

SECTION 1: INTRODUCTION

The City of Calexico is home to about 40,000 people. The City's water department provides water service to an area of roughly 8 square miles via 8,300 metered connections.



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INTRODUCTION

In accordance with the Water Code, an Urban Water Management Plan is required to be updated every five years.

1.1 PURPOSE AND SUMMARY

This is the 2015 Urban Water Management Plan (“UWMP” or “Plan”) for the City of Calexico (hereinafter “City”). This plan has been prepared in compliance with the Urban Water Management Planning Act (Act), which has been codified at California Water Code sections 10610 through 10657 and can be found in **Appendix B** to this 2015 UWMP.

As part of the Act, the legislature declared that waters of the state are a limited and renewable resource subject to ever increasing demands; that the conservation and efficient use of urban water supplies are of statewide concern; that successful

implementation of plans is best accomplished at the local level; that conservation and efficient use of water shall be actively pursued to protect both the people of the state and their water resources; that conservation and efficient use of urban water supplies shall be a guiding criterion in public decisions; and that urban water suppliers shall be required to develop water management plans to achieve conservation and efficient use.

The Act requires “every urban water supplier providing water for municipal purposes to more than 3,000 customers or supplying more than 3,000 acre-feet of water annually, to prepare and adopt, in accordance with prescribed requirements,



an urban water management plan.” These plans must be filed with the California Department of Water Resources (DWR) every five years describing and evaluating reasonable and practical efficient water uses, reclamation, and conservation activities. (See generally Wat. Code § 10631).

The Act has been amended on several occasions since its initial passage in 1983. Recent amendment to the Act per SBx7-7 require that per capita water use within an urban water supplier's service area must decrease by 20 percent by the year 2020 in order to receive grants or loans administered by DWR or other state agencies. The legislation sets an overall goal of reducing per capita urban water use by 20 percent by December 31, 2020. The state shall make incremental progress towards this goal by reducing per capita water use by at least 10 percent by December 31, 2015. Each urban retail water supplier shall develop water use targets by July 1, 2016. Effective 2016, urban retail water suppliers who do not meet the water conservation requirements established by this bill are not eligible for state water grants or loans.

In short, this Plan is a management tool, providing a general, long-term framework for action, rather than a detailed blueprint for supply and demand management. This Plan explores whether there will be enough

water for the City in future years, and what mix of programs should be explored for making this water available. Water management in California is not a matter of certainty, and planning projections may change in response to a number of factors. As part of the City's past and current sustainability goals, the City is currently implementing all facets of this plan to achieve its water conservation & sustainability goals.

1.2 COORDINATION

In preparing this 2015 Plan, the City has encouraged broad community participation. Copies of the City's draft plan were made available for public review at the City's office. The City noticed a public hearing to review and accept comments on the draft plan with more than two weeks in advance of the hearing. The notice of the public hearing was published in the local press and on the City's website. On May 17 2017, the City held a noticed public hearing to review and accept comments on the draft plan. Notice of the public hearing was published in the local press. Following the public hearing, the City adopted the 2015 Plan on May 17 2017 via Council resolution. A copy of the council resolution adopting this UWMP is included in **Appendix A**.

The City's 2015 UWMP is a collaborative effort involving its own staff, outside agencies, and the general public.



**Table 1.1
Coordination and Public Involvement**

	Participated In Plan Preparation	Notice of Preparation*	Commented on Draft	Notified of Public Hearing**	Attended Public Hearing
City Staff	x	x	x	x	x
Imperial County Staff		x			
Imperial Irrigation Dist.		x			
City of Brawley		x			
City of El Centro		x			
City of Imperial		x			
Interested General Public		X		x	x

*60-Day Notification as required by CWC § 10621(b) **2-week and 1-week notices as required by CWC § 10642

As required by the Act, the 2015 UWMP is being provided to DWR, the California State Library, the County, and the public within 30 days of adoption. The 2015 UWMP is also available on the City’s website: <http://www.calexico.ca.gov/> and DWR’s website: <https://wuedata.water.ca.gov/>

1.3 DWR UPDATES TO THE UWMPs

There have not been any significant changes to the Water Code affecting the 2015 UWMPs (relative to SBx7-7 for the 2010 UWMPs). However, there have been several updates to the UWMP Act affecting the 2015 UWMPs as follows:

- **Demand Management Measures (DMMS):** Updates to the DMMs (CWC § 10631 (f) (1) & (2) AB 2067, 2014)

- **Submittal Date:** Extended Submittal Date (CWC § 10621 (d) (1) & (2) AB 2067, 2014)
- **Electronic Submittal:** New Submittal Format to DWR (CWC § 10644 (a) (2) SB 1420, 2014)
- **Standardized Forms:** Use DWR Standardized Forms (CWC § 10644 (a) (2) SB 1420, 2014)
- **Water Loss:** New Submittal Format to DWR (CWC § 10631 (e) (1) (J) and (e) (3) (A) and (B) SB 1420, 2014)
- **Estimating Future Water Savings:** Water Use Projections to Assume Water Savings Per Appendix K (CWC § 10631 (e) (4) SB 1420, 2014)
- **Voluntary Reporting of Energy Intensity:** Energy to Produce Water (CWC § 10631.2 (a) (b) SB 1036, 2014)



- **Defining Water Features:** Water features must be defined. (CWC § 10632 (b) SB 2049, 2010)

Of the above, the changes to the DMMs are the most significant update affecting the 2015 UWMPs. AB 2067 and SB 1420, which amended the DMMs, mark a continued focus on water use reduction strategies. AB 2067 and SB 1420 not only change the amount of DMMS required (consolidated from 14 DMMS to 7 DMMs), but also require reporting requirements on the DMMs.

In addition to the above, there are several optional or voluntary categorical and data reporting changes to the UWMP Act. These include optional categories of Climate Change, Energy Intensity, Passive Savings, as well as various optional data reporting.

1.4 UPDATES TO THE CITY'S UWMP

In addition to general updates described in the previous section, the City's 2015 UWMP has undergone several changes from the 2010 UWMP. A summary of the key changes to the UWMP are as follows:

- **New Format:** Format of the UWMP has been changed to include a new look and new arrangement of sections to be in a more logical order. The new arrangement also helps the discussion of certain topics which precede other

topics. See **Section 1.5** for the format of this 2015 UWMP.

- **DWR & Water Code:** A listing of DWR-required UWMP updates (see previous Section).
- **City/Water History:** A broader, more in-depth look at the City's history
- **City Development Growth:** An updated look at development which took place in the City since the 2010 UWMP.
- **Water Sources and Supplies:** A broader, more in-depth discussion of water sources and supplies.
- **Recycled Water:** An updated look on recycled water opportunities for the Imperial Valley Region and the City.
- **Water Quality:** A broader, more in-depth discussion of water quality and treatment.
- **Water Use:** Updated information on recent water use quantities and a deeper discussion on water use parameters. Also, an updated look at SBx7-7 targets.
- **Supply v Demand:** Updated information on projected supplies vs demands, and a discussion on recent regional droughts affecting the City. There is also an expansion on the discussion of the City's source water reliability.



- **Conservation Measures:** Updated information on the City's conservation measures, including new CUWCC BMP categories and DWR's new list of DMMS. Also, a discussion on the City's current standing with CUWCC.
- **Contingency Planning:** Updated information on the City's contingency plans, including the City's Ordinances.

In addition to the above changes, there are multiple minor changes. The changes reflect both those that are required by the Water Code and those that are voluntarily included for the benefit of the City.

1.5 FORMAT OF THE 2015 UWMP

The sections and information contained in this 2015 UWMP correspond to the items in the UWMP Act and other amendments to the Water Code, including the Water Conservation Act of 2009 (SBx7-7), as follows:

Section 1 - Introduction

This section describes the UWMP Act, the UWMP preparation and adoption process, the history and development of the City and the City's water supply system, a description of its existing service area, the local climate, population served, and some basic statistics on the City's water distribution system.

Section 2 – Water Sources & Supplies

This section describes the existing potable water supplies available to the City, including imported water from Imperial Irrigation District's All-American Canals (All-American and Central Main Canal). In addition, this section evaluates potential future water supply sources.

Section 3 – Recycled Water Opportunities

This section discusses potential recycled water supplies, an assessment of potential customers, and methods to expand the use of recycled water.

Section 4 – Water Quality

This section discusses the quality of the City's potable water supply sources, including imported, surface, and groundwater. This section also discusses drinking water standards and the effect that water quality has on management strategies and supply reliability.

Section 5 – Water Use

This section describes past, current and projected water usage within the City's service area. This chapter also discusses the requirement of the SBx7-7.



Section 6 – Reliability Planning

This section presents an assessment of the reliability of the City’s water supplies by comparing projected future water demands with expected available water supplies under three different hydrologic conditions: normal year; a single dry year; and multiple dry years. This 2015 Plan concludes that if projected imported and local supplies are developed as anticipated, no water shortages are anticipated in the City’s service area during the planning period.

Section 7 – Conservation Measures

This section addresses the City’s compliance with water conservation measures as a member of the California Urban Water Conservation Council (CUWCC) with the current Best Management Practices (BMPs). The BMPs correspond to 7 Demand Management Measures (DMMs) described in the 2015 UWMP Guidebook, which were previously the 14 DMMs listed in the Act.

Section 8 – Contingency Planning

This section describes the City’s response plan to water shortages, as well as those efforts that will be utilized in the event of water supply interruptions, such as power outages, earthquakes, or droughts. This section also describes regional response efforts to water supply interruptions.

Appendices

The appendices contain references and specific documents that contain reference data used to prepare this 2015 Plan.

1.6 CITY AND WATER SYSTEM HISTORY

Current City Structure

Currently, the City of Calexico is a general-law City per the State of California Govt Code § 34102. Per the US Census Bureau, the City qualifies as an “urban area”, but falls under the “urban cluster” category which covers small to mid-size cities (see **Section 1.9**). The City of Calexico operates under a City Council/City Manager form of government. The City Council consists of five Council Members elected to four year terms. The City Manager, who serves on behalf of the City Council, runs the day-to-day operations of the City. Under the City’s Manager’s general oversight, the City’s Public Works Director runs the Public Works Department, which includes the City’s Water System.

City History

The City Calexico began as a tent city of the Imperial Land Company, was founded in 1899, and incorporated in 1908. The Imperial Land Company laid out the towns of Calexico, Heber, Imperial, and Brawley as well as Mexicali. The Imperial Land



Company was essentially a land colonization company, working in conjunction with the California Development Company to provide the workforce to develop the region into a productive year-round agriculture land.



Figure 1.1: City of Calexico (Early 1900s)

In the early days of the Imperial Valley, water was imported by rail from Coachella Valley, severely limiting habitation in the area. The initial efforts for the Imperial Valley canal system began as early as 1859, but did not materialize in part due to the Civil War and funding needs. When it became known that the area was going to be developed, many people moved into and bought property in the Imperial Valley. Five townsites were surveyed (including the City of Calexico). The formation of the California Development Company in 1894, and the establishment of its headquarters near the border with Mexico, helped paved the way for settlers to begin forming in Calexico. The California Development Company helped fund the construction of the initial canal (the Imperial Canal), through the assessment of shares to landowners in

mutual water companies, assuring their rights to delivery of water to their parcels, and raising money for the construction of the canals. Thus, dredging began in 1900 and construction on the first canal (the Imperial Canal) was completed in 1901. However, after the initial construction of the Imperial Canal, problems soon arose with the canal's design which caused the California Development Company to become defunct. In 1905, flooding and silt formation in the Imperial Canal allowed for the entirety of the Colorado River to flow into the Canal, flooding nearby farms and leading to the formation of the Salton Sea. It took nearly two years for the flooding to be mended and for the Colorado River to return to its natural formation. In 1908, the California Development Company went into bankruptcy and the Southern Pacific Railroad received all remaining assets from the company.



Figure 1.2: Colorado River Flooding in 1906

The initial development of the City and the surrounding Imperial Valley region was due in large part to the construction of the Imperial Canal and the promise of more canals



Figure 1.3: Calexico Border Crossing (1929)

to come. In 1903, the townsite of Calexico was plotted and lot-lines were laid out. With the Imperial Canal still providing service to the Imperial Valley Region, in April of 1908, the City of Calexico formally incorporated. Soon after, the City Calexico advanced steadily towards urbanization. Money raised by the issuance of bonds starting in 1909 provided the basis for the paving of streets, building wide, substantial concrete walks, providing a water system and a sewer system. With the dissolution of the California Land Company, the City's continued growth over the next several decades was largely tied to the formation of the Imperial Irrigation District.

The Imperial Irrigation District (IID) was

formed in 1911 under the California Irrigation District Act to acquire the properties of the bankrupt California Development Company. IID was formed as a public agency, acquiring 13 mutual water companies in the valley which had developed and operated water distribution canals. IID took over where the California Development Company left off and was involved in the planning and construction of a replacement for the Imperial Canal. The replacement, which was to eventually become known as the All-American Canal, did not immediately take place (due to funding needs). Instead, the All-American Canal's construction was tied into the funds for the construction of the Hoover Dam, which was authorized in 1928 as part of the



Figure 1.4: Construction on One of the Branches of the All-American Canal (1930s)

Boulder Canyon Project Act. Construction of the All-American Canal began shortly after the approval of the Boulder Canyon Project Act, and lasted through all of the 1930s (see **Figure 1.4** above) and into the 1940s. The length of construction was due in part to the distance of the canal to urban areas which made the transportation of materials, equipment, and labor difficult. The All-American Canal was completed in 1942 and helped to sustain the Imperial Valley's and the City's continued growth as an agricultural town. Today, the Imperial Valley is one of the most productive agricultural areas in the world, with over 530,000 acres (800 square miles) of highly productive farmland, thanks to 1,600 miles of canals and 1,400 miles of drains, despite

its arid climate. To this day, land immediately surrounding the City has remained an agricultural powerhouse.

Much of Calexico's recent growth, however, can be attributed to the presence of the maquiladora manufacturing plants across the U.S./Mexico International Border in Mexicali, Mexico. The maquiladoras provide labor-intensive manufacturing services for U.S. based industries and are becoming more attractive to U.S. businesses trying to remain competitive.

1.7 CURRENT WATER SERVICE AREA

The City's Water Department is responsible for providing water services to its



certificated water service area which coincides with the City's jurisdictional boundaries. Part 1 of the City's Public Works Department's Mission is to:

“Develop and maintain public facilities and infrastructure effectively and efficiently including the water system, wastewater system, storm drainage system, streets and road system, sidewalk systems, parks system, publicly landscaped areas, airport, municipal buildings and facilities.”

With no wholesale customers, the City is a retail-only water agency and maintains residential, commercial, and industrial customers. The City bills its customers on a monthly basis for water service. Currently, the City covers an area of about 8.3 square miles. The City's westerly border consists of the All-American Canal and the UPRR Tracks; the northerly border consists of Jasper Road; the easterly border consists of East Rivera and Central Drain Three; and the southerly border consists of the international boundary line with Mexico. The City's limits are shown in **Figure 1.9** of this Section.

Additionally, the County of Imperial has identified a “Sphere of Influence” for the City which extends a bit further beyond the City's current jurisdictional boundaries (see yellow lines in **Figure 1.9**). As the City continues to develop, the City will likely at some point absorb these areas into its

jurisdictional boundaries and thus provide water service to this expanded area.

1.8 LAND USE & ECONOMY

Current Land Use in County

The City of Calexico is one of seven incorporated cities located in Imperial County, a little under 2 hours east of San Diego. Imperial County encompasses an area of 4,597 square miles or 2,942,080 acres, and is bordered on the west by San Diego County, on the north by Riverside County, on the east by the Colorado River, and on the south by 84 miles of the International Boundary with Mexico. Nearly one-fifth of the total acreage in Imperial County is irrigated for agricultural purposes, most notably the area known as the Imperial Valley. The developed area within the Imperial Valley represents less than one percent of the total amount of land. Urban land uses within the Imperial Valley consist of cities, prisons, a military base, power plants, and industrial users. Approximately seven percent of the Imperial Valley consists of the Salton Sea. According to a 2015 County Report, about 535,000 acres (836 square miles) were used for agriculture in 2015 (up from 509,000 acres in 2014).

In Imperial County, there is about thirty times more agricultural land than developed land.



Economics

Overall, Imperial County’s agricultural production consisted of more than 120 types of crops. In addition, a number of feedlots and dairies located in the Valley have significant economic impact. In fact, according to a 2015 County Report, livestock accounted for the highest-ranking value at over \$500 million gross for 2015. Total 2015 Agricultural and Livestock production in Imperial County was just under \$2 billion.



Figure 1.5: Dairy Production in Imperial County

In addition to agricultural and livestock production, the County has a substantial manufacturing economy. According to recent Census statistics for 2014-2015, total manufacturing production is estimated to be about \$1.5 billion.

Table 1.2 on the following page provides some basic statistics on current land use and economy for Imperial County and the City of Calexico.

Land Development in County

The Imperial County General Plan, updated October 2015, identifies urban areas surrounding the incorporated cities of Brawley, Calexico, Calipatria, El Centro, Imperial, Holtville, and Westmorland. Per the Plan, five (5) Specific Plan Areas within IID’s service area and one (1) outside of IID’s service area are designated for possible development. The Specific Plan Areas are shown in **Figure 1.8** in this Section. Two of the Specific Plan Areas will affect the City in some capacity due to proximity. Namely, the Gateway of the Americas Specific Plan and the Heber Specific Plan. These two plans will potentially add up to 6,500 acres of residential, commercial, and industrial development within only a few miles of the City. In addition to the larger developments, there are four (4) other smaller-scale specific plans designated for possible development.

The County of Imperial has identified two developments adjacent to the City in the near future.

Some of these designated urban areas are already in development. Some of these designated areas could possibly be completed in the near future.

Due to contractual restrictions related to IID’s Colorado River entitlement, total farmable acres should remain fairly constant with only possible minor fluctuations



Table 1.2
Current Land Use & Economic Statistics (Imperial County & City of Calexico)

Land: Total (sq. miles)		
Item	Imperial County	City of Calexico
Land Area	4,176.60	8.39
Land: Irrigated/Agriculture (acres)		
Item	Imperial County	City of Calexico
Total Agricultural Land	534,328	1,455 (City) 3,200 (Sphere of Infl.)**
Land: Developed (acres)		
Item	Imperial County	City of Calexico
Incorporated	9,274	5,296 (City Limits)
Unincorporated	8,754	3,006 (sphere of influence)
Total	18,028	8,302
Land: Other (acres)		
Item	Imperial County	City of Calexico
Other Land (non-agricultural/un-developed)	2,177,884 (various)	1,455 (open space incl. parks)*
Housing		
Item	Imperial County	City of Calexico
Total Housing Units	56,067	10,800 (City Limits)
Median Home Price	\$151,600	\$176,250
Owner Occupancy Rate	55.5%	50.8%
Total	18,028	8,302
Economy: Labor Force		
Item	Imperial County	City of Calexico
Employed	62,500	12,551
Unemployed	14,500	3,383
Total	77,000 (53% of pop.)	15,934 (55% of pop.)
Economic: Production/Revenue		
Item	Imperial County	City of Calexico
Manufacturing	\$1.47 Billion	N/A
Agriculture/Crops	\$1.93 Billion	N/A
Retail & Wholesale Sales	\$3.28 Billion	\$849 million

*Per 2015 City of Calexico General Plan

**Agricultural Land Identified Only (Not Currently in Use)



over the foreseeable future. However, trends in land use point to an increase in the development of existing urban areas to provide residential capacity for an increased population (as is evidenced by the aforementioned Specific Plan Areas). With development of existing urban areas, increases in service-infrastructure (utilities) will follow. Even so, total urban land use in the coming years will remain small in comparison to agriculture land use within the Imperial Unit.

City Land Use & Development

Data derived from the City’s 2015 General Plan identifies that land use within the City’s limits consists of the following:

- 1,128 acres zoned for residential uses
- 160 acres zoned for commercial uses
- 85 acres zoned for industrial use
- 257 acres zoned for Airport
- Remaining acres zoned for Public Facilities/Parks and Open Space

The remaining acreage is allocated to residential specific plans either within the City’s limits or within the City’s sphere of influence.

Although the City rapidly expanded from 1990 to 2010, with population more than doubling during that time, the City has only

experienced mild development from 2010 to 2016, due in part to the economic downturn from 2008 to 2012. The only new finished developments in the City since the 2010 UWMP involved some single and multi-family homes located in between Rancho Frontera Ave. and Meadows Rd. south of Cole Blvd. (see **Figures 1.11 & 1.12**). The new developments are listed in **Table 1.3** below:

Table 1.3
Recent Developments Since 2010 UWMP

Zone	Development
Residential	Meadow Townhomes (off Meadows Dr.) 1.7 acres
Residential	Via Del Sol Apts. (off Meadows Dr.) 3.1 acres
Residential	Villa Dorada (off Meadows Dr.) 3.9 acres
Residential	Calexico Family Apts. (off Meadows Dr.) 3.7 acres
Residential	Villa D. L. Flores Sr. Apts. (off Meadows Dr.) 3.0 acres
Commercial	Calexico Gardens Mall (off Cole Blvd.) 1.0 acre
Total	6 Developments 16.4 acres

In addition to the completed developments listed above, there is current construction on a second part of the Via Del Sol Apartments which should be completed



soon, if not already. **Table 1.4** below provides the details of the current development.

**Table 1.4
Developments Currently Under Construction***

Zone	Development
Residential	Via Del Sol Apts. (off Meadows Dr) 2.7 acres

**Possibly completed as of the recording of this UWMP*

Besides the recent and current development, the City is planning for future development to take place in the City. The City’s 2015 General Plan identifies the following approved or projected developments within the City limits:

**Table 1.5
Approved Developments (2015 Gen. Plan)**

Zone	Development
Residential	6,857 (units) 908 (acres)
Commercial	108 (acres)
Industrial	98 (acres)
Total	1,114 (acres) 1.74 (sq. miles)

Thus, the foreseeable land use will consist of 2,036 acres allocated to housing, 268 acres allocated to commercial use, and 183 acres allocated to industrial use.

The 2015 General Plan recognizes that most, or at least a portion of this planned

development listed above, will take the place of land currently designated as agricultural land. The Agricultural Element of the 2015 General Plan lists both conversion and preservation of agricultural land as the City’s objectives in order to preserve agricultural lands for the longest period possible while also meeting the needs of its community.

Other Development Near City

One of the key items affecting the City is the pending expansion and modernization of the Calexico Land Port of Entry (LPOE). This project is being handled by the US General Services Administration (GSA) and will be completed in two phases.



Figure 1.6: Calexico Border Crossing

Phase 1, costing \$100 million, is scheduled to be completed in January 2018. Phase 2 is not yet funded. The resulting expansion will require 60 temporary homes for construction and 200 permanent homes for operational needs.



1.9 CLIMATE

The Imperial Valley Region is an arid desert with two distinct seasons. The summer season stretches from April to October, with temperatures ranging from the mid-80s to the low-100s. The winter season stretches from November to March, with temperatures ranging from the mid-60s to the high-70s.



Figure 1.7: Imperial Valley Landscape Contrasts

Annual rainfall in the Imperial Valley averages less than three inches, with most rainfall associated with brief but intense storms. The majority of the rainfall occurs from December through March. Periodic summer thunderstorms are common in the region.

Monthly historical average precipitation and temperatures (based on data collected from 1904 through 2010) is shown in **Table 1.6** below:

Table 1.6
Historical Climate Characteristics (1901-2010)
<http://www.wrcc.dri.edu/cgi-bin/cliMAIN.pl?ca1288>

Month	Rainfall (in)	Avg. Temp (High/Low)
Jan	0.42	67/39
Feb	0.35	73/44
Mar	0.22	79/48
Apr	0.07	85/53
May	0.03	92/59
Jun	0.01	101/68
Jul	0.10	104/76
Aug	0.41	103/75
Sep	0.24	98/68
Oct	0.24	88/56
Nov	0.21	77/46
Dec	0.42	67/39
Totals:	2.69	86/56

Up until late November, 2016, the State of California had undergone a several-year drought since 2011. Since November 2016, rainfall has been on the rise for many regions throughout the State, including the Imperial Valley.

Recent climate data for the Imperial Valley reflects dry conditions through most of



2016, with an increase in rainfall for December 2016 and January 2017 months. **Table 1.7** on the following page provides climate data from a nearby station within a few miles of the City:

Table 1.7
Recent Climate Characteristics (2016-2017)
<http://www.cimis.water.ca.gov/UserControls/Reports/MonthlyReportViewer.aspx>

Month	Rainfall (in)	Temp (High/Low)
Jan (2017)	1.17	68/44
Feb (2016)	0.00	82/42
Mar (2016)	0.00	84/50
Apr (2016)	0.00	87/55
May (2016)	0.05	91/59
Jun (2016)	0.00	106/72
Jul (2016)	0.00	109/75
Aug (2016)	0.00	108/76
Sep (2016)	0.26	99/67
Oct (2016)	0.00	94/61
Nov (2016)	0.03	81/48
Dec (2016)	1.25	69/42
Totals:	2.76	92/59

1.10 POPULATION & DEMOGRAPHICS

Due to the City's undeveloped land area, the City's population has been steadily growing since its formation in the early 1900s. Since the early 1990s, the City's population has more than doubled.

According to the 2010 Census, the population for the City of Calexico was 38,572 as of April 2010, up from a population of 27,079 in 2000 (an annual growth rate of 4.2 percent). The total housing units (single & multi-family homes) in 2010 was 10,651 units, of which 9,313 units were occupied (an occupancy rate of 87.4 percent). Total persons per household was estimated to be 4.24.

According to the most recent (2016) estimates from the California Department of Finance (CADO), the City's current (2016) population is 40,211; up from 38,572 in 2010. This represents an annual growth rate of 0.71 percent from 2010 –much lower than the growth rate from 2000 to 2010. Total housing units are estimated to be 10,825 units, of which 9,882 are currently occupied (91 percent occupancy rate). The population growth rate of 0.71 percent indicates that only very mild development has occurred in the City over the past six years. In fact, the only new development in the City since the 2010 UWMP involved some single and multi-family homes located in between Rancho Frontera Ave. and Meadows Rd. south of Cole Blvd. (see **Figures 1.11 & 1.12**).

2015 City General Plan Population Forecasts

In spite of this slow growth rate, the City references population forecasts from the



Southern California Association of Governments (SCAG) in the City’s 2015 General Plan. SCAG forecasted up to the year 2035 using a more aggregate growth rate of about 3 percent. Although this growth rate is higher than recent years, it does balance the more rapid growth rate of years past (slightly over 4 percent) and the more moderate growth rate of recent years

(0.71 percent as previously mentioned). The only caveat to SCAG’s forecasts is the use of 2008 as the base point to project to the year 2020, which renders a population of 50,800 in 2020. Since the current population is 40,211 (as previously mentioned), the City would need to grow tremendously in the next 4 years to have a population of 50,800 by 2020. This would be by far the largest growth rate the City has ever seen, which is obviously unlikely. Thus, adjustments to the forecasts listed in the City’s 2015 General Plan must be made to ensure accuracy in this UWMP.

Adjusted Population Forecasts

For the sake of this UWMP, the projected population will be determined using a combination of CADoF data and SCAG data. Proceeding with SCAG’s forecasted growth

rate of about 3 percent, but beginning with the current CADoF population for 2016 as the baseline, the projected population for the City through 2040 is shown below in

Table 1.8:

**Table 1.8
City of Calexico
Recent, Current & Projected Population***

Year	Population
2015	40,092
2016	40,211
2020	44,967
2025	50,912
2030	56,857
2035	62,802
2040	68,747

**Per CADoF and SCAG Data*

Beginning in 2020 or thereabouts, the City of Calexico will be the largest City in Imperial County in terms of population. Despite this steady population growth, the real challenge facing the City’s water system is not merely the gradual increase in demand, but potential spikes in demand resulting from daytime or short-term residents. As the City continues to grow both in size and significance, the City may likely experience periodic spikes in the number of daytime or short-term residents (not unlike a beach City during the weekends).



Potential Changes in Population

Due to the potential for changes in the City's boundaries and service area in the upcoming years (i.e. "Sphere of Influence"), it will be necessary to ensure that the water service area population complies with DWR's requirements for UWMP data reporting. More specifically, this relates to SBx7-7 per capita water consumption requirements (refer to Section 4 of this UWMP). The City may find that their service

area expands in non-UWMP years and thus the data from outside agencies, such as the US Census, CADoF, SCAG, etc., may not be accurate or up-to-date. This could result in confusion with the baseline or current

per capita water use rates which are based on current City boundaries and future consumption rates which are based on the potential expanded boundary. To ensure the most accurate data calculations, it is recommended that the City use DWR's Water Use Efficiency or "WUE" online tool in the future. DWR's WUE tool can calculate the service area populations for non-Census years using a GIS boundary (i.e. KML or KMZ shape format) which is uploaded to the WUE. DWR provides instructions on how to use the WUE tool.

DWR's "WUE" online tool will allow the City to determine accurate estimates of its service area population, should their boundaries change.

1.11 WATER SYSTEM

A basic overview of the City's water system is provided herein. More information on the City's water sources, water treatment, and water demands can be found in **Sections 2, 3, and 4** of this report. As this report is more of a water-resource-management planning document, it does not provide much technical or engineering detail.

Water Sources

The City's only source of water is raw, untreated surface water (Colorado River) from the All-American Canal. The Colorado River water travels 80 miles from the Imperial Dam down the All-American Canal by gravity. The City maintains a 42-inch pipeline intake near the intersection of the canal and the UPRR tracks on the westerly side of the City. The 42-inch pipeline draws the water from the Canal into the City's 25 million-gallon (MG) raw water reservoir located adjacent to the Canal. The water is stored in the reservoir for a period of time before being treated at the City's Water Treatment Plant.

Water Treatment

The City provides full Title 22 treatment at its 14 million gallon per day (MGD) water treatment plant located in the southwest part of the City. The plant consists of two



clarifiers with capacities of 4.2 MGD and 10 MGD, gravity filtration, and chlorine disinfection. The water from the City's 25 MG raw water pond is pumped to the City's treatment plant Pierce Avenue by three (3) influent pumps via a 30-inch pipeline, a distance of approximately one mile. After treatment, water is stored in one of the City's water storage tanks.

Water Storage

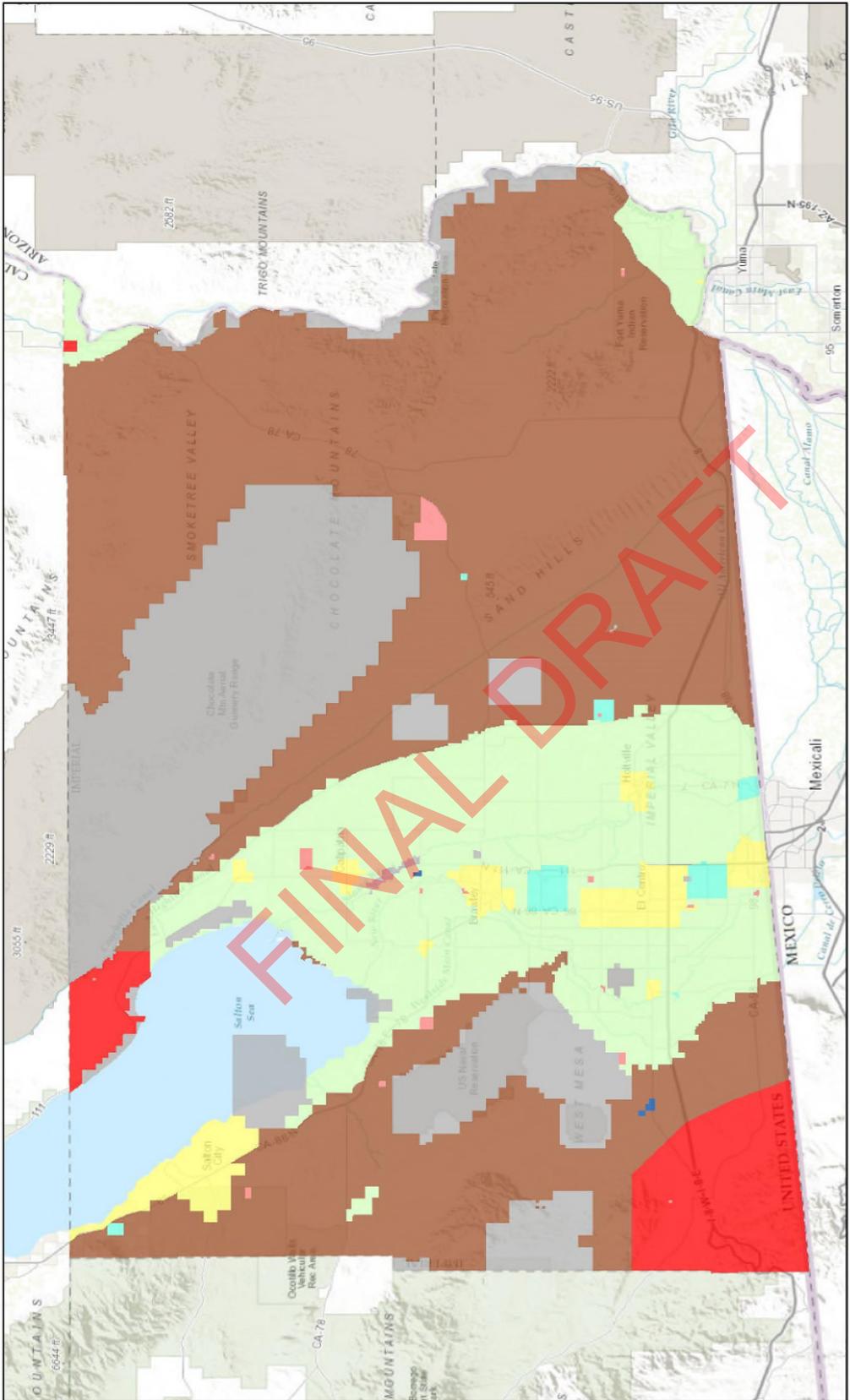
The City maintains three (3) above-grade storage tanks. Two of the tanks are located at the City's treatment plant site and one of the tanks is located on the east side of the City. The two tanks located at the treatment plant site have capacities of 6 million gallons and 4 million gallons and the east side reservoir has a capacity of 6 million gallons, for a total of 16 million gallons (49 acre feet) of treated water storage available on a daily basis.

Distribution System

The City distributes water to about 8,300 service customers through a 75-mile network of distribution mains ranging from two inches to 30 inches in diameter. The water system consists of only one pressure zone which must be maintained by pumping due to the flat topography throughout the City. The tanks are unable of providing even minimum pressure required of typical municipal water systems. The current flow rate of the City's finished water pump station is 18,000 gallons per minute (gpm) (26 MGD). The discharge pressure of this pump station is approximately 62 pounds per square inch (psi). A total of seven pumps (5 at main tank facility, 2 at the east side tank) transfer potable water from the storage tanks to the City's distribution system. To ensure water supply in case of emergency, the City maintains two emergency diesel pumps that pump up to 4,000 gallons per minute (gpm) to maintain pressure during emergencies.



General Plan Land Use



February 12, 2017

General Plan Land Use

- Agriculture
- Community Area
- Government/Special District
- Industry
- Recreation/Open Space
- Special Purpose Facility
- Specific Plan Area
- Urban Area

Sources: Esri, HERE, DeLorme, Intermap, increment P. Corp., GEBCO, USGS, FAO, NPS, NRCAN, Geobase, IGN, Kadaster NL, Ordnance Survey, Esri, Japan, METI, Esri, China (Hong Kong), Swisstopo, MapboxIndia, © OpenStreetMap contributors, and the GIS User Community

Figure 1.8: Imperial County Land Use (from Imperial County 2015 General Plan)

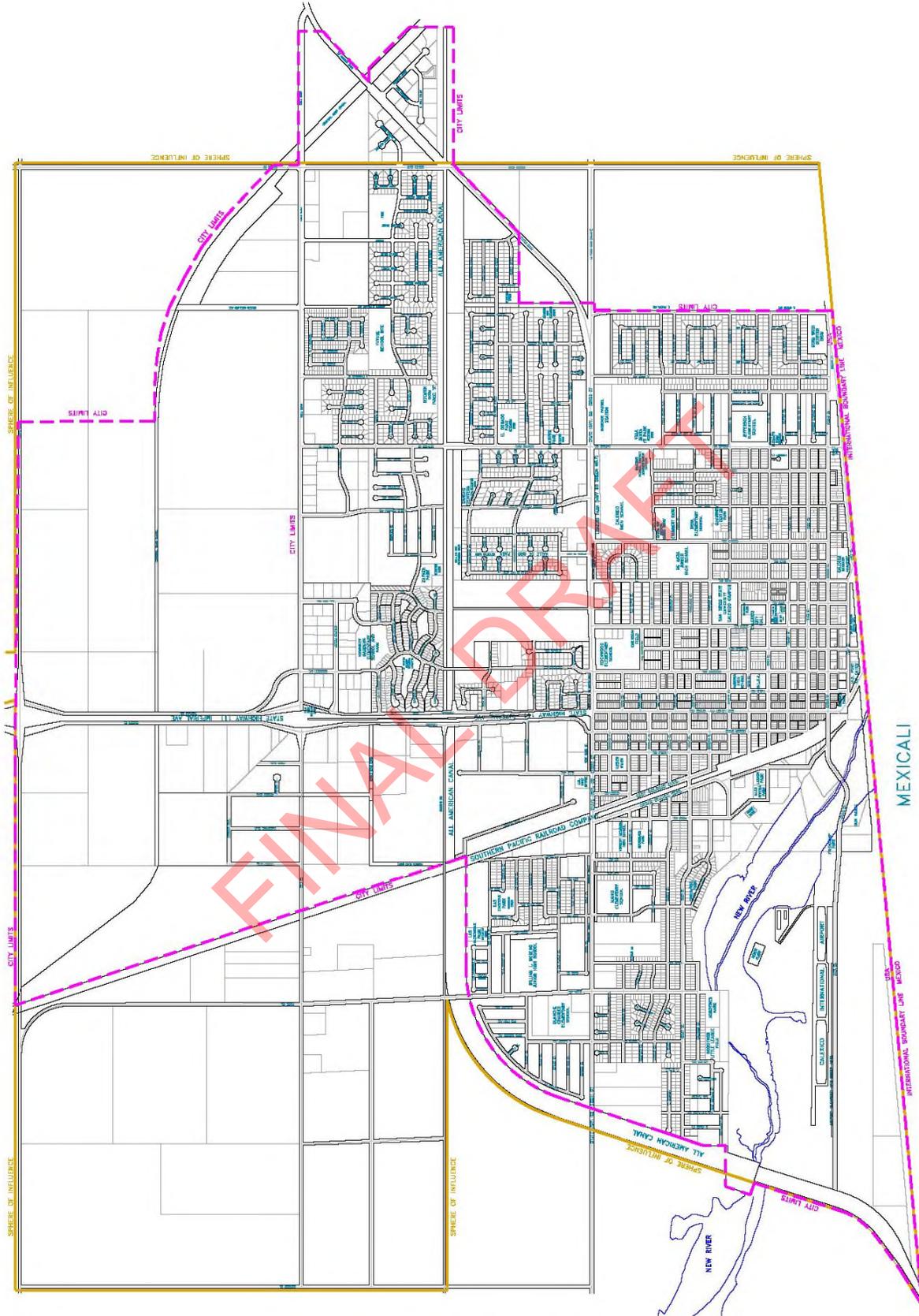


Figure 1.9: City Map (City Limits shown in Pink; Sphere of Influence Shown in Yellow)

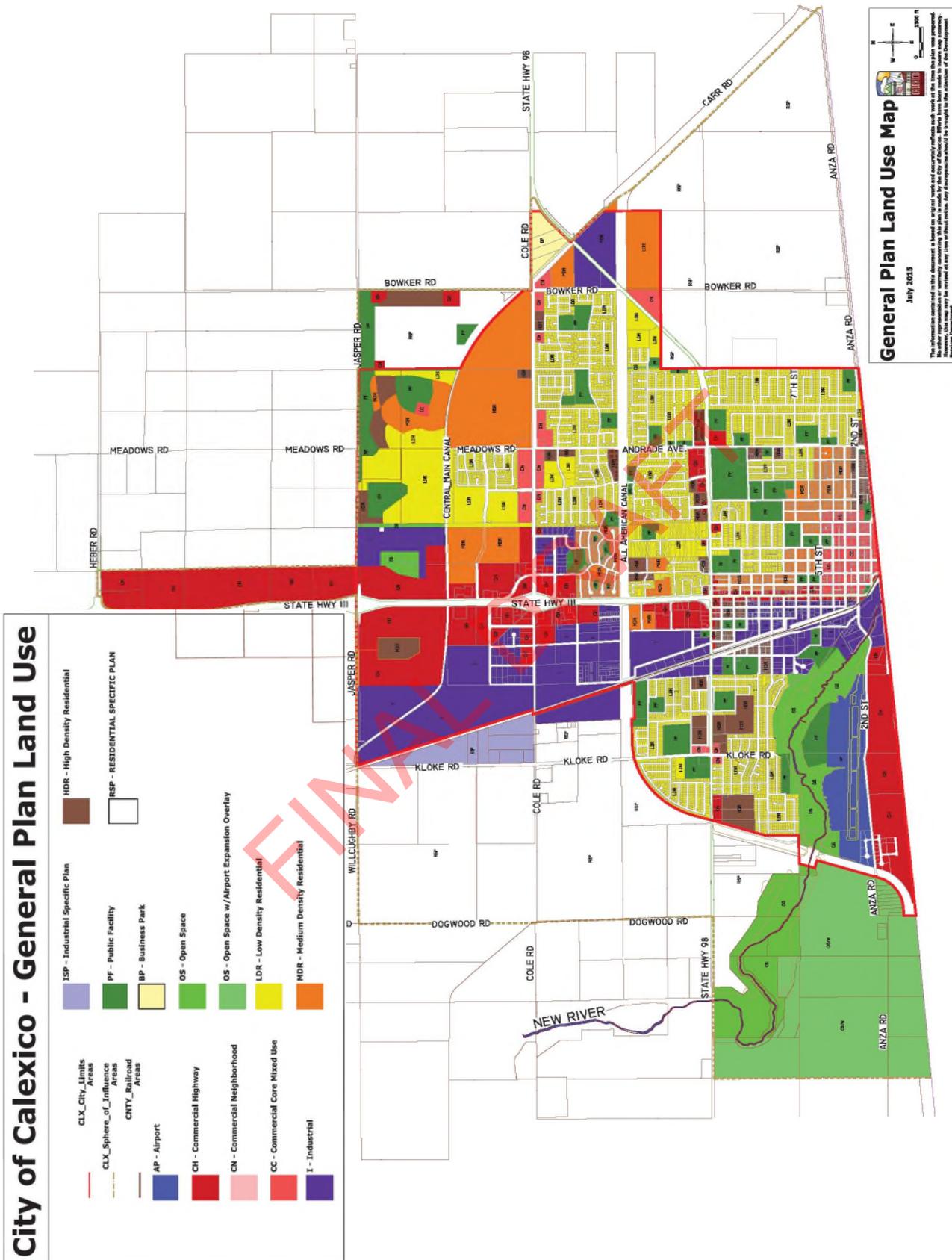


Figure 1.10: City Land Use Map (from 2015 City General Plan)



Figure 1.11: Current (Feb. 2017) City of Calexico Satellite Image



Figure 1.12: New Housing Development (including small strip mall development) since 2010 UWMP



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