CITY OF POMONA
ENVIRONMENTAL CHECKLIST

EXECUTIVE SUMMARY:

This Initial Study was prepared to analyze environmental impacts from City of Pomona's Treatment – Perchlorate Facility (PTP) project. In summary, the proposed project involves installing an Ion Exchange (IX) perchlorate treatment facility and ancillary improvements on the City's existing Well No. 6 site (1375 East 3rd Street) and the adjacent Anion Exchange Plant-1 (AEP-1) site (1374 East 3rd Street). Additional proposed improvements include booster pumps, bag filters, vehicular access, perimeter walls, water pipelines, drainage improvements, and landscaping.

A. **Project title:** Treatment-Perchlorate Facility (PTP)

B. **Lead agency**: City of Pomona
505 S. Garey Avenue
Pomona, California 91767

Contact person: Timotheus Hampton, PE, Senior Water Resources Engineer

Project sponsor: City of Pomona, Public Works Department

C. **Project location:** The proposed PTP facility would be located on the City of Pomona's existing Well No. 6 site, with improvements extending across Electra Street and onto the City's adjacent Anion Exchange Plant-1 (AEP-1) site. Alternatively, the proposed PTP facility and all associated improvements would be located on the AEP-1 site. Pomona's Well No. 6 and AEP-1 sites are respectively located at 1375 and 1374 East 3rd Street, on opposite sides of Electra Street, in the City of Pomona, Los Angeles County, California. The adjacent sites occupy one assessed parcel - APN 8326-016-901 that is diagonally bisected by Electra Street. In addition, construction staging for the project would occur on APN 8326-014-900, which is located 471 feet east of the project site on the south side of East 3rd Street.

Figures 1-3 depict the regional orientation, project location, and Assessor's Parcel Maps of the project site, respectively. For regional orientation, the City of Pomona is located in the eastern portion of Los Angeles County, approximately 25 miles east of downtown Los Angeles. The project site is located on the United States Geologic Survey's (USGS's) *Ontario, CA* 7.5-Minute Topographic Quadrangle, and on Map Page 641 of the Los Angeles County Thomas Guide.

D. **Project description:** In summary, the proposed project involves installing an Ion Exchange (IX) perchlorate treatment facility and ancillary improvements on the City's existing Well No. 6 site and the adjacent Anion Exchange Plant-1 (AEP-1) site. (The

locations of these sites are depicted on Figures 1-3.) The IX treatment process consists of routing water through a specialized resin (small plastic beads) to which perchlorate molecules chemically attach.

The proposed IX facility, which would be located on the Well No. 6 site, consists of six pairs of resin-containing lead-lag vessels that would have a total design treatment capacity of 16.6 million gallons per day (MGD) and would achieve a perchlorate effluent level of 1 part per billion (ppb). Additional proposed improvements on the Well No. 6 site include booster pumps adjacent to the IX facility to maintain adequate pressure in the system; a gated asphalt driveway access from Electra Street; storm drain improvements; and a site perimeter wall. The project also proposes installing bag filters and corresponding booster pumps on the AEP-1 site. To connect the proposed facility to the City's water system and the AEP-1 facility, the project includes installing four pipelines: a 30-inch perchlorate influent pipeline, a 30-inch perchlorate effluent pipeline, a 14-inch bypass pipeline, and a 4-inch backwash pipeline. Portions of the existing property fence/wall on the AEP-1 site would be demolished and reconstructed to allow for the installation of these pipelines.

Figure 4 presents the proposed Civil Site Plan and Figure 5 presents a flow diagram of the proposed treatment plant. The following subsections describe the background and need for the project and provide details regarding the construction, physical composition, and operation of the proposed facility.

Background and Project Need

The City of Pomona obtains its potable water from groundwater production wells, surface water from the San Gabriel Mountains via San Antonio Canyon, treated surface water purchased from the Metropolitan Water District of Southern California, and the Three Valleys Municipal Water District. The City's groundwater production wells are impacted by contaminants, including nitrate, perchlorate, volatile organic chemicals (VOCs), arsenic, MTBE, and chromium. The City currently operates two Anion Exchange Plants (AEP #1 and AEP #2) to reduce concentrations of nitrate and perchlorate in groundwater through treatment and blending. The portion of flow treated at the AEP plants is blended with the remaining flow (bypass stream) to achieve compliance with nitrate and perchlorate standards. The City also controls perchlorate concentrations in flows tributary to the AEP by shutting down wells with higher perchlorate concentrations. Volatile organic compounds (VOC) concentrations at the AEP are currently managed by controlling the combination of operating wells to achieve compliance with VOC standards with blending as the water treatment option.

The existing AEP plants were designed and are primarily operated to reduce nitrate concentrations. To fully meet the nitrate operational goal of 36 milligrams per liter (mg/l), approximately 40 to 50 percent of the flow is required to be treated by the AEP. Following the establishment of the California perchlorate Maximum Contaminant Level (MCL) in October 2007, the City began operating the AEP to also reduce perchlorate levels. To meet the California perchlorate MCL, the City is currently treating

approximately 65 to 70 percent of the flow conveyed to the AEP, limiting well operation to wells containing lower perchlorate concentrations.

The City is now proposing to add a third, perchlorate-specific Anion Exchange Plant (AEP-3), which would allow the existing AEP-1 and AEP-2 facilities to resume normal operation (nitrate removal), thereby allowing the City to increase production by approximately 2,400 gallons per minute.

Construction

Construction of the proposed facility involves site preparation, installation/assembly of equipment, trenching to install pipelines, perimeter wall/fence improvements, paving, and landscaping. Site preparation would be minimal, since the project sites are currently flat and used for water supply/treatment purposes. Nevertheless, site preparation would be required to create equipment pads for the proposed IX vessels, bag filters, and booster pumps.

Once the pads are created, the equipment would be installed. The proposed equipment is largely prefabricated, thus limiting the level of construction activity needed to install the facility.

The proposed equipment would be connected to the existing water system via four (4) pipelines, which would be installed below ground via trenching. The proposed pipelines would be installed in parallel and adjacent alignments extending from the southeast corner of the Well #6 site, across Electra Street, along the southern and eastern perimeter of the AEP-1 site, to the existing AEP-1 facility.

Installing the water lines would require removing and reconstructing an approximately 20-foot segment of the existing perimeter wall/fence along the Electra Street frontage of the AEP-1 site. In addition, a perimeter wall/fence would be installed surrounding the Well #6 site to match the wall/fence surrounding the AEP-1 site.

The proposed project would replace existing transformers at Well #6 site with a new 480V transformer to accommodate the proposed booster pumps, existing well #6 service, and lighting. The proposed project would also add two 200 amp circuit breakers under the existing 480V transformer at AEP Site to accommodate the proposed bypass booster pumps.

The Well #6 site would also be improved with an asphalt concrete driveway taking assess from Electra Street. Finally, landscaping would be installed to complement the existing perimeter wall/fence screening of the AEP-1 site.

Physical Composition

The proposed Ion Exchange system would be designed for a capacity of 16.6 MGD. There are several different vendors that provide IX treatment facilities. Each vendor has a unique design; however, most IX systems consist of lead-lag pairs of cylindrical shaped vessels.

Start-Up and Maintenance Activities

Once the facility is installed, an acceptance test would be conducted. This test would produce effluent, which would be potable perchlorate-treated water, so long as the system is working properly. The demonstration test effluent would either be put back into the City's water system (preferable) or disposed of via the sewer.

Maintenance of the proposed facility includes replacement of IX resin and normal/scheduled day-to-day activities. Resin replacement is anticipated to occur once per year by a private vendor. Spent resin, which is classified as a non-toxic substance, would either be regenerated or disposed of by the vendor in accordance with state and local regulations. In either case, the spent resin would be removed from the site.

Alternate Facility Layout

As an alternative to placing the proposed IX facility on the Well #6 site, the City could choose to place the proposed IX facility on the AEP site. In this alternate facility layout, the proposed IX facility and corresponding booster pumps would be oriented in a north-south arrangement along the east side of Electra Street, immediately southwest of Reservoir No. 6. See Figure 8, which depicts both the alternate facility layout and the proposed facility layout.

In the alternative facility layout, the physical composition, operation, and start-up and maintenance activities of the facility would be the same as those described above in regards to the proposed facility layout. Construction would be also largely the same; however, the alternate facility layout would not require trenching in Electra Street to install the pipelines or the corresponding demolition/reconstruction of the AEP site's wall/fence. Placing the IX facility on the existing AEP site would, however, require an upgrade of the existing 480V transformer to a new combined transformer (anticipated to a 2400V transformer) that would replace three other transformers on the AEP Site. Such an upgrade would also require new wiring and panel upgrades throughout the AEP Site.