UNIVERSITY
Community Plan Update

In support of the
Program Environmental Impact Report (PEIR)
for the University Community Plan Update (CPU)

Water Distribution and Wastewater Collection System Technical Study

June
2020

Final Draft

Prepared for:

SD Planning

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City of San Diego
Planning Department

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Table of Acronyms

AC	Asbestos Cement
ALUCP	Airport Land Use Compatibility Plan
CIP	Capital Improvements Program
CPU	Community Plan Update
LRDP	Long Range Development Plan
MCAS	Marine Corps Air Station
NCWRP	North City Water Reclamation Plant
NMI	North Metro Interceptor
PEIR	Program Environmental Impact Report
PLWWTP	Point Loma Wastewater Treatment Plant
PUD	Public Utilities Department
SDCWA	San Diego County Water Authority
SR	State Route
UCPU	University Community Plan Update
UCSD	University of California San Diego
WTP	Water Treatment Plant

1 INTRODUCTION

This report provides a high-level assessment of the water distribution and wastewater collection systems to support the Program Environmental Impact Report (PEIR) for the University Community Plan Update (UCPU). The UCPU is a comprehensive update to the current community plan, which was adopted in 1987 and last amended in 2018.

1.1 Planning Area

The University Community Planning Area (Planning Area) includes approximately 8,675 acres (13.5 square miles), and is bounded on the north by Los Peñasquitos Lagoon and Sorrento Valley, on the south by State Route (SR) 52, on the east by Marine Corps Air Station (MCAS) Miramar, and on the west by the Pacific Ocean and the community of La Jolla. A vicinity map is provided in Figure 1.

1.2 Land Use

Parks and open spaces are dominant elements throughout the community, with concentrations in the northern and central portions of the Planning Area, and account for approximately 32 percent of current land use. Public facilities and institutional land use account for approximately 29 percent of land use. Most institutional land use is clustered around the campus of the University of California, San Diego (UCSD) campus. Residential land uses—including single-family and multifamily housing—account for approximately 21 percent of land uses. Commercial land uses, which most commonly feature retail, hotels, and offices, account for only approximately 6 percent of land use. Light industrial occupies approximately 9 percent of land in the Planning Area. Approximately 3 percent of land in the Planning Area is undeveloped.

1.3 Future Development

Information regarding future development within the Planning Area can be found in the Program Environmental Impact Report.

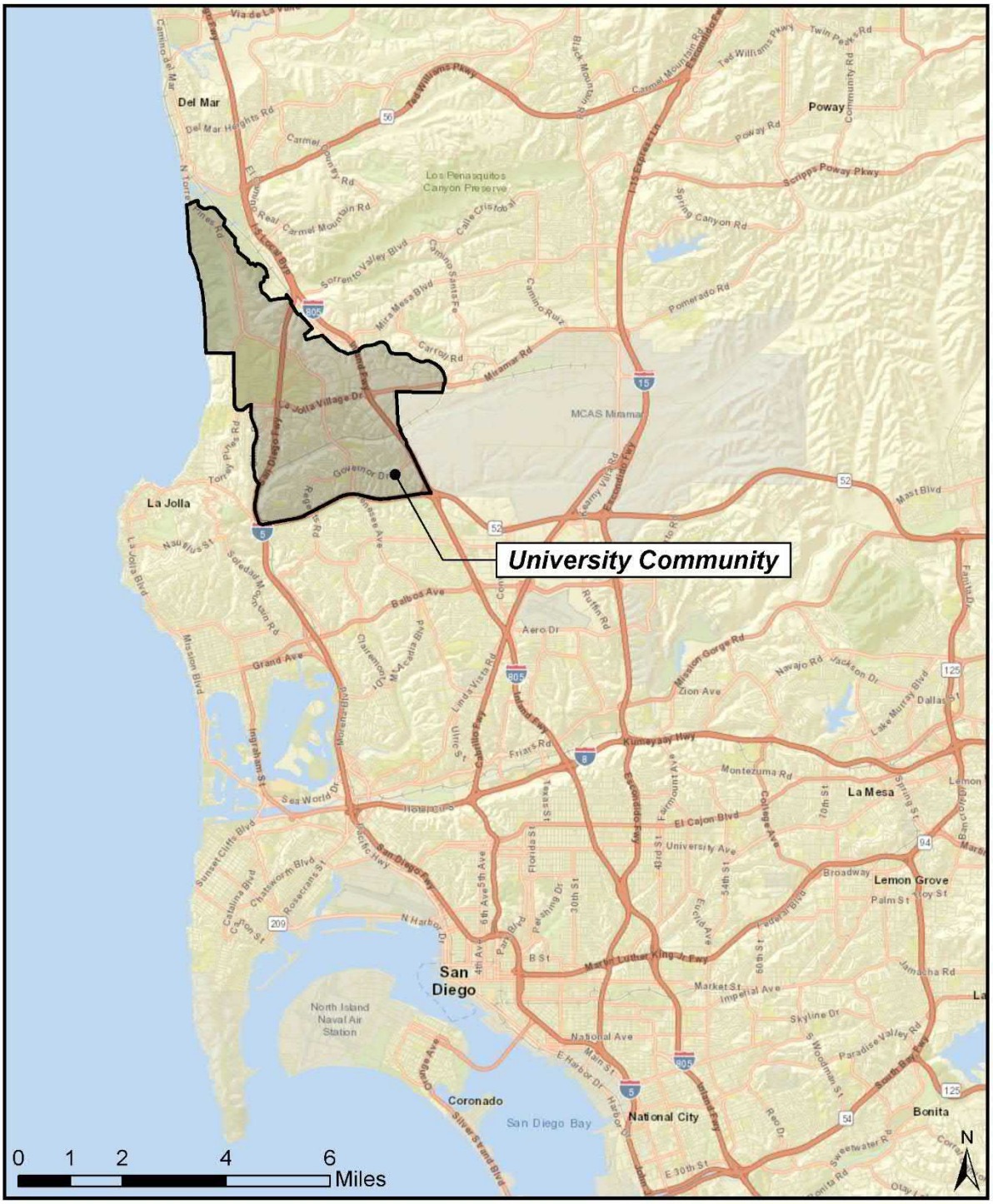

Figure 1 - Vicinity Map

2 WATER DISTRIBUTION SYSTEM

The City of San Diego's (City's) Public Utilities Department (PUD) provides water for the University Community through an existing water system. The water supply to the University Community is supplied via the City's Miramar Water Treatment Plant (WTP) which receives water from the San Diego County Water Authority (SDCWA) aqueduct system as well as through the impoundment of local runoff.

2.1 Pressure Zones

The University Community includes several water pressure zones: North City (610 psi), La Jolla Gardens (330 psi), Northwest Mesa (559 psi), and Miramar (712 psi). The main pressure zone in the north and central portions of the community is the North City zone. The pressure zone to the south is the Northwest Mesa zone. Generally, these zones supply water from the east at higher grades to the lower elevations in the south and west. Pressure zones in the University Community and surrounding areas are serviced with water from the Miramar WTP via the Soledad Valley Pipeline, Miramar Extension Pipeline, and Elliot Pipeline (see Figure 2).

2.2 Asbestos Cement Pipelines

The City previously completed an assessment of their existing water system that specifically focused on the condition of Asbestos Cement (AC) pipelines. AC pipelines in many areas of the City are aging and in need of replacement (CH2M, 2016). A large portion of the existing water distribution system located in the University Community consists of AC pipelines. As part of the proposed UCPU, the City may determine and assist in funding pipeline projects to enhance the service reliability of the water delivery system.

2.3 Future Studies

As previously described, the University Community is supplied by the Miramar WTP, which transmits large volumes of water from higher elevations in the east to lower elevations in the west. It is not likely that significant infrastructure will be required to serve the potential buildout of the Community Plan. However, as individual projects are undertaken, it is anticipated that site-specific studies will be required to address water service, or the need to upgrade aging or insufficient infrastructure to serve their projects.

2.4 Conclusion

Based on (1) current available pressures and the condition of the water distribution system serving the community plan area, and (2) the expectation that water distribution infrastructure improvements would be made as Capital Improvement Plan (CIP) projects and/or as new development occurs, impacts of the proposed UCPU on the water distribution system in the Planning Area would likely be significant and unavoidable.

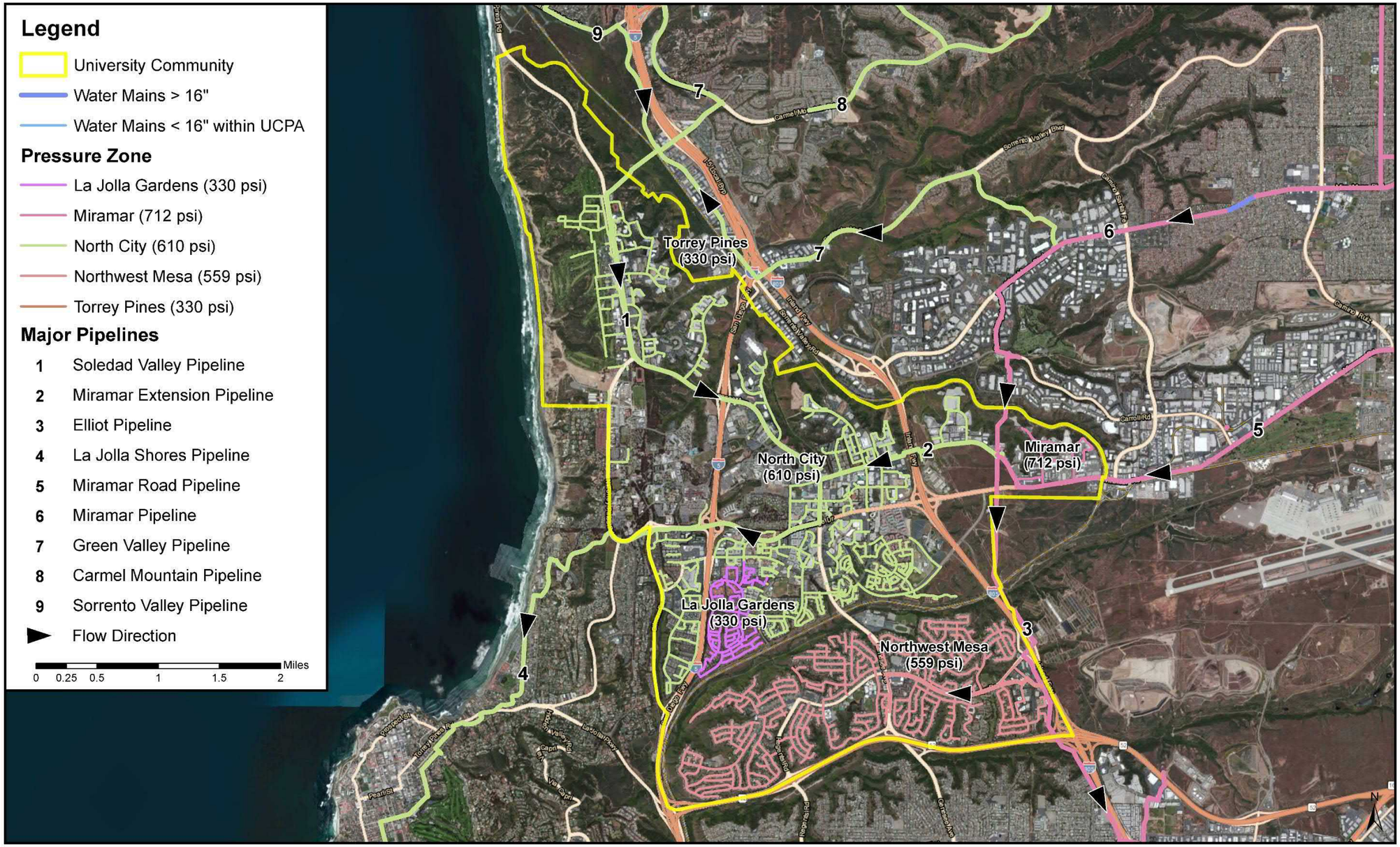

Figure 2 - Existing Water Distribution System

3 WASTEWATER COLLECTION

The City's PUD provides wastewater collection, treatment, reclamation, and disposal services to the University Community through its Metropolitan Sewerage System.

3.1 Trunk Sewers

The majority of sewer flows generated within the University Community are conveyed outside of the community boundary via the UCSD and Miramar Trunk Sewers, which are eventually conveyed via the Rose Canyon Trunk Sewer (see Figure 3). Outside of the community boundary, sewer flows continue to the North Metro Interceptor (NMI), eventually reaching the Point Loma Wastewater Treatment Plant (PLWWTP).

3.2 Reclaimed Water

In addition to these flows, a portion of the sewer flows within the University Community are also conveyed to the North City Water Reclamation Plant (NCWRP) via the Los Peñasquitos Relief Trunk Sewer and the North City Tunnel Connector via the New Rose Canyon Trunk Sewer #2B. Reclaimed water produced at the NCWRP is distributed throughout the northern part of the City via an extensive reclaimed water pipeline system. Distribution pipelines are installed within the University Community to provide reclaimed water for irrigation, landscaping, and industrial use.

3.3 Conclusion

Based on (1) the current condition of the existing sewer collection system serving the University Community and (2) the expectation that new sewer collection system infrastructure improvements would be made a requirement of new development as it occurs, impacts of the proposed UCPU on the sewer collection system would likely be significant and unavoidable.

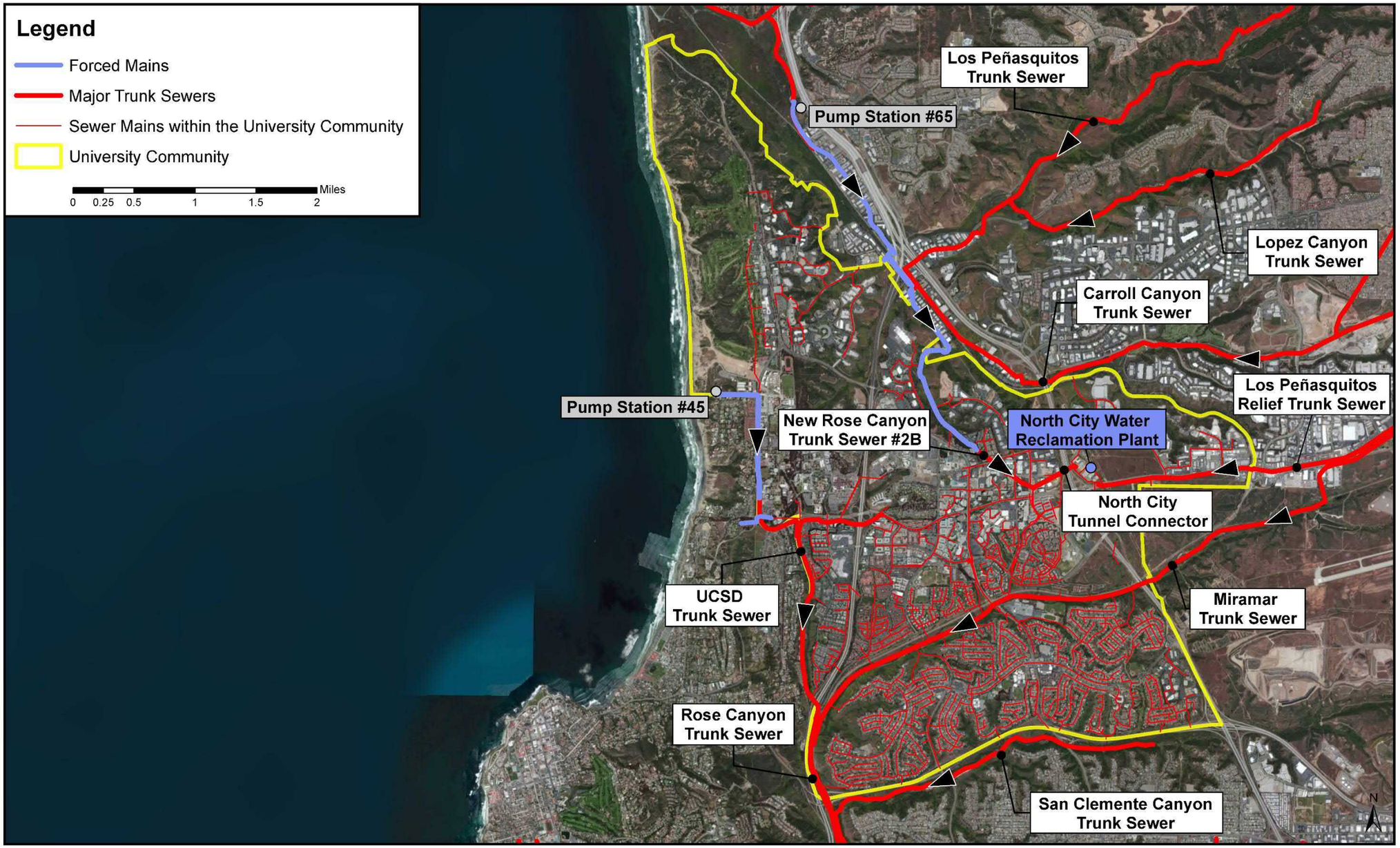

Figure 3 - Existing Sewer System

4 REFERENCES

CH2M (2016). Programmatic Water Distribution Summary in Support of Environmental Impact Report for San Ysidro Community Plan Update City of San Diego – Appendix L: Programmatic Sewer Summary.