Revisions to the California Plumbing Code to Allow the Use of Perfluoroalkoxy in Dialysis Branch Lines and Plastic Pipe in Plumbing Applications in OSHPD 1, 2, 3, and 4 Facilities

Initial Study

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Prepared for

Office of Statewide Health Planning and Development
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Acronyms and Abbreviations

ABS	acrylonitrile butadiene styrene
BMP	best management practice
CBSC	California Building Standards Commission
CCR	California Code of Regulations
CEQA	California Environmental Quality Act
CNDDB	California Natural Diversity Database
CPVC	chlorinated polyvinyl chloride
CRHR	California Register of Historical Resources
DWV	drain-waste-vent
EIR	Environmental Impact Report
Farmland	Prime Farmland, Unique Farmland, or Farmland of Statewide Importance
FDD	Facilities Development Division
FMMP	Farmland Mapping and Monitoring Program
HCl	hydrogen chloride
HCP	habitat conservation plan
MEK	methyl ethyl ketone
mm	millimeter
NOP	Notice of Preparation
NRHP	National Register of Historic Places
NTSB	National Transportation Safety Board
OSHPD	California Office of Statewide Health Planning and Development
OSHPD 1	General Acute Care Hospitals and Acute Psychiatric Hospitals
OSHPD 2	Skilled Nursing Facilities and Intermediate Care Facilities
OSHPD 3	Licensed Clinics and Freestanding Outpatient Clinical Services Buildings
OSHPD 4	Correctional Treatment Centers
PFA	Perfluoroalkoxy
PVC	polyvinyl chloride
TAC	toxic air contaminant
VOC	volatile organic carbon

A. PROJECT DESCRIPTION

1.0 Project Background

The California Building Standards Commission (CBSC) oversees the triennial compilation and publication of the adoptions, amendments, and repeal of administrative regulations to Title 24 of the California Code of Regulations (CCR), California Building Standards Code. Part 5 of the California Building Standards Code is known as the California Plumbing Code and will incorporate, by adoption, the latest edition of the Uniform Plumbing Code of the International Association of Plumbing and Mechanical Officials with the California Amendments.

The California Building Standards Code is published in its entirety every 3 years by order of the California legislature, with supplements published in intervening years. The California legislature delegated authority to various State agencies, boards, commissions, and departments, for creation of building regulations to implement the State's statutes. These building regulations or standards have the same force of law and take effect 180 days after their publication unless otherwise stipulated.

California's Office of Statewide Health Planning and Development (OSHPD), as one of the legislatively delegated State agencies, has authority to propose regulations related to the following facilities:

- General Acute Care Hospitals and Acute Psychiatric Hospitals (OSHPD 1);
- Skilled Nursing Facilities and Intermediate Care Facilities (OSHPD 2);
- Licensed Clinics and Freestanding Outpatient Clinical Services Buildings (OSHPD 3); and
- Correctional Treatment Centers (OSHPD 4).

These proposed regulations then are subjected to the Triennial Code Adoption Cycle review and approval process, administered by CBSC.

OSHPD's Facilities Development Division (FDD) Building Standards Unit is responsible for the development of administrative regulations and building standards for the four facility types listed above. These regulations are developed, as necessary, to implement the provisions of the Alfred E. Alquist Hospital Seismic Safety Act of 1983.

Building Standards Unit staff work in conjunction with OSHPD's architects, engineers, and construction observation staff; the Hospital Building Safety Board; and interested members of the public to develop code language for new building standards and amendments to existing standards in the California Building Standards Code. All regulatory proposals are submitted to the CBSC for approval and adoption.

The purpose of the Proposed Project is to change the 2016 California Plumbing Code, to allow the use of the following materials in the indicated plumbing systems for OSHPD 1, 2, 3, and 4 facilities:

- Chlorinated polyvinyl chloride (CPVC) pipes, tubes, and fittings in water supply distribution systems;
- Perfluoroalkoxy (PFA) in dialysis branch lines;
- Acrylonitrile butadiene styrene (ABS) and polyvinyl chloride (PVC) piping installations in sanitary drainage systems;
- ABS and PVC pipes and fittings for drain-waste-vent (DWV) systems; and
- ABS and PVC piping installations for stormwater drainage systems.

The Proposed Project is needed to increase flexibility in the construction, modification, or renovation of OSHPD 1, 2, 3, and 4 facilities.

2.0 Project Objectives

The objectives of the Proposed Project are as follows:

- Align California's Building Code with the national model code, which contains no prohibitions on the use of plastic pipe for plumbing;
- Increase consistency within California's Building Standards Code, for which no prohibitions on the use of plastic pipe for plumbing exist except for OSHPD 1, 2, 3 and 4 facilities;
- Possibly reduce the cost and improve the ease of installation of plumbing materials;
- Reduce the potential for corrosion of plumbing piping from hospital wastes and/or corrosive soil types;
- Reduce the potential for infection and/or disease transmission (e.g., galvanized water lines can form bio films); and
- Allow use of nationally used and proven products in OSHPD 1, 2, 3, and 4 facilities.

3.0 Proposed Project

The Proposed Project would involve making the following changes to the 2016 California Plumbing Code. These changes would apply to OSHPD 1, 2, 3, and 4 facilities throughout the State of California (see Figure 1). Proposed additions are shown in <u>underscore</u>, and proposed deletions are shown in ~~strikeout~~.

- **Chapter 6 – Water Supply and Distribution**

  604.0 Materials.

  604.1 Pipe, Tube, and Fittings. Pipe, tube, fittings, solvent cements, thread sealants, solders, and flux used in potable water systems intended to supply drinking water shall be in accordance with the requirements of NSF 61.

Horizon WATER and ENVIRONMENT

Figure 1
Project Area

Materials used in the water supply system, except valves and similar devices, shall be of a like material, except where otherwise approved by the Authority Having Jurisdiction.

Materials for building water piping and building supply piping shall comply with the applicable standards referenced in Table 604.1.

~~***Exception: [OSHPD 1, 2 & 4]*** *Use of CPVC is not permitted for applications under authority of the Office of Statewide Health Planning and Development.*~~

- **Chapter 6 – Water Supply and Distribution**

605.0 Joints and Connections

605.3 Copper Pipe, Tubing, and Joints

605.3.3 Mechanical Joints

~~**605.3.3.2**~~ **<u>605.1.3.2</u>** ~~**[Not permitted for OSHPD 1, 2, 3, & 4]**~~ **Pressed Fittings.** Pressed fittings for copper pipe or tubing shall have an elastomeric O-ring that forms the joint. The pipe or tubing shall be fully inserted into the fitting, and the pipe or tubing marked at the shoulder of the fitting. Pipe or tubing shall be cut square, chamfered, and reamed to full inside diameter. The fitting alignment shall be checked against the mark on the pipe or tubing to ensure the pipe or tubing is inserted into the fitting. The joint shall be pressed using the tool recommended by the manufacturer.

614.0 Dialysis Water-Distribution Systems

6.14.1 [OSHPD 1, 2, 3, & 4] Dialysis water feedlines shall be PVC (polyvinyl chloride), glass, stainless steel, or PVDF (polyvinylidene fluoride,) and sized to provide a minimum velocity of 1.5 feet per second (0.46 m/s). The piping shall be a singleloop system with or without recirculation. Branches to dialysis machines shall be ¼ inch (6.4 mm) inside dimension and take off from the bottom of the main feedline. <u>Branch lines may be Perfluoroalkoxy (PFA).</u>

- **Chapter 7 – Sanitary Drainage**

701.0 Materials

~~**701.1**~~ **<u>701.2</u> Drainage Piping.** Materials for drainage piping shall be in accordance with one of the referenced standards in Table 701.1 except that:

(1) No galvanized wrought-iron or galvanized steel pipe shall be used underground and shall be kept not less than 6 inches (152 mm) aboveground.

(2) ABS and PVC DWV piping installations shall be installed in accordance with applicable standards referenced in Table 1401.1. Except for individual single-family dwelling units, materials exposed within ducts or

plenums shall have a flame-spread index of a maximum of 25 and a smoke-developed index of a maximum of 50, where tested in accordance with ASTM E 84 and UL 23.

(a) ***[HCD 1 & HCD 2]*** *ABS and PVC installations are limited to not more than two stories of areas of residential accommodation.*

~~*(b)* ***[OSHPD 1, 2, & 4]*** *ABS and PVC installations are not allowed.*~~

- **Chapter 9 – Vents**

903.0 Materials

903.1 Applicable Standards. Vent piping and fittings shall comply with the applicable standards referenced in Table 701.1, except that:

(1) No galvanized steel or 304 stainless steel pipe shall be installed underground and shall not be less than 6 inches (152 mm) aboveground.

(2) ABS and PVC DWV piping installations shall be in accordance with the applicable standards reference in Table 1401.1. Except for individual single-family dwelling units, materials exposed within ducts or plenums shall have a flame-spread index of a maximum of 25 and a smoke-developed index or not more than 50 where tested in accordance with ASTM E 84 or UL 723.

903.1.1 [HCD 1 & HCD 2] *ABS or PVC installations are limited to not more than two stories of areas of residential accommodation.*

903.1.2 [HCD 1] *All malleable iron vents shall be galvanized.*

~~***903.1.3 [OSHPD 1, 2, 3 & 4]*** *ABS and PVC installations are not allowed.*~~

- **Chapter 11 – Storm Drainage**

1101.0 General.

1101.1 Where Required. Roofs, paved areas, yards, courts, courtyards, vent shafts, light wells, or similar areas having rainwater, shall be drained into a separate storm sewer system, or into a combined sewer system where a separate storm sewer system is not available, or to some other place of disposal satisfactory to the Authority Having Jurisdiction. In the case of one- and two-family dwellings, storm water shall be permitted to be discharged on flat areas, such as streets or lawns, so long as the storm water shall flow away from the building and away from adjoining property, and shall not create a nuisance.

1101.2 Storm Water Drainage to Sanitary Sewer Prohibited. Storm water shall not be drained into sewers intended for sanitary drainage.

1101.3 Material Uses. Rainwater piping placed within the interior of a building or run within a vent or shaft shall be of cast-iron, galvanized steel,

wrought iron, brass, copper, lead, Schedule 40 ABS DWV, Schedule 40 PVC DWV, stainless steel 304 or 316L [stainless steel 304 pipe and fittings shall not be installed underground and shall be kept not less than 6 inches (152 mm) aboveground], or other approved materials, and changes in direction shall be in accordance within the requirements of Section 706.0. ABS *and* PVC DWV piping installations shall be installed in accordance within IS 5 and IS 9. Except for individual single-family dwelling units, materials exposed within ducts or plenums shall have a flame-spread index of a maximum of 25 and a smoke-developed index of a maximum of 50, where tested in accordance with ASTM E 84 and UL 723.

1101.3.1 [HCD 1 & HCD 2] *ABS or PVC installations are limited to not more than two stories of areas of residential accommodation.*

~~***1101.3.2 [OSHPD 1, 2, 3, & 4]*** *ABS and PVC installations are not allowed.*~~

1102.0 Materials

1102.1 Conductors. Conductors installed aboveground in buildings shall be in accordance within the applicable standards referenced in Table 701.1 for aboveground drain, waste, and vent pipe.

1102.1.1 Inside of Conductors. The inside of conductors installed aboveground level shall be seamless copper water tube, Type K, L, or M; Schedule 40 copper pipe or Schedule 40 copper alloy pipe; Type DWV copper drainage tube; service weight cast-iron soil pipe or hubless cast-iron soil pipe; standard weight galvanized steel pipe; stainless steel 304 or 316L [stainless steel 304 pipe and fittings shall not be installed underground and shall be kept not less than 6 inches (152 mm) aboveground]; or Schedule 40 ABS or Schedule 40 PVC plastic pipe.

1102.1.2 [HCD 1] *ABS or PVC installations are limited to not more than two stories of areas of residential accommodation.*

~~***1102.1.3 [OSHPD 1, 2, 3, & 4]*** *ABS and PVC installations are not allowed.*~~

4.0 Proposed Plumbing Materials

The Proposed Project would allow use of PFA, ABS, PVC, and CPVC materials as specified above. These materials, along with key aspects of their manufacture, in-use, and end of life features, are described below. All of the proposed materials would be subject to various ASTM standards as well as NSF 61 standards. During installation of ABS, PVC, and CPVC, each of these pipes may be connected using various pipe fittings and connectors. These fittings may use various cements and sealers for a proper, leak-free fit. (See the general discussion on pipe fittings, cements, and sealers at the end of this section.)

PFA

PFA was first produced by DuPont in 1972 and is called Teflon® PFA. PFA is a type of fluoropolymer and has very similar properties as the more common polytetrafluoroethylene (PTFE), which is the more popularly known form of Teflon. PFA is used for pharmaceutical, environmental, laboratory, and semiconductor applications. PFA consists of copolymers of tetrafluoroethylene and perfluoroethers, has a very high impact strength, and can be used at a higher working temperature than most plastics. PFA is inert to strong mineral acids, inorganic bases, inorganic oxidizers, aromatics, some aliphatic hydrocarbons, alcohols, aldehydes, ketones, ethers, esters, chlorocarbons, fluorocarbons, and mixtures of these substances. PFA is not considered hazardous as defined in the U.S. Code of Federal Regulations, 29 CFR 1910.1200.

ABS

ABS is a common thermoplastic polymer. A thermoplastic polymer is a plastic material that becomes pliable or moldable above a specific temperature and solidifies on cooling. ABS is a lightweight material that exhibits high impact resistance and mechanical toughness. It is used in many consumer products, such as toys, appliances, and telephones.

ABS is synthesized from styrene and acrylonitrile in the presence of polybutadiene (synthesized from 1,3-butadiene). The resulting ABS polymer contains long chains of polybutadiene, cross-linked with shorter chains of poly(styrene-co-acrylonitrile). The polymerization process typically uses an emulsion process, a continuous mass process, or a combination of the two processes. The base monomers have the potential to be emitted in the manufacturing process; however, this is highly dependent on the process and process control technologies used. Many process control technologies capture and reuse monomers that may escape and use closed systems.

ABS plastic is recyclable and commonly is mixed with virgin ABS to make plastics for various uses.

PVC

PVC comes in two basic forms: rigid and flexible. The rigid form of PVC is used in construction for pipe and in profile applications, such as doors and windows. It also is used for bottles, other non-food packaging, and cards (e.g., bank or membership cards). PVC can be made softer and more flexible by the addition of plasticizers. In this form, it also is used in plumbing, electrical cable insulation, imitation leather, signage, inflatable products, and many applications where it replaces rubber.

The basic PVC polymer typically is combined with various additives and enhancers before final product formation. These enhancers are added to improve the characteristics of the final product, such as heat stabilizers, UV stabilizers, plasticizers, processing aids, impact modifiers, thermal modifiers, fillers, flame retardants, biocides, smoke suppressors, and color pigments.

Phthalates are the most widely used plasticizer when making plastic softer and more flexible. Phthalates generally are classified according to size and the amount of branching of the molecule.

Heat stabilizers minimize the loss of hydrogen chloride (HCl) during the degradation process. Traditionally, derivatives of heavy metals (e.g. lead and cadmium) have been used; these have been phased out and currently metallic salts of fatty acids, such as calcium stearate, have been used to achieve the desired enhancement. In rigid forms of PVC, tin-based stabilizers also may be used. Other metals may be used in flexible PVC and include stabilizers based on barium, zinc, and calcium carboxylates.

Chlorination is discussed below under CPVC.

Recycling PVC has become possible by using the Vinyloop® process (a physical, solvent-based recycling technology, suitable for difficult-to-treat composite PVC waste).

CPVC

CPVC is a thermoplastic produced by chlorination of PVC resin. It is generated by chlorination of aqueous solution of PVC particles, followed by exposure to UV light that initiates the free-radical chlorination process. The increase in chlorine content provides a higher heat resistance. Common uses of CPVC include hot and cold water pipes and industrial liquid handling. CPVC shares most of the features and properties of PVC. Because of its excellent corrosion resistance at elevated temperatures, CPVC is ideally suited for self-supporting constructions where temperatures up to 200 degrees Fahrenheit exist.

The basic CPVC polymer typically is combined with various additives and enhancers before final product formation. These enhancers are added to improve the characteristics of the final product, such as heat stabilizers, UV stabilizers, plasticizers, processing aids, impact modifiers, thermal modifiers, fillers, flame retardants, biocides, smoke suppressors, and color pigments. These are similar to the ones described above for PVC.

PVC, CPVC, and ABS Pipe Fittings, Cements, and Sealers

To connect PVC, CPVC, and ABS pipe sections together and provide a complete seal, various fittings, cements, and sealers typically are used on-site during installation. The cements and sealers in particular may release various volatile organic carbons (VOCs), some of which are toxic air contaminants (TACs), during the curing process. Traditionally, cements and sealers used significant quantities of methyl ethyl ketone (MEK) as a solvent. Because of the low VOC regulatory requirements in many California air districts, the cements and sealers are reformulated to use a larger percentage of acetone, which is less volatile, and MEK content is decreased or eliminated. Other ingredients common in PVC and CPVC cements include tetrahydrofuran, cyclohexanone, and silica, along with the polymer resin (PVC or CPVC) and minor amounts of plasticizers, fillers, color pigments, and other stabilizers. Other ingredients common in ABS cement includes ABS resin and minor amounts of plasticizers, fillers, color pigments, and other stabilizers. A particular solvent cement often contains small quantities of proprietary formulations, used to enhance the softening and joining properties of the cement through the various plasticizers, stabilizers, and fillers. Some of this proprietary information is not available publically; however, the major constituents of the solvent cement typically can be found on material safety data sheets, if they are required to be listed.

5.0 Project Location and Setting

The Proposed Project would allow statewide use of the identified materials for the four facility types listed in Section 2.1. The specific locations of their use that may result from the Proposed Project are unknown at this time, and would be based on the locations and construction methods for future new construction and renovation of OSHPD 1, 2, 3, and 4 facilities.

6.0 Permits and Approvals

The permits and regulatory compliance requirements for the Proposed Project are described by permitting agency, as shown in Table 2-1. Activities conducted in compliance with the adopted regulations may be subject to other permitting and approvals, such as from local land use authorities. As the specific locations of such activities are unknown at this time, the specific local or other permitting and approvals that may be applicable also are unknown.

Table 2-1. Other Permits and Regulatory Approvals

Regulatory Agency	Law/Regulation	Purpose	Permit/Authorization Type
California Building Standards Commission	CCR, Title 24	California Plumbing Code, Water Supply and Distribution; Sanitary Drainage	CBSC Approval

7.0 Topics to be Analyzed in the Environmental Impact Report

Based on some public concerns that have been expressed regarding ABS, PVC, and CPVC pipes, OSHPD has chosen to prepare a Draft Environmental Impact Report (Draft EIR). The Draft EIR will assess the proposed project's effects on the environment, to identify potentially significant impacts (if any), and to identify, if applicable, feasible mitigation measures to reduce or eliminate potentially significant environmental impacts. An analysis of alternatives to the proposed project also will be included in the Draft EIR. Topics to be analyzed in the Draft EIR include but are not necessarily limited to the following:

- Air Quality
- Biological Resources
- Cultural Resources
- Greenhouse Gas Emissions
- Hazards and Hazardous Materials
- Hydrology and Water Quality

Responses received to the Notice of Preparation (NOP) may modify the list of issues addressed in the Draft EIR.

8.0 Environmental Procedures

The NOP initiates the CEQA process and allows agency and public input, to assist OSHPD in refining the range of issues and project alternatives to be addressed in the Draft EIR. Comment is invited on the NOP to help determine the scope of issues to be included in the Draft EIR.

Any comments are to be submitted within 30 days of receipt of the NOP to Glenn Gall, AIA, OSHPD's Project Manager for the Proposed Project (see *Contact Information* below). In conjunction with the 30-day review period for the NOP, OSHPD will hold two scoping meetings to provide an additional opportunity to learn about the project, ask questions, and provide comments about the scope and content of the information to be addressed in the draft EIR. The scoping meetings will be held at the following times and locations:

Friday, May 15, 2015
10:00 am – 12:00 pm
Office of Statewide Health Planning and Development
Sacramento Room
400 R Street
Sacramento, CA 95811

Friday, May 22, 2015
10:00 am – 12:00 pm
Ronald Reagan State Building
Auditorium
300 S. Spring Street
Los Angeles, CA 90013

After the 30-day review period for the NOP is complete and all comments are received and considered, a Draft EIR will be prepared in accordance with CEQA, as amended (Public Resources Code Section 21000 et seq.), and the State Guidelines for Implementation of CEQA (CCR Section 15000 et seq.).

After the Draft EIR is completed, it will be made available for a 45-day public review and comment period. A Notice of Availability of the Draft EIR will be sent directly to responsible trustees and agencies with jurisdiction by law over the Proposed Project; agencies, individuals, and organizations commenting on the NOP; and any other entities and individuals who have requested notice regarding the Draft EIR. The Draft EIR will be made available to the public at a number of locations, including OSHPD's headquarters, several public libraries throughout the state, and online. Information about availability of the draft EIR will be posted on the OSHPD's website (http://www.oshpd.ca.gov/FDD/Regulations/index.html).

9.0 Contact Information

For further information or to submit comments in response to this NOP, please send or e-mail correspondence and/or comments to the following:

Glenn Gall, AIA
Project Manager
Office of Statewide Health Planning and Development
400 R Street, Suite 200
Sacramento, CA 95811
(916) 440-8356
Glenn.Gall@oshpd.ca.gov

B. ENVIRONMENTAL CHECKLIST

1.0 Overview

Project title:	Revisions to the California Plumbing Code to Allow the Use of Perfluoroalkoxy in Dialysis Branch Lines and Plastic Pipe in Plumbing Applications in OSHPD 1, 2, 3, and 4 Facilities (Proposed Project)
Lead Agency name and address	Office of Statewide Health Planning and Development 400 R Street Sacramento, CA 95811-6213
Contact person and phone number:	Glenn Gall, AIA, Project Manager (916) 440-8356
Project location:	The Proposed Project may result in activities statewide, at new and existing OSHPD facilities.
Project sponsor's name and address:	Office of Statewide Health Planning and Development 400 R Street Sacramento, CA 95811-6213
Land designation:	Land use designations cannot be determined because Proposed Project activities may occur at various locations statewide that currently are unknown.

2.0 Environmental Factors Potentially Affected

The environmental factors checked below potentially would be affected by the Proposed Project or would include at least one impact that would be "less than significant" but would be evaluated in the Draft EIR because of concerns expressed by the public, as indicated by the checklist on the following pages.

[ ] Aesthetics	[ ] Agricultural and Forestry Resources	[X] Air Quality
[X] Biological Resources	[X] Cultural Resources	[ ] Geology / Soils
[X] Greenhouse Gas Emissions	[X] Hazards and Hazardous Materials	[X] Hydrology / Water Quality
[ ] Land Use / Planning	[ ] Mineral Resources	[ ] Noise
[ ] Population / Housing	[ ] Public Services	[ ] Recreation
[ ] Transportation/Traffic	[ ] Utilities / Service Systems	[X] Mandatory Findings of Significance

3.0 Evaluation of Environmental Impacts

In this analysis, the degree of change from existing conditions caused by the Proposed Project is compared to the impact evaluation criteria to determine whether the change is significant. In other words, existing conditions serve as the baseline for evaluating the potential impacts of the Proposed Project. As mandated by the California Environmental Quality Act (CEQA), only reasonably foreseeable changes to the physical environment are considered.

Potential impacts that cannot be assessed because of absence of site-specific information are considered to be speculative. For example, use of pipe could occur as part of a larger project (e.g., new hospital facilities) where the project as a whole could have potentially significant impacts. Because the locations and characteristics of any such projects are currently unknown, it would be speculative to say whether and where such potential impacts would occur. Therefore, this evaluation focuses specifically on whether the use of plastic pipe in these types of facilities generally would have potentially significant impacts.

Similarly, these changes to the California Building Standards Code would not authorize projects implementing the regulations (i.e., using plastic pipe) to violate any other applicable local, state or federal laws, regulations, or policies. For example, changes to the California Building Standards Code under the Proposed Project would not override a local ordinance prohibiting the use of plastic pipe that would otherwise apply.

The following terminology is used throughout this document to describe the level of potential impacts on the environment from the Proposed Project:

- *No Impact.* The Proposed Project would not adversely affect a particular environmental resource or topical area of analysis in any way.

- *Less than Significant.* The Proposed Project would not cause a substantial adverse change in the environment.

- *Potentially Significant.* The Proposed Project could cause a significant environmental impact.

Potential impacts that are considered speculative are accorded a significance conclusion of "No Impact." Potential impacts that are determined in this analysis to be less than significant may be carried forward for further analysis in the EIR because of public concerns. It is indicated in the checklist response discussion whether a less than significant impact will be evaluated in the EIR.

4.0 CEQA Environmental Checklist

I. AESTHETICS

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
	Would the project:				
a.	Have a substantial adverse effect on a scenic vista?	☐	☐	☐	☒
b.	Substantially damage scenic resources, including, but not limited to trees, rock outcroppings, and historic buildings within a state scenic highway?	☐	☐	☐	☒
c.	Substantially degrade the existing visual character or quality of the site and its surroundings?	☐	☐	☐	☒
d.	Create a new source of substantial light or glare that would adversely affect daytime or nighttime views in the area?	☐	☐	☐	☒

Discussion of Checklist Responses

a. Have an Adverse Effect on a Scenic Vista—*No Impact*

The use of PFA in dialysis branch lines and/or plastic pipe as part of construction or renovation of OSHPD 1, 2, 3 and 4 facilities would be unlikely to have an adverse effect on a scenic vista. No impact would occur.

b. Substantially Damage Scenic Resources, including Trees, Rock Outcroppings, and Historic Buildings within a State Scenic Highway—*No Impact*

Possibly some OSHPD 1, 2, 3 and 4 facilities may be visible from state scenic highways, and possibly some OSHPD facilities may be historic buildings, but the use of PFA, PVC, CPVC, and ABS pipe in plumbing applications would not affect the aesthetic quality or resources of these buildings. No impact would occur.

c. Substantially Degrade the Existing Visual Character or Quality of the Site and Its Surroundings—*No Impact*

The use of PFA, PVC, CPVC, and ABS pipe would not affect the existing visual character or quality of any potential project sites at OSHPD 1, 2, 3 and 4 facilities. Plastic pipes used under

the revised regulations, in lieu of metal pipes, primarily would be contained within building walls and would not be visible. No impact would occur.

d. Create a New Source of Light or Glare, Affecting Views in the Area—*No Impact*

Installation and/or the use of PFA, PVC, CPVC, and ABS pipe would not include any nighttime lighting or sources of glare. The Proposed Project may reduce the amount of exposed metal piping in OSHPD 1, 2, 3 and 4 facilities, and thus potentially could reduce glare to some marginal degree because metal generally is more reflective than plastic. No impact would occur.

II. AGRICULTURAL RESOURCES

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the Project:					
a.	Convert Prime Farmland, Unique Farmland, or Farmland of Statewide Importance (Farmland), as shown on the maps prepared pursuant to the Farmland Mapping and Monitoring Program (FMMP) of the California Resources Agency, to nonagricultural use?	☐	☐	☐	☒
b.	Conflict with existing zoning for agricultural use, or a Williamson Act contract?	☐	☐	☐	☒
c.	Conflict with existing zoning for, or cause rezoning of, forest land (as defined in Public Resources Code Section 12220[g]), timberland (as defined by Public Resources Code Section 4526), or timberland zoned Timberland Production (as defined by Government Code Section 51104[g])?	☐	☐	☐	☒
d.	Result in the loss of forest land or conversion of forest land to non-forest use in a manner that will significantly affect timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, or other public benefits?	☐	☐	☐	☒
e.	Involve other changes in the existing environment that, because of their location or nature, could result in a conversion of Farmland to a nonagricultural use?	☐	☐	☐	☒

Discussion of Checklist Responses

a and e. Convert Farmland to Non-Agricultural Use Related to the FMMP or Involve Other Changes in the Existing Environment that Could Result in a Conversion to Non-Agricultural Use—*No Impact*

The use of PFA, PVC, CPVC, and ABS piping in OSHPD 1, 2, 3, and 4 facilities would not result in the direct or indirect conversion of agricultural or forest lands to non-agricultural use. No impact would occur.

b and c. Conflict with Existing Zoning for Agriculture Use, a Williamson Act Contract, or existing zoning for, or cause rezoning of, forest land, timberland, or timberland zoned Timberland Production—*No Impact*

The use of PFA, PVC, CPVC, and ABS piping in OSHPD 1, 2, 3 and 4 facilities would not conflict with existing zoning for agricultural use, forest land, timberland, or conflict with a Williamson Act contract. No impact would occur.

d. Result in the loss of forest land or conversion of forest land to non-forest use that would significantly affect timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, or other public benefits—*No Impact*

The Proposed Project would not result in the loss of forest land or conversion of forest land to non-forest use that would significantly affect timber, aesthetics, fish and wildlife, biodiversity, water quality, recreation, or other public benefits. No impact would occur.

III. AIR QUALITY

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
When available, the significance criteria established by the applicable air quality management or air pollution control district may be relied upon to make the following determinations. Would the project:					
a.	Conflict with or obstruct implementation of the applicable air quality plan?	☐	☐	☒	☐
b.	Violate any air quality standard or contribute substantially to an existing or projected air quality violation?	☐	☐	☒	☐
c.	Result in a cumulatively considerable net increase of any criteria pollutant for which the project region is a nonattainment area for an applicable federal or state ambient air quality standard (including releasing emissions that exceed quantitative thresholds for ozone precursors)?	☐	☐	☒	☐
d.	Expose sensitive receptors to substantial pollutant concentrations?	☐	☐	☒	☐
e.	Create objectionable odors affecting a substantial number of people?	☐	☐	☒	☐

Discussion of Checklist Responses

a. Conflict with or Obstruct Implementation of the Applicable Air Quality Plan—*Less than Significant*

The use of PFA in dialysis branch lines is not anticipated to conflict with or obstruct implementation of the applicable air quality plan. The use of PVC, CPVC, and ABS pipe in OSHPD facilities as a result of the Proposed Project may occur statewide, and thus all air basins in the state potentially could be affected. Installation of PVC, CPVC, and ABS pipe could contribute some amount of VOCs and TACs because the cements and sealers used to connect pipes together emit these contaminants during the curing process. Typical VOCs and TACs include phenolics, phthalates, and various types of monomers. In addition, the Proposed Project potentially could result in increased use and production of PFA, PVC, CPVC, and ABS pipe, the production of which could release air contaminants. The increased production of PFA, PVC, CPVC, and ABS pipe may or may not occur in California and may or may not require having their own environmental compliance and air quality permitting analyses conducted.

However, these potential minor sources of contaminants are not anticipated to be of a sufficient degree to conflict with any applicable air quality plans. The impact would be less than significant. While this potential impact is not considered to be significant, it will be evaluated further in the Draft EIR.

b. Violate Any Air Quality Standard or Contribute Substantially to an Existing or Projected Air Quality Violation—*Less than Significant*

The use of PFA in dialysis branch lines is not expected to affect any air quality standard or contribute substantially to an existing or project air quality violation. The use of PVC, CPVC, and ABS pipe in OSHPD facilities as a result of the Proposed Project may occur statewide, and thus all air basins in the state potentially could be affected. Several air basins within the state are in non-attainment of the ozone ambient air quality standard. Cements and sealers used to connect pipes together emit VOCs during the curing process, which may contribute to formation of ozone in air basins that are in non-attainment. Because Proposed Project locations currently are unknown, it would be speculative to say whether and where a potential impact may occur. While this potential impact is therefore not considered to be significant, it will be evaluated further in the Draft EIR.

c. Result in a Cumulatively Considerable Net Increase of Any Criteria Pollutant for Which the Project Region is a Nonattainment Area—*Less than Significant*

As discussed under "b" above, the use of PVC, CPVC, and ABS pipes may emit VOCs that could contribute to cumulative ozone violations. Because Proposed Project locations currently are unknown, it would be speculative to say whether and where a potential impact may occur. This impact is therefore not considered to be significant, but will be evaluated in the Draft EIR.

d. Expose Sensitive Receptors to Substantial Pollutant Concentrations—*Less than Significant*

PFA, PVC, CPVC, and ABS pipe under normal operating conditions do not emit any substantial pollutants. During installation and conditioning of the PVC, CPVC, and ABS pipes, some TACs may be emitted. These generally will be small quantities that will disperse rapidly on reaching ambient air. In the event of fire, the potential also would exist for burning PFA, CVC, CPVC, and ABS pipe to generate toxic fumes, such as hydrogen fluoride or hydrogen cyanide. This potential impact is not considered to be significant, because of adherence to existing worker health protection and fire prevention standards. However, because of public concerns, the impact will be evaluated further in the Draft EIR.

e. Create Objectionable Odors Affecting a Substantial Number of People—*Less than Significant*

The use of PFA, PVC, CPVC, and ABS pipe during normal operation would not result in any generation of odors. During installation and conditioning of PVC, CPVC, and ABS pipe, some odors associated with the release of VOCs during pipe fittings may occur. These odors would be temporary, localized, and would dissipate quickly in the ambient air, and thus a substantial number of people would not be exposed to objectionable odors. Some temporary objectionable odors may occur, associated with the gasoline and diesel-powered

construction equipment used to deliver or install the pipe. However, this would be similar to baseline conditions and would not result in exposing a substantial number of people to objectionable odors. Therefore, the impact would be less than significant and will not be evaluated in the Draft EIR.

IV. BIOLOGICAL RESOURCES

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the Project:					
a.	Have a substantial adverse effect, either directly or through habitat modifications, on any species identified as a candidate, sensitive, or special-status species in local or regional plans, policies, or regulations, or by the CDFW or USFWS?	☐	☐	☒	☐
b.	Have a substantial adverse effect on any riparian habitat or other sensitive natural community identified in local or regional plans, policies, or regulations, or by the CDFW or USFWS?	☐	☐	☒	☐
c.	Have a substantial adverse effect on federally protected wetlands as defined by Section 404 of the Clean Water Act (including marshes, vernal pools, and coastal wetlands) through direct removal, filling, hydrological interruption, or other means?	☐	☐	☐	☒
d.	Interfere substantially with the movement of any native resident or migratory fish or wildlife species or with established native residents or migratory wildlife corridors, or impede the use of native wildlife nursery sites?	☐	☐	☐	☒
e.	Conflict with any local policies or ordinances protecting biological resources, such as a tree preservation policy or ordinance?	☐	☐	☐	☒
f.	Conflict with the provisions of an adopted habitat conservation plan (HCP); natural community conservation plan; or other approved local, regional, or state HCP?	☐	☐	☐	☒

Discussion of Checklist Responses

a. Have a Substantial Adverse Effect, either Directly or Through Habitat Modifications, on Any Species Identified as a Candidate, Sensitive, or Special-Status Species—*Less than Significant*

The use of PFA, PVC, CPVC, and ABS piping in OSHPD 1, 2, 3, and 4 facilities is not expected to result in substantial direct effects to any sensitive or listed species. Since no development, grading, or land disturbance is proposed for this project, no habitat modifications would occur. Nevertheless, due to some concerns expressed about potential environmental impacts to aquatic organisms from leachates from PVC, CPVC, and ABS pipe, this issue will be further examined in the EIR.

b. Have a Substantial Adverse Effect on Any Riparian Habitat or Other Sensitive Natural Community—*Less than Significant*

The use of PFA. PVC, CPVC, and ABS piping in OSHPD 1, 2, 3, and 4 facilities is not expected to result in substantial direct effects to any riparian habitat or other sensitive natural community. Nevertheless, due to some concerns expressed about potential environmental impacts to aquatic organisms, this issue will be further examined in the EIR.

c. Have a Substantial Adverse Effect on Federally Protected Wetlands—*No Impact*

The use of PFA, PVC, CPVC, and ABS piping in OSHPD 1, 2, 3, and 4 facilities would not result in any effects to federally protected wetlands. There would be no impact.

d. Interfere Substantially with the Movement of Any Native Resident or Migratory Fish, or Wildlife Species, or with Established Native Residents or Migratory Corridors, or Impede the Use of Native Wildlife Nursery Sites—*No Impact*

The use of PFA, PVC, CPVC, and ABS plastic piping in OSHPD 1, 2, 3, and 4 facilities would not result in any interference with wildlife movement, established wildlife corridors, or the use of Native Wildlife Nursery. There would be no impact.

e. Conflict with any Local Policies or Ordinances Protecting Biological Resources—*No Impact*

The proposed changes to the CPC regarding PFA, PVC, CPVC, and ABS plastic piping in OSHPD 1, 2, 3, and 4 facilities would not exempt users from applicable local policies or ordinances protecting biological resources. As such, there would be no potential for conflicts, and there would be no impact.

f. Conflict with the Provisions of an Adopted HCP or Natural Community Conservation Plan—*No Impact*

The proposed changes to the CPC regarding PFA, PVC, CPVC, and ABS in OSHPD 1, 2, 3, and 4 facilities would not exempt users from applicable provisions of an Adopted HCP or Natural

Community Conservation Plan. As such, there would be no potential for conflicts, and there would be no impact.

V. CULTURAL RESOURCES

		Potentially Significant Impact	Less Than Significant With Mitigation Incorporated	Less Than Significant Impact	No Impact
	Would the project:				
a.	Cause a substantial adverse change in the significance of a historical resource as defined in Section 15064.5?	☐	☐	☒	☐
b.	Cause a substantial adverse change in the significance of an archaeological resource as defined in Section 15064.5?	☐	☐	☐	☒
c.	Directly or indirectly destroy a unique paleontological resource or site or unique geological feature?	☐	☐	☐	☒
d.	Disturb any human remains, including those interred outside of formal cemeteries?	☐	☐	☐	☒

Discussion of Checklist Responses

a. Cause a Substantial Adverse Change in the Significance of a Historical Resource as Defined in Section 15064.5—*Less than Significant*

The use of PFA, PVC, CPVC, and ABS materials in historic structures is not expected to significantly affect the integrity of historic structures. Nevertheless, this issue will be examined further in the EIR.

b. Cause a Substantial Adverse Change in the Significance of an Archaeological Resource as Defined in Section 15064.5—*No Impact*

Since no ground disturbance is contemplated as a part of this project, adverse changes in the significance of archaeological resources are not anticipated. No impact would occur.

c. Directly or Indirectly Destroy a Unique Paleontological Resource or Site or Unique Geological Feature—*No Impact*

Since no ground disturbance is contemplated as a part of this project, adverse changes in the significance of archaeological resources are not anticipated. No impact would occur.

d. Disturb Any Human Remains, Including Those Interred Outside of Formal Cemeteries—*No Impact*

Since no ground disturbance is contemplated as a part of this project, human remains will not be disturbed. No impact would occur.

VI. GEOLOGY, SOILS, AND SEISMICITY

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the Project:					
a.	Expose people or structures to potential substantial adverse effects, including the risk of loss, injury, or death involving:				
	1. Rupture of a known earthquake fault, as delineated on the most recent Alquist-Priolo Earthquake Fault Zoning Map issued by the State Geologist for the area or based on other substantial evidence of a known fault? Refer to Division of Mines and Geology Special Publication 42.	☐	☐	☐	☒
	2. Strong seismic ground shaking?	☐	☐	☐	☒
	3. Seismic-related ground failure, including liquefaction?	☐	☐	☐	☒
	4. Landslides?	☐	☐	☐	☒
b.	Result in substantial soil erosion or the loss of topsoil?	☐	☐	☐	☒
c.	Be located on a geologic unit or soil that is unstable or that would become unstable as a result of the Project and potentially result in an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse?	☐	☐	☐	☒
d.	Be located on expansive soil, as defined in Table 18-1-B of the 1994 Uniform Building Code, creating substantial risks to life or property?	☐	☐	☐	☒
e.	Have soils incapable of adequately supporting the use of septic tanks or alternative wastewater disposal systems in areas where sewers are not available for the disposal of wastewater?	☐	☐	☐	☒

Discussion of Checklist Responses

a. Expose People or Structures to Potential Substantial Adverse Effects, Including the Risk of Loss, Injury, or Death Involving:

1. Seismic-Related Rupture of a Known Earthquake Fault—*No Impact*

The use of PFA, PVC, CPVC, and ABS pipe in OSHPD 1, 2, 3 and 4 facilities would not expose people or structures to potential adverse effects, including the risk of loss, injury, or death involving the rupture of a known earthquake fault. PVC piping has been found to have good hydraulic and structural integrity compared to other common materials used in water and sewer piping applications (e.g., metal, vitrified clay) (Ohlinger, 2002; Duffy, 2007). Vinyl piping's flexibility enable it to respond to excessive forces without fracturing (Ohlinger, 2007), and makes it less vulnerable to earth movements (Duffy, 2007). ABS piping has similar properties to PVC and CPVC piping. As such, there is no reason to believe that PVC, CPVC or ABS piping would be more likely to fail in the event of a seismic-related rupture of a known earthquake fault, and thereby expose people or structures to adverse effects, than metal piping currently authorized for use in OSHPD facilities. No impact would occur.

2. Strong Seismic Ground Shaking—*No Impact*

The use of PFA, PVC, CPVC, and ABS pipe in OSHPD 1, 2, 3 and 4 facilities would not expose people or structures to potential adverse effects, including the risk of loss, injury or death involving strong seismic ground shaking. As described above, PVC piping has been found to have good structural integrity relative to piping materials currently authorized for use in OSHPD facilities (e.g., metal) (Ohlinger, 2002; Duffy, 2007). There is no reason to believe that PVC, CPVC or ABS piping would be more likely to fail in the event of strong seismic ground shaking than metal piping currently authorized for use in OSHPD facilities. No impact would occur.

3. and 4. Seismic-related Ground Failure, Including Liquefaction and Landslides—*No Impact*

The use of PFA, PVC, CPVC, and ABS pipe in OSHPD 1, 2, 3 and 4 facilities would not expose people or structures to potential adverse effects, including the risk of loss, injury or death involving seismic-related ground failure, including liquefaction and landslides. As described above, PVC piping has been found to have good structural integrity relative to piping materials currently authorized for use in OSHPD facilities (e.g., metal) (Ohlinger, 2002; Duffy, 2007). There is no reason to believe that PVC, CPVC or ABS piping would be more likely to fail in the event of seismic related ground failure than metal piping currently authorized for use in OSHPD facilities. No impact would occur.

b. Cause Substantial Soil Erosion or the Loss of Topsoil—*No Impact*

The use of PFA, PVC, CPVC, and ABS pipe in OSHPD 1, 2, 3 and 4 facilities would not result in substantial soil erosion or the loss of topsoil. No impact would occur.

c. Be Located on a Geologic Unit or Soil that is Unstable or that Would Become Unstable as a Result of the Proposed Project and Potentially Result in an On-site or Off-site Landslide, Lateral Spreading, Subsidence, Liquefaction, or Collapse—*No Impact*

Under the Proposed Project, PFA, PVC, CPVC, and ABS piping theoretically could be used on a geologic unit or soil that is unstable, but the Proposed Project would not affect the stability of the geologic unit or soil, nor would it affect the chances of an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse. In addition, as described above, PVC piping has been found to have good structural integrity relative to other piping materials currently authorized for use in OSHPD facilities (e.g., metal) (Ohlinger, 2002; Duffy, 2007). As such, there is no reason to believe that PVC, CPVC or ABS piping would be more likely to fail if an on-site or off-site landslide, lateral spreading, subsidence, liquefaction, or collapse were to occur than metal piping currently authorized for use in OSHPD facilities. No impact would occur.

d. Be Located on Expansive Soil, Creating Substantial Risks to Life or Property—*No Impact*

Under the Proposed Project, PFA, PVC, CPVC, and ABS piping theoretically could be used on expansive soil, but the Proposed Project would not affect the soil, nor would it result in risks to life or property. In addition, as described above, PVC piping has been found to have good structural integrity relative to other piping materials currently authorized for use in OSHPD facilities (e.g., metal) (Ohlinger, 2002; Duffy, 2007). As such, there is no reason to believe that PFA, PVC, CPVC or ABS piping would be more likely to fail and create substantial risks to property if it were to be located on expansive soil than metal or other piping currently authorized for use in OSHPD facilities. No impact would occur.

e. Have Soils Incapable of Adequately Supporting the Use of Septic Tanks or Alternative Wastewater Disposal Systems in Areas Where Sewers are Not Available for the Disposal of Wastewater—*No Impact*

The Proposed Project would not include any activities that could affect the use of septic tanks or alternative wastewater disposal systems. No impact would occur.

VII. GREENHOUSE GAS EMISSIONS

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the Project:					
a.	Generate a net increase in greenhouse gas emissions which may have a significant impact on the environment?	☐	☐	☒	☐
b.	Conflict with a county-adopted climate action plan or another applicable plan, policy or regulation adopted for the purpose of reducing the emissions of greenhouse gases?	☐	☐	☒	☐

Discussion of Checklist Responses

a. Generate a Net Increase in Greenhouse Gas Emissions, which May Have a Significant Impact on the Environment—*Less than Significant*

During normal operational use of PFA, PVC, CPVC, and ABS pipes, no emissions of GHGs occur. Installation and conditioning of PVC, CPVC, and ABS pipes for the Proposed Project would generate GHG emissions associated with construction equipment used during installation; such emissions would be similar to GHG emissions occurring as a result of use of other pipe materials. Production of PVC, CPVC, and ABS pipes emits GHG emissions that may be higher than the GHG emissions used in manufacturer of existing pipe materials. The extent of additional emissions is impossible to calculate, and therefore speculative to estimate. This impact is therefore not considered to be significant, but it will be further evaluated in the Draft EIR.

b. Conflict with Any Applicable Plan, Policy, or Regulation Adopted for the Purpose of Reducing the Emissions of Greenhouse Gases—*Less than Significant*

Installation of plastic piping would emit GHG emissions associated with vehicles for workers and delivery, and with construction equipment used during installation. These emissions would be similar to GHG emissions for installation of the existing pipe materials. Specific Proposed Project locations are unknown at this time, so it is not possible to determine which local GHG plans, policies, or regulations may apply. This impact is therefore not considered significant, but it will be evaluated in the Draft EIR.

VIII. HAZARDS AND HAZARDOUS MATERIALS

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the Project:					
a.	Create a significant hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials?	☐	☐	☒	☐
b.	Create a significant hazard to the public or the environment through reasonably foreseeable upset and accident conditions involving the release of hazardous materials into the environment?	☐	☐	☒	☐
c.	Emit hazardous emissions or involve handling hazardous or acutely hazardous materials, substances, or waste within one-quarter mile of an existing or proposed school?	☐	☐	☒	☐
d.	Be located on a site that is included on a list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 and, as a result, create a significant hazard to the public or the environment?	☐	☐	☐	☒
e.	Be located within an airport land use plan area or, where such a plan has not been adopted, be within 2 miles of a public airport or public use airport and result in a safety hazard for people residing or working in the study area?	☐	☐	☐	☒
f.	Be located within the vicinity of a private airstrip and result in a safety hazard for people residing or working in the study area?	☐	☐	☐	☒
g.	Impair implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan?	☐	☐	☐	☒

VIII. HAZARDS AND HAZARDOUS MATERIALS

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
h.	Expose people or structures to a significant risk of loss, injury, or death involving wildland fires, including where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands?	☐	☐	☐	☒

Discussion of Checklist Responses

a. Create a Significant Hazard to the Public or the Environment through the Routine Transport, Use, or Disposal of Hazardous Materials—*Less than Significant*

PFA is chemically inert and does not present a substantial hazard to the public or the environment through the routine transport, use, or disposal of hazardous materials. Some public health concerns exist regarding use of PVC, CPVC, and ABS piping, related to the following: exposure of workers to potentially carcinogenic components (vinyl chloride monomer) and toxic by-products (dioxins) during PVC manufacturing; reaction of plastic piping with non-compatible solvents and leaching of contaminants during use; exposure of workers and other members of the public to health risks from use of specialized resins, cements, and solvents (e.g. acetone, cyclohexanone, methyl ethyl ketone, and tetrahydrofuran) during the installation and the use of plastic piping; potential for PVC piping to breakdown during use and/or disposal, and create smaller particles of PVC plastic that may enter the environment. None of these impacts are considered to be significant because plastic pipe has been used in all other types of buildings in California for decades, and NSP and ASTM standards are in place for the protection of human health. However, because of public concerns, these potential impacts will be evaluated further in the Draft EIR.

b. Create a Significant Hazard to the Public or the Environment through Reasonably Foreseeable Upset and Accident Conditions Involving the Release of Hazardous Materials into the Environment—*Less than Significant*

Public health concerns exist regarding the potential for PFA, PVC, CPVC, and ABS pipe to increase hazards to public health in the event of a fire, as they can release toxic airborne byproducts (e.g. hydrogen fluoride, dioxins or hydrochloric acid) when heated. While this potential impact is not considered to be significant (see discussion in Section 4.III, Air Quality), because of public concerns, it will be evaluated further in the Draft EIR.

c. Emit Hazardous Emissions or Involve Handling Hazardous or Acutely Hazardous Materials, Substances, or Waste within One-Quarter Mile of an Existing or Proposed School—*Less than Significant*

Although the potential exists for increased production of PFA, ABS, PVC, and CPVC in response to a change in plumbing code regulations, and for such production to include hazardous emissions or handling hazardous or acutely hazardous materials, it would be speculative to conclude whether or not such potential emissions or substances would occur within one-quarter mile of an existing or proposed school. Specific locations of PFA, PVC, CPVC, and ABS pipe manufacturing, transport, use, or disposal that may occur as a result of the Proposed Project are unknown at this time. This impact is therefore not considered significant, but it will be evaluated further in the Draft EIR.

d. Be Located on a Site that is Included on a List of Hazardous Materials Sites Compiled Pursuant to Government Code Section 65962.5, and Create a Significant Hazard to the Public or the Environment—*No Impact*

Whether OSHPD 1, 2, 3 and 4 facilities using PFA, PVC, CPVC, and ABS piping pursuant to the Proposed Project would be located on any list of hazardous materials sites compiled pursuant to Government Code Section 65962.5 is unknown. Therefore, the potential to create a hazard to the public or the environment would be speculative. No impact would occur.

e and f. Be Located within an Airport Land Use Plan Area or Be within 2 Miles of a Private Airport or Public Airport and Result in a Safety Hazard for People Residing or Working in the Study Area—*No Impact*

OSHPD 1, 2, 3, and 4 facilities may be within 2 miles of a private airport or public airport. However, the use of these plastic pipes in such facilities would not result in a safety hazard for people residing or working in the study area. No impact would occur.

g. Impair Implementation of or Physically Interfere with an Adopted Emergency Response Plan or Emergency Evacuation Plan—*No Impact*

The Proposed Project includes regulatory changes permitting statewide use of PFA, PVC, CPVC, and ABS pipe in OSHPD facilities. Choice and installation of plumbing materials does not require activities that reasonably can be expected to impair the implementation of or physically interfere with an adopted emergency response plan or emergency evacuation plan. No impact would occur.

h. Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Wildland Fires, Including Where Wildlands are Adjacent to Urbanized Areas or Where Residences are Intermixed with Wildlands—*No Impact*

The type of plumbing materials used would have no effect on wildland fires and would not expose people or structures to a substantial risk of loss, injury, or death involving wildland fires, including places where wildlands are adjacent to urbanized areas or where residences are intermixed with wildlands. No impact would occur.

IX. HYDROLOGY AND WATER QUALITY

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the Project:					
a.	Violate any water quality standards or waste discharge requirements?	☐	☐	☒	☐
b.	Substantially deplete groundwater supplies or interfere substantially with groundwater recharge, resulting in a net deficit in aquifer volume or a lowering of the local groundwater table level (e.g., the production rate of pre-existing nearby wells would drop to a level that would not support existing land uses or planned uses for which permits have been granted)?	☐	☐	☐	☒
c.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, in a manner that would result in substantial erosion or siltation on site or off site?	☐	☐	☐	☒
d.	Substantially alter the existing drainage pattern of the site or area, including through the alteration of the course of a stream or river, or substantially increase the rate or amount of surface runoff in a manner that would result in flooding on-site or off-site?	☐	☐	☐	☒
e.	Create or contribute runoff water that would exceed the capacity of existing or planned storm water drainage systems or provide substantial additional sources of polluted runoff?	☐	☐	☐	☒
f.	Otherwise substantially degrade water quality?	☐	☐	☒	☐
g.	Place housing within a 100-year flood hazard area, as mapped on a federal Flood Hazard Boundary or Flood Insurance Rate Map or other flood hazard delineation map?	☐	☐	☐	☒
h.	Place within a 100-year flood hazard area structures that would impede or redirect floodflows?	☐	☐	☐	☒

IX. HYDROLOGY AND WATER QUALITY

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
i.	Expose people or structures to a significant risk of loss, injury, or death involving flooding, including flooding as a result of the failure of a levee or dam?	☐	☐	☐	☒
j.	Contribute to inundation by seiche, tsunami, or mudflow?	☐	☐	☐	☒

Discussion of Checklist Responses

a and f. Violate Any Water Quality Standards or Waste Discharge Requirements or Otherwise Substantially Degrade Water Quality—*Less than Significant*

The use of PFA, PVC, CPVC, and ABS pipe in OSHPD 1, 2, 3 and 4 facilities as a result of the Proposed Project may occur throughout the state. Public concerns have been raised that PVC, CPVC, and ABS pipe may leach toxic pollutants during installation and use and thereby degrade water quality. None of these impacts are considered to be significant because plastic pipe has been used safely in many other types of buildings in California for decades, and NSP and ASTM standards are in place for the protection of human health. While this potential impact appears to be less than significant, it will be evaluated in the Draft EIR.

b. Substantially Deplete Groundwater Supplies or Interfere Substantially with Groundwater Recharge, Resulting in a Net Deficit in Aquifer Volume or Lowering of the Local Groundwater Table Level—*No Impact*

The Proposed Project would not increase water demand or affect groundwater recharge in any OSHPD facilities. No impact would occur.

c. Substantially Alter the Existing Drainage Pattern of the Site or Area, Including through the Alteration of the Course of a Stream or River, Resulting in Substantial Erosion or Siltation On-site or Off-site—*No Impact*

The use of PFA, PVC, CPVC, and ABS pipes in OSDPD 1, 2, 3, and 4 facilities would not result in the substantial alteration of existing drainage patterns of a site or area. No impact would occur.

d. Substantially Alter the Existing Drainage Pattern of the Site or Area, Including through the Alteration of the Course of a Stream or River, or Substantially Increase the Rate or Amount of Surface Runoff Resulting in Flooding On-site or Off-site—*No Impact*

As described in the preceding checklist question discussion, the Proposed Project would not permanently affect drainage patterns at OSHPD 1, 2, 3 and 4 facilities. The Proposed Project would not increase the amount of impervious area or otherwise increase the rate or amount of surface runoff at any OSHPD 1, 2, 3 and 4 building sites. No impact would occur.

e. Create or Contribute Runoff Water that Would Exceed the Capacity of Existing or Planned Storm Water Drainage Systems or Provide Substantial Additional Sources of Polluted Runoff—*No Impact*

The Proposed Project would not increase the amount of impermeable surfaces at any building sites. The Proposed Project potentially could result in the use of plastic pipe rather than metal pipe for stormwater drainage connections at OSHPD facilities, but this change would not affect the volume or transport of stormwater generated at the sites. No impact would occur.

g. Place Housing within a 100-year Flood Hazard Area, As Mapped on a Federal Flood Hazard Boundary or Flood Insurance Map or Other Flood Hazard Delineation Map—*No Impact*

The Proposed Project would not include construction of any housing. No impact would occur.

h. Place Structures within a 100-year Flood Hazard Area Resulting in Impeding or Redirecting Flood Flows—*No Impact*

The use of PFA, PVC, CPVC, and ABS pipe in OSHPD 1, 2, 3 and 4 facilities would not cause structures to be located in a flood hazard area. No impact would occur.

i. Expose People or Structures to a Significant Risk of Loss, Injury, or Death Involving Flooding, Including Flooding Resulting from the Failure of a Levee or Dam—*Less than Significant*

Public concerns have been raised that plastic pipes are more susceptible to premature mechanical failure than metal pipes in plumbing applications. In its 1998 report, the National Transportation Safety Board (NTSB) determined that plastic pipe used for gas service installed between the 1960s and 1980s was more susceptible to brittle-like cracking (NTSB 1998). If a plastic pipe failed in an OSHPD 1, 2, 3 or 4 facility, it potentially could result in flooding and loss or injury. For this analysis, evidence could not be found of plastic pipes failing prematurely in plumbing applications. PVC, CPVC, and ABS pipes currently are allowed in plumbing for all building types in California and elsewhere in the U.S., except at OSHPD 1, 2, 3, and 4 facilities. Therefore, this impact is considered less than significant, but because of public concerns, it will be evaluated further in the Draft EIR.

j. Contribute to Inundation by Seiche, Tsunami, or Mudflow—*No Impact*

The Proposed Project would not affect the siting of future OSHPD buildings, and therefore it would not cause facilities to be constructed in proximity to the ocean or in areas where mudflows or seiches are likely to occur. No impact would occur.

X. LAND USE AND PLANNING

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the Project:					
a.	Physically divide an established community?	☐	☐	☐	☒
b.	Conflict with any applicable land use plan, policy, or regulation of an agency with jurisdiction over the project (including a general plan, specific plan, local coastal program, or zoning ordinance) adopted for the purpose of avoiding or mitigating an environmental effect?	☐	☐	☐	☒
c.	Conflict with any applicable habitat conservation plan or natural community conservation plan?	☐	☐	☐	☒

Discussion of Checklist Responses

a. Physically Divide an Established Community—*No Impact*

The use of PFA, PVC, CPVC, and ABS pipe in OSHPD 1, 2, 3 and 4 facilities would not physically divide an established community. No impact would occur.

b. Conflict with Any Applicable Land Use Plans, Policies, or Agency Regulation Adopted for the Purpose of Avoiding or Mitigating an Environmental Effect—*No Impact*

The Proposed Project would not authorize any activities that could conflict with land use plans or policies. No impact would occur.

c. Conflict with Habitat Conservation Plans—*No Impact*

The Proposed Project would not authorize any activities that could conflict with any habitat conservation plans. No impact would occur.

XI. MINERAL RESOURCES

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the Project:					
a.	Result in the loss of availability of a known mineral resource that would be of value to the region and the residents of the state?	☐	☐	☒	☐
b.	Result in the loss of availability of a locally important mineral resource recovery site delineated on a local general plan, specific plan, or other land use plan?	☐	☐	☒	☐

Discussion of Checklist Responses

a and b. Result in the Loss of Availability of a Known Mineral Resource of Value or Result in the Loss of Availability of a Locally Important Mineral Resource Recovery Site—*Less than Significant*

As discussed in previous sections, the Proposed Project could result in increased use of PFA, PVC, CPVC, and ABS pipe. For example, OSHPD 1, 2, 3 and 4 facilities may choose to replace existing metal pipes with plastic pipes or use plastic pipes rather than metal pipes in new facilities. Such increased use could result in increased production and demand for base products. Some minerals, such as barium, may be used in the manufacture of PVC, CPVC, and ABS or in extraction of base products, such as petroleum. Where such minerals may be obtained is unknown (many sources are likely to exist), but increased demand for use in PFA, PVC, CPVC, and ABS pipe manufacturing could reduce the availability of such resources. However, relative to the overall consumption of minerals and the overall demand for PFA, PVC, CPVC, and ABS pipe, the Proposed Project's contribution to such demand would be negligible. For this analysis, evidence could not be found of a shortage in minerals used in the production of PFA, PVC, CPVC, or ABS pipe. The impacts would be less than significant.

XII. NOISE

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the Project result in:					
a.	Exposure of persons to or generation of noise levels in excess of standards established in a local general plan or noise ordinance or applicable standards of other agencies?	☐	☐	☐	☒
b.	Exposure of persons to or generation of excessive groundborne vibration or groundborne noise levels?	☐	☐	☐	☒
c.	A substantial permanent increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
d.	A substantial temporary or periodic increase in ambient noise levels in the project vicinity above levels existing without the project?	☐	☐	☐	☒
e.	For a project located within an airport land use plan area, or, where such a plan has not been adopted, within 2 miles of a public airport or public-use airport, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒
f.	For a project within the vicinity of a private airstrip, would the project expose people residing or working in the project area to excessive noise levels?	☐	☐	☐	☒

Discussion of Checklist Reponses

a. Result in Noise Levels in Excess of Standards Established in the Local General Plan or Noise Ordinance, or in Other Applicable Local, State or Federal Standards—*No Impact*

Installation and the use of plumbing material in OSHPD 1, 2, 3, and 4 facilities may create short-term noise during construction. However, the Proposed Project would not exempt projects using plastic pipe from compliance with applicable noise standards. No impact would occur.

b. Result in Exposure of Persons to or Generation of Excessive Groundborne Vibration or Groundborne Noise Levels—*No Impact*

Installation of these plumbing materials potentially could expose persons or structures to groundborne vibration or groundborne noise levels, because installation of pipe may include drilling or other vibration-causing activities. However, because the specific locations where such potential impacts may occur is unknown, determining whether any impacts would be excessive is not possible. Therefore, there would be no impact.

c. Result in Substantial Permanent Increase in Ambient Noise Levels in the Project Vicinity above Levels Existing without the Project—*No Impact*

The use of PFA, PVC, CPVC, and ABS pipe in OSHPD 1, 2, 3 and 4 facilities would not result in permanent increases in ambient noise levels above levels existing without the Proposed Project. No impact would occur.

d. Result in a Substantial Temporary Increase in Ambient Noise Levels in the Project Vicinity above Levels Existing without the Project—*No Impact*

Installation of plumbing materials in OSHPD 1, 2, 3 and 4 facilities potentially could expose persons to temporary increases in ambient noise levels related to the equipment used to install the pipe. However, any noise generated during implementation of the Proposed Project would be minor and would be limited to the construction phase. The Proposed Project would not expose people residing or working in these locations to excessive noise levels. No impact would occur.

e and f. Expose People Residing or Working in the Vicinity of an Airport Land Use Plan Area, within 2 Miles of a Public Airport or Public-use Airport, or within the Vicinity of a Private Airstrip to Excessive Noise Levels—*No Impact*

Installation and the use of plumbing material in OSHPD 1, 2, 3 and 4 facilities may occur within an airport land use plan area, within 2 miles of a public airport, or in the vicinity of a private airstrip. However, any noise generated under the Proposed Project would be minor and would be limited to the construction phase. The Proposed Project would not expose people residing or working in these locations to excessive noise levels. No impact would occur.

XIII. POPULATION AND HOUSING

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the Project:					
a.	Induce substantial population growth in an area, either directly (e.g., by proposing new homes and businesses) or indirectly (e.g., through extension of roads or other infrastructure)?	☐	☐	☐	☒
b.	Displace a substantial number of existing housing units, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒
c.	Displace a substantial number of people, necessitating the construction of replacement housing elsewhere?	☐	☐	☐	☒

Discussion of Checklist Responses

a. Induce Population Growth—*No Impact*

The Proposed Project would not include housing and would not construct or expand any new infrastructure. No impact would occur.

b and c. Displace Population or Housing—*No Impact*

Replacement or retrofit of plumbing in existing buildings with plastic pipe resulting from the Proposed Project could displace medical resident populations temporarily, but these patients simply would be moved to other parts of the facility or would be transferred to another facility. Furthermore, OSHPD buildings are not considered housing. No impact would occur.

XIV. PUBLIC SERVICES

	Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the Project:				
a. Result in substantial adverse physical impacts associated with the provision of new or physically altered governmental facilities or a need for new or physically altered governmental facilities, the construction of which could cause significant environmental impacts, in order to maintain acceptable service ratios, response times, or other performance objectives for any of the following public services:				
Fire protection?	☐	☐	☒	☐
Police protection?	☐	☐	☐	☒
Schools?	☐	☐	☐	☒
Parks?	☐	☐	☐	☒
Other public facilities?	☐	☐	☐	☒

Discussion of Checklist Responses

a. Result in Adverse Physical Impacts Associated with the Provision of New or Physically Altered Governmental Facilities or a Need for New or Physically Altered Governmental Facilities for: Fire Protection—*Less than Significant*

Public concerns have been raised regarding the potential for PVC, CPVC, or ABS pipe to increase the risk of fire. Concerns have cited the potential for large-diameter plastic piping used for drain, waste and vent systems to create a pathway for smoke, hot gases, and fire to spread through a building. Evidence has not been found to suggest that this impact might be significant, but because of some public concerns, it will be evaluated further in the Draft EIR.

Police Protection, Schools, Parks, or Other Public Facilities—*No Impact*

The Proposed Project would not cause an increase in population that would affect demand for added police protection, schools, parks, or other public facilities. No impact would occur.

XV. RECREATION

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the Project:					
a.	Increase the use of existing neighborhood and regional parks or other recreational facilities such that substantial physical deterioration of the facility would occur or be accelerated?	☐	☐	☐	☒
b.	Include recreational facilities or require the construction or expansion of recreational facilities that might have an adverse physical effect on the environment?	☐	☐	☐	☒

Discussion of Checklist Responses

a. Increase Use of Existing Parks or Recreational Facilities—*No Impact*

The Proposed Project would not cause an increase in population or contribute to the deterioration of any existing recreational facilities. No impact would occur.

b. Create New or Altered Recreational Facilities—*No Impact*

The Proposed Project would not create any new recreational facilities and would not alter any existing recreational facilities. No impact would occur.

XVI. TRANSPORTATION/TRAFFIC

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the Project:					
a.	Conflict with an applicable plan, ordinance or policy establishing measures of effectiveness for the performance of the circulation system, taking into account all modes of transportation including mass transit and non-motorized travel and relevant components of the circulation system, including but not limited to intersections, streets, highways and freeways, pedestrian and bicycle paths, and mass transit?	☐	☐	☐	☒
b.	Conflict with an applicable congestion management program, including, but not limited to level of service standards and travel demand measures, or other standards established by the county congestion management agency for designated roads or highways?	☐	☐	☐	☒
c.	Result in a change in air traffic patterns, including either an increase in traffic levels or a change in location that results in substantial safety risks?	☐	☐	☐	☒
d.	Substantially increase hazards due to a design feature (e.g., sharp curves or dangerous intersections) or incompatible uses (e.g., farm equipment)?	☐	☐	☐	☒
e.	Result in inadequate emergency access?	☐	☐	☐	☒
f.	Conflict with adopted policies, plans, or programs regarding public transit, bicycle, or pedestrian facilities, or otherwise decrease the performance or safety of such facilities?	☐	☐	☐	☒

Discussion of Checklist Responses

a. Conflict with Applicable Circulation Plans, Ordinances, or Policies—*No Impact*

The Proposed Project potentially could result in temporary increases in traffic from transportation of plastic pipe to project sites. However, it would be speculative to say whether and where potential traffic impacts may occur, because specific locations of project-related activities are unknown. Site-specific factors (such as facility layouts, adjacent roads, and existing LOS metrics) would determine the presence and degree of any potential traffic impacts. Because the impact is speculative, it has been concluded that there is no impact.

b. Conflict with Applicable Congestion Management Programs—*No Impact*

It would be speculative to say whether and where potential traffic impacts may occur related to the Proposed Project, because Proposed Project locations are unknown. Knowledge of site-specific factors (such as facility layouts, adjacent roads, and existing LOS metrics) would be necessary to determine whether any conflicts with applicable congestion management programs may occur. Because the impact is speculative, it has been concluded that there is no impact.

c. Result in a Change in Air Traffic Patterns—*No Impact*

The choice of plumbing materials for OSHPD 1, 2, 3, and 4 facilities would not affect air traffic patterns. No impact would occur.

d. Result in Increased Hazards Due to Design Features—*No Impact*

The choice of plumbing materials for OSHPD 1, 2, 3, and 4 facilities would not increase traffic hazards because of project design features. No impact would occur.

e. Result in Inadequate Emergency Access—*No Impact*

Transport of PFA, PVC, CPVC, and ABS piping and equipment for installation in OSHPD 1, 2, 3 and 4 facilities would not interfere with emergency access. No impact would occur.

f. Conflict with Alternative Transportation Policies, Plans, or Programs—*No Impact*

The choice of plumbing materials for OSHPD 1, 2, 3, and 4 facilities would not affect alternative transportation policies, plans, or programs. No impact would occur.

XVII. UTILITIES AND SERVICE SYSTEMS

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
Would the Project:					
a.	Exceed wastewater treatment requirements of the applicable RWQCB?	☐	☐	☒	☐
b.	Require or result in the construction of new water or wastewater treatment facilities or an expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
c.	Require or result in the construction of new stormwater drainage facilities or an expansion of existing facilities, the construction of which could cause significant environmental effects?	☐	☐	☐	☒
d.	Have sufficient water supplies available to serve the Project from existing entitlements and resources, or would new or expanded entitlements be needed?	☐	☐	☐	☒
e.	Result in a determination by the wastewater treatment provider that serves or may serve the Project that it has inadequate capacity to serve the Project's projected demand in addition to the provider's existing commitments?	☐	☐	☐	☒
f.	Be served by a landfill with insufficient permitted capacity to accommodate the Project's solid waste disposal needs?	☐	☐	☐	☒
g.	Comply with federal, state, and local statutes and regulations related to solid waste?	☐	☐	☒	☐

Discussion of Checklist Responses

a. Exceed Wastewater Treatment Requirements of the Applicable Regional Water Quality Control Board—*Less than Significant*

PFA is chemically inert and is not expected to affect wastewater treatment requirements. Public concerns have been raised that PVC, CPVC, and ABS piping may leach contaminants during use. If plastic piping leached contaminants, these contaminants then may be

transported to the local wastewater treatment plant, where they may not be fully removed by treatment processes before being discharged. ABS and PVC piping are proposed for use in sanitary drainage systems and storm drain systems with implementation of the Proposed Project. While no evidence has been found to suggest that this impact could be significant, because of some public concerns, it will be evaluated further in the Draft EIR.

b. Require or Result in the Construction of New Water or Wastewater Treatment Facilities or Expansion of Existing Facilities—*No Impact*

The Proposed Project would not contribute to increased population or water or wastewater treatment demand. The Proposed Project may result in the replacement of existing building water and wastewater systems with plastic piping, but this would not affect the need for new water or wastewater treatment facilities or expansion of existing facilities. No impact would occur.

c. Require or Result in the Construction of New Stormwater Drainage Facilities or Expansion of Existing Facilities—*No Impact*

The Proposed Project would allow for use of plastic pipe for stormwater drainage in existing or new OSHPD 1, 2, 3 and 4 facilities, and it could result in replacement, retrofit, or installation of plastic pipe for stormwater drainage in OSHPD 1, 2, 3 and 4 facilities. However, the Proposed Project would not result in increased stormwater discharges that would create the need for new or expanded stormwater drainage facilities. No impact would occur.

d. Make Sufficient Water Supplies Available to Serve the Project from Existing Entitlements and Resources—*No Impact*

The Proposed Project would not increase water demand in any existing OSHPD facilities. The use of PFA and/or plastic pipe at new OSHPD 1, 2, 3 and 4 facilities would not increase water use relative to existing piping. No impact would occur.

e. Result in a Determination by the Wastewater Treatment Provider that Serves or May Serve the Project that It Has Inadequate Capacity to Serve the Project's Projected Demand in Addition to the Provider's Existing Commitments—*No Impact*

The Proposed Project would not cause an increase in population or an increase in wastewater generation rates. No impact would occur.

f and g. Comply with All Applicable Regulations Related to Solid Waste and Have Available Landfill Capacity to Accommodate the Project's Solid Waste Disposal Needs—*Less than Significant*

Plastics are relatively bulky and have long biodegradation times, and thus they take up landfill space (Murphy, No Date). PVC and other plastics also are relatively difficult to recycle, though recycling is possible and commonly is done (Murphy, No Date). The Proposed Project may increase the use of PVC, CPVC, and ABS pipe in OSHPD 1, 2, 3 and 4 facilities relative to metal pipe, which is more easily recycled. This potentially could result in more future disposal of plastic and greater potential impact on landfill capacity, if the plastic pipe is not recycled. However, the amount of plastic pipe used in OSHPD 1, 2, 3 and 4 facilities as a result of the

Proposed Project would be small relative to the overall volume used in the state for all types of buildings and applications, and it would be speculative to say how and where landfill capacity impacts may occur because of the Proposed Project. While this impact is therefore considered less than significant, it will be evaluated further in the Draft EIR.

XVIII. MANDATORY FINDINGS OF SIGNIFICANCE

		Potentially Significant Impact	Less than Significant with Mitigation Incorporated	Less-than-Significant Impact	No Impact
a.	Does the Project have the potential to degrade the quality of the environment, substantially reduce the habitat of a fish or wildlife species, cause a fish or wildlife population to drop below self-sustaining levels, threaten to eliminate a plant or animal community, substantially reduce the number or restrict the range of a rare or endangered plant or animal, or eliminate important examples of the major periods of California history or prehistory?	☐	☐	☒	☐
b.	Does the Project have impacts that are individually limited but cumulatively considerable? ("Cumulatively considerable" means that the incremental effects of a project are considerable when viewed in connection with the effects of past projects, the effects of other current projects, and the effects of probable future projects.)	☐	☐	☐	☒
c.	Does the Project have environmental effects that will cause substantial adverse effects on human beings, either directly or indirectly?	☐	☐	☒	☐

Discussion of Checklist Responses

a. Result in Impacts on Environmental Quality, Fish, or Wildlife, and Historic Resources—*Less than Significant*

As described in the preceding impact discussions, the Proposed Project is not anticipated to result in significant impacts on environmental quality, fish, or wildlife, or historic resources. However, due to public concerns expressed regarding certain environmental topics, this will be further evaluated in the EIR.

b. Result in Impacts that would be Individually Limited but Cumulatively Considerable—*No Impact*

A cumulative impact refers to the combined effect of "two or more individual effects which, when considered together, are considerable or which compound or increase other

environmental impacts" (State CEQA Guidelines Section 15355). Cumulative impacts reflect "the change in the environment which results from the incremental impact of the project when added to other closely related past, present, and reasonably foreseeable probable future projects. Cumulative impacts can result from individually minor but collectively significant projects taking place over a period of time" (State CEQA Guidelines Section 15355[b]).

Although the Proposed Project could result in the use of plastic pipe that could contribute to cumulative impacts (e.g., emissions of VOCs in air basins that are not in attainment for VOCs), the location and extent to which plastic pipe would be used for implementation of the Proposed Project would be speculative. Therefore, it is not possible to conclude that the Proposed Project would make a considerable contribution to any significant cumulative impact. Accordingly, there would be no impact.

c. Result in Environmental Effects that Would Cause Substantial Adverse Effects on Human Beings, either Directly or Indirectly—*Less than Significant*

The Proposed Project would not have any potential for substantial direct or indirect adverse effects on human beings. The impact would be less than significant. Nevertheless, due to some concerns raised by the public, this will be evaluated further in the EIR.

C. DETERMINATION

This Initial Study has concluded that the Proposed Project would not result in any potentially significant impacts. However, because of public concerns expressed about certain issues, OSHPD will prepare a Draft EIR to provide the most detailed and robust analysis possible, with the most opportunities for public input through the CEQA process.

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