Culver CITY

GENERAL PLAN UPDATE

INFRASTRUCTURE

EXISTING CONDITIONS REPORT | AUGUST 2020

COVID-19 and the Culver City General Plan Update Existing Conditions Reports

As part of the General Plan Update (GPU), the City of Culver City produced a series of stand-alone technical reports describing existing conditions and future trends for topics critical to the General Plan. Findings from these reports will inform future phases of the update process, including the creation of alternative land use and transportation scenarios, policy development, and environmental analysis. These reports represent conditions in Culver City that were current as of fall 2019 and early 2020 when most of the analysis was undertaken. The existing conditions reports are meant to reflect a snapshot in time and thus will not be updated throughout the rest of the GPU process.

Before publishing the existing conditions reports in spring 2020, COVID-19 emerged as a threat to global public health crisis that changed all aspects of daily life. Because most of the analysis in these reports had been completed before the pandemic, many important issues that have emerged in recent months are not covered in these reports. Nevertheless, the GPU Team is monitoring the crisis as it develops and is designing engagement opportunities to ensure it hears all stakeholders' experiences and needs, existing before and through this crisis, through the planning process.

The GPU is our opportunity to make Culver City a place where everyone thrives. The pandemic has shown us that everything and everyone—from housing to parks, from our cultural vibrancy to our bustling economy, to our natural assets and community residents, workers, and visitors—are critical to shaping and realizing this vision into the future.

As we continue to follow the Safer at Home Orders, many issues from the existing conditions reports have been magnified. The City, with support and leadership from community members, has begun to respond in ways that align with Culver City's vision for the future. These include but are not limited to:

- **Housing** – As economic activity has declined or shifted, unemployment rates have risen dramatically and more residents than before are in the economically precarious situation of being rent-burdened. Culver City has responded by extending temporary renter protection measures and creating several opportunities for community-wide conversations about long-term solutions. To address housing affordability during this economic downturn, the City has also been working on new affordable housing measures including an inclusionary ordinance, a linkage fee, rental assistance, and an affordable accessory dwelling unit program.

- **Economic Development** – Culver City created an Economic Recovery Task Force that applies an equity lens when developing opportunities for the business community to recover, ensuring that residents and visitors have equitable access to services. As part of the economic recovery effort, the City has been issuing temporary use permits to allow business expansions on private property and the public right of way, passed a commercial eviction moratorium, has relaxed parking standards and intensification of uses.

- **Mobility** – The City has been implementing lane closures in the Downtown area and the Arts District to accommodate outdoor dining and other activities; is reviewing the deployment of Slow Streets on

residential streets with low traffic volumes and speeds to provide for more outdoor space for residents while practicing social distancing; and is planning a pilot Downtown-E Line tactical mobility lane to accommodate the movement of transit buses, bicycles, scooters, and emergency vehicles.

- **Parks and Open Space Programming** – School closures and physical distancing rules for parks and open space have limited the number of recreational activities for families. To support those with young children through summer activity cancelations, the Parks, Recreation, and Community Services Department made summer camps virtual. To support seniors, meal delivery has changed from in-person pickup to a delivery service, that protects vulnerable residents. At the same time, food service provision extended to support more community members in need, regardless of age. From March 15 to May 15, 2020, 7,458 meals were delivered to seniors, 195+ grocery based sere delivered, 9,542 community calls made, 6,000 senior Safer at Home Guides mails, 6,000 postcards sent, 106 links provided for the virtual recreation center, and 810 acres were mowed at our parks to allow for social distancing.

While these changes have been significant, at this moment it is not possible to fully predict COVID-19's impact over the next 25 years. Projections and trends described in these existing conditions reports may differ from future conditions if there are long-lasting fundamental shifts in the economy and society. Thus, the COVID-19 pandemic has sparked questions for the Culver City GPU, including:

- What innovative ways are there to maintain or stimulate the local economy when implementing new, possibly permanent restrictions on how business needs to be conducted?
- What are some creative solutions to deal with the potential impacts of changing demand for commercial space?
- What lessons can be learned from the safer at home orders on how the City addresses mobility?
- How should we design shared spaces, from affordable multifamily housing projects to the public realms, to allow for physical distancing?
- How does the City build resilient systems and protocols to ensure it can continue to provide essential services despite disruptions?
- How can the General Plan guide equitable recovery and resiliency efforts during and after crises?
- How can the General Plan define actionable steps to implement policies and programs while allowing for flexibility in an era of uncertainty and rapid change?

To answer these questions, we need everyone engaged in sharing their different perspectives and unique stories so that, together, we can plan and build a vibrant Culver City for all.

Contact City staff at Advance.Planning@culvercity.org or by calling tel:1-310-253-5740 if you have any questions. Visit the GPU's Picture Culver City project website for more information about the project, where you can find the existing conditions reports, take surveys related to existing conditions, watch summary videos of existing conditions, send the GPU Team a message, sign up for updates, learn about upcoming events, and much more.

The City of Culver City continues to cooperate with the Los Angeles County Department of Public Health and the Centers for Disease Control and Prevention (CDC) to respond to the spread of the novel coronavirus (COVID-19) in Los Angeles County.

For updates on the City's response to COVID-19, please visit the City's Coronavirus webpage.

Para leer esta información en español, por favor visite la página web de Coronavirus de la ciudad.

July 2020

INTRODUCTION AND SETTING

Culver City is supported by a network of utilities that protect and provide for the community. The physical and economic growth of the city depends on this network. It is also vital that resources that conform with local regulations and residents' visions are available to improve and maintain utilities.

The city's utility infrastructure varies in age and maintaining it improves its lifespan. The City of Culver City (City) owns and operates its sanitary sewer main, and separate and independent entities provide other utility services. Utility service providers for Culver City include:

- **Water:** Golden State Water Company (GSWC)[1] and the City of Los Angeles Department of Water and Power (LADWP)[2]
- **Storm Water:** Los Angeles County Public Works Department (LACDWP)
- **Electricity:** Southern California Edison (SCE) and the Los Angeles Department of Water and Power (LADWP).[3] The Clean Power Alliance purchases electricity from various producers and SCE distributes that electricity to Culver City. LADWP produces, purchases, and delivers electricity to a portion of Culver City.
- **Natural Gas:** SoCalGas (SCG)
- **Recycled Water:** Culver City does not currently have a recycled water network

KEY FINDINGS

- **Water.** Independently-operated water distribution networks currently serve Culver City adequately. Supply is mainly maintained through imported water. As demand increases, available supply will be expected to increase, requiring additional water to be imported.[4] Based on available information, the water purveyors do not anticipate a reduced water supply. Furthermore, efforts at the state and local level support a continued decrease in water usage for the city. State mandates and water conservation measures and strategies in the City have been reducing water use and efforts to sustainably manage resources through Low Impact Development (LID), reduction and reuse systems, and conservation efforts. With an increase in population and development, new or adapted water supply strategies, including recycled water, water treatment, groundwater, and desalination may become necessary. This combination of imported, conservation, and reuse water sources will help to diversify and improve the reliability of water purveyors that supply the City's water.
- **Sewage and Wastewater.** City-operated sewage and wastewater conveyance systems are currently adequately served by the Hyperion WWTP, which operates under the potential treatment capacity of the facility. City-owned pumping stations slated to be abandoned in

[1] GSWC is an investor-owned utility regulated by the CPUC.

[2] LADWP is a publicly-owned utility regulated by the City of Los Angeles City Council.

[3] SCE is an investor-owned utility regulated by the California Public Utilities Commission (CPUC).

[4] City of Culver City, Water Supply Assessment Culver Studios Innovation Plan, 2017. Prepared by GSWC. Retrieved from: https://www.culvercity.org/Home/ShowDocument?id=9793.

2020 include the Mesmer and Overland stations. Constructing a new station on Bankfield Avenue and redirecting these flows will reduce energy and maintenance costs, reduce the potential for sanitary sewer overflows, and provide new opportunities to repurpose the now unused facilities. If implemented, adding more water conservation measures, such as greywater[5] and blackwater[6] systems, could potentially decrease flows diverted out of the city.

- **Stormwater.** Several governing boards and legal tools ensure that Culver City effectively and sustainably manages its stormwater. The City is responsible for complying with the Los Angeles Regional Water Quality Control Board's (LARWQCB) Municipal Separate Storm Sewer System (MS4) permit. This permit requires the City to implement stormwater best management practices (BMPs) that improve water quality in the Ballona Creek (BC) Watershed. Investments such as those made possible by approving Culver City's Clean Water measure (Measure CW)[7] have immense potential to enhance water quality and expand groundwater recharge within the city. The Ballona Creek and Marina del Rey Watershed Management Groups (BC-WMG and MR-WMG respectively) play large roles in supporting effective stormwater conveyance and water sustainability in and around Culver City. Although LA County manages the stormwater conveyance system in the city, the City is involved in stormwater management overall.

  Investing in innovative local and regional water management projects, such as those related to Ballona Creek, can enhance the City's sustainable stormwater management strategies. All new projects proposed by private development must adhere to the City's Storm Water Planning Program and LA County LID standards. Applying BMPs to private development, green streets, and regional projects will improve water quality and reduce the strain on aging and at capacity traditional, or gray, infrastructure.[8]

- **Electric.** SCE and LADWP maintain the renewable energy distribution networks that supply most of Culver City's electricity. The network can be updated through technological and resiliency advancements or routed underground to support specific development goals. Increasing localized renewable energy, such as building-scale solar power with battery storage, would further enhance the resiliency of the City's electric network. Enhancing the City's electric network also supports its electric vehicle infrastructure. A small number of electric vehicle charging stations are currently available in the City. Shifting the City's energy supply to a user-supported, 100% renewable energy supply and using other localized

[5] Wastewater from businesses or residents that excludes fecal contamination (e.g. sinks, showers, dishwashers, washing machines).

[6] Wastewater from toilets.

[7] City of Culver City, Measure CW, 2020. Retrieved from: https://www.culvercity.org/city-hall/information/election-information/ballot-measure-information/clean-culver-city.

[8] Gray infrastructure is conventional piped drainage and water treatment systems designed to move urban stormwater away from the built environment. It is often contrasted with green infrastructure, which reduces and treats stormwater at its source and delivers social, environmental, and economic benefits.

renewably-distributed energy resources would also support increasing the number of charging stations and their use.

- **Natural Gas.** While the City currently uses compressed natural gas (CNG) for most of its municipal vehicles, it plans to replace them with electric vehicles to reduce GHG emissions. Reducing the carbon and electric impacts of buildings citywide and shifting reliance away from privately-owned vehicles will further reduce GHG emissions and the effects of climate change.
- **Data.** The City currently supports a backbone fiber-optic network to five main city tracts. However, this network provides limited coverage of the city. Expanding this network's laterals throughout the city will enhance the network's operation and minimize costs. The fiber network is critical to fostering economic growth in the city and enhancing public safety.

INFRASTRUCTURE CAPACITY AND IMPROVEMENTS

POTABLE WATER SYSTEMS

WATER SERVICE

LADWP and GSWC provide the City's water service and own, operate, and maintain their own water infrastructure. Although operated independently, the systems are interconnected and allow the agencies to share water between them if necessary.

Resilient municipal water systems use water from various sources and do not solely rely on imported water. Regionally, LADWP's supply is composed of both imported and local water sources, including the Los Angeles Aqueduct, local groundwater, and the Metropolitan Water District of Southern California (Metropolitan). GSWC purchases its water from the West Basin Municipal Water District (WBMWD), a large water purveyor that imports its water supply from Metropolitan.

The Metropolitan water supply comes from the Colorado River Aqueduct and the State Water Project (California Aqueduct). GSWC plans to continue importing the water it supplies to Culver City though it also owns one groundwater well in the Culver City system that is on standby status for emergency use. The Culver City system has not used groundwater as a supply source since 1998. Initiatives such as the One Water LA 2040 plan are in place to reduce dependency on imported water and use alternate sources, such as recycled water systems, groundwater recharge, and upgraded treatment processes.

Once LADWP and GSWC acquire its water, the water goes through a treatment and distribution process to connect to Culver City residents and businesses. GSWC issues annual water quality consumer confidence reports to provide information on local water quality.[9] Metropolitan and

[9] GSWC, Culver City Water System Consumer Confidence Report on Water Quality for 2019, 2020. Retrieved from: https://www.gswater.com/sites/main/files/file-attachments/water-quality-2019-culver-city.pdf?1591302565.

WBMWD treat the water after importing it and before distributing it to the Culver City system through three Metropolitan West Basin (WB) connections—WB-23, WB-24, and WB-34. Each of those connections have maximum capacities of 9,000 gallons per minute (gpm), 9,000 gpm, and 4,500 gpm, respectively. Four reservoirs that have a total capacity of 2.7 million gallons feed the system.

WATER DISTRIBUTION NETWORK

Figure 1 shows where both the GSWC and LADWP main water lines (diameter 12" and greater) are located and that Mclaughlin Avenue, west of the 405 Freeway, demarcates the utility services, with LADWP serving the west side and GSWC serving most of the city to the east. As the main provider to the City, the GSWC system currently serves more than 9,700 connections, distributing approximately 5,000 acre-feet (AF) of potable water annually.[10] Water distribution services in the city encompass potable pipeline networks, storage, and fire water access. As shown in Figure 2, which depicts the fire hydrants and water storage tanks in Culver City, the network provides fire protection and includes three water storage tanks on the hills of the Baldwin Hills Scenic Overlook area.

CAPACITY

Operating and maintaining independently owned systems and upgrading the system ensures the infrastructure can support additional demand. Neither water agency serving the city has reported any operating capacity issues.

DEMAND

To operate effectively, Culver City's water infrastructure must meet current and projected future demand. Evaluating historical and current water usage helps inform future projections. Southern California Association of Governments (SCAG) publishes population, employment, and housing data and a methodology to extrapolate growth projections from historical data sets. GSWC follows SCAG's forecasting processes to estimate future water demands in Culver City.

The SCAG-based water use projections are based on the population and housing growth rates. Household projections are used to determine growth in single- and multi-family service connections, while employment growth projections are used to determine growth in commercial, industrial, institutional, landscape and other service connections. Based on GSWC historical water use data, most water demand in Culver City is attributed to residential activity followed by commercial, industrial, public/institutional, and landscaping.[11]

Although Culver City is implementing measures to decrease its water use and has been seeing a trend in decreased water use, population and housing growth may counter this trend. GSWC provides most of Culver City's water, and saw that use declined by 19% between 2008 to 2015, as shown in Figure 3. This decline may be the result of the implementation of tiered water rates, plumbing code updates, economic downturn beginning in 2008, and statewide drought beginning in 2012.

[10] GSWC, 2015 UWMP – Culver City, Final Report, 2016.

[11] Ibid 4.

Even with this recent decline, SCAG's projections show that population and housing supply will increase at a greater rate, countering trends in declining water use. From 2015 to 2040, SCAG projects a 27% increase in water demand requiring more imported water supplies, as shown in Figure 4 and Table 1. GSWC will need to increase the supply of water it imports from WBMWD to meet demand.[12] While GSWC will import the majority of the city's water supply, LADWP will use diverse water supply sources to serve its areas in the city.

Recent state and local legislation will hold Culver City accountable for reducing its water use. Senate Bill X7-7, The Water Conservation Act of 2009, requires a 20% reduction in urban per capita water use across the state by December 31, 2020. Retail water suppliers were required to report existing baseline water usage and set targets for reduction. Also, LADWP must meet the conservation goals established in response to the multi-year California drought as outlined in the state's Executive Directive No. 5 (ED5) and Sustainable City Plan (pLAn) water conservation measures.

These measures require reducing per capita potable use by 22.5% by 2025 and 25% by 2035, reducing imported water purchases from MWD by 50% by 2025, and expanding all local sources of water so that they account for at least 50% of the total supply by 2035. Culver City's Water Conservation Plan encourages residents to conserve water and imposes mandatory water use restrictions on LADWP and GSWC's business and residential customers.[13]

Culver City seems on track for meeting its reduced water use goals. Between 1997 and 2006, water use in the City was 166 gallons per capita per day (gpcd), which is now used as Culver City's base daily per capita use number. Although the City's 2020 water use target is 142 gpcd, an approximately 14% reduction from the City's base daily per capita use, the system's water use in 2015 was 121 gpcd, below the 2020 goal.

Other cities within the LADWP service area also seem on track for meeting their water reduction goals. Between 1996 and 2005, those cities had a base per capita daily water use of 154 gpcd. Their 2020 water use target per capita under the same conservation model is 142 gpcd, which is an approximately 8% reduction from their base daily per capita use. Overall, LADWP service area water use in 2015 was 114 gpcd, below their 2020 goal of 142 gpcd.[14]

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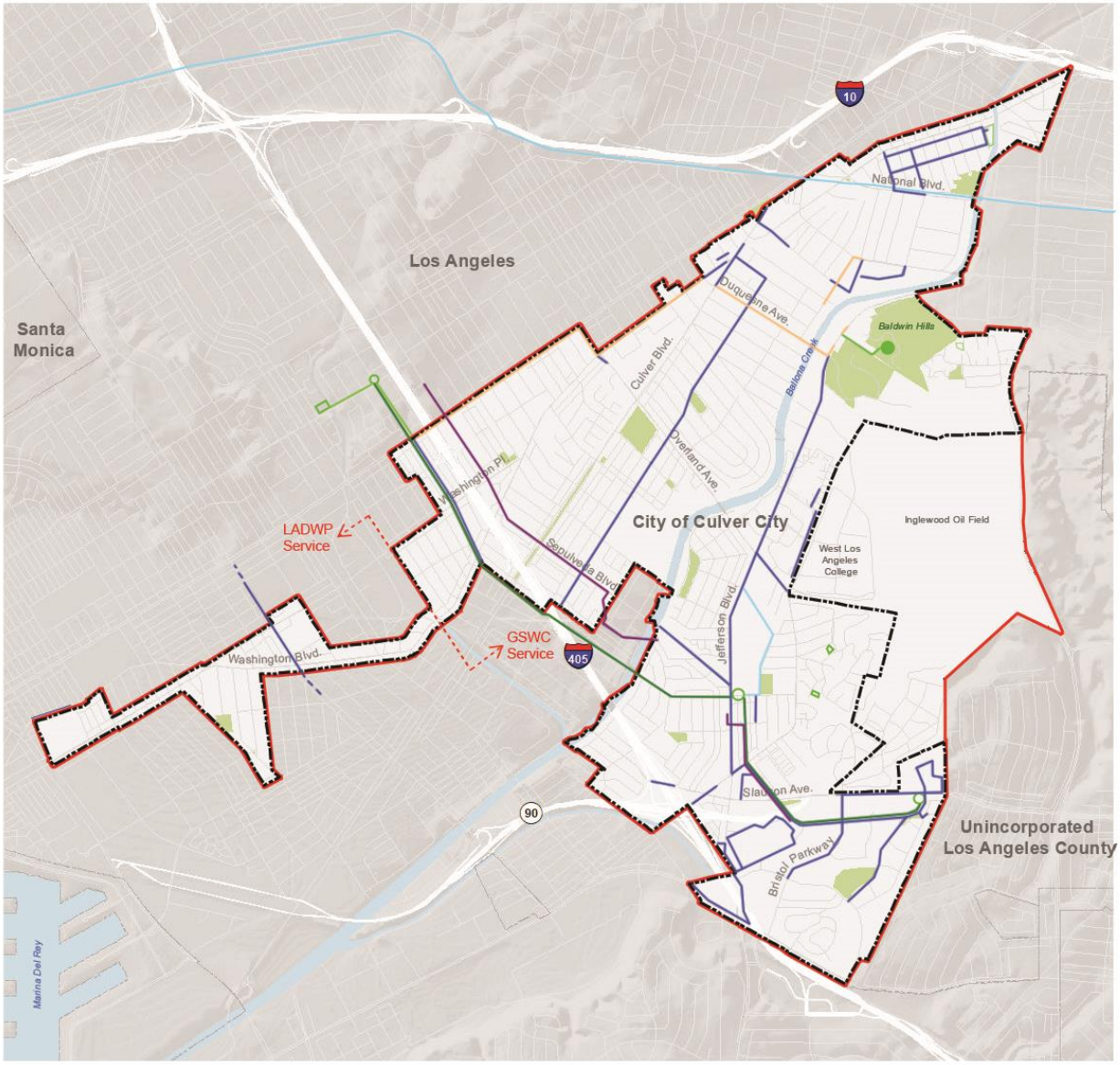
[12] Ibid 4.

[13] City of Culver City, Water Conservation Plan for Fiscal Year 2015/2016, 2015. Retrieved from: https://www.culvercity.org/home/showdocument?id=1952.

[14] LADWP, Urban Water Management Plan, 2015. Retrieved from: https://www.ladwp.com/cs/idcplg?IdcService=GET_FILE&dDocName=QOELLADWP005416&RevisionSelectionMethod=LatestReleased.

Figure 1: Potable Water Pipelines Over 12" in Diameter in Culver City



Sources: City of Culver City, 2019; County of Los Angeles, 2019.

0 0.225 0.45 0.9 Mile

Jurisdictional Boundaries

- City of Culver City City Limits
- City of Culver City Sphere of Influence
- Jurisdictional Boundaries

Transportation Features

- Expo Line
- Metro Station

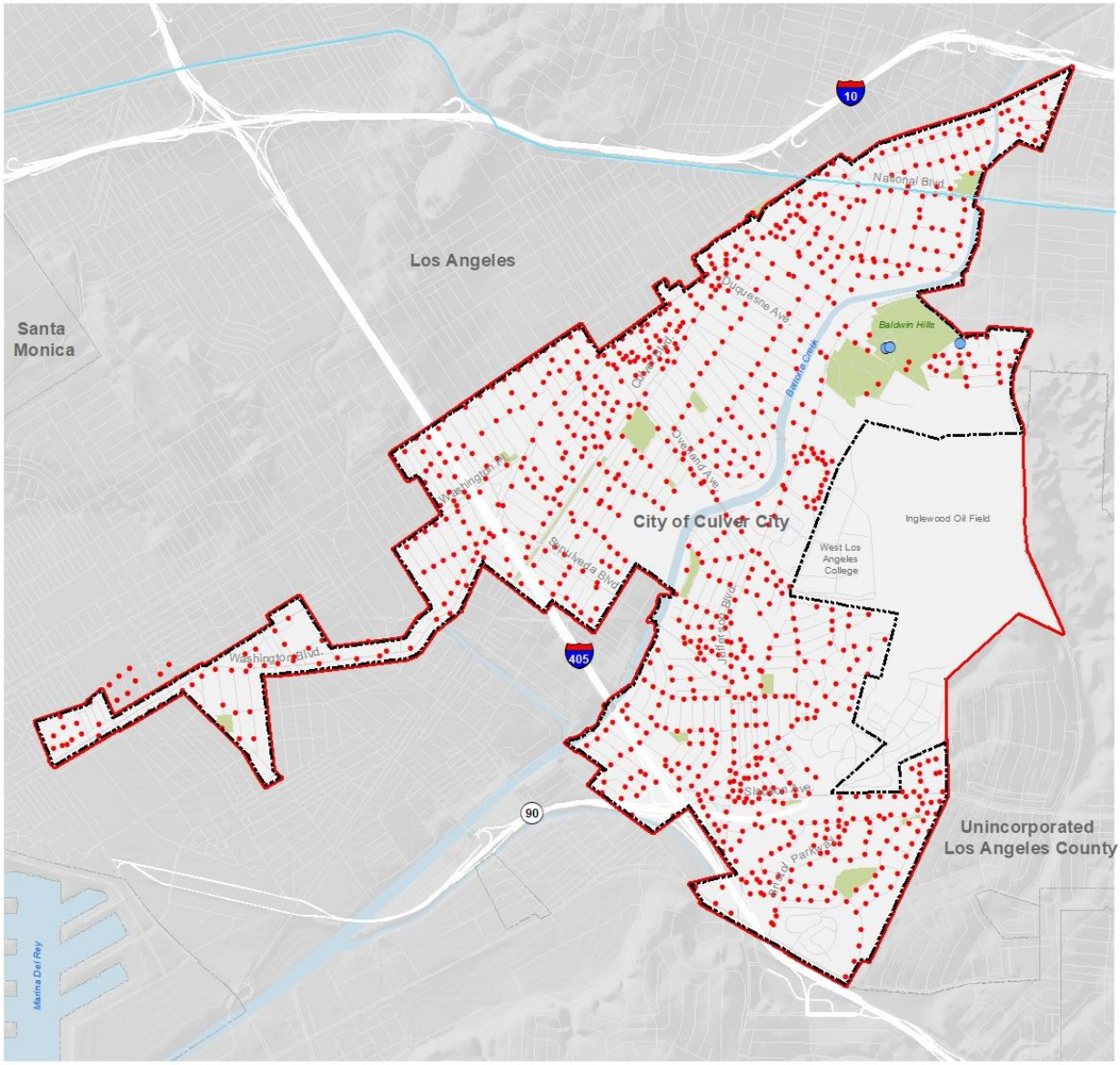
Other Features

- Water
- Parks and Open Spaces

Water Pipeline (12" and Greater)

- 48" MWD Culver City Feeder
- 96" MWD Sepulveda Feeder
- 12" Potable Water
- 14" Potable Water
- 16" Potable Water
- 17" Potable Water
- Reservoir
- MWD Connection
- Plant / Booster Station

Figure 2: Fire Hydrants and Water Tanks within Culver City



Sources: City of Culver City, 2019; County of Los Angeles, 2019.

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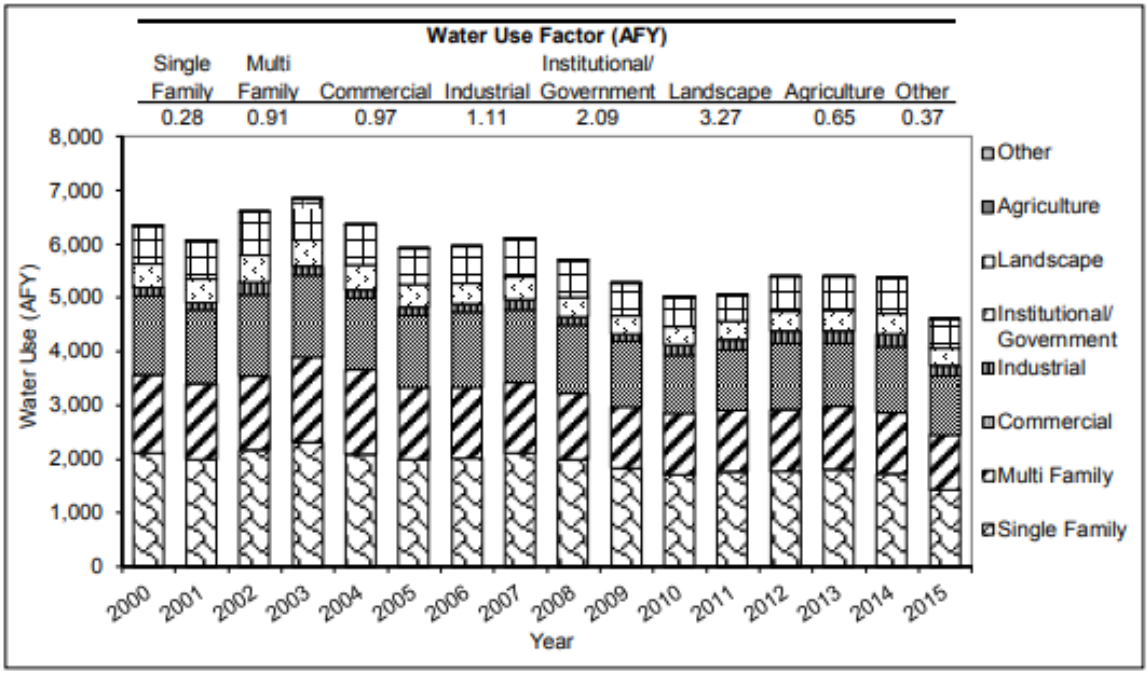
- Water Tanks

Figure 3: GSWC Historical Water Use in Culver City, 2000-2015[15]



Note: Water Use Factor is calculated using 2008-2013 water use.

Figure 4: Historical and Projected Water Connections in Culver City[16]

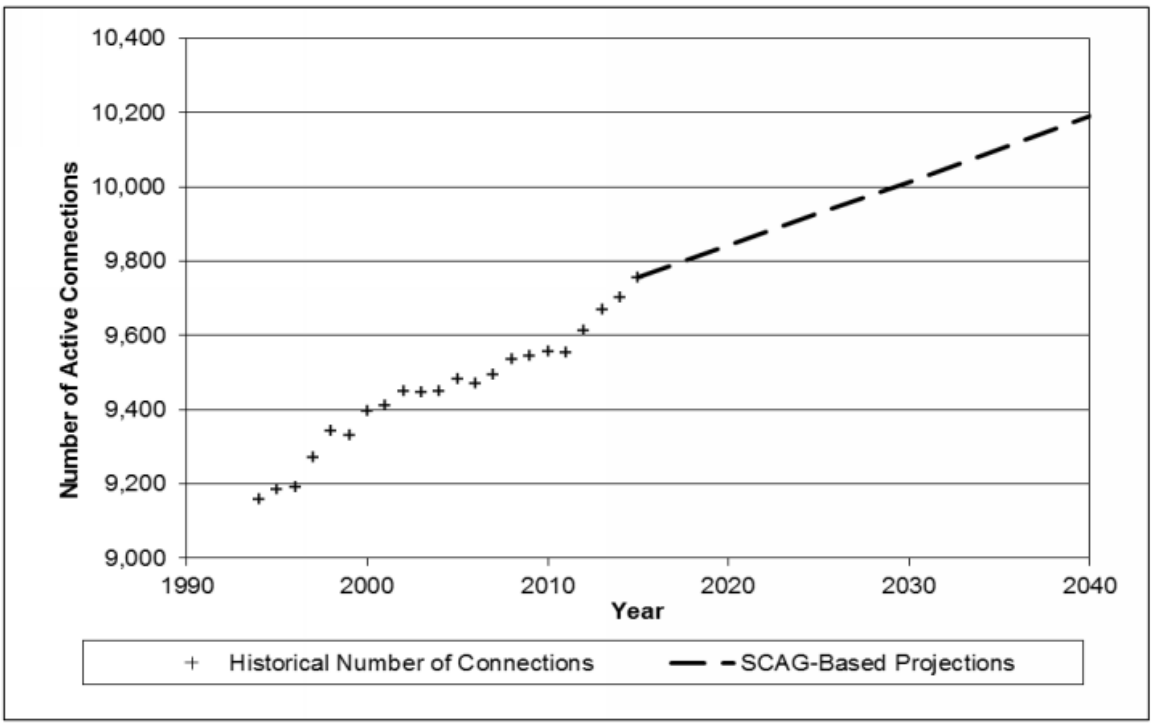


Table 1: Projected Demands for Potable Water[17]

	Projected Water Use (Volume, in Acre-Feet per Year (AFY)) *Report to the Extent that Records are Available*				
Use Type	**2020**	**2025**	**2030**	**2035**	**2040-opt**
Single Family	1,831	1,842	1,853	1,864	1,875
Multi-Family	1,227	1,234	1,242	1,249	1,257
Commercial	1,288	1,311	1,333	1,357	1,380
Industrial	187	190	194	197	201
Institutional/Governmental	372	380	388	397	405
Landscape	713	726	739	753	766
Other	5	5	5	5	5
Losses	349	353	357	361	365
Agricultural irrigation	1	2	3	3	4
Total	**5,973**	**6,043**	**6,114**	**6,186**	**6,258**

Source: Ibid 4

IMPROVEMENTS

For future projects, GSWC's primary goal is to diversify its supply sources and use less imported water to improve the reliability of the systems it serves, including Culver City's. GSWC has historical water rights within the Santa Monica Basin and in the unadjudicated portion of the Central Basin, two areas within the Los Angeles Area groundwater basin as delineated by geologic and hydrologic patterns, and is assessing methods to localize production, such as through groundwater development projects.

One approach to increase groundwater development projects is to develop a Groundwater Sustainability Plan (GSP). The Sustainable Groundwater Management Act of 2014 (SGMA) identified the unadjudicated portion of the Central Basin as a "high" priority basin for groundwater management purposes. Groundwater basins are prioritized based on the population that lives there, rate of projected population growth, number of wells that draw from the basin, and how much its population relies on groundwater as its primary source. Therefore, GSWC and other local agencies were required to produce a GSP by 2020.[18] However, in January 2019, the Central Basin was reclassified by the State Department of Water Resources to a very low priority basin. Accordingly, the requirement to prepare a GSP, or an alternate plan, no longer applies to the unadjudicated

[15] Ibid 4.

[16] Ibid 10.

[17] Water use projected based on 2015 connection data, SCAG housing and employment growth rates, and 2008-2013 average water use factors. Losses are projected based on a historical average of 6% loss.

[18] Ibid 4.

portion of the Central Basin. The remainder of the Central Basin is already an adjudicated basin and not required to develop a GSP.[19,20]

In addition to the Central Subbasin, a significant portion of the city overlays the Santa Monica Basin, a medium priority basin. The City of Culver City is a member agency of the Santa Monica Basin Groundwater Sustainability Agency (SMBGSA) and is working with the Cities of Santa Monica and Beverly Hills, LADWP, and Los Angeles County to prepare a GSP for the Santa Monica Basin by January 2022. While the City does not actively pump groundwater, the GSA will prepare a GSP for sustainable groundwater use.

GSWC is working to make imported water more reliable and cost-effective. For example, GSWC has developed conjunctive use storage programs and is supporting the Cadiz Valley Water Conservation, Recovery, and Storage Project (Cadiz Project). The Cadiz Project will capture and retain thousands of acre-feet of native groundwater currently lost to evaporation through an aquifer system in San Bernardino County. In 2009, GSWC signed a letter of intent to purchase up to 5,000 acre-feet per year (afy) of the total 50,000 afy the project is slated to produce annually for 50 years. Making necessary improvements to the water distribution infrastructure ensures the network remains effective. In 2018, GSWC replaced 0.3 miles of pipe, water services, fire hydrants, and a storm drain on Jefferson Boulevard in the southwestern part of the city. WBMWD and Metropolitan have been pursuing seawater desalination projects to increase service capacity for their wholesale retail customers, including Culver City.[21]

LADWP has also been making improvements to the water distribution infrastructure within its service area. Currently, LADWP is constructing the Sepulveda Venice Water Pipeline Connection, a new water trunk line that connects the LADWP distribution system to the Metropolitan water supply to increase the reliability of LADWP's water distribution system to the West Los Angeles area. The project will construct a new regulator station on Bentley Avenue south of Venice Boulevard to control and regulate water pressure from the Metropolitan system, and a pressure relief station on Bentley Avenue north of Venice Boulevard. The project is expected to be completed in summer 2020.

SEWAGE AND WASTEWATER

WASTEWATER TREATMENT

Sewage in Culver City is transported through a series of gravity mains and lift stations that the City owns and maintains. The wastewater is conveyed through trunk sewers to the City of Los Angeles Bureau of Sanitation's Hyperion Wastewater Treatment Plant (WWTP) facility located in Playa Del Rey. The WWTP is permitted to provide secondary treatment for up to 450 million gallons per day (mgd) average dry weather flow (ADWF), and the current ADWF is 279 mgd. Based on service loads at the WWTP, the average per capita wastewater generation factor in 2014 was 93 gallons per day

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[19] City of Beverly Hills, Public Works Department. 2019. Memorandum on Santa Monica Basin Groundwater Sustainability Agency MOU Amendment 1. Retrieved from: https://beverlyhills.granicus.com/MetaViewer.php?view_id=58&clip_id=6688&meta_id=403586.

[20] SGMA. 2020. Basin Prioritization Dashboard. Accessed July 24, 2020. Retrieved from: https://gis.water.ca.gov/app/bp-dashboard/final/.

[21] Ibid 4.

(gpd).[22] Treatment consists of screening, grit removal, and primary sedimentation with coagulation and flocculation (a process that separates suspended solids from the water) followed by biological treatment. All the wastewater collected is either recycled or discharged into the Pacific Ocean through a five-mile submerged stormwater or discharge pipe in Santa Monica Bay.[23]

COLLECTION NETWORK

Sewage in Culver City generally moves through the gravity mains and lift stations system from northwest to south. The gravity mains are made of various materials including primarily polyvinyl chloride (PVC) and in some cases vitrified clay pipe (VCP). As shown in Figure 5, a few gravity mains near Mar Vista and Palms belong to the City of Los Angeles but discharge into the northern side of Culver City.[24] Two of the seven pump stations that the City operates, Mesmer and Overland, will be abandoned in 2020.[25] A significant portion of the flows from these pump stations is routed to interceptor sewers ranging in size from 96" to 150" in diameter that the City of Los Angeles owns, including one on La Cienega that is over 80 years old and was recently sliplined[26] to reinforce deterioration.[27] The decision to abandon the pump stations was based on a 2008 feasibility assessment that showed the potential to divert the flows to a new station the City will construct along Bankfield Avenue. In 2019, the City awarded a contract to construct diversion sewer pipes for the new station.[28] Consolidating the flows into a single pump station would reduce energy and maintenance costs, reduce the potential of sewer overflows, free former pump stations for other uses such as stormwater diversion, and reduce staff maintenance and monitoring costs.

RECYCLED WATER SYSTEMS

Culver City does not have access to recycled water. WBMWD owns and operates a recycled water distribution network; however, service does not extend to the city and there are no plans to connect within the next 20 years.[29]

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[22] Ibid 4.

[23] Ibid 4.

[24] City of Culver City, Sewer Infrastructure Management System (SIMS). Retrieved from: https://gisproxy.culvercity.org/Html5Viewer/index.html?viewer=Sims.sims.

[25] City of Culver City, Notice Inviting Sealed Bids for Bid No. #1909, 2019. Retrieved from: https://www.bidnet.com/bneattachments?/550952716.pdf.

[26] Sliplining a pipe is completed by installing a smaller, "carrier pipe" into a larger "host pipe", grouting the annular space between the two pipes, the voids, and sealing the ends.

[27] City of Los Angeles, La Cienega Interceptor Sewer Rehabilitation Project/Blackwelder to Olympic, 2018.

[28] City of Culver City, Notice Inviting Sealed Bids for Bid No. #1839, 2018. Retrieved from: https://www.bidnet.com/bneattachments?/502747630.pdf.

[29] Ibid 4.

STORMWATER

HYDROLOGY

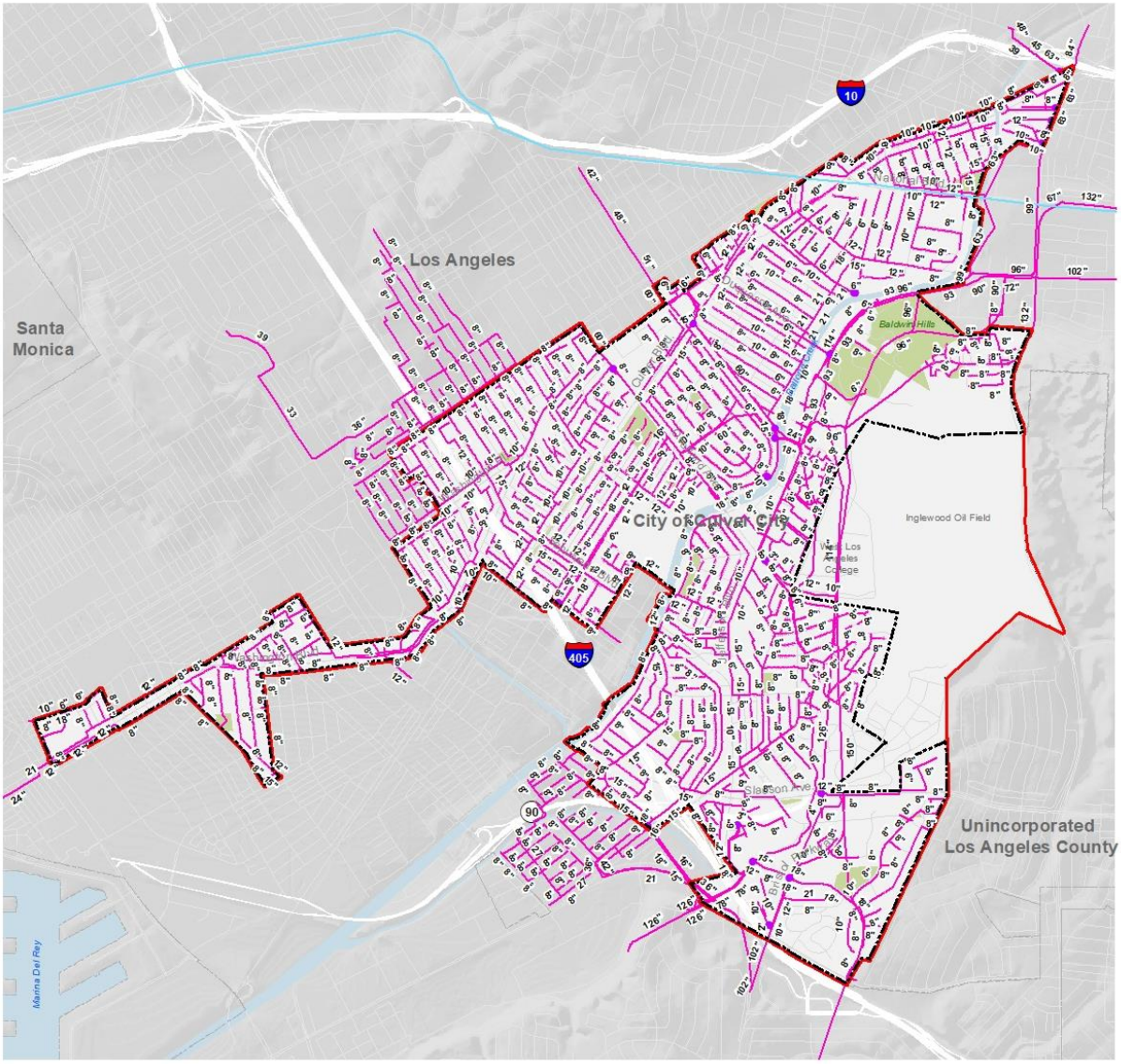
Culver City's water impacts various watersheds and water bodies in the region. There are two major watersheds the city is part of: the Ballona Watershed, as shown in Figure 6, and the Marina del Rey Watershed, as shown in Figure 7. The Ballona Watershed spans almost 130 square miles and is bound by the Santa Monica Mountains to the north, 110-Harbor Freeway to the east, and Baldwin Hills to the south. A majority of the city's land area drains into the Ballona watershed.[30] The remaining area drains into the small, 2.9-square mile Marina del Rey Watershed, which surrounds the Marina del Rey harbor. Ballona Creek's stormwater flows westward through an engineered channel, discharging into the Santa Monica Bay through the Oxford Basin, a 10.7-acre human-made flood control retention facility, located in the harbor, that the LA County Flood Control District owns and operates. [31,32]

[30] BC-WMG, BC-EWMP, 2016. Retrieved from: https://www.waterboards.ca.gov/rwqcb4/water_issues/programs/stormwater/municipal/watershed_management/ballona_creek/BallonaCreek_RevisedEWMP_corrected2016Feb1.pdf.

[31] Ibid 16.

[32] MR-WMG, MR-EWMP, 2016. Retrieved from: http://file.lacounty.gov/SDSInter/dbh/docs/1025171_MdR_EWMP_Final.pdf.

Figure 5: City of Los Angeles and Culver City Sewer Collection Network



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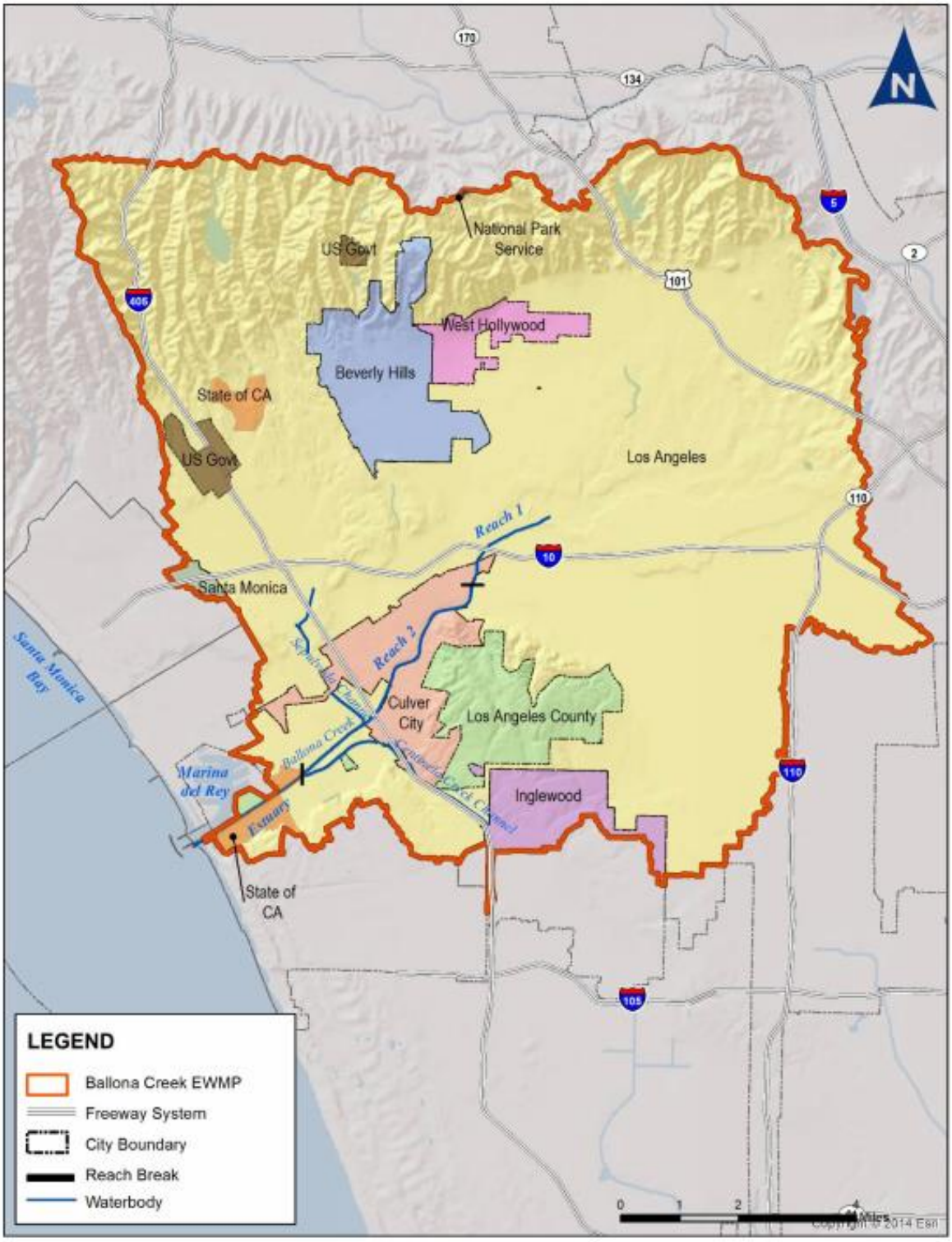
- Parks and Open Spaces
- Pump Stations
- Sewer Lateral Lines
- Sewer Mains

Figure 6: Ballona Creek Watershed[33]



[33] Ibid 27

Figure 7: Marina del Rey Watershed[34]

[34] Ibid 29

DRAINAGE COLLECTION

Stormwater is collected and conveyed through the storm drains that Culver City and LA County own and maintain. These lines generally drain towards the southwest or northeast, depending on their location within the City, before discharging into larger conveyance pipes that drain into Ballona Creek. The Culver City Drainage Area Map (Figure 8) depicts the drainage areas within the city that outfall to specific discharge points, and stormwater collection and conveyance system of mains and lateral pipes within these drainage areas. Major outfall pipes for this stormwater system vary in size from 18" to 87" in diameter as depicted in the map and are found along the east and west sides of Ballona Creek. There are also outfall pipes along National Boulevard, Higuera Street, off Baldwin Hills Scenic Overlook, Duquesne Avenue, Madison Avenue, La Bouget Avenue, Sepulveda Boulevard, St. Nicholas Avenue, and Overland Avenue.

As shown in Figure 10, Culver City and LA County also have a network of catch basins that trap debris before it can enter the storm drain system. These catch basins help the storm drain system work effectively and more efficiently.

WATER QUALITY PROTECTION AND RUNOFF CONTROL REQUIREMENTS

Culver City is coordinating its water quality protection and runoff control requirements with multiple adjacent municipalities and regional agencies. The City has a stormwater ordinance that is modeled after LA County's stormwater management regulations, hydraulics and hydrology guidance, and LID guidelines. The City administers its Storm Water Pollution Prevention Plan requirements. Culver City also joined the BC-WMG and MR-WMG. Both WMGs drafted corresponding Enhanced Watershed Management Programs (EWMPs), which set implementation and prioritization plans for institutional and infrastructure best management practices (BMPs) to address regional water quality issues.

SITE-SPECIFIC IMPROVEMENTS

The BC-EWMP[35] and MR-EWMP[36] define water quality goals which align and include local agencies in the watershed with their respective compliance target. To reach those goals, agencies are required to manage runoff by implementing watershed control measures such as regional projects, green streets, LIDs, and other structural BMPs.

For example, the BC-EWMP requires that the City be able to contribute some form of resource to manage approximately 99-acre-feet (AF) of runoff per storm event, which would require about $140 million in projects both within Culver City and regionally.[37] Table 2 shows different projects within the Ballona Creek Watershed this funding could cover and the corresponding AF of runoff they could support during a storm event. Opportunities for such improvements outlined in BC-EWMP and MR-EWMP are highlighted in Figures 9, 10, 11, and 12.

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[35] Ibid 32.

[36] Ibid 22.

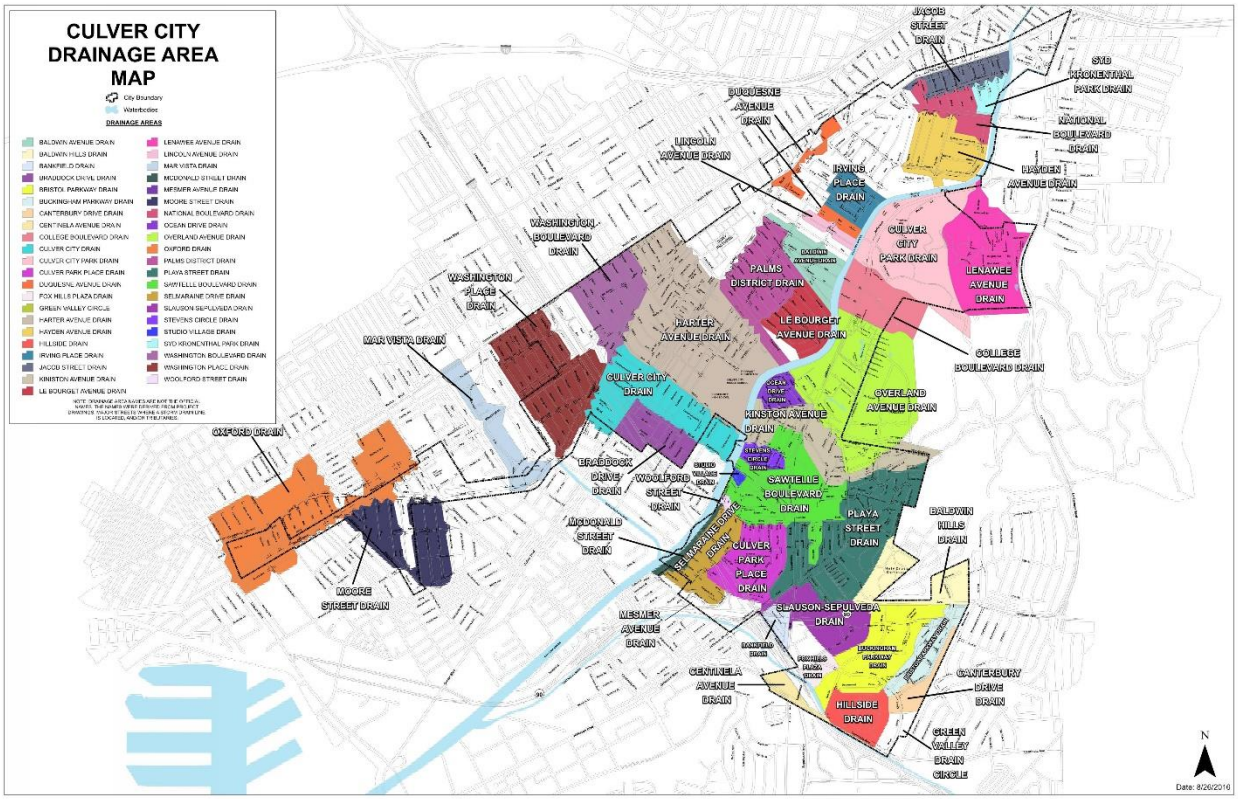
[37] City of Culver City, Stormwater, 2020. Retrieved from: https://www.culvercity.org/live/home-property/residential-recycling-trash-services/stormwater.

Table 2: Examples of Potential Projects to Fund in the Ballona Creek Watershed to Meet BC-EWMP's Storm Event Runoff Requirements

Watershed Control Measure	Maximum Runoff per Storm Event (acre-feet)
Regional Projects	62
Green Streets programs	20
Low Impact Developments[38] (LIDs)	17
Total AF of runoff support proposed by projects above	99
Total AF of runoff support required by BC-EWMP	99

Source: City of Culver City, Stormwater, 2020.

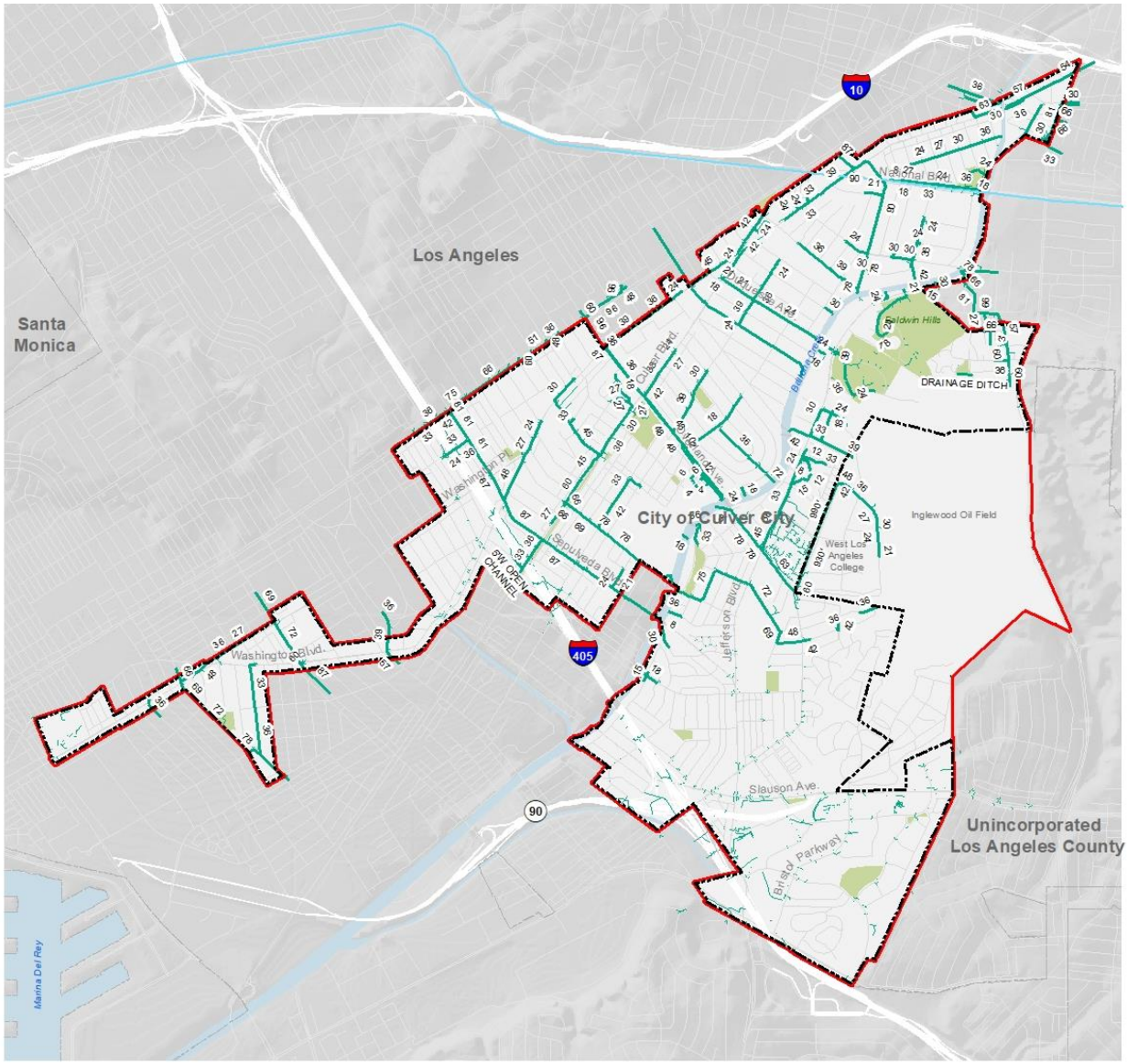
Figure 8: Culver City Drainage Area Map[39]



[38] City of Culver City, Stormwater, 2019. Retrieved from: www.culvercity.org/live/home-property/residential-recycling-trash-services/stormwater.

[39] City of Culver City, Culver City Drainage Area Map, 2016.

Figure 9: Culver City Stormwater Collection System



Sources: City of Culver City, 2019; County of Los Angeles, 2019.

0 0.225 0.45 0.9 Mile

Jurisdictional Boundaries

- City of Culver City City Limits
- City of Culver City Sphere of Influence
- Jurisdictional Boundaries

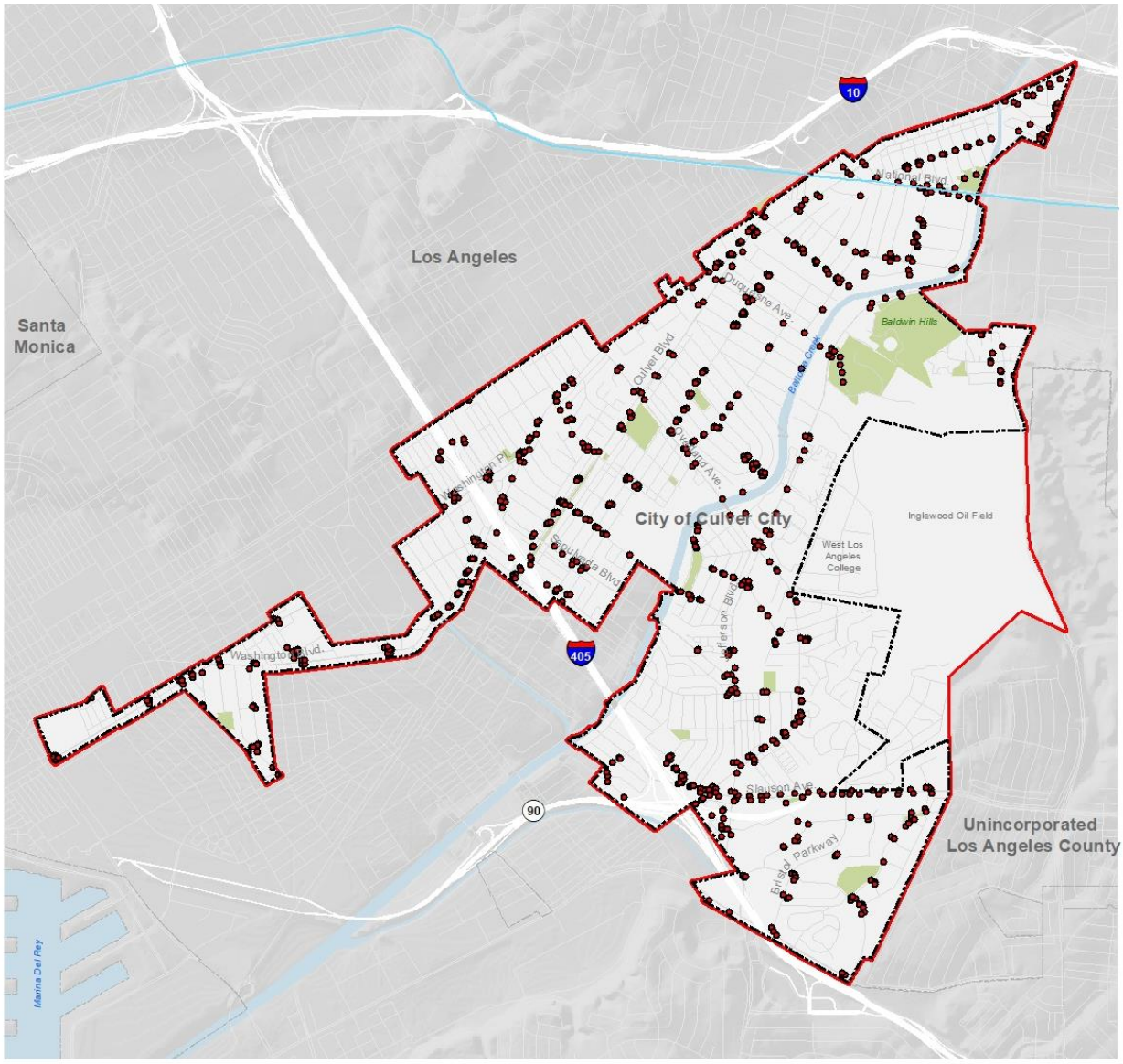
Transportation Features

- Expo Line
- Metro Station

Other Features

- Water
- Parks and Open Spaces
- 18 Stormwater Mains (with Diameter)
- Stormwater Lateral Pipes
- Storm Culverts

Figure 10: Culver City Catch Basin Locations



Sources: City of Culver City, 2019; County of Los Angeles, 2019.

0 0.225 0.45 0.9 Mile

Jurisdictional Boundaries

- City of Culver City City Limits
- City of Culver City Sphere of Influence
- Jurisdictional Boundaries

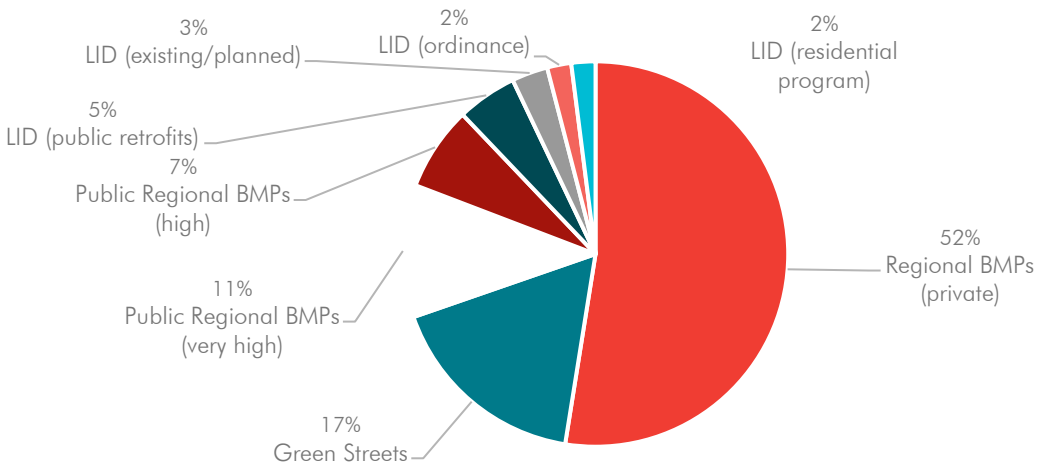
Transportation Features

- Expo Line
- Metro Station

Other Features

- Water
- Parks and Open Spaces
- Catch Basins

Figure 11: Ballona Creek Watershed Planned BMPs (all cities)[40]



Several projects within Culver City are currently underway to support water quality, stormwater, and sustainability initiatives. The Culver Boulevard Realignment and Urban Stormwater Project is a regional BMP project that started construction in February 2020. Infiltration galleries for groundwater recharge and retention basins for runoff capture and reuse are proposed along the raised median of the travel way. Bioswales and drywells are included in the design to pretreat the surface runoff from Culver Boulevard prior to entering the infiltration galleries or retention basins and eventually rejoining the groundwater.[41]

The Washington Boulevard Stormwater and Urban Runoff Project is a proposal to reduce pollutant loads in Marina del Rey Harbor by capturing and storing stormwater and urban runoff in sealed storage tanks underground. Following retention, runoff is eventually pumped to the sanitary sewer and conveyed to the Hyperion WWTP for treatment. An area of approximately 40 acres will be intercepted by the project prior to draining into the Marina del Rey watershed (see Figure 13).[42] A portion of the drainage area is part of Culver City. Culver City is currently performing additional design for the project based on public feedback and construction has been postponed until January 2021.[43]

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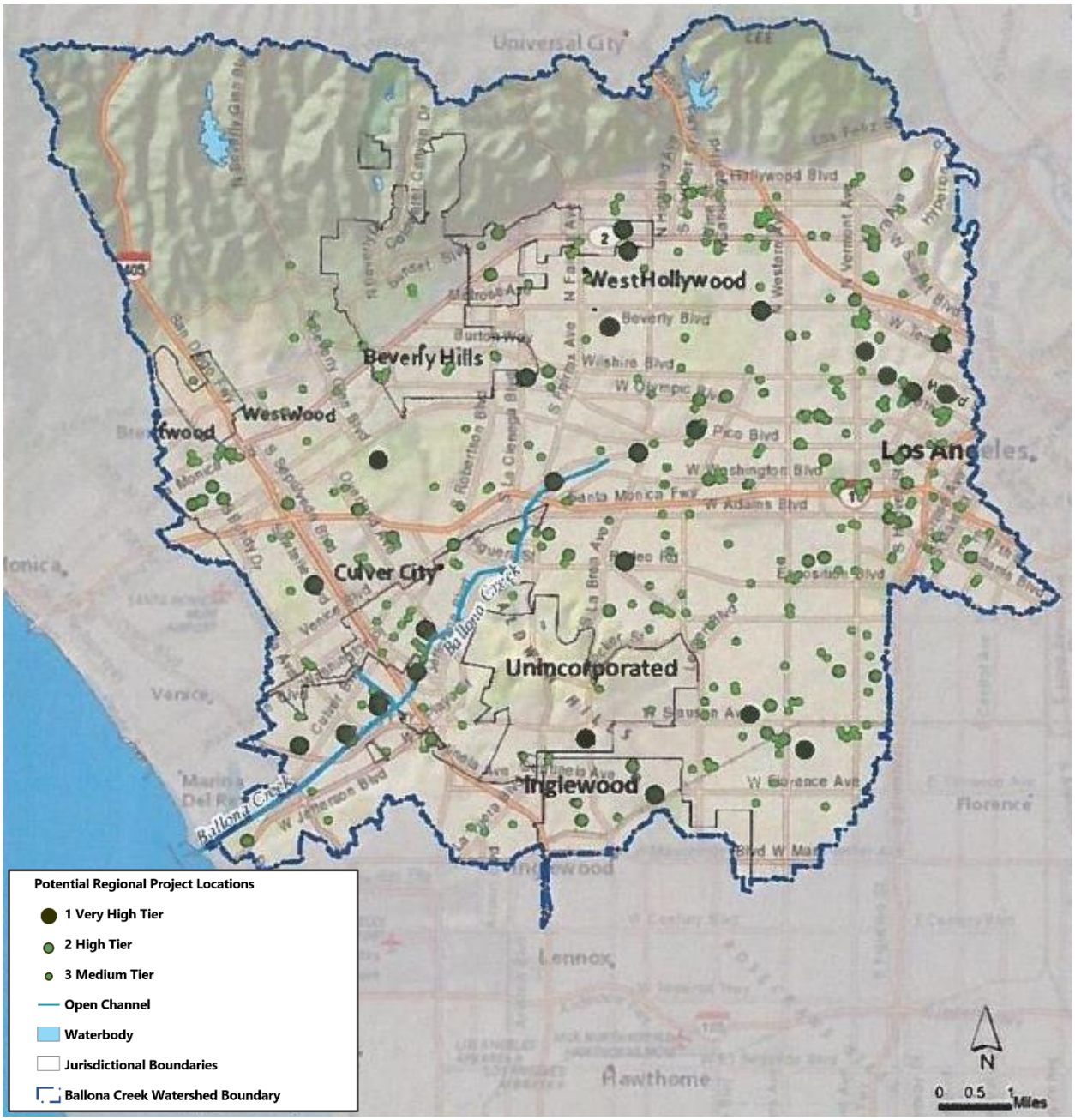
[40] Ibid 33.

[41] City of Culver City, Culver Boulevard Realignment and Urban Stormwater Project, 2019. Retrieved from: www.culvercity.org/city-hall/city-government/city-projects/culver-boulevard-realignment-urban-stormwater-project.

[42] City of Culver City, Initial Study and Mitigated Negative Declaration for Washington Boulevard Stormwater and Urban Runoff Diversion Project, 2019. Retrieved from: https://www.culvercity.org/home/showdocument?id=18043.

[43] City of Culver City, Washington Boulevard Stormwater and Urban Runoff Project, 2020. Retrieved from: https://www.culvercity.org/city-hall/city-government/city-projects/washington-boulevard-stormwater-and-urban-runoff project#:~:text=The%20goal%20of%20the%20Project,enters%20the%20storm%20drain%20system.

Figure 12: Ballona Creek Watershed Regional Stormwater Opportunities [44]



[44] Ibid 33

Figure 13: Marina Del Rey Proposed Regional BMPs [45]

[45] Ibid 33

ELECTRIC

Culver City is a member of the Clean Power Alliance (CPA), which provides clean, renewable energy. CPA is a nonprofit entity, formed in 2019 through a Joint Powers Authority[46] and is made up of 32 public agencies across Los Angeles and Ventura counties. CPA purchases clean power and supplies 100% renewable electricity to Culver City as the community's default-selected tier option. Lower renewable percentage rate options (36% and 50% renewable) are available to consumers through two additional tiers offered at a reduced cost. Benefits of being a member of the CPA include local management and control, stable and competitive rates, and higher renewable energy content when compared to SCE. SCE distributes electric power from the CPA to Culver City and LADWP produces, purchases, conveys, and delivers electric power to other parts of Culver City. LADWP's main Receiving Station[47] D, that brings high voltage power into the city and steps it down to local distribution levels, is located directly north of the city. Since 2017, renewable energy sources have supplied 30% of LADWP's power throughout its service area. LADWP is working aggressively to expand Los Angeles' supply of renewable resources, which impacts Culver City.

ELECTRIC DISTRIBUTION NETWORK

The Santa Monica District of SCE delivers electric power to Culver City through a series of 29 distribution circuits connecting the city and has been working to improve its network's resiliency to disruptions. Between 2017 and 2018, Culver City's sustained, unexpected interruptions to electricity services decreased from an average of 121.7 minutes to 36.6 minutes. In comparison, the entire SCE systemwide network sustained 136.8 minutes of interruptions in 2018 and 139.7 minutes of interruptions in 2017, not including interruptions caused by acts of nature. Causes of repair outages in Culver City in 2018 were attributed largely to equipment failure (48.5%), urgent maintenance operations (33.7%), and weather/fire/earthquake (9.7%).[48] At the California Public Utilities Commission's (CPUC) request, SCE prepared a Wildfire Mitigation Plan that showed that six of the City's 29 circuits are within wildfire-prone areas. The Plan includes a Public Safety Power Shutoff program that monitors weather conditions and, when necessary, shuts the power off within one or more of the City's six circuits to reduce the likelihood of wildfire caused by their power lines.

IMPROVEMENTS

SCE is implementing several capital improvement projects within Culver City. Improvements to the SCE system within Culver City maintain and enhance the existing system, ensure service demands are met, and accommodate new development. In 2019, SCE replaced and upgraded its transmission

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[46] A joint powers authority is when two or more public authorities (e.g. local agencies, or utility or transport districts), not necessarily located in the same state, jointly exercise any power common to all parties.

[47] A receiving station is one type of high voltage substations used by LADWP that serves as a bridge between power plants and local distribution: http://www.clui.org/content/receiving-stations-converter-stations-switching-stations-and-other-control-facilities.

[48] SCE, Circuit reliability Review, Culver City, 2019. Retrieved from: https://www1.sce.com/nrc/reliability/reports/CulverCity.pdf.

and distribution equipment and structures, improved circuit reliability and hardened its grid,[49] and converted above ground networks to underground systems. By 2020, SCE expects to complete an underground conversion project along Culver Boulevard, south of Sepulveda Boulevard and Commonwealth Avenue.[50] A feasibility study of an underground utility district is currently being conducted by SCE for a segment of the Park to Playa Trail, a planned 13 mile regional trail to connect a network of trails, parks, and open spaces from the Baldwin Hills Parklands to the Pacific Ocean, which would include a segment of La Cienega Boulevard within Culver City.

City Council and staff are trying to encourage all vehicles traveling to, through, and from Culver City be electric, as Culver City has been working to accommodate more electric vehicles. Consequently, the Transportation and Public Works Departments are collaboratively designing policies and programs for City vehicles, residents, and businesses. The vehicle electrification team will work with stakeholders including the Clean Power Alliance, SCE, the Los Angeles Clean Tech Incubator, and the SCAG.

In 2019, the City received a SCAG grant to prepare a citywide Electric Vehicle (EV) Infrastructure Plan (EVIP). The EVIP will install EV charging stations curbside, in single-family and multi-family dwellings, and on commercial properties. The consultants hired to prepare the EVIP will need to include a comprehensive outreach and communications strategy, engage stakeholders, identify barriers to electrifying the transportation sector and develop measures to overcome them, evaluate City building and zoning codes and recommend how to improve them, and develop incentive/rebate programs to encourage drivers to transition from fossil-fuel-powered vehicles to electric.

The City plans to replace its diesel-fueled, gasoline, and CNG powered fleet vehicles with electric vehicles and adopted a new vehicle electrification policy that accommodates this fleet and corresponding facilities and infrastructure. The Transportation Department is implementing a policy that replaces all light-duty general service vehicles at the end of their useful lives with electric vehicles. Annually, all other vehicles (mid-duty, heavy-duty, and emergency vehicles) scheduled for replacement will be evaluated based on the Division's needs and the maturity of the technology being proposed. Plans are underway for each department to pilot immature vehicle technologies, beginning with a pilot electric refuse vehicle and battery electric transit buses.

The Transportation Department is committed to procuring 10 electric buses and placing four of those electric buses into service by 2021, with the remaining electric buses coming the following year. By the end of the fiscal year 2021, a long-term transportation vehicle replacement plan will have all CNG transit vehicles be fully electric by 2028. This plan will include a facility electrification infrastructure plan for the Transportation Facility. Staff is committed to lessening vehicular emissions from the City's fleet and beyond. A fleet electrification policy will ensure an electric fleet that balances the City's environmental, financial, and reliability goals. Over time, transitioning to an

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[49] Grid hardening will replace existing power lines in wildfire prone areas of the city with insulated wire that is encased within plastic to prevent the transmission of electricity between power lines during windy and dry weather conditions.

[50] SCE, Underground Conversion Projects, 2018. Retrieved from: https://www1.sce.com/wps/wcm/connect/5e534575-4d74-4d7c-96b1-21521fab46ed/SCE_UGConversionProjectSummaryQ42016.pdf?MOD=AJPERES.

all-electric fleet citywide will improve regional air quality and support the City's sustainability objectives.

NATURAL GAS

SCG conveys and delivers natural gas services to residential and public services in Culver City using a combination of storage and pipeline facilities. This network has been instrumental in helping the City integrate compressed natural gas (CNG) vehicles into its municipal fleet. The City began that process in 1996. By 2004, the Culver CityBus network transitioned to 100% CNG, which was ranked the second-best green fleet in North America in 2008. As of 2019, the City's fleet of over 350 vehicles and equipment includes 41 CNG powered vehicles including refuse trucks, heavy duty public works trucks, park vehicles, and various staff cars.[51] Currently, the City is working towards converting this CNG fleet into an all electric fleet (see the Electric Distribution Network section) In 2016, the City approved an agreement with Clean Energy Renewable for consulting and managing services of renewable natural gas as part of the City's participation in the Low Carbon Fuel Standard (LCFS) program under California Assembly Bill 32 to support greening the City's transportation facilities.

NATURAL GAS DISTRIBUTION NETWORK

Natural gas distribution service networks cover the majority of Culver City and are fed largely by the natural gas storage facility located in Playa del Rey. The city also sits within a portion of the Inglewood Oil Field, which actively produces both oil and natural gas. Regionally connected transmission and high-pressure distribution lines intersect the City, which connect to the locally distributed pipeline network.

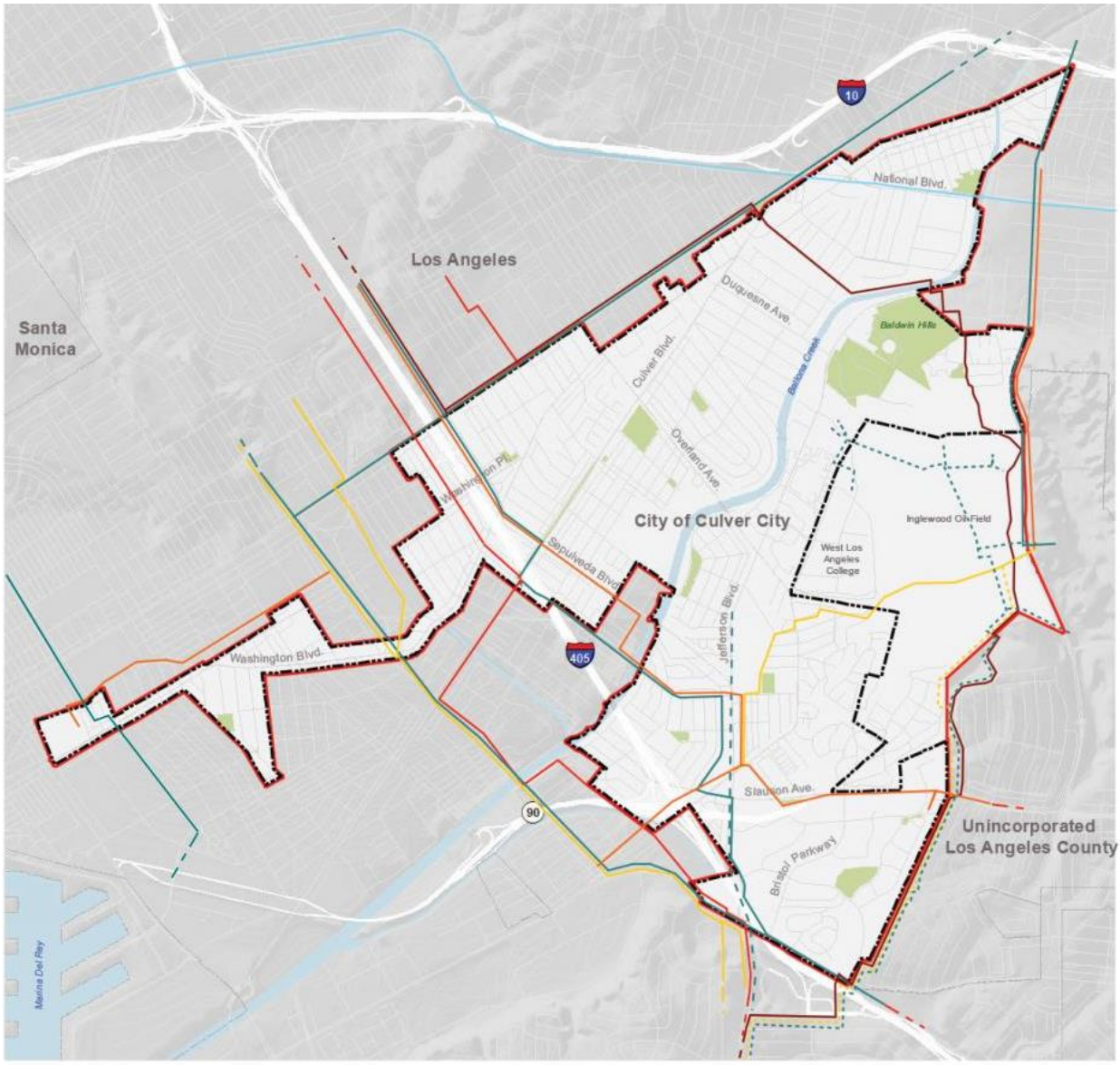
IMPROVEMENTS

Enhancing the Playa del Rey gas storage facility and the facility's monitoring systems, well configuration, and inspections, will help improve the network's safety in and around Culver City. The storage facility continues to take steps to minimize the environmental impacts of its storage operations, including avoiding sensitive resource areas and adapting scheduling activities, and partnering with agencies and organizations to protect and enhance natural resources in the surrounding community, particularly the Ballona Wetlands. As of 2019, no pipeline safety enhancement plans are currently scheduled in Culver City.

Hazardous liquid and gas pipelines that transport gasoline, crude oil, and transmit and distribute natural gas, mostly for the Inglewood Oil Field's operations, add to the City's network of natural gas pipelines. Most pipelines in the city are active and filled, while others are unfilled or permanently abandoned, as shown in Figure 14.

[51] SCG, Natural Gas Vehicles: Customer Case Study, 2014. Retrieved from: https://www.socalgas.com/documents/innovation/natural-gas-vehicles/NGV-CulverCity-CNG-Bus.pdf.

Figure 14: Culver City Hazardous Pipeline Network



Sources: City of Culver City, 2019; County of Los Angeles, 2019.

0 0.225 0.45 0.9 Mile

Jurisdictional Boundaries

- City of Culver City City Limits
- City of Culver City Sphere of Influence
- Jurisdictional Boundaries

Transportation Features

- Expo Line
- Metro Station

Other Features

- Water
- Parks and Open Spaces

Hazardous Pipelines

- Active (Filled)
- Active (unfilled)
- Permanently Abandoned
- Natural Gas (High Pressure Distribution)
- Natural Gas (Transmission)
- Gasoline
- Crude Oil
- Multiple Products

DATA

DATA DISTRIBUTION NETWORK

Culver City Connect is Culver City's municipal fiber network facilitating high speed data throughout the city. The initial 21.7-mile backbone network was completed in July 2018, is entirely underground, and now consists of 675 strands of fiber (see Figure 15). Three hub facilities within the city house City-owned network electronics, and the City leases two fiber networks to carrier hotels.[52] The backbone network focuses on five tracts: Fox Hills, Hayden, Jefferson Corridor, Smiley Blackwelder, and Washington National.

Implementing a robust fiber network within these five tracts will increase the availability, affordability, and reliability of high capacity broadband connectivity that will attract and retain target, technology-centric small businesses to Culver City. A robust fiber network in the five tracts will also help foster the transition from a 4G LTE to a 5G cell phone network by providing carriers a low-cost alternative to installing or expanding their own fiber optic cable backbone.[53] Overall, wireline networks play a critical role in meeting business development objectives and enhancing public safety due to their speed, bandwidth, and reliability.

IMPROVEMENTS

Since implementing a redundant fiber backbone foundation, the City has been building laterals to multi-tenant commercial properties in each tract to improve the network's operation and allow individual businesses to connect to the network cost-effectively.

The network will also connect to anchor institutions in the community, such as the Culver City Unified School District and healthcare facilities, and will eventually extend to additional office buildings and dwelling units to increase revenue and expand availability. The City is selecting firms to operate, maintain, market, and develop the network.

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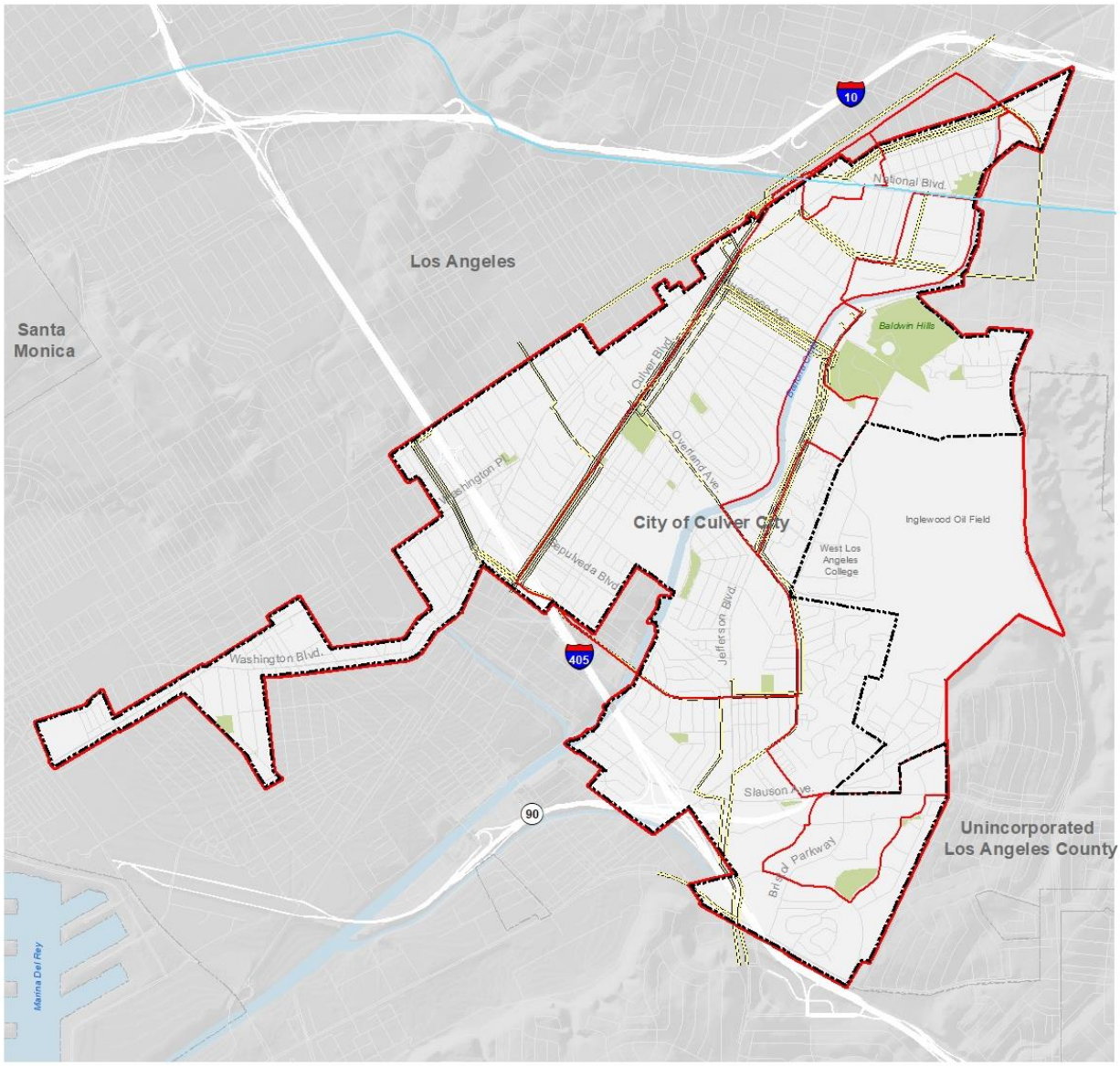
[52] City of Culver City, Culver Connect Municipal Fiber Network Project, 2019. Retrieved from: https://www.culvercity.org/how-do-i/learn/municipal-fiber-network-project.

[53] City of Culver City, Preliminary Fiber Network Design and Business Plan Framework, 2013. Retrieved from: https://www.culvercity.org/home/showdocument?id=2204.

Figure 15: Culver City Fiber Optic Network



Sources: City of Culver City, 2019; County of Los Angeles, 2019.

0 0.225 0.45 0.9 Mile

Jurisdictional Boundaries

- City of Culver City City Limits
- City of Culver City Sphere of Influence
- Jurisdictional Boundaries

Transportation Features

- Expo Line
- Metro Station

Other Features

- Water
- Parks and Open Spaces
- Fiber Ring Cables
- Fiber Optic Cables