Ashley Bell

California State Polytechnic University – Pomona

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Advisor: Nichole Horton, P. E.

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Table of Contents

Acknowledgements ......................................................................................................................... 1

Executive Summary .......................................................................................................................... 2

Project Objectives ........................................................................................................................... 4

Project Outcomes ............................................................................................................................ 5

Future Intern Advice ......................................................................................................................... 7

Appendices ......................................................................................................................................... 8

     Appendix A – System Configuration, Concentration Readings and Levels .............................. 8

     Appendix B – Pomona Water Reclamation Plant Visit ............................................................... 12

     Appendix C – Hydrant Flow Testing .......................................................................................... 18

     Appendix D – 822 W. Commercial St. ....................................................................................... 20

     Appendix E – 198 N. Hamilton Blvd. ......................................................................................... 24
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**Executive Summary**

The City of Pomona Water Resources Department (Department) aims to protect and manage the natural water resources for the people of Pomona, providing the cleanest water possible to its residents and businesses. Pomona receives just over 75% of its water from aquifers located adjacent to San Antonio Canyon and the San Gabriel Mountains, and it’s important that the Department stewards this natural resource. The Department addresses work within six divisions; Water Distribution & Wastewater, Administration & Engineering, Water Production & Treatment, Water Quality and Environmental Programs.

The Water Production and Treatment Division maximizes locally produced groundwater and collected surface water in order to minimalize the dependency on more expensive alternatives such as purchased water. The also acquire, store and deliver sufficient quantities of high quality potable/recycled water to the City’s customers (residents and businesses) in the most effective and efficient manner. The Administration & Engineering Division provides overall administration, interagency coordination with other water agencies, fiscal control, engineering design, and the implementation of the City’s Capital Improvement Plan (CIP) programs. Providing maintenance of the City of Pomona’s distribution and wastewater system is the main goal and objective of the Water Distribution & Wastewater Division. This is achieved by carrying out regularly scheduled inspections of infrastructure. At times this includes repair for a variety of system infrastructure to ensure customers have a safe, stable supply of potable water and stable wastewater collections. The Water Quality Division provides cross-connection control, chemical analysis, biological testing, and water quality reporting to regulatory agencies such as the Environmental Protection Agency (EPA), California Regional Water Quality Control Board
(RWQCB), and the Los Angeles County Department of Public Health (DPH), help to ensure the City’s water supply remains in compliance with State and Federal requirements. The Environmental Programs Division incorporates stormwater, energy efficiency, water conservation, conservation education, waste reduction, and pollution prevention to protect and conserve our natural resources.

This internship will focus on a diversity of efforts within the City’s Water Resources Department, and includes a little bit of each of the aforementioned divisions goals, objectives, and daily operations. Support for other Departments in the City will also be included. The intern will provide support to the Public Works, Community Services and GIS Departments. Greater attention will be given to the environmental cleanup project which will be discussed in greater depth within the project objectives.
**Project Objectives**

Located on 1.17 acres of land, the property located on 822 West Commercial Street in the City of Pomona is currently under environmental testing and remediation. Previously, the site had been used for aboveground and underground storage tanks by the Calsol facility. Its most recent installations occurred in September of 1998. Many of these storage tanks included the following chemicals and biohazards; acetone, xylenes, toluene, methyl ethyl ketone, isopropanol, gasoline, mineral spirits of tetrachloroethene (PCE), kerosene, and diesel fuels. Calsol is listed as a hazardous waste generator of waste oil, mixed oils, and liquids with halogenated compounds. In 1976, an accident was caused when a refuse truck attempted to beat the train, and did not. This resulted in a spill from an above ground PCE tank, which was illegally located in violation of City of Pomona Ordinance 2654 and the 1973 Uniform Fire Code. Once the City of Pomona acquired the property, remediation of the land was a necessity due to most of the spill seeping into the land and possibly the groundwater. This contamination raised alarms for the City’s Water Resources Department. After remediation, this property will be redeveloped for neighborhood use as a local plaza.

The second part of the project includes a site at 198 North Hamilton Boulevard in the City of Pomona. Formerly utilized by the Atlantic Richfield Corporation (ARCO), this property’s purpose was for fuel and oil storage and distribution. Later this property was acquired and unused by the Pomona Valley Towing, Inc., transferred to the Redevelopment Agency of Pomona, and again transferred to the City of Pomona in 2003. Environmental assessments show that there are total petroleum hydrocarbons (TPH), primarily used in diesel fuel or home heating fuel range in some soils on this property.
**Project Outcomes**

**822 West Commercial Street**

Due to this property having soil contamination impacts due to PCE and other volatile organic compounds (VOCs), remedial action consisting of soil vapor extraction (SVE) is required. This SVE system will provide treatment of soil vapor by granular activated carbon absorption (GAC). Currently this is the remediation method being used for this property.

The SVE system draws in contaminated soil vapor within the local neighborhood. This causes a vacuum effect underground and draws in soil vapor to be cleaned. Figures within Appendix A identify the effect over time for the site and surrounding neighborhood. This also cleans up the soil vapor beneath the site at 198 North Hamilton Boulevard.

**198 North Hamilton Boulevard**

Soil excavation and off-site transportation disposal following either off-site treatment or soil reuse or off-site disposal was the preferred alternative for TPH impacted soils found at low depths. The cleanup of this site is being regulated by the state of California Department of Toxic Substances Control (DTSC). The City and DTSC have identified that excavation of the soil is not necessary. Instead the site is to be turned into a parking lot. The pavement to be installed will work as an environmental vapor cap. The SVE at the Cal Sol lot is cleaning up the soil vapor under and near it.

The environmental remediation of the two project sites located on 822 West Commercial Street and 198 North Hamilton Boulevard will hopefully lead to improved water quality and improved air quality in the localized neighborhood. Post-environmental remediation water and
soil quality testing will need to be completed in order to determine the effectiveness of the project results which will occur within the coming months.

In addition to the two main projects, other skillsets that I’ve acquired over the course of the internship have involved acclimating myself to engineering software such as ArcMAP GIS, EPANet, and AutoCAD. These tools were used to study hydrology systems, update city standard specifications, and construct maps of targeted areas within the Pomona area. These skills would prove beneficial for various projects that would come up in the day to day tasks assigned to me by engineering and other staff. In addition to this, I’ve become much more familiar with and comfortable in permit plan reviews specifically for single family homes, commercial buildings, pools, patios, and antennas; verifying parcel tracts and legal descriptions; issuing certificates of compliance; and lastly learning a wealth of water/wastewater terminology in regard to valves and backflow assemblies to name a few.
**Future Intern Advice**

For the duration of this internship experience with the City of Pomona Water Resources Department, I have been exposed to a wealth of valuable information, software, and resources that will no doubt be beneficial to my career as a Civil Engineer. As I move on from my internship with the Department, I would like to encourage interns following to not be afraid to ask questions on the assignments or projects that you will be involved with. Also, do not be afraid to explore other projects that catch your interest as well. Look into and become familiar with software that could prove beneficial for the internship, and the work you’ll be involved with. Research what you don’t know or understand. In addition look to your supervisor as a resource.
APPENDIX A

System Configuration, Concentration Readings and Levels
APPENDIX B

Pomona Water Reclamation Plant Visit
APPENDIX C

Hydrant Flow Testing
APPENDIX D

822 West Commercial Street
822 W. COMMERCIAL ST. CALSOL LOT - CONCEPTUAL URBAN PLAZA

Site surface shall be covered with decorative concrete, concrete pavers, small drought tolerant plants and decorative seating. There may be a portion of public art.
APPENDIX E

198 North Hamilton Boulevard