

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

## Water Distribution and Wastewater Collection System Technical Study



May  
2022

### Final Report

*Prepared for:*



*Prepared by:*



*In association with:*

**DUDEK**

*In support of the Program Environmental Impact Report  
for the Mira Mesa Community Plan Update*

**Water Distribution and Wastewater  
Collection System Technical Study**

**Final Report**

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*Prepared for*

City of San Diego  
Planning Department

*Prepared by*

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# 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 Mira Mesa Community Plan Update (MMCPU). The MMCPU provides a detailed framework to guide development in the Mira Mesa Community Planning area and is a comprehensive update to the current community plan, which was adopted in 1992.

## 1.1 Planning Area

The Mira Mesa Community Planning area, which includes approximately 10,730 acres (16.8 square miles), is bounded on the north by Los Peñasquitos Canyon, on the south by Miramar Road and a tributary of Carroll Canyon Creek, on the east by Interstate (I-) I-15, and on the west by I-805. A vicinity map is provided in Figure 1.

## 1.2 Land Use

A significant portion of the Mira Mesa Community Planning area consists of three main land use types, including Residential (approximately 26.6%), Open Space (approximately 23.2%), and Industrial (approximately 20.8%). Commercial land uses, which most commonly feature retail, hotels, and offices, account for approximately 3.4% of the area. Public facilities and institutional land uses account for approximately 2.4% percent of the area. Parks and Recreation land use, which consists of community, neighborhood, and resource-based parks make up approximately 2% of the planning area, while cemeteries make up approximately 1.1% of the area. The remaining 6.6% of the area is comprised of the Carroll Canyon Master Plan, which will include light industrial, commercial, and residential, as well as parks and recreation, land uses.

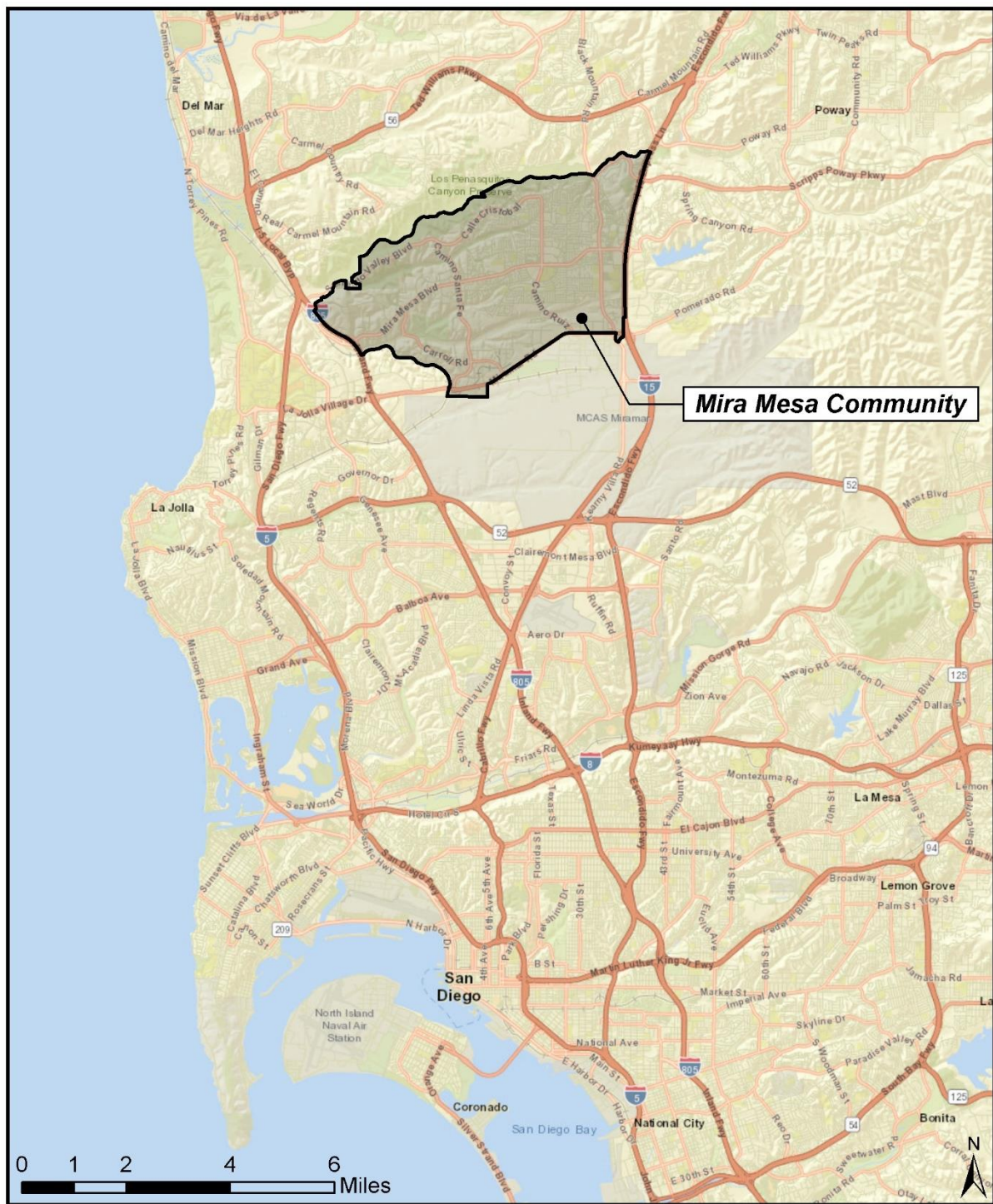
## 1.3 Future Development

In terms of future development and planning within the MMCPU area, the proposed Carroll Canyon Master Plan, 3Roots Master Plan, Stone Creek Master Plan, Marine Corps Air Station (MCAS) Miramar Master Plan, MCAS Miramar Airport Land Use Compatibility Plan (ALUCP), Los Peñasquitos Master Plan, and the San Diego Miramar College Facilities Master Plan Updates are outlined in the Mira Mesa Community Plan Update Atlas.

The 3Roots project will encompass approximately 412.9 acres and will include approximately 1,800 residential dwelling units, 38.3 acres of parks and trails, a mobility hub, and commercial uses (3Roots EIR, 2020).

The Stone Creek project proposes the development of approximately 293 acres of land and will include approximately 4,445 multi-family residential dwelling units, office, business, light industrial, and park space (Stone Creek, 2015).





**Figure 1 - Vicinity Map**



## 2 WATER DISTRIBUTION SYSTEM

The City of San Diego Public Utilities Department (PUD) provides water for the Mira Mesa Community Planning area through an existing water system. The water supply to the Mira Mesa Community Planning area 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 Mira Mesa Community Planning area includes several water pressure zones: Mercy High (750 psi), Miramar (712 psi), Mira Mesa (625 psi), North City (610 psi), Carroll Ridge (610 psi), El Camino (470 psi), and Lusk Park (470 psi). The main pressure zone in the north and central portions of the community is the Mira Mesa zone. The pressure zone to the east and south is the Miramar zone and to the west it the North City 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 Mira Mesa Community Planning area and surrounding areas are serviced with water from the Miramar WTP via the Miramar Pipeline, Rancho Bernardo Pipeline, Mercy High Pipeline, and the Miramar Road Pipeline (Figure 2).

### 2.2 Asbestos Cement Pipelines

The City previously completed an assessment of their existing water system that was 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. A large portion of the existing water distribution system located in the Mira Mesa Community Planning area consists of AC pipelines. As part of the Mira Mesa Community Plan, 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 Mira Mesa Community Planning area 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.

To this point, the Water Study that was prepared for the 3Roots project EIR identified the existing water system as well as the proposed build-out water system. To meet the allowable static pressure as outlined in the City of San Diego design criteria, the proposed development will look to create a new 485 psi pressure zone. This new zone will be created using three new pressure-reducing stations and will allow the project to meet the minimum and maximum static pressure requirements (3Roots EIR, 2020).

### 2.4 Conclusion

Future projects and developments stemming from the proposed community plan update may trigger local capacity or maintenance upgrades. Each project will be required to develop site-

specific water studies to ensure that demands are met with regards to water service and fire flow requirements. All future projects will be required to adhere to the current City of San Diego standards and design guidelines.



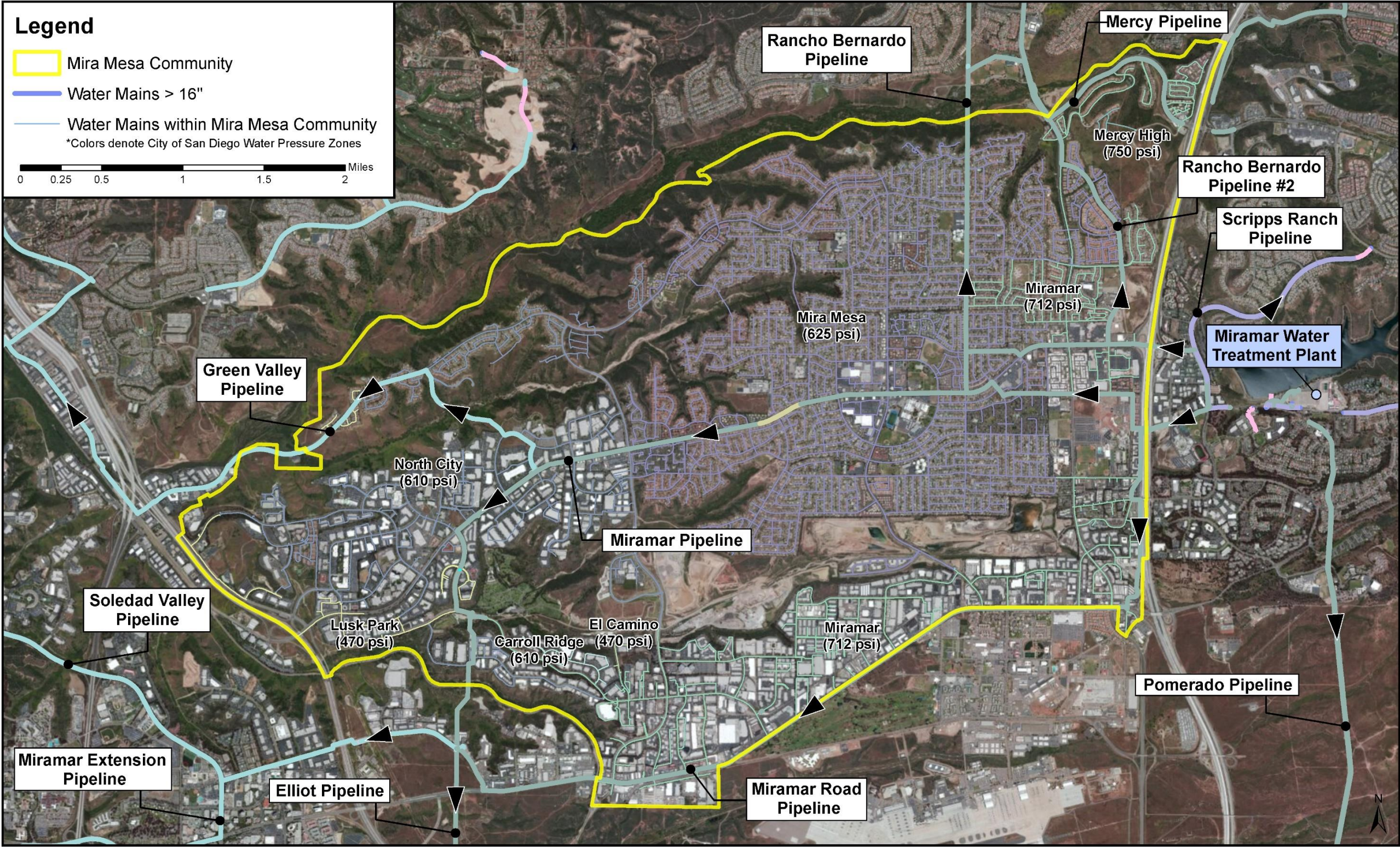


Figure 2 - Existing Water Distribution System





### 3 WASTEWATER COLLECTION

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

#### 3.1 Trunk Sewers

The majority of sewer flows generated within the Mira Mesa Community Planning area are conveyed outside of the community boundary via Miramar Trunk Sewer (Figure 3). Outside of the community boundary, sewer flows continue to the Rose Canyon Trunk Sewer and 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 Mira Mesa Community Planning area are conveyed to the North City Water Reclamation Plant (NCWRP). 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 Mira Mesa Community Planning area to provide reclaimed water for irrigation, landscaping, and industrial use.

#### 3.3 Conclusion

Future projects and development will be required to prepare site-specific sewer studies that will assess the condition of sewer infrastructure pre and post-development. It is anticipated that the sanitary sewer systems directly impacted by these future projects will be assessed for upgrades at that time. All future projects will be required to adhere to the current City of San Diego standards and design guidelines.



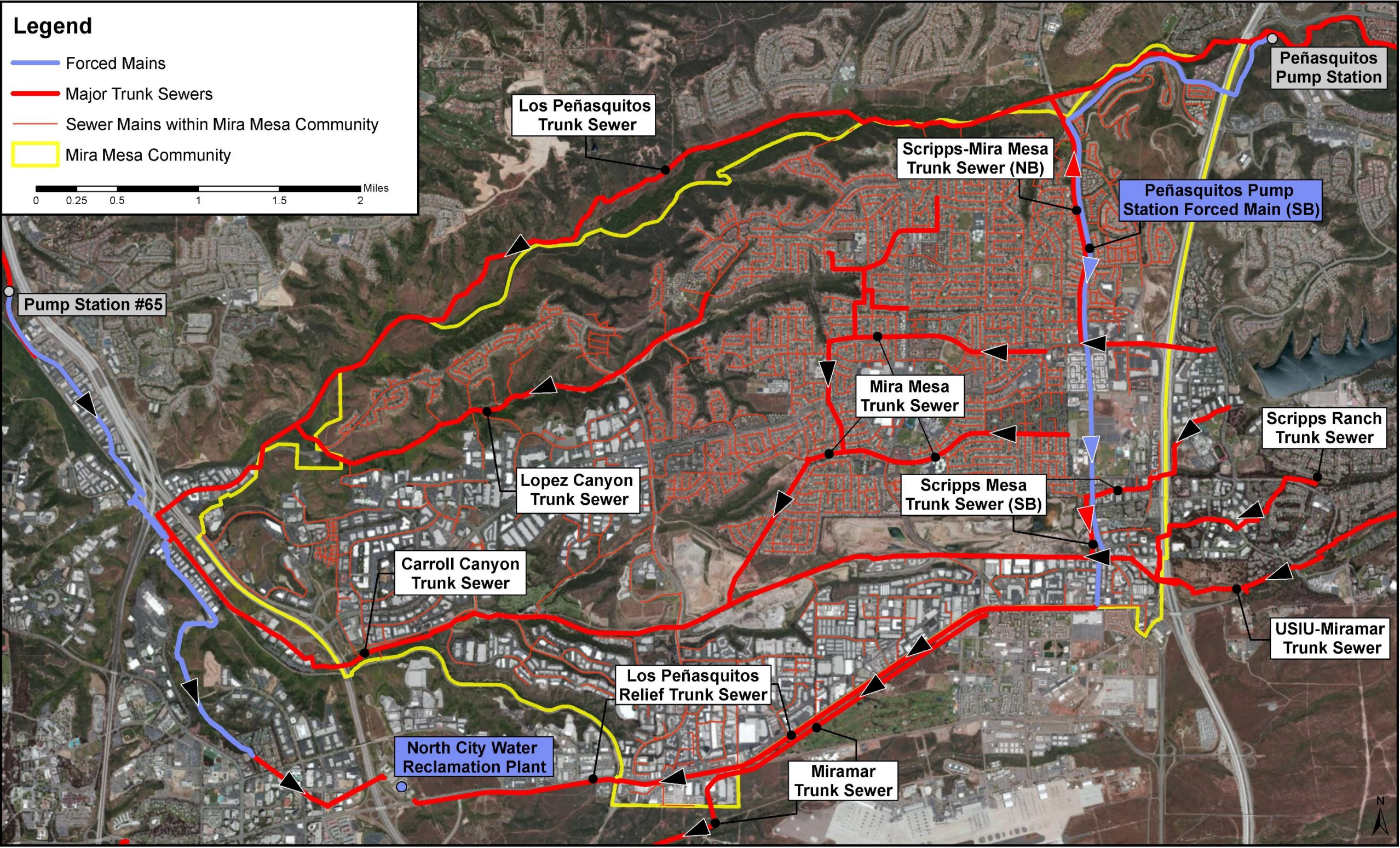


Figure 3 - Existing Sewer System





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