

# Appendix J

IID Supporting Guidelines for the  
Determination of Wholesale Water  
Sustainability



## **Appendix J**

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### Imperial Irrigation District (IID) Supporting Guidelines for the Determination of Wholesale Water Sustainability



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## **Acronyms**

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AAC –All American Canal  
AF – Acre-Feet  
AFY – Acre-Feet per Year  
CAP – Central Arizona Project  
CDHP – California Department of Public Health  
CU – Consumptive Use  
CEQA – California Environmental Quality Act  
CRWDA – Colorado River Water Delivery Agreement  
CVWD – Coachella Valley Water District  
EDP – Equitable Distribution Plan  
EPA – Environment Protection Agency  
Gpd – gallons per day  
IID – Imperial Irrigation District  
IOPP – Inadvertent Overrun Payback Policy  
IRWMP – Integrated Regional Water Management Plan  
IWSP – Interim Water Supply Policy for Non-Agricultural Projects  
KAF – Thousands of Acre-Feet  
MCI – Municipal, Commercial and Industrial  
MWD – Metropolitan Water District of Southern California  
PPR – Present Perfected Rights  
QSA – Quantification Settlement Agreement  
SB – California State Senate Bill  
SDCWA – San Diego County Water Authority  
SDI – Supply/Demand Imbalance  
SLR – San Luis Rey Settlement Parties  
SWRCB – California State Water Resources Control Board  
USBR –United States Bureau of Reclamation  
WSA – Senate Bill 610 Water Supply Assessment  
WSM – Westside Main Canal  
WVA – Senate Bill 201 Water Verification Assessment





## **Appendix J. Imperial Irrigation District Guidelines for the Determination of Wholesale Water Sustainability (DRAFT)**

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### ***J.1 INTRODUCTION***

Imperial Valley depends solely on the Colorado River for surface water delivery. IID imports raw Colorado River water and distributes it primarily for agricultural use (95.5% of total 2011 delivery). The remaining 4.5 percent is distributed, on a wholesale basis, to the Valley's seven municipalities, one private water company, and two community water systems for treatment to potable standards and distribution as domestic water;, and to industrial, environmental and recreational users throughout IID's Imperial Unit (See Figure J-1).

Rainfall measures less than three inches per year and contributes to IID's water supply, as follows. In 2011, spatially averaged rainfall across the valley of just less than 2 inches contributed an estimated 11 KAF to non-ag consumptive use (CU) and 65.5 KAF to agricultural CU within the valley. Imperial Valley groundwater is of poor quality and is generally unsuitable for domestic or irrigation purposes, though some is pumped for geothermal and other industrial use.

IID was formed in 1911, under the California Irrigation District Act, to acquire properties of the bankrupt California Development Company and its Mexican subsidiary to import raw Colorado River water and distribute it. By 1922, IID had acquired 13 mutual water companies, which had developed and operated distribution canals in the Imperial Valley. By the mid-1920s, IID was delivering water to nearly 500,000 acres. Since 1942, water has been diverted at Imperial Dam on the Colorado River into the All-American Canal (AAC), both of which IID operates and maintains.

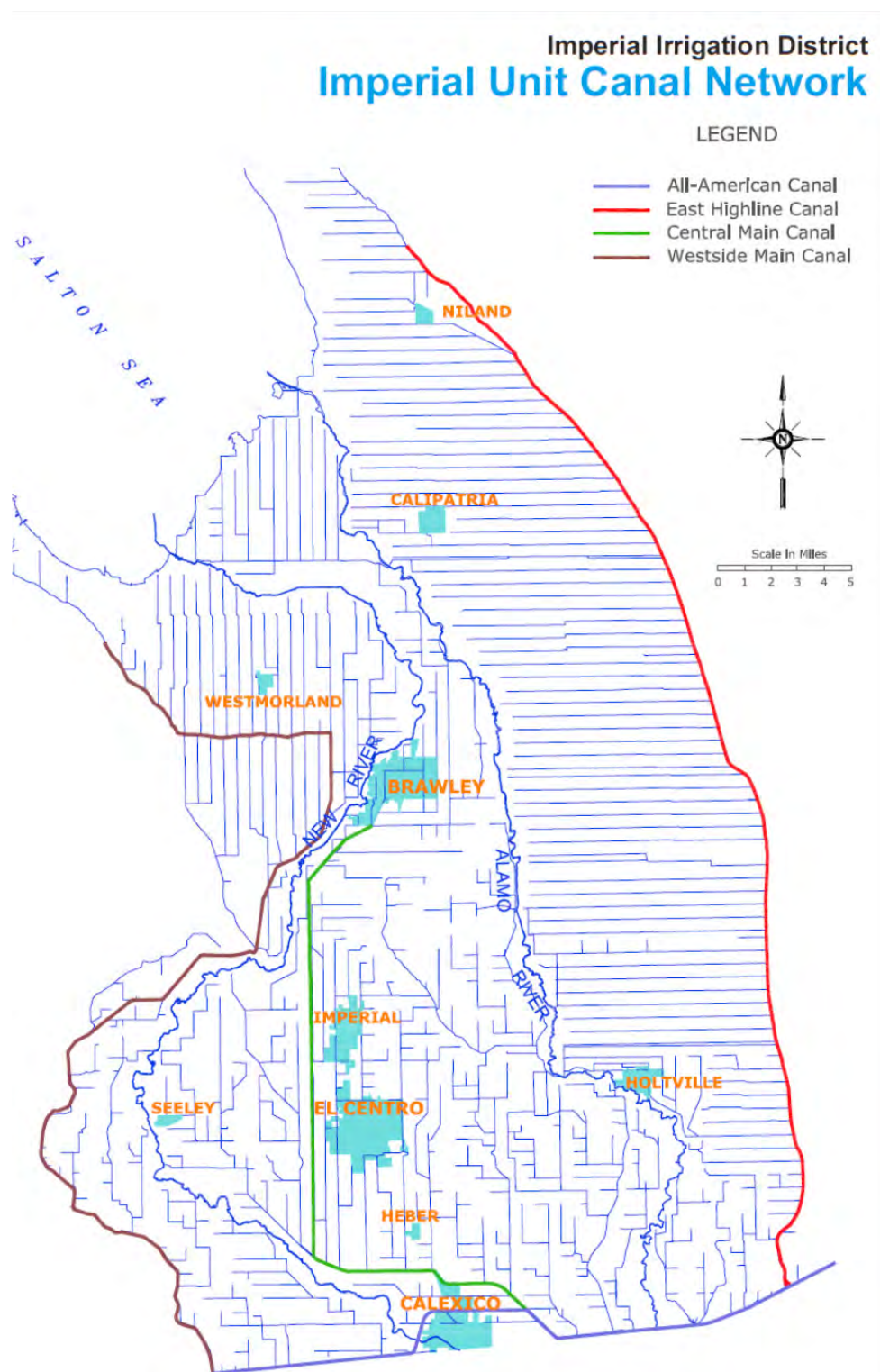
#### ***J.1.1 IID Authority and Responsibility***

IID was formed by a vote of the people in 1911, under the California Irrigation District Act, holds water rights in trust for the use of in the Imperial Valley. Established by the people, IID's mission is to provide reliable, efficient and affordably priced water and energy service to the communities it serves.<sup>1</sup>

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<sup>1</sup> IID's Vision Statement: Imperial Irrigation District will protect its water rights and energy balancing authority, deliver the highest level of customer service and maintain system reliability for the sustained benefit of the regional economy, the environment and the communities it serves in a fiscally responsible manner.

As a wholesaler of Colorado River water, IID performs three chief functions: (1) diversion and delivery of Colorado River water, including operation of Imperial Dam and a complex system of canals and laterals; (2) operation and maintenance of drainage canals and facilities; and (3) generation and distribution of



**Figure J-1.IID Water Service Boundary and Municipal Retail Water Customers**

electricity. Based on the Water Rules and Regulations, it has responsibility to control, distribute, store, spread, sink, treat, purify, recapture, and salvage any water. IID is not a public water supply system or retail water purveyor.

#### **J.1.1.1 Role of IID in the Project Approval Process**

As a wholesale agency, IID has a role in the approval process for any municipal, commercial, and industrial (MCI) project within its water service boundaries. As with some State and Federal permitting agencies, IID requires a consultation for securing sufficient water supplies well in advance of the local lead agency submitting a request for a Water Supply Assessment (WSA) from the local retail water purveyor or by the project proponent if no retail provider is named. Consultation and IID findings are necessary for inclusion in all project documentation subject to Water Code §10910-10915, also referred to as Senate Bill 610 (SB610). IID neither authors nor approves a WSA; rather, IID informs the local retail water purveyor, lead agency and project proponents in the development of their SB 610 WSAs.

**IID encourages the preparer of a WSA to use these guidelines verbatim where factual data is needed regarding the sustainability of wholesale water from IID. IID will update time-series data on an annual basis or prior to use of the guidelines if used after October 1, 2012.**

#### **J.1.2 SB 610 and SB 221**

Under SB 610, water supply assessments must be furnished to local governments for inclusion in any environmental documentation for certain projects (as defined in California Water Code 10912 [a]) subject to the California Environmental Quality Act (CEQA). Under the same code, a separate action, SB 221, requires an affirmative written verification of sufficient water supply (water supply verification.

*“SB 610 and SB 221 are companion measures which seek to promote more collaborative planning between local water suppliers and cities and counties.” (State Water Code 10912)*

SB 221 is intended to ensure that collaboration on finding needed water supplies to serve a new subdivision of 500 units or more occurs when it should, before construction begins. If coordinated, comprehensive water supply planning is underway at the time the SB 610 water supply assessment is prepared, compliance with SB 221 will be greatly facilitated.

†As mentioned in Section J.1.1.1, IID will not author a Water Supply Assessment, but will support the process through early consultation.

#### **J.1.3 Purpose of Document**

This document is intended to inform local lead agencies, retail water purveyors, and future development project proponents of the IID process for seamless integration with the local lead agency CEQA review and project approval process.

The purpose of these Supporting Guidelines is to:

- Assist lead agencies (i.e., Imperial County and Cities that lie within the IID water service area) and project proponents to formally request water from IID
- Insure consistent disclosure of the availability and sustainability of IID's water rights as outlined in Section J.0 of these guidelines
- Provide factual IID data for local lead agency and retail water purveyor compliance of SB 610 and SB 221
- Describe IID support in working with local retail water purveyors in the implementation of water conservation practices as they relate to retail purveyor and project specific demand reductions
- Define IID's review and evaluation process for proposed MCI projects
- Streamline the project review process and support Imperial County and Cities during environmental review and lead agency determinations
- Ensure a long-term sustainable raw wholesale water supply for: 1.) existing customers, 2.) reasonably foreseeable increases in water demand, and 3.) new demand associated with proposed projects

In addition, these guidelines are meant to facilitate compliance with SB 610 and SB 221 in the IID water service area (see Figure J-1) and to assist both IID and the lead land use agencies to make discretionary decisions consistent with their authorities. These guidelines will better enable IID to effectively manage existing water supplies and to maximize IID's ability to store when the available water supply exceeds the demand in a given calendar year or undertake projects to create new water. Lead agency compliance with these guidelines will enable IID staff to more efficiently evaluate applications for water service and environmental documents prepared consistent with state law.

**Note: Use of the checkbox, "☐", identifies sections which satisfy all, or in part, elements of a WSA per Section 10911 of the California Water Code.**

## ***J.2 FIRST STEPS IN IID CONSULTATION PROCESS***

‡Prior to determining if a WSA is required, a project proponent or lead agency will need to submit a formal "Request for Water Determination" (**Consultation Form**, see Exhibit A) for all MCI developments.

‡The request is to include, at a minimum, a detailed project description and water budget consistent with *IID Interim Water Supply Policy for Non-Agricultural Projects* (IID, 2009) requirements cited below.

‡Upon receipt of the Consultation Letter, IID will assess the scope of work and provide an implementation schedule for completion of a Determination of Wholesale Water Sustainability (Sustainability Findings Report).

- †IID will use the submitted information to conduct an initial review to determine if additional requirements need to be met by the lead agency, local retail water purveyor, or project proponent.
- †IID staff will make the determination of sustainability based on the policy and regulations at the time when a Consultation Letter is submitted.
- †IID will use the submitted information to conduct an initial review to support any subsequent IID determinations on assigning a sustainable water supply and entering into a wholesale relationship with the project proponent.
- †IID requires some form of an agreement to pay for IID staff costs in preparing the report.
- The lead agency should expect some form of action by IID staff prior to commitment of providing raw water from its Colorado River supplies which IID holds in trust for beneficial use on lands in its water service area.

The following excerpts from the *IID Interim Water Supply Policy for Non-Agricultural Projects (IWSP)* pertain to non-agricultural projects that meet the requirements for submitting a Consultation Letter to IID:

*Any request for water service for a proposed Non-Agricultural Project that meets the criteria for a Water Supply Assessment pursuant to Water Code Sections 10910- 10915 or a water supply verification pursuant to Government Code Section 66473.7 shall include all information required by Water Code Sections 10910 –10915 or Government Code Section 66473.7 to enable the District to review the Water Supply Assessment or water supply verification. All submittals should **include sufficient detail and analysis regarding the project's water demands, including types of land use and per capita water usage, necessary to make the determinations outlined in Section 5.2** (Interim Water Supply Policy 6-16-09).*

The IID IWSP further notes that all MCI development projects are subject to the submittal of a Consultation Letter regardless of its size or intended water use. The policy reads as follows (bold added to emphasize key points):

*Any request for water service for a proposed Non-Agricultural Project that does **not** meet the criteria for a water supply assessment pursuant to Water Code Section 10910-10915 or water supply verification pursuant to Government Code Section 66473.7 shall include a **complete project description with a detailed map or diagram depicting the footprint of the proposed project, the size of the footprint, projected water demand at full implementation of the project and a schedule for implementing water service**. All submittals should include sufficient detail and analysis regarding the project's water demands, including types of land use and per capita water usage, necessary to make the determinations outlined in Section 5.2. (Interim Water Supply Policy, June 2009).*

### **J.2.1 Consultation Letter Submittal**

The Consultation Letter (See Exhibit A) will include information that is imperative to IID's determination of sufficiency. The following lists the necessary information to be contained in the letter:

- project name, proponent, and lead agency
- contact information for project proponent and lead agency
- written project description included in electronic format both pdf and compatible with Microsoft Word 2007
- detailed ESRI GIS map of proposed project
- project area broken down based on each proposed land use
- status of project in an existing UWMP
- unit water demand for each land use category
- proposed infrastructure and point of connection to IID lateral or canal
- projected water demand in five year increments and at project build-out, as follows:
- annual project demand at each IID delivery gate (AF)
- proposed diversion (cfs) of raw water during maximum day and peak hour demand estimates

### ***J.2.2 IID Staff Review of Consultation Letter***

Upon receipt of the Consultation Letter, IID staff will formally accept the Consultation Letter by starting the IID response period of 30 days to review and provide an IID Sustainability Findings Letter to adhere to the positive findings of raw water supply sustainability. If a positive finding based on IID's existing facilities and programs is not adequate or available to satisfy sustainability as per the definition of SB 610, IID will work with the lead agency to identify the needed facilities, or expand facilities and/or implement demand reduction programs. This Sustainability Findings Report will be provided to three entities: 1) local water purveyor (only if in the boundaries of an existing purveyor), 2) lead agency, and 3) project proponent.

### ***J.2.3 Official Lead Agency Request Letter for a SB 610 Analysis***

- ☐ **The official lead agency has determined that the Project is subject to CEQA and satisfies the criteria set forth in Section 10912 of the California Water Code requiring the completion of a WSA.**
- ☐ **The official lead agency has identified the appropriate retail water purveyor as the responsible agency for the Project. The water purveyor recognizes that IID possesses information regarding the source of water to be used in the assessment of water for approved development and pending development applications (i.e., reasonably foreseeable development) within the IID service area that may be provided water by one or more of the Imperial Region's water retailers, which should be considered in the preparation of this WSA.**

The retail water purveyor (or lead agency if the water purveyor fails to comply with SB610) will begin the following sequence of actions upon their receipt of a lead agency request for SB 610 analysis:

- IID requests a copy of all lead agency requests for a project level SB 610 analysis.
- IID will use this letter as notification of the required 90-day time period for response by the local retail water purveyor.
- At this time, IID will insure that a Sustainability Findings Report is on record and is still valid if a significant time period has lapsed.
- Verification will also be made to ensure that the local retail water purveyor has received a copy.

- When proposed project does not fall under the requirements of SB 610, IID will work directly with the lead agency and project proponent to insure prior completion of a Sustainability Findings Report to supplement the water supply disclosure under CEQA.

### ***J.3 EXAMPLE SUSTAINABILITY FINDINGS REPORT***

**□ Determine if the project is included in the 20+ year projection of water demand and supply in an adopted 2010 UWMP [Section 10910(c)]. Since IID is not required to have a UWMP, the Sustainability Findings Report will serve in its place to supplement the local water purveyor's adopted UWMP.**

This section is written to assist in the Sustainability Findings Report development. The sub-section titles, text, tables and figures should be reviewed relative to each Consultation Letter. Changes in policy and regulations will be included as addendum to this section. Graphs and tables will be updated by IID staff over time; regardless of the submittal of a Consultation Letter.

#### ***J.3.1 IID Background***

**□ Identify Existing Water Supplies for the Project [Section 10910(d)(1)]**

The Imperial Valley depends solely on the Colorado River for surface water delivery. IID imports raw water from the Colorado River and distributes it primarily for agricultural use (95.5%). The remaining 4.5% is distributed to the valley's seven municipalities, one private water company, and two community water systems for treatment to potable standards and distribution as domestic water and to industrial users.

Rainfall is less than three inches per year and does not currently contribute to IID's water supply, although at times it may reduce agricultural water demand. The groundwater in the Imperial Valley is of poor quality and is generally unsuitable for domestic or irrigation purposes, though some is pumped for industrial use.

The Imperial Irrigation District (IID) was formed in 1911, under the California Irrigation District Act, to acquire properties of the bankrupt California Development Company and its Mexican subsidiary to import raw Colorado River water and distribute it. By 1922, IID had acquired 13 mutual water companies, which had developed and operated distribution canals in the Imperial Valley. By the mid-1920s, IID was delivering water to nearly 500,000 acres.

Since 1942, water has been diverted at Imperial Dam on the Colorado River into the All-American Canal (AAC), both of which IID operates and maintains.



### **J.3.2 IID Surface Water Rights**

#### **□ Identify Potential Conflicts in Exercising Water Rights [Section 10910(e)]**

This section of the Water Code states:

*If no water has been received in prior years by the public water system,...under the existing water supply entitlements, water rights, or water service contracts [identified to serve the proposed project], the public water system,...shall also include in its water supply assessment pursuant to subdivision (c), an identification of the other public water systems or water service contract holders that receive a water supply or have existing water supply entitlements, water rights, or water service contracts, to the same source of water as the public water system,...has identified as a source of water supply within its water supply assessments.*

The intent of this section is to identify any potential conflicts that may arise from the exercise of an existing water supply entitlement, water right, or water service contract to serve a proposed project if such water supply entitlement, water right, or water service contract has not been previously exercised.

The surface water supply associated with IID stems from the Colorado River, and is subject to a long history of water apportionment and regulations to equitably share the resource amongst the southwestern region of the United States. The following discussion is made to lead up to a conclusion that IID's firm water rights are sustainable to meet the project water demands.

#### **J.3.2.1 Colorado River Water Rights**

The IID's rights to appropriate Colorado River water are long-standing. 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. Pursuant to then-existing California laws, these appropriations were initiated by the posting of public notices for approximately 7 million acre-feet per year (AFY) at the point of diversion and recording such notices in the office of the county recorder.

The individual appropriations were subsequently assigned to the California Development Company, whose entire assets, including its water rights, were later bought by the Southern Pacific Company. The IID was formed in 1911. On June 22, 1916, the Southern Pacific Company conveyed all of its water rights to the IID. The IID's predecessor right holders made reasonable progress in putting their pre-1914 appropriative water rights to beneficial use. By 1929, an approximate 424,150 acres of the Imperial Valley's approximately one million irrigable acres was under irrigation.

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 allocate the water, regulate land use and manage 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:

#### **J.3.2.2 Colorado River Compact (1921)**

With the authorization of their legislatures and at the urging of the federal government, representatives from the seven Colorado River basin states began negotiations regarding the distribution of water from the Colorado River in 1921. In November of 1922, an interstate agreement called the "Colorado River Compact" was signed by the representatives giving each basin perpetual rights to annual apportionments of 7.5 million AF of Colorado River water.

Pursuant to the provisions of the Boulder Canyon Project Act adopted in 1929, the California Limitation Act, and the Secretary's contracts with the California water users, California was apportioned 4.4 million AFY out of the lower basin allocation of 7.5 million AFY, plus 50% of any available surplus water. Further apportionment of California's share of Colorado River water was made by the Secretary of the Interior by entering contracts with California right holders.

The Secretary entered into a permanent service water delivery contract with the IID on December 1, 1932. The District undertook to pay the cost of the works (Imperial Dam and the All-American Canal), and to include within itself certain public lands of the United States and other specific lands. The United States undertook to deliver to the Imperial Dam the water which would be carried by the new canal to the various lands to be served by it. The IID's contract with the Secretary incorporated the provisions of the Seven-Party Agreement. The IID's contract has no termination date; it is a contract for permanent water service.

#### **J.3.2.3 California Seven-Party Agreement (1931)**

On November 5, 1930, the Secretary of the Interior requested the California Division of Water Resources to recommend a proper method of apportioning the water which California was entitled to receive under the 1922 Colorado River Compact and the Boulder Canyon Project Act. Thereafter, a number of users and prospective users of Colorado River water entered into the Seven-Party Agreement on August 18, 1931.

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The Seven-Party Agreement provided a schedule of apportionments and priorities, and the parties requested "the Division of Water Resources to, in all respects, recognize said apportionments and priorities in all matters relating to State authority and to recommend the [apportionment and priority provisions] to the Secretary of the Interior of the United States for insertion in any and all contracts for water made by him pursuant to the terms of the Boulder Canyon Project Act . . . ." The Seven-Party Agreement states the apportionments and priorities as reflected in Table J-1 below.

As a result of the Seven-Party Agreement, with respect to the signatory parties, the IID agreed to limit its California pre-1914 appropriative water rights in quantity and priority to the apportionments and priorities contained in the Seven-Party Agreement.

**Table J-1. Seven-Party Agreement for Apportionments and Priorities**

Priority	Description	Acre-feet per year
1	Palo Verde Irrigation District--gross area of 104,500 acres	3,850,000
2	Yuma Project (Reservation District) - not exceeding a gross area of 25,000 acres	
3a	IID and lands in Imperial and Coachella Valleys to be served by AAC	
3b	Palo Verde Irrigation District--16,000 acres of mesa lands	
4	Metropolitan Water District and/or City of Los Angeles and/or others on coastal plain	550,000
	Subtotal	4,400,000
5a	Metropolitan Water District and/or City of Los Angeles and/or others on coastal plain	550,000
5b	City and/or County of San Diego	112,000
6a	Imperial Irrigation District and lands in Imperial and Coachella Valleys	300,000
7	Agricultural use all remaining water	
	<b>TOTAL</b>	<b>5,362,000</b>

#### J.3.2.4 IID State Applications and Permits

Following execution of the Seven-Party Agreement, the IID filed eight applications with the California Division of Water Rights between 1933 and 1936 to appropriate water pursuant to the California Water Commission Act. The IID applications each reserved the pre-1914 appropriative rights. However, the applications also incorporated the terms of the Seven-Party Agreement, thus incorporating the apportionment and priority parameters of the Seven-Party Agreement into IID's appropriative applications. Permits were granted on the applications in 1950. A summary of the issued permits is shown in Table J-2 below.

**Table J-2. Issued Permits Summary**

<b>Permit Number</b>	<b>AFY</b>	<b>Place of Diversion and Purpose</b>
7643	7,239,680.25	Imperial Dam Irrigation and domestic
7649	5,791,744.20	Imperial Dam Power-related
7648	4,343,808.15	Imperial Dam Power-related
7647	5,791,744.20	Imperial Dam Power-related
7646	5,791,744.20	Imperial Dam Power-related
7645	5,791,744.20	Imperial Dam Power-related
7644	9,411,584.33	Imperial Dam Power-related
7651	1,447,936.05	Imperial Dam Power-related

### **J.3.2.5 The Subordination by Coachella Valley Water District**

At the time the IID entered into its contract with the Secretary of the Interior, it was anticipated that the lands to be served with Colorado River water in the Coachella Valley to the north would also become a part of the IID. However, the Coachella farmers eventually decided that they preferred to have their own delivery contract with the Secretary, and an action was brought by the Coachella Valley Water District (CVWD) to protest the IID's court validation of the 1932 IID water service and repayment contract with the Secretary of the Interior.

In 1934, IID and CVWD executed a compromise agreement which paved the way for CVWD to have its own contract with the Secretary, but which provided that CVWD would subordinate its Colorado River entitlement, in perpetuity, to the IID entitlement. In other words, within the third, sixth and seventh priority agricultural pool, as set forth in the Seven-Party Agreement and the various California water delivery contracts, IID's water use takes precedence over CVWD's use.

As a practical matter, under the third priority, CVWD receives what is left over from the 3.85 million AFY agricultural pool after uses by Palo Verde, the Yuma project, and IID are deducted. In summary, the IID has senior water rights to the Colorado River established under state law. In years when California is limited to 4.4 million AFY, the IID has water rights in the amount of 3.85 million AFY minus the amounts used by Priorities 1 and 2. Priorities 1 and 2 are not fixed quantities and have ranged between 364,817 AFY and 602,181 AFY over the last 25 years.

### **J.3.2.6 IID Present Perfected Rights and the Arizona v. California US Supreme Court Decision (1964, 1979)**

The term "Present Perfected Rights" first appeared in the Colorado River Compact executed on November 24, 1922. The Compact provided that "Present Perfected Rights to the beneficial use of waters of the Colorado River system are unimpaired by this Compact." Section 6 of the Boulder Canyon Project Act, effective on June 25, 1929, recognized and protected these rights by providing that "the dam and reservoir . . . shall be used; second, for irrigation and domestic uses and satisfaction of Present Perfected Rights in pursuance of Article VIII of said Colorado River Compact . . . ."

Pursuant to the terms of the Boulder Canyon Project Act, California's 4.4 million AFY of mainstream water was to be used to satisfy "any rights which existed on December 21, 1928. Such "rights" included "Present Perfected Rights" within the IID's pre-1914 state-law appropriative rights. Although the United States Supreme Court in *Arizona v. California* defined "Perfected Right" and "Present Perfected Rights" in its 1964 Decree, IID's Present Perfected Rights were not quantified until the Supreme Court issued a Supplemental Decree in 1979. That Supplemental Decree defined IID's Present Perfected Rights as a right to Colorado River water: In annual quantities not to exceed (i) 2,600,000 acre-feet of diversions from the mainstream or (ii) the consumptive use required for irrigation of 424,145 acres and for the satisfaction of related uses, whichever of (i) or (ii) is less, with a priority date of 1901.

IID's Present Perfected Rights are very important because Article II(B)(3) of the Supreme Court Decree provides that in any year in which there is less than 7.5 million acre-feet of mainstream water available for release for consumptive use in Arizona, California and Nevada, the Secretary of the Interior shall first provide for the satisfaction of Present Perfected Rights in the order of their priority dates without regard to state lines before imposing shortage cutbacks on other junior water right holders.

**Note:** *Throughout this document, net consumptive use is defined as per USBR Colorado River Accounting and Water Use (Decree Accounting) at Imperial Dam – not with any other accounting.*

#### **J.3.2.7 Colorado River Basin Project Act (1968)**

In 1968, various water development projects in both the upper and lower basins, including the Central Arizona Project (CAP), were authorized by Congress. Under the act, priority was given to California's apportionment 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.

#### **J.3.2.8 Quantification Settlement Agreement (2003)**

Due to completion of a large portion of the CAP infrastructure in 1994, creation of the Arizona Water Banking Authority in 1996, 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 Colorado River Compact States and affected California water delivery agencies, a Quantification Settlement Agreement (QSA) and related agreements and documents were signed by the Secretary of Interior, IID, Coachella Valley Water District (CVWD), Metropolitan Water District (MWD), the San Diego County Water Authority (SDCWA), and other affected parties on October 10, 2003.

With the execution of the QSA and the Colorado River Water Delivery Agreement, IID's apportion changed to what is currently the existing IID water right total. **Table J-3** lists the named parties, points of diversion and annual amounts from the Colorado River Water Delivery Agreement; IID's consumptive uses were capped at 3,100,000 acre-feet (3.1 million AF) for the term of the QSA. This annual water limit creates complicated accounting for both IID and United States Bureau of Reclamation (USBR), and is still evolving. The data included in **Table J-3** represents IID's first attempt to consolidate USBR and IID figures in a simplified annual format for purposes of preparing an assessment of IID's water supplies. The 3.1 million AF annual cap and water conservation and transfer programs also present unique challenges, especially as data prior to 2003 cannot always be compared or averaged with pre-QSA data absent additional data rectification or benchmarking. The QSA represents the amount of water delivered to IID for the term of the QSA (2003 – 2045, or 2075).

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**Table J-3. Parties to the Colorado River Water Delivery Agreements**

Delivered to (entity)	At (point of diversion)	Amount not to exceed (AF)	Notes
CVWD	Imperial Dam	103,000	...
MWD	Lake Havasu	110,000 *	1
SDCWA	Lake Havasu	56,200	2
SDCWA	Lake Havasu	200,000	
SLR	See Note 4	See Note 4	4
Misc. & Indian PPRs	Current points of delivery	11,500	5
For Benefit of MWD/SDCWA	Lake Havasu	145,000	6
IID	Imperial Dam	Remainder	...
IID's Priority 3(a) Total		3,100,000	...

Source: Exhibit A of the Colorado River Water Delivery Agreement (CRWDA)

<<http://www.usbr.gov/lc/region/g4000/crwda/crwda.pdf>>

Note: By IID and MWD agreement, the 1988 IID/MWD transfer has been fixed at 105,000 AFY, beginning in calendar year 2007

Notes to Imperial Irrigation District:

1. Agreement for the Implementation of a Water Conservation Program and Use of Conserved Water, dated December 22, 1988; Approval Agreement, dated December 19, 1989. Of amount identified: up to 90,000 AF to MWD and 20,000 AF to CVWD.
2. Water conserved from construction of a new lined canal parallel to the All- American Canal from Pilot Knob to Drop 3.
3. Agreement for Transfer of Conserved Water, dated April 29, 1998, as amended. As set forth in Exhibit B of the Colorado River Water Delivery Agreements, delivery amounts shall be 205,000 AF in calendar year 2021, and 202,500 AF in calendar year 2022.
4. Water conserved from All-American Canal lining project and made available for benefit of San Luis Rey Settlement Parties under applicable provisions of Pub. L. No. 100-675, as amended. Quantity may vary, not to exceed 16,000 AFY, as may the point of diversion, subject to the terms of the Allocation Agreement.
5. Water to be delivered to miscellaneous and Indian Present Perfected Rights (PPRs) identified in the Decree in Arizona v. California, as supplemented. The delivery of water will be to current points of delivery unless modified in accordance with applicable law.
6. As provided in subsection 4(g) of Colorado River Water Delivery Agreements.

### **J.3.3 Applying for New IID Water Supplies**

IID's Integrated Water Resource Management Plan (IWRMP) addresses the development of additional water supplies for new non-agricultural projects. While the IWRMP is intended to identify and prioritize long-term water supply augmentation and demand management opportunities, IID does not currently have a policy in place to address new project demands, except on a case-by-case basis with the

submittal of a Consultation Letter requesting IID staff to review the available Colorado River water supplies, the policies affecting these supplies, and sustainability of the supplies over the next 20 year period.

While IID is working to develop long-term water supply augmentation through methods such as water banking, recycling of municipal wastewater, treatment of agricultural tail water, and others, these will be utilized primarily for new non-agricultural projects that will require a greater amount of water than is currently utilized by agriculture on their development footprint.

While the IWRMP is intended to identify and prioritize long-term water supply augmentation and demand management opportunities, IID does not currently have a policy in place to address new project demands, except on a case-by-case basis with IID staff applying policies and regulations in effect upon receipt a Consultation Letter by a project proponent. While IID is working to develop long-term water supply augmentation through methods such as water banking, recycling of municipal wastewater, treatment of agricultural tail water, and others, these will be utilized primarily for new non-agricultural projects that will require a greater amount of water than what was historically (defined as a minimum 10 year period preceding the date of the Consultation Letter submittal) utilized by agriculture on their development footprint.

#### ***J.3.4 IID as a Wholesale Supplier of Untreated Surface Water***

##### **□ Groundwater Assessment [Section 10910(f)]**

The potable (treated) water demands of the Project will not be met with wholesale groundwater from IID. Consequently, Section 10910(f) of the Water Code is fulfilled.

IID's source is virtually all surface water from the Colorado River. Water is diverted from the Colorado River at the Palo Verde Weir, north of Blythe by Palo Verde Irrigation District and at the Imperial Dam through the All-American Canal headworks and desilting basins by Imperial Irrigation District and Bard Irrigation District into the All- American Canal for use in the Bard, Imperial and Coachella Valleys.

Approximately fifty percent of land in Imperial County is undeveloped and under federal ownership and jurisdiction. One-fifth of the nearly 3 million acres in Imperial County is irrigated for agricultural purposes; most notable being the central area known as Imperial Valley. The Imperial Valley area is the south-central part of Imperial County, and is bounded by Mexico on the south, the Algodones Sand Hills on the east, the Salton Sea on the north, San Diego County on the northwest, and the alluvial fans bordering the Coyote Mountains and the Yuha Desert to the southwest. The Imperial Valley Area encompasses a total of 989,450 acres. Imperial Valley land that is irrigated for agriculture consists of 512,163 acres.

IID's open channel gravity flow irrigation and drainage system services this irrigated farmland. The system includes 80 miles of the All-American Canal, 50 miles of drains in the All-American Canal Section, 3 miles of the New Briar Canal and 1,585 miles of other main and lateral canals. A favorable salt balance



has been maintained in Imperial Valley soils as approximately 30% more salt was discharged through the district's drainage than was brought into Imperial Valley by importation of Colorado River water for irrigation. This balance is due to the installation of 28,972 miles of underground drain tile in individual fields since 1929.

It is this adequate drainage system in the Imperial Valley that makes the difference between barren land and highly productive soil. The saline drainage water is carried through the district's drainage canals into the Salton Sea. The number of pipe lined canals is increasing for projects within or adjacent to urban areas due to real estate development that is occurring in the Imperial Valley. The developed area, which includes Imperial County's incorporated cities, unincorporated communities and supporting facilities, comprises approximately one percent of Imperial County's area. The Salton Sea accounts for approximately seven percent of Imperial County's surface area. IID has a specific service area that it is responsible for supplying agricultural water.

In addition to agricultural irrigation, the IID's water service includes providing untreated water for municipal use to the Imperial Valley's seven incorporated cities of Brawley, Calexico, Calipatria, El Centro, Holtville, Imperial and Westmorland. Three unincorporated communities are also included in the service area; Heber, Niland and Seeley. See **Figure J-1** for a map of the IID water service area.

To comply with US Environmental Protection Agency (EPA) requirements and avoid termination of canal water service, residents in the IID water service area who do not receive treated water service must obtain alternative water service for drinking and cooking from a state-approved provider. To avoid penalties that could exceed \$25,000 a day, IID strictly enforces this rule. The IID section tracks nearly 4,000 raw water service accounts required by the California Department of Public Health (CDPH) to have alternate drinking water service. Data is also maintained in a small-acreage pipe and drinking water database, and provides an annual compliance update to CDPH.<sup>2</sup>

Agricultural development in the Imperial Valley began at the turn of the twentieth century, and agricultural production of approximately \$1,286,066,000 annually (in 2005) is the mainstay of the local agriculture economy. IID's delivery of Colorado River water to agricultural land and the municipalities that in turn provide water to urban development makes this economy possible. While the agriculture-based economy is expected to continue, land use will vary somewhat over the years as urbanization and growth in nonagricultural economic sectors occur in both rural areas and adjacent to existing urban areas.

### ***J.3.5 Regional Demand for IID as the Water Wholesaler***

#### **□ Determine if UWMP Includes Water Demands [Section 10910(c)]**

Under the California Water Code, demand and supply must be evaluated over a 20-year horizon. Therefore, IID has evaluated revised growth calculations in the Imperial IRWMP, which includes the Project's water demand as well as water demand from planned future growth. Growth projections in

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<sup>2</sup> IID 2007 Water Conservation Plan, p 12, IID RPM, Oct 2008

the Imperial IRWMP is based on population growth figures over the entire Imperial Region based on census data and general plans proposed within the Imperial Region. Planned future growth is described in the CDWR SB 610 guidebook published by the California Department of Water Resources as follows:

*Neither SB 610 nor SB 221 defines planned future uses. However, it would be a reasonable interpretation that planned future uses are those that would be undertaken within the same time frame as the project under consideration. Each preparer of an assessment will determine what planned future uses it will include in the demand calculation to insure that it is not identifying the same increment of water for more than one future use. (Guidebook for Implementation of Senate Bill 610 and Senate Bill 221 of 2001, California Department of Water Resources, October 2008)*

Water in IID's Imperial Valley service area is divided into three basic categories: agricultural, municipal, and industrial. In 2007, the IID delivered 2,646,072 acre-feet of water to the Imperial Valley. IID reported 2,593,541 acre-feet or 98.01 percent of IID's flows in 2007 were to agricultural users<sup>3</sup>. The seven incorporated and three unincorporated urban areas within the Imperial Valley each receive water that is diverted from IID's lateral canal system to their treatment facilities prior to distribution within their respective municipal areas. The primary industrial water users outside the urban areas are geothermal plants, Holly Sugar Corporation, chemical and fertilizer producers, a state prison, and a U.S. Naval Air Facility.

IID's delivered water values are operational summaries of uses that may include agricultural, small acreage, municipal, industrial, and some losses. Additional water not accounted for in these numbers may include unmeasured deliveries such as service pipes, temporary construction, and miscellaneous uses as well as operational and system losses. There is no available data that completely distinguishes between these uses of raw water. Water distribution systems lose water during distribution for several reasons. Specific water distribution losses depend on the type of distribution system. A piped water distribution system can lose water due to pipe failures or leaks. Open channels, ponds, reservoirs, and water basins can lose water from seepage through the soil, surface evaporation into the air, and plant consumption.

IID has an open channel gravity flow water distribution system comprised of over 1,600 miles of laterals and main canals. Its water distribution system losses result from four major conditions: seepage, operational discharges, evaporation, and phreatophyte consumption. The Consolidated Decree of the U.S. Supreme Court in *Arizona v California* requires the Secretary of the Interior to provide detailed and accurate records of diversions, return flows, and consumptive use of water diverted from the mainstream of the Colorado River below Lee Ferry (lower Colorado River). The Bureau of Reclamation

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<sup>3</sup> "East Brawley Geothermal Development Project SB 610 Water Supply Assessment Review" letter, February 12, 2009,

provides these records annually in a report, "Compilation of Records in Accordance with Article V of the Decree of the Supreme Court of the United States in Arizona v. California Dated March 9, 1964". Starting in 2004, with the implementation of the QSA, the report name is "Colorado River Accounting and Water Use Report Arizona, California and Nevada".<sup>4</sup> These reports tabulate measured diversions, measured returns and consumptive uses of each Colorado River water contractor (Note: All IID accounting volumes are described as consumptive use values at Imperial Dam net of return flow).

#### **J.3.5.1 Influence of Climate on Water Demands**

Imperial Valley has an arid desert climate characterized by hot/dry summers and mild winters. Summer temperatures typically exceed 100 degrees Fahrenheit, while winter low temperatures rarely drop below 32 degrees Fahrenheit. The remainder of the year has a relatively mild climate with temperatures averaging in the mid-70's.

The average annual air temperature is 72 degrees Fahrenheit, and the average frost-free season is in excess of 300 days per year. The average annual rainfall in the Imperial Valley is less than three inches, with most rainfall associated with brief, but intense storms. The majority of the rainfall occurs from November through March, although periodic summer thunderstorms are common in the region. Imperial Valley does receive beneficial rainfall that is used for evapotranspiration; the remainder results in direct runoff to the Salton Sea. In general, an inch of rainfall over the IID service area can result in up to 40,000 to 60,000 acre-feet of reduction in IID's consumptive use of Colorado River water (depending on rainfall distribution, intensity, and duration).

#### **J.3.5.2 Historic and Projected Population**

Imperial County lies in the southeastern corner of California and is comprised of approximately 4,597 square miles or 2,942,080 acres. Imperial County is 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 Boundary with the Republic of Mexico to the south.

The economy within the Valley is gradually becoming more diverse. Agriculture will likely continue to be the predominant industry; however, two principal factors that will cause a reduction of agricultural acreage are urban development and the economics of the agricultural market. Over the next twenty years, urbanization is expected to slightly decrease agriculture land use in order to provide adequate space for an increase in residential, commercial, and industrial growth.

Strong among the future industrial uses are alternative energy production facilities. The majority of urban development should occur in and around the seven incorporated cities and three unincorporated communities. Urban development is expected to remain concentrated near the established urban centers for a more efficient infrastructure layout. Development located in more rural areas will require

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<sup>4</sup> <<http://www.usbr.gov/lc/region/g4000/wtracct.html>>

the provision of private utility systems. As long as development is within the IID Service Area, raw water purchased from IID for treatment and municipal use is the best option.

Part of the Valley's future urban growth is due to the two international border crossings in the Imperial Unit: the Calexico Port of Entry and the International Port of Entry. The Mexican/United States International Port of Entry is located just east of the City of Calexico. It is expected to facilitate urban development within the Imperial Valley, since the movement of goods and services has increased dramatically due to the creation of the North American Free Trade Agreement (NAFTA).

Typical undeveloped areas that are being developed or could likely be developed include areas that surround the incorporated cities and unincorporated areas of the Imperial Valley, as well as unincorporated areas that are defined by specific plans. Specific plans are used to implement the Imperial County General Plan for large development projects such as planned communities, or to designate an area of Imperial Valley where further studies are needed for development like Mesquite Lake.

When adopted, a specific plan serves as an amendment to Imperial County's General Plan for a very defined and detailed area. In 2003, the total urban area within the Imperial Valley was 49,760 acres or 4.69% of the total Imperial Valley, which is comprised of 1,061,637 acres.<sup>5</sup> This percentage is likely higher due to real estate development that occurred between 2003 and 2008. Urban areas yet to be developed will be characterized by a full level of urban services, and will contain a broad range of residential, commercial and industrial land uses.

It is anticipated urban development yet to be developed will eventually be annexed and incorporated into existing municipal areas, or form new County Service Areas (CSAs), and be provided with a full range of public infrastructure normally associated with urbanized areas. This includes public sewer and water, drainage improvements, street lights, fire hydrants, and fully improved paved streets with curbs, gutters and sidewalks that are consistent with respective municipal standards. The following excerpt is from the Imperial County General Plan Land Use Element with regard to population:

*"Imperial County Planning/Building Department bases its population estimates on building permits and housing unit change. From this annual compilation, the Population Research Unit of the California Department of Finance (DOF) estimates the annual change in population. According to these 2003 estimates, the population estimate for the unincorporated area is 33,750 with the total population estimate for Imperial County being 150,900. This compares to the 1990 census results of 32,773 for the unincorporated area and 147,361 for the entire County. The seven incorporated cities: Brawley, Calexico, Calipatria, El Centro, Holtville, Imperial, and Westmorland, account for 75 percent of the total population. In the past, incorporated cities have grown at a faster pace than the rural areas. Recently, residential development has increased in agricultural areas away from cities and communities. This has created conflicts with agriculture, in spite of the County's "Right to Farm" ordinance. Also, treated water is generally*

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<sup>5</sup> Imperial County General Plan 2003 Update, Land Use Element, pages 26 & 27.

*not available in these areas and the U.S. Environmental Protection Agency has, by Administrative Order of December 22, 1992, prohibited Imperial Irrigation District from providing service to these residences from untreated canal water. Attempts to resolve this situation, including installation of in-home treatment systems, are on going.”*

Two methods of determining projected population are considered in an assessment of IID’s water supplies. The first is based on information from the Imperial County General Plan. The second is based on US Census Bureau Data. The most conservative of these – the one with the highest population – is used.

**Table J-8** provides information from the US Census Bureau. The population in Imperial County in 2000 according to the Bureau was 142,361 and the 2007 population estimate was 161,867. The percent population change over that seven year time period was 13.7%. This equates to an annualized rate of increase of 1.85% per year. The latter alternative reflected in the **Table J-8** projections provides a greater projected population and, therefore, a more conservative look at population growth. These numbers will be used in the calculations for water consumption later in this section.

The Imperial County population is closely tied with job and employment availability, which typically results in sharp population increases during winter months. This is because agriculture is the dominant industry in Imperial County, which follows a seasonal pattern of high employment during winter months followed by lower employment during hot summer months, exactly opposite from the seasonal pattern elsewhere in California.

As a leading producer of row crops and livestock, Imperial County is experiencing a trend toward reliance on labor contractors to provide workers during the high seasonal demand. As a result, population will increase more predominantly in winter months than summer months.

### **J.3.5.3 Regional Demand based on Projected Population**

**Table J-4** shows the projected populations that have been calculated using US Census data for 2000 and 2007. Municipal water demand is based on the amount of municipal water used in 2006 (37,958 acre-feet, 2009 Supply/Demand Imbalance (SDI) Apportionment Report, IID), plus the current District-wide average use per capita multiplied by the increase in population since 2006. Average use was calculated as 0.26 acre-feet per capita per year, or just over 232 gpd/capita. This average per capita water use is multiplied by the current service population to determine the total apportionment to the water agency.

The water demand in Table J-5Table J-4 addresses municipal consumption; primarily residential, commercial, schools, etc. As a comparison of projected consumption, IID’s Draft “Limit on Use, Cumulative Future Water Demand” presents three scenarios for projected demand; **Scenario 1** (Low Future Water Demand), **Scenario 2** (Medium Future Water Demand), and **Scenario 3** (High Future Water Demand). The water demand differential between **Scenarios 1** and **2** is a function of anticipated geothermal development and higher population projections.

**Scenario 2:** “relatively medium future water demand based on development of half of the known geothermal resources and municipal growth based on the current forecasts - nearly 200,000 by 2040

(Table J-8). Values ... are based on IID from Supply Demand Imbalance Apportionment for cities that did not develop a UWMP. These municipalities are Holtville, Westmorland, Heber PUD, Seeley CWD, Centinela State Prison; and Niland and Calipatria, which are served by Golden State Water Company.”<sup>6</sup>

For projected municipal demand refer to the extrapolated census data (Table J-4, fourth column) These values of projected demand, when compared to IID’s three scenarios, are closest to the projections of **Scenario 2**. Because the municipal consumption projections of **Scenario 2** are close to – and more conservative than – those based on population projections in Table J-8, the **Scenario 2** projections are the ones used for deciding IID MCI sustainable water supplies. Table J-4 shows both population from Table J-8 (fourth column) and municipal use from IID’s Scenario 2 (Table J-4, last column). The Scenario 2 values in the last column are the ones carried forward to Table J-5.

Note: The projected municipal use in Scenarios 1, 2, and 3 are shown through Year 2040, while Table J-4 shows only through Year 2030. This is because Year 2030 is the current planning horizon [NEED 2035 Numbers].

**Table J-4. MCI Water Use Within the IID Water Service Area Based on Projected Population**

Year	Projected Population	Gallons per Year	Acre-Feet per Year (from Table J-8 Census Data)	Acre-Feet (from Cumulative Water Demand Scenarios, Scenario2)
2010	171,018	14,481,804,240	44,465	50,819
2015	187,433	15,871,826,440	48,733	55,877
2020	205,424	17,395,304,320	53,410	61,397
2025	225,142	19,065,024,560	58,537	67,335
2030	246,752	20,894,959,360	64,156	71,233

**Table J-5. Future Water Demand – Medium Future Water Demand, Scenario 2**

(All Units in Thousands of Acre-Feet)						
Year	Municipal	Geothermal	Industrial	Feedlot/Dairies	Environmental Resources	Total Water Demand
2005	48,844	16,274	7,092	20,000	0	92,210
2010	50,819	23,817	7,092	20,000	3,840	105,568
2015	55,877	31,360	7,092	20,000	7,930	122,259
2020	61,397	38,903	7,092	20,000	12,020	139,412
2025	67,335	46,446	7,092	20,000	12,020	152,893
2030	71,233	53,989	7,092	20,000	12,020	164,334
2035	75,513	61,532	7,092	20,000	12,020	176,157
2040	79,983	69,075	7,092	20,000	12,020	188,170

<sup>6</sup> IID Limit on Use, Cumulative Future Water Demand, IID, undated p.3 of 7

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These other non-residential land uses have been aggregated together as “Other Non-Agricultural Use” for the projected Imperial Valley water consumption for each of the water use projection years in **Table J-7**. After deducting the IID Reduction from IID’s Priority 3(a) Quantified Amount of 3,100,000 AF to achieve a Net Consumptive Use, Total Municipal Use and Other Non-Agricultural Use, the Total Agricultural Use is the remaining amount, since agriculture will use what is available. **Table J-7** summarizes the projected water consumption for Imperial Valley from 2010 to 2030. For comparison, the most recent information available on agricultural consumption, from 2007, is 2,593,541 acre-feet.

**Table J-6. Projected Imperial Valley Water Consumption, 2010 -2030 (AFY at Imperial Dam)**

Year	IID Priority 3(a) Quantified Amount	IID Reduction: Total Amount	IID Net Consumptive Use Amount (Total Imperial Valley)
2010	3,100,000	361,200	2,738,800
2015	3,100,000	530,200	2,569,800
2020	3,100,000	450,200	2,649,800
2025	3,100,000	482,200	2,617,800
2030	3,100,000	487,200	2,612,800

**Table J-7. Future Water Demand – Medium Future Water Demand, Scenario 2, 2005 – 2040**

Year	IID Net CU Amount (Total Imperial Valley) at Imperial Dam*	IID System Loss (Est.)**	IID Net Consumptive Use Amount (Total Imperial Valley)*	Total Municipal Use	Total Other Non-Agricultural Use	Total Agricultural Use
2010	2,738,800	375,000	2,363,800	50,819	54,749	2,258,232
2015	2,569,800	333,500	2,236,300	55,877	66,382	2,114,041
2020	2,649,800	333,500	2,316,300	61,397	78,015	2,176,888
2025	2,617,800	333,500	2,284,300	67,335	85,558	2,131,407
2030	2,612,800	333,500	2,279,300	71,233	93,101	2,114,966

Note: The projected municipal use in Scenarios 1, 2, and 3 are shown through Year 2040, while Table 7 shows only through Year 2030. This is because Year 2030 is the horizon year that this WSA is required to address.

IID looks at extrapolated census data (**Table J-8**) to compare IID’s three scenarios. The scenario closest to the projections is Scenario 2. Because the municipal consumption projections of Scenario 2 are close to – and more conservative than – those based on population projections in **Table J-8**, the Scenario 2 projections are the ones typically used. 0, therefore, shows both the municipal use based on population from **Table J-8** (fourth column) and municipal use from IID’s Scenario 2 (last column). The Scenario 2 values in the last column are the ones carried forward to **Table 8**.

**Table J-8. Imperial County Population Projections**

Area of Interest	2000	2007	2010	2015	2020	2025	2030
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Entire Imperial County	142,361	161,867	171,018	187,433	205,424	225,142	246,752
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### ***J.3.6 Financial Assessment***

#### **□ Capital Outlay Program for Financing Delivery of Water [Section 10910(d)(2)(B)]**

Needs to be done accord IWSP

This subsection requires a discussion of the needed capital outlay program for financing the delivery of treated water to the Project. User rates and connection fees pay for IDD's wholesale delivery of untreated surface water to the local water purveyor's water treatment and conveyance facilities .

IID's water rate is approximately \$ per month. The current rate structure for IID (see **Figure 3-1**) assumes that maintenance and operations costs are recovered from revenues generated from quantity and fixed service charges. Costs of capacity constructed for new development is borne entirely by new growth through a development fee. There is no distinction in geographic area on which areas of IID's service area benefit from which IID conveyance facilities.

**NOT COMPLETED**

*Figure J-2. IID's Conceptual Rate Design*

### ***J.3.7 Permits Required***

#### **□ Federal, State, and Local Permits Required [Section 10910(d)(2)(C)]**

This subsection requires identification of any federal, state, and local permits required for construction of any infrastructure associated with delivering water to the Project.

Expansion of the local water purveyor capacity will be done in accordance with DPH requirements. Large IID efficiency enhancements or expansions may require local permitting and possible CEQA action depending on the extent of new construction. No other regulatory approvals are anticipated for meeting existing untreated water demands plus the Project demands.



#### ***J.4 DOCUMENTING SUPPLY AND DEMAND BY HYDROLOGIC YEAR CONDITIONS***

Because IID's 2000 Regional Urban Water Management Plan was deemed obsolete and is no longer supported due to the consumptive limits imposed by the QSA, the water supplies available during a normal year are best represented by the "post-QSA era" (2003 and later). This represents the maximum amount of supply available and is thus the new "normal water year". This is the "age of limits" for IID, where water is not necessarily tightly constrained or scarce, but rather the supply is no longer unlimited due to the agreements with other QSA participants. For the single dry and multiple dry water years assessment, the Equitable Distribution Plan (EDP) governs. The EDP was adopted in 2007, along with subsequent regulations, allowing the IID Board to make an annual determination as to Supply/Demand Imbalance (SDI) conditions. In an October 26, 2008 Board presentation, IID staff summarized the situation by noting that a 64% probability existed of demand exceeding supply in the 2009 calendar year, even assuming no overrun were to occur in 2008. Similarly, the Hanemann Brookes Study opined that SDI situations were likely to occur "4 or 5 times out of the next 10 years", and from 2003 through 2008 IID was accounted as overrunning its annual water limit three times.

The Equitable Distribution plan and the Supply/Demand Imbalance are discussed in **Section J.4.3.4** under the single dry and multiple dry year projections. Consumptive use is not the same as delivery. **Table J-9**, particularly column 12, summarizes the "IID Net Consumptive Use Amount", which is indicative of future supplies as measured at Imperial Dam.

Agricultural water demands will decrease in an amount equivalent to the water conservation attributable to on-farm efficiency measures (setting aside outside factors such as annual rainfall, differences attributable to the intensity of farming within IID such as acreage in production, double cropping, and market conditions, etc.), so while IID's total volume in this column is declining, so too are its agricultural demands. However, as a consequence of reducing the agricultural water demand through increased on-farm and system efficiency, less water is available for years when agricultural demand may be higher than normal, such as in years of low rainfall or due to cropping choices made by Imperial Valley growers.

Such intermittent spikes in higher agricultural demand means less water is available for non-agricultural development. Similarly, reductions attributable to system conservation efforts and the All-American Canal Lining Project are a result of the implementation of conservation measures, so there is no net decline in the water available for IID's water users as a result of water conservation and transfer projects (even though these tables illustrate declining future consumptive use limits for IID). IID suggests the limits in **Table J-9**, which assumes full use of IID's water supply, be considered given the projected probabilities of SDI conditions, ongoing Colorado River drought hydrology, 2003-2008 water use, and the declaration of 2009 as a SDI Water Year:

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**Table J-9. IID Consumptive Use (Units in Thousands of acre-feet)**

Col 1	2	3	4	5	6	7	8	9	10	11	12
IID Priority 3a											
IID Reductions											IID Net Consumptive Use Amount
Year	IID Priority 3a Quantified Amount	1988 MWD Transfer	SDCWA Transfer	AAC Lining	Salton Sea Mitigation SDCWA Transfer	Intra-Priority 3 CVWD Transfer	MWD Transfer w/Salton Sea Restoration	Conditional ISG Backfill	Mexc. PPRs	IID Total Reduction	
2003	3,100	105	10	0	5	0	-	-	12	131.6	2,968
2004	3,100	102	20	0	10	0	-	-	12	143.4	2,957
2005	3,100	102	30	0	15	0	-	-	12	158.4	2,942
2006	3,100	101	40	0	20	0	-	9	12	181.6	2,918
2007	3,100	105	50	0	25	0	-	-	12	191.5	2,909
2008	3,100	105	50	67.7	25	4	20	-	12	283.2	2,817
2009	3,100	105	60	67.7	30	8	40	-	12	322.2	2,778
2010	3,100	105	70	67.7	35	12	60	-	12	361.2	2,739
2011	3,100	105	80	67.7	40	16	80	-	12	400.2	2,700
2012	3,100	105	90	67.7	45	21	100	-	12	440.2	2,660
2013	3,100	105	100	67.7	70	26	100	-	12	480.2	2,620
2014	3,100	105	100	67.7	90	31	100	-	12	505.2	2,595
2015	3,100	105	100	67.7	110	36	100	-	12	530.2	2,570
2016	3,100	105	100	67.7	130	41	100	-	12	555.2	2,545
2017	3,100	105	100	67.7	150	45	91	-	12	570.2	2,530
2018	3,100	105	130	67.7	-	63	-	-	12	377.2	2,723
2019	3,100	105	160	67.7	-	68	-	-	12	412.2	2,688
2020	3,100	105	193	67.7	-	73	-	-	12	450.2	2,650
2021	3,100	105	205	67.7	-	78	-	-	12	467.2	2,633
2022	3,100	105	203	67.7	-	83	-	-	12	470.2	2,630
2023	3,100	105	200	67.7	-	88	-	-	12	472.2	2,628
2024	3,100	105	200	67.7	-	93	-	-	12	477.2	2,623
2025	3,100	105	200	67.7	-	98	-	-	12	482.2	2,618
2026	3,100	105	200	67.7	-	103	-	-	12	487.2	2,613
2027	3,100	105	200	67.7	-	103	-	-	12	487.2	2,613
2028	3,100	105	200	67.7	-	103	-	-	12	487.2	2,613
'29-37	3,100	105	200	67.7	-	103	-	-	12	487.2	2,613
'38-474	3,100	105	200	67.7	-	103	-	-	12	487.2	2,613
'48-775	3,100	105	200	67.7	-	100	-	-	12	484.2	2,616

Source: QSA CRWDA Exhibit B

**Notes:**

1. Information conveyed in this table is from the United State Bureau of Reclamation's Exhibit B of the Colorado River Water Delivery Agreement (CRWDA); however, IID has adjusted the 1988 MWD Transfer values for 2003 through 2006 to reflect actual values and the values for 2007 - 2077 to reflect the new IID/MWD agreement. IID Total Reduction and IID Net Consumptive Use Amount have been recalculated to reflect these changes.
2. By IID and MWD agreement, the 1988 IID/MWD transfer has been fixed at 105 KAFY, starting in 2007.
3. Reductions include conservation for 1988 IID/MWD Agreement Transfer, IID/SDCWA Transfer, AAC Lining (amount may vary); SDCWA Transfer Mitigation, additional MWD Transfer w/Salton Sea Restoration (amount may vary), and Misc. PPRs and allow for Conditional Interim Surplus Agreement Backfill (amount may vary). Amounts in this table are independent of increases and reductions as allowed under the Inadvertent Overrun and Payback Policy. NOTE: Shaded columns represent amounts that might vary.
4. Assumes SDCWA does not elect termination in year 35.
5. Assumes SDCWA and IID mutually consent to renewal term of 30 years.

***J.4.1 Water Supplies Available for Normal Water Years (20-year Projection)***

The official USBR Colorado River Accounting and Water Use (Decree Accounting) report tabulations that include QSA and related agreement deductions related primarily to IID’s water conservation and transfer projects and modified for IID hidden services and system losses provide the most appropriate summary of IID’s consumptive uses.

IID’s official consumptive use values from USBR Decree Accounting records are shown in **Table J-10**. These values do not include the deductions related to any water conservation and transfer programs (IID/MWD began in 1990 and the QSA transfers initiated in 2003) nor IID hidden services and system losses. Prior to 2003, IID’s had a dynamic water right well in excess of its usage. As previously noted, given the 3.1 million AFY cap agreed to by IID as a part of the QSA/Transfer Agreements, these current day evaluation focuses on water years and accounting from 2003 forward. The “IID Net Consumptive Use Amount” in column 12 of **Table J-9** best characterizes the normal year supplies at Imperial Dam. For use in Imperial Valley, this number must be reduced to account for IID system losses and hidden services.

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**Table J-10. Annual Decree Accounting**

Year	IID Consumptive Use	IID/MWD Conservation Program	IID/SDCWA Conservation Program	Salton Sea Mitigation	IID Overrun Per Decree Accounting Records
1970	2,848,565				
1971	2,967,907				
1972	2,965,910				
1973	3,047,899				
1974	3,171,977				
1975	3,070,974				
1976	2,876,984				
1977	2,772,062				
1978	2,757,199				
1979	2,884,235				
1980	2,845,779				
1981	2,872,289				
1982	2,595,578				
1983	2,555,617				
1984	2,666,535				
1985	2,685,837				
1986	2,686,875				
1987	2,764,865				
1988	2,947,581				
1989	3,009,451				
1990	3,054,188	6,110			
1991	2,898,963	26,700			
1992	2,575,659	33,929			
1993	2,772,148	54,830			
1994	3,048,076	72,870			
1995	3,070,582	74,570			
1996	3,159,609	90,880			
1997	3,158,486	97,740			
1998	3,101,548	107,160			
1999	3,088,980	108,500			
2000	3,112,770	109,460			
2001	3,089,911	106,880			
2002	3,152,984	104,940			
2003	2,978,223	105,130	10,000	0	6,886
2004	2,743,909	101,900	20,000	15000	--
2005	2,756,846	101,940	30,000	15000	--
2006	2,909,680	101,160	40,000	20000	18,914
2007	2,872,754	105,000	50,000	25021	6,358
2008	2,826,539	105,000	50,000	25300	--

#### ***J.4.2 Management during Hydrologic Year Supply Demand Imbalance***

On November 28, 2006, the Board of Directors (“IID Board”) of the Imperial Irrigation District (“District”) adopted Resolution No 22-2006 approving the development and implementation of an Equitable Distribution Plan.

As part of this Resolution, the IID Board directed the General Manager to prepare the rules and regulations necessary or appropriate to implement the Equitable Distribution Plan (EDP) within the IID district boundaries. The EDP was created as a water management tool to address years in which water demand is expected to exceed supply, that is when there is a supply/demand imbalance (SDI). The Hanemann Brookes study suggests that SDI conditions are likely to occur 40-50% of the years during the next decade.

The dry and multiple dry water years analysis assumes the following:

- 1) Rainfall is scarce in Imperial County to create dry local conditions. The year of 2006 with 0.43 inches of rain – well below the 94-year average of 2.85 inches – creates higher than normal demand. This is deemed the “dry” water year.
- 2) The USBR has not declared a surplus for delivery to the Colorado River Lower Basin and an SDI has been declared by IID’s Board of Directors for the year. This scenario creates the worst-case conditions of higher than normal demand and lower than normal supply.

#### ***J.4.3 Dry Year Demand***

In the case of demand, IID notes that, in general, an inch of rainfall over the IID service area can result in up to 40,000 to 60,000 acre-feet of reduction in IID’s consumptive use of Colorado River water. The year of 2003 had rainfall of 2.72 inches (see Table 6) – the closest in recent years to the statistical average of 2.85 inches. For this reason, 2003 is deemed a “normal” year. IID’s projected Net Consumptive Use (CRWDA Exhibit B) amount that year (2003) was 2,968,400 AF (see Figure 8).

Note: Official USBR record shows IID Net Consumptive Use for 2003 as 2,978,223 AF, with an overrun of 6,102 AF. For the selected dry water year of 2006, with 0.43 inches of rainfall, IID projected Net Consumptive Use (CRWDA Exhibit B) was 2,918,400 AF (official USBR Net Consumptive Use is 2,909,680 AF, with an overrun of 17,914 AF), which incidentally was lower than 2003 when the rainfall was near-normal, at 2.7 inches (official USBR NET Consumptive Use is 2,978,223 AF, with an overrun of 6,102 AF). Agronomic and/or agricultural economic conditions likely influenced individual farm management decisions and practices and, thus, impacted water use in 2003.

For the Sustainability Findings Report, it is assumed that during a dry year the water demand will be 50,000 acre-feet greater for every inch of rainfall less than the water demand in a normal year rainfall of 2.72 inches. That is, for every inch of rainfall less than the Imperial Valley 90-year average of 2.85 inches/year, the water demand will be increased by 50,000 AF in a dry year over the amount used in a normal year.

#### **J.4.3.1 Calculation of Dry Year Demand**

Given:

1. Normal Year (2003) Consumptive Use (measured at Imperial Dam) = 2,978,223 AF
2. Normal Year (2003) Rainfall = 2.72 inches
3. Dry Year (2006) Rainfall = 0.43 inches

#### **Calculate Dry Year Consumptive Use**

4. Dry Year Consumptive Use = Normal Consumptive Use + [(Average Year Rainfall – Deficient Year Rainfall) x (50,000 acre-feet)]
5.  $2,978,223 \text{ acre-feet} + [(2.72 \text{ inches} - 0.43 \text{ inches}) \times (50,000 \text{ acre-feet})] = 2,978,223 \text{ acre-feet} + 114,500 \text{ acre-feet} = 3,092,723 \text{ acre-feet of dry year demand}$
6. **Dry Year Consumptive Use = 3,092,723 acre-feet of dry year demand**

#### **J.4.3.2 Dry Year Supply**

Equitable Distribution is the mechanism by which a Supply/Demand Imbalance is administered. From the Imperial Irrigation District Environmental Compliance Report for Revised Regulations for Equitable Distribution Plan, the specifics governing Equitable Distribution are as follows:

Declaration/Termination of Supply/Demand Imbalance:

- a.) District shall track actual supply and demand during each Water Year and, based upon District staff's estimates of water supply and demand for the coming Water Year, determine whether the probability of total demand exceeding District's Colorado water supply is greater than fifty percent (50%). If the probability is greater than fifty percent (50%), the District may declare an SDI for the coming Water Year. Such SDI Declaration must be made on or before October 1 and can be withdrawn on or before December 31.
- b.) District shall track actual supply and demand during the SDI Water Year. If cumulative consumptive use through June of the SDI Water Year is less than 1.575 million AF, District may terminate the SDI Declaration for that year.

#### **J.4.4 Apportionment of Supply**

Upon SDI Declaration, District shall apportion the Available Water Supply among the types of water users in the IID district boundaries using the following:

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- a.) Municipal Users - Base amount of 2006 usage plus current District-wide average use per capita multiplied by the increase in population since 2006;
- 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;
- c.) Feed Lots and Dairies - Estimated based upon past use and consideration of future changes;
- d.) Environmental Resources Water - Estimated based upon the amount reasonably necessary to achieve the purposes of the District's commitments, taking past use into account; and
- e.) Agricultural Lands - Straight Line Apportionment used. Subtract the estimated demand for categories "a" through "d" above from Available Water Supply, and then divide the remaining supply by the total number of Eligible Agricultural Acres pursuant to "a" through "c" noted under the definition for Eligible Agricultural Acres to determine apportionment per Eligible Agricultural Acre. The amount apportioned to acreage that does not comply with "d" under the definition for Eligible Agricultural Acres will be placed in the District Water Exchange.

Special Requirement for 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 SDI 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 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.

Special Requirements for Agricultural Water Users:

- a.) Agricultural Water Users must complete and keep current the Water Card to receive an apportionment and delivery of water. As part of this process, Farm Units must be identified and kept current.
- b.) A written notice of the apportionment per Eligible Agricultural Acre of the number of Eligible Agricultural Acres per owner shall be sent to the land owner and the authorized representative no later than December 1 prior to the beginning of the SDI Water Year.
- c.) The owner or authorized representative of Eligible Agricultural Acres must accept or reject in writing some or all of the SDI Apportionment on a take-or-pay basis within sixty (60) days of the notice of the SDI Apportionment. Payment for the accepted apportioned water shall be made monthly based on actual use. On December 31 of the SDI year, any remaining amount of unused water part of the take-or-pay obligation will be included in the year end invoice.

***J.4.5 District Water Exchange Eligibility***

Any Agricultural Water User can be a Buyer. Any Agricultural Water User with an SDI Apportionment may be a Seller.

Offers to Sell:

- a.) An Agricultural Water User with acres eligible for SDI Apportionment may subsequently send a "Notice of Intention to Sell" to the District indicating the number of Acre Feet of water being offered to the District Water Exchange for immediate sale.
- b.) Potential Seller must be current on his take-or-pay obligation.
- c.) An Agricultural Water User that has sent a Notice of Intention to Sell to the District may subsequently send a "Notice of Withdrawal of Offer to Sell". The District will honor the Notice of Withdrawal only if the water that was the subject of the original Notice of Intention to Sell has not been sold prior to receipt of the Notice of Withdrawal of Offer to Sell.

Offers to Buy:

- a.) An Agricultural Water User may send a "Notice of Intention to Buy" to the District that states the number of acre/feet of water he wishes to acquire from the District Water Exchange.
- b.) An Agricultural Water User that has previously sent a Notice of Intention to Buy may subsequently send the District a "Notice of Withdrawal of Offer to Buy." The District will honor the Notice of Withdrawal of Offer to Buy if the District has not previously purchased water from sellers to satisfy the Notice of Intention to Buy.

**J.4.5.1 Priority of Execution of Sell/Buy Offers**

Priority of offers to Sell and/or Buy will be based upon the date of receipt of the Notice of Intention to Sell or Buy. The District will periodically publish on its website the aggregate volume of water from pending Notices of Intention to Sell and/or Buy.

**J.4.5.2 Payment for Water from the Water Exchange**

After the District sells the water that Seller has offered for sale through his Notice of Intention to Sell, the Seller shall have no further take-or-pay obligation for payment of that water. If Seller's water does not sell, he is responsible for his take-or-pay obligation. The buyer shall pay the District the total purchase amount due before receiving the purchased water. The total amount due is based on the Acre Feet of water purchased (not to exceed buyer's Notice of Intention to Buy) multiplied by the purchase price defined as the current District agricultural water rate plus a processing fee of one dollar (\$1) per Acre Foot.

**J.4.6 Charge for Unused Water**

If an Agricultural Water User buys additional water through District Water Exchange, then he must either: (a) use the purchased water during the SDI Water Year; or (b) offer the purchased water for sale through the District Water Exchange no later than October 1. If an Agricultural Water User does none of the above and has not used the total of purchased water plus accepted SDI Apportionment on his Eligible Agricultural Acres at the end of the SDI Water Year, such Agricultural Water User shall pay a charge to the District (in addition to his take-or-pay obligation) equal to the Unused Water Charge



multiplied by the amount in Acre Feet by which the Agricultural Water User's unused purchased water from the District Water Exchange plus unused accepted SDI Apportionment if the SDI Water Year exceeds five percent (5%) of the amount apportioned to the Agricultural Water User's Eligible Agricultural Acres.

#### ***J.4.7 Interface with District Agricultural Land Fallowing Program***

An Agricultural Water User that participates in the District's Fallowing Program must assign to the District an amount of the Agricultural Water User's accepted SDI Apportionment equal to the amount of water conserved by fallowing for which the Agricultural Water User is contracted.

If the Agricultural Water User's accepted apportionment is less than his Fallowing Program contracted amount, he may procure this difference from the following sources for which the Agricultural Water User qualifies pursuant to these regulations: the Agricultural Water User's accepted SDI Apportionment on other Eligible Agricultural Acres, or the District Water Exchange.

#### ***J.4.8 Miscellaneous***

The General Manager is authorized and directed to do any and all things necessary to implement and effectuate these Regulations. The General Manager shall provide notice of any changes or revisions to these Regulations to all District landowners and water users.

#### ***J.4.9 Inadvertent Overrun Payback Policy***

An SDI is declared when Imperial Valley demands are projected to exceed the available IID water supply for that calendar year. If IID use is not reduced sufficiently and demand exceeds the quantified amount in any calendar year, that overuse must be paid back in future years according to the terms of the Inadvertent Overrun Payback Policy (IOPP).

**Table J-11. Projected Imperial Valley Consumption, 2010-2030 (Acre-feet in Imperial Valley)**

Year	IID Net CU Amount (Total Imperial Valley) at Imperial Dam*	IID System Loss (Est.)**	IID Net Consumptive Use Amount (Total Imperial Valley)*	Total Municipal Use	Total Other Non-Ag Use	Total Ag Use
2010	2,738,800	375,000	2,363,800	50,819	54,749	2,258,232
2015	2,569,800	333,500	2,236,300	55,877	66,382	2,114,041
2020	2,649,800	333,500	2,316,300	61,397	78,015	2,176,888
2025	2,617,800	333,500	2,284,300	67,335	85,558	2,131,407
2030	2,612,800	333,500	2,279,300	71,233	93,101	2,114,966

Again, this assessment will consider 2003 as the characteristic "normal" year with 2,978,223 acre-feet of consumptive use. Given that in 2003 there were 450,556 acres irrigated for agriculture (2003-2005

Annual Inventory of Areas Receiving Water<sup>7</sup>), and deducting 50,819 acre feet for municipal uses and 54,749 acre-feet for other non-agricultural uses (Year 2010, **Table J-7**), that leaves 2,872,655 acre-feet (less system losses of 375,000 leaves 2,258,232 acre-feet) to irrigate 450,556 acres, equating to a normal water year agricultural use of 5.0 AF per acre of land.

The apportionment for the SDI declared in 2009 is 5.25 acre-feet/acre, this number assumes that the Total Municipal and Total Other Non- Agricultural Use will be less than projected in **Table J-9**. In the event that a reduction in use by the agriculture sector is required, such a reduction would be accommodated on the basis of individual farm management decisions and practices such as adjusting the crops planted for the year to incorporate ones requiring less water use, or reducing the amount of water applied to crops that may result in a lower yield, or some other agronomic and/or agricultural economic accommodation.

These same conditions could go on for multiple years, with low local rainfall resulting in higher agricultural demand and low watershed precipitation resulting in a reduced supply. As noted in the Hanemann Brookes study, this SDI condition could be anticipated to occur in four or five of the next ten years, creating the multiple dry water years condition to be included in the assessment.

## ***J.5 SATISFYING DEMAND FOR MUNICIPAL USES***

With the definition of dry year hydrologic conditions and Projected IID water supplies above, the decision point of assessing a 20-year projection incorporating new MCI development is made based on the past and present conditions of each development. For example, a new development footprint overlying a previous (past) agricultural use has a distinct advantage over a new development area with no previous agricultural use.

Regardless of hydrologic condition, in dry or multiple dry water years under SDI conditions, Municipal Users will receive their base amount of 2006 usage, plus current district-wide average use per capita multiplied by the increase in population since 2006. Non-agricultural water users, including urban manmade lakes, navigable waterways, and other non-residential amenities, shall be allowed to use that amount of water needed for reasonable and beneficial use.

### ***J.5.1 Lands with a Past Agricultural Use***

Developments with a footprint that overlies a previous agricultural use requires a verification from IID water meter accounting data to define the consumptive use of raw water supplies used for agricultural irrigation. With this information, past agricultural water use will be used in the determination of eligibility for SDI water allocations under the Equitable Distribution Plan. The SDI water allocations are based on the percentage of the new development land that overlies the previous agricultural use. A 5 year average of past water use is typically used to establish comparison of previous water supply to the

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<sup>7</sup> [http://www.iid.com/Media/CRPSRVY\\_2005\\_V16\\_PIO.pdf](http://www.iid.com/Media/CRPSRVY_2005_V16_PIO.pdf)

projected water demands for the entire development. If the projected water demands are less than the previous agricultural demand, the project is granted SDI water allocations, which results in a positive determination of the sustainability of water in all year-types over the 20 year forecasting period.

### J.5.1.1 Project Example Calculation of Previous Agricultural Use

The agricultural water use for this project example is illustrated in **Table J-12**. The listed 5 year history of water use equates to a running two-year average high of 3,508 acre-feet with 50% of the land in agriculture, or a five year average of 1,548 acre-feet. The 3,508 AF is a reasonable representation of agricultural use in a normal water year for the extent of agriculture on the site. This amount is used for assigning a prior use of water and establishing the need for additional water from IID. If the total prior use is greater than the example project, no impact is associated with development. Fees and rates are set accordingly based on this finding.

**Table J-12. Example of Past Agricultural Water Delivery**

Year	Water Delivery (acre-feet) at Delivery Gate						
	WSM 20 001	WSM 20 002	WSM 20 003	WSM 20 004	WSM 23A 001	WSM 23A 002	Total
2004	321	36	9	-	131	-	496.4
2005	-	48	16	-	-	-	64
2006	-	35	133	-	-	-	168
2007	1,202	23	37	169.8	14	1037.4	2,482
2008	2,378	-	-	92.2	-	2063.8	4,534
Total	3,900	141	195	262	145	3,101	7,744

### J.5.2 No Previous Agricultural Use

In cases where the development footprint does not overlie a previous agricultural use, the rules for Equitable Distribution apply (see **Section J.4.3.4**). This states that municipal lands will receive the base amount of 2006 usage plus current District-wide average use per capita multiplied by the increase in population since 2006. If a municipal water user 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 (currently \_\_\_% of standard water rate).

The cost penalty of this example in terms of fees and rates is intended to serve as a means to recover capital costs and enforcement of increased water conservation practices during a dry or multiple dry year condition. The following quote from a December 2008 IID letter from the Assistant Water Department Manager at the time summarizes this further:

"While MCI water users are allotted a higher priority than agricultural users under SDI conditions, IID's water supply will be limited for all of its users and every effort should be made to serve as good stewards of this precious resource."

## ***J.6 DETERMINATION OF WATER SUPPLY SUFFICIENCY***

These guidelines have determined that, under the terms of the IID Interim Water Supply Policy, adopted by the IID Board of Directors (Date), IID's water supply is sufficient to meet the projected demands through 2030 for the Service Area. This needs to float a bit to account for the range of projects and the expected growth period horizon...already need to go beyond 2030 as the time frame of report.

## **Exhibit “A” – Sustainability Findings Report**





# Imperial Irrigation District

## Request for Determination of Wholesale Water Sustainability

### CONSULTATION INFORMATION

Project Name:			
Project Proponent:	Address:	Phone:	
Lead Agency Name:	Address:	Phone:	
Lead Agency Contact:			
Date:	Requested Review Period:	to	

### PROJECT INFORMATION

#### 1. Brief Project Description

#### 2. Attachment "A" on CD or Flash Drive –

To include:

- Detailed Project Description in Microsoft Word Format
- Detailed ESRI GIS map of proposed project
- Project area broken down based on each proposed land use
- Unit water demands based on each land use category
- Projected population growth and water demands in five year increments to project build-out
- Proposed infrastructure and point of connection to IID's raw water canal(s)
- Proposed instantaneous diversion of raw water during maximum day and peak hour demand estimates

### COMMENTS OR SPECIFIC QUESTIONS

Disclosure statement on how information will be used and who will be able to see.







