TEMESCAL SUBBASIN GROUNDWATER SUSTAINABILITY PLAN

DRAFT PLAN AREA

September 2020

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Appendices (following text)

Appendix D – Stakeholder Outreach Plan (to be added later, appendices A-C will be referenced in Chapter 1)

Acronyms

AFY	acre-feet per year
Basin Plan	Water Quality Control Plan for the Santa Ana River Basin
Basin	Temescal Subbasin
BMP	Best management practices
CDA	Chino Desalter Authority
CIMIS	California Irrigation Management Information System
Corona	City of Corona
DDW	State Water Resources Control Board Division of Drinking Water
DWR	California Department of Water Resources
gpcd	gallons per capita per day
GSA	Groundwater Sustainability Agency
Temescal GSA	Temescal Groundwater Sustainability Agency
GSP	Groundwater Sustainability Plan
GWMP	Groundwater Management Plan
Home Gardens	Home Gardens County Water District
InSAR	Interferometric Synthetic Aperture Radar
IRWMP	Integrated Regional Water Management Plan
mg/L	milligrams per liter
mgd	million gallons per day
Norco	City of Norco
Outreach Plan	Stakeholder Outreach Plan
OWOW Plan	One Water One Watershed Plan
RCDEH	Riverside County Department of Environmental Health
RMP	Recharge Master Plan
RO	Reverse Osmosis
RWMP	Reclaimed Water Master Plan
SARWQCB	Santa Ana Regional Water Quality Control Board
SAWPA	Santa Ana Watershed Project Authority
SCAG	Southern California Association of Governments
SGMA	Sustainable Groundwater Management Act
SNMP	Salt and Nutrient Management Plan
SWRCB	State Water Resources Control Board
TDS	Total Dissolved Solids
TMDL	Total Maximum Daily Load
TVWD	Temescal Valley Water District
USFS	United States Forest Service
USGS	United States Geological Survey
UWMP	Urban Water Management Plan
WMWD	Western Municipal Water District
WRCRWA	Western Riverside County Regional Wastewater Authority

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2. PLAN AREA

This chapter provides a general description of the Temescal Subbasin Groundwater Sustainability Plan Area (GSP Area), consistent with GSP Regulations §354.8, and is organized into the follow sections:

- Geographic Area
- Jurisdictional Agencies
- Water Supply
- Water Resources Monitoring and Management Programs
- General Plans
- Additional GSP Elements
- Notice and Communication

The description of the plan area was developed from previous reports and studies, including the 2008 Groundwater Management Plan (2008 GWMP) for the City of Corona (Corona) (Todd 2008).

2.1. GEOGRAPHIC AREA

The GSP Area is the Temescal Subbasin of the Upper Santa Ana Valley Groundwater Basin (DWR 2016) is located in Riverside County. The Temescal Subbasin (Basin) underlies the southwest portion of the upper Santa Ana Valley, as shown on Figure 2-1.

The GSP Area is coincident with the Basin and covers approximately 23,500 acres or 37 square miles. The Basin borders the Chino Subbasin to the north, the Riverside-Arlington Subbasin to the east, the Bedford-Coldwater Subbasin of the Elsinore Basin to the south, and the Coastal Plain Subbasin of the Orange County Basin to the west. These adjacent basins are shown on Figures 2-1.

In general, the basin is bounded by the Santa Ana River to the north, the El Sobrante de San Jacinto and La Sierra Hills and the Riverside-Arlington Subbasin to the east, the Santa Ana Mountains to the west, and Bedford-Coldwater Subbasin to the south (DWR 2016).

2.2. LAND USE AND WATER MANAGEMENT JURISDICTIONAL AGENCIES

Land use and land management activities can influence water demands, recharge potential, and water quality. This section identifies and describes the agencies with land use management responsibilities within the Basin. Detailed discussion of land use planning and policies relevant to groundwater management is included in Section 2.6. In general, these agencies can be categorized as follows:

- Counties
- Cities
- Federal
- State
- Conservation Easements
- Water Management Entities

The jurisdictional boundaries for agencies that have land use management responsibilities in the Basin are shown on Figures 2-2 and 2-3**.**

2.2.1. Counties

The Basin lies within the northwestern portion of Riverside County. Riverside County has jurisdiction for land use planning for unincorporated areas in the County. Small portions of the Basin along its northwestern side are unincorporated areas in Riverside County. Riverside County also has responsibility for on-site wastewater treatment systems (i.e. septic systems) through its Department of Environmental Health. Riverside County Department of Environmental Health (RCDEH) is also responsible for regulation of the construction, destruction, and maintenance of groundwater wells.

2.2.2. Cities

The Temescal Subbasin is almost entirely overlaid by Corona's sphere of influence and the City of Norco (Norco). Corona and Norco have land use planning authority within their respective boundaries. General plan elements relevant to the GSP are discussed in Section 2.6. In addition to land use planning, the cities of Corona and Norco are responsible for stormwater management for their respective jurisdictions, which can impact basin recharge and therefore shallow ground water quality.

2.2.3. Federal

Federal Lands in the Basin are presented on Figure 2-3. There are small portions of the northwestern Basin that are on land owned by the Department of Defense. Land along the southwestern edge of the Basin is US Forest Service (USFS) Cleveland National Forest and other federal Non-Forest Service Land within USFS. Resource management efforts in the Cleveland National Forest target fire, ecology, archaeological resources, and recreational resources. These management activities can impact basin recharge, surface run-off, as well as, surface and groundwater quality.

Prado Dam lies in the northwest corner of the Basin and is owned and operated by the U.S. Army Corps of Engineers. The Prado Dam and Reservoir is the principle regulating structure on the Santa Ana River.

2.2.4. State

State Lands in the Basin are presented on Figure 2-3. A very small portion of northwestern edge of the Basin is in the Chino Hills State Park.

2.2.5. Conservation Easements

Conservation easements for the Dos Lagos Golf Course, Temescal Canyon, and Lee Lake are held by the Riverside-Corona Resource Conservation District (RCRCD) just to the south of the Basin. RCRCD aims to conserve natural resources, including soil, water, plants, and wildlife, in western Riverside and San Bernardino Counties. RCRCD activities include conducting conservation projects, educating the community, and providing technical advice to land users.

Additionally, there is a 13-acre Fresno Canyon conservation easement that partially overlaps a small area of the westernmost portion of the Basin.

2.2.6. Water Management Entities

While Corona and Norco are the primary water suppliers in the Basin, other water management entities have jurisdictional and/or monitoring and management responsibilities in the Basin.

The Riverside County Flood Control and Water Conservation District (Flood Control District) is located in the western portion of Riverside County and overlies the Basin. The Flood Control District regulates development in relation to floodplains and drainage, identifies potential flood hazards, and constructs flood control structures.

The Santa Ana Watershed Project Authority (SAWPA) is a joint power authority formed of several water agencies in the Santa Ana River watershed aimed at protecting the watershed and maximizing beneficial uses within the watershed. SAWPA focuses on water resource issues including water supply reliability, water quality improvement, recycled water, wastewater treatment, groundwater management, brine disposal, and integrated regional planning. SAWPA also administers the Basin Monitoring Program Task Force for the watershed, which monitors and reports surface water quality as well as produces Santa Ana River Wasteload Allocation Model Reports. These monitoring and reporting activities are necessary to determine compliance with the nitrogen and total dissolved solids (TDS) objectives for the watershed.

The Orange County Water District (OCWD) owns and operates the Prado Wetlands, 2,150 acres of constructed wetlands behind the Prado Dam, located just north of the northeast corner of the Basin. These wetlands improve water quality in the Santa Ana River by removing nitrate from the water.

2.3. WATER SUPPLY

Water supply for municipal and industrial uses include groundwater and imported water from the Western Municipal Water District (WMWD). In addition, recycled water is used for non-potable uses. The water providers within the Basin and additional detail on their various water sources are described in the following sections.

2.3.1. Water Providers

Corona serves the majority of the population within the Basin. Norco and the Home Gardens County Water District (Home Gardens) serve water to smaller portions of the Basin.

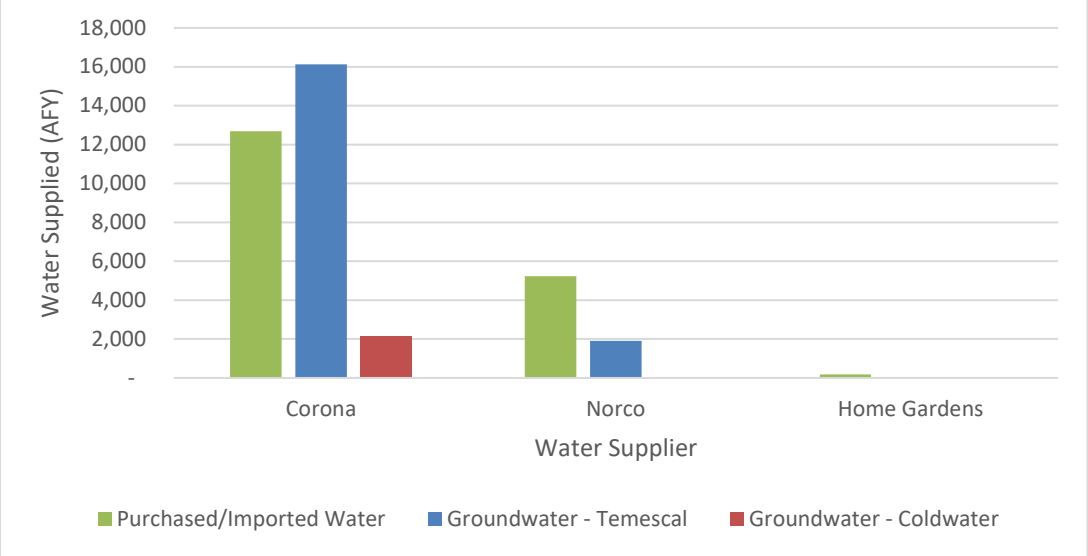
Corona provides water and wastewater services to residential, institutional, commercial, and industrial customers within the city as well as to the unincorporated communities of El Cerrito, Coronita, and parts of Temescal Canyon. Corona's water service area encompasses approximately 39 square miles. Corona's water sources include groundwater pumped from the Temescal Subbasin and the Coldwater Subbasin and imported water purchased from WMWD.

Norco is the sole water purveyor for the residents and businesses within its city boundaries, which encompass approximately 15 square miles. Norco purchases imported water from WMWD, purchases desalinated groundwater from the Chino Desalter Authority (CDA) and pumps groundwater from the Temescal Subbasin.

Home Gardens serves water to a portion of the census-designated place of Home Gardens and purchases all water from Corona.

The 2015 water supplies for each water purveyor from each water source are shown on Figure 2-4. Purchased imported water, groundwater from the Temescal Subbasin, and groundwater from the Bedford-Coldwater Subbasin make up 41 percent, 52 percent, and 7 percent of Corona's supply, respectively (KWC 2016). Purchased imported water and groundwater from the Temescal Subbasin make up 73 percent and 27 percent of Norco's supply, respectively (Blais 2016). Purchased imported water makes up 100 percent of the supply for Home Gardens. Note that all of Home Gardens purchased supply and a portion of Norco's purchased supply are from Corona and are thus included in Corona's total supply. It should be noted that these water supply distributions are based on year 2015 only and typically vary in various degrees from year to year.

Figure 2-4 Water Supply Sources within Basin (2015)



2.3.2. Water Supply Sources

2.3.2.1. Groundwater

Corona and Norco are the primary producers of groundwater in the Temescal Subbasin. Corona has 19 wells (KWC 2016) and Norco has 4 wells (Blais 2016) in the Temescal Subbasin that extract water from the subbasin for the purpose of potable water supply.

There are also a number of private wells operating in the Basin. Well densities for domestic wells, production wells, public wells, and all groundwater wells are shown on Figures 2-5a, 2-5b, 2-5, and 2-5d respectively. Well density varies throughout the subbasin from 0 to 15 wells per 0.5 square mile section.

Corona owns and operates the 10 million gallons per day (mgd) Temescal Desalter, a reverse osmosis (RO) treatment facility where groundwater from the Temescal Subbasin high in TDS is forced one-way through membranes that reject salts as waste brine. Corona then blends this water with locally produced groundwater. The location of the Temescal Desalter is shown along with other Corona water and wastewater facilities in Figure 2-6.

In addition to pumping groundwater from the Temescal Subbasin, Norco purchases groundwater from the CDA, which is extracted from the Chino Subbasin. This water purchase is further described in Section 2.3.2.3.

2.3.2.2. Local Surface Water

There is no surface water used as a water supply within the Basin. Just to the south of the Basin, Corona utilizes surface flows from Coldwater Canyon in percolation basins and then extracts groundwater from the Coldwater Subbasin.

2.3.2.3. Purchased or Imported Water

The Basin's primary sources of imported water are supplied through WMWD, a member agency of Metropolitan Water District of Southern California. Imported water supply from WMWD consists of treated surface water, untreated surface water and desalinated brackish groundwater.

WMWD supplies treated surface water via the Mills Pipeline from Henry J. Mills filtration plant. The Mills Pipeline delivers treated water directly to Corona through metered turnout WR-24. This connection has an effective capacity of 6.5 mgd (KWC 2016). Norco also receives water from WMWD via the Mills Pipeline, which is then wheeled through a metered connection from Corona to Norco (Blais 2016).

WMWD supplies untreated surface water via the Lower Feeder. The Lower Feeder supplies raw water to Corona's Lester Water Treatment Plant through metered turnout WR-19 and to Corona's Sierra del Oro Water Treatment Plant through metered turnout WR-33. The Lester Plant has a peak capacity of 30 mgd, and the Sierra del Oro Plant has a peak capacity of 9.0 mgd. The Lower Feeder is connected to Corona's Green River Water Treatment Plant via WR-29; however, this facility is currently inactive (KWC 2016).

WMWD supplies desalinated brackish groundwater via the Arlington Desalter to both Corona and Norco. Norco entered into a purchase water agreement with WMWD to purchase a minimum of 4,400 acre-feet per year (AFY) of treated groundwater annually from the Arlington Desalter reverse-osmosis treatment facility (Blais 2016). Excess production from the desalter is made available to Corona (KWC 2016).

Corona maintains a two-way connection with the City of Riverside that can be used in the event of an emergency.

Norco is a member agency of the CDA, a Joint Powers of Authority. Norco has an annual obligation to purchase 1,000 AFY of reverse osmosis treated potable groundwater water from CDA (Blais 2016).

The City of Corona operates well(s) for Home Gardens and supplies them with all their water supply.

2.3.2.4. Recycled Water

As shown on Figure 2-6, there are three wastewater reclamation facilities in the Basin. Existing reclaimed water supply is provided by three Water Reclamation Facilities (WRF1, WRF2 and WRF3) and two non-potable wells owned and operated by Corona. The average annual production from these sources is approximately 11.35 mgd or 12,700 AFY. Corona is a member of the Western Riverside County Regional Wastewater Authority (WRCRWA), which operates a new wastewater reclamation facility in Eastvale. When WRCRWA is fully implemented, Corona's level of recycled water production will stay the same. However, the location of sources of supply will shift to the north and the City will have access to additional recycled water supply from WRCRWA (Corona 2018).

Norco is also a member of WRCRWA, but does not currently receive and distribute recycled water.

2.3.2.5. Conjunctive Use/Managed Recharge/In-Lieu Recharge

In 2013, Corona prepared a Recharge Master Plan (RMP) for the Temescal Subbasin that defines the groundwater management objectives for the subbasin. The RMP lays out goals and alternatives for artificial recharge in the subbasin. Implementation of the RMP is ongoing. Corona currently discharges tertiary treated effluent from its Wastewater Treatment Plants No. 1 and No. 2 to the Lincoln/Cota Ponds, where the effluent is either lost to evapotranspiration or percolated to groundwater (Wildermuth 2013).

2.3.3. Water Use Sectors

Water use sectors are defined in the GSP Regulations as categories of water demand based on the general land uses to which the water is applied, including urban, industrial, agricultural, managed wetlands, managed recharge, and native vegetation.

The distribution of current land use types in the Basin is presented on Figure 2-7. While the land use types are more detailed than the water sector categories, the land use mapping provides relevant background information for understanding the various water uses and locations of these uses in the Basin. A significant portion of the Basin is characterized as single-family residential land use. The next most common land use type within the Basin is industrial. Water use and land use by sector for Corona, Norco, and the Basin are presented in Table 2-1.

Table 2-1 Water Use and Land Use by Sector (2015)[1]

Water Use Sector	Corona Water Use	Norco Water Use	Basin Land Use
Urban	82%[2]	100%	69%
Industrial	18%[3]	0%	11%
Agricultural	0%	0%	1%
Managed Wetlands	0%	0%	0%
Managed Recharge	0%	0%	0%
Native Vegetation	0%	0%	18%

Notes:
1) Water use data is provided by Corona and Norco's Urban Water Management Plans (UWMPs) (KWC, 2016 and Blais, 2016) and land use data is based on an analysis of the land use parcels included in the Basin as shown in Figure 2-7.
2) Urban water use for Corona does not include commercial uses, which is reported as combined with industrial.
3) Industrial water use for Corona includes commercial uses.

2.4. WATER RESOURCES MONITORING PROGRAMS

This section summarizes the following water resources monitoring activities in the Basin:

- Climate
- Surface Water Flow
- Surface Water Quality
- Imported Water Deliveries
- Groundwater Recharge/Consumptive Use
- Water Recycling
- Wells and Groundwater Pumping
- Groundwater Levels
- Groundwater Quality
- Land Use
- Land Subsidence

Several ongoing monitoring programs provide data and information relevant to the Basin. Corona, Norco, other local agencies, state agencies and federal agencies are responsible for the various monitoring programs, which are summarized briefly below (Sections 2.4.1 through 2.4.12).

2.4.1. Climate

The State Water Resources Control Board (SWRCB) Division of Drinking Water (DDW) compiles climate data in the California Irrigation Management Information System (CIMIS). This database includes total solar radiation, soil temperature, air temperature/relative

humidity, wind direction, wind speed, and precipitation. While the CIMIS databases is a comprehensive source for climate data, there are no CIMIS stations in the Basin. The closest CIMIS stations are:

- Chino #255 - This station is located north of the Basin (Latitude: 33.985350, Longitude: -117.656528).
- U.C. Riverside #44 - This station is located east of the Basin (Latitude: 33.964942, Longitude: -117.33698).
- Surface Water Flows

United States Geological Survey (USGS) owns and operates two streamflow gauges in the Basin. These include:

- TEMESCAL C AB MAIN ST A CORONA CA (11072100) - This station is located on the Temescal Creek near Main Street in Corona.
- SANTA ANA R BL PRADO DAM CA (11074000) - This station is located along the Santa Ana River below Prado Dam.

2.4.2. Surface Water Quality

Corona and Norco are both members of the Middle Santa Ana River Watershed Total Maximum Daily Load (TMDL) Task Force. The Task Force is a collaborative effort of public- and private-sector agencies and interests focused on the development of pathogen TMDLs for Santa Ana River Reach 3, its tributaries, and other water bodies in the Chino Basin area, located immediately north of the Basin. Formed in 2007, the Task Force has been working on several pathogen-related activities and studies for the Chino Basin. The objectives of this Task Force are to implement a number of tasks identified by the Regional Board in their 2005 Amendment to the water quality control plan (Basin Plan). These include the implementation of a watershed-wide monitoring program to assess compliance with water contact recreation (REC-1) beneficial use water quality objectives for fecal coliform, evaluate numeric targets established for E. coli, and identify and implement measures to control sources of impairment. The Task Force works with the Regional Board in the formulation of pathogen TMDL allocation and implementation strategies (SAWPA 2019).

The Upper Temescal Valley Salt and Nutrient Management Plan (SNMP) developed by Elsinore Valley Municipal Water District and Eastern Municipal Water District includes several management actions, one of which is the implementation of a monitoring program. This monitoring program includes seven surface water monitoring sites, one of which is in the GSP Area. This privately-owned continuous flow gage is located at the All American Aggregate pit in Corona, the discharge point of the Temescal Wash (WEI 2017).

Releases to the Temescal Wash are monitored by various dischargers through NPDES permit requirements (Todd 2008).

2.4.3. Groundwater Levels

Corona has monitored water quality in production wells in the Temescal subbasin to protect water quality and to comply with regulations over time. Since 1998, the City has conducted a monitoring program including water level measurements in about 19 production wells, maintaining these data in a water level database. In 2006, the City expanded the water level monitoring program to include wells that are not currently pumping (or pump on a limited basis) these wells are a combination of inactive irrigation wells, inactive or periodically used production wells, and dedicated monitoring wells installed by the City. (Todd 2008).

2.4.4. Groundwater Quality

Groundwater quality monitoring occurs at Corona's active production wells on a continuous basis, ranging in frequency from semi-monthly to semiannual depending on the water quality constituent. However, no formal water quality monitoring program has been established at the monitoring wells, primarily because of an inability to pump some of the wells.

2.4.5. Groundwater Production

Corona and Norco accounts for most groundwater production from the Basin, however, there are also private pumpers. Per the well density map shown in Figure 2-5d, there are approximately 200 wells in the Basin, 19 of which are production wells for Corona and 4 of which are production wells for Norco.

WMWD serves as the Santa Ana Watershed water master and records annual production for the watershed.

According to Watermaster records, other current and historical pumpers include:

- All American Asphalt
- Dart Corporation
- Minnesota Mining & Mfg Co

2.4.6. Conjunctive Use/Managed Recharge

Corona currently discharges tertiary treated effluent from its Wastewater Treatment Plants No. 1 and No. 2 to the Lincoln/Cota Ponds, where the effluent is either lost to evapotranspiration or percolated to groundwater. Effluent discharge quantity is monitored and recorded by Corona (Wildermuth 2013).

2.4.7. Recycled Water

Corona records recycled water flows and quality at the three reclamation facilities; WRF1, WRF2 and WRF3. Corona also records recycled water deliveries to the 282 metered

connections in the recycled water service areas for landscape irrigation, toilet flushing via dual plumbed systems, firefighting, dust control and various construction applications.

2.4.8. Imported Water

Corona maintains records of imported water purchases and deliveries from WMWD and water delivered to Norco and Home Gardens.

2.4.9. Land use

Land use data for the Basin are available through the Southern California Association of Governments (SCAG), as well as the planning departments of the cities of Corona and Norco. The most recent land use mapping data from SCAG are from 2016, while the latest general plans from Corona and Norco were adopted in 2004 and 2014, respectively. The current land use shows much of the subbasin is now single-family residential homes with very little agricultural area.

The Basin was historically an agricultural area and has significantly urbanized since the mode 1980s. In the 1950s and 1960s, the subbasins consisted mainly of irrigated agricultural lands with a variety of crops, especially citrus. The 1984 land use map on Figure 2-8 suggests that much of the southern part of the Basin continued to be used for agriculture, but most of this land was likely fallow or non-irrigated pasture by 1984.

The contributing watersheds that surround the subbasins consist mostly of native vegetation or grasslands used for grazing. With the exception of urbanization of the small watershed on the northeastern side of the Basin, land use in the contributing watersheds has not changed significantly over the last 20 years.

2.4.10. Land subsidence

While the potential for subsidence was recognized in the 2008 Groundwater Management Plan, it has not been a known issue in the Basin and ground surface elevations have not been monitored until recently. The TRE Altamira Interferometric Synthetic Aperture Radar (InSAR) Dataset, provided by the California Department of Water Resources (DWR) through the Sustainable Groundwater Management Act (SGMA) Data Viewer (DWR 2020) and showing vertical ground surface displacement from June 2015 to September 2019, indicates that the Basin has been characterized by uplift over that period, likely reflecting tectonic factors. No known available sources of data indicate subsidence in the Basin.

2.4.11. Incorporation of Existing Monitoring into GSP

Data from existing monitoring programs have been collected and incorporated into the GSP. The existing monitoring data and locations are discussed further as part of the Monitoring Plan, Chapter 7 of this GSP.

2.5. WATER RESOURCES MANAGEMENT

There are a number of previous plans related to different aspects of water resources management in the Basin. The previous studies/plans are summarized in this section. Generally, this previous work falls into two main categories: groundwater subbasin management, water resources management. The categorization helps to provide some context for the summaries that follow:

- **Groundwater Basin Management** - Plans and studies focusing on groundwater management include the 2008 GWMP, the monitoring program in the 2008 GWMP, and the 2013 RMP. Management of groundwater quality is described in general in the Water Quality Control Plan for the Santa Ana Basin.
- **Water Resources Management** - There are a number of water resources planning documents. WMWD's Updated Integrated Regional Water Management Plan (IRWMP) (Kennedy/Jenks 2008) and SAWPA's One Water One Watershed Plan (OWOW Plan) (SAWPA 2018) provide information on water resources on a regional scale. However, WMWD's IRWMP plan is over 10 years old and SAWPA's OWOW Plan is very high level as it covers the entire Santa Ana River Watershed. Additional plans developed by Corona and Norco are more recent and more focused on the Basin. The 2015 Corona Urban Water Management Plan (KWC 2016) and the 2015 Norco Urban Water Management Plan (Blais 2016) include information on existing and future water demands and supplies, including groundwater, imported water, surface water, and recycled water. The 2015 Urban Water Management Plans (UWMPs) also identified water supply strategies for meeting future demands. The Reclaimed Water Master Plan (Corona 2018) provides recommendations for expansion of Corona's reclaimed water program.

2.5.1. AB3030 Groundwater Management Plan

The GWMP was prepared in June 2008 and includes the Basin and the Bedford-Coldwater Subbasin (Todd 2008). The goals of the 2008 GWMP included operating the groundwater basin in a sustainable manner for beneficial uses and increasing the reliability of water supply for basin users.

The major components of the 2008 GWMP included:

- Data compilation and management
- State of the groundwater basins
- Corona water demand and supply
- Basin management objectives
- Basin management strategies
- Implementation plan

The 2008 GWMP included a thorough evaluation of the groundwater conditions and conceptual model. A key finding of the study that the Basin was potentially in a state of

overdraft from 2001 through 2004, when groundwater pumping in the basin increased from a previous average of 10,000 AFY to an average of 20,000 AFY. The 2008 GWMP recommended numerous strategies for managing groundwater while maintaining groundwater production including:

- Develop new wells that will allow flexibility in pumping distribution and maintenance of water levels
- Enhance recharge directly into the Basin
- Provide the infrastructure necessary for the conveyance of water to recharge facilities
- Provide replacement water sources for a portion of the groundwater demand, potentially decreasing Basin production
- Increase monitoring of groundwater levels and storage for the tracking of overdraft mitigation

Since 2008, the City has added new wells, which allow flexibility in pumping distribution.

2.5.2. Groundwater Monitoring Program and Protocols

The 2008 GWMP included a groundwater monitoring program for the Basin and the Bedford-Coldwater Subbasin (Todd 2008).

Objectives of the 2008 GWMP monitoring program included:

- Characterize water levels and water quality in various aquifers across the subbasins
- Monitor areas of concern to address specific problems
- Evaluate the performance of groundwater management activities
- Track changes in groundwater levels, quality and storage over time

2.5.3. Recharge Master Plan for the Temescal Basin

The RMP for the Corona's use of the Temescal Basin was prepared in September 2013 by Wildermuth Environmental to address the groundwater overdraft identified in the 2008 GWMP. The major components of the RMP included:

- Define goals for artificial recharge and develop planning criteria
- Characterize potential source waters for artificial recharge
- Characterize the universe of potential sites for artificial recharge
- Develop alternatives for artificial recharge
- Evaluate and rank alternatives for artificial recharge

The results of the analysis in the RMP recommended the implementation of Alternative 1 (Divert base flow in Temescal Creek for Recharge at the Lincoln/Cota Ponds) and Alternative 4b (Stormwater and recycled water recharge at the Main Street and Oak Street basins), which would result in about 7,200 to 9,300 AFY of new recharge to the Temescal Basin. This would exceed the goal for the RMP to increase recharge by 4,000 AFY and would allow

Corona to decrease its reliance on purchased imported water and decrease the total cost of its water supply.

Since 2013, Corona conducted research on Alternative 4b and found that the water quality analysis of stormwater is not high enough to use for reacharge to the Basin. Implementing this alternative would require the additional use of clarifying equipment to address debris and silt in the stormwater runoff. Although it may be pursued in the future, Alternative 4b is not being pursued at this time.

2.5.4. Water Quality Control Plan for the Santa Ana River Basin

The Water Quality Control Plan for the Basin Plan provides the framework for how surface water and groundwater quality in the Santa Ana Region should be managed to provide the highest water quality reasonably possible. The Basin Plan (i) designates beneficial uses for surface and ground waters, (ii) sets narrative and numerical objectives that must be attained or maintained to protect the designated beneficial uses and conform to the state's antidegradation policy, and (iii) describes implementation programs to protect all waters in the Santa Ana Region.

The Basin Plan includes a site-specific objectives for un-ionized ammonia, cadmium, copper, and lead for the Santa Ana River System, which includes Temescal Creek. These objectives aim to prevent chronic toxicity to aquatic life in the Santa Ana River. The Basin Plan also states water quality objectives for the Temescal Groundwater Management Zone for 770 milligrams per liter (mg/L) TDS and 10.0 mg/L Nitrate as Nitrogen.

The Basin Plan outlines the statewide monitoring activities aimed at assessing attainment of water quality goals and objectives specified in the Basin Plan. The groundwater monitoring program relies on data collected by municipal supply districts. The Santa Ana Regional Water Quality Control Board (SARWQCB) contributes to the data collection effort.

2.5.5. Integrated Regional Water Management Plan Update

Corona and Norco purchase imported water from WMWD. Therefore, it is relevant to track WMWD planning efforts that affect the Corona and Norco service areas or the imported water delivered to Corona and Norco.

WMWD completed its most recent Integrated Regional Water Management Plan in 2008 (Kennedy/Jenks 2008). The purpose of the IRWMP was to address long range water quantity, quality, and environmental planning needs within WMWD's service area. WMWD is conducting another IRWMP update, which is expected to be completed in 2020.

The 2008 WMWD IRWMP focused on:

- Identifying and evaluating water management strategies that could increase local water supply, thereby improving water supply reliability.

- Evaluating local and regional water quality, environmental, and disadvantaged community issues.

The IRWMP also includes discussion of other regional planning efforts that impact water management within the WMWD service area as well as compilation of estimates of water demands by member agencies, water supplies (e.g., local groundwater, recycled water, surface water, and imported water) available to the agencies, and efforts to coordinate investments in water management, as appropriate, between agencies.

The IRWMP included several projects relevant to Corona:

- New water wells
- Replacement water wells
- Groundwater blending program
- Improvement of groundwater quality/quantity monitoring program
- Recharge basins within Oak Avenue detention basin
- Recharge basins within Main Street detention basin
- Upgradient injection wells
- Recycled water injection wells
- Lincoln and Cota street percolation ponds maintenance program

Several of these projects include groundwater recharge projects that were also recommended in the 2013 RMP.

2.5.6. Santa Ana River Watershed One Water One Watershed Plan

Corona, Norco, and Home Gardens are involved in SAWPA, which in 2018 updated its One Water One Watershed Plan (OWOW Plan). The OWOW Plan's goals for the entire Santa Ana River Watershed are as follows:

- Achieve resilient water resources through innovation and optimization
- Ensure high-quality water for all people and the environment
- Preserve and enhance recreational areas, open space, habitat, and natural hydrologic function
- Engage with members of disadvantaged communities and associated supporting organizations to diminish environmental injustices and their impacts on the watershed
- Educate and build trust between people and organizations
- Improve data integration, tracking, and reporting to strengthen decision making

The Plan includes ongoing water management projects and programs undertaken by Corona, Norco, and Home Gardens.

2.5.7. Corona and Norco Urban Water Management Plans

The California Urban Water Management Planning Act requires preparation of Urban Water Management Plans (UWMPs) by urban water providers with 3,000 or more connections. The UWMPs, generally required every five years, provide information on water supply and water demand—past, present, and future—and allow comparisons as a basis for ensuring reliable water supplies. UWMPs examine water supply and demand in normal years and during one-year and multi-year droughts. UWMPs also provide information on per-capita water use, encourage water conservation, and present contingency plans for addressing water shortages.

Corona's most recent UWMP is from 2015. According to the 2015 UWMP, Corona is in compliance with the state requirements to reduce per capita water use by 20 percent by 2020 (Senate Bill X7-7). As reported in Corona's 2015 UWMP, the 2015 per capita daily water use of 163 gallons per capita per day (gpcd) was currently below the interim 2015 target of 238 gpcd and below the 2020 target of 213 gpcd (KWC 2016). Per the 2015 UWMP, Corona should be able to meet demands through 2040 in normal, dry, and multiple-dry years using their existing water sources.

Norco's most recent UWMP is from 2015. According to the 2015 UWMP, Norco is also in compliance with Senate Bill X7-7. As reported in Norco's 2015 UWMP, the 2015 per capita daily water use of 246 gpcd was currently below the interim 2015 target of 296 gpcd and below the 2020 target of 263 gpcd (Blais 2016). Per the 2015 UWMP, Norco should be able to meet demands through 2040 in normal, dry, and multiple-dry years using their existing water sources.

UWMPs must be updated every 5 years. The 2020 UWMPs for Corona and Norco must be completed and submitted to the California Department of Water Resources (DWR) by June 30, 2021. Any pertinent information from this update may be integrated into this GSP before its submittal to DWR by January 31, 2022.

2.5.8. Reclaimed Water Master Plan

The purpose of the 2018 Reclaimed Water Master Plan (RWMP) (Corona 2018) was to assist Corona with meeting its goals for reclaimed water use by recommending the implementation of appropriate projects, programs, and additional studies. The RWMP identified, evaluated, prioritized, and scheduled 33 projects. The recommendations from the RWMP fell into four categories:

- Improvements involving receiving future supply from WRCWRA
- Improvements to add demand for reclaimed water
- Enhancements to data collection
- Additional studies related to future uses of reclaimed water

The RWMP does not include projects relating to recharge of the Basin with reclaimed water.

2.5.9. Water Resources Management Implementation Status

Most of the previous plans summarized above have included recommendations for water resources management activities in the Basin. Since the time of publication, many of these recommendations have been implemented.

2.6. GENERAL PLANS

This section presents relevant elements of General Plans and other land use planning in the Basin as relevant to groundwater sustainability. This section focuses on planning goals and objectives that are aligned with potential groundwater management activities. In addition, this section highlights the potential for future changes in land use that may influence water demands and infiltration/recharge of the Basin.

This section summarizes the goals, objectives, policies, and implementation measures as described in the General Plans for Riverside County, Corona, and Norco which together encompass the Basin. The jurisdictional boundaries in the Basin are presented on Figure 2-2.

Applicable general plans include:

- The Riverside County General Plan- The entire Basin is within Riverside County.
- Corona General Plan - Most of the Basin is within the Corona jurisdictional boundary. Corona's General Plan includes plans and policies applicable to the entire City as well as to the City's sphere of influence.
- Norco – The northeastern portion of the Basin is within the Norco jurisdictional boundary.

The goals and policies that are water resources related are summarized as follows.

2.6.1. Riverside County General Plan

The Riverside County General Plan was adopted in 2015. The General Plan covers the entire unincorporated portion of the County and also includes 19 detailed Area Plans covering most of the County.

The Multipurpose Open Space Element of the Riverside County General Plan addresses the conservation, development, and use of natural resources including water, soils, rivers, and mineral deposits. There are a number of policies related to water supply and conveyance, water conservation, watershed management and groundwater recharge. Several of these policies are summarized in Table 2-2.

Table 2-2 Select Policies in the Riverside County General Plan

Category	Policy[(1)]
Water Supply and Conveyance	Balance consideration of water supply requirements between urban, agricultural, and environmental needs.
	Provide active leadership in the regional coordination of water resource management and sustainability efforts affecting Riverside County.
	Promote the use of recycled water for landscape irrigation.
Water Conservation	Implement a water-efficient landscape ordinance and corresponding policies.
	Seek opportunities to coordinate water-efficiency policies and programs with water service providers.
Watershed Management	Encourage wastewater treatment innovations, sanitary sewer systems, and groundwater management strategies that protect groundwater quality in rural areas.
	Minimize pollutant discharge into storm drainage systems, natural drainages, and aquifers
	Where feasible, decrease stormwater runoff by reducing pavement in development areas, reducing dry weather urban runoff, and by incorporating "Low Impact Development," green infrastructure and other Best Management Practice design measures.
Groundwater Recharge	Support efforts to create additional water storage where needed, in cooperation with federal, state, and local water authorities.
	Participate in the development, implementation, and maintenance of a program to recharge the aquifers underlying the county.
	Ensure that adequate aquifer water recharge areas are preserved and protected.
	Use natural approaches to managing streams, to the maximum extent possible, where groundwater recharge is likely to occur.
	Discourage development within watercourses and areas within 100 feet of the outside boundary of the riparian vegetation, the top of the bank, or the 100 year floodplain, whichever is greater.

Notes:
(1) The policy statements have been shortened for use in this table. The full text is included in the Riverside County General Plan.

2.6.2. City of Corona General Plan

The City of Corona's General Plan was adopted in 2004 and has a planning horizon of year 2025. The General Plan covers the 37.6 square miles within City limits and provides guidance to Riverside County for the 35.2 square miles within the Corona Sphere of Influence. The two most relevant chapters of Corona's General Plan to water resource management are the chapters on Infrastructure and Public Services and Environmental Resources. There are additional relevant policies in the Land Use and Public Health and Safety chapters as well.

Relevant policies included in the General Plan are summarized in Table 2-3.

Table 2-3 Selected Policies in the City of Corona General Plan

Category	Policy[1]
Land Use	Accommodate the types, densities, and mix of land uses that can be adequately supported by transportation and utility infrastructure (water, sewer, etc.) and public services (schools, parks, libraries, etc.)
	Require that new residential, commercial, office, and industrial development be designed to minimize consumption of and sustain scarce environmental resources through methods including using drought-tolerant species and recycled water for irrigation in landscaping, capturing rainwater and using it onsite, and using water efficient fixtures in new buildings.
Infrastructure and Utilities	Establish guidelines and standards for water conservation and actively promote use of water conserving devices and practices in both new construction and major alterations and additions to existing buildings.
	Encourage the use of recycled water by industrial, commercial, and institutional, users through the use of incentives such as differential pricing.
	Require the use of recycled water for landscaped irrigation, grading, and other non-contact uses in new developments, parks, golf courses, sports fields, and comparable uses, where feasible.
	Encourage the use of rainwater capture and storage facilities in residential and nonresidential developments.

Environmental Resources	Prohibit the discharge of toxins, debris, refuse, and other pollution into watercourses, other drainages and groundwater basins.
	Balance consideration of water supply requirements between urban, agricultural, and environmental needs so that sufficient supply is available to meet each of these different demands.
	Provide active leadership in the regional coordination of water resource management and sustainability efforts affecting Riverside County and continue to monitor and participate in, as appropriate, regional activities to prevent overdraft caused by population growth.
	Support efforts to create additional water storage where needed, in cooperation with federal, State, and local water authorities. Additionally, support and/or engage in water banking in conjunction with these agencies where appropriate, as needed.
	In cooperation with Riverside County, participate in the development, implementation, and maintenance of a program to recharge the aquifers underlying the City and SOI areas.
	Retain storm water at or near the site of generation for percolation into the groundwater to conserve it for future uses and to mitigate adjacent flooding.
	Use natural approaches to managing streams, to the maximum extent possible, where groundwater recharge is likely to occur.
	Require new private or public developments to preserve and enhance existing native riparian habitat and prevent obstruction of natural watercourses.
	Consider wetlands for use as natural water treatment areas that will result in improvement of water quality
Public Health & Safety	Promote the collection of relevant data on groundwater levels and liquefaction susceptibility, as a basis for future refinement of liquefaction policies or procedures.
	Use natural watercourses as the City's primary flood control channels, whenever feasible and practical.
	Minimize the potential risk of contamination to surface water and groundwater resources and implement restoration efforts to resources adversely impacted by past urban and rural land use activities.

Notes:
(1) Some policy statements have been shortened for use in this table. The full text is included in the City of Corona General Plan (2004).

2.6.3. City of Norco General Plan

Norco's General Plan Update was adopted in 2014. Norco's General Plan is comprised on several elements, of which Conservation is the most relevant for water resources planning. Relevant policies included in the General Plan are included in Table 2-4.

Table 2-4 Selected Policies in the City of Norco General Plan

Category	Policy[1]
Water Supply	Continue to promote water conservation through the use of xeriscape designs in new development and public spaces where feasible.
	Continue to provide information to the public on ways to conserve water and reduce consumption.
	Monitor the demand for reclaimed water and file for Petitions of Change with the SARWQCB as-needed to reduce the amount of reclaimed water that is discharged from treatment facilities and make that water available for transmission into the City's reclaimed water infrastructure system.
	Insure that there are adequate increases in water production and distribution capabilities to meet future growth demands.
Water Quality	Develop and maintain inter-agency agreements and infrastructure improvements to have back-up water supply sources from adjoining water districts during times of emergencies and system maintenance requirements.
	Continue public information campaigns to all residents with large animals to ensure awareness that manure spreading as a means of disposal is strictly prohibited to prevent contamination to groundwater supplies.

Notes:
(1) Some policy statements have been shortened for use in this table. The full text is included in the City of Norco General Plan Update (2014)

2.6.4. General Plan Influences on Groundwater Sustainability Agency Ability to Achieve Sustainability

The general plans for Riverside County, Corona, and Norco all include policies to increase water conservation and protect groundwater and surface water quality. They also include policies promoting the preservation of natural floodplains, which contributes to groundwater recharge. However, the planned growth the Basin would convert open space uses that allow groundwater infiltration to more developed land use types with more impervious cover that will likely not allow the same amount of groundwater infiltration. While the use of low impact development practices and stormwater best management practices (BMPs) that promote infiltration would help mitigate the loss of infiltration due to land use changes, future development may lead to an overall loss in groundwater recharge in the Basin.

Riverside County. The Riverside County General Plan addresses the importance of groundwater. The policies and implementation of the land use and public facilities/services elements indicate that the County role is to support and encourage local water agencies in ensuring that water supply is available. Similarly, with wastewater issues and protection of water quantity and quality, the County role is limited to encouragement of other agencies, developers, and landowners. The General Plan contains little policy to manage land use within the constraints of available water supply other than to encourage drought resistant plants and the use of recycled water.

City of Corona. Corona serves a population that is predicted to increase from 170,100 in 2020 to about 182,800 residents by 2040 (KWC 2016). Corona land use policies generally are protective of agricultural land and hillsides, and conservation policies address water efficiency, water recycling, sustainability measures, and coordination with other agencies, including the Temescal Valley Water District (TVWD).

To be added later: how land use plans could affect the ability of the GSA to achieve sustainable groundwater management over the planning and implementation horizon

2.6.5. GSP Influences on General Plans

City of Corona. Implementation of the GSP will support Corona in providing continued groundwater to its population. In addition, the GSP will ensure good quality water in sufficient quantities to serve its residents into the future, including drought periods.

Riverside County. The Riverside County General Plan generally assumes that local water agencies can ensure adequate high-quality water supplies into the future. The GSP provides additional specific information, documents potential challenges to water supply, and explores undesirable results that may occur with future increases in groundwater demand. Undesirable results will be defined with sustainability criteria, and if identified, will be addressed with management actions. These management actions may have ramifications for County land use planning. For example, GSPs are authorized within the GSP Plan Areas to impose well spacing requirements and control groundwater pumping and control extractions by regulating, limiting, or suspending extractions from individual groundwater wells. Such regulation may present a constraint on potential land uses.

Additional details regarding how GSP implementation will affect water supply assumptions of land use plans may be added later.

2.7. ADDITIONAL GSP ELEMENTS

The GSP requirements include a list of additional GSP elements from Water Code Section 10727.4 that may or may not be relevant to a GSP. As shown in Table 2-5, several of these elements are not applicable to the Basin. The elements that are applicable to the Basin, are presented in the sections below.

Table 2-5 Additional GSP Elements included in Water Code Section 10727.4

Water Code Section 10727.4 Elements	GSP Section or N/A
a) **Control of saline water intrusion**	N/A
b) **Wellhead protection areas and recharge areas**	2.7.1
c) **Migration of contaminated groundwater**	2.7.2
d) **A well abandonment and well destruction program**	2.7.3
e) **Replenishment of groundwater extractions**	N/A
f) **Activities implementing, opportunities for, and removing impediments to, conjunctive use or underground storage**	N/A
g) **Well construction policies**	2.7.3
h) **Measures addressing groundwater contamination cleanup, groundwater recharge, in-lieu use, diversions to storage, conservation, water recycling, conveyance, and extraction projects**	N/A
i) **Efficient water management practices, as defined in Section 10902, for the delivery of water and water conservation methods to improve the efficiency of water use**	2.7.4
j) **Efforts to develop relationships with state and federal regulatory agencies**	2.7.5
k) **Processes to review land use plans and efforts to coordinate with land use planning agencies to assess activities that potentially create risks to groundwater quality or quantity**	2.7.6
l) **Impacts on groundwater dependent ecosystems**	TBD

2.7.1. Wellhead Protection Areas and Recharge Areas

In 2002, Corona conducted an assessment of the vulnerability of their drinking water wells under the California Drinking Water Source Assessment Program. This program, developed by the California Department of Public Health, delineates the area around drinking water sources, such as wells, through which contaminants might reach the water supply. This assessment identified surface recharge areas in the vicinity of Corona's wells. In addition, the analysis in 2008 GWMP identified the main areas of subbasin recharge for the aquifers tapped by Corona's wells. These areas include the entire footprint of the unconfined Channel Aquifer, recharge areas along washes and alluvial fans, and areas of subsurface inflow such as Temescal Canyon and Arlington Gap (Todd 2008).

2.7.2. Groundwater Contamination Migration and Clean-up

There are several groundwater contaminated sites in the Basin that are in varied stages of remediation. The pollutants of concern for these sites include gasoline, diesel, PCE, TCE, Benzene and Xylene. The status of each site is summarized in Table 2-6.The remediation activities for contaminated sites directly over the Basin are managed and tracked by the SARWQCB. GeoTracker is the SWRCB data management system for sites that impact groundwater or have the potential to impact groundwater. GeoTracker contains sites that require groundwater cleanup and the status of required clean-up activities. In the Basin, there are a number of closed sites (clean-up activities have been completed). Currently there are 5 open sites, as shown on Figure 2-9.

Table 1. Table 2-6 Status of Contamination Sites in the Basin

Site	Contaminants of Concern	Status
ARCO #1924	Gasoline	OPEN – Eligible for closure as of 2/18/2016
Thomas Ranch (Schofield)	Benzene, other acid or corrosive, other petroleum, xylene	OPEN – Site assessment as of 8/21/1986
Dry Clean Express	Tetrachloroethylene (PCE), Trichloroethylene (TCE)	OPEN - Inactive as of 2/13/2020
Private Residence	Diesel	OPEN - Inactive as of 11/17/2017
All American Asphalt Landfill	Non Specified	OPEN – Operating as of 11/1/2014

2.7.3. Well Permitting, Construction, and Destruction Requirements

The RCDEH is responsible for issuing well permits. Permits are required for the construction and/or abandonment of all water wells including, but not limited to driven wells, monitoring wells, cathodic wells, extraction wells, agricultural wells and community water supply wells. The process includes an application by the property owner and certified well driller, and a site inspection by the County. The wells are also inspected during different stages of construction to help verify standards are being met. All drinking water wells are evaluated once they complete installation to ensure they comply with State well standards and meet minimum drinking water standards. If found in compliance, the homeowner is issued a clearance letter authorizing their use.

Corona and Norco have not developed their own well construction standards, but do require compliance with DWR standards and RCDEH standards.

Through their Water Engineering Program, Riverside DEH requires that a permit be obtained for the abandonment of any well in the County (Riverside DEH 2020). Guidance for well abandonment procedures are consistent with the standards developed by DWR and included in the California Water Code (§ 13800 through 13806) for drilling and destroying wells in California. The 2008 GWMP recommended increased coordination with RDEH Water Engineering Program regarding well abandonment procedures.

2.7.4. Efficient Water Management Practices

Corona and Norco encourage and facilitate efficient water management practices, which are discussed at a high level in each city's General Plans (Corona 2004 and Norco 2014). In addition, specific water conservation targets and demand management measures, including metering, conservation pricing, public education, water loss auditing, and other water

conservation program activities, are documented in each city's 2015 Urban Water Management Plans (KWC, 2016 and Blais 2016). As documented in Section 2.5.7 of this GSP, Corona and Norco have both met and exceeded their 2020 water efficiency goals as of 2015 with per capita water uses of 163 and 246 gpcd, respectively.

Water conservation reduces reliance on potable water supplies, including groundwater. Thus increasing water conservation through the implementation of water efficiency practices may reduce groundwater pumping and promote sustainable groundwater management.

2.7.5. Relationships with State and Federal Agencies

The Temescal Groundwater Sustainability Authority (Temescal GSA) has developed a stakeholder list, which includes local groups, State agencies and Federal agencies. These stakeholders represent a variety of interests and perspectives. Additionally, the stakeholder group brings a variety of expertise, including holders of groundwater rights, public water systems, land use planning agencies, regulatory agencies, etc. These stakeholders have been engaged throughout the development of this GSP to provide them with information about the purpose of the GSP, educate about the groundwater basins characteristics, and obtain input on sustainability goals and management actions.

To be updated as-needed upon completion of stakeholder list.

2.7.6. Land Use Plan Coordination

Land use planning agencies have been invited as stakeholders to the GSP planning process. The GSA recognizes the importance of the natural recharge areas, where stormwater is recharged into the groundwater basin.

To be updated as-needed upon completion of stakeholder list and engagement with land use planning agencies.

2.8. NOTICE AND COMMUNICATION

The GSA has developed a Stakeholder Outreach Plan (Outreach Plan) per SGMA requirements, and it is included in Appendix D. The Outreach Plan outlines the communication methods and strategies the GSA will employ to most effectively engage and involve stakeholders throughout GSP development and SGMA implementation.

The Outreach Plan addresses:

- Inform all stakeholders of the GSP development process, including purpose, opportunities and issues, core recommendations, and timeline.
- Provide meaningful opportunities for stakeholders and the public to learn, ask questions, and provide input.
- Involve the many diverse communities and stakeholders of Corona, Norco, and Home Gardens, recognizing that different approaches may be needed to reach

specific populations like Disadvantaged Communities, and flexibility and adaptation in approach may be required.

- Ensure a transparent process where stakeholders and the public can understand what important discussions are taking place, how they can participate in them, and how input is being used.

Appendix D includes information on outreach activities conducted throughout the GSP development process.

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FIGURES

Please note that the figures in this section include maps that are designed for printing at 11x17 inches.

We recommend printing the pdf through Adobe Acrobat and selecting *Actual Size* and *Choose paper source by PDF page size*.

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CHINO SUBBASIN
Cucamonga Creek
Santa Ana River
CITY OF NORCO
RIVERSIDE-ARLINGTON SUBBASIN
91
CITY OF CORONA
COASTAL PLAIN OF ORANGE COUNTY
Padro Dam
Wardlow Wash
TEMESCAL WASH
15
HOME GARDENS COUNTY WATER DISTRICT
TEMESCAL SUBBASIN
Lake Mathews
Main Street Wash
CITY OF CORONA
RIVERSIDE COUNTY
ORANGE COUNTY
CITY OF CORONA SPHERE OF INFLUENCE
BEDFORD-COLDWATER SUBBASIN
Coldwater Canyon
Elsinore Subbasin

- Streams
- Highways
- Major Streets
- Minor Streets
- Water Body
- Cities
- County Boundary
- City of Corona Sphere of Influence
- Temescal Basin GSP Area
- Coastal Plain of Orange County Basin
- Bedford-Coldwater Subbasin
- Chino Subbasin
- Elsinore Valley Subbasin
- Riverside-Arlington Subbasin

Data Sources:
Cal-Atlas, DWR Bulletin 118, National Hydrography Dataset, SAWPA

Disclaimer:
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Figure 2-1
Temescal Basin GSP Area

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TODD GROUNDWATER

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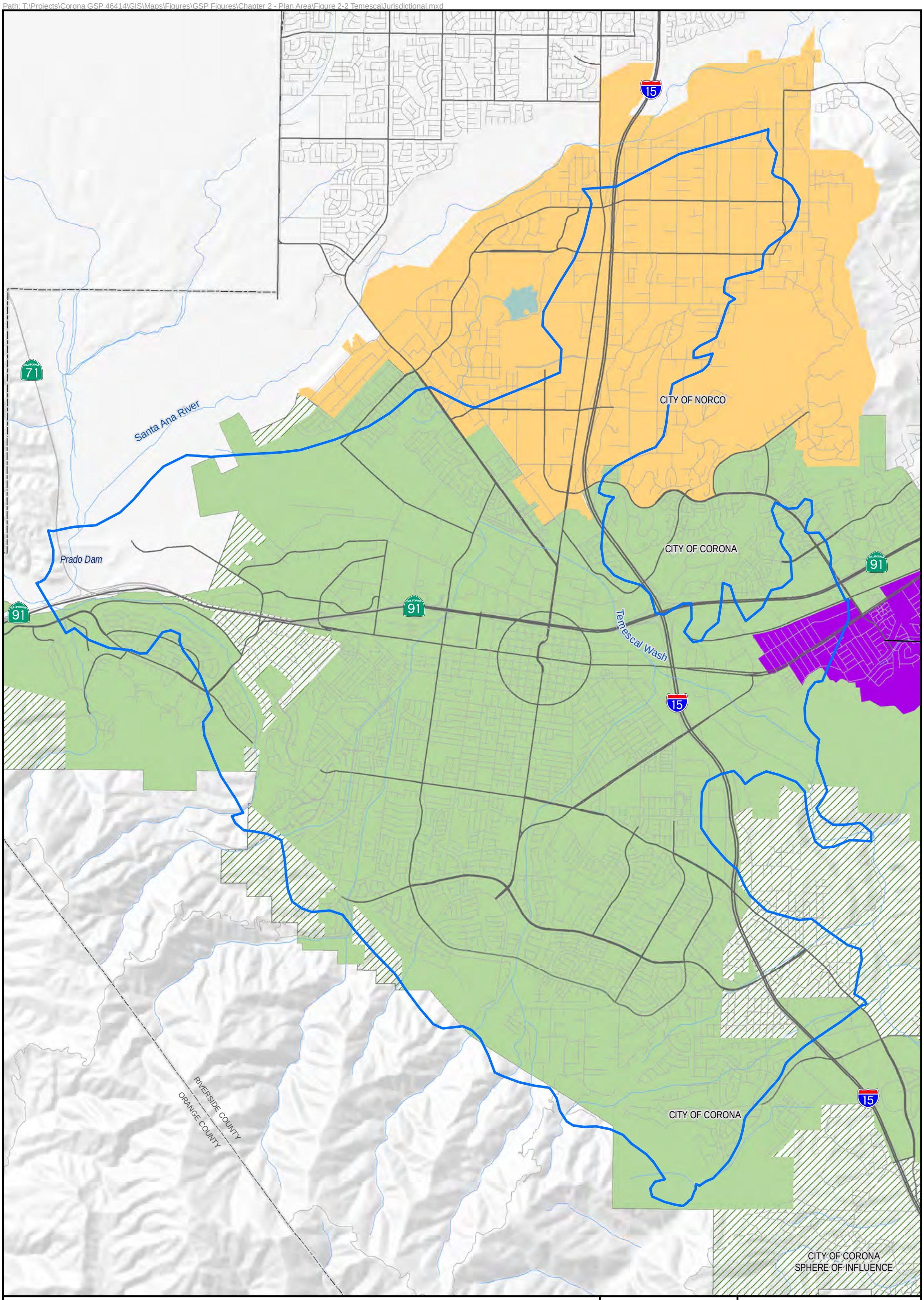

- Highways
- Major Streets
- Minor Streets
- Streams
- Temescal Basin
- City of Corona
- City of Norco
- Home Gardens County Water District
- City of Corona Sphere of Influence
- County Boundary
- Waterbody

Data Sources:
Cal-Atlas, DWR Bulletin 118, National Hydrography Dataset, SAWPA

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Figure 2-2
Jurisdictional Areas

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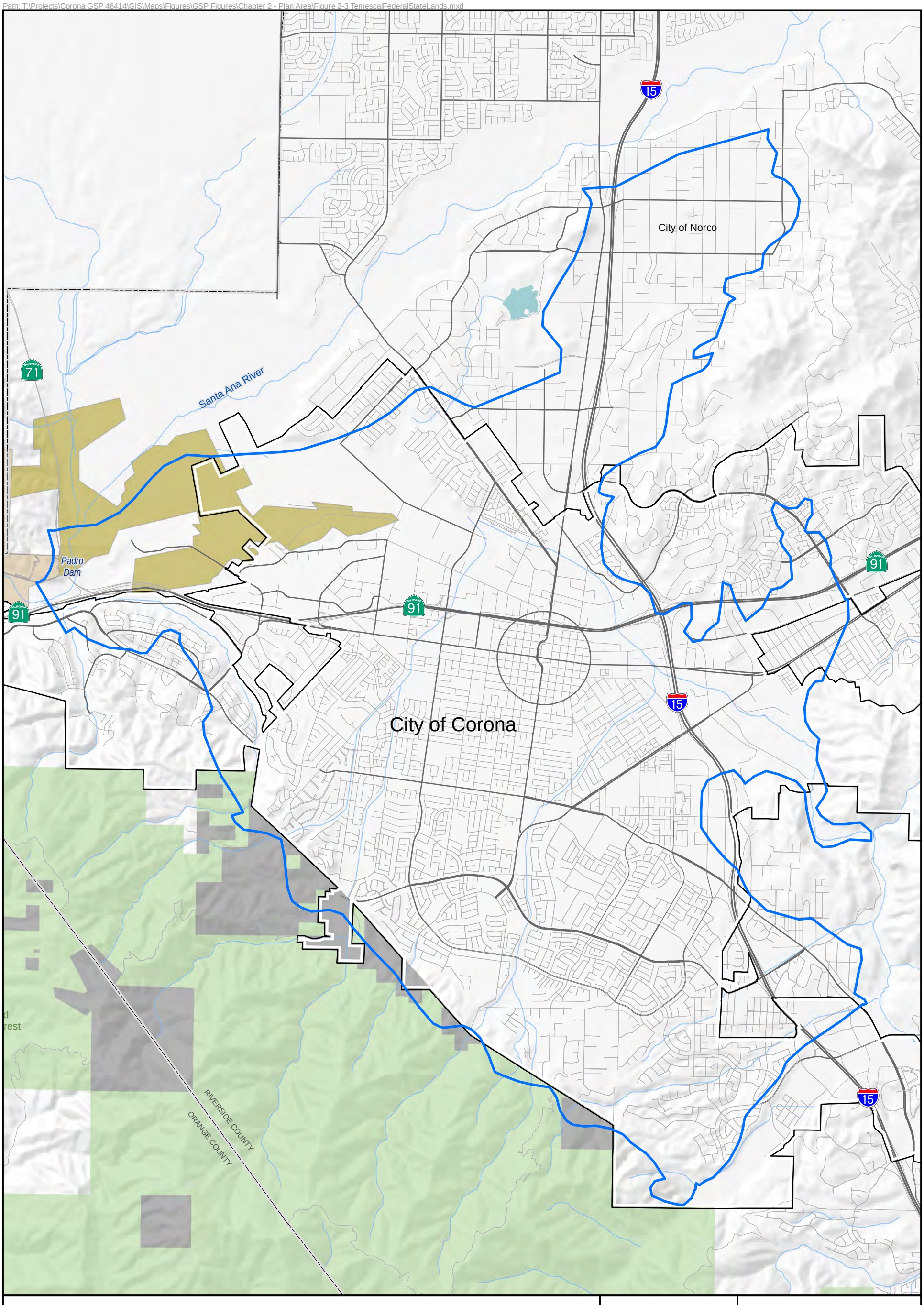

Department of Defense
State of California
Federal Lands - Non-Forest Service Land within USFS
Federal Lands - US Forest Service
Temescal Basin
Riverside County

Data Sources:
EVMUD, Cal-Atlas, DWR Bulletin 118, BLM

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Figure 2-3
Federal and State Lands

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RIVERSIDE COUNTY
ORANGE COUNTY

Domestic Wells by Section

- 1 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- Temescal Basin

Data Sources:
Cal-Atlas, DWR Bulletin 118, National Hydrography Dataset

Disclaimer:
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Figure 2-5a
Basin Domestic Groundwater Wells in Basin

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RIVERSIDE COUNTY
ORANGE COUNTY

Production Wells by Section

- 1 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- Temescal Basin

Data Sources:
Cal-Atlas, DWR Bulletin 118, National Hydrography Dataset

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Figure 2-5b
Basin Production Groundwater Wells in Basin

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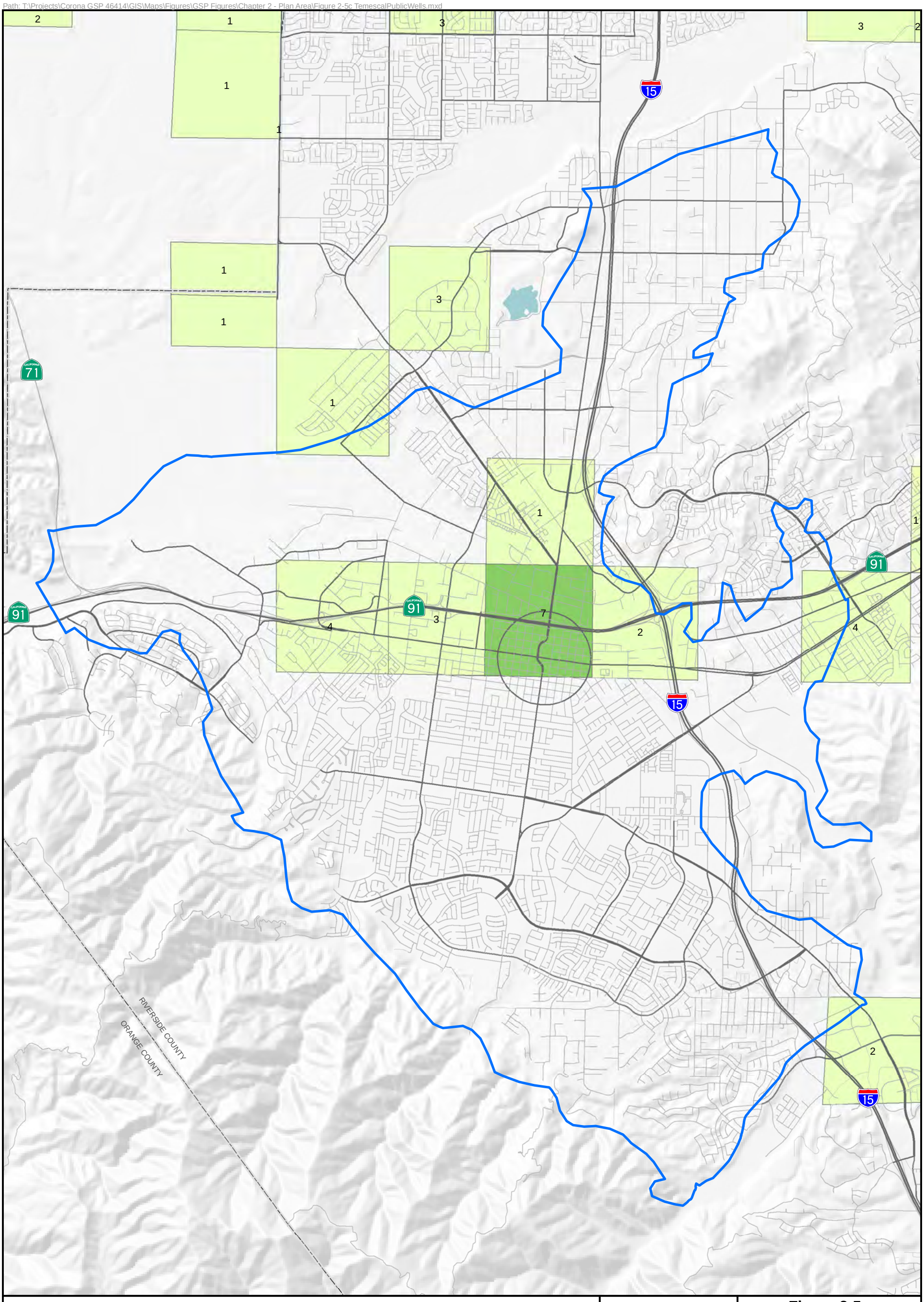

Public Wells by Section

- 1 - 5
- 6 - 10
- 11 - 15
- 16 - 20
- Temescal Basin

Data Sources:
Cal-Atlas, DWR Bulletin 118, National Hydrography Dataset

Disclaimer:
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Miles

Figure 2-5c
Basin Public Groundwater Wells in Basin

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TODD GROUNDWATER

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RIVERSIDE COUNTY

ORANGE COUNTY

All Wells by Section

- 1 - 10
- 11 - 20
- 21 - 40
- 41 - 80
- Temescal Basin

Data Sources:
Cal-Atlas, DWR Bulletin 118, National Hydrography Dataset

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Figure 2-5d
All Basin Groundwater Wells

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TODD GROUNDWATER

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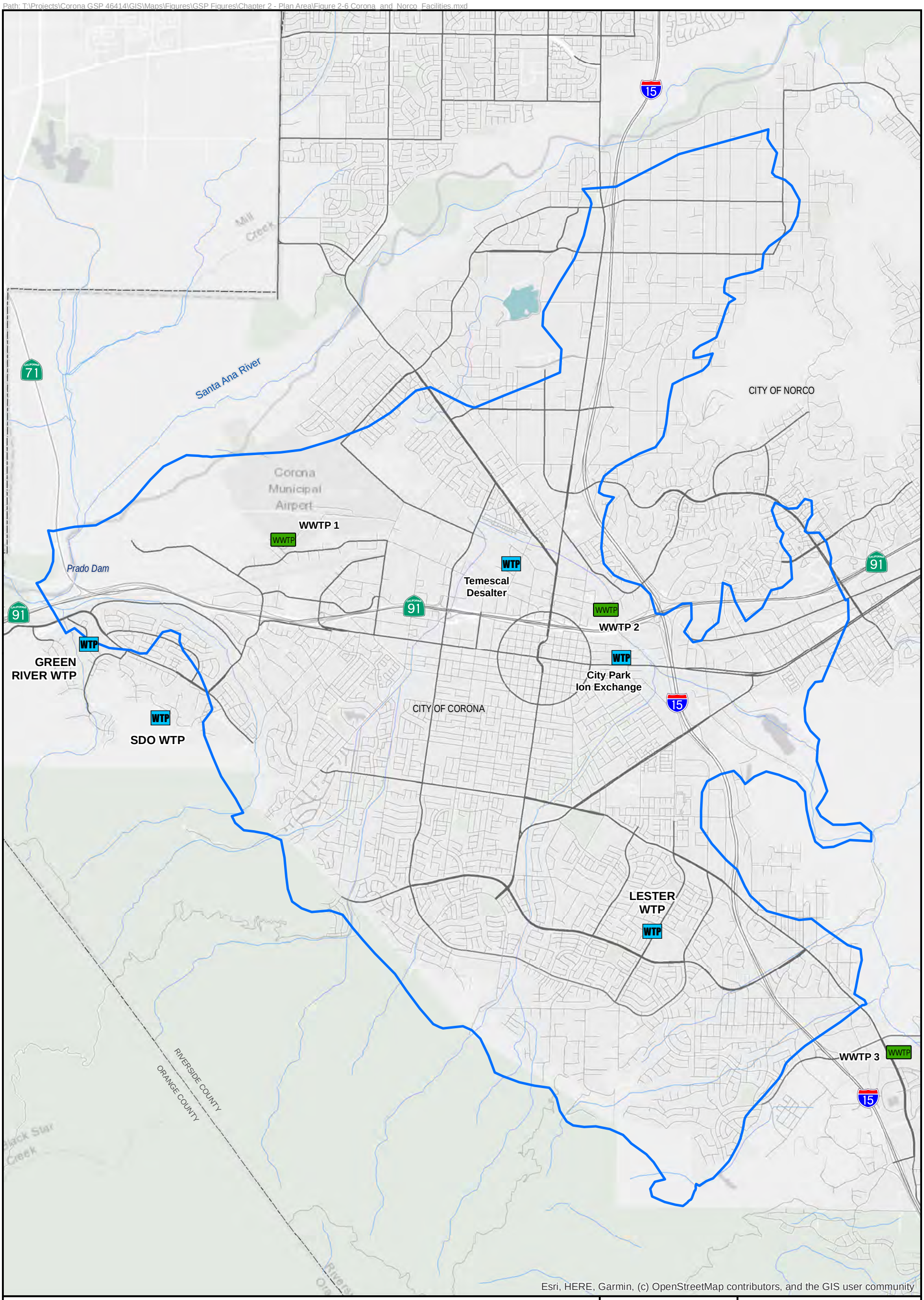

WTP Water Treatment Plant

WWTP Wastewater Treatment Plant

Temescal Basin

Data Sources:
Cal-Atlas, DWR Bulletin 118, National Hydrography Dataset, SAWPA

Disclaimer:
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Figure 2-6
Corona and Norco Facilities

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Data Sources:
Cal-Atlas, DWR Bulletin 118, SCAG

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RIVERSIDE COUNTY
ORANGE COUNTY

Existing Land Use (SCAG, 2016)

- Agriculture
- Commercial
- Industrial
- Military Installations
- Mixed Residential; Mixed Use
- Mobile Homes and Trailer Parks
- Multi-Family Residential
- Open Space/Recreation
- Public
- Rural Residential
- Single Family Residential
- Specific Plan
- Transportation/Utilities
- Undevelopable/Protected
- Under Construction
- Unknown
- Vacant
- Water
- Temescal Basin

N

0 0.5 1
Miles

Figure 2-7
Existing Land Use

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Path: T:\Projects\Corona GSP 46414\GIS\Maps\Figures\GSP Figures\Chapter 2 - Plan Area\Figure 2-8 Temescal_LU_1984.mxd

Data Sources:
DWR Bulletin 118, FMMP

Disclaimer:
Features shown in this figure are for planning purposes and represent approximate locations. Engineering and/or survey accuracy is not implied.

RIVERSIDE COUNTY

ORANGE COUNTY

1984 Land Use

- Urban
- Grazing Land
- Agricultural Areas
- Water
- Native

Temescal Basin

N

0 0.5 1

Miles

Figure 2-8
1984 Land Use

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CHINO SUBBASIN

Santa Ana River

Prado Dam

ARCO #1924

PRIVATE RESIDENCE

DRY CLEAN EXPRESS

THOMAS RANCH (SCHOFIELD)

COASTAL PLAIN OF ORANGE COUNTY

TEMESCAL SUBBASIN

ALL AMERICAN ASPHALT LANDFILL, CORONA-INERT

RIVERSIDE-ARLINGTON SUBBASIN

BEDFORD-COLDWATER SUBBASIN

RIVERSIDE COUNTY

ORANGE COUNTY

Groundwater Contamination Sites

- Open - Eligible for Closure
- Open - Inactive
- Open - Operating
- Open - Site Assessment

Temescal Basin

Data Sources:
Cal-Atlas, DWR Bulletin 118, National Hydrography Dataset, CA GeoTracker

Disclaimer:
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N

0 0.5 1

Miles

Figure 2-9
Groundwater Contamination Sites

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