PROJECT EAGLE

WATER SUPPLY ASSESSMENT

CALIFORNIA SB-610

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OCTOBER 25,2017

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Acronyms

AC	Alternating Current
AAC	All American Canal
AF	Acre-Foot or Acre-Feet
AFY	Acre-Feet per Year
AOP	Annual Operations Plan
AVM	Acoustic Velocity Meter
CAP	Central Arizona Project
CDCR	California Department of Corrections and Rehabilitation
CDPH	California Department of Public Health
CDWR	California Department of Water Resources
CEQA	California Environmental Quality Act
CFR	Code Federal Regulations
CO2e	Carbon Dioxide Equivalent
CRWDA	Colorado River Water Delivery Agreement: Federal QSA
CUP	Conditional Use Permits
CU	Consumptive Use
CVWD	Coachella Valley Water District
CVP	Conservation Solar Voltaic Technology
CWC	California Water Code
CWMP	Construction Waste Management Plan
DA	Development Agreement
DC	Direct Current
EDP	IID Equitable Distribution Plan
EIS	Environmental Impact Statement
ERP	Emergency Response Plan
ET	Evapotranspiration
HMMP	Hazardous Materials Management Plan
ICPDS	Imperial County Planning and Development Services
ICS	Intentionally Created Surplus
IID	Imperial Irrigation District
In	Inches
IOPP	Inadvertent Overrun Payback Policy
ISG	Interim Surplus Guidelines
ISO	International Standard Organization
IRWMP	Integrated Regional Water Management Plan

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IWSP	Interim Water Supply Policy
KAF	Thousand Acre Feet
KAFY	Thousand Acre Feet Per Year
kV	Kilovolt
LAFCO	Local Agency Formation Commission
LCR	Lower Colorado Region
MCI	Municipal, Commercial & Industrial
MGD	Million Gallons per Day
MW	Megawatt
MWAC	Megawatt per Acre
MWD	Metropolitan Water District of Southern California
NAF	Naval Air Facility
NAFTA	North American Free Trade Agreement
O&M	Operation and Maintenance
OWTS	Onsite Water Treatment System
POE	Point of Entry
PPR	Present Perfected Right
PV	Photo Voltaic
PVID	Palo Verde Irrigation District
QSA/Transfer Agreements	Quantification Settlement Agreement and Related Agreements
SB	Senate Bill
Schedule 7	IID Water Rate Schedule 7. For General Industrial Use
SDCWA	San Diego County Water Authority
SNWA	Southern Nevada Water Authority
SPCC	Spill Prevention Control and Countermeasures
SQFT	Square Feet
TLCEP	Temporary Land Conversion Fallowing Program
US	United States
USBR	United States Bureau of Reclamation
USD	United States Dollar
USEPA	United States Environmental Protection Agency
WSA	Water Supply Assessment

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Purpose of Water Supply Assessment

This Water Supply Assessment (WSA) was prepared for the City of El Centro and Weiler Family Farms (the "Applicant") by water supply experts at Development Design & Engineering, Inc. (DD&E), as the consultant, regarding the proposed Project Eagle (the "Project"). This study is a requirement of California law, specifically Senate Bill 610 (referred to as SB 610).[1] SB 610 is an act that amended Section 21151.9 of the Public Resources Code, and Sections 10631, 10656, 10910, 10911, 10912, and 10915 of the California Water Code (CWC). SB 221 is an act that amended Section 11010 of the Business and Professions Code, while amending Section 65867.5 and adding Sections 66455.3 and 66473.7 to the Government Code. SB 610 was approved by the Governor and filed with the Secretary of State on October 9, 2001, and became effective January 1, 2002, which requires a lead agency, to determines that a Project (as defined in Water Code § 10912) subject to CEQA, to identify any public water system that may supply water for the project and to request the project proponent prepare a specified water supply assessment.

This study has been prepared pursuant to the requirements of CWC Section 10910 , as amended by Senate Bill (SB) 610 (Costa, Chapter 643, Stats. 2001). The purpose of SB 610 is to advance water supply planning efforts in the State of California, therefore SB 610 requires the lead agency (ICPDS), to identify any public water system or water purveyor that may supply water for the Project, to prepare the WSA after a consultation. Once the water supply system is identified and water usage is established for construction and operations for the life of the project, the lead agency is then able to coordinate with the local water supplier (IID) and make informed land use decisions to help provide California's cities, farms and rural communities with adequate water supplies.

Under SB 610, water supply assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in CWC Section 10912 [a]) that are subject to the California Environmental Quality Act (CEQA). Due to increased water demands statewide, this water bill seeks to improve the link between information on water availability and certain land use decisions made by cities and counties. This bill takes a significant step toward managing the demand placed on California's water supply. It provides further regulations and incentives to preserve and protect future water needs. Ultimately, this bill will coordinate local water supply and land

[1] SB 610 amended Section 21151.9 of the California Public Resources Code, and amended Sections 10631, 10656, 10910, 10911, 10912, and 10915, repealed Section 10913, and added and amended Section 10657 of the Water Code. SB 610 was approved by California Governor Gray Davis and filed with the Secretary of State on October 9, 2001.

use decisions to help provide California's cities, farms, rural communities and industrial developments with adequate long-term water. Ultimately the lead agency will determine whether water supplies will be sufficient to satisfy the demands of the Project, in addition to existing and planned future uses.

Project Determination According to SB 610 - Water Supply Assessment

With the introduction of SB 610, any project under the California Environmental Quality Act (CEQA) shall provide a Water Supply Assessment if the project meets the definition of CWC Section 10912.2. Project Eagle is deemed a "Project" as it is considered due to the fact that it is a proposed industrial, manufacturing, or processing plant, or industrial park planned to house more than 1,000 persons, occupying more than 40 acres of land, or having more than 650,000 square feet of floor area as stated in the CWC Section 10912 (a)(5).

EXECUTIVE SUMMARY

The City of El Centro, the lead agency has requested a Water Supply Assessment (WSA) as part of the Project and environmental review for Project Eagle. This study is intended for use by The City of El Centro in its evaluation of water supplies for existing and future land uses. The evaluation examines the following water elements:

- Water availability during a normal year
- Water availability during a single dry, and multiple dry water years
- Water availability during a 20-year projection to meet existing demands
- Expected water demands of the Project
- Reasonable foreseeable planned future water demands to be served by the water supplier.

The Project site lies within IID's Imperial Unit and as such is eligible to receive water service. IID has adopted an Interim Water Supply Policy for Non-Agricultural Projects (IWSP) from which water supplies can be contracted to serve new non-agricultural developments within IID's water service area. For applications processed under the IWSP, applicants shall

be required to pay a processing fee and, after IID board approval of the corresponding agreement, will be required to pay a reservation fee(s) and annual water supply development fees.

The IWSP sets aside 25,000 acre feet per year (AFY) of IID's Colorado River water supply to serve new non-agricultural projects. To date, a balance of 23,800 AF remains available under the IWSP for new non-agricultural projects ensuring reasonably sufficient supplies for such projects. The Project's construction water demands at full build out is expected to be 175 AF. The Project operational water demand is expected to be approximately 2,492 AFY. The project proposes to reclaim and recycle 75% of its total operational water consumption. The applicant intends to purchase the remaining 25% of their needed water supply from the IID see **Table 1** . The applicant proposes to purchase construction and operational water from the IID, due to the on-site water system the facility will be able to recycle a majority of the water used. Approximately 670 AFY is proposed to be purchased from the IID to be used for operational task of the solar manufacturing facility, thus supplementing the remaining balance of the operation water, i.e the 25 percent. The Project's operational water represents 2.82% of the unallocated supply set aside for non-agricultural projects, which would not affect IID's ability to provide water to other users in IID's. The Project proposes to use a total of 50 AFY for employee use from the City of El Centro. Forecasted water numbers are for a total of 260 days per year of operation with a 5 day supply reserve at the facility, totaling 265 days a year.

Project Water Allocation & Proposed Water Source

Activity	Water Consumption (AF)	Proposed Water Source
Construction (Fixed Use)	175 AF	IID
Project Operational Water[2]		
Start Up Water (5 Phases)	9.2 AFY	IID
Reclaimed Water (75%)	1825 AFY	On Site Water System
Supplemental Water (25%)	660 AFY	IID
Employee Potable Water	50 AFY	City of El Centro

[2] The 5 phase project proposes to use appx. 600,000 Gallons Per Day (GDP) per phase of the 600,000 GDP, 75% will be recaptured and recycled through a state approved on-site water system. The applicant will need to obtain 25% of the operational water needs from the IID per day, roughly 150,000 GPD, which equates to appx. .5 AF per day multiplied by 5 phases 2.5 AFD for 5 phases.

Project Introduction

Project Needs and Objectives

The approximately 330-acre project site is located in the County of Imperial (County), adjacent to the City of El Centro (City). The site is currently designated by the County as Urban Area, which are areas anticipated to annexed or incorporated into cities. The County created this designation to reduce duplicated planning efforts and possible planning conflicts between the County and cities, and to allow cities to plan for the development of these areas. Consistent with the County designation, the site is located within the City of El Centro Sphere of Influence (SOI) and annexation of the site from the County to the City is proposed in anticipation of future development. In order to coordinate this interjurisdictional effort, the project would require processing through the Imperial County Local Agency Formation Commission pursuant to the Cortese-Knox-Hertzberg Local Government Reorganization Act (Government Code §§ 56000, et seq.) ("LAFCO Act"). As indicated above, the primary objective of the proposed Dogwood Road at Villa Avenue project (hereafter project) is to adopt a general plan amendment and annex an approximately 330-acre site in order to allow for future industrial development within the City of El Centro. Other project objectives are to (1) utilize a site that has already been disturbed to reduce regional biological impacts; (2) locate where rail transport is readily accessible or otherwise reduce vehicular trips; (3) minimize off-site infrastructure improvements required to serve the project; (4) reduce potable water demand by use of recycled water and agricultural water supplies and/or providing on-site wastewater treatment; and (5) reduce energy demand by installing solar to generate 10 Megawatts (MW) of energy and improve energy efficiency relative to the California Building Code

Project Location & Setting

The approximately 330-acre project site is located at the southeast corner of Dogwood Road at Villa Avenue, Imperial County, California (Figure 1). The site is currently located within the County and is directly adjacent to the City. The site is generally south of East Villa Road, west of Cooley Road, east of North Dogwood Road and north of the Holton Interurban Railroad. The Assessor's Parcel Number for the site is 044-450-038. The project site is relatively flat, and consists of agricultural fields, dirt roads, a sewer lift station, located at the north west portion of the property, a segment of the concrete-lined

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Dogwood Canal along the western perimeter, and a segment of the unlined Central Drain Three that runs north-south across the central portion of the site (Figure 2). The canals that feed into the project site via gates are as follows: Dogwood Canal Gates 54, 54-A, 57, 57-A and 57-B; and Alder Canal Gates 95 and 99, and Alder Canal Lateral 12 Gates 96-A, 97, 97-A and 97-B. Existing surrounding uses include agricultural fields, rural residential, industrial, and the Imperial Irrigation District (IID) facility uses (Figure 3; Table 1). The IID facility includes power plant facilities with battery storage.

Table 2: Surrounding Land Uses

Location	Existing Use	General Plan Designation[1]	Zone
North	Agricultural fields	Low Density Residential	A-2 (County)
	Rural single-family residential (Villa Lane)	Rural Residential	A2/A-2 (County)
Northeast	Agricultural fields	Low Density Residential	A-2 (County)
East	Agricultural fields	Low Density Residential	A2U (County)
	Agricultural fields	Planned Industrial	A1U (County)
Southeast	Rock and gravel sales	Planned Industrial	M1 (County)
	Rural residential, portable restroom storage	Rural Residential	C2U (County)
South	Automotive repair, tire sales, sand and gravel processing, block sales, and fabrication and machining	Planned Industrial	Manufacturing Business Park (City)
Southwest	Vegetable growing supplies	General Industrial	General Manufacturing (City)
West	IID power plant facility	Public	Limited Use (City)
Northwest	IID Warehouse	Planned Industrial	A2U (County)

[1] The County General Plan designates all surrounding County land and the site as Agriculture.

Several easements exist on-site, consisting of the following:

City of El Centro Sewer easement (April 22, 1909)

Imperial County roadway easements – roadway easement 60 feet along the eastern boundary and 40 feet along the western boundary (April 21, 1922)

Imperial Water Company No. 1 drainage ditch easement - eastern 20 feet (June 13, 1922)

Imperial Irrigation District drainage ditch easement – 150-foot right-of-way (November 4, 1924)

Southern Sierras Power Company powerline easement– right-of-way parallel to the Southern Pacific Railroad right-of-way (July 6, 1935)

Imperial Irrigation District powerline easement – 90-foot wide (June 20, 1951)

Fred C. Smith tile drain installation and maintenance easement - along the north side (July 8, 1953)

City of El Centro sewer lift station easement (April 21, 2003)

City of El Centro temporary trunk sewer easement (April 23, 2003)

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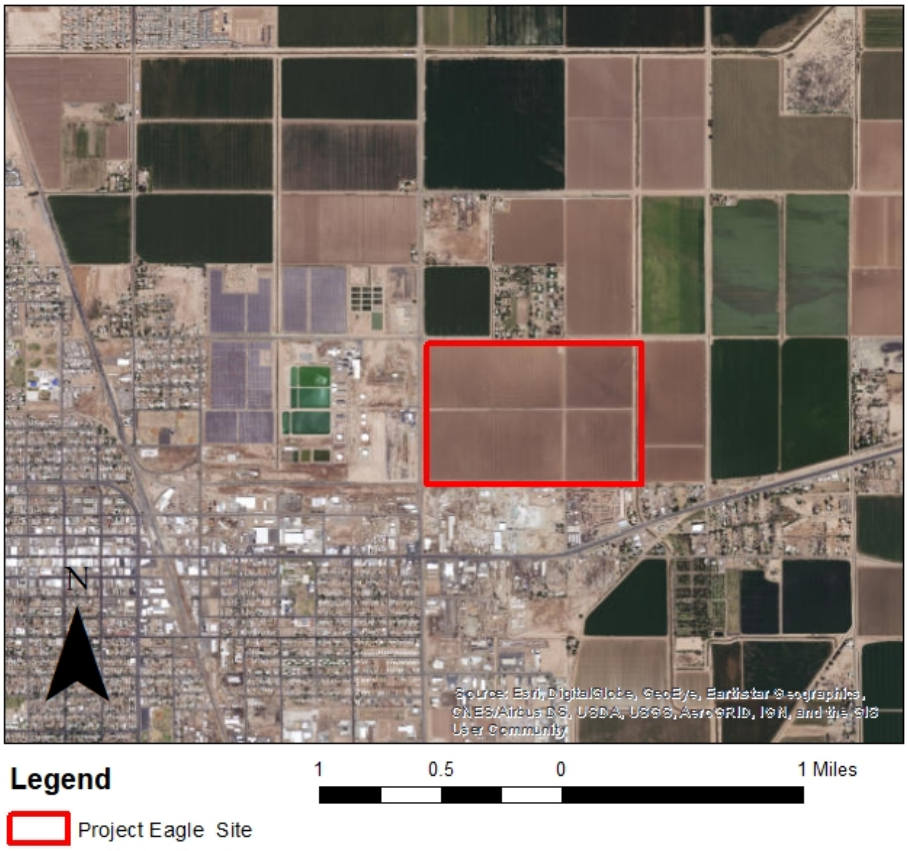
Figure 1: Project Area Map

Figure 2: Location Map



Project Description

The Dogwood Road at Villa Avenue project consists of the annexation of the site from the County to the City, a General Plan Amendment (GPA) and a Pre-zone. No specific development is proposed at this time, but specific requirements and features would be included to achieve the goals and objectives of the project. A description of these discretionary actions as well as anticipated future development is described further below. Once a specific development with a site plan is proposed, then the City would determine if this document adequately covers the future action or if additional environmental analysis is necessary.

General Plan Amendment

The County of Imperial designates the site as Urban Area, which is intended to cover areas anticipated to be annexed or incorporated into cities. The site is located within the City of El Centro sphere of influence. Per the City's General Plan, the western third of the site is currently designated as Planned Industrial and the eastern two-thirds are designated as Low Density Residential. The project proposes a GPA to remove the site from the County's General Plan and to re-designate the entire site as General Industrial – General Manufacturing within the City General Plan. Under the General Manufacturing designation, the proposed GPA would allow for a maximum FAR of 0.45:1 and an average FAR of 0.35:1. This designation specifies operations must not create "offensive, obnoxious, or dangerous conditions which are detectable beyond the boundary of the land use designation borders".

Pre-zone

The site is currently zoned A2U Agriculture-Urban Area by the County of Imperial. As the site is not currently in the City, there is no existing City zoning for the site. The proposed City pre-zone would zone the site as MG General Manufacturing. Per the City's Municipal Code Section, this zone does not include any minimum lot sizes or setbacks with the exception of 50-foot rear and side setbacks from adjacent residential zones. This zone allows for buildings up to 75 feet tall, with one parking space per 500 square-feet required. The following is an excerpt from Municipal Code Chapter 29 - Zoning, Article II. - Zones,

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Division 4. - Manufacturing Zones:

MG general manufacturing zone. This zone is intended to provide for the development of manufacturing, processing, fabrication, and assembly of goods and materials, which do not in their operation or maintenance create offensive, obnoxious, or dangerous conditions that are detectable beyond the boundary of the zone. Certain outdoor operations are permitted in this zone. The MG zone is intended to implement the general manufacturing - general industrial general plan land use designation.

The Municipal Code includes general manufacturing zone design standards pertaining to site planning, natural surveillance, architecture, roof treatments, parking and circulation, loading facilities, landscaping, walls and fences, screening, and lighting. The future development at the site would be in conformance with the Municipal Code and would comply with these design standards.

Future Development

Based on the proposed General Plan designation and zoning, the maximum buildout of the site could include up to 5 million square feet of manufacturing warehouse space. Due to the size of 330-acre size of the project area, it is likely that future build out of the project site would be split into multiple phases. Under this scenario, each phase would include approximately 1 million square feet and would generate approximately 1,000 employees. Buildout of the site could take up to 5 years, with each phase taking approximately 1 year for construction.

The future buildout of a general manufacturing warehouse would require water, wastewater, energy, and access improvements. Since the project consists of a land use change and no specific development plans are proposed, specific utility plans are not available. However, the following infrastructure improvements are based on the assumption of an approximately 5-million square-foot manufacturing warehouse located at the project site and takes into consideration the location of existing infrastructure and surrounding uses.

]Stormwater

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Future buildout of the site would be completed in compliance with the Clean Water Act, and the associated National Pollutant Discharge Elimination System (NPDES) permit program. This includes compliance with the Construction General Permit Order 2009-0009-DWQ, and the associated requirement to prepare a Storm Water Pollution Prevention Plan (SWPPP) with Best Management Practices. In addition, the future operations would comply with the NPDES Industrial General Permit (IGP). The project would also be required to provide other water quality features and hydrology controls in accordance with regulations to ensure discharge rates remain similar to the existing conditions and to maintain water quality. Pursuant to these requirements and the likely amount of impervious area resulting from future development consistent with the proposed zoning, the project would require an approximately 20-acre retention basin.

Water

Potable water use on-site would be provided via a 10-12" diameter pipeline from the City of El Centro based on the City of El Centro's Water Master Plan. The water demand for the approximate 330 acres site is expected to use approximately 600,000.00 gallons per day (GPD) (1.84 ACFT) of IID's raw water using the canal gates historically used on site. If the project site operates 265 days a year the project site would consume 670 AFY, which is significantly less than what is allocated currently for the approximately 330 acre site. The project site is implementing measures to reclaim and recapture water for recycled use via a water treatment facility on site, with the implementation of water conservation methods the project site is expected to stay below the 670 acre feet per year, see **Table 1**. It is important to note that the future manufacturing operations would use raw water from the aforementioned IID canals and pre-treat the water prior to industrial use. This water would be recaptured and reclaimed via an on-site wastewater treatment system, the rate of recapture would be approx. 75 percent as previously stated.

In addition to potable water, the project site receives agricultural-use water from IID at multiple locations around the perimeter of the project site. The canals that feed into the project site per IID water history records via gates are as follows; (a) Dogwood Canal Gates 54, 54-A (b) Alder Canal Gates 95. The project proposes to retain the Dogwood and Alder Canals and provide minimal improvements such as a culvert for a driveway access, fencing

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and/or slope stability improvements. The future industrial uses may not require agricultural water supply from the Alder Canal Lateral 12 and, as such, this lateral may be abandoned in the future. The abandonment of this lateral or the other aforementioned improvements would not affect the conveyance of water through the site. The future development of the site would be conditioned to provide adequate easements to IID for ongoing maintenance and operations of these canals.

Wastewater

Wastewater would be pre-treated and discharged back into the IID drain or adjacent agricultural fields, with minimal discharge into the City's wastewater system. Based on the City of El Centro's Sewer Master Plan, the project site is serviced by a 20-24" diameter force main pipeline and lift station on the north/west portion of the property. All wastewater discharges would be in accordance with National Pollutant Discharge Elimination System (NPDES) permit program and the Colorado River Basin – Storm Water Programs.

Energy

Energy would be provided for the project by IID via an agreement as well as from solar panels. It is anticipated that development of the 330-acre project site with general manufacturing uses would include a two to three acre area for an IID substation. While no site plan has been prepared for the future development at this time, it is anticipated that the IID substation would be located on the western side of the property in proximity to the existing off-site IID power plant. This station may include battery storage, which could potentially provide energy storage for the proposed project.

In addition, energy for the future general manufacturing uses would include on-site solar panels. Solar panels would likely include a mix of rooftop solar on the buildings as well as ground-mounted solar possibly located on the 20-acre detention basin area. The GPA and Pre-zoning approvals would be would be conditioned to require that future development demonstrate XX percent of the site energy use would be generated by solar or another alternative energy source prior to issuance of occupancy permits for each phase.

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Circulation and Access

In an effort to control traffic and avoid interfering with the Dogwood Canal, the main access to the site is anticipated to be on Villa and/or Cooley Roads. The access driveways would be sized to accommodate large trucks as well as emergency access vehicles. In order to improve circulation and accommodate large vehicles, the off-site segment of Cooley Road between the southwest corner of the site and Evan Hewes Highway would be paved. Right of way would need to obtained to improve Cooley Road. A driveway along Dogwood Road may be required in phase XX of the project.

<Summarize LLG transportation phasing plan here once available. >

Configuration of the future development of the site would likely entail XXXX. Internal circulation on the site would likely XXXXXXX

Other access components anticipated for the future development of the site would include:

A transit stop (e.g., bus or van sharing loading zone) with the improvements adjacent to Villa Road.

Use of the railroad spur located in the southern area of the property. It is anticipated that the future development would include a loading dock and a connection to this railroad spur.

All future access improvements would adhere to all development standards and road improvements necessary.

Frontage improvements along XX and XX roads would be required consisting of XXXXX.

<ADD OTHER TRAFFIC FEATURES/improvements FROM LLG REPORTS>

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Description of IID Service Area

The Project site is located in Imperial County in the southeastern corner of California. The County is comprised of approximately 4,597 square miles or 2,942,080 acres[4], bordered by San Diego County to the west, Riverside County to the north, the Colorado River/Arizona boundary to the east, and 84 miles of international border with the Republic of Mexico (Mexico) to the south. Approximately fifty percent (50%) of Imperial County is undeveloped land under federal ownership and jurisdiction. The Salton Sea accounts for approximately eleven percent (11%) of Imperial County's surface area. In 2015, fifteen percent (15%) of the area was in irrigated agriculture (446,796 acres), including 14,676 acres of the Yuma project, some 35 sections or 5,600 acres served by Palo Verde Irrigation District (PVID), and 426,530 acres served by IID.[3, 4]

The area served by IID is located in Imperial Valley, which is generally contiguous with IID's Imperial Unit, lying south of the Salton Sea, north of the US /Mexico international border and generally within the 658,942 acre area between IID's Westside Main and East Highline canals.[5] In 2015, IID delivered untreated water to 426,530 net irrigated acres, predominantly in the Imperial Valley along with small areas of East and West Mesa land. The developed area consists of seven (7) incorporated cities (Brawley, Calexico, Calipatria, El Centro, Holtville, Imperial and Westmorland), three (3) unincorporated communities (Heber, Niland, Seeley), and three (3) institutions (Naval Air Facility [NAF] El Centro, Calipatria California Department of Corrections and Rehabilitation [CDCR], and Centinela CDCR) and supporting facilities**.** Figure 1 provides a map of the IID Imperial Unit boundary, as well as cities, communities and main canals.

Imperial Valley has a subtropical desert climate characterized by hot, dry summers and mild winters. Summer temperatures typically exceed 100 degrees Fahrenheit (°F), while winter low temperatures rarely drop below 32°F. The remainder of the year has a relatively mild climate with temperatures averaging in the mid-70s. For the thirty (30) years from 1995-2014, average annual air temperature was 72.9°F, and average annual rainfall period was 2.67 inches (see **Table 1** and **Table 4 and Table 3).** The majority of rainfall occurs from November through March, along with periodic summer thunderstorms.

4 Imperial County General Plan, Land Use Element 2008 Update.
3 USBR website: Yuma Project. 7 June 2017, PVID website: About Us, Acreage Map. 7 June 2017.
[4] USBR website: Yuma Project. 7 June 2017.
5 IID Annual Inventory of Areas Receiving Water Years 2016, 2015, 2014

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IID is located in the Northern Sonoran Desert, which has a subtropical desert climate with hot, dry summers and mostly mild winters. The 100-year average rainfall is 3 inches per year, most of which occurs from November through March. However, summer storms can be significant in some years. Clear and sunny conditions typically prevail, and frost is rare. The region receives 85 to 90 percent of possible sunshine each year, the highest value in the United States. Winter temperatures are

mild, but summer temperatures are very hot, with more than 100 days over 100ºF each year.[6] Rainfall in the Imperial Valley contributes around 50,000 AF of effective agricultural water per inch of rain.

Table 1: Climate Characteristics, Imperial, CA 100-Year Record, 1915-2014

Climate Characteristic	Annual Value
Average Precipitation (100-year record, 1915-2014)	**3.00 inches (In)**
Minimum Temperature, Jan 1937	**16 °F**
Maximum Temperature, July 1995	**121 °F**
Average Minimum Temperature, 1915-2014	**47.8 °F**
Average Maximum Temperature, 1915-2014	**98.2 °F**
Average Temperature, 1915-2014	**72.8 °F**

Notable from **Error! Not a valid bookmark self-reference.** and **Table 3.** is that while average annual rainfall measured at IID Headquarters in Imperial, CA, has been decreasing, monthly average temperatures are remarkably consistent.

Table 2: IID Areawide Annual Precipitation (IN), 1990-2014

1990	1991	1992	1993	1994	1995	1996
1.646	3.347	4.939	2.784	1.775	1.251	0.685
1997	**1998**	**1999**	**2000**	**2001**	**2002**	**2003**
1.328	2.604	1.399	0.612	0.516	0.266	2.402
2004	**2005**	**2006**	**2007**	**2008**	**2009**	**2010**
4.116	4.140	0.410	1.331	1.301	0.619	3.907
2011	**2012**	**2013**	**2014**			
2.261	2.752	2.772	1.103			

Computation based on polygon average of CIMIS and IID data as they came online in the WIS[9]

6 CDWR, CWP Update 2013, Volume 2, Colorado River Hydrologic Region, pp CR32-CR33, modified by IID 2014 record.

[9] From 1/1/1990-3/23/2004, 3 CIMIS stations: Seeley, Calipatria/Mulberry, Meloland. From 3/24/2004-7/5/2009, 4 CIMIS stations: added Westmorland North. From 7/6/2009-12/1/2009, 3 CIMIS stations: Westmorland North offline. From 12/2/2009-2/31/2009, 4 CIMIS stations, Westmorland North back online. From 1/1/2010-9/20/2010, 4 CIMIS & 4 IID stations; and from 9/21/2010-present 4 CIMIS & 3 IID stations: Calexico station was decommissioned, last data is for 09/20/2010.

Table 3: Monthly Mean Temperature (ºF) – Imperial, CA, 10-Year, 30-Year & 100-Year, 2005-2014, 1995-2014, 1915-2014

	Jan			Feb			Mar			Apr		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
10-year	81	31	56	84	36	59	94	40	66	99	45	71
30-year	80	33	56	84	36	60	92	41	65	100	47	71
100-year	80	31	55	84	35	59	91	40	64	98	45	71
	May			Jun			Jul			Aug		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
10-year	107	54	79	113	60	86	115	68	92	114	67	91
30-year	105	54	79	112	60	86	114	68	92	113	69	92
100-year	105	52	78	112	59	86	114	68	92	113	67	91
	Sep			Oct			Nov			Dec		
	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg	Max	Min	Avg
10-year	107	54	79	84	36	59	94	40	66	99	45	71
30-year	105	54	79	84	36	60	92	41	65	100	47	71
100-year	105	52	78	84	35	59	91	40	64	98	45	71

Source: IID Imperial Headquarters Station Record (Data provided by IID staff).

Table 4: Monthly Mean Rainfall (In) – Imperial, CA 10-Year, 30-Year & 100-Year, *2005-2014, 1995-2014, 1915-2014*

	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual
10-yr	0.47	0.36	0.15	0.03	0.00	0.00	0.21	0.38	0.17	0.21	0.24	0.34	2.54
30-yr	0.44	0.44	0.26	0.06	0.04	0.00	0.13	0.23	0.26	0.30	0.23	0.34	2.67
100-yr	0.42	0.38	0.26	0.11	0.02	0.00	0.12	0.35	0.37	0.26	0.21	0.50	3.00

Source: IID WIS: CIMIS stations polygon calculation (Data provided by IID staff).

The Imperial Valley depends on the Colorado River for its water, which IID transports, untreated, to delivery gates for agricultural, municipal, industrial (including geothermal and solar energy), environmental (managed marsh), recreational (lakes), and other non-agricultural uses. IID supplies the cities, communities, institutions and Southern California Water Company (which serves Calipatria, Niland, and Calipatria CDCR) with untreated water that they treat to meet state and federal drinking water guidelines before distribution to their customers. Industries outside the municipal areas treat the water to required standards of their industry. The IID Water Department tracks nearly 4,000 raw water service accounts required by the California Department of Public Health (CDPH) to have alternate state approved drinking water service. The District maintains a small-acreage pipe and drinking water database and provides an annual compliance update to CDPH.

Figure 1 - IID Imperial Unit Boundary and Canal Network

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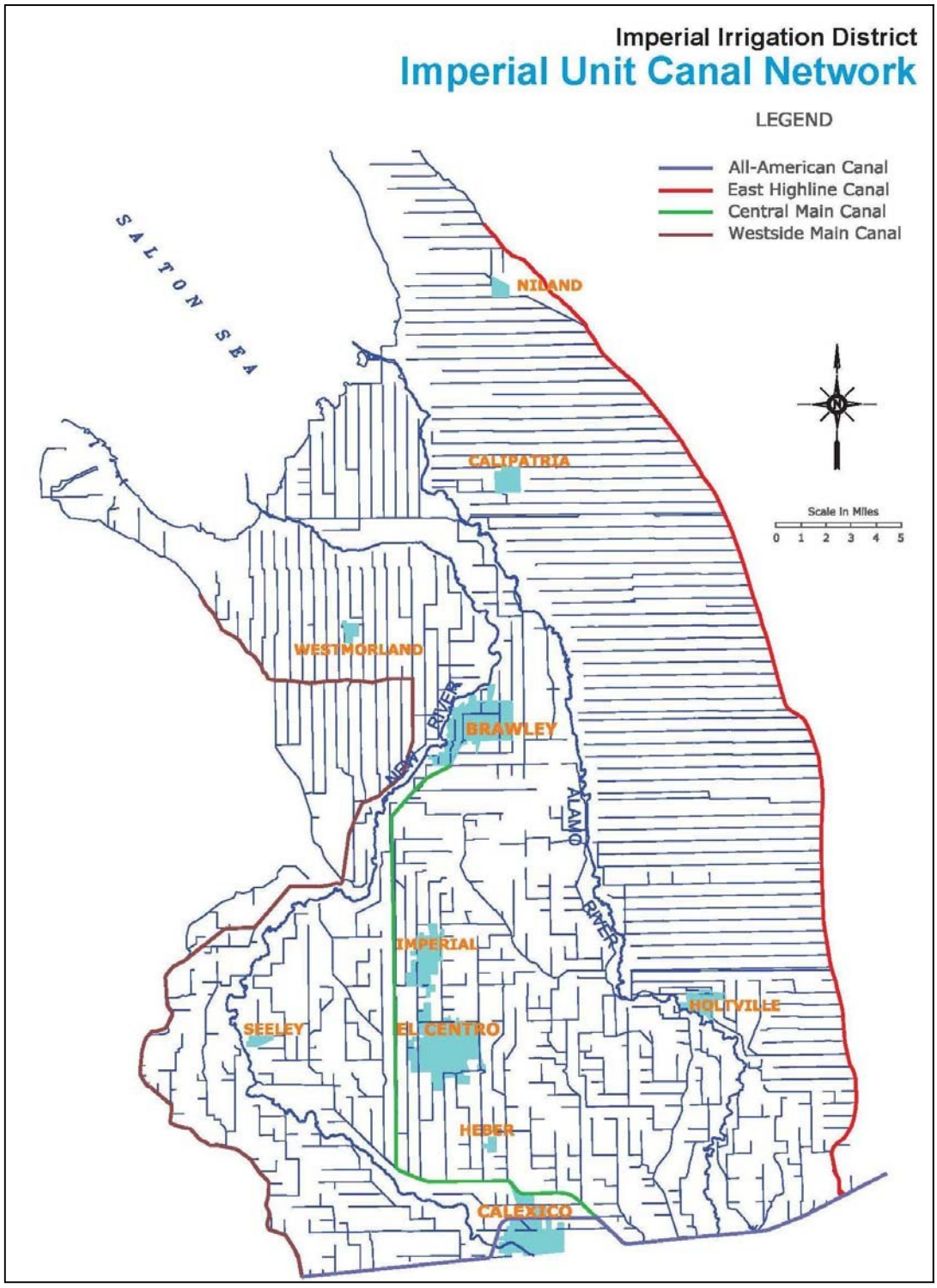

Imperial County Past and Future Land and Water Uses

Agricultural development in the Imperial Valley began at the turn of the twentieth century. In 2016, gross agricultural production for Imperial County was valued at $2,063,214,000 USD, of which approximately $1,980,685,440.00 USD was produced in the IID water service area.[10] While the agriculture-based economy is expected to continue, land use is projected to change somewhat over the years as industrial and/or alternative energy development and urbanization occur in rural areas and in areas adjacent to existing urban centers, respectively.

Imperial Valley's economy is gradually diversifying. Agriculture will likely continue to be the primary industry within the valley; however, two principal factors anticipated to reduce crop acreage are renewable energy (geothermal and solar) and urban development. Over the next 40 years, urbanization is expected to replace some agricultural land uses to due to an increase in residential, commercial, municipal and industrial uses. The transition from agricultural land use typically results in a minor net decrease in water demand for municipal and commercial development, a considerable net decrease in water demand for solar energy development, and a net increase in water demand for geothermal energy development. Local energy resources include geothermal, wind, biomass and solar. The County General Plan provides for development of energy production centers or energy parks within Imperial County.[11] Alternative energy facilities, like the one proposed in the Project, will help California meet its statutory and regulatory goals for increasing renewable power generation and use and decrease water demands in Imperial County.

The IID Board has adopted the following policies and programs to address how to accommodate water demands under the terms of the QSA/ Transfers Agreements and minimize potential negative impacts on agricultural water uses:

Imperial Integrated Regional Water Management Plan adopted by the board on December 18, 2012, and by the County, the City of Imperial, to meet the basic requirement of CDWR for an IRWM plan. In all, 14 local agencies adopted the 2012 Imperial IRWMP.

Interim Water Supply Policy for Non-Agricultural Projects adopted by the board on September 29, 2009, to ensure sufficient water will be available for new development, in

10 2016 Imperial County Crop and Livestock Report
http://www.co.imperial.ca.us/ag/docs/spc/crop_reports/2016_Imperial_County_Crop_and_Livestock_Report.pdf.
11 Imperial County General Plan, Geothermal/Alternative and Transmission Element, revised 2006 and 2015.

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particular anticipated renewable energy projects until the board selects and implements capital development projects such as those explored in the Imperial IRWMP.

Temporary Land Conversion Fallowing Policy adopted by the board on May 8, 2012, and revised on March 29, 2016, to provide a framework for a temporary, long-term fallowing program to work in concert with the IWSP and IID's coordinated land use/water supply strategy.

Equitable Distribution Plan adopted by the board on October 28, 2013, to provide a mechanism for IID to administer apportionment of the district's quantified annual supply of Colorado River water.

Imperial Integrated Regional Water Management Plan (October 2012)

The Imperial IRWMP serves as the governing document for regional water planning to meet present and future water resource needs and demands by addressing such issues as additional water supply options, demand management and determination and prioritization of uses and classes of service provided. In November 2012, the Imperial County Board of Supervisors approved the Imperial IRWMP, and the City of Imperial City Council and the IID Board approved it in December 2012. Approval by these three (3) stakeholders meets the basic requirement of California Department of Water Resources (CDWR) for an IRWMP. Through the IRWMP process, IID presented to the region stakeholders options in the event long-term water supply augmentation is needed, such as water storage and banking, recycling of municipal wastewater, and desalination of brackish water[12]. As discussed herein, long term water supply augmentation is not anticipated to be necessary to meet Project demands.

Chapter 5 of the 2012 Imperial IRWMP addresses water supplies, demand, baseline and forecasted through 2050, and IID water budget. Chapter 12 addresses projects, programs and policies, and funding alternatives. Chapter 12 of the IRWMP lists, and Appendix N details, a set of capital projects that IID could pursue, including the amount of water that might result (AFY) and cost ($/AF) if necessary. These highlight potential capital improvement projects that could be implemented in the future.

[12] October 2012 Imperial Integrated Regional Water Management Plan, Chapter 12.

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Imperial Valley forecasted future non-agricultural water delivery demand is provided in **Table 5** in five-year increments for 2015 through 2055. Total water demand for non-agricultural uses is projected to be 200.9 KAF in the year 2055. This is a forecasted increase in the use of non-agricultural water from 107.8 KAF for the period of 2015 to 2055.[13] These values were modified from Chapter 5 of the Imperial IRWMP to reflect updated conditions from the IID Provisional Water Balance for calendar year 2015. Due to the recession in 2009 and other factors, non-agricultural growth projections have lessened since the 2012 Imperial IRWMP, Projections in **Table 5** have been adjusted using a multiplier .03 to reflect that.

Table 5: Historic and Forecasted Non-Agricultural Water Delivery Demand within IID Water Service Area, 2015-2055 (KAFY)

	2015	2020	2025	2030	2035	2040	2045	2050	2055
Without Conservation									
Municipal	30.0	34.1	37.1	40.1	41.9	46.9	52.4	58.7	62.8
Industrial	26.4	33.1	39.8	46.6	53.3	60.1	66.8	73.5	80.3
Other	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5	5.5
Feedlots/Dairies	17.8	19.1	19.1	19.1	19.1	19.1	19.1	19.1	19.1
Envr Resources	8.1	12.2	12.2	12.2	12.2	12.2	12.2	12.2	12.2
Recreational	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4	7.4
Service Pipes	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0	12.0
Total Non-Ag Delivery Demand	107.2	123.4	133.1	142.9	151.4	163.2	175.4	188.4	199.3

Notes:
2015 Water Balance rerun 03/21/2017
2015 non-agricultural water demands are from IID 2015 Provisional Water Balance, 2020-22055 demands modified from Imperial IRWMP Chapter 5 based on 2015 Water Balance analysis with assistance from IID staff.
Industrial Demand includes geothermal, but not solar, energy production.
Projections have been adjusted using a multiplier of .03

Agricultural evapotranspiration (ET) demand of approximately 1,475.7 KAFY is expected to increase in 2018 to around 1,566.5 KAFY with the termination of fallowing programs implemented to provide as much as 150 KAFY of water for Salton Sea mitigation in 2015-2017. Forecasted agricultural evapotranspiration remains constant as reductions in water use are to come from efficiency conservation measures not reduction in agricultural production. Market forces and other factors may impact focasted future water demand. The 2015 historic and forecasted 2020 to 2055 are provided in **Table 6**. Then accounting

[13] Wistaria Solar Ranch, Environmental Impact Report, http://www.icpds.com/?pid=4194.

for agriculture ET, tailwater and tilewater to the Salton Sea, total agricultural consumptive use (CU) demand ranges from 2,158.7 KAF in 2015 to 2.210.5 KAF in 2055. Forcasted total agricultural delivery demand is around 100 KAFY higher than the CU demand, ranging from 2,158.7 KAF in 2015 to 2,210.5 KAF in 2055.

Table 6: Historic and Forecasted Agricultural Water Consumptive Use and Delivery Demand within IID Water Service Area, 2015-2055 (KAFY)

	2015	2020	2025	2030	2035	2040	2045	2050	2055
Ag ET from Delivered & Stored Soil Water	1,475.70	1,566.50	1,566.50	1,566.50	1,566.50	1,566.50	1,566.50	1,566.50	1,566.50
Ag Tailwater to Salton Sea	283.6	322.9	272.9	222.9	222.9	222.9	222.9	222.9	222.9
Ag Tilewater to Salton Sea	398.4	420.1	420.1	420.1	420.1	420.1	420.1	420.1	420.1
Total Ag CU Demand	2,157.70	2,309.50	2,259.50	2,209.50	2,209.50	2,209.50	2,209.50	2,209.50	2,209.50
Total Ag Delivery Demand	2,158.70	23,010.60	2,260.50	2,010.50	2,210.50	2,210.50	2,210.50	2,210.50	2,210.50
Note: *2015 Water Balance rerun 03/21/2017* 2015 record from IID 2015 Provisional Water Balance; 2020-2055 forecasts from spreadsheet used to develop Figure 19, et seq. in Imperial IRWMP Chapter (Data provided by IID staff).									

IID Interim Water Supply Policy for Non-Agricultural Projects[14] (September 2009)

The IID IWSP provides a mechanism to address water supply requests for projects being developed within the IID service area. The IWSP designates up to 25,000 acre-feet per year of IID's annual Colorado River water supply for new projects, provides a mechanism and process to develop a water supply agreement for any appropriately permitted project, and establishes a framework and set of fees to ensure the supplies used to meet new demands do not adversely affect existing users by funding water conservation or augmentation projects as needed.

Depending on the nature, complexity and water demands of the proposed project, new projects may be charged a one-time Reservation Fee and an annual Water Supply

[14]"http://www.iid.com/water/municipal-industrial-and-commercial-customers" http://www.iid.com/water/municipal-industrial-and-commercial-customers>

Development Fee for the contracted water volume used solely to assist in funding new water supply projects. The 2016 fee schedule is shown in **Table 8.** All new industrial use projects are subject to the fee, while new municipal and mixed-use projects shall be

subject to the fee if the Project water demands exceed certain district-wide average per capita use standards. The applicability of the fee to mixed-use projects will be determined by IID on a case-by-case basis, depending on the proportion of types of land uses and water demand proposed for a project.

Table 7: Interim Water Supply Policy 2016 Annual Non-Agricultural Water Supply Development Fee Schedule

Annual Demand (AF)	Reservation Fee ($/AF)*	Development Fee ($/AF)*
0-500	$69.05	$276.20
501-1000	$97.22	$388.88
1001-2500	$122.08	$488.31
2501-5000	$150.80	$603.21

*Adjusted annually in accordance with the Consumer Price Index (CPI).

IID customers with new projects will be charged the appropriate water rate based on measured deliveries, see IID Water Rate Schedules. As of October 2016, IID has issued one Water Supply Agreement for 1,200 acre-feet per year, leaving a balance of 23,800 acre-feet per year of supply available for contracting under the IWSP.

IID Temporary Land Conversion Fallowing Policy[15] (May 2012)

Imperial County planning officials determined that renewable energy facilities were consistent with the county's agricultural zoning designation and began issuing conditional use permits for these projects with ten- to twenty-year terms. These longer-term, but temporary, land use designations were not conducive to a coordinated land use/water supply policy as envisioned in the Imperial IRWMP, because temporary water supply assignments during a conditional use permit (CUP) term were not sufficient to meet the water supply verification requirements for new project approvals. Agricultural land

[15] IID website: Temporary Land Conversion Fallowing Policy (TLCFP), and The TLCFP are the sources of the text for this section.

owners also sought long-term assurances from IID that, at project termination, irrigation service would be available for them to resume their farming operations.

Based on these conditions, IID determined it had to develop a water supply policy that conformed to the local land use decision-making in order to facilitate new development and economic diversity in Imperial County. IID concluded that certain lower water use projects could still provide benefits to local water users. The resulting benefits; however, may not be to the same categories of use (e.g., MCI) but to the district as a whole.

At the general manager's direction, staff developed a framework for a fallowing program that could be used to supplement the IWSP and meet the multiple policy objectives envisioned for the coordinated land use/water supply strategy. Certain private projects that, if implemented, will temporarily remove land from agricultural production within the district's water service area include renewable solar energy and other non-agricultural projects. Such projects may need a short-term water supply for construction activities and longer-term water service for facility operation and maintenance or for treating to potable water standards. Conserved water will be created to the extent that water use for the project is less than water historic use for the project footprint as determined by the EDP analysis.[16]

Water demands for certain non-agricultural projects are typically less than that required for agricultural production; this reduced demand allows additional water to be made available for other users under IID's annual consumptive use cap. This allows the district to avail itself of the ability during the term of the QSA/Transfer Agreements under CWC Section 1013 to create conserved water through these projects as temporary land fallowing conservation measures. This conserved water can then be used to satisfy the district's conserved water transfer obligation and for environmental mitigation purposes.

Under the terms of the legislation adopted to facilitate the QSA/Transfer Agreements and enacted in CWC Section 1013, the TLCFP was adopted by the IID board on May 8, 2012 and revised on March 29, 2016 to update the fee schedule for 2016.. This policy provides a framework for a temporary, long-term fallowing program to work in concert with the IWSP and in line with the Equitable Distribution Plan (EDP). While conserved water generated from the TLCFP is limited by law for use for water transfer or environmental purposes, by

[16] For details of how water conservation yield attributable to land removed from agricultural production and temporarily fallowed is computed, see TLCP for Water Conservation Yield.

satisfying multiple district objectives the TLCFP serves to reduce efficiency conservation and water use reduction demands on IID water users, thus providing district wide benefits.

IID Equitable Distribution Plan[17] (October 2013)

In support of IID's Colorado River water management responsibilities, each calendar year the Water Department apportions its annual water supply to all users in accordance with the Oct. 28, 2013 Equitable Distribution Plan. To be eligible for the agricultural apportionment, a field must be connected to IID's canal system, be current with its water availability charges and water bills, be larger than five (5) acres in size and used for crop production, algae farming or an actively managed duck pond.

Water users may aggregate water accounts into farm units to facilitate the use and management of water among the fields in those accounts. Additionally, the EDP allows for an intra-district clearinghouse for the movement of agricultural water between IID agricultural water users and farm units within the IID water service area. Movement of water between users is only possible through the use of the Agricultural Water Clearinghouse.

By facilitating the movement of apportioned water between agricultural water users and between farm units, the Agricultural Water Clearinghouse allows growers and IID to balance water demands for different types of crops and soils with the apportionments that are made.

EDP regulations are used to administer the annual apportionment, with specifics for non-agricultural users, as follows:

- Municipal Users – Base amount of 2006 usage plus current District-wide average use per capita multiplied by the increase in population since 2006.

- Industrial Users – For existing contracts, estimated based on past use, not to exceed contracted amount and contact terms. For new contracts, estimated based on

[17] IID website: Equitable Distribution and EDP Revised 10-28-2013 are the sources of the text for this section.

anticipated use, not to exceed contract amount and contract terms, taking into consideration the Integrated Water Resources Management Plan[18].

- Lots, Dairies and Fish Farms – Estimated based upon past use and consideration of future changes.

- Environmental Resources Water – Estimated based upon the amount reasonably necessary to achieve the purposes of the District's commitments, taking past use into account.

IID Water Rights

As noted above, IID and its customers are dependent on Colorado River water. The following section summarizes the laws and regulations that influence IID's water supply and demand. The Law of the River (as described below), along with the 2003 Quantification Settlement Agreement and Related Agreements serve as the laws, regulations and agreements that primarily influence the findings of this WSA. These agreements state that California has the most senior water rights along the Colorado River and that IID specifically has access to 3.1 MAF per year (the largest allocation on the Colorado River). These two components will influence future decisions in terms of water supply during periods of shortages.

California Law

IID's has a longstanding right to divert Colorado River water, and IID holds legal titles to all of its water and water rights in trust for landowners within the district (Water Code §§ 20529, 22437; *Bryant v. Yellen*, 447 U.S. 352, 371 (1980), fn. 23..) Beginning in 1885, a number of individuals, as well as the California Development Company, made a series of appropriations of Colorado River water under California law for use in the Imperial Valley. The rights to these appropriations were among the properties acquired by IID from the California Development Company.

Law of the River

[18] The 2009 draft Integrated Water Resources Management Plan (draft IID Plan), which was not adopted by the IID Board of Directors, is superseded by the 2012 Imperial IRWMP, which incorporates the IID Interim Water Supply Policy.

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Colorado River water rights are governed by numerous compacts, state and federal laws, court decisions and decrees, contracts, and regulatory guidelines collectively known as the "Law of the River." Together, these documents form the basis for allocation of the water, regulation of land use, and management of the Colorado River water supply among the seven Basin States and Mexico.

Of all regulatory literature that governs Colorado River water rights, the following are the specifics that impact IID:

Colorado River Compact (1921)
Boulder Canyon Project Act (1928)
California Seven-Party Agreement (1931)
Arizona v. California US Supreme Court Decision (1964, 1979)
Colorado River Basin Project Act (1968)
Quantification Settlement Agreement and Related Agreements (2003)
2003 Colorado River Water Delivery Agreement: Federal QSA for purposes of Section 5(b) Interim Surplus Guidelines (CRWDA)
1970 Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs Annual Operating Plan (AOP) for Colorado River Reservoirs
2007 Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lakes Powell and Mead (2007 Interim Guidelines)

Colorado River Compact (1924)

With authorization of their legislatures and urging of the federal government, representatives from the seven Colorado River Basin States began negotiations regarding distribution of water from the Colorado River in 1921. In November 1922, an interstate agreement called the "Colorado River Compact" (Compact) was signed by the representatives giving the Lower Basin (Arizona, California and Nevada) perpetual rights to annual apportionments of 7.5 million acre-feet (MAF) of Colorado River water (75 MAF over ten [10] years). The Upper Basin (Wyoming, New Mexico, Colorado and Utah) was to receive the remainder, which based on the available hydrological record was also expected to be 7.5 MAF annually, with enough left over to provide 1.5 MAF annually to Mexico.

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Boulder Canyon Project Act (1928)

Provisions in the 1928 Boulder Canyon Project Act made the compact effective and authorized construction of Hoover Dam and the AAC, and served as the United States' consent to accept the Compact. Through a Presidential Proclamation on June 25, 1929, this act resulted in ratification of the Compact by six (6) of the basin states and required California to limit its annual consumptive use to 4.4 MAF of the lower basin's apportionment plus not less than half of any excess or surplus water un-apportioned by the Compact. A lawsuit was filed by the State of Arizona after its refusal to sign. Through the implementation of its 1929 Limitation Act, California abided by this federal mandate. The Boulder Canyon Act authorized the Secretary of the Interior (Secretary) to "contract for the storage of water… and for the delivery thereof… for irrigation and domestic uses," and additionally defined the Lower Basin's 7.5 MAF apportionment split, with an annual allocation 0.3 MAF to Nevada, 2.8 MAF to Arizona, and 4.4 MAF to California. Although the three (3) states never formally settled or agreed to these terms, a 1964 Supreme Court decision (*Arizona v. California*, 373 U.S. 546) declared the three (3) states' consent to be insignificant since the Boulder Canyon Project Act was authorized by the Secretary.

California Seven-Party-Agreement (1931)

Following implementation of the Boulder Canyon Project Act, the Secretary requested that California make recommendations regarding distribution of its apportionment of Colorado River water. In August 1931, under chairmanship of the State Engineer, the California Seven-Party Agreement was developed and authorized by the affected parties to prioritize California water rights. The Secretary accepted this agreement and established these priorities through General Regulations issued in September of 1931. The first four (4) priority allocations account for California's annual apportionment of 4.4 MAF, with agricultural entities using 3.85 MAF of that total. Additional priorities are defined for years in which the Secretary declares that excess waters are available.

Arizona v. California U.S. Supreme Court Decision (1964, 1979)

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The 1964 Supreme Court decision settled a 25-year disagreement between Arizona and California that stemmed from Arizona's desire to build the Central Arizona Project (CAP) to enable use of its full apportionment. California's argument was that as Arizona used water from the Gila River, which is a Colorado River tributary, it was using a portion of its annual Colorado River apportionment. An additional argument from California was that it had developed a historical use of some of Arizona's apportionment, which, under the doctrine of prior appropriation, precluded Arizona from developing the project. California's arguments were rejected by the United States Supreme Court. Under direction of the Supreme Court, the Secretary was restricted from delivering water outside of the framework of apportionments defined by law. Preparation of annual reports documenting consumptive use of water in the three Lower Basin states was also mandated by the Supreme Court. In 1979, present perfected water rights (PPRs) referred to in the Compact and in the Boulder Canyon Project Act were addressed by the Supreme Court in the form of a Supplemental Decree.

In March of 2006, a Consolidated Decree was issued by the Supreme Court to provide a single reference to the conditions of the original 1964 decrees and several additional decrees in 1966, 1979, 1984 and 2000 that stemmed from the original ruling. The Consolidated Decree also reflects the settlements of the federal reserved water rights claim for the Fort Yuma Indian Reservation.

Colorado River Basin Project Act (1968)

In 1968, various water development projects in both the Upper and Lower Basins, including the CAP were authorized by Congress. Under the Colorado River Basin Project Act, priority was given to California's apportionment over (before) the CAP water supply in times of shortage. Also under the act, the Secretary was directed to prepare long-range criteria for the Colorado River reservoir system in consultation with the Colorado River Basin States.

Quantification Settlement Agreement and Related Agreements (2003)

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With completion of a large portion of the CAP infrastructure in 1994, creation of the Arizona Water Banking Authority in 1995, and the growth of Las Vegas in the 1990s, California encountered increasing pressure to live within its rights under the Law of the River. After years of negotiating among Compact states and affected California water delivery agencies, a Quantification Settlement Agreement and Related Agreements and documents were signed on October 10, 2003, by the Secretary of Interior, IID, Coachella Valley Water District (CVWD), Metropolitan Water District of Southern California (MWD), San Diego County Water Authority (SDCWA), and other affected parties.

The Quantification Settlement Agreement and Related Agreements (QSA/Transfer Agreements) are a set of interrelated contracts that resolve certain disputes among the United States, the State of California, IID, MWD, CVWD and SDCWA, for a period of 35 to 75 years, regarding the reasonable and beneficial use of Colorado River water; the ability to conserve, transfer and acquire conserved Colorado River water; the quantification and priority of Priorities 3(a) and 6(a)[19] within California for use of Colorado River water; and the obligation to implement and fund environmental impact mitigation.

Conserved water transfer agreements between IID and SDCWA, IID and CVWD, and IID and MWD are all part of the QSA/Transfer Agreements. For IID, these contracts identify conserved water volumes and establish transfer schedules along with price and payment terms. As specified in the agreements.

, IID will transfer nearly 415,000 AFY over a 35-year period (or longer), as follows:

- MWD 110,000 AFY [modified to 105,000 AFY in 2007],
- SDCWA 200,000 AFY,
- CVWD and MWD combined 103,000 AFY,
- San Luis Rey Indian Tribes 11,500 AFY of water

All of the conserved water will ultimately come from IID system efficiency and on-farm efficiency conservation improvements. In the interim, IID has implemented a fallowing program to generate water associated with Salton Sea mitigation related to the impacts of the IID/SDCWA water transfer (Fallowing Program), as required by the State Water

[19] Priorities 1, 2, 3(b), 6(b), and 7 of current Section 5 Contracts for the delivery of Colorado River water in the State of California and Indian and miscellaneous Present Perfected Rights within the State of California and other existing surplus water contracts are not affected by the QSA Agreement.

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Resources Control Board, which is to run from 2003 through 2017. In return for its QSA/Transfer Agreements programs and deliveries, IID will receive payments totaling billions of dollars to fund needed efficiency conservation measures and to pay growers for conserved on-farm water, so IID can transfer water without impacting local productivity. In addition, IID will transfer 67,700 AFY annually to SDCWA of water conserved from the lining of the All American Canal (AAC) in exchange for payment of lining project costs and a grant to IID of certain rights to use the conserved water. In addition to the 105,000 acre-feet of water currently being conserved under the 1988 IID/MWD Conservation Program, these more recent agreements define an additional 303,000 AF - per year to be conserved by IID from on-farm and distribution system conservation projects for transferred to SDCWA, CVWD, and MWD.

Colorado River Water Delivery Agreement (2003)[20]

As part of QSA/Transfer Agreements among California and federal agencies, the Colorado River Water Delivery Agreement: Federal QSA for purposes of Section 5(b) Interim Surplus Guidelines (CRWDA) was entered into by the Secretary, IID, CVWD, MWD and SDCWA. This agreement involves the federal government because of the change in place of diversion from Imperial Dam into the AAC to Parker Dam into MWD's Colorado River Aqueduct.

The CRWDA assists California to meet its "4.4 Plan" goals of using it's 4.4 MAFY Colorado River Entitlement by quantifying deliveries for a specific number of years for certain Colorado River entitlements so transfers may occur. In particular, for the term of the CRWDA, quantification of Priority 3(a) was effected through caps on water deliveries to IID (consumptive use of 3.1 MAF per year) and CVWD (consumptive use of 330 KAF per year). In addition, California's Priority 3(a) apportionment between IID and CVWD, with provisions for transfer of supplies involving IID, CVWD, MWD and SDCWA are quantified in the CRWDA for a period of 35 years or 45 years (assumes SDCWA does not terminate in year 35) or 75 years (assumes SDCWA and IID mutually consent to renewal term of 30 years).

Allocations for consumptive use of Colorado River water by IID, CVWD and MWD that will enable California to stay within its basic annual apportionment (4.4 MAF plus not

[20] CRWDA: Federal QSA. 7 June 2017.

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less than half of any declared surplus) are defined by the terms of the QSA/Transfer Agreements **Table 8.** As specified in the CRWDA, by 2026, IID annual use within its water

service area (Imperial Valley) is to be reduced to just over 2.6 MAF of its 3.1 MAF quantified annual apportionment. The remaining nearly 500,000 AF (which includes the 67,000 AF from AAC lining) are to be transferred annually to urban water users outside of the Imperial Valley.

Table 8: QSA Colorado River Use – Annual 4.4 MAF Apportionment Cap (Priorities 1 to 4) for California Agencies (Excluding Transfers and Exchanges)

User	Apportionment (AFY)
Palo Verde Irrigation District and Yuma Project*	420,000
Imperial Irrigation District	3,100,000
Coachella Valley Water District	330,000
Metropolitan Water District of Southern California*	550,000
Total:	**4,400,000**

* PVID and Yuma Project did not agree to a cap; value represents a contractual obligation by MWD to assume responsibility for any overages or be credited with any volume below this value.
Notes: All values are consumptive use at point of Colorado River diversion: Palo Verde Diversion Dam (PVID), Imperial Dam (IID and CVWD), and Parker Dam (MWD). Source: IID 2009 Annual Water Report, p 15.

Quantification of Priority 6(a) was effected through quantifying annual consumptive use amounts to be made available in order of priority to MWD (38 KAF), IID (63 KAF), and CVWD (119 KAF) with the provision that any additional water available to Priority 6(a) be delivered under IID's and CVWD's existing water delivery contract with the Secretary.[21] The CRWDA provides that the underlying water delivery contract with the Secretary remain in full force and effect (*Colorado River Documents 2008*, Chapter 6, pages 6-12 and 6-13). The CRWDA also provides a source of water to affect a San Luis Rey Indian Water rights settlement. Additionally, the CRWDA satisfies the requirement of the 2001 Interim Surplus Guidelines (ISG) that a QSA be adopted as a prerequisite to the interim surplus determination by the Secretary in the ISG.

Inadvertent Overrun Payback Policy (2003)

[21] When water levels in the Colorado River reservoirs are low, Priority 5, 6 and 7 apportionments are not available for diversion.

The Inadvertent Overrun Payback Policy (IOPP), adopted by the Secretary contemporaneously with the execution of the CRWDA, provides additional flexibility to Colorado River management and applies to entitlement holders in the Lower Division States (Arizona, California and Nevada).[22] The IOPP defines inadvertent overruns as "Colorado River water diverted, pumped, or received by an entitlement holder of the Lower Division States that is in excess of the water users' entitlement for the year." An entitlement holder is allowed a maximum overrun of ten percent (10%) of its Colorado River water entitlement.

In the event of an overrun, the IOPP provides a mechanism to payback the overrun. When the Secretary has declared a normal year for Colorado River diversions, a contractor has from one to three years to pay back its obligation, with a minimum annual payback equal to twenty percent (20%) of the entitlement holder's maximum allowable cumulative overrun account or 33.3 percent of the total account balance, whichever is greater. However, when Lake Mead is below 1,125 feet on January 1, the terms of the IOPP require that the payment of the inadvertent overrun obligation be made in the calendar year after the overrun is reported in the United States Bureau of Reclamation (USBR) Lower Colorado Region Colorado River Accounting and Water Use Report for Arizona, California, and Nevada (Decree Accounting Report).[23].

1970 Criteria for Coordinated Long-Range Operation of Colorado River Reservoirs

The 1970 Operating Criteria control operation of the Colorado River reservoirs in compliance with requirements set forth in the Colorado River Compact of 1922, the United States-Mexico Water Treaty of 1944, the Colorado River Storage Project Act of 1956, the Boulder Canyon Projects Act (Lake Mead) and the Colorado River Basin Project Act (Upper Basin Reservoirs) of 1968, and other applicable federal laws. Under these Operating Criteria, the Secretary makes annual determinations published in the USBR Annual Operating Plan for Colorado River Reservoirs (discussed below) regarding the release of Colorado River water for deliveries to the Lower Basin states. A requirement to equalize active storage between Lake Powell and Lake Mead when there is sufficient

[22] USBR, 2003 CRWDA ROD Implementation Agreement, IOPP and Related Federal Actions Final EIS. Section IX. Implementing the Decision A. Inadvertent Overrun and Payback Policy. Pages 16-19 of 34.

[23] 2003 CRWDA ROD. Section IX. A.6.c,, page 18 of 34.

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storage in the Upper Basin is included in these operating criteria. **Error! Reference source not found.** Identifies the major storage facilities and the Upper Basin and Lower Basin boundaries.

Figure 2: Major Colorado River Reservoir Storage Facilities and Basin Location Map

Source: [Final EIS – Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead, Volume 1 Chapter 1 Purpose and Need](), p I-10

Annual Operating Plan for Colorado River Reservoirs

The Annual Operating Plan (AOP) is developed in accordance with Section 602 of the Colorado River Basin Project Act (PL 90-537); the Criteria for Coordinated Long-Range Operations of Colorado River Reservoirs pursuant to the Colorado River Basin Project Act of 1968, as amended, promulgated by the Secretary; and Section 1804(c)(3) of the Grand Canyon Protection Act (PL 102-575). As part of the AOP process, the Secretary makes determinations regarding the availability of Colorado River water for deliveries to the Lower Basin states, including whether normal, surplus, and shortage conditions are in effect on the lower portion of the Colorado River.

2007 Colorado River Interim Guidelines for Lower Basin Shortages (2007 Interim Guidelines)

A multi-year drought in the Upper Colorado River basin that began in October 1999 was the trigger for the Interim Shortage Guidelines. In the summer of 1999, Lake Powell was essentially full with reservoir storage at 97 percent of capacity. However, precipitation fell off starting in October 1999 and 2002 inflow was the lowest recorded since Lake Powell began filling in 1963.[24, 25] By August 2011, inflow to was 279 percent of average; however, drought resumed in 2012 and has continued through water year 2014. Using the record in**,** average unregulated inflow to Lake Powell for water years 2000-2014 is 71 percent; or if 2011 is excluded, 66 percent of the historic average, see **Table 9**.

Table 9: Unregulated Inflow to Lake Powell, Percent of Historic Average, 2000-2015

2000	2001	2002	2003	2004	2005	2006	2007	2008	2009	2010	2011	2012	2013	2014	2015
62%	59%	25%	51%	49%	105%	73%	68%	102%	88%	73%	136%	35%	49%	90%	83%

Sources: Drought in the Upper Colorado River Basin (2000-2010), and UCR Water Operations: Historic Data (2011-2016)

[24] Water Year: October 1 through September 30 of following year, so year ending September 1999 water year.
[25] Drought in the Upper Colorado River Basin. August 2011

In the midst of the drought period, USBR developed 2007 Interim Guidelines with consensus from the seven basin states, which selected the Draft EIS Preferred Alternative as the basis for USBR's final determination. The basin states found the Preferred Alternative best met all aspects of the purpose and need for the federal action.[26]

The 2007 Interim Guidelines Preferred Alternative highlights the following:

1. The need for the Interim Guidelines to remain in place for an extended period of time.
2. The desirability of the Preferred Alternative based on the facilitated consensus recommendation from the basin states.
3. The likely durability of the mechanisms adopted in the Preferred Alternative in light of the extraordinary efforts that the basin states and water users have undertaken to develop implementing agreements that will facilitate the water management tools (shortage sharing, forbearance, and conservation efforts) identified in the Preferred Alternative.
4. That the range of elements in the Preferred Alternative will enhance the Secretary's ability to manage the Colorado River reservoirs in a manner that recognizes the inherent tradeoffs between water delivery and water storage.

In June 2007, USBR announced that a preferred alternative for Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations of Lake Powell and Lake Mead (Final Preferred Alternative) had been determined. The Final Preferred Alternative, based on the Basin States' consensus alternative and an alternative submitted by the environmental interests called "Conservation Before Shortage," is comprised of four key operational elements which are to guide operations of Lake Powell and Lake Mead through 2026 are:

1. Shortage strategy for Lake Mead and Lower Division states: The Preferred Alternative proposed discrete levels of shortage volumes associated with Lake Mead elevations to conserve reservoir storage and provide water users and managers in the Lower Basin with greater certainty to know when, and by how much, water deliveries will be reduced during low reservoir conditions.
2. Coordinated operations of Lake Powell and Lake Mead: The Preferred Alternative proposed a fully coordinated operation of the reservoirs to minimize shortages in the Lower Basin and to avoid risk of curtailments of water use in the Upper Basin.
3. Mechanism for storage and delivery of conserved water in Lake Mead: The Preferred Alternative proposed the Intentionally Created Surplus (ICS) mechanism to provide for the creation, accounting, and delivery of conserved system and non-system water

[26] USBR Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead http://www.usbr.gov/lc/region/programs/strategies.html

thereby promoting water conservation in the Lower Basin. Credits for Colorado River or non-Colorado River water that has been conserved by users in the Lower Basin creating an ICS would be made available for release from Lake Mead at a later time. The total amount of credits would be 2.1 MAF, but this amount could be increased up to 4.2 MAF in future years.

4. Modifying and extending elements of the ISG: The ISG determines conditions under which surplus water is made available for use within the Lower Division states. These modifications eliminate the most liberal surplus conditions thereby leaving more water in storage to reduce the severity of future shortages.

With respect to the various interests, positions and views of each of the seven basin states, this provision adds an important element to the evolution of the legal framework for the prudent management of the Colorado River. Furthermore, the coordinated operation element allows for adjustment of Lake Powell releases to respond to low reservoir storage conditions in either Lake Powell or Lake Mead[27]. states found the Preferred Alternative best met all aspects of the purpose and need for the federal action.[28] The 2007 Interim Guidelines Preferred Alternative highlights the following:

5. The need for the Interim Guidelines to remain in place for an extended period of time.
6. The desirability of the Preferred Alternative based on the facilitated consensus recommendation from the basin states.
7. The likely durability of the mechanisms adopted in the Preferred Alternative in light of the extraordinary efforts that the basin states and water users have undertaken to develop implementing agreements that will facilitate the water management tools (shortage sharing, forbearance, and conservation efforts) identified in the Preferred Alternative.
8. That the range of elements in the Preferred Alternative will enhance the Secretary's ability to manage the Colorado River reservoirs in a manner that recognizes the inherent tradeoffs between water delivery and water storage.

In June 2007, USBR announced that a preferred alternative for Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations of Lake Powell and Lake Mead (Final Preferred Alternative) had been determined. The Final Preferred Alternative, based on the Basin States' consensus alternative and an alternative submitted by the environmental interests called "Conservation Before Shortage," is comprised of four

[27] For a discussion of the 2007 Interim Guidelines, see: Intermountain West Climate Summary by The Western Water Assessment, issued Jan. 21, 2008, Vol. 5, Issue 1, *January 2009 Climate Summary*, Feature Article, pages 5-7, http://wwa.colorado.edu/climate/iwcs/archive/IWCS_2009_Jan.pdf, 22 Mar 2013.

[28] USBR Colorado River Interim Guidelines for Lower Basin Shortages and Coordinated Operations for Lake Powell and Lake Mead, http://www.usbr.gov/lc/region/programs/strategies.html.

key operational elements which are to guide operations of Lake Powell and Lake Mead through 2026 are:

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6. Coordinated operations of Lake Powell and Lake Mead: The Preferred Alternative proposed a fully coordinated operation of the reservoirs to minimize shortages in the Lower Basin and to avoid risk of curtailments of water use in the Upper Basin.
7. Mechanism for storage and delivery of conserved water in Lake Mead: The Preferred Alternative proposed the Intentionally Created Surplus (ICS) mechanism to provide for the creation, accounting, and delivery of conserved system and non-system water thereby promoting water conservation in the Lower Basin. Credits for Colorado River or non-Colorado River water that has been conserved by users in the Lower Basin creating an ICS would be made available for release from Lake Mead at a later time. The total amount of credits would be 2.1 MAF, but this amount could be increased up to 4.2 MAF in future years.
8. Modifying and extending elements of the ISG: The ISG determines conditions under which surplus water is made available for use within the Lower Division states. These modifications eliminate the most liberal surplus conditions thereby leaving more water in storage to reduce the severity of future shortages.

Lower Colorado Region Water Shortage Operations

The drought in the Colorado River watershed has continued through 2016 despite an increase in observed runoff in August 2011 when unregulated inflow to Lake Powell was 279 percent of the average. Since 2000, Lake Mead has been below the "average" level of lake elevations. Such conditions have caused the preparation of shortage plans for waters users in Arizona and Nevada, and in Mexico.

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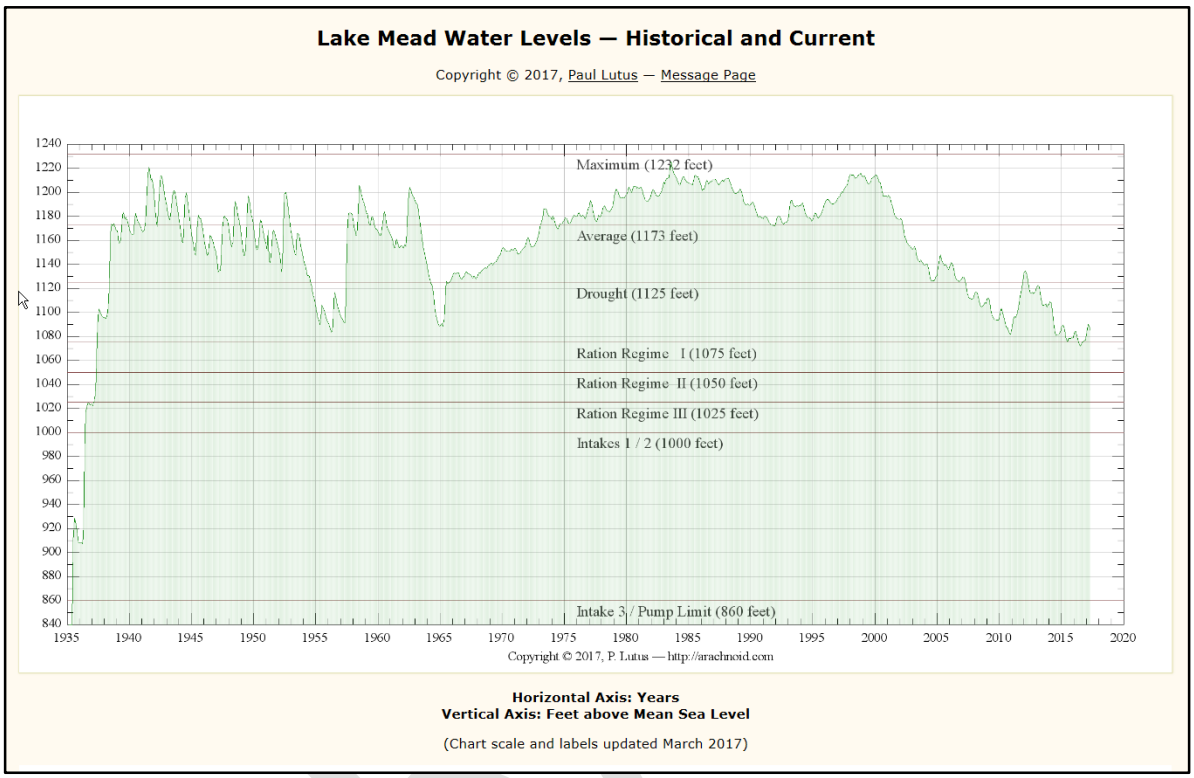
Figure 3: Lake Mead Water Elevation Levels



For graph of latest elevations visit<http://www.arachnoid.com/NaturalResources/index.html>

According to guidelines put in place in 2007, Arizona and Nevada begin to take shortages when the water elevation in Lake Mead falls below 1,075 feet. The volumes of shortages increase as water levels fall to 1,050 feet and again at 1,025 feet. In 2012, Mexico agreed to participate in a 5-year pilot agreement to share specific volumes of shortages at the same elevations. The 2007 interim shortage guidelines contain no reductions for California, which has senior water rights to the Central Arizona Project water supply, through 2025 when the guidelines expire. If Lake Mead's elevation drops to 1,025 feet, a re-consultation process would be triggered among the basin states to address next steps. Consultation would start out within each state, then move to the three lower basin states, followed by all seven states and the USBR. Mexico will then be brought into the process unless they choose to participate earlier.

IID Water Supply – Normal Year, Single Dry and Multiple Dry Years

SB 610 requires an analysis of a normal, single dry, and multiple dry water years to show that adequate water is available for the proposed Project in various climate scenarios. Water availability for this Project in a normal year is no different from water availability during a single-dry and multiple-dry year scenarios. This is due to the small effect rainfall has on water supply in IID's arid environment along with IID's strong entitlements to the Colorado River water supply. Local rainfall does have some impact on how much water is consumed (i.e. if rain falls on agricultural lands, those lands will not demand as much irrigation), but does not impact the definition of a normal year, a single-dry year or a multiple-dry year scenario.

IID Water Supply – Normal Year

IID is entitled to annual net consumptive use of 3.1 million acre-feet of Colorado River, less its QSA transfer obligations. Imperial Dam, located north of Yuma, Arizona, serves as a diversion structure for water deliveries throughout southeastern California, Arizona and Mexico. Water is transported to the IID water service area through the AAC for use throughout the Imperial Valley.

IID historic and forecast net consumptive use volumes at Imperial Dam from CRWDA Exhibit B are shown in **Error! Reference source not found.** Volumes for years 2003-2015 are adjusted for USBR Decree Accounting historic records. Volumes for years 2016-2077 are from the CRWDA

Exhibit B modified to reflect the 2014 Letter Agreement[29] changes to the 1988 IID/MWD Water Conservation Agreement.

Due to limits on annual consumptive use of Colorado River water under the QSA/Transfer Agreements, IID's water supply during a normal year is best represented by the CRWDA Exhibit B Net Available for Consumptive Use (
Table 10, Column 11). That annual volume is the IID Priority 3(a) Quantified Amount of 3.1 million acre-feet (MAF) (

[29] Letter Agreement for Substitution and Conservation Modifications to the IID/MWD Water Conservation Agreement - December 18, 2014 http://www.iid.com/home/showdocument?id=9951

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Table 10, Column 2) less the IID transfer program reductions for each year (**Table 10**, Columns 3-9). These volumes represent the supply available to IID at Imperial Dam.

The CRWDA Exhibit B Net Available for Consumptive Use volumes less system operation demand represent the amount of water available for delivery by IID Water Department to its customers each year. In a normal year, perhaps 150,000 AF of effective rainfall would fall in the IID water service area. However, rainfall is not evenly distributed throughout the IID water service area and is not taken into account by IID in the submittal of its Estimate of Diversion (annual water order) to the USBR.

Table 10: IID Historic and Forecast Net Consumptive Use for Normal Year, Single-Dry Year and Multiple-Dry Year Water Supply, 2003-2037, et seq. (CRWDA Exhibit B)

IID Quantification and Transfers, Volumes in KAF at Imperial Dam [1]										
Col 1	2	3	4	5	6	7	8	9	10	11
	IID Priority 3(a)									
		IID Reductions								IID Net Available for Consumptive Use (Col 2 - 10)
Year	IID 3(a) Quantified Amount	1988 MWD Transfer [2]	SDCWA Transfer	AAC Lining	Salton Sea Mitigation SDCWA Transfer [3]	Intra-Priority 3 CVWD Transfer	MWD Transfer w\ Salton Sea Restoration [4]	Misc. PPRs	IID Total Reduction (Σ Cols 3-9) [5]	
2003	3,100	105.1	10.0	0.0	0.0	0.0	0.0	11.5	126.6	2978.2
2004	3,100	101.9	20.0	0.0	15.0	0.0	0.0	11.5	148.4	2743.9
2005	3,100	101.9	30.0	0.0	15.0	0.0	0.0	11.5	158.4	2756.8
2006	3,100	101.2	40.0	0.0	20.0	0.0	0.0	11.5	172.7	2909.7
2007	3,100	105.0	50.0	0.0	25.0	0.0	0.0	11.5	191.5	2872.8
2008	3,100	105.0	50.0	8.9	26.0	4.0	0.0	11.5	205.4	2825.1
2009	3,100	105.0	60.0	65.5	30.2	8.0	0.0	11.5	280.2	2566.7
2010	3,100	105.0	70.0	67.7	33.7	12.0	0.0	11.5	299.9	2545.6
2011	3,100	103.9	63.3	67.7	0.0	16.0	0.0	11.5	246.4	2915.8
2012	3,100	104.1	106.7	67.7	15.2	21.0	0.0	11.5	326.2	2,903.2
2013	3,100	105.0	100.0	67.7	71.4	26.0	0.0	11.5	381.6	2,554.8
2014	3,100	104.1	100.0	67.7	89.2	31.0	0.0	11.5	403.5	2,533.4
2015	3,100	107.82	100.0	67.7	153.3	36.0	0.0	11.5	476.32	2,480.9
2016	3,100	105	100	67.7	130	41	100	11.5	555.2	2,544.8
2017	3,100	105	100	67.7	150	45	91	11.5	570.2	2,529.8
2018	3,100	105	130	67.7	0	63	0	11.5	377.2	2,722.8
2019	3,100	105	160	67.7	0	68	0	11.5	412.2	2,687.8
2020	3,100	105	193	67.7	0	73	0	11.5	450.2	2,649.8
2021	3,100	105	205	67.7	0	78	0	11.5	467.2	2,632.8
2022	3,100	105	203	67.7	0	83	0	11.5	470.2	2,629.8
2023	3,100	105	200	67.7	0	88	0	11.5	472.2	2,627.8
2024	3,100	105	200	67.7	0	93	0	11.5	477.2	2,622.8
2025	3,100	105	200	67.7	0	98	0	11.5	482.2	2,617.8
2026	3,100	105	200	67.7	0	103	0	11.5	487.2	2,612.8
2027	3,100	105	200	67.7	0	103	0	11.5	487.2	2,612.8
2028	3,100	105	200	67.7	0	103	0	11.5	487.2	2,612.8
29-37	3,100	105	200	67.7	0	103	0	11.5	487.2	2,612.8
38-47 [6]	3,100	105	200	67.7	0	103	0	11.5	487.2	2,612.8

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48-77 [7]	3,100	105	200	67.7	0	50 [8]	0	11.5	434.2	2,665.8

1. 2003 through 2015, volumes are adjusted for actual USBR Decree Accounting values; IID Total Reduction and Net Available for Consumptive Use may not equal Col 2 minus Col 10, if IID use was not included in Exhibit B.
2. 2014 Letter of Agreement provides that, effective January 2016 total amount of conserved water available is 105 KAFY; 2015 total amount of conserved water that will be available is 107,820 AF.
3. Salton Sea Mitigation volumes may vary based on conservation volumes and method of conservation.
4. *This transfer is not likely given lack of progress on Salton Sea restoration as of 2016.*
5. Reductions include conservation for 1988 IID/MWD Transfer, IID/SDCWA Transfer, AAC Lining; SDCWA Transfer Mitigation, MWD Transfer w/Salton Sea Restoration (if any), and Misc. PPRs. Amounts are independent of increases and reductions as allowed under the IOPP.
6. Assumes SDCWA does not elect termination in year 35.
7. Assumes SDCWA and IID mutually consent to renewal term of 30 years.
8. Modified from 100 KAFY in CRWDA Exhibit B; stating in 2018 MWD will provide CVWD 50 KAFY of the 100 KAFY.
9. *Note: Shaded columns represent volumes of water that may vary.*

Source: CRWDA: Federal QSA Exhibit B, p 13.

IID Water Supply – Single Dry and Multiple Dry Years

When drought conditions exist within the IID water service area, as has been the case for the past decade or so, the water supply available to meet agricultural and non-agricultural water demands remains the same as normal year water supply because IID continues to rely solely on its entitlement for Colorado River water, and is managing that supply using the EDP system of apportionment. Due to the priority of their water rights and other agreements, drought affecting Colorado River water supplies causes shortages for Arizona, Nevada and Mexico, not California and IID. Accordingly, the Net Available for Consumptive Use volumes in

Table 10, Column 11 represent the water supply at Imperial Dam available for diversion by IID in a single-dry year and multiple-dry year scenarios.

Under CRWDA Inadvertent Overrun Payback Policy (IOPP), IID has some flexibility to manage its water use. When the water level in Lake Mead is above 1,125 feet, an overrun of its USBR approved annual water order is permissible, and IID has up to three years to pay water use above the annual water order. When Lake Mead's water level is at or below 1,125 feet or less on January 1 in the calendar year after the overrun is reported in the USBR Lower Colorado Region Decree Accounting Report, the IOPP prohibits additional overruns and requires that outstanding overruns are to be paid back in the subsequent calendar year rather than in three years as allowed under normal conditions; that is, in the calendar year following publication of the overrun in the USBR Colorado River Accounting and Water User Report: Arizona, California, and Nevada (Decree Accounting report).

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As noted earlier, in support of its Colorado River water management responsibilities, each calendar year IID apportions its annual water supply to all users in accordance with the EDP. This helps the Water Department match its quantified annual water order to the water users' demands. For historic IID annual rainfall, net consumptive use, transfers and IID underrun/overrun amounts, see

Table 10. Note that the district has not had an annual overrun since calendar year 2014, the first year in which the EDP was fully implemented.

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Table 11: IID Annual Rainfall, Net Consumptive Use and Underrun/Overrun Amounts, 1988-2014

Year	IID Total Annual Rainfall	IID Net Consumptive Use	IID/MWD Transfer	D/ SDCWA Transfer	SDCWA ransfer Salton ea Mitigation	IID Underrun /Overrun	IID/CVWD Transfer	AAC Lining
1988		2,947,581						
1989		3,009,451						
1990	91,104	3,054,188	6,110					
1991	192,671	2,898,963	26,700					
1992	375,955	2,575,659	33,929					
1993	288,081	2,772,148	54,830					
1994	137,226	3,048,076	72,870					
1995	159,189	3,070,582	74,570					
1996	78,507	3,159,609	90,880					
1997	64,407	3,158,486	97,740					
1998	100,092	3,101,548	107,160					
1999	67,854	3,088,980	108,500					
2000	29,642	3,112,770	109,460					
2001	12,850	3,089,911	106,880					
2002	12,850	3,152,984	104,940					
2003	116,232	2,978,223	105,130	10,000	0	6,555		
2004	199,358	2,743,909	101,900	20,000	15,000	166,408		
2005	202,983	2,756,846	101,940	30,000	15,000	159,881		
2006	19,893	2,909,680	101,160	40,000	20,000	8,957		
2007	64,580	2,872,754	105,000	50,000	25,021	6,358		
2008	63,124	2,825,116	105,000	50,000	26,085	47,999	4,000	8,898
2009	30,0354	2,566,713	105,000	60,000	30,158	237,767	8,000	65,577
2010	189,566	2,545,593	105,000	70,000	33,736	207,925	12,000	67,700
2011	109,703	2,915,784	103,940	63,278	0	82,662	16,000	67,700
2012	133,526	2,903,216	104,140	106,722	15,182	134,076	21,000	67,700
2013	134,497	2,554,845	105,000	100,000	71,398	65,451	26,000	67,700
2014	53,517	2,533,414	104,100	100,000	89,168	797	31,000	67,700
2015	97.039	2,480,933	107,820	100,000	153,327	0	36,000	67,700

Notes: Volumes in acre-feet and except Total Annual Rainfall, are USBR Decree Accounting Report record at Imperial Dam
Not all IID QSA programs are shown on this table
IID Total Annual Rainfall from IID Water Balance, first available calculations are for 1990
Source: USBR Decree Accounting reports, except IID Total Rainfall and IID Overrun/Underrun is a separate calculation

City of El Centro- Potable Water Supplier

The City of El Centro receives raw water from IID. Approximately three percent (3%) of IID untreated water is ultimately used for non-agricultural purposes, which includes water treated and served by cities and local utility districts, like Heber Public Utility District (HPUD). The 3% also includes water supplied by IID for industrial purposes, and water supplied by IID to approximately 4,000 raw water domestically used service accounts. .

The City of El Centro's sphere of influence is located within the Imperial Unit of IID's service area. The 699,092-acre Imperial Unit serves the Imperial Valley including the urban areas for the cities of El Centro, Calexico, Imperial and Brawley, and approximately a quarter of Imperial County's unincorporated area. In total, IID delivers water within an area just over 520,000 acres, including cities, cemeteries, schools, parks, golf courses, etc., as well as irrigated agricultural land. The IID's total service area, lying entirely within Imperial Region is divided into four units: Imperial, West Mesa, East Mesa, and Pilot Knob, with a gross acreage of 1,061,637 acres.

Approximately 97 percent of the water demand in the Imperial Unit is for agricultural irrigation. Agriculture is successful in this region for two reasons: 1) rich soils which have accumulated on the valley floor over thousands of years; and 2) the large quantity of water that is transported 80 miles from the Colorado River via the All-American Canal, then distributed to farmlands and all other users by a complex system of smaller canals.

Recycled water low in salinity could be used for agricultural; however, treatment and distribution of recycled wastewater low in salinity is not cost effective option at this time. Colorado River water salinity has averaged 760 parts per million over the last 20 years, and treated municipal wastewater is approximately 200-300 ppm higher in salinity. In addition, agricultural producers are averse to using treated wastewater due to consumer perceptions that the crops might be tainted.

The City's water facilities are described in the City of El Centro's 2015 UWMP. The City provides potable water to homes and businesses by treating Colorado River water imported by the IID. The imported water is from a surface water source. Its treatment must comply with the Surface Water Rule of the Federal and State Safe Drinking Water Act. The California Department of Public Health (CDPH) granted a permit to the City of El Centro to supply water for domestic purposes to its users. The treatment facility must meet all

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applicable United States Environmental Protection Agency domestic water quality standards.

The City of El Centro takes its water from the All-American Canal. Water is conveyed from the canal to four open, concrete reservoirs, each with a capacity of 12.5 MG allowing a total of 50 MG of raw water storage capacity. Water from the four reservoirs is pumped to the treatment plant. Once raw water is treated, potable water is distributed to the City's customers via a network of pressurized main and service water lines. Potable water is stored at the treatment plant in three (3) reservoirs with a capacity of 10 MG and one (1) reservoir sized at 4 MG at an additional location. The City has a total net potable water capacity of 14 MGD. The City currently has a maximum/peak daily demand of 19.4 AF per day. The City anticipates making Wastewater Treatment Plant improvements contingent on adopting a Capital Improvement Plan.

Conservation & Planning: City of El Centro 2015 Urban Water Management Plan[7]

The City of El Centro 2010Urban Water Management Plan (UWMP) was adopted by the City Council on June 21,, 2011 (Resolution No. 11-89). The Urban Water Management Planning Act of CWC Section 10610 et seq.) requires urban water suppliers to report, describe, and evaluate:

- Water deliveries and uses
- Water supply sources
- Efficient water uses
- Demand Management Measures (DMMs), including implementation strategy and schedule

The Water Conservation Act of 2009 (CWC Section 10602 et seq.) requires urban water suppliers to report in their UWMPs base daily per capita water use (baseline), urban water use target for 2020, interim urban water use target for 2015, and compliance daily per

[7] City of El Centro's 2015 Urban Water Management Plan

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capita water use. One of four methods provided in the code is to be used. The City of El Centro selected Method 3(see 2015 UWMP[8]), with the following result.

Step 1: Baseline Calculation, CWC Section 10608.12(a)

As shown in Table 10, the base daily per capita water use, or baseline, for the City of El Centro is 200.9 gallons per capita per day (gpcd), calculated as the consecutive 10-year average for 2001- 2010.

Table 10: Base Daily per Capita Water Use in the City of El Centro

Baseline Daily Per-Capita Water Use				
Sequence Year	Calendar Year	Water Service Area Population	Annual Gross Water Use (AFY)	Annual Daily per Capita Water Use (gpcd)
1	2001	38,166	8,762	205
2	2002	38,118	8,839	207
3	2003	38,456	8,774	204
4	2004	38,589	8,998	208
5	2005	39,147	9,152	209
6	2006	39,957	9,679	216
7	2007	39,617	9,159	206
8	2008	40,874	9,036	197
9	2009	41,804	8,784	188
10	2010	42,544	8,046	169
Baseline Daily Per-Capita Water Use:				200.9

City of El Centro's Base Daily per Capita Water use in City of El Centro (2001-2010)

*Populations estimated from the State of California.

**Values in this table were supplied by IID.

[8] City of El Centro5 Urban Water Management Plan, Section 5 SB X7-7 Baselines and Targets, pp 5-1 http://www.cityofelcentro.org/userfiles/6-23-16%20FINAL%20El%20Centro%202015%20UWMP.pdf

Step 2: Method 3 Calculation, CWC Section 10608.20 (3)

Method 3 provides for calculation of a city's 2020 water use target: "Ninety-five percent of the applicable state hydrologic region target as set forth in the State's draft 20x2020 Water Conservation Plan dated April 30, 2009)". The City of El Centro is in California Hydrologic Region 10, Colorado River Region, and the 2020 water use target for Region 10 is 211 gpcd[9].

Table 11: Method 3. City of El Centro Urban Water Use Target

Method 3: City of El Centro Urban Water Use Target (95% of Region 10 Urban Water Use Target, gpcd)	198.6

Step 3: Minimum Water Use Reduction Calculation, CWC Section 10608.22

The water code further stipulates: "Notwithstanding the method adopted by an urban retail water supplier pursuant to Section 10608.20, an urban retail water supplier's per capita daily water user reduction shall be no less than 5 percent of base daily per capita water use as defined in [CWC Section 10608.12(b)]". CWC Section 10608.12(b) states: for the purposes of Section 10608.22, the urban retail water supplier's estimate of its average gross water use, reported in gallons per capita per day and calculated over a continuous five-year period ending no earlier than Dec 31, 2007, and no later than December 31, 2010. The City of El Centro chose the continuous 5-year period of 2004-2008, which had an average gross use of 208.6 gpcp (for source data, see).

[9] 20x2020 Water Conservation Plan (Feb 2010), Table ES-2, page x. <http://www.water.ca.gov/wateruseefficiency/sb7/docs/20x2020plan.pdf>

Table 12: Average Gross Daily per Capita Water Use in the City of El Centro

Minimum Baseline Daily Per-Capita Water Use				
Sequence Year	Calendar Year	Water Service Area Population	Annual Gross Water Use (AFY)	Annual Daily Per Capita Water Use (gpcd)
1	2003	38,456	8,774	204
2	2004	38,589	8,998	208
3	2005	39,147	9,152	209
4	2006	39,957	9,679	216
5	2007	39,617	9,159	206
Minimum Baseline Daily Per-Capita Water Use:				208.6

City of El Centro's Average per Capita per Day Use (2003-2007)

*Populations estimated from the State of California.

**Values in this table were supplied by City of El Centro.

Table 13: Min Required Water Use Reduction in per Capita Water Use in the City of El Centro

City of El Centro Minimum Water Use Reduction, (No less than five percent of average gross daily per capita water use) per CWC 10608.22	**10.43 GPCD**

Step 4: Determine 2020 Water Use Target and 2015 Interim Water Use Target for City of El Centro as per CWC sections cited above, the City of El Centro 2020 Water Use Target shall be the lesser of the Method 3 Target (198.6 gpcd) and the result of the minimum water use reduction 181 gpcd minus 9 gpcd) which equals 172 gpcd. The 2015 Interim Water Use Target is to be the average of the baseline and the 2020 Water use Target.

Table 14: 2020 Water Use Target in per Capita per Day in the City of El Centro

2020 Water Use Target baseline -9 gpcd	**198.6**
2015 Interim Water Use Target	**199.8**
Baseline (per CWC 10608.22)	**181**

The City is required to meet its 2020 Water User Target to be eligible for future state funding unless revised in the 2015 UWMP update. As reported in the City of El Centro 2015 Urban Water Management Plan, the Water Use Target for 2020 is 198.6 GPCD. In 2010, the use was 193 GPCD, already in compliance.

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The Act directs water agencies in carrying out their long-term resource planning responsibilities to ensure adequate water supplies are available to meet existing and future demands (CWC 10612 (b)). Urban water suppliers are required to assess current demands and supplies over a 20-year planning horizon and consider various drought scenarios.

The UWMP Act also requires that water shortage contingency planning and drought response actions be included in a UWMP. UWMPs are to be prepared every five years by urban water suppliers with 3,000 or more service connections, or supplying 3,000 or more acre-feet of water per year.

There is no foreseeable water shortage in the City of El Centro for the next 20 years. The City of El Centro uses Colorado River water that is supplied by the IID, and will be able to meet all currently projected City of El Centro's demands.

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Figure 9: California Hydrologic Regions and 2020 Conservation Goals

Service Area Population for the City of El Centro

The 2015 UWMP identifies the Service Area Population. Table 15 below shows the 2010 through 2017 population from the California Department of Finance (DoF) for Imperial County and the cities within Imperial County.

Table 15: Population Estimates for Imperial County and Cities, 2010-2017

Population Estimates for Imperial County and Cities								
Imperial County	**4/1/2010**	**1/1/2011**	**1/1/2012**	**1/1/2013**	**1/1/2014**	**1/1/2015**	**1/1/2016**	**1/1/2017**
Brawley	24,953	25,321	25,673	25,885	26,044	26,367	26,629	26,928
Calexico	38,572	39,049	39,554	39,861	40,115	40,448	40,660	40,921
Calipatria	7,705	7,671	7,982	7,075	7,475	7,399	7,508	7,555
El Centro	42,598	43,169	43,724	44,249	44,509	45,039	45,305	45,628
Holtville	5,939	6,011	6,042	6,035	6,063	6,117	6,174	6,255
Imperial	14,758	15,102	15,492	16,160	16,833	17,529	18,190	18,658
Westmorland	2,225	2,252	2,265	2,260	2,261	2,276	2,288	2,302
Balance Of County	37,778	37,795	38,241	38,699	38,689	39,449	39,326	40,087
Incorporated	136,750	138,575	140,732	141,525	143,300	145,175	146,754	148,247
County Total	174,528	176,370	178,973	180,224	181,989	184,624	186,080	188,334

Source: State of California Department of Finance, City of El Centro's 2015 Urban Water Management Plan

Future Population

Southern California Association of Governments Draft 2016-2040 Regional Transportation Plan/Sustainable Communities Strategy project the City of El Centro's population to 2040.

Table 16: Population Forecasts for the City of El Centro, 2015-2040

Current and Project Populations-City of El Centro						
Population Served	2015	2020	2025	2030	2035	2040
	44,847	53,176	55,100	57,025	58,948	60,993
% Increase		18.60%	22.90%	27.20%	31.40%	36.00%

Source: City of El Centro's 2015 Urban Water Management Plan

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http://www.cityofelcentro.org/userfiles/6-23-16%20FINAL%20El%20Centro%202015%20UWMP.pdf, retrieved, September, 2017.

City of El Centro – Water System Demands

The City's water billing system identifies customer categories so that accounts can be classified by water use sector. The total amount of water delivered into the system is metered at the water treatment plant and is shown in Table 17. Un-metered flows include park irrigation and system losses. For 2005, 2010 and 2015 unmetered flows and system losses account for approximately 6.6%, 10.4% and 7.9%, respectfully, of the total water pumped into the City system. It is anticipated that this will be reduced to less than 10% over the next 20 years. The treated water flows from 2005 to 2010 decreased 12.5% over the five-year period. This is probably mostly due to increased water rates within the City.

2010 Actual Water Deliveries & Estimated Future Water Demands

Table 17: 2010 City of El Centro Water Deliveries

Water deliveries — actual, 2010, in MG/year					
	2010				
	Metered		Not metered		Total
Water use sectors	# of accounts	Volume	# of accounts	Volume	Volume
Single family	7,065	1,150	0	0	1,150
Multi-family	510	163	0	0	163
Commercial	570	213	0	0	213
Industrial	3	0	0	0	0
Institutional/governmental	0	0	0	0	0
Landscape	2	38	0	0	38
Agriculture	0	0	0	0	0
Other	0	2	0	0	2
Total	8,150	1,566	0	0	1,566
Units (circle one): million gallons per year					

Source: City of El Centro 2015 Urban Water Management Plan

Table 18: Estimated Future Water Demands, based on water use targets for the City of El Centro 2015-2040

Project City Water Demands						
	2015	2020	2025	2030	2035	2040
Existing Households						
Population	44,847	43,934	43,021	42,107	41,194	40,281
Total Per-Capita Water Use (gpcd)	141.6	167.4	161.7	156.1	150.4	144.7
Water Use (AFY)	7,117	8,240	7,796	7,362	6,941	6,531
New Households						
Population	0	4,144	8,288	12,431	16,575	20,719
Total Per-Capita Water Use (gpcd)	0	137.8	138.5	139.1	139.8	140.4
Water Use (AFY)	0	640	1,286	1,937	2,595	3,259
Total Per-Capita Water Use (gpcd)	141.6	164.8	158	152.2	147.3	143.2
Total Water Use (AFY)	7,117	8,880	9,081	9,300	9,536	9,790

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Project Water Supply Sources

Water for the Project will be needed on-site during commissioning/construction, operation and employee use for potable, non-drinking non-potable water needs. Untreated Colorado River water will be supplied to the project via the adjacent Dogwood Canal gates 54, 54 and Adler Lateral Canal gate 95, as noted in **Table 1**, employee potable water will be obtained for the duration of the Project from a state-approved provider, in this case the City of El Centro.[30] The project will be equipped with its own Point-of-Entry (POE) water purification system to a level necessary to meet any applicable health department standards for operational use. No groundwater will be utilized due to the poor groundwater quality in the region.

At the present time, IID is providing water for use of industrial projects under Water Rate Schedule 7 General Industrial Use.[31] Schedule 7 water is subject to the terms of the IID EDP Equitable Distribution Plan regulations. The pertinent EDP sections are, as follows:

1.0 - Purpose.

1.1 Purpose. The Imperial Irrigation District ("District" or "IID") is authorized by State law to adopt rules and regulations for the equitable distribution of water within the District. The District Board has approved a plan for the equitable apportionment of the available water supply (the "Equitable Distribution Plan"). This Equitable Distribution Plan strictly prohibits individual landowners or water users from transferring water and/or water rights outside the IID service area, but does allow for an intra-district clearinghouse for the movement of agricultural water between IID Agricultural Water Users and Farm Units within the IID water service area. Pursuant to Resolution No. 26-2013, the IID Board of Directors has adopted this Equitable Distribution Plan.

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[30] Letter Agreement for Substitution and Conservation Modifications to the IID/MWD Water Conservation Agreement - December 18, 2014 http://www.iid.com/home/showdocument?id=9951
e-approved provider. To avoid penalties that could exceed $25,000 a day, IID strictly enforces this rule. The section tracks nearly 4,000 raw water service accounts required by the California Department of Public Health (CDPH) to have alternate drinking water service. The section maintains a small-acreage pipe and drinking water database, and provides an annual compliance update to CDPH.

[31] Letter Agreement for Substitution and Conservation

2.0 - Terms and Definitions.

2.1.5 Eligible Agricultural Acres. Acreage that is subject to the Temporary Land Conversion Fallowing Policy or meets all the following tests:

a. Cropland greater than 5 acres;
b. Used for crop production, duck ponds or algae farming;
c. Current with water availability charges and water bills; and
d. Connected to District water distribution system.

3.0 - Distribution

3.1 Apportionment of Supply.

The District shall annually apportion the Available Water Supply among the types of water users in the District using the following criteria:

b. Industrial Users – For existing contracts, estimated based on past use, not to exceed contracted amount and contract terms. For new contracts, estimated based on anticipated use, not to exceed contract amount and contract terms, taking into consideration the Integrated Water Resources Management Plan [superseded by the Imperial IRMWP].

3.2 Non-Agricultural Water Users.

a. District shall notify Non-Agricultural Users of their Apportionment no later than December 1, prior to the beginning of the Water Year.

b. Non-Agricultural Water Users shall be allowed to use that amount of water needed for reasonable and beneficial use. If a Non-Agricultural Water User's usage exceeds the amount of apportionment quantified for its usage, the fee for the excess amount of water shall be the Water User's standard water rate plus the Conserved Water Rate.

The Project will seek annexation from Imperial County in to the City of El Centro to allow a change from crop production to solar manufacturing facility. As noted previously, under the terms of California legislation adopted to facilitate the QSA/Transfer Agreements and enacted in CWC Section 1013, the IID board to adopted the TLCFP to address how to deal with any such temporary reduction of water use by projects like Project Eagle.

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While conserved water generated from the TLCFP is limited by law for use for water transfer or environmental purposes, by satisfying multiple district objectives the TLCFP serves to reduce the need for efficiency conservation and other water use reduction practices on the part of IID and its water users providing the district with wide benefits. One of the considerations in developing the TLCFP was to provide agricultural land owners with long-term assurances from IID that, at Project termination, irrigation service would be available for them to resume their farming operations.

If IID determines that the Project should obtain water under IID's Interim Water Supply Policy (IWSP) for non-agricultural projects rather than **Schedule 7 General Industrial Water**, the Project will do so. The IWSP, (link provided in Resources) designates up to 25,000 AFY of water for potential Non-Agricultural Projects within IID's water service area. As of June 2017, IID has 23,800 AF available under the IWSP for new projects like Project Eagle. The IWSP establishes a schedule for Processing Fees, Reservation Fees, and Connection Fees that change each year for all non-agricultural projects, and annual Water Supply Development fees for some non-agricultural projects. Project Eagle's water use will be subject to the annual Water Supply Development fee if IID determines that water for the Project is to be supplied under the IWSP..

The IWSP Water Supply Agreement includes steps that IID might take under EDP Apportionment,[32] as follows:

Section 3.7: If IID implements a water apportionment program pursuant to the Equitable Distribution Plan during all or any part of the Term of this Agreement, IID shall have the right to apportion Project Developer's water as a(n) Industrial/Municipal . . . User consistent with the terms of the Equitable Distribution Plan.

Section 3.8: To the extent that IID receives an order or directive from a governmental authority having appropriate jurisdiction that reduces the volume of water available to IID from the Colorado River during all or any part of the Term of this Agreement, IID may reduce the Maximum Use Amount, as directed by the IID board; provided however that in no event shall the ratio of (i) such reduction in the Maximum Use Amount to (ii) the

[32] on Modifications to the IID/MWD Water Conservation Agreement - December 18, 2014
http://www.iid.com/home/showdocument?id=9951
e-approved provider. To avoid penalties that could exceed $25,000 a day, IID strictly enforces this rule. The section tracks nearly 4,000 raw water service accounts required by the California Department of Public Health (CDPH) to have alternate drinking wat

total reduction of water available to IID from the Colorado River exceed the ratio of a the Maximum Use Amount to the current total amount of water available to IID from the Colorado River for the otherwise applicable year under contract or law. This reduction shall be separate from and in addition to any allocation authorized pursuant to the Equitable Distribution Plan.

Section 3.7 has been in effect since the EDP was adopted by the IID Board of Directors on October 28, 2013.

The likelihood of Section 3.8 of the IWSP Water Supply Agreement coming into effect where IID does not receive its annual 3.1 MAF apportionment, less transfer obligations of Colorado River water is low due to the high priority the IID entitlement enjoys relative to other Colorado River contractors. See the "Lower Colorado Region Water Shortage Operations" discussion at the end of the IID Water Rights section above. However, if Section 3.8 were to come into effect within the 40-year span of the Project, the Project proponent is to work with IID to ensure it can manage any reduction.

As such, lower Colorado River water shortage does not present a material risk to the available water supply that would prevent the County from making the findings necessary to approve this WSA. Rather, this contract term reaffirms that IID, like any water provider, has jurisdiction to manage the water supply within its service area and impose conservation measures during a period of temporary water shortage. For the reasons presented in discussed within this WSA, IID has a water supply that is sufficient to support the water demands forecasted for this Project, as well as other existing uses and forecasted future uses for a 20-year period. Indeed, without the Project, IID's task of managing water supply under EDP Apportionment would be more difficult because the agricultural use on the Project site would be significantly higher than the proposed demand for the Project as explained in more detail below.

To obtain water delivery service, the Project proponent will complete an IID-410 Certificate of Ownership and Authorization (Water Card), which provides the Water Department with information needed to manage the District's apportioned supply. Water cards are used for Agriculture, Municipal, Industrial and Service Pipe accounts. If water is to be provided under IWSP rather than Schedule 7. General Industrial Use, the Project proponent will seek to enter into a IWSP Water Supply Agreement.

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Expected Water Demands for the Project

IID delivers water to the Project Eagle area for agricultural uses through can IID's Dogwood and Alder Canals. The agricultural water uses are estimated at 1,626.45 per net-irrigable acreage of agricultural land for 320 AC. The proposed project anticpates using 320 acres of agricultural land that would be temporarily converted (i.e., agricultural fields of the proposed full build-out scenario minus the acreage of roads and ditches currently on the site). The anticipated water demand for operation, construction and decommissioning of the proposed Project is approximately 24.5 AFY. Thus, 24.5 AFY multiplied by 30 years is equal to a historic yearly average water use of AFY at full build-out, see **Table 12**.

Table 12: Total Life-of-Project Water Usage, Aniticpated Historical Yearly Average

Project Eagle Water Use	Water Demand
Construction Water Usage	175.0 AF
Operational Water Usage	
Start Up (Day 1)	9.2 AFY
Reclaimed Water (Day 2-264), Including 5 Day Emergency Water Storage, (75%)	1825 AFY
Supplemental Water (Day 2-264), Including 5 Day Emergency Water Storage , (25%)	660.00 AFY
	+/- 670 AFY
Employee Water Use (260), 17 GPD X 3600 Employees X 260 Days of Operation	50.0 AFY

Project Eagles Developers propose to use Schedule 7 General Industrial Water or to enter into an IWSP Water Supply Agreement with IID to meet Project demands and for the water to be delivered from the adjacent IID canals. The project will attain potable drinking water from a certified State of California system or provider, ie City of El Centro. In summary, water usage by the Project is estimated to be 670 AFY for the lifetime of the project, please see **Table 12**.

Total water usage for construction is 175 AF and operational water use is expected to be 670 AFY for the lifetime of the Project. 50 AFY will need to be provided by the City of El Centro for employee use.

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The IID has historically delivered untreated water to the proposed Project site area for agricultural uses through Dogwood Canal Lateral Gates 54 and 54 A and Alder Canal Lateral Gate 95. As stated, the proposed Project anticipates using 330 acres of converted agricultural land (i.e., agricultural fields of the proposed full build-out scenario minus the acreage of roads and ditches currently on the site). IID historic water delivery record to the site is shown in **Table 13**, for the years 2003-2013. The average annual delivery for this period is 1,921.48.95 AF over the course of 10 years for all delivery gates.

Table 13: Historic Ten-Year Delivery FP Yield Record for Lateral Delivery Gates, (AF), 2003-2013

Year	Dogwood Canal Lateral Gate 54	Dogwood Canal Lateral Gate 54 A	Dogwood Alder Lateral Gate 95	Total for Project Eagles Historical Use by Year
2003	907.90	451.05	1,014.36	1954.74
2004	762.90	458.98	971.72	1981.52
2005	683.70	413.76	903.68	1825.81
2006	759.00	483.18	920.15	1896.82
2007	672.30	438.80	1,007.00	1781
2008	523.30	384.60	981.40	1890.6
2009	860.90	530.90	989.10	1983.3
2010	814.50	212.50	214.80	681.3
2011	779.20	576.70	94.90	1221
2012	736.30	486.90	1,221.80	2177.3
2013	588.40	516.30	736.20	1821.4
Total for 10 Historical Years	**5,634.21**	**4,953.67**	**10,001.21**	**19,214.79**

Source: IID, Historical Records. 10 years are the historical and Fallowing Program Records used for EDP Apportionment baseline .

Table 14: Annual Average Deliveries and Fallowing Program Yield (AFY), 2002-2013

Average Delivery & Fallowing Program Yield		
	Total Average for Canal Gate s	Average of 10 Years
Project Eagles Historical IID Canal Gates	19,214.79	1,921.48

Using the State of California's perimeters of 20 year operational life, The proposed Project water delivery demand of 175 AF for Construction water use, 670 AFY for operational water use and 50 AFY for employee water totals 728.75 AFY, which is a decrease in the historical water consumption use of 1,921.48 (38%) reduction from the historic average annual water delivery for agricultural uses at the Project site. The proposed water demand for operational use represents only 2.82 % of the balance of 23,800 AYF of supply available

for contracting under the IWSP in the event that IID determines to use IWSP water for this Project.

The combination of the significant reduction from historic agricultural water demands and the availability of IWSP water prove that water supply is available to meet the delivery demand of the proposed Project. In addition, provided a water supply agreement is approved and executed by IID under the provisions of the IWSP, 23,130 AFY would remain available for other future non-agricultural uses.

Furthermore, the change to non-agricultural water use from existing agricultural water use will decrease the overall water demand on IID by up to 1251.48 AFY at Full Build-Out, as the higher demand agricultural water delivery requirement of 1,921.48 AFY is converted for a solar manufacturing facility with an operational water delivery demand of 670 AFY. The City of El Centro will be able to meet the demands of 50 AFY of water due to the forecasted population that was intended but did not occur during the housing crash of 2009.

IID Ability to Meet Demands with Water Supply

Non-agricultural water demands for the Project site has been projected out to 2055 in **Table 5**, agricultural demands have been projected out to 2055 in **Table 6** and demands from system operation have been projected out to 2055 in, all measured within the IID water service area. IID water supplies available for consumptive use after accounting for mandatory transfers have been projected out to 2077 in **Table 10** (Column 11), measured at Imperial Dam.

To assess IID ability to meet future water demands, IID historic and forecasted demands are compared with CRWDA Exhibit B net availability, all at Imperial Dam. The analysis requires accounting for system operation consumptive use within the IID water service area and by IID from AAC at Mesa Lateral 5 to Imperial Dam, and for water pumped for use by the USBR Lower Colorado Water Supply Project which is a component in IID's consumptive use in the USBR Decree Accounting Report. IID System operation consumptive use for 2015 are provided in **Table 15** to show the use components included in the calculation and their 2015 volumes.

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Table 16 provides the basis for assessing IID's ability to meet customer water demands through 2055.

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Table 16 includes IID non-agricultural delivery demands from agricultural delivery demands from, system operation consumptive use from
Table 10 and CRWDA Exhibit B IID net available consumptive use in Column 11.

Table 15: IID System Operations Consumptive Use within IID water service area and from AAC at Mesa Lateral 5 to Imperial Dam, (KAF), 2015

IID Delivery System Evaporation	24.5
IID Canal Seepage	92.4
IID Main Canal Spill	1.5
IID Lateral Canal Spill	125.4
IID Seepage Interception	-41.1
IID Unaccounted Canal Water	-7.5
Total IID System Operational Use, within water service area	288.6
"Losses" from AAC @ Mesa Lat 5 to Imperial Dam	62.5
LCWSP pumpage	-7.2
Total System Operational Use in 2015	**343.9**
Sources: 2015 Water Balance rerun 03/21/2017, and Unpublished 2016 IID Water Conservation Plan	

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Table 16: IID Historic and Forecasted Consumptive Use vs CRWDA Exhibit B IID Net Available Consumptive Use, volumes at Imperial Dam (KAFY), 2015-2055

	2015	2020	2025	2030	2035	2040	2045	2050	2055
Non-Ag Delivery	107.8	125.0	134.7	144.5	153.0	164.7	177.0	190.0	200.9
Ag Delivery	2,157.7	2,309.6	2,259.5	2,209.5	2,209.5	2,209.5	2,209.5	2,209.5	2,209.5
QSA Salton Sea Mitigation Delivery	142.6	n/a	n/a	n/a	n/a	n/a	n/a	n/a	n/a
System Op CU in IID & to Imperial Dam	343.9	436.0	411.0	407.0	407.0	407.0	407.0	407.0	407.0
IID CU at Imperial Dam	2,752.0	2,870.6	2,805.2	2,761.0	2,769.5	2,780.2	2,793.5	2,806.5	2,817.4
Ex.B IID Net Available CU at Imperial Dam	2,564.8	2,649.8	2617.8	2612.8	2612.8	2612.8	2612.8	2665.8	2665.8
IID Underrun/Overrun	187.2	219.7	186.4	147.2	155.7	167.4	179.7	139.7	150.6

Notes: 2015 Water Balance rerun 03/21/2017
Non-Ag Delivery CI 15.0%, Ag Delivery CI 3.0%, QSA SS mitigation CI 15.0
Underrun /Overrun = IID CU at Imperial Dam minus Ex.B Net Available
Ag Delivery for years 2020-2055 do not take into account land conversion for solar use nor reduction in agricultural land area due to urban expansion; the forecast ag demand is based on 2003 acreage with reduction for projected on-farm conservation efficiency.

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Table 17 presents IID's 2015 approved water order, consumptive use at Imperial Dam from USBR 2015 Decree Accounting Report, and IID underrun/overrun reported in the 2015 QSA Implementation Report.

Table 17: Approved Water Order, Actual CU (Decree Accounting Report) and IID Underrun, (KAF at Imperial Dam), 2015

IID Approved Water Order [1]	2,592.6 to 2,617.5 less 7.2 supplied by LCWSP
IID Consumptive Use [2]	2,480.9
IID Underrun /Overrun [3]	97.2

Sources:
1 2015 IID Revised Water Order, Nov 25, 2015
2 2015 Decree Accounting Report
3 2015 QSA Implementation Report
Notes: Ag Delivery for years 2020-2055 in line 2 does not take into account future land conversion for solar use nor reduction in agricultural land area due to urban expansion; the forecast ag demand is for 2003 acreage with reduction for projected on-farm conservation efficiency.

IID measures inflow to the water service area at AAC Station 2900 just upstream of Mesa Lateral 5 Heading. The acoustic velocity meter (AVM) has excellent measurement accuracy, with a confidence interval of 2.4%.[10] The 2015 measured inflow at this site was 2,603.8 KAF, which results in an estimated IID consumptive use of 2,752.0 KAF at Imperial Dam. That amount exceeded the CRWDA Exhibit B Net Available for Consumptive Use of 2,564.8 KAF by 94.3 KAF. This matches very well with the 2015 QSA Implementation Report underun of 187.2 KAF.

However, as shown in the 2015 QSA Implementation Report and summarized in **Table 20**, in 2015 IID consumptive use was less than IID's QSA Entitlement of 3.1 MAFY. This has been the case every year since the IID EDP Apportionment was implemented. This would indicate that although IID forecasted demand shown in **Table 18** in exceeds CRWDA Exhibit B Net Consumptive Use volumes for the entire the life of the Project, IID consumptive use measured at Imperial Dam may in fact not be as high as forecasted. In addition, given that the Project will use less water than the existing agricultural demand, the Project will ease rather than exacerbate overall IID water demands.

[10] Water balance results are reported with a high level of precision (nearest whole acre-foot) that may imply a higher degree of accuracy than is actually justified. While a detailed uncertainty analysis has not been conducted to assess potential error in the data and computed values, an estimated percent uncertainty (approximately equivalent to a 95 % confidence interval) in each measured or calculated flow path has been estimated.
A 95% confidence interval means, for example, for AAC at Mesa Lateral 5 with a 2.4 % confidence interval, there is a 95% probability that the value measured and reported at this site is within 2.4% of the actual flow.

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Table 18: IID 2015 Water Accounting: All Values are Provisional Consumptive Use at Imperial Dam (AF), 2015

	Consumptive Use	Fallowing	Efficiency	Salton Sea Delivery	Storage at Lake Mead	Storage at MWD
Miscellaneous Present Perfected Rights						
1988 IID/MWD Transfer	107,820		107,820			
SDCWA Transfer	100,000	40,000	60,000			
CVWD Transfer	36,000	4,157	31,843			
San Diego Transfer - Salton Sea Mitigation	153,327	153,327		153,327		
Inadvertent Overrun Payback	0					
Intentionally Created Surplus	38,313		38,313			38,313
AAC Lining Project Transfer	67,700		67,700			
IID Water Users	2,480,933					
LCWSP Wellfield Pumpage	7,219					
Total	3,002,812	197,484	305,676	153,327	0	38,313
IID QSA Entitlement	3,100,000					
Inadvertent Overrun Reported by USBR	--					
Underrun	-97,188					
Notes:						
1	Adjusted for excess conservation and delivery of 566 AF in 2014 and 43,893 AF in 2015 (110,000-566+43,893=153,327 AF). See Salton Sea Mitigation Accounting for details.					
2	Draft USBR Water Accounting, 4/22/2016.					
3	Included as part of IID's CU in lieu of an equivalent diversion.					
4	As reported in IID QSA Implementation Report 2015					

Finally, in the event that (1) IID has issued water supply agreements that exhausted the 25 KAFY set aside in the IWSP, and (2) it becomes apparent that IID delivery demands due to non-agricultural use are going to cause the district to exceed its quantified 3.1 MAFY entitlement less transfer obligations, IID has identified options to meet these demands. These options include (1) tracking water yield from temporary conversion from agricultural to non-agricultural land uses (renewable energy and urban expansion); and (2) only if necessary, developing projects to expand the size of the District's water supply portfolio.

Tracking Water Savings from Growth of Non-Agricultural Land Uses

The Imperial County Board of Supervisors has targeted up to 25,000 acres of agricultural lands for temporary conversion to solar projects about 5 percentage of the County's agricultural lands), because they found that a 5% reduction in agricultural lands for solar projects would not adversely affect agricultural production. According to the *2016 Temporary Land Conversion Program* existing solar developments have converted

approximately 7,864 acres of farmland[11]. Through the temporary land conversion fallowing program these projects have a yield at-river of 37,717 AF of water in 2016[12]. The balance of the 25,000-acre agriculture-to-solar policy is 21,037 acres. On average, each agricultural acre converted would reduce agricultural demand by 5.13 AFY, which results in an at-river yield (reduction in net consumptive use).

However, due to the nature of the conditional use permits under which solar projects are being developed, IID cannot rely on this "new" supply being permanently available. In fact, should a solar project decommission early, that land may go immediately back to agricultural use (it remains zoned an agricultural land) and the water demand increase back up the EDP Apportionment for agricultural use. Nevertheless, during their operation, the solar projects do ameliorate pressure on IID to implement projects to meet demand from new non-agricultural projects.

Unlike the impact of solar projects, other non-agricultural water demands are forecasted to grow, as reflected in the nearly 100% increase in non-agricultural water demand from 107.8 KAF in 2015, to 200.9 KAF in 2055 reflected herein in **Table 21**. Growth of the municple development is expected occur within the sphere of influence areas surrounding incorporated city boundaries within the IID water service area, which are currently used for agriculture and demand higher levels of water use.

Developed municipal land use is projected to grow by 55,733 acres from 2015 to 2050[13] within the sphere of influence of the incorporated cities and specific plan areas in Imperial County. A conservative estimate is that municipal land uses will displace at least 24,500 acres of farmland based on the Imperial Local Agency Formation Commission (LAFCO) sphere of influence maps and existing zoning and land use in Imperial County.

Municipal water use is forecasted to increase due to the 24,500 AC within the Imperial County Sphere of Influence by the year 2050. The IID has forecasted that an adjusted rate of .03 (Please see **Table 6**) would increase municipal water (from 30.0 KAFY in 2015 to 63.8 KAFY) use by 33.8 KAFY. Using the multiplier of .03 by the expected 24,500 AC equals an additional .735 KAFY, which totals a increase of 34.5KAFY. Therefore there would be an

[11] 2016 Temporary Land Conversion Fallowing Program, http://www.iid.com/home/showdocument?id=14265, Retrived September, 2017
[12] 2016 Temporary Land Conversion Fallowing Program, http://www.iid.com/home/showdocument?id=14265, Retrived September, 2017
[13] IRWMP, Chapter 5, Table 5-14.

increase in water consumption for municipal water use increasing the yield of water in the Colorado River.

With the forecasted decrease in agricultural land of 24,500 and a decrease in water apportionment of 5.13 AF/AC totals a reduction in agricultural water consumption of 125.7 KAFY. Thus a decrease of agricultural water consumption by 125.7 KAFY and an increase in municipal water consumption of 34.5 KAFY would yield a decrease in Colorado River water consumption of 91.2KAFY from 2015-2050, an due to the conversion of agricultural uses to municipal and industrial uses.

Table 19: Municipal Water Demand Calculated Using Water Demand, Per Capita Model, 2005-2050 (AFY)

	Forecasted Demand									
	2005	**2010**	**2015**	**2020**	**2025**	**2030**	**2035**	**2040**	**2045**	**2050**
Within IID Water Service Area										
Brawley	8,344	10,351	12,206	14,060	15,458	16,855	17,620	19,645	21,903	24,421
Calexico	6,293	7,184	8,238	9,292	10,133	10,975	11,367	12,674	14,131	15,755
Calipatria	1,249	1,445	1,617	1,789	1,900	2,011	2,045	2,391	2,776	3,206
El Centro	9,015	9,778	11,169	12,561	13,527	14,494	14,957	16,676	18,593	20,730
Holtville	1,273	1,304	1,384	1,464	1,523	1,581	1,604	1,789	1,995	2,224
Imperial	2,426	3,036	3,685	4,334	4,628	4,922	5,062	5,644	6,292	7,016
Westmorland	636	752	858	963	1,040	1,116	1,154	1,287	1,435	1,600
Heber PUD	1,025	1,653	1,895	2,138	2,331	2,525	2,913	3,360	3,876	4,472
Seeley County WD	233	292	351	423	510	615	741	892	1,075	1,296
Niland	310	387	467	562	677	816	984	1,185	1,428	1,721
Calipatria – CDCR	961	961	961	961	961	961	961	961	961	961
Centinela – CDCR	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175	1,175
NAF El Centro	368	389	411	434	459	484	512	540	571	603
Total	**33,308**	**38,707**	**44,417**	**50,156**	**54,322**	**58,530**	**61,095**	**68,219**	**76,211**	**85,180**
Outside IID Water Service Area										
Ocotillo/ Nomirage	68	61	46	46	46	46	46	46	46	46

Expanding Water Supply Portfolio

While forecast yield at-river from the growth of non-agricultural uses in the County is sufficient to meet the forecasted excess of non-agricultural use over CRWDA Net Available supply (**Table 18**, line 6) within the IID service area without expanding its Water Supply

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Portfolio, IID has also evaluated the feasibility of certain capital projects to increase its Water Supply Portfolio. As reported in 2012 Imperial IRWMP Chapter 12,

IID contracted with [GEI Consultants, Inc.] to identify a range of capital project alternatives that the district could implement. Qualitative and quantitative screening criteria and assumptions were developed in consultation with IID staff. Areas within IID's service area with physical, geographical (i.e., market demand for the water), and environmental characteristics most suited to implementing short- and long-term alternatives were identified. Technical project evaluation criteria included volumes of water that could be delivered and/or stored by each project, regulatory and permitting complexity, preliminary engineering components, land use requirements, and costs.

After preliminary evaluation, a total of 27 projects were configured: 17 groundwater or drain water desalination, 2 groundwater blending, 6 recycled water alternatives, 1 groundwater banking alternative, and 1 IID system conservation project alternative.

These projects were assessed at a reconnaissance level to allow for comparison of project costs. IID staff and the board identified key factors to categorize project alternatives and establish priorities. Lower priority projects were defined as those projects that were less feasible due to technical, political, or financial constraints. Preferential criteria were project characteristics that would increase the relative benefits of a project and grant it a higher priority. Four criteria were used to prioritize the IID capital projects:

Financial Feasibility. Projects whose unit cost was more than $600/AF were eliminated from further consideration.

Annual Yield. Project alternatives generating 5,000 acre-feet or less of total annual yield were determined not to be cost-effective and lacking necessary economies of scale.

Groundwater Banking. Groundwater banking to capture and store underruns is recognized as a beneficial use of Colorado River water. Project alternatives without groundwater banking were given a lower priority.

Partnering. Project alternatives in which IID was dependent on others (private and/or public agencies) for implementation were considered to have a lower priority in the IID

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review; this criterion was reserved for the IRWMP process, where partnering is a desirable attribute.

Based on these criteria, the top ten included six desalination, two groundwater blending, one system conservation, and one groundwater storage capital projects. These capital projects are displayed **Table 20** below.

Table 20: IID Capital Project Alternatives and Cost (May 2009 price levels $)

Name	Description	Capital Cost	O&M Cost	Equivalent Annual Cost	Unit Cost ($/AF)	In-Valley Yield (AF)
GW 18	Groundwater Blending East Mesa Well Field Pumping to AAC	$39,501,517	$198,000	$2,482,000	$99	25,000
GW 19	Groundwater Blending East Mesa Well Field Pumping to AAC with Percolation Ponds	$48,605,551	$243,000	$3,054,000	$122	25,000
WB 1	Coachella Valley Groundwater Storage	$92,200,000	$7,544,000	$5,736,746	$266	50,000
DES 8	East Brawley Desalination with Well Field and Groundwater Recharge	$100,991,177	$6,166,000	$12,006,000	$480	25,000
AWC 1	IID System Conservation Projects (2)	$56,225,000	N/A	$4,068,000	$504	8,000
DES 12	East Mesa Desalination with Well Field and Groundwater Recharge	$112,318,224	$6,336,000	$12,831,000	$513	25,000
DES 4	Keystone Desalination with IID Drainwater/ Alamo River	$147,437,743	$15,323,901	$23,849,901	$477	50,000
DES 14	South Salton Sea Desalination with Alamo River Water and Industrial Distribution	$158,619,378	$15,491,901	$24,664,901	$493	50,000
DES 15	South Salton Sea Desalination with Alamo River Water and MCI Distribution	$182,975,327	$15,857,901	$26,438,901	$529	50,000
DES 2	Keystone Desalination with Well Field and Groundwater Recharge	$282,399,468	$13,158,000	$29,489,000	$590	50,000

Source: Imperial IRWMP, Chapter 12; see also Imperial IRWMP Appendix N, IID Capital Projects

As mentioned above, IID's quantified Priority 3(a) water right under the QSA/Transfer Agreements secures 3.1 MAF per year, less transfer obligations of water for IID's use from the Colorado River, without relying on rainfall in the IID service area. As the IID Water website states,

Through the implementation of extraordinary conservation projects, the development of innovative efficiency measures and the utilization of progressive management tools, the IID Water Department is working to ensure both the long-term viability of agriculture and the continued protection of water resources within its service area.

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As such, IID actively promotes on-farm efficiency conservation and is implementing system efficiency conservation measures including seepage recovery from IID canals and the All-American Canal and measures to reduce operational discharge.

Overall, agricultural water demand in the Imperial Valley will decrease due to IID system and grower on-farm efficiency conservation measures that are designed to maintain agricultural productivity at pre-QSA levels while producing sufficient yield at-river to meet IID's QSA transfer obligations. These efficiencies combined with the conversion of some agricultural land uses to non-agricultural land uses (both solar and municipal), ensure that IID can continue to meet the water delivery demand of its existing and future agricultural and non-agricultural water users, including the Project Eagle's Solar Manufacturing Solar Facility Project for the next 20 years and for the life of the Project. IID has also evaluated the feasibility of new capital water supply projects, but does not find them necessary to implement at this time in order to meet existing and forecasted water demands within its service IID serves as the regional wholesale water supplier, importing raw Colorado River water and delivering it, untreated, to agricultural, municipal, industrial, environmental and recreational water users within its Imperial Unit water service area.

Public Water System/Lead Agency Findings

IID's annual entitlement to consumptive use of Colorado River water is capped at 3.1 MAF less water transfer obligations, pursuant to the QSA and Related Agreements. In 2015 IID consumptively used 2,480,933 AF of Colorado River water (volume at Imperial Dam, see **Table 11**); 2,249,398 AF (in Imperial Valley) were delivered to customers of which 2,157,672 AF or 95.9 percent went to agricultural users another 142,647 AF at Imperial Dam see **Table 16** were delivered to satisfy the IID/SDCWA Salton Sea Mitigation obligation.

Reduction of IID's net consumptive use of Colorado River water under the terms of the Colorado River Water Delivery Agreement is to be the result of efficiency conservation measures. Agricultural evapotranspiration use in the Imperial Valley will not decline. However, IID operational spill and agricultural tailwater will decline, impacting the Salton Sea.

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Due to the dependability of IID's water rights and Colorado River water storage facilities, it is unlikely that the water supply of IID would be disrupted even under shortage conditions because Mexico, Arizona and Nevada have lower priority and are responsible for reducing their water use during a declared Colorado River water shortage before California would be impacted. Nevertheless IID is participating in discussions for possible actions in response to extreme drought on the Colorado River. Historically, IID has never been denied the right to use the annual volume of water it has available for its consumptive uses under its entitlement.

In support of IID's Colorado River water management responsibilities, each calendar year IID apportions its annual water supply to all users in accordance with the Equitable Distribution Plan. Under the terms of the EDP, IID apportions water to municipal, commercial and industrial users prior to calculating the agricultural apportionment. The Project Eagle is estimated to use 175 AF of water during commissioning, 670 AFY of water during operation, and 50 AF for employee use, over the total life of the Project (including construction, operation and employee use). This is a decrease of 38. % when compared to existing agricultural water use at the Project site.

It is anticipated that IID will apportion Schedule 7 Industrial Use water for this Project. Should IID determine that the Project is to utilize IWSP for Non-Agricultural Projects water and the Project proponents will enter into a Water Supply Agreement with IID,. In which case the Project will use only 2.8% of the remaining 23,800 AFY of IWSP water. Based on the entire record and the Environmental Impact Report (EIR) prepared for this Project pursuant to the CEQA, California Public Resources Code sections 21000, *et seq*., Imperial County hereby finds that the IID projected water supply will be sufficient to satisfy the demands of this Project in addition to existing and planned future uses, including agricultural and non-agricultural uses for a 20 year period and for the life of the Project.

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Assessment Conclusion

This WSA has determined that IID water supply is adequate for this Project. IID's IWSP for Non-Agricultural Projects dedicates 25,000 AFY of IID's annual water supply to serve new projects. To date 23,800 AF per year remain available for new projects ensuring reasonably sufficient supplies for new non-agricultural water users. Total water usage for the life of the Projects represents 2.8 %, of the unallocated supply set aside in the IWSP for non-agricultural project, and approximately 0.1% of forecasted future non-agricultural water demands planned in the Imperial IRWMP through 2055. Furthermore, the Project represents a 38% decrease of operational water demand for agricultural uses at the Project site and will provide a reduction in use of 1251.48 AFY at thus a reduction for the life of the project. For all the reasons described herein, the amount of water available and the stability of the IID water supply along with on-farm and system efficiency conservation and other measures being undertaken by IID and its customers ensure that this Project's water needs will be met for the next 20 years as requested by SB-610.

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