and a 12kV electrical system (Buildings 39, 42, and 46). In 2013, the FOG (fat, oil, and grease) receiving station (Structure 18) was constructed[. In 2014, the cogeneration system waste heat radiator(Structure 24) was added. In 2016,] the [gas conditioning area (Structure 36) and the] cogeneration building (Building 38) [were] constructed, and Structure 5 was converted to the southwest primary clarifier. Building 33, the engineering office, is a temporary building erected in 2016 to oversee planning and construction. [The southwest primary clarifier electrical building (Building 22) was constructed in 2017.] (Melvin, 2017:16-21)

Significance Evaluation

Building 20 is evaluated below for potential historic significance according to National Register of Historic Places (National Register) Criteria A through D and California Register of Historical Resources (California Register) Criteria 1 through 4. The City of Hayward applies California Register criteria to determine eligibility for local designation.

Criterion A/1 – Event. Research does not indicate that Building 20 is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States. The Hayward WPCF was originally constructed in 1953 to treat sanitary wastewater before it is released into San Francisco Bay. The facility was expanded over subsequent decades, and Building 20 was constructed in 1972 as one of several buildings and structures added during the 1970s. As the original air compressor building, Building 20 supports the overall process of wastewater treatment, and no records were identified to suggest that Building 20 specifically is the site of important events. For these reasons, Building 20 does not appear to be individually eligible for listing under Criterion A/1.

Criterion B/2 – Person. Research does not indicate that Building 20 is associated with the lives of persons important to local, California, or national history. (Design professionals are discussed under Criterion C/3.) No individuals are directly associated with the building, which has apparently functioned as an air compressor building since 1972. For this reason, Building 20 does not appear to be individually eligible for listing under Criterion B/2.

Criterion C/3 – Design/Construction. Building 20 does not embody the distinctive characteristics of a type, period, region, or method of construction. It was built in 1972, nearly two decades after the original Hayward WPCF. Building 20 is a prefabricated, metal-frame shelter for air compressor equipment and does not appear to represent the work of a master or possess high artistic values. For these reasons, Building 20 does not appear to be individually eligible for listing under Criterion C/3.

Criterion D/4 – Information Potential. Criterion D/4 typically applies to archaeological resources rather than architectural resources. When Criterion D/4 does relate to architectural resources, it is relevant when the building/structure itself is the principal source of important construction-related information. Building 20 was constructed using common materials and building techniques and does not appear to have the potential to provide important information related to materials or construction types. Therefore, Building 20 does not appear to be individually eligible for listing under Criterion D/4.

Historic District Considerations

In 2017, an evaluation of the Hayward WPCF concluded that it was not eligible for listing in the National Register or California Register as a historic district under any criteria (Melvin, 2017). ESA updated the evaluation in 2024 and concurred with the previous finding. No apparent patterns emerge to suggest that there is a potential district or districts within the Hayward WPCF that include Building 20. Additionally, City of Hayward records do not indicate that any of the age-eligible architectural resources within the Hayward WPCF would contribute to a potential discontiguous historic district within the Hayward WPCF.

Integrity Analysis

In addition to being eligible for listing under at least one of the four National Register/California Register criteria, a resource must also retain sufficient integrity to convey its historical significance. There are seven aspects to consider when evaluating the integrity of a resource: location, design, setting, materials, workmanship, feeling, and association. As discussed above, Building 20 does not appear to be individually significant under any National Register or California Register criteria, either as a standalone resource or as a contributor to a known or potential historic district. Therefore, a discussion of integrity is not presented.

Summary

Building 20 is not recommended individually eligible for listing in the National Register, California Register, or the City of Hayward's register of designated historical resources under any criteria. It is also not recommended eligible as a contributor to a known or potential historic district eligible for individual listing in the National Register, California Register, or the City of Hayward's register of designated historical resources. As such, the building would not be considered a historic property for the purposes of NHPA Section 106 or a historical resource for the purposes of CEQA.

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 4 ***Resource Name or #:** (Assigned by recorder) Structure 23
P1. Other Identifier: Digester No. 1
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**

***a. County** Alameda **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)

***b. USGS 7.5' Quad** San Leandro, CA **Date** 2021 **T** __; **R** __; __ ☐ **of** __ ☐ **of Sec** __; ____**B.M.**

c. Address 3700 Enterprise Avenue City Hayward Zip 94545

d. UTM: (Give more than one for large and/or linear resources) Zone 10S, 576705.54 mE/ 4165645.29 mN

e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate)
APN 439-0099-002-02

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Structure 23 (Digester No. 1) is located within the Hayward Water Pollution Control Facility (WPCF). It is a cylindrical concrete structure measuring approximately 80 feet in diameter. It is capped by a domed roof with a circular metal service ingress and surrounded by metal railing along the top ledge. Metal bracing along the roof and structure perimeter connects ingoing and outgoing metal piping to an adjacent structure (Digester No. 2). The east side of Structure 23 is physically attached to Building 28 (Mixing and Heating Building).

***P3b. Resource Attributes:** (List attributes and codes) HP9. Public Utility Building

P5a. Photograph or Drawing

***P4. Resources Present:**
☐ Building ☒ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
☐ Other (Isolates, etc.)

P5b. Description of Photo: Structure 23, view facing northeast. Photo by ESA, January 2024.

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
1976 (City of Hayward, 2024)

***P7. Owner and Address:**
City of Hayward
777 B Street
Hayward, CA 94541-5007

***P8. Recorded by:** (Name, affiliation, and address)
Amy Langford / ESA
180 Grand Avenue, Suite 1050
Oakland, CA 94612

***P9. Date Recorded:**
January 4, 2024

***P10. Survey Type:** Reconnaissance

***P11. Report Citation**: (Cite survey report and other sources, or enter "none.")
ESA. *Cultural Resources Survey Report for the City of Hayward Water Pollution Control Facility Improvements Phase II Project.* Prepared for the City of Hayward. January 2024.

***Attachments:** ☐NONE ☐Location Map ☒Continuation Sheet ☒Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐Other (List): _____

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** (Assigned by recorder) Structure 23 ***NRHP Status Code** 6Z

B1. Historic Names: Structure 23, Digester No. 1
B2. Common Names: Structure 23, Digester No. 1
B3. Original Use: digester tank B4. Present Use: digester tank.
***B5. Architectural Style:** Utilitarian
***B6. Construction History:** Previous documentation of the WPCF indicates that Building 28 was constructed ca. 1975. Correspondence with Hayward WPCF staff indicates that the building underwent unspecified modifications ca. 2017. No recent exterior alterations were observed by ESA staff.

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** N/A **Original Location:** N/A
***B8. Related Features:** Digester No. 1 (Structure 23) is attached to an auxiliary mixing and heating building (Building 28). Metal bracing connects ingoing and outgoing metal piping to an adjacent structure (Digester No. 2).

B9a. Architect: Jenks & Adamson (sanitary engineer) **b. Builder**: Unknown
***B10. Significance: Theme** N/A **Area** N/A
Period of Significance N/A **Property Type** N/A **Applicable Criteria** N/A

Development of the Hayward WPCF

The following history of the development of the Hayward WPCF is an excerpt from the *Historic Resources Inventory and Evaluation Report [for the] City of Hayward Recycled Water Project, Alameda County, California* (Melvin, 2017). Corrected construction dates were provided by the City of Hayward in January 2024 and added in brackets below.

> *In 1946, the California State Board of Public Health passed a resolution prohibiting raw sewage discharge into San Francisco Bay; the resolution also ordered municipalities to begin immediate development of wastewater treatment facilities. By 1952, the only cities not yet in compliance were Millbrae, Sausalito, and Hayward.*
>
> *In November 1950, the City of Hayward used funds from a federal loan to hire prominent sanitary engineer Harry N. Jenks as a consultant in developing its sewage treatment plant.… Constructed for approximately $2 million on 40 acres purchased from William Johnson, the plant was financed by a $1.7 million revenue bond issue passed in April 1952, later augmented by another $300,000 bond issue passed that December. Contractors Barrett & Hilp and DeLuca Construction Co. completed construction in late 1953. The Hayward Municipal Sewage Treatment Plant [as the WPCF was originally known] originally included a primary biofilter (Structure 1), a primary clarifier (Structure 3), a secondary clarifier (Structure 2), a primary mixing tank (Structure 5), a secondary mixing tank (Structure 4), a vacuator (Structure 6), a primary digester (Structure 7), a control house & pumping plant (Building 8), a hydraulic jump aerator (non-extant), an effluent box (non-extant), sludge drying beds (non-extant), … an effluent pond (Structures 9 and 10, originally designed as one of three ponds) [and a bypass control box (Structure 11)]. …*

(Continued on page 3)

B11. Additional Resource Attributes: None
***B12. References:**

Kyle Carbert (City of Hayward). Email to Johanna Kahn (ESA). January 8, 2024.

Melvin, Steven. *Historic Resources Inventory and Evaluation Report [for the] City of Hayward Recycled Water Project, Alameda County, California*. Prepared by JRP Historical Consulting, LLC, Davis, CA, for the City of Hayward. May 2017.

B13. Remarks: None

***B14. Evaluator:** Johanna Kahn and Amy Langford / ESA
***Date of Evaluation:** January 2024

(This space reserved for official comments.)

Source: Google Earth, 2024.

N

B10. Significance (continued):

In 1958, Hayward earmarked $835,000 for plant expansion in that year's public works bond issue. Three years later, the City of Hayward approved expansion plans submitted by Jenks, who was hired on again as a consultant. Among the additions were an additional digester (Structure 12), an additional vacuator (Structure 13), a sludge-conditioning tank (Structure 14), a large final clarifier (non-extant), and a biorainator (non-extant). The addition of a sludge conditioning tank allowed for sludge to be de-watered faster using floccule reagents and chemicals. In addition to structures related to wastewater treatment, Jenks' plans also called for the construction of a storage and maintenance building (Building 16) as well as a concrete equipment slab (non-extant, later replaced by Building 19 after 1970). The additions were constructed by Berkeley-based contracting firm C. Norman Peterson, Inc. at a cost of $882,200, well over the amount allotted three years earlier. These additions were all in place by 1966. …

By 1969, the plant was processing on average 11 [million gallons per day, or MGD], with 16 MGD during the canning season. This level of production severely taxed the system, which had been upgraded only to handle brief peak periods of 15 MGD. The following year, the City received plans for phase I of a $15 million plant expansion drafted by John Jenks' firm, Jenks & Adamson, to meet the city's needs over the next 20 years. The plans included designs for a new operations [and administration] building (Building 17), an equipment housing structure (Building 19), [an air compressor building] (Building 20), and the conversion of the primary mixing tank (Structure 5) to a flotator-thickener. The plans additionally included designs for extensive chlorination facilities adjacent to the oxidation ponds…. These chemical facilities were urgently needed at the plant, as that June, the Bay Regional Water Quality Control Board, reacting to aerial slide photographs of brownish effluent pouring into the bay from the Hayward Outfall Channel, threatened the city with a cease-and-desist order under the provisions of the Porter-Cologne Water Quality Act. …

The south Alameda County municipalities commissioned sanitary engineering firms Jenks & Adamson and Kennedy Engineers to draft a report outlining the most efficient method of implementing [a] sub-regional plan in 1970. Within two years, the firms had designed the inter-municipal "super sewer" at a projected construction cost of $82.42 million, which would be shared by the Alameda County sub-regional dischargers, collectively called the East Bay Dischargers Authority (EBDA)…. At the same time that the EBDA "super sewer" plan was developing, the City of Hayward also planned the expansion of its own local sewage treatment facility, called the Hayward Wastewater Treatment Plant by 1975. Having received formal approval by the EBDA and the State Water Resources Control Board, the City of Hayward began implementing the $2.2 million Phase II expansion, which included the construction of an additional digester (Structure 23), a mixing and heating building (Building 28), a waste gas burner [(non-extant)], additional oxidation ponds … [a gasoline pump (Structure 21), and] a centrifuge building extension (non-extant, added to Building 27) …

Since the mid-1970s, the plant has undergone several subsequent expansions. Somewhat minor additions to the plant include the construction of additional storage facilities [(Building 30 ca. 1980 and Building 37 ca. 2005) [, the old power generation station (Building 25) in 1982, and the high-pressure gas storage tank (Structure 26) in 1982 as well as] the renovation and expansion of the [operations and] administration building (ca. [1981 and] 1994). In the early 1980s, the plant was expanded to include a fluid bed reactor (Structure 29)... In the mid-to-late 1990s, the Headworks (Building 34) [was] constructed [, and in 2002, the boiler building (Building 35) was constructed]. In 2008, the plant completed the massive $58 million Phase I of the Water Pollution Control Facility Improvement Project. This expansion included a second trickling filter (Structure 40), two new final clarifiers (Structures 47 and 48), [aeration blower building (Building 31)], solids contact basins (Structure 32 replaced the ca. 1962 final clarifier), solids thickening facilities (Building 44), [the water reclamation station (Structure 15), the trickling filter pumping station (Structure 41), two biofilters (Structures 43 and 45), the soil bed odor filter (Structure 49), the sludge polymer feed system (Structure 50), the stormwater pump station (Structure 51), the final clarifier electrical building (Building 52)], and a 12kV electrical system (Buildings 39, 42, and 46). In 2013, the FOG (fat, oil, and grease) receiving station (Structure 18) was constructed[. In 2014, the cogeneration system waste heat radiator(Structure 24) was added. In 2016,] the [gas conditioning area (Structure 36) and the] cogeneration building (Building 38) [were] constructed, and Structure 5 was converted to the southwest primary clarifier. Building 33, the engineering office, is a temporary building erected in 2016 to oversee planning and construction. [The southwest primary clarifier electrical building (Building 22) was constructed in 2017.] (Melvin, 2017:16-21)

Significance Evaluation

Structure 23 is evaluated below for potential historic significance according to National Register of Historic Places (National Register) Criteria A through D and California Register of Historical Resources (California Register) Criteria 1 through 4. The City of Hayward applies California Register criteria to determine eligibility for local designation.

Criterion A/1 – Event. Research does not indicate that Structure 23 is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States. The Hayward WPCF was originally constructed in 1953 to treat sanitary wastewater before it is released into San Francisco Bay. The facility was expanded over subsequent decades, and Structure 23 was constructed in 1976 as one of several buildings and structures added during the 1970s. As a digester, Structure 23 supports the overall process of wastewater treatment, and no records were identified to suggest that Structure 23 specifically is the site of important events. For these reasons, Structure 23 does not appear to be individually eligible for listing under Criterion A/1.

Criterion B/2 – Person. Research does not indicate that Structure 23 is associated with the lives of persons important to local, California, or national history. (Design professionals are discussed under Criterion C.) No individuals are directly associated with the structure, which has apparently functioned as a digester since 1976. For this reason, Structure 23 does not appear to be individually eligible for listing under Criterion B/2.

Criterion C/3 – Design/Construction. Structure 23 does not embody the distinctive characteristics of a type, period, region, or method of construction. It was built ca. 1975, nearly two decades after the original Hayward WPCF. Structure 23 is a utilitarian, concrete structure and does not appear to represent the work of a master or possess high artistic values. For these reasons, Structure 23 does not appear to be individually eligible for listing under Criterion C/3.

Criterion D/4 – Information Potential. Criterion D/4 typically applies to archaeological resources rather than architectural resources. When Criterion D/4 does relate to architectural resources, it is relevant when the building/structure itself is the principal source of important construction-related information. Structure 23 was constructed using common materials and building techniques and does not appear to have the potential to provide important information related to materials or construction types. Therefore, Structure 23 does not appear to be individually eligible for listing under Criterion D/4.

Historic District Considerations

In 2017, an evaluation of the Hayward WPCF concluded that it was not eligible for listing in the National Register or California Register as a historic district under any criteria (Melvin, 2017). ESA updated the evaluation in 2024 and concurred with the previous finding. No apparent patterns emerge to suggest that there is a potential district or districts within the Hayward WPCF that include Structure 23. Additionally, City of Hayward records do not indicate that any of the age-eligible architectural resources within the Hayward WPCF would contribute to a potential discontiguous historic district within the Hayward WPCF.

Integrity Analysis

In addition to being eligible for listing under at least one of the four National Register/California Register criteria, a resource must also retain sufficient integrity to convey its historical significance. There are seven aspects to consider when evaluating the integrity of a resource: location, design, setting, materials, workmanship, feeling, and association. As discussed above, Structure 23 does not appear to be individually significant under any National Register or California Register criteria, either as a standalone resource or as a contributor to a known or potential historic district. Therefore, a discussion of integrity is not presented.

Summary

Structure 23 is not recommended individually eligible for listing in the National Register, California Register, or the City of Hayward's register of designated historical resources under any criteria. It is also not recommended eligible as a contributor to a known or potential historic district eligible for individual listing in the National Register, California Register, or the City of Hayward's register of designated historical resources. As such, the building would not be considered a historic property for the purposes of NHPA Section 106 or a historical resource for the purposes of CEQA.

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings _____
Review Code _____ Reviewer _____ Date _____

Page 1 **of** 4 ***Resource Name or #:** (Assigned by recorder) Building 27
P1. Other Identifier: Maintenance and Electrical Shop
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
***a. County** Alameda **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad** San Leandro, CA **Date** 2021 **T** _; **R** _; _ ☐ **of** _ ☐ **of Sec** _; ____**B.M.**
c. Address 3700 Enterprise Avenue City Hayward Zip 94545
d. UTM: (Give more than one for large and/or linear resources) Zone 10S, 576651.71 mE/ 4165592.46 mN
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate)
APN 439-0099-002-02

***P3a. Description:**
Building 27 (Maintenance and Electrical Shop) is located within the Hayward Water Pollution Control Facility (WPCF). It is a 4,830-square-foot, one-story, metal-frame building. It features a rectangular footprint, is clad in raised-seam metal siding, and capped by a front-gable roof covered with metal roofing and a row of roof vents. The primary (south) façade contains a pair of partially glazed metal doors and two metal-frame, single-hung, sash windows. The rear (north) façade features two single-hung, metal sash windows and two ground-level vents. The side façades (east and west) each contain a single, flush panel door, two metal-frame, single-hung, sash windows, ground-level vents, and four roll-up metal garage doors. Typical fenestration features metal-frame, single-hung, sash windows. Several windows have been covered with metal bars. Building 27 was designed in a utilitarian architectural style.

***P3b. Resource Attributes:** (List attributes and codes) HP9. Public Utility Building

P5a. Photograph or Drawing

***P4. Resources Present:**
☒ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
☐ Other (Isolates, etc.)

P5b. Description of Photo: Building 27, view facing northeast. Photo by ESA, January 2024.

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
Ca. 1968-75 (City of Hayward, 2024)

***P7. Owner and Address:**
City of Hayward
777 B Street
Hayward, CA 94541-5007

***P8. Recorded by:**
Amy Langford / ESA
180 Grand Avenue, Suite 1050
Oakland, CA 94612

***P9. Date Recorded:**
January 4, 2024

***P10. Survey Type:** Reconnaissance

***P11. Report Citation**: (Cite survey report and other sources, or enter "none.")
ESA. *Cultural Resources Survey Report for the City of Hayward Water Pollution Control Facility Improvements Phase II Project.* Prepared for the City of Hayward. January 2024.

***Attachments:** ☐NONE ☐Location Map ☒Continuation Sheet ☒Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐Other (List): _____

State of California -- The Resources Agency Primary #
DEPARTMENT OF PARKS AND RECREATION HRI#

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** (Assigned by recorder) Building 27 ***NRHP Status Code** 6Z
Page 2 **of** 4

B1. Historic Names: Building 27, Maintenance and Electrical Shop
B2. Common Names: Building 27, Maintenance and Electrical Shop
B3. Original Use: Sludge Dewatering Facility B4. Present Use: Maintenance and electrical shop
***B5. Architectural Style:** Utilitarian
***B6. Construction History:** Previous documentation of the WPCF indicates that Building 27 was constructed ca. 1968-1975, with a centrifuge building extension added ca. 1975. Recent alterations observed by ESA staff include the installation of metal bars on several windows along the primary (south) and side (west) facades.

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** N/A **Original Location:** N/A
***B8. Related Features:** Building 27 is part of the larger Hayward WPCF.

B9a. Architect: Jenks & Adamson (sanitary engineer) **b. Builder**: Unknown
***B10. Significance: Theme** N/A **Area** N/A
Period of Significance N/A **Property Type** N/A **Applicable Criteria** N/A

Development of the Hayward WPCF

The following history of the development of the Hayward WPCF is an excerpt from the *Historic Resources Inventory and Evaluation Report [for the] City of Hayward Recycled Water Project, Alameda County, California* (Melvin, 2017). Corrected construction dates were provided by the City of Hayward in January 2024 and added in brackets below.

> *In 1946, the California State Board of Public Health passed a resolution prohibiting raw sewage discharge into San Francisco Bay; the resolution also ordered municipalities to begin immediate development of wastewater treatment facilities. By 1952, the only cities not yet in compliance were Millbrae, Sausalito, and Hayward.*
>
> *In November 1950, the City of Hayward used funds from a federal loan to hire prominent sanitary engineer Harry N. Jenks as a consultant in developing its sewage treatment plant.… Constructed for approximately $2 million on 40 acres purchased from William Johnson, the plant was financed by a $1.7 million revenue bond issue passed in April 1952, later augmented by another $300,000 bond issue passed that December. Contractors Barrett & Hilp and DeLuca Construction Co. completed construction in late 1953. The Hayward Municipal Sewage Treatment Plant [as the WPCF was originally known] originally included a primary biofilter (Structure 1), a primary clarifier (Structure 3), a secondary clarifier (Structure 2), a primary mixing tank (Structure 5), a secondary mixing tank (Structure 4), a vacuator (Structure 6), a primary digester (Structure 7), a control house & pumping plant (Building 8), a hydraulic jump aerator (non-extant), an effluent box (non-extant), sludge drying beds (non-extant), … an effluent pond (Structures 9 and 10, originally designed as one of three ponds) [and a bypass control box (Structure 11)]. …*

(Continued on page 3)

B11. Additional Resource Attributes: None
***B12. References:**

Kyle Carbert (City of Hayward). Email to Johanna Kahn (ESA). January 8, 2024.

Melvin, Steven. *Historic Resources Inventory and Evaluation Report [for the] City of Hayward Recycled Water Project, Alameda County, California*. Prepared by JRP Historical Consulting, LLC, Davis, CA, for the City of Hayward. May 2017.

B13. Remarks: None

***B14. Evaluator:** Johanna Kahn and Amy Langford / ESA
***Date of Evaluation:** January 2024

(This space reserved for official comments.)

Source: Google Earth, 2024.

B10. Significance (continued):

In 1958, Hayward earmarked $835,000 for plant expansion in that year's public works bond issue. Three years later, the City of Hayward approved expansion plans submitted by Jenks, who was hired on again as a consultant. Among the additions were an additional digester (Structure 12), an additional vacuator (Structure 13), a sludge-conditioning tank (Structure 14), a large final clarifier (non-extant), and a biorainator (non-extant). The addition of a sludge conditioning tank allowed for sludge to be de-watered faster using floccule reagents and chemicals. In addition to structures related to wastewater treatment, Jenks' plans also called for the construction of a storage and maintenance building (Building 16) as well as a concrete equipment slab (non-extant, later replaced by Building 19 after 1970). The additions were constructed by Berkeley-based contracting firm C. Norman Peterson, Inc. at a cost of $882,200, well over the amount allotted three years earlier. These additions were all in place by 1966. …

By 1969, the plant was processing on average 11 [million gallons per day, or MGD], with 16 MGD during the canning season. This level of production severely taxed the system, which had been upgraded only to handle brief peak periods of 15 MGD. The following year, the City received plans for phase I of a $15 million plant expansion drafted by John Jenks' firm, Jenks & Adamson, to meet the city's needs over the next 20 years. The plans included designs for a new operations [and administration] building (Building 17), an equipment housing structure (Building 19), [an air compressor building] (Building 20), and the conversion of the primary mixing tank (Structure 5) to a flotator-thickener. The plans additionally included designs for extensive chlorination facilities adjacent to the oxidation ponds…. These chemical facilities were urgently needed at the plant, as that June, the Bay Regional Water Quality Control Board, reacting to aerial slide photographs of brownish effluent pouring into the bay from the Hayward Outfall Channel, threatened the city with a cease-and-desist order under the provisions of the Porter-Cologne Water Quality Act. …

The south Alameda County municipalities commissioned sanitary engineering firms Jenks & Adamson and Kennedy Engineers to draft a report outlining the most efficient method of implementing [a] sub-regional plan in 1970. Within two years, the firms had designed the inter-municipal "super sewer" at a projected construction cost of $82.42 million, which would be shared by the Alameda County sub-regional dischargers, collectively called the East Bay Dischargers Authority (EBDA)…. At the same time that the EBDA "super sewer" plan was developing, the City of Hayward also planned the expansion of its own local sewage treatment facility, called the Hayward Wastewater Treatment Plant by 1975. Having received formal approval by the EBDA and the State Water Resources Control Board, the City of Hayward began implementing the $2.2 million Phase II expansion, which included the construction of an additional digester (Structure 23), a mixing and heating building (Building 28), a waste gas burner [(non-extant)], additional oxidation ponds … [a gasoline pump (Structure 21), and] a centrifuge building extension (non-extant, added to Building 27) …

Since the mid-1970s, the plant has undergone several subsequent expansions. Somewhat minor additions to the plant include the construction of additional storage facilities [(Building 30 ca. 1980 and Building 37 ca. 2005) [, the old power generation station (Building 25) in 1982, and the high-pressure gas storage tank (Structure 26) in 1982 as well as] the renovation and expansion of the [operations and] administration building (ca. [1981 and] 1994). In the early 1980s, the plant was expanded to include a fluid bed reactor (Structure 29)... In the mid-to-late 1990s, the Headworks (Building 34) [was] constructed [, and in 2002, the boiler building (Building 35) was constructed]. In 2008, the plant completed the massive $58 million Phase I of the Water Pollution Control Facility Improvement Project. This expansion included a second trickling filter (Structure 40), two new final clarifiers (Structures 47 and 48), [aeration blower building (Building 31)], solids contact basins (Structure 32 replaced the ca. 1962 final clarifier), solids thickening facilities (Building 44), [the water reclamation station (Structure 15), the trickling filter pumping station (Structure 41), two biofilters (Structures 43 and 45), the soil bed odor filter (Structure 49), the sludge polymer feed system (Structure 50), the stormwater pump station (Structure 51), the final clarifier electrical building (Building 52)], and a 12kV electrical system (Buildings 39, 42, and 46). In 2013, the FOG (fat, oil, and grease) receiving station (Structure 18) was constructed[. In 2014, the cogeneration system waste heat radiator(Structure 24) was added. In 2016,] the [gas conditioning area (Structure 36) and the] cogeneration building (Building 38) [were] constructed, and Structure 5 was converted to the southwest primary clarifier. Building 33, the engineering office, is a temporary building erected in 2016 to oversee planning and construction. [The southwest primary clarifier electrical building (Building 22) was constructed in 2017.] (Melvin, 2017:16-21)

Significance Evaluation

Building 27 is evaluated below for potential historic significance according to National Register of Historic Places (National Register) Criteria A through D and California Register of Historical Resources (California Register) Criteria 1 through 4. The City of Hayward applies California Register criteria to determine eligibility for local designation.

Criterion A/1 – Event. Research does not indicate that Building 27 is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States. The Hayward WPCF was originally constructed in 1953 to treat sanitary wastewater before it is released into San Francisco Bay. The facility was expanded over subsequent decades, and Building 27 was constructed ca. 1968-1975 as one of several buildings and structures likely added during the 1970s. As the original Sludge Dewatering Facility building, Building 27 supports the overall process of wastewater treatment, and no records were identified to suggest that Building 27 specifically is the site of important events. For these reasons, Building 27 does not appear to be individually eligible for listing under Criterion A/1.

Criterion B/2 – Person. Research does not indicate that Building 27 is associated with the lives of persons important to local, California, or national history. (Design professionals are discussed under Criterion C/3.) No individuals are directly associated with the building, which has apparently functioned as a sludge dewatering facility and then a general maintenance and electrical shop after 1975. For this reason, Building 27 does not appear to be individually eligible for listing under Criterion B/2.

Criterion C/3 – Design/Construction. Building 27 does not embody the distinctive characteristics of a type, period, region, or method of construction. It was built ca. 1968-1975, nearly two decades after the original Hayward WPCF. Building 27 is a utilitarian, metal-frame building originally intended for standard water treatment processes and later used for miscellaneous utility repairs and does not appear to represent the work of a master or possess high artistic values. For these reasons, Building 27 does not appear to be individually eligible for listing under Criterion C/3.

Criterion D/4 – Information Potential. Criterion D/4 typically applies to archaeological resources rather than architectural resources. When Criterion D/4 does relate to architectural resources, it is relevant when the building/structure itself is the principal source of important construction-related information. Building 27 was constructed using common materials and building techniques and does not appear to have the potential to provide important information related to materials or construction types. Therefore, Building 27 does not appear to be individually eligible for listing under Criterion D/4.

Historic District Considerations

In 2017, an evaluation of the Hayward WPCF concluded that it was not eligible for listing in the National Register or California Register as a historic district under any criteria (Melvin, 2017). ESA updated the evaluation in 2024 and concurred with the previous finding. No apparent patterns emerge to suggest that there is a potential district or districts within the Hayward WPCF that include Building 27. Additionally, City of Hayward records do not indicate that any of the age-eligible architectural resources within the Hayward WPCF would contribute to a potential discontiguous historic district within the Hayward WPCF.

Integrity Analysis

In addition to being eligible for listing under at least one of the four National Register/California Register criteria, a resource must also retain sufficient integrity to convey its historical significance. There are seven aspects to consider when evaluating the integrity of a resource: location, design, setting, materials, workmanship, feeling, and association. As discussed above, Building 27 does not appear to be individually significant under any National Register or California Register criteria, either as a standalone resource or as a contributor to a known or potential historic district. Therefore, a discussion of integrity is not presented.

Summary

Building 27 is not recommended individually eligible for listing in the National Register, California Register, or the City of Hayward's register of designated historical resources under any criteria. It is also not recommended eligible as a contributor to a known or potential historic district eligible for individual listing in the National Register, California Register, or the City of Hayward's register of designated historical resources. As such, the building would not be considered a historic property for the purposes of NHPA Section 106 or a historical resource for the purposes of CEQA.

State of California -- The Resources Agency
DEPARTMENT OF PARKS AND RECREATION

PRIMARY RECORD

Primary #
HRI #
Trinomial
NRHP Status Code

Other Listings _____
Review Code _____ Reviewer _____ Date _____

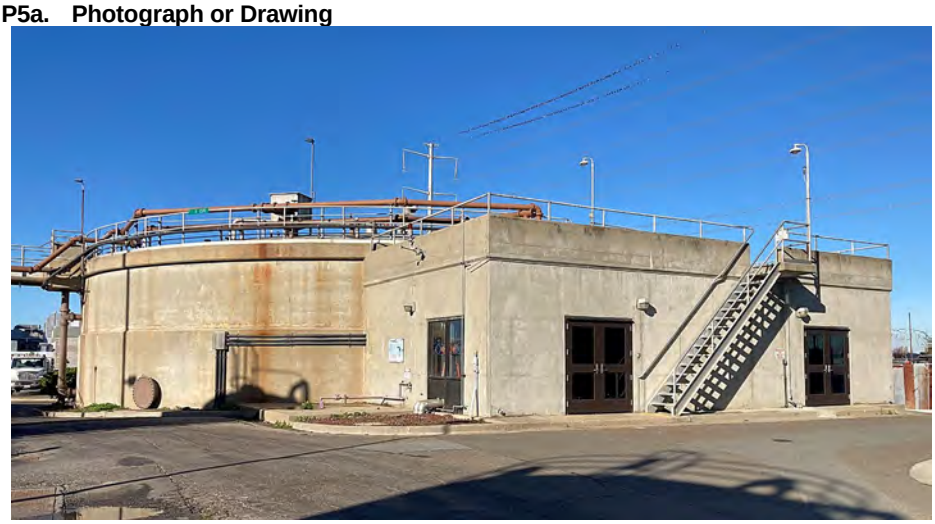
Page 1 **of** 4 ***Resource Name or #:** (Assigned by recorder) Building 28
P1. Other Identifier: Mixing and Heating Building
***P2. Location:** ☐ **Not for Publication** ☒ **Unrestricted**
***a. County** Alameda **and** (P2c, P2e, and P2b or P2d. Attach a Location Map as necessary.)
***b. USGS 7.5' Quad** San Leandro, CA **Date** 2021 **T** _; **R** _; _ ☐ **of** _ ☐ **of Sec** _; ____**B.M.**
c. Address 3700 Enterprise Avenue City Hayward Zip 94545
d. UTM: (Give more than one for large and/or linear resources) Zone 10S, 576721.99 mE/ 4165646.48 mN
e. Other Locational Data: (e.g., parcel #, directions to resource, elevation, decimal degrees, etc., as appropriate)
APN 439-0099-002-02

***P3a. Description:** (Describe resource and its major elements. Include design, materials, condition, alterations, size, setting, and boundaries)

Building 28 (Mixing and Heating Building) is located within the Hayward Water Pollution Control Facility (WPCF). It is a 830-square-foot, one-story concrete building. It is capped by a flat roof with parapets framed by a metal protective railing. The roof is accessible from the primary (east) façade by a utilitarian metal staircase with metal handrails. The primary (east) façade also features two pairs of partially glazed, metal doors. The side (south) façade features two fixed, metal-frame windows. Building 28 was designed in a utilitarian architectural style. The west wall of Building 28 is physically attached to Structure 23 (Digester No. 1).

***P3b. Resource Attributes:** (List attributes and codes) HP9. Public Utility Building

P5a. Photograph or Drawing



***P4. Resources Present:**
☒ Building ☐ Structure ☐ Object
☐ Site ☐ District ☐ Element of District
☐ Other (Isolates, etc.)

P5b. Description of Photo: Building 28 in right foreground (Structure 23 is visible in left background), view facing northwest. Photo by ESA, January 2024.

***P6. Date Constructed/Age and Source:** ☒ Historic ☐ Prehistoric ☐ Both
Ca. 1975 (City of Hayward, 2024)

***P7. Owner and Address:**
City of Hayward
777 B Street
Hayward, CA 94541-5007

***P8. Recorded by:** (Name, affiliation, and address)
Amy Langford / ESA
180 Grand Avenue, Suite 1050
Oakland, CA 94612

***P9. Date Recorded:** January 4, 2024
***P10. Survey Type:** Reconnaissance

***P11. Report Citation**: (Cite survey report and other sources, or enter "none.")
ESA. *Cultural Resources Survey Report for the City of Hayward Water Pollution Control Facility Improvements Phase II Project.* Prepared for the City of Hayward. January 2024.

***Attachments:** ☐NONE ☐Location Map ☒Continuation Sheet ☒Building, Structure, and Object Record
☐Archaeological Record ☐District Record ☐Linear Feature Record ☐Milling Station Record ☐Rock Art Record
☐Artifact Record ☐Photograph Record ☐Other (List): _____

BUILDING, STRUCTURE, AND OBJECT RECORD

***Resource Name or #** (Assigned by recorder) Building 28 ***NRHP Status Code** 6Z

B1. Historic Names: Building 28, Mixing and Heating Building
B2. Common Names: Building 28, Mixing and Heating Building
B3. Original Use: auxiliary mixing and heating building for Digesters No. 1-3. B4. Present Use: auxiliary mixing and heating building for Digesters No. 1-3.
***B5. Architectural Style:** Utilitarian
***B6. Construction History:** Previous documentation of the WPCF indicates that Building 28 was constructed ca. 1975. Correspondence with Hayward WPCF staff indicates that the building underwent unspecified modifications ca. 2017.

***B7. Moved?** ☒**No** ☐**Yes** ☐**Unknown** **Date:** N/A **Original Location:** N/A
***B8. Related Features:** Building 28 (west façade) is attached to Digester No. 1 (Structure 23).

B9a. Architect: Jenks & Adamson (sanitary engineer) **b. Builder**: Unknown
***B10. Significance: Theme** N/A **Area** N/A
Period of Significance N/A **Property Type** N/A **Applicable Criteria** N/A

Development of the Hayward WPCF

The following history of the development of the Hayward WPCF is an excerpt from the *Historic Resources Inventory and Evaluation Report [for the] City of Hayward Recycled Water Project, Alameda County, California* (Melvin, 2017). Corrected construction dates were provided by the City of Hayward in January 2024 and added in brackets below.

> *In 1946, the California State Board of Public Health passed a resolution prohibiting raw sewage discharge into San Francisco Bay; the resolution also ordered municipalities to begin immediate development of wastewater treatment facilities. By 1952, the only cities not yet in compliance were Millbrae, Sausalito, and Hayward.*
>
> *In November 1950, the City of Hayward used funds from a federal loan to hire prominent sanitary engineer Harry N. Jenks as a consultant in developing its sewage treatment plant.… Constructed for approximately $2 million on 40 acres purchased from William Johnson, the plant was financed by a $1.7 million revenue bond issue passed in April 1952, later augmented by another $300,000 bond issue passed that December. Contractors Barrett & Hilp and DeLuca Construction Co. completed construction in late 1953. The Hayward Municipal Sewage Treatment Plant [as the WPCF was originally known] originally included a primary biofilter (Structure 1), a primary clarifier (Structure 3), a secondary clarifier (Structure 2), a primary mixing tank (Structure 5), a secondary mixing tank (Structure 4), a vacuator (Structure 6), a primary digester (Structure 7), a control house & pumping plant (Building 8), a hydraulic jump aerator (non-extant), an effluent box (non-extant), sludge drying beds (non-extant), … an effluent pond (Structures 9 and 10, originally designed as one of three ponds) [and a bypass control box (Structure 11)]. …*

(Continued on page 3)

B11. Additional Resource Attributes: None
***B12. References:**

Kyle Carbert (City of Hayward). Email to Johanna Kahn (ESA). January 8, 2024.

Melvin, Steven. *Historic Resources Inventory and Evaluation Report [for the] City of Hayward Recycled Water Project, Alameda County, California*. Prepared by JRP Historical Consulting, LLC, Davis, CA, for the City of Hayward. May 2017.

B13. Remarks: None

***B14. Evaluator:** Johanna Kahn and Amy Langford / ESA
***Date of Evaluation:** January 2024

(This space reserved for official comments.)

Source: Google Earth, 2024.

N

B10. Significance (continued):

In 1958, Hayward earmarked $835,000 for plant expansion in that year's public works bond issue. Three years later, the City of Hayward approved expansion plans submitted by Jenks, who was hired on again as a consultant. Among the additions were an additional digester (Structure 12), an additional vacuator (Structure 13), a sludge-conditioning tank (Structure 14), a large final clarifier (non-extant), and a biorainator (non-extant). The addition of a sludge conditioning tank allowed for sludge to be de-watered faster using floccule reagents and chemicals. In addition to structures related to wastewater treatment, Jenks' plans also called for the construction of a storage and maintenance building (Building 16) as well as a concrete equipment slab (non-extant, later replaced by Building 19 after 1970). The additions were constructed by Berkeley-based contracting firm C. Norman Peterson, Inc. at a cost of $882,200, well over the amount allotted three years earlier. These additions were all in place by 1966. …

By 1969, the plant was processing on average 11 [million gallons per day, or MGD], with 16 MGD during the canning season. This level of production severely taxed the system, which had been upgraded only to handle brief peak periods of 15 MGD. The following year, the City received plans for phase I of a $15 million plant expansion drafted by John Jenks' firm, Jenks & Adamson, to meet the city's needs over the next 20 years. The plans included designs for a new operations [and administration] building (Building 17), an equipment housing structure (Building 19), [an air compressor building] (Building 20), and the conversion of the primary mixing tank (Structure 5) to a flotator-thickener. The plans additionally included designs for extensive chlorination facilities adjacent to the oxidation ponds…. These chemical facilities were urgently needed at the plant, as that June, the Bay Regional Water Quality Control Board, reacting to aerial slide photographs of brownish effluent pouring into the bay from the Hayward Outfall Channel, threatened the city with a cease-and-desist order under the provisions of the Porter-Cologne Water Quality Act. …

The south Alameda County municipalities commissioned sanitary engineering firms Jenks & Adamson and Kennedy Engineers to draft a report outlining the most efficient method of implementing [a] sub-regional plan in 1970. Within two years, the firms had designed the inter-municipal "super sewer" at a projected construction cost of $82.42 million, which would be shared by the Alameda County sub-regional dischargers, collectively called the East Bay Dischargers Authority (EBDA)…. At the same time that the EBDA "super sewer" plan was developing, the City of Hayward also planned the expansion of its own local sewage treatment facility, called the Hayward Wastewater Treatment Plant by 1975. Having received formal approval by the EBDA and the State Water Resources Control Board, the City of Hayward began implementing the $2.2 million Phase II expansion, which included the construction of an additional digester (Structure 23), a mixing and heating building (Building 28), a waste gas burner [(non-extant)], additional oxidation ponds … [a gasoline pump (Structure 21), and] a centrifuge building extension (non-extant, added to Building 27) …

Since the mid-1970s, the plant has undergone several subsequent expansions. Somewhat minor additions to the plant include the construction of additional storage facilities [(Building 30 ca. 1980 and Building 37 ca. 2005) [, the old power generation station (Building 25) in 1982, and the high-pressure gas storage tank (Structure 26) in 1982 as well as] the renovation and expansion of the [operations and] administration building (ca. [1981 and] 1994). In the early 1980s, the plant was expanded to include a fluid bed reactor (Structure 29)... In the mid-to-late 1990s, the Headworks (Building 34) [was] constructed [, and in 2002, the boiler building (Building 35) was constructed]. In 2008, the plant completed the massive $58 million Phase I of the Water Pollution Control Facility Improvement Project. This expansion included a second trickling filter (Structure 40), two new final clarifiers (Structures 47 and 48), [aeration blower building (Building 31)], solids contact basins (Structure 32 replaced the ca. 1962 final clarifier), solids thickening facilities (Building 44), [the water reclamation station (Structure 15), the trickling filter pumping station (Structure 41), two biofilters (Structures 43 and 45), the soil bed odor filter (Structure 49), the sludge polymer feed system (Structure 50), the stormwater pump station (Structure 51), the final clarifier electrical building (Building 52)], and a 12kV electrical system (Buildings 39, 42, and 46). In 2013, the FOG (fat, oil, and grease) receiving station (Structure 18) was constructed[. In 2014, the cogeneration system waste heat radiator(Structure 24) was added. In 2016,] the [gas conditioning area (Structure 36) and the] cogeneration building (Building 38) [were] constructed, and Structure 5 was converted to the southwest primary clarifier. Building 33, the engineering office, is a temporary building erected in 2016 to oversee planning and construction. [The southwest primary clarifier electrical building (Building 22) was constructed in 2017.] (Melvin, 2017:16-21)

Significance Evaluation

Building 28 is evaluated below for potential historic significance according to National Register of Historic Places (National Register) Criteria A through D and California Register of Historical Resources (California Register) Criteria 1 through 4. The City of Hayward applies California Register criteria to determine eligibility for local designation.

Criterion A/1 – Event. Research does not indicate that Building 28 is associated with events that have made a significant contribution to the broad patterns of local or regional history or the cultural heritage of California or the United States. The Hayward WPCF was originally constructed in 1953 to treat sanitary wastewater before it is released into San Francisco Bay. The facility was expanded over subsequent decades, and Building 28 was constructed ca. 1975 as one of several buildings and structures added during the 1970s. As a mixing and heating building, Building 28 ensures the safe operation of the nearby digesters and supports the overall process of wastewater treatment, and no records were identified to suggest that Building 28 specifically is the site of important events. For these reasons, Building 28 does not appear to be individually eligible for listing under Criterion A/1.

Criterion B/2 – Person. Research does not indicate that Building 28 is associated with the lives of persons important to local, California, or national history. (Design professionals are discussed under Criterion C.) No individuals are directly associated with the building, which has apparently functioned as a mixing and heating building since 1975. For this reason, Building 28 does not appear to be individually eligible for listing under Criterion B/2.

Criterion C/3 – Design/Construction. Building 28 does not embody the distinctive characteristics of a type, period, region, or method of construction. It was built ca. 1975, nearly two decades after the original Hayward WPCF. Building 28 is a utilitarian, concrete building and does not appear to represent the work of a master or possess high artistic values. For these reasons, Building 28 does not appear to be individually eligible for listing under Criterion C/3.

Criterion D/4 – Information Potential. Criterion D/4 typically applies to archaeological resources rather than architectural resources. When Criterion D/4 does relate to architectural resources, it is relevant when the building/structure itself is the principal source of important construction-related information. Building 28 was constructed using common materials and building techniques and does not appear to have the potential to provide important information related to materials or construction types. Therefore, Building 28 does not appear to be individually eligible for listing under Criterion D/4.

Historic District Considerations

In 2017, an evaluation of the Hayward WPCF concluded that it was not eligible for listing in the National Register or California Register as a historic district under any criteria (Melvin, 2017). ESA updated the evaluation in 2024 and concurred with the previous finding. No apparent patterns emerge to suggest that there is a potential district or districts within the Hayward WPCF that include Building 28. Additionally, City of Hayward records do not indicate that any of the age-eligible architectural resources within the Hayward WPCF would contribute to a potential discontiguous historic district within the Hayward WPCF.

Integrity Analysis

In addition to being eligible for listing under at least one of the four National Register/California Register criteria, a resource must also retain sufficient integrity to convey its historical significance. There are seven aspects to consider when evaluating the integrity of a resource: location, design, setting, materials, workmanship, feeling, and association. As discussed above, Building 28 does not appear to be individually significant under any National Register or California Register criteria, either as a standalone resource or as a contributor to a known or potential historic district. Therefore, a discussion of integrity is not presented.

Summary

Building 28 is not recommended individually eligible for listing in the National Register, California Register, or the City of Hayward's register of designated historical resources under any criteria. It is also not recommended eligible as a contributor to a known or potential historic district eligible for individual listing in the National Register, California Register, or the City of Hayward's register of designated historical resources. As such, the building would not be considered a historic property for the purposes of NHPA Section 106 or a historical resource for the purposes of CEQA.