IID

A century of service.

2025 Service Area Plan

Prepared for Imperial County LAFCO

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ACRONYMS AND ABBREVIATIONS

Acronym/Abbreviation	Definition
AAC	All American Canal
AAEE	Additional Achievable Energy Efficiency
AAFS	Additional Achievable Fuel Substitution
AC	Acre
AF	Acre-feet
AFY	Acre-feet per year
AGC	Automatic Generation Control
AMI	Advanced Metering Infrastructure
AMR	Automated Meter Reading
BA	Balancing Authority
BECC	Border Environment Cooperation Commission
BEIF	Border Environmental Infrastructure Fund
BESS	Battery Energy Storage System
BHE	Berkshire Hathaway Energy
BIA	Bureau of Indian Affairs
BIA	Bureau of Indian Affair
BMP	Best Management Practice
BOD	Biochemical Oxygen Demand
Ca+	Calcium ion
CAISO	California Independent System Operator
CAP	Community of Assistance Program
CCRLF	Climate Catalyst Revolving Loan Fund
CDP	Census Designated Place
CDPH	California Department of Public Health
CDWR	California Department of Water Resources
CEC	California Energy Commission
CEDU	California Energy Demand Update
CESP	Custom Energy Solutions Program
CI	Chemical ionization
CIP	Capital Improvement Plan
CLEEN	California Lending for Energy and Environmental Needs
CMUA	California Municipal Utilities Association
CO_2	Carbon Dioxide
CO_3	Carbon Trioxide
COP	Certificate of Participation
CP	Coincident Peak
CPI	Consumer Product Index
CPS	Control Performance Standard
CRA	Community Reinvestment Act
CRWDA	Colorado River Water Delivery Agreement
CSP	Customer Service Proposal
CTR	Controlled Thermal Resource
CU	Consumptive use
CVWD	Coachella Valley Water District

CWA	Clean Water Act
CWA	Clean Water Act
CWSRF	Clean Water State Revolving Fund
DFA	Division of Financial Assistance
DIP	Deficit Irrigation Program
District	Imperial Irrigation District
DNV GL	Det Norske Veritas
DO	Dissolved Oxygen
DOF	Department of Finance
DP	Dewatering Pump
DSM	Demand-side Management or Design side management
DWQIP	Drain Water Quality Improvement Plan
E. coli	Escherichia coli,
EC	Electrical Conductivity
EEC	Energy Efficiency and Conservation
ECA	Energy Cost Adjustment
ECGS	El Centro Generating Station
ECSS	El Centro Switching Station
EE	Energy Efficiency
EHL	East Highline Canal
EIR	Environmental Impact Report
EIS	Environmental Impact Statement
EPA	Environmental Protection Agency
ET	Evapotranspiration
EV	Electric Vehicles
FEMA	Federal Emergency Management Agency
FERC	Federal Energy Reliability Commission
FIT	Feed-in tariff
FT	Feet
FTE	Full time employee
GE	General Electric
GHG	Greenhouse Gas
GPS	Global Positioning System
GW	Gigawatt
GWh	Gigawatt hour
HCO_3	Bicarbonate
HVAC	Heating, Ventilation and Air Conditioning
HWY	Highway
I	Interceptor
IBank	California Infrastructure and Economic Development Bank
ICFB	Imperial County Farm Bureau
ICS	Intentionally Created Surplus
IEPR	Integrated Energy Policy Report
IID	Imperial Irrigation District
IPP	Independent Power Producers
IRP	Integrated Resource Plan
IRWMP	Integrated Regional Water Management Plan
ISRF	Infrastructure State Revolving Fund

IT	Information Technology
IT/OT	Infrastructure and Operations
ITP	Incidental Take Permit
IWSP	Interim Water Supply Policy
JPA	Joint Power Agreement
KAF	Thousand Acre-feet
KAFY	Thousand Acre-feet per year
kV	Kilovolt
KWH	Kilowatt hour
LAFCO	Local Agency Formation Commission
LAN	Local Area Networks
Lbs	Pounds
LED	Light-emitting diode
M2C	Meter-to-Cash
MAF	Million Acre-feet
MAFY	Million acre-feet per year
Mg	Magnesium
mg/L	Milligrams per liter
MM	Millimeter
Mt	Metric tons
MVA	Mega volt-amperes
MW	Megawatt
MWD	Metropolitan Water District
MWh or MWhr	Megawatts per hour
N	Nitrogen
Na+K	Sodium-Potassium
NADBank	North American Development Bank
NAFTA	North American Free Trade Agreement
NCPA	Northern California Power Agency
NEL	Net Energy for Load
NEM	Net Energy Metering
NERC	North American Energy Reliability Corporation
NGVIDD	North Gila Valley Irrigation and Drainage District
NH_3	Ammonia
NO_2	Nitrogen Dioxide
NO_3	Nitrate
NPDES	National Pollutant Discharge Elimination System
NSP	Nonpoint Source Pollution
O&M	Operation and Maintenance
OFECP	On-Farm Efficiency Conservation Program
P	Phosphorus
PBC	Public Benefit Charge
PDAP	Project Development Assistance Program
pH	Potential of hydrogen
PPA	Power Purchase Agreement
PPR	Present Perfected Rights
PV	Photo-voltaic
PVNGS	Palo Verde Nuclear Generating Station

QSA	Quantification Settlement Agreement
R	Regulating
RPS	Renewable Portfolio Standard
SAP	Service Area Plan
SCADA	Supervisory Control and Data Acquisition
SCAG	Southern California Association of Governments
SCE	Southern California Edison
SCIA	System Conservation Implementation Agreement
SCPPA	Southern California Public Power Authority
SDG&E	San Diego Gas and Electric
SDCWA	San Diego County Water Authority
SF	Square Feet
SJGS	San Juan Generating Station
SO_4	Sulfate Ion
SOC	System Operations Center
STEP	Strategic Transmission Expansion Plan
SWRCB	State Water Resource Control Board
TDS	Total dissolved solids
TLCFP	Temporary Land Conversion Fallowing Policy
TMDL	Total maximum daily load
TSS	Total Suspended Solids
US	United States
USBR	United States Bureau of Reclamation
USDA	United States Department of Agriculture
V	Volts
VoIP	Voice Over Internet Protocol
VPN	Virtual Private Networks
WAN	Wide Area Networks
WAPA	Western Area Power Administration
WECC	Western Electricity Coordinating Council
WFL	Western Farm Lands
WIS	WMO Information System
WISKI	Water Management Information Systems
WLAN	Wireless Local Area Networks
WMID	Western Meadows Irrigation District
YA	Yuma Area
YID	Yuma Irrigation District
YMIDD	Yuma Mesa Irrigation and Drainage District

I. INTRODUCTION

The Imperial Irrigation District ("IID") is a public entity organized in 1911 pursuant to the Irrigation District Law (California Water Code sections 20500 et. seq.). IID is empowered to provide irrigation and energy related services to customers within its district boundaries and, through service contracts, to customers outside of its district boundaries. The district has the powers of eminent domain and is authorized to contract, to construct works, to fix rates and charges for commodities or services furnished, and to incur indebtedness related to its functions and purposes.

A. IID GOVERNANCE

The governing structure of the IID consists of an elected five-member Board of Directors that meet the first and third Tuesday of every month at 1285 Broadway, in El Centro, California and semiannually in La Quinta, California. IID is managed by a board appointed general manager. IID's general counsel and auditor also report directly to the board. The board is composed of five individuals who are elected by registered voters from the geographic divisions in which they reside within the district. All of the district political divisions are located within Imperial County.

The Imperial Irrigation District has two primary operational departments, the Water Department and the Power Department, which are overseen by the general manager's Executive Department and supported by four additional service departments: General Services, Information Technology, Finance, and Human Resources and also manages governmental affairs and communications (internal and external). The IID Board of Directors receives critical administrative support from the Executive Department, which oversees energy reliability compliance, real estate and risk management functions as discussed under the Administrative Section of this Service Area Plan (the "SAP").

IID Operational Resources and Budget

The adopted IID 2024 Budget Plan demonstrates an overall operation with 1,446 regular position employees with an almost equal distribution of employees within the Water Department (466 FTE or 32 percent), Power Department (478 FTE or 34 percent) and all other Executive and Administrative/Support Departments (502 FTE or 34 percent). The 2025 Budget Plan reflects revenues and funding estimated at $813 million from the Power Department and $335 million from the Water Department (including transfer funds). The current financial resources utilized by the district are discussed under the Finance Plan Section of this SAP (see website for full IID Budget Plan.)

B. SERVICE AREA PLAN INTRODUCTION & PURPOSE

The Board of Directors and the general manager are committed to the overall mission of providing reliable, efficient and cost-effective water and energy services to the communities IID serves. The specific powers that are exercised by the district include, but are not limited to the following:

- Supply of raw water for beneficial purposes including the construction, operation and maintenance of canals, pipelines, and water conveyance infrastructure;
- Provision of drainage functions made necessary by the irrigation services provided for and by the district;
- Construction, operation and maintenance of dams, reservoirs, conjunctive use, reclamation, and other water management projects and works owned and/or operated by the district;
- Generation, purchase, or lease of electric power, including the acquisition, operation, and control of plants for the generation, transmission, and provision of electric power;

This SAP examines all of the services provided by IID, the current service demand and the projected future service needs within the district's service area(s). Consistent with the *Cortese-Knox-Hertzberg Local Government Reorganization Act of 2000*[1], this SAP is structured to provide a basis and framework for current and future service assessments and planning.

Purpose of the SAP under AB 1484

In 1997, Assembly Bill (AB) 1484 established the Commission of Local Governance for the 21st Century. The role of the Commission of Local Governance was to evaluate local government organization and operational issues, develop a statewide vision, and determine how the State should grow. The *Cortese-Knox-Hertzberg Local Government Reorganization* Act *of 2000* was subsequently put in place and established procedures for local government changes of organization. This SAP aims to identify and assess current and future public facilities owned, operated, and/or maintained by IID for the provision of services as part of Imperial County LAFCO's Municipal Service Review process. Mitigation recommendations are incorporated in the respective sections to offset any potential impacts to IID facilities or services.

Geographic Location, District Boundary and Service Areas

IID headquarters are located in southern California, approximately 120 miles east of San Diego and just north of the U.S./Mexico International border in Imperial County. The district's

[1] The Cortese-Knox-Hertzberg (CKH) Local Government Reorganization Act of 2000 is Government Code §§ 56000 et seq. that provides LAFCO with its authority, procedures and functions to "approve or disapprove with or without amendment, wholly, partially or conditionally" proposals concerning the formation of cities and special districts, annexation or detachment of territory to cities and special districts, and other changes in jurisdiction or organization of local government agencies.

boundary was originally established in 1911 under the Irrigation District Law (California Water Code Sections 20500 et. Seq.). As of 2025, IID's legal district boundary is entirely contained within Imperial County, but is not coterminous with Imperial County lines. IID provides raw water services entirely within Imperial County while energy services extend into Riverside County and into Borrego Springs in San Diego County (for emergency responses only). IID has successfully provided electricity to service areas outside of its district boundaries since 1943 through independent service agreements.

The district's legal boundaries were greatly influenced by the Boulder Canyon Project Act of 1928 and the Boulder Canyon Project Act Agreement of 1932, which together authorized and orchestrated the construction of Hoover Dam and the All-American Canal. According to the 1932 Boulder Canyon Act Agreement between the United States Department of the Interior and IID, changes in the district boundaries, beyond those authorized under the Agreement, shall not be made unless approved by Congress. The district's water service area is thus defined by the limits authorized under the Boulder Canyon Project Act Agreement. **Figure 1** identifies the legal boundaries of the Imperial Irrigation District as per record annexations (inclusions into the district) and
Figure *2* that follows, reflects the water service area boundary (also known as the All-American Canal Water Service Area) within Imperial County as authorized by the Secretary of the Interior.[2]

In contrast, IID's energy service area has been extended beyond the district boundaries and Imperial County boundaries, pursuant to service contracts approved by California regulatory authorities. These contracts include IID's 1934 Compromise Agreement with CVWD and the US Bureau of Reclamation, and the 1943 Purchase and Sale Agreement with California Electric Power Company, the predecessor to Southern California Edison. The 1943 Purchase and Sale Agreement has been modified and extended over the years by several Service Boundary Agreements and was approved by the California Public Utilities Commission. **Figure 3** identifies the IID energy service area.

In addition, IID was certified by the North American Electric Reliability Corporation (NERC) as one of 34 Balancing Authorities in the Western United States. As a federally certified Balancing Authority IID must ensure the reliability of the electric system within its geographical boundaries by, among other requirements, maintaining a continual balance between electric resources and electricity demands. IID is subject to the reliability, safety and security regulations promulgated by the North American Electrical Reliability Corporation, an agent of the Federal Energy Regulatory Commission (FERC) and enforced by the Western Electricity Coordinating Council (WECC).

[2] Figures 1, 2, and 3 are not to scale and are for assessment and planning purposes only.

Figure 1 Imperial Irrigation District Boundary

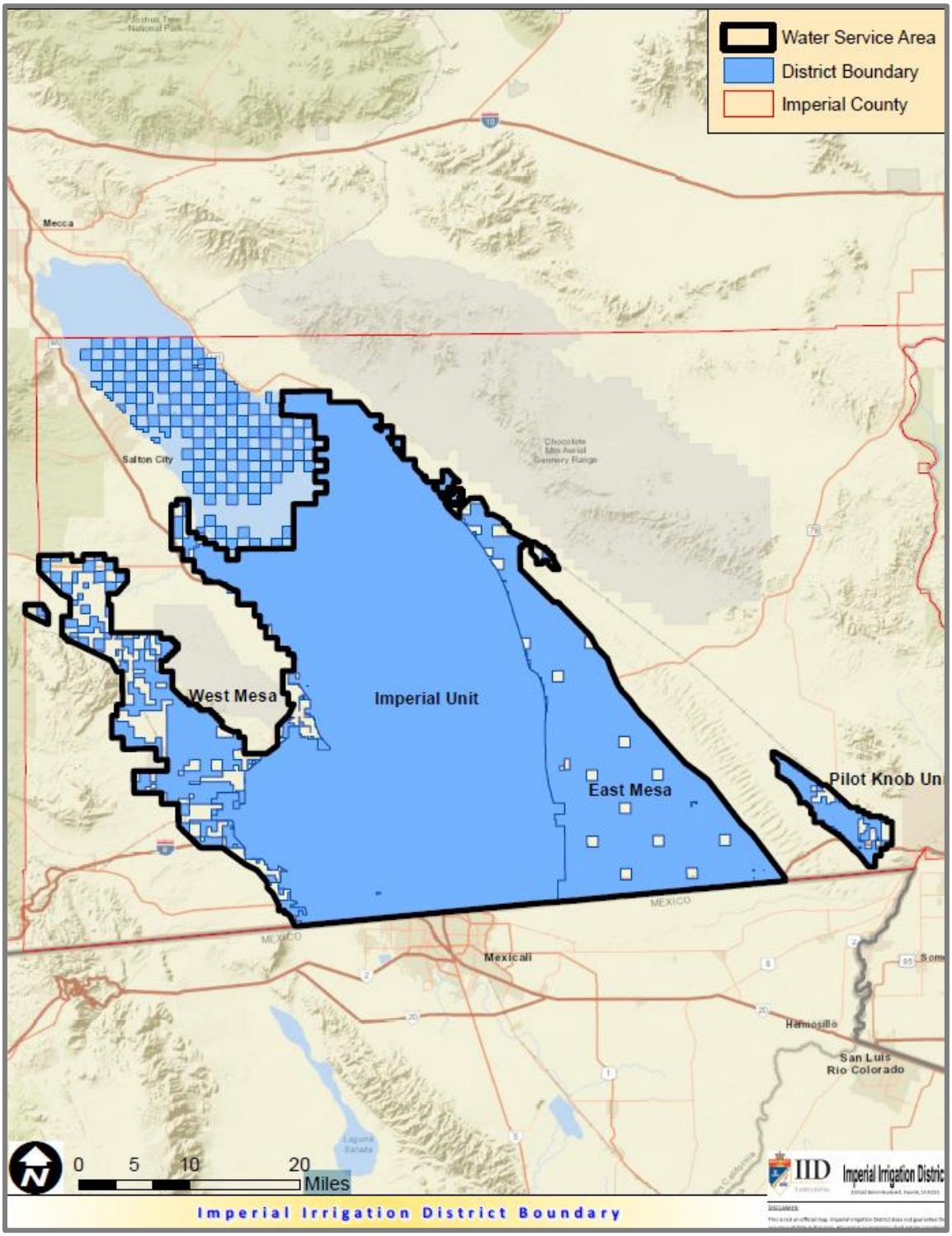


Figure 2 IID Water Service Area Boundary

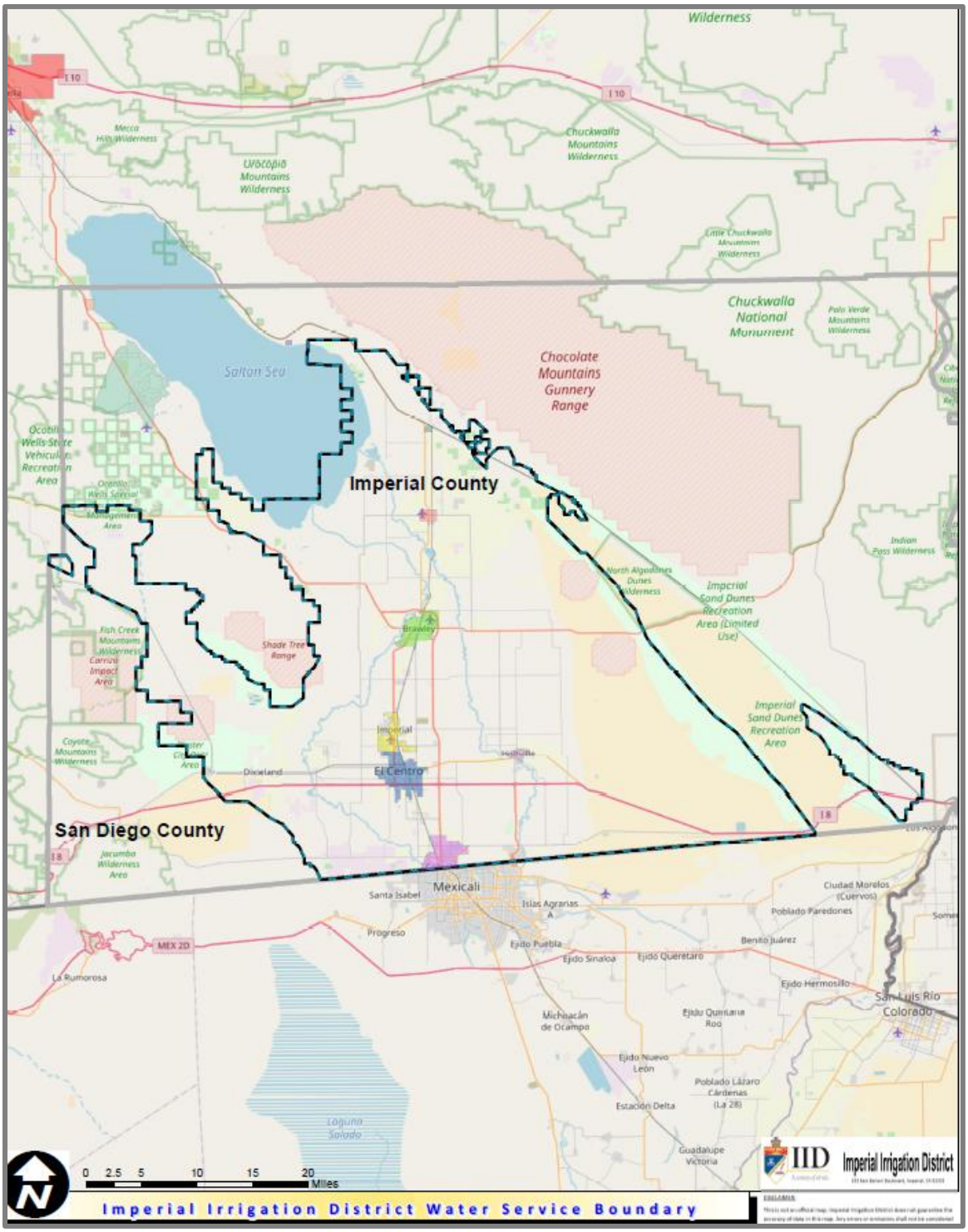
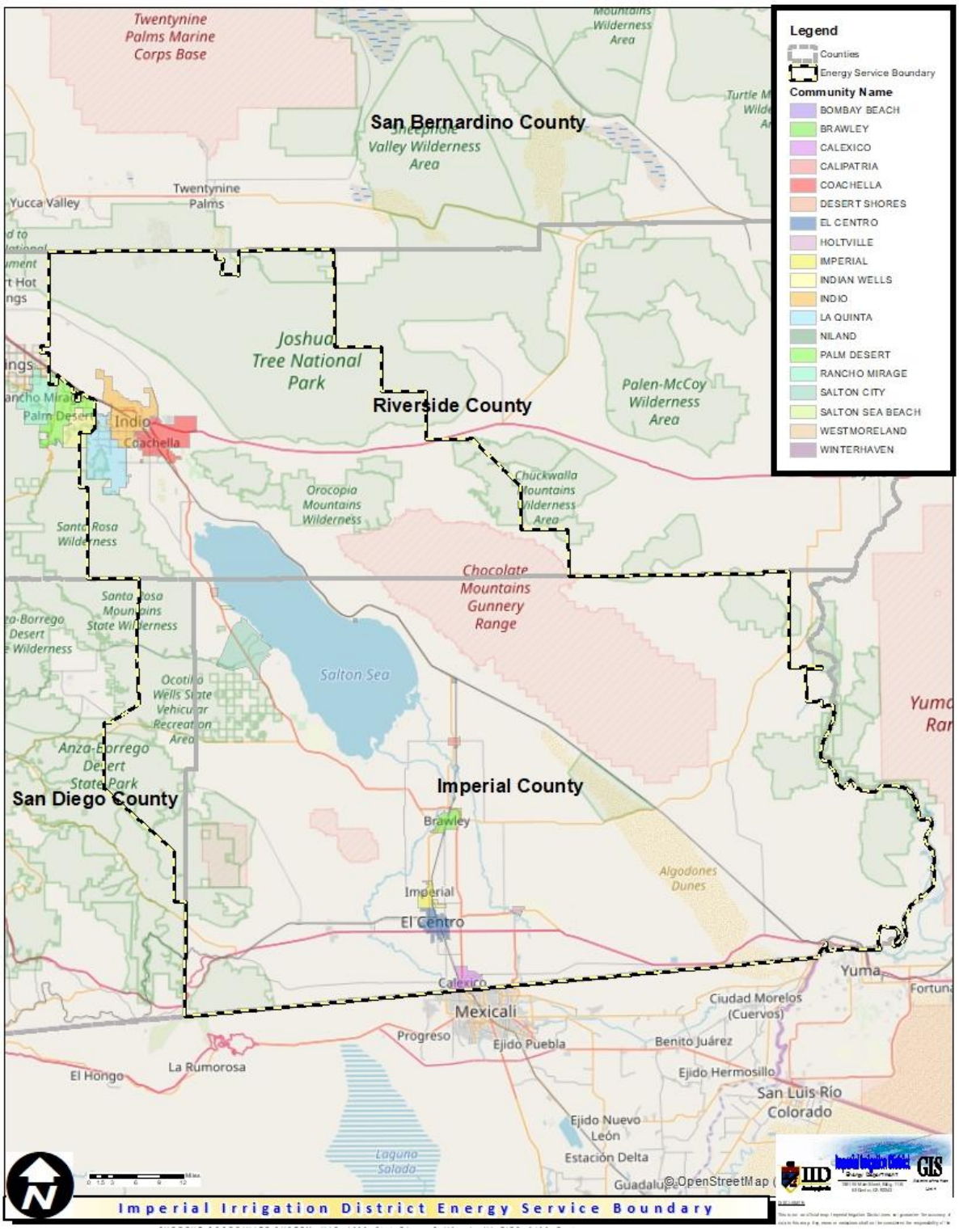


Figure 3 IID Energy Service Area



In summary, the District's water service area is determined by its congressionally authorized district expansion limits while the energy service area is determined by contracts and both state and federal regulatory authorities. For example, IID's electrical service to the Coachella Valley is governed by the 1934 Compromise Agreement with the Coachella Valley Water District and the US Bureau of Reclamation, as well as the long-standing Service Boundary Agreement with Southern California Edison, which were approved and sanctioned by federal and state regulators. Further, IID's energy service area is subject to the strict reliability, safety and security standards promulgated and enforced by the Western Electricity Coordinating Council and the Federal Energy Regulatory Commission. Finally, IID's service areas for energy utilities remain under the purview of the California Public Utilities Commission, and according to California state law, IID's service boundaries can only be modified with the concurrence of IID.

Communities in Service Areas

IID covers an irrigation service area of 1,658 square miles and an energy service area of 6,471 square miles, which partially overlap. Communities that are provided with either raw water services, or energy services, by IID are identified under **Table I- 1** by county (continued on the next page). Not all of the communities in Imperial County are within the water service area and not all Riverside County communities are within the energy service area. Borrego Springs (in San Diego County) only receives incidental IID energy services and is therefore not reflected on the table.

Table I- 1 Communities within Service Areas

Imperial County Communities	Raw Water Service	Energy Service
Bombay Beach CDP		X
Brawley, City of	X	X
Calexico, City of	X	X
Calipatria, City of	X	X
Desert Shores CDP		X
El Centro, City of	X	X
Heber CDP	X	X
Holtville, City of	X	X
Imperial, City of	X	X
Niland CDP	X	X
Ocotillo CDP		X

Imperial County Communities Continued	Raw Water Service	Energy Service
Palo Verde CDP		X
Salton City CDP		X
Salton Sea Beach CDP		X
Seeley CDP	X	X
Westmorland, City of	X	X
Winterhaven		X

Riverside County Communities	Raw Water Service	Energy Service
Bermuda Dunes, CDP		X
Coachella, City of		X
Desert Hot Springs, City of		X
Indian Wells, City of (portion)		X
Indio, City of		X
Indio Hills, CDP		X
La Quinta, City of		X
Mecca CDP		X
Palm Desert, City of (portion)		X
Rancho Mirage, City of (portion)		X
Sky Valley, CDP		X
Thermal, CDP		X
Thousand Palms CDP		X

IID's Sphere of Influence

The *Cortese, Knox, Hertzberg Local Government Reorganization Act of 2000* requires the LAFCO to determine and update the spheres of influence for all applicable jurisdictions within the county. A sphere of influence is defined by Government Code §56076 as "a plan for the probable physical boundary and service area of a local agency, as determined by the commission." Although Government Code §56425 governs LAFCO's role in adopting and updating sphere of influences, changes to IID service area would require congressional action. According to state law and court precedent, Imperial County LAFCO has the exclusive jurisdiction to conduct IID's municipal service review. This is because IID's legal district boundaries are entirely within Imperial County and there are no agreements transferring

jurisdiction from Imperial County LAFCO to other LAFCOs.

As of the date of this 2025 Service Area Plan, IID had no plans to expand its current water service area, which is contained entirely within Imperial County, or to expand its energy service area, which extends beyond Imperial County into Riverside and San Diego counties. IID intends to continue providing quality, and economical water and energy service to all of the areas it currently provides with those services. Imperial County LAFCO approved IID's sphere of influence, according to California Government Code §56076, in October 2020, based on IID's established service areas. The Imperial Irrigation District's boundaries and service areas are depicted in the previously introduced in **Figure 2** and **Figure 3**.

Figure 2 IID Procedures for Extending Water Service Outside of District Boundaries

The delivery of water to lands within the Imperial County must meet certain requirements. Lands within the legal district boundaries are subject to an administrative process prior to water delivery services. Lands outside the legal boundary of the district, but within the authorized service area as described in IID's 1932 Agreement with the Bureau of Reclamation, may receive conserved water or file a petition for inclusion (annexation) into the district. All annexations are at the discretion of the IID Board of Directors. The decision for annexation of lands within the water service area is made by the IID Board of Directors based on a variety of considerations such as water supply and demand, hydrology, access to irrigation and drainage facilities, method of irrigation, and other limitations imposed by virtue of Section 206 of Public Law 100-675[3] ("Protection of Existing Water Uses"). Any proposed legal district boundary change would require further action from Imperial County LAFCO. The following is a brief overview of water delivery service requirements under three distinct scenarios:

Scenario 1-Lands that are included within the legal district boundary

- Ensure water availability charges have been paid (annual per acre fee)
- Certificate of Ownership and Authorization Form is completed
- Associated capital costs are paid by the proponent
- Subject to IID Water Rules and Regulations

Scenario 2-Lands are outside the district boundary but within the AAC service area

- Option 1-Purchase conserved water from IID
- Option 2-File a petition with IID/LAFCO for inclusion (annexation) into the district, then Scenario 1

Scenario 3-Lands are outside the district boundary, outside the AAC service area, but within Imperial County

- Option 1-Purchase conserved water from IID

[3] An Act to provide for the settlement of water rights claims, to authorize the lining of the All-American Canal, and other purposes as detailed in the 1988 Settlement Agreement.

- Option 2-Seek congressional authorization for expansion of district boundaries beyond the limits established by the Secretary of the Interior in 1932

As noted above, lands that are unable, or unwilling, to be annexed into the district, but that are located within Imperial County, may have an option to purchase conserved water from IID. The transfer of wholesale conserved water outside of the district boundary is also at the discretion of the IID Board and must meet a number of conditions, including but limited to:

1. Authorization by the State Water Resources Control Board
2. Environmental Compliance
3. Subject to the 2003 Quantification Settlement Agreement provisions[4]

As of the date of this Service Area Plan, there were no known, or likely, requests for water service area extensions.

Restrictions on Extending Water Service Within District Boundaries to Federal Lands

The priority of water to federal lands within the IID water service area is restricted under the 1988 San Luis Rey Indian Water Rights Settlement Act. The federal legislation was passed before the settlement agreement was developed. The United States, the Bands, and the Local Entities have been unable to agree on a settlement implementing the 1988 Act due to conflicting interpretations of the intent of the Act. Nonetheless, under SEC 206. PROTECTION OF EXISTING WATER USES, the following is stated, thus requiring formal interpretation from the respective federal agency authorizing the use of federal land subject to the water supply inquiry.

"As of the effective date of this Act, any action of the Secretary to use, sell, grant, dispose, lease or provide rights-of-way across Federal public domain lands located within the All-American Canal Service Area shall include the following conditions:

(1) those lands within the boundary of the Imperial Irrigation District as of July 1, 1988, as shown in Imperial Irrigation District Drawing 7534, excluding Federal lands without a history of irrigation or other water using purposes;

(2) those lands within the Imperial Irrigation District Service Area as shown on General Map of Imperial Irrigation District dated January 1988 (Imperial Irrigation District No. 27F 0189) with a history of irrigation or other water using purposes; and

(3) those land within the Coachella Valley Water District's Improvement District No. 1 shall have a priority for irrigation or other water using purposes over the lands benefiting from the action of the Secretary . . . . ."

[4] 2003 QSA 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 and the ability to conserve, transfer and acquire conserved Colorado River water.

C. SERVICE AREA PLAN REQUIREMENTS

IID Service Area Plan Context

Service area plans support Imperial County LAFCO's Municipal Service Review process, which by state law occurs every five years. The 2019 IID Service Area Plan was the first service area plan prepared by the Imperial Irrigation District for submission to Imperial County LAFCO, making this 2025 SAP the first update.

Minimum Contents of Service Area Plans

The required contents of an up-to-date Service Area Plan are determined by Imperial County LAFCO Guidelines and reviewed by the LAFCO for sufficiency. Per Government Code Section 56430, the LAFCO, in undertaking its periodic municipal service review, shall prepare a written statement of its determinations with respect to each of the following requirements:

1. *Growth and population projections for the affected area;*
2. *The location and characteristics of any disadvantaged unincorporated communities within, or contiguous to, the sphere of influence;*
3. *Present and planned capacity of public facilities, adequacy of public services, and infrastructure needs or deficiencies;*
4. *Financial ability of agencies to provide services;*
5. *Status of, and opportunities for, shared facilities;*
6. *Accountability for community service needs, including governmental structure and operational efficiencies;*
7. *And any other matter related to effective or efficient service delivery, as required by commission policy.*

Role of the Imperial County Local Agency Formation Commission

The Imperial County LAFCO is charged with the review and approval of the IID Service Area Plan. Imperial County LAFCO conducts this municipal service review because IID's legal boundaries are entirely within Imperial County and there are no agreements transferring jurisdiction from Imperial County LAFCO to any other LAFCO.

D. ORGANIZATIONAL STRUCTURE OF SERVICE AREA PLAN

This Service Area Plan discusses the services provided by the Imperial Irrigation District, identifies the service demands existing at the time of Plan's preparation, and estimates the future demand for such facilities and services. In doing so, it considers new planned, or projected, development from local urban areas and increased agricultural water use demand. An approximate 20-year planning period is used to forecast population growth, and the

estimated facility and service demands are based on population projections in five-year increments through 2040.

This Service Area Plan provides the information necessary for LAFCO to conduct a municipal services review in compliance with Section 56430, and is organized into the following six sections that satisfy the Guidelines adopted by the Imperial County LAFCO:

I. **INTRODUCTION AND BACKGROUND**: Provides a brief description of the Imperial Irrigation District, Service Area Plan requirements, including the overall content of the Service Area Plan presented herein.

II. **EXECUTIVE SUMMARY**: Provides an overview and summary of the service assessments and conditions identified regarding existing facilities, demand, mitigation, and costs.

III. **GROWTH AND POPULATION PROJECTIONS/DEMAND**: Provides a discussion on existing and projected populations within the district's service area and describes potential impacts to agricultural water demand (agricultural land) associated with population growth and projected transition of service demand.

IV. **PUBLIC FACILITIES AND SERVICES**: Provides a thorough description of existing and planned IID facilities and services, their current and projected adequacy, and any opportunities for shared facilities, or services, with other agencies. The following facilities and services are included in the review:

- **A.** Water Services and Facilities
- **B.** Irrigation Drainage Services and Facilities
- **C.** Energy Services and Facilities
- **D.** Conservation Programs and Services
  1. Water Conservation Programs
  2. Energy Efficiency Programs
- **E.** Administrative Services and Facilities

V. **FINANCIAL PLAN**: The financial section identifies and discusses existing and potential future sources of revenue and financing mechanisms for public facilities and services that may be available to the Imperial Irrigation District.

- **A.** Existing Revenue Sources
- **B.** Current Facility Financing & Recommendations
- **C.** Potential Additional Revenue Sources for Capital Needs

II. EXECUTIVE SUMMARY

This Service Area Plan illustrates IID's long-term strategic objectives consistent with other IID adopted plans. A number of uncertainties facing the IID in the next several years are mitigated, within limitations. These external issues include, but are not limited to 1) the protection of water rights held in trust for water uses within the district; 2) the increasing use of efficiency-based water conservation measures ; 3) compliance with state and federal water quality programs; 4) future hydrologic water supply conditions and federal Colorado River operational guideline changes 5) the emerging and changing State and Federal mandates impacting renewable energy portfolio standards and emission reduction targets; 6) significant high-voltage electric transmission development to augment the export of locally produced renewable resources; 7) regulatory and reliability compliance requirements from energy oversight agencies; and 8) the 1934 Agreement of Compromise between IID and Coachella Valley [County] Water District contains provisions anticipating a 99 year lease of hydroelectric opportunities on the All-American Canal which are scheduled to sunset on January 1, 2033. The full 1934 Agreement of Compromise will remain in place.

The remaining term of the Agreement of Compromise raises a number of uncertainties that may be evolving during the next ten-year planning period. A study was commissioned in 2022 by Imperial County LAFCO and Riverside County LAFCO for an analysis regarding the potential for alternative electrical service governance structures for the Coachella Valley territory.[5] The formation of a Joint Powers Authority took place in 2025 composed of the city of La Quinta, city of Indio and county of Riverside. It is anticipated that an IID-CVPA Cooperation Agreement will be developed to detail how the District may support or interface with the newly formed JPA.

A. AREA GROWTH SUMMARY

The population and growth projections presented herein provide a context for the analysis and findings introduced for each individual public service facility in terms of the performance standard, inventory of existing facilities, existing service demand versus projected future demand, adequacy and mitigation. Per the Department of Finance data, it is estimated that the 2025 population in Imperial County is 185,550, while the service area population in the Coachella Valley communities within Riverside County, that are currently served, is estimated at 249,560 for 2025 (adjusted for partially served communities using DOF and US Census Data population estimates). The following **Table EX- 1** displays the projected population of Imperial Irrigation District's service areas through Year 2040, in five-year increments.

[5] "Alternative Governance Structures and Alternative Electricity Service Provisions: Imperial Irrigation District," sponsored by the California State Water Resources Control Board, specifically to IID's extended electrical service territory in the Coachella Valley. State Grant Agreement No. D2118003. For a copy of the most current report, see https://www.iclafco.com/projects/iid.

Table EX- 1 Service Area Population Projections

Year	Imperial County Projected Population	Coachella Valley Projected Population	Total Service Area Projected Population
2025	185,550	249,560	**437,135**
2030	193,326	250,937	**446,293**
2035	199,157	252,623	**453,815**
2040	203,470	254,217	**459,727**

Source: Department of Finance Estimated and projected Population for Imperial County, May 2025; and for Riverside select communities, using the Department of Finance growth rate for Riverside County as a whole was applied to the 2020 baseline population as presented by Census Dots using Census Data for unincorporated areas that have no DOF projections.

This Service Area Plan uses population and growth projections for the region based on Department of Finance projections growth rates. This was an adjustment from the previous service area plan under which more aggressive numbers tied to the Imperial Regional Water Management Plan had been applied and are no longer representative of the growth demand. Population does peak in the winter months in Imperial Valley due to a modest influx of winter visitors. The population variation is much steeper in the Coachella Valley. Population projection estimates in the Coachella Valley communities apply the DOF established growth rate which ranges from .35% to .67% for five-year intervals. The Coachella Valley's population, as a whole, tends to fluctuate aggressively, reaching over 500,000 (valley-wide) briefly during select winter months and balancing around 300,000 during the summer months. Energy demand projections allow for these flexibilities.

In brief, the projected raw water demand for agricultural use in the Imperial Valley is projected to remain the same unless there is substantial permanent irrigated land retirement as a result of planned land use changes (conversion of farmland to urban use). Non-agricultural water demands are anticipated to increase over the planning period, consistent with population projections and an unpredictable new demand tied to increased interest in geothermal and lithium development in the Imperial Valley.

Conversely, the projected energy demand to meet population and commercial/industrial growth is expected to grow substantially, particularly in the Coachella Valley service areas, but consistent with the population projects. Non-residential energy demand in both service areas is anticipated to be offset by the very same, and aforementioned, energy generation facilities and new solar development.

B. SUMMARY OF FINDINGS

The service review findings in this Service Area Plan are based on information obtained from existing IID reports and adopted plans, adopted budgets, annual reports, and verifications

through IID staff. IID facilities and services reviewed include: water facilities, drainage facilities, power facilities, conservation/efficiency programs and services and administrative facilities. Findings for each facility and/or service are summarized in the proceeding tables and introduced by a respective, brief narrative. The tables in this section summarize the relevant performance standard for the desired level of service and a description of the corresponding facilities' assessment to meet current and future demands.

Irrigation Water Supply, Storage and Conveyance Facilities

IID's sole source of water is Colorado River water. The District's annual consumptive use is capped at 3.1 million acre-feet per year (MAFY) during the term of the 2003 Quantification Settlement Agreement (QSA). Of that water supply 2.6 MAFY is allocated to IID under present perfected rights. These PPR's are entitlements essentially established under state law, and have priority over later contract entitlements. Under the QSA IID voluntarily transfers close to 500,000 AFY of Colorado River water conserved for the benefit of urban areas participating under the QSA. The QSA was enacted in 2003 as the nation's largest agriculture-to-urban water conservation and voluntary transfer program between the Secretary of Interior, Imperial Irrigation District, Coachella Valley Water District (CVWD), The Metropolitan Water District of Southern California (MWD), San Diego County Water Authority (SDCWA) and other affected parties. Please see Water Conservation Programs and Services for more information.

IID owned water conveyance and operational storage facilities are all located within the County of Imperial and are reviewed in context with IID's water distribution system which is entirely gravity flow. These facilities include reservoirs, irrigation canals, laterals, intertie systems, pipelines, and flow equipment that convey and measure raw water for irrigation to agricultural operations, rural residences, municipalities and water districts and/or water companies for treatment to potable water users and businesses within the service area. Water facilities also include SCADA control systems and system equipment necessary for the efficient operation and conveyance of water. These water services are managed and operated by the IID Water Department with the goal of meeting the established performance standards within IID's consumptive use of 2.6 MAFY.

All operational water storage facilities within IID are intended for water management and regulating purposes. The District does not own any long-term water storage facilities, however, under the current guidelines[6], the total amount of Efficiency Conservation Intentionally Created Surplus that IID may store within its Lake Mead ICS account in any year is maximized for an annual creation of 25,000 AF and a cumulative limit of 50,000 AF total. IID also makes use of conserved water storage agreements through other partner agencies. The total IID ICS storage balance at the end of 2023 was 340,472 AF.

[6] The 2007 Guidelines are under review as they are set to expire in December 2025 for planned implementation through 2026.

Irrigation Water Facilities		
Performance Standard*	Consumptive Use: Agricultural water supply: Non-Ag water supply: Operational Water Storage:	2.6 MAFY 5.1 AFY/Acre .50 AFY/Acre 7,750 AF Goal
Existing Facilities (2024)	Water distribution canals: Operational reservoirs: Farm delivery gates: Non-Ag delivery gates: Canal/Lateral controls: Automated systems: Mobile metering:	1,668 Miles 4,665 AF 4,790 336 470 300+ 17
Existing Demand (2024)	Total Consumptive Use: 2.6 MAF/Year • Agricultural water demand: 2.2 MAF/Year on Average • Non-Ag water demand: 97,000 AF/Year on Average • All other water delivery:* 285,000 AF/Year on Average Total conservation for transfer purposes: 477,200 AF	
Adequacy	2024:	Sufficient
Future Demand	2030: 2.6 MAFY in-valley/487 KAF for transfer purposes 2040: 2.6 MAFY in-valley/487 KAF for transfer purposes	
Mitigation	Continue to protect Colorado River water rights held in trust for IID water uses within the district.	
Funding Sources	Current funding – Water sales and water transfer revenues Future funding – Water sales and water transfer revenues; grant funding, as available.	
2025 Budget	$88.3 million for water operation and maintenance $39.6 million for water capital projects (Excludes Drainage & Water Transfer Projects)	

* Water uses for environmental, recreational, canal seepage, operational discharge, mitigation, evaporation, and miscellaneous uses are included as Other Operational Demand. Table does not include conserved water volumes created for water transfer purposes. Please see Water Conservation Section.

Irrigation Drainage Facilities & Services

IID operates a comprehensive irrigation drainage collection system with the primary purpose of transporting water from agricultural irrigated lands in Imperial Valley into the Salton Sea. IID drainage facilities include facilities that convey agricultural discharges from the fields to the Alamo River, the New River or directly to the Salton Sea. IID drains, as a matter of necessity, also collect treated wastewater discharge, and surface runoff from non-agricultural uses. Although municipalities and other point source dischargers are allowed to discharge into IID's drain facilities, the IID drainage system is not intended to, nor designed to, collect or convey, urban or stormwater runoff. IID drainage facilities may include pumps when necessary due to drain elevations and/or depth challenges in order to maintain obligations to growers. These drainage facilities are managed and operated by the IID Water Department.

Drainage Facilities	
Performance Standard	IID Design Guidelines, NPDES requirements, IID discharge requirements and any FEMA requirements.
Existing Facilities (2024)	All-American Drains: 50 Miles Drains (Earthen): 1,296 Miles Drains (Concrete Lined): 1 Mile Drains (Piped): 109 Miles
Existing Demand (2024)	Capacity: Capacity to receive irrigation run-off Quality: Operational and regulatory monitoring
Adequacy	Capacity: Sufficient capacity to receive irrigation run-off Quality: Ag Waiver Under Board Order R7-2021-0050-03 Monitoring of Total Suspended Solids (main drains): • Eight of 16 drain sites achieved TSS goal
Future Demand	Capacity: Consistent capacity to receive irrigation run-off Quality: Final sediment TMDL numeric target of 200 mg/L Total Suspended Solids (TSS) goal of 200 mg/l
Mitigation	Continual monitoring, implementation of Best Management Practices and nine (9) drainage quality mitigation measures recommended.
Funding Sources	Current: Water sales/Drainage fees Future: Water sales/Drainage service fees
2025 Budget	$2 million for capital costs for drains

Power Facilities & Services

IID power facilities and services cover the entire Imperial County and extend into portions of the Coachella Valley in Riverside County and eastern portions of San Diego County (as an emergency response operation). Power facilities include generation facilities, energy storage facilities and energy transmission and distribution lines. Since IID is not a member of the California Independent System Operator (CAISO) as a Balancing Authority, IID must be able to provide reliable energy services even during extreme events and is regulated by the Western Electricity Coordinating Council (WECC). The operation and management of power facilities and services are all under the IID's Power Department.

Power Facilities & Services	
Performance Standard	IID must match generation to load as a Balancing Authority.
Existing Facilities (2024)	Generation Facilities 2,782,250 MWh Generation Facilities from Power Purchase 1,116,175 MWh Energy storage facilities: 60 MW/140MWh Energy transmission lines: Over 1,800 Miles Substations: 128 Distribution lines: Over 4,400 miles of overhead lines (Primary) Over 1,700 miles of underground lines
Existing Demand (2024)*	**2024** Annual Demand 3,755,413 MWh Peak Load 1,152 MW
Adequacy	Sufficient: Resources to cover load plus reserve
Future Demand*	**2030** Annual Mid Energy Demand 4,306 GWh 1-in-10 Mid Peak Load 1,229 MW
	2035 Annual Mid Energy Demand 4,412 GWh 1-in-10 Mid Peak Load 1,268 MW
	2040 Annual Mid Energy Demand 4,567 GWh 1-in-10 Mid Peak Load 1,309 MW
Mitigation	Continued implementation of the Energy Integrated Resource Plan and corresponding recommendations.
Funding Sources	Current: Energy sales Future: Energy sales
2025 Budget	$602.9 million for power operation and maintenance $126.5 million for power capital projects

* Demand and projected data are from the 2024 Integrated Resource Plan and IID Power Department staff contact.

Conservation Programs and Services

IID is responsible for implementing both water and energy efficiency/conservation efforts. IID is located at the heart of many available natural resources to develop renewable generation facilities as well as energy efficiency and conservation but has only one source for its water supply, the Colorado River. Consequently, water conservation is key to meeting local water supply demand for new growth. Summarized findings are independently presented for water conservation and energy efficiency as follows:

Water Conservation - As a party to the QSA, the nation's largest agriculture-to-urban water conservation and transfer agreement, IID is implementing numerous efficiency-based conservation programs to create just under 500,000 AFY of conserved water (from 2003 baseline numbers). IID adopts and implements a Water Conservation Plan (2021) that outlines its water use and conservation programs used to meet the district's water transfer commitments and obligations. Water conservation projects and programs are managed by the IID Water Department via system conservation and with the District's agricultural partners via on-farm-efficiency water conservation.

The Colorado River Basin is entering its third decade of drought. In June 2022, the Department of the Interior called for the Basin states to develop a plan before the end of the year to reduce demands by 2-4 million acre-feet per year, through 2026, or the Secretary of the Interior would take regulatory action to force these reductions in order to protect the Colorado River system. California Colorado River contractors submitted a voluntary conservation proposal to Reclamation to conserve up to 400,000 AFY through 2026 as the State's commitment to Lake Mead and the Colorado River System. IID entered into a System Conservation Implementation Agreement in 2024 for its share of the California proposal under a voluntary plan for a not to exceed conservation volume of 250,000 AFY (through 2026). This amount would be over and above IID's existing QSA water transfer obligations.

Other factors to consider during the SAP five-year planning period include anticipated changes to the 2007 Colorado River Interim Guidelines for the Lower Basin Shortages and Coordinated Operations for Lake Powel and Lake Mead which are set to expire at the end of 2025, for 2026 water year implementation. The post 2026 operating conditions are not expected to be finalized any earlier than summer of 2026 and are anticipated to affect all Colorado River users during times of shortage. IID's water entitlement is significant at 3.1 MAFY, of which 2.6 MAFY are present perfected rights. These vested rights are not subject to reclamation law limitations and in times of shortage, PPRs must be satisfied first. IID is working diligently with federal agencies and Colorado River contractors to minimize impacts to the local community while simultaneously ramping up water conservation programs in an effort to augment local water supplies and meaningfully contribute to the protection of the Colorado River System. The following table provides a summary of those efforts.

Water Conservation & Efficiency Programs/Services		
Performance Standard	Water Conservation Target: 482,200 – 487,200 AFY Maintaining agricultural production with increased water use efficiencies that require less water than totals in history. Water conservation volumes shall further be consistent with the targets under the Quantification Settlement Agreement and any other System Conservation Implementation Agreements entered into between IID and Reclamation[7].	
Existing Programs (2024)	Water Use Efficiency Programs • On-Farm Water Conservation Programs • Deficit Irrigation Program • System Conservation Projects & Programs Renewable Energy Water Efficiency Program Standards Urban Water Use Efficiency Program Standards	
Existing Demand (2024)	2024: 477,200 AFY of conservation water 250,000 AFY or less for SCIA Implementation	
Adequacy	2024 Conservation Yield:	Sufficient
Future QSA Demand	2025: 482,200 AFY of conserved water 2030: 487,200 AFY of conserved water 2035: 487,200 AFY of conserved water	
Future SCIA Demand[8]	2025: Up to 250,000 AFY of conserved water 2026: Up to 250,000 AFY of conserved water	
Mitigation	Continue to implement IID's Water Conservation Plan. Continue to implement SCIA approved efficiency programs.	
Funding Sources	Water transfer revenues; Federal grant funding	
2025 Budget	$98.3 million for O&M for water transfer projects $20.9 million for capital projects for water conservation	

[7] Conservation targets included in the suite of QSA Agreements include the 1988 IID/MWD Transfer, IID/SDCWA Transfer, IID/CVWD Transfer, the All-American Canal Lining Project as well as the satisfaction of Miscellaneous PPR's. Amounts are independent of increases and reductions in conformance with the Intentional Overrun and Payback Policy and Intentionally Created Surplus program.

[8] 2024 System Conservation Implementation Agreement for Calendar Year 2024 Through 2026 Between the Unites States Bureau of Reclamation and the Imperial Irrigation District to Implement the Lower Colorado River Basin System Conservation and Efficiency Program.

***Energy Efficiency*-** IID implements a comprehensive energy conservation portfolio consistent with AB 2021 and SB 350 including new measures under SB100 for greenhouse gas emission reductions. Energy efficiency standards are detailed under the most recently adopted 2024 Integrated Resource Plan and programs are managed under the IID's Power Department.

Energy Conservation & Efficiency Programs/Services			
Performance Standard	Energy Efficiency Savings 26,960 MWh by 2030 Renewable Energy Portfolio to reach 60% by 2030 Emission Reductions of 40% below 1990 Levels (7% for IID)		
Existing Programs (2024)	Energy Efficiency Programs • Residential Programs (4) • Commercial Programs (3) Renewable Energy Programs • Green Energy Rate Program • Net Energy Metering Program • Net Billing Program • Feed-In Tariff Program Emission Reductions Program (E-Green Program)		
Existing Demand (2024)	2024 Efficiency Savings: 38,693 MWh target 2024 Renewable: 44% target 2024 Emission Reduction: 524,000-667,000 metric tons		
Adequacy	Efficiency Savings (2019-21):	35,000 MWh	Low Satisfactory
	Renewable (2023):	41%	Satisfactory
	Emission Allowance:	1,200,000 mt	Above Satisfactory
Future Demand	2025 Efficiency: 37,997 MWh target 2030 Efficiency: 26,960 MWh target 2025 Renewable: 52% target 2030 Renewable: 60% target 2025 Emission Reduction: 40% Below 1990 levels 2030 Emission Reduction: 50% to 60% Below 1990 levels		
Mitigation	Continue to implement the adopted Integrated Resource Plan and adopted programs.		
Funding Sources	Current funding – Energy sales Future funding- Energy sales; grant funding		
2025 Budget	$ 94.7 million for renewable requirements $10.7 million for efficiency programs		

Administrative Facilities & Services

Administrative facilities include buildings that house administrative and general service staff and that provide internal support services and general services to IID clients, governmental affairs and the business community, as well as the water and power departments. Five IID departments oversee and deliver administrative services as follows: Executive Department, General Services Department, Information Technology (IT) Department, Finance Department, and Human Resources Department.

Administrative Facilities	
Performance Standard	.75 Admin FTE/1,000 in population served 450 SF of building space/1,000 in population served 125 SF of office space per FTE
Existing Facilities	Executive Department 14,375 SF General Services Department 25,465 SF Information Technology Department 25,486 SF Finance Department 16,195 SF Human Resources Department 15,934 SF **Subtotal 97,455 SF** Common Areas (Exclusively Admin) 93,987 SF **TOTAL ADMIN AREAS 191,442 SF**
Existing Demand	2024 FTE: 315 Admin FTE (420 in population/.75) 2024 Space: 191,442 SF (418,833 in population)
Adequacy	2024 Admin FTE: 401 Meets/Exceeds Demand 2024 Admin Area: 180,450 SF Meets Demand
Future Demand	2030: 438 Admin FTE and 262,917 SF of space 2040: 546 Admin FTE and 328,063 SF of space
Mitigation	By 2030, 71,475 SF of additional admin space may be needed or the conversion of shared common areas.
Funding Sources	Current: Water and Power Department revenues Future: Water and Power Department revenues
2025 Budget	$100 million for Operation Expenditures

III. GROWTH AND POPULATION PROJECTIONS

IID operations consist of two primary departments, the Water Department and the Power Department with additional support services. Future water service demand will be determined by existing water transfer agreements (including any voluntary water conservation agreements with Reclamation for the benefit of Lake Mead), trends in the Imperial Valley farming community, industrial development in the geothermal industry and the level of urban growth that will reduce acreage of irrigated farmland. Energy service demand will largely be determined by population growth and economic trends in the Imperial Valley and the Coachella Valley and the pace of industrial growth. Both the water and energy service sectors are poised to greatly benefit from aggressive efficiency and conservation efforts to offset some of the projected growth demands.

IID intends to continue to serve agricultural operations in the Imperial Valley and support the orderly growth and development of urban areas throughout its respective water and energy service areas in both counties. It is the IID's intent to encourage cities and the respective counties to plan for growth in a sustainable and orderly manner. Collaborative development will enable IID to adequately plan for infrastructure improvements, phase service expansion consistent with the jurisdictions anticipated growth, while sustaining the historical agricultural demand and meeting outstanding commitments. This section of the Service Area Plan provides an overview of the district's irrigation characteristics in Imperial County and identifies the anticipated population and economic growth throughout its principal two-county service area, both of which are critical factors on how the IID will adequately serve the communities with water and/or energy services.

A. REGIONAL SETTING AND CHARACTERISTICS

Regional Setting

IID water service area is primarily in the Imperial Valley, entirely within the boundaries of the County of Imperial, but the district's energy services extend into the Coachella Valley and eastern section of Riverside County. Limited forms of energy service are also provided to San Diego County. The Imperial Valley and Coachella Valley have a strong agricultural economy. Although this region is naturally a desert, with high temperatures and low average rainfall of less than three inches (75 mm) annually, the economy has a rich history based on agriculture production due to irrigation. Imperial Valley's water supply is wholly from the Colorado River. Colorado River water is channeled through the All-American Canal and Coachella Canal.

IID Water Department maintains an annual inventory of areas receiving water. As of 2023, an estimated 520,347 acres are serviced by IID with irrigation water in Imperial County. IID does not provide irrigation water services outside of Imperial County. The district's 2023 Annual Inventory of Areas Receiving Water indicated that the total net area irrigated for crops was 447,798. Another 23,594 were farmable acres, but temporarily out of production (fallowed

or under a temporary fallowing program), while an additional 48,955 acres received irrigation water for rural home sites, feed lots, solar and industrial areas as well as municipal uses.

The Imperial County Agricultural Commissioner's Office estimated the county's agricultural production value in 2023 was $2.8 billion[9]. Vegetable and Melon Crops were the single largest production category by dollar value ($1.2 billion), comprising 43% of the county total. Three products dominated this category: leaf lettuce ($141 million), broccoli ($93 million), and head lettuce ($216 million). At 30%, Livestock represented the second largest category ($821 million) and consisted mostly of feedlot cattle ($477 million). Field Crops ranked third at $467 million and 17%. Together, these three super categories accounted for 90% of the county's direct farm production values. Agricultural customer water deliveries were at 2,149,900 AF in 2023 per the Provisional Water Balance Report[10] and the District reported a total consumptive water use for all customers of 2,437,024 AF for the same calendar year.

Approximately 61 percent of the 163,807 electric customer accounts served by the IID were outside of Imperial County and in the Riverside County energy service area. Coachella Valley communities served by IID include the cities of Coachella, Desert Hot Springs, Indio and La Quinta, and portions of the cities of Palm Desert, Rancho Mirage and Indian Wells. There are also a number of unincorporated areas in Riverside County that receive energy services from IID as well as Borrego Springs and some isolated home-sites in east San Diego County (during storm events as emergency response). The dynamics of the Power Department are largely driven by new growth and development demand coupled with aging infrastructure in both counties while the dynamics in the Water Department are largely driven by water transfer agreements and urban growth in the Imperial Valley.

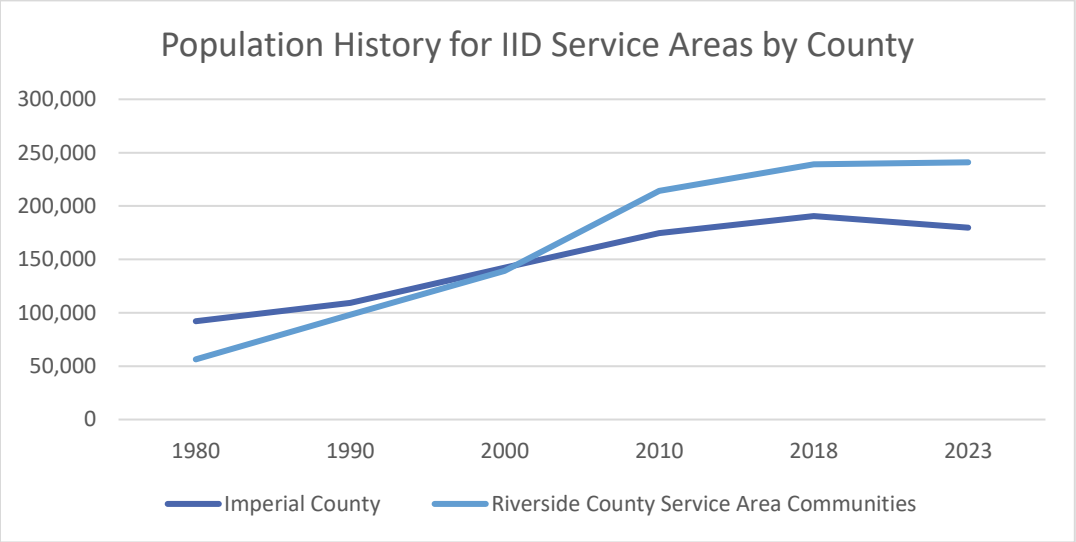
Population History

The Imperial County population discussed herein encompasses the entire water service area, and includes all of the cities in Imperial County and all of the unincorporated communities under the jurisdiction of Imperial County. Riverside County population data is restricted to the communities (incorporated and un-incorporated) that are within the energy service area boundaries (as delineated in Figure 3 of this SAP), specifically Coachella, Indio, La Quinta, Mecca, Thousand Palms, Thermal and small portions of Indian Wells, Palm Desert, and Rancho Mirage. Based on population data available from the California Department of Finance and the US Census Bureau, the Imperial County and service area communities in Riverside County have experienced moderate population growth since the 1980s with the Riverside County communities experiencing aggressive growth between 2000 and 2010 that has tapered during the last decade for the Coachella Valley and experienced a slight drop in Imperial Valley. The 2023 service area population in Imperial County was estimated at 179,790, while the service

[9] As per the 2017 Crop and Livestock Report.
[10] WISKI Provisional Water Balance Report run 3/25/24.

area population (actively served by IID) in the Coachella Valley communities within Riverside County is estimated at 240,988 as denoted in **Figure 4.**

Figure 4-IID Service Population



Source: Department of Finance for incorporated communities and US Census for Census Designated Places.

Disadvantaged Unincorporated Communities

Government Code Section 56430 (a) (2) requires the identification of location and characteristics of any disadvantaged unincorporated communities within, or contiguous to, a sphere of influence. The capacity and adequacy of infrastructure, public facilities, and public services must be identified for disadvantaged unincorporated communities, which are defined as areas of inhabited territory located within an unincorporated area of a county in which the annual median household income is less than 80 percent of the statewide area median household income.

According to the California Department of Housing and Community Development (HCD),[11]the Statewide area median income in 2023 was $91,550 and thus the disadvantaged household income was $73,240 or less for 2023. There are approximately thirteen disadvantaged unincorporated communities within the IID water and energy service area boundaries that fall within this definition. The communities of Heber, Niland and Seeley are the only disadvantaged unincorporated communities located within the district boundaries. **Table G-1** identifies all of the unincorporated disadvantaged communities within the IID water and energy service areas and their most current economic statistic regarding poverty level for all unincorporated, Census Designated Place (CDP) identified under the American Community Five-Year Survey.

[11] Department of Housing and Economic Development, Income Limits 2023 (ca.gov)

Table G- 1 Disadvantaged Communities within Service Areas

Imperial County Unincorporated Community	Poverty Level	Water Service Area	Energy Service Area
Bombay Beach CDP	**69.4%**		X
Desert Shores CDP	**21.4%**		X
Heber CDP	**16.1%**	X	X
Niland CDP	**50.3%**	X	X
Ocotillo CDP	**43.8%**		X
Palo Verde CDP	**NA***		X
Salton City CDP	**12.2%**		X
Salton Sea Beach CDP	**62.0%**		X
Seeley CDP	**22.2%**	X	X
Winterhaven, CDP	**73.6%**		X
Riverside County Unincorporated Community	**Poverty Level**	**Water Service Area**	**Energy Service Area**
Mecca CDP	**15.3%**		X
Thermal CDP	**23.1%**		X
Thousand Palms CDP	**13.1%**		X

Source: US Census, American Community Survey, 5-Year Estimates, Quick Facts/July 2023 Percentage of Persons in Poverty.

* Palo Verde community data for population in poverty is not available.

The percentage of the population living in poverty in Imperial County is one of the highest in the state of California and has remained constant over the last four decades. According to the US Census Bureau, Imperial County had a 1990 poverty rate of 23.8 percent, a 2000 poverty rate of 22.6 percent and a 2010 poverty rate of 23 percent. According to the 2023 US Census Quick Facts, the most recent statistics show the County of Imperial at a 21.2 percent poverty rate. The State of California poverty rate was 11.5 percent for the same report period. Although statistics for Riverside County as a whole are not applicable given the limited area served in 2023 by IID, two of the unincorporated communities in Riverside County far exceeded the State poverty rate as noted in Table G-1.

IID offers Financial Assistance Programs through the Power Department that are income-qualified assistance programs for economically disadvantaged households designed to help customers meet their energy needs. Rate discounts are offered to income-qualified customers and a special rate is offered for those using critical medical equipment or who were affected by the COVID-19 epidemic. A financial assistance program is offered to customers facing financial crisis that are at risk of disconnection for nonpayment. For rural residents that are enrolled under the Energy Financial Assistance Programs, eligibility for potable water services (bulk or bottled water from qualified agency) may also be arranged through the Water Department. This assistance is provided for alternative potable water services for

drinking and cooking for residents in the IID water serve area who do not receive treated water. This is done in order to avoid water disconnect and to ensure IID maintains compliance with Environmental Health Services requirements, as administered through the California Department of Public Health[12](CDPH).

B. GROWTH PROJECTIONS

It is projected that future population growth will largely occur within the unincorporated areas via annexations by local municipalities given the limited opportunities available for infill development in most cities within Imperial County and Riverside County Service Areas. Other factors that affect service demand include economic stagnation caused by inflation and California's ongoing out-migration. This chapter provides an overview of population projections as well as growth projections adjusting service demand from other factors to project water demand and energy service demand.

1. Population Projections for Service Demand

a) Imperial County Population Growth Projections

The Department of Finance (DOF) has prepared population projections for the County of Imperial. DOF estimates the Imperial County 2025 population of 185,550 and expected to reach 203,470 by 2040. Adjustments have been made to Imperial County population projections communicated under the 2020 Service Area Plan and carried over for 2025 through 2040. The population projections noted on **Table G- 2,** are reflective of the most current Department of Finance data for Imperial County.

Table G- 2 Imperial Region Population Projections

Year	Imperial County Projected Population
2025	185,550
2030	193,326
2035	199,157
2040	203,470

Source: Department of Finance, May 2025.

b) Riverside County Population Growth Projections

Population projections in the Riverside County service area are limited to the communities of Coachella, Desert Hot Springs, Indio and La Quinta, including portions of the cities of Palm Desert, Rancho Mirage and Indian Wells, consistent with the

[12] IID strictly enforces enrollment with an alternative potable water service purveyor. IID maintains a compliance database and provides an annual update to CDPH.

district's energy service territory. The following unincorporated communities are also included: Bermuda Dunes, Indio Hills, Mecca, Sky valley, Thermal and Thousand Palms. These areas represent an estimated population of 249,560 in 2025 which is projected to reach 254,217 by 2040. The population projections noted on **Table G- 3** use the annual average growth history rate ranging from .35% to .67% percent, applied to five-year periods consistent with county-wide growth rates used by DOF for Riverside county.

Table G- 3 Coachella Valley Region Population Projections

Year	Riverside County Projected Population	Coachella Valley Energy Service Area Population
2025	2,464,950	249,560
2030	2,533,895	250,937
2035	2,620,176	252,623
2040	2,703,895	254,217

Source: Department of Finance, May 2025 for County-wide population and incorporated cities and Census Dot for unincorporated areas using ACS source and applying the following five-year period growth rates: 2020-2025 at .35%, 2026-2030 at .55%, 2031-2035 at .67%, 2036-2040 .63%. .

c) Total Service Area Population Growth Projections

The combined population growth projections for both service regions is displayed in **Table G- 4.** Population affecting water demand is applicable only in Imperial County, while population affecting energy demand encompasses both the Imperial County region and the Coachella Valley Region in Riverside County.

Table G- 4 Service Area Populations

Year	Imperial County Projected Water/Energy Service Population	Coachella Valley Projected Energy Service Population	Total Service Area Projected Population for Power
2025	185,550	249,560	**437,135**
2030	193,326	250,937	**446,293**
2035	199,157	252,623	**453,815**
2040	203,470	254,217	**459,727**

Source: For Imperial County, 2012 Imperial Integrated Regional Water Management Plan and for Riverside County Communities, the Department of Finance twenty-eight-year annual average growth history rate of 2.7 percent (based on the population history for the specified communities as a whole, 2018).

2. Growth Projections and Impacts on Service Demand

As previously noted, population projections are not the only factors affecting water service demand and energy service demand. Agricultural intensity affects water service demand, but may have little impact on energy demand. Non-residential/Non-agricultural land uses resulting from urban sprawl (e.g. industrial development) may result in a decline for water demand, but may result in an increased demand for energy services or transmission facilities when tied to the renewable energy industry.

a) Water Demand Projections

Non-Agricultural Water Demand- Approximately 96 percent of all IID water demand is from agricultural land uses with the remaining four percent serving non-agricultural land uses. Non-agricultural uses include municipal, industrial, feedlots/dairies, environmental resources, recreation, rural service pipes and other non-agricultural uses. Industrial demand includes lithium, geothermal, including solar, energy production. The aforementioned population growth projections for the Imperial County contribute to the non-agricultural water demand projections by an estimated 28 percent. Riverside County has no demand on water services from IID.

Future agricultural water service demand will vary from current service demand as a result of changes in economic, land use, and hydrologic conditions. Trends over history show agricultural land conversion to urban uses, often results in less irrigated crop land in production. Cities with potential, permanent agricultural land conversions in Imperial County include Imperial, Brawley, Calexico, Holtville and El Centro. This conversion generally results in a decreased irrigation water demand in Imperial County since agricultural operations used an average of 5.1 AF Water/Acre annually (prior to implementation of water conservation programs) while municipal uses use an average of 0.50 AF Water/Acre annually.

Imperial Valley 2015 and forecasted 2020 to 2055, non-agricultural water demands were projected under the adopted Imperial Integrated Regional Water Management Plan (IRWMP) in 2012 and continue to be adequate. These water demand projections are applied in Water Supply Assessments for new development projects in Imperial Valley and applied consistently throughout this Service Area Plan.

Table G- 5 provides the 2015 and 2020 non-agricultural water use history and 2025-2040 projected water demand in five-year increments, without conservation efforts which are discussed under the Conservation Chapter of this Service Area Plan. Total water demand for non-agricultural uses is projected to be 165.7 KAF in the year 2040. This is a forecasted increase in the use of non-agricultural water from 58.3 KAF from 2015 to 2055, despite the nominal 7.7 KAF increase documented over the five-year period between 2015 and 2020.

Table G- 5 Non-Agricultural Water Demand Projections

Water Use	2015 KAFY	2020 KAFY	2025 KAFY	2030 KAFY	2035 KAFY	2040 KAFY
Municipal	**30.0**	**30.9**	36.8	39.8	41.5	46.3
Industrial	**26.4**	**28.7**	39.8	46.5	53.2	59.9
Other	**5.5**	**5.5**	5.5	5.5	5.5	5.5
Feedlots/Dairies	**17.8**	**19.0**	20.0	20.0	20.0	20.0
Environmental Resources	**8.3**	**9.5**	12.0	12.0	12.0	12.0
Recreation	**7.4**	**9.5**	10.0	10.0	10.0	10.0
Service Pipes	**12.0**	**12.0**	12.0	12.0	12.0	12.0
Total Non Ag Water Demand	**107.4**	**115.1**	**136.1**	**145.8**	**154.2**	**165.7**

Source: These water demands are from IID Provisional Water Balance rerun in 2022 and modified from 2012 Imperial IRWMP projections to incorporate a reduction of three percent based on IID 2020 delivery data.

Agricultural Water Demand- Agricultural water use accounts for approximately 96% of IID's total consumptive use. In 2023, gross agricultural production for Imperial County was valued at $2.8 billion USD, of which the vast majority was produced within the IID water service area.[13] Although the agriculture-based economy is expected to continue, land use is projected to modestly change somewhat over the years as industrial and/or renewable energy development (i.e. solar) and urbanization occur in rural areas and in areas adjacent to existing urban centers, respectively. Population growth, inevitably results in urban sprawl, which in turn results in the conversion of farm ground.

Agricultural water demands were also projected under the adopted Imperial IRWMP of 2012.

Table *G- 6* provides the 2015 and 2020 history and 2025-2040 forecasted agricultural consumptive use and delivery demand within the IID water service area, which is entirely within Imperial County. Agricultural evapotranspiration (ET) demand of approximately 1,475.7 KAF in 2015 decreased to around 1,442.3 KAF with termination of fallowing programs that provided 105.3 KAF of water for Salton Sea mitigation in 2017 and 46.5 KAF in 2019. Forecasted agricultural ET remains constant, as reductions in water use are to come from efficiency conservation not reduction in agricultural production. Forecasted total agricultural delivery demand is around 1 KAFY higher

13 http://www.co.imperial.ca.us/ag/docs/spc/crop_reports/2017_Imperial_County_Crop_and_Livestock_Report.pdf 2023 Imperial County Crop and Livestock Report.

than the CU demand due to subsurface flow to Salton Sea.

Table G- 6 Agricultural Water Demand Projections as AFY

	2015 KAFY	2020 KAFY	2025 KAFY	2030 KAFY	2035 KAFY	2040 KAFY
Ag ET from Delivered & Stored Soil Water	**1,476.4**	**1,442.2**	1,567.5	1,567.5	1,567.5	1,567.5
Ag Tailwater to Salton Sea	**282.9**	**312.9**	268.0	218.0	218.0	218.0
Ag Tilewater to Salton Sea	**398.6**	**410.2**	423.0	423.0	423.0	423.0
Total Ag CU Demand	**2,157.9**	**2,165.4**	**2,258.5**	**2,208.5**	**2,208.5**	**2,208.5**
Subsurface Flow to Salton Sea	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*	*1.0*
Total Ag Delivery Demand	**2,158.9**	**2,166.4**	**2,259.5**	**2,209.5**	**2,209.5**	**2,209.5**

Notes: 2015 record from IID 2015 Provisional Water Balance rerun 06/28/2019; 2020 record from IID 2020 Provisional Water Balance rerun 01/25/2021; 2020-2055 forecasts from spreadsheet used to develop Figure 19, et seq. in Imperial IRWMP Chapter 5 (Data provided by IID staff).

Water demand is projected to remain constant for agricultural use between 2030 and through 2055 for the purpose of this Service Area Plan. These figures are conservative as there is a probability that agricultural water demand will likely decrease due to permanent urban sprawl and other water conservation efforts related to IID's Interim Water Supply Policy for Non-Agricultural Uses. These factors may result in a permanent decrease on agricultural water demand as discussed further throughout this Service Area Plan. Other uses accounted for in demand projections include water delivery for environmental, recreational, canal seepage, operational discharge, mitigation, evaporation, and approximately 35 KAFY of unaccounted water. **Table G-7** has a summary of total projected water demand for both agricultural and non-agricultural uses in the Imperial Valley.

Table G- 7 Water Demand Projections in AFY

Year	Non-Agricultural Water Demand	Agricultural Water Demand	Total Projected Water Demand
2025	136,100	2,259,500	**2,395,600**
2030	145,800	2,209,500	**2,355,300**
2035	154,200	2,209,500	**2,363,700**
2040	165,700	2,209,500	**2,375,200**

Source: 2012 Imperial Integrated Regional Water Management Plan.

NOTE: Conservation efforts under Agricultural Water Demand are not accounted for under these projections.

b) Energy Demand Projections

Population forecasts, on their own, are unable to project energy demand. Non-residential energy sales accounts for slightly under 50 percent of all IID electrical

energy sales. Commercial sales accounted for about 40 percent of IID's total energy sales. Energy sales demonstrated a 5% decrease in 2023 from 2022 sales, however the 2023 peak energy demand represented an increase of 5.7% over 2022 peak demand. New and rapidly increasing industrial loads are anticipated in the Coachella Valley.

Economic Data is a clear driving factor for energy demand. Economic data used in the energy load forecast regression models are population, total employment, farm employment, retail employment, personal income, and gross regional product. The projected energy demand from non-residential commercial/industrial growth is expected to grow substantially, particularly in the Riverside County service area.

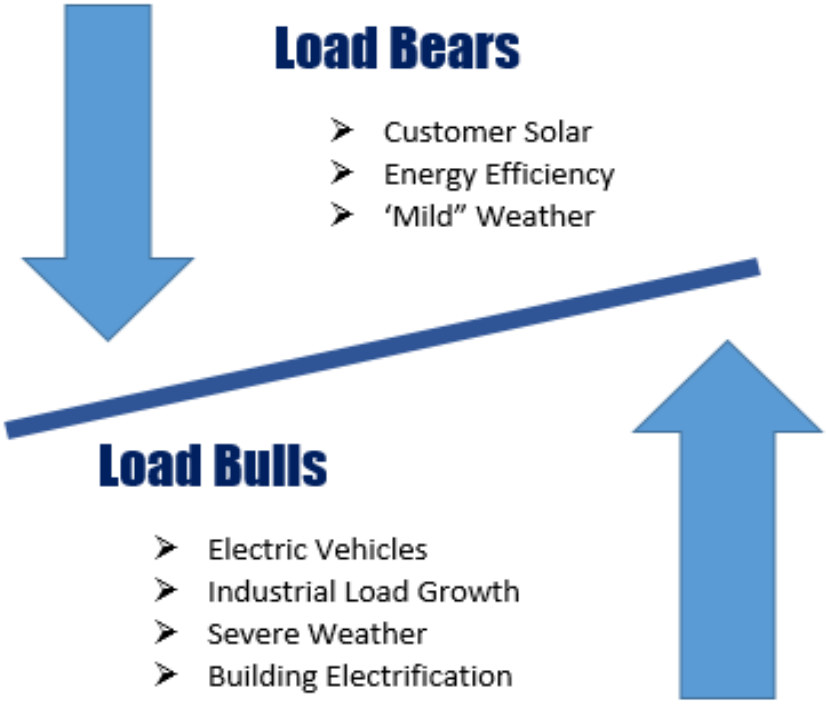
The IID Power Department has prepared system load term load forecasts of peak demands, net energy requirements and energy sales to customers for its service territory with support from Ascend Analytics. Ascend's load model uses the California Energy Commission (CEC) 2021 Integrated Energy Policy Report (IEPR) Mid Demand / Mid AAEE-AAFS Case as the starting point for the CAISO peak demand and total energy forecasts, using the 1-in-10 coincident case for peak demand.[14] The load forecast relies on industry accepted standards of practice, as well as rigorous, detailed and thorough analysis, critical to obtaining results that are both realistic and statistically sound. In this load forecast, an econometric approach was utilized to forecast IID's total retail sales. The Net Energy for Load (NEL) forecast was derived from the total retail sales forecast and the average difference of NEL and retail sales over history; Coincident Peak (CP) forecast was derived from NEL forecast and representative load factor history. The forecast is primarily driven by several key variables that have an impact on hourly/daily/monthly/yearly loads and the forecast incorporated into the load impact resulting from these variables including, but are not limited to:

- Weather changes
- IID Energy Efficiency (EE) programs
- IID Rooftop Photo-voltaic (PV) Solutions Programs
- Electric Vehicles programs (EV)
- New Industrial Load Impact
- Regulatory Requirement Changes

Since the forecast variables are uncertain, the severity of their impact on load depends on how each of these variables transpire. Generally, these variables can either encourage load growth or deter it. Below is a diagram that illustrates which

[14] 2021 Integrated Energy Policy Report

variables encourage load growth and which variables deter load growth.



The California Energy Commission (CEC) releases demand forecasts periodically for IID and other BAs in California as part of the Integrated Energy Policy Report (IEPR). The most current IEPR is the 2022 Update, which included the 2022 California Energy Demand Update (CEDU), only released a "Mid" case scenario. Under the Power Department's IRP, for the 2024 IRP forecast, three main cases were used to represent the potential outcomes using the prior 2021 IEPR for Low and High scenarios: 1) High Case Scenario- Combining severe weather conditions, high industrial growth, high electric vehicle penetration, low energy efficiency, and low rooftop/customer solar penetrations; 2) Mid Case Scenario (Expected) – Combining normal weather, normal industrial growth, average electric vehicle penetration, average energy efficiency, and average rooftop/customer solar penetrations; and 3) Low Case Scenario–Combining mild weather conditions, normal economic industrial growth, low electric vehicle penetration, high energy efficiency, high rooftop/customer solar penetrations. The assumed monthly energy and 1-in 10 peaks load forecasts are provided in

Table G- 8.

Table G- 8 Annual Energy Demand and 1 in 10 Peak Load Forecasts

	Annual energy Demand (GWH)			1-in-10 Peak Loan (MW)		
	Low	Mid	High	Low	Mid	High
2025	3,966	4,094	4,233	1,168	1,167	1,215
2026	3,988	4,139	4,297	1,183	1,181	1,234
2027	4,028	4,186	4,361	1,198	1,194	1,254
2028	4,058	4,232	4,426	1,214	1,209	1,276
2029	4,076	4,271	4,482	1,226	1,219	1,294
2030	4,088	4,306	4,537	1,239	1,229	1,313
2031	4,087	4,337	4,581	1,249	1,240	1,330
2032	4,078	4,365	4,624	1,254	1,250	1,345
2033	4,059	4,387	4,666	1,257	1,258	1,360
2034	4,026	4,403	4,702	1,258	1,264	1,374
2035	3,981	4,412	4,734	1,254	1,268	1,387
2036	3,988	4,438	4,780	1,259	1,276	1,400
2037	3,999	4,470	4,830	1,266	1,284	1,413
2038	3,009	4,503	4,880	1,272	1,293	1,427
2039	4,019	4,535	4,929	1,278	1,301	1,441
2040	4,030	4,567	4,979	1,284	1,309	1,455

Source: 2024 Energy Integrated Resource Plan: IID.com/home/2024 IRP

C. IMPACTS FROM LAND USE CHANGES

The transition from agricultural land use typically results in a net decrease in water demand for municipal, commercial, and solar energy development; and a net increase in water demand for geothermal energy or other industrial development. Local energy resources include geothermal, hydro, wind, biomass and solar. The County General Plan provides for development of energy production centers or energy parks within Imperial County.[15] Alternative energy facilities will help California meet its statutory and regulatory goals for

[15] Imperial County General Plan, Geothermal/Alternative and Transmission Element, revised 2006 and 2015.

increasing renewable power generation and use and decrease water demands in Imperial County.

The IID Board has adopted several policies and programs to address how to accommodate water demands and minimize potential negative impacts on agricultural water uses. Conservation Programs are independently assessed under its respective chapter of this Service Area Plan and are consistent with the following policies that have been adopted by the district:

Imperial Integrated Regional Water Management Plan: adopted by the IID Board on December 18, 2012, and by the County and the City of Imperial, to meet the basic requirement of California Department of Water Resources (CDWR) for an IRWM plan. In all, 14 local agencies adopted the 2012 Imperial IRWMP. Changes in the State law that came into effect in 2016 have made the 2012 IRWMP non-compliant with State standards, restricting local jurisdictions from many of the CDWR financial resources.

Interim Water Supply Policy for Non-Agricultural Projects: adopted by the IID Board on September 29, 2009, to ensure sufficient water will be available for new development, in particular, anticipated renewable energy projects until the board selects and implements capital development projects such as those considered in the Imperial IRWMP. New non-agricultural development must coordinate with IID for the generation of conserved water.

Temporary Land Conversion Fallowing Policy: adopted by the IID 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. Although water generated from the TLCFP is limited by policy for use towards transfer or environmental purposes, by satisfying multiple district objectives the TLCFP also serves to reduce the conservation and water use demands on other IID water users.

Equitable Distribution Plan: revised plan adopted by the IID Board on July 26, 2023, to provide a mechanism for IID to administer apportionment of the district's quantified annual supply of Colorado River water; The 2023 revisions established a water exchange clearinghouse to facilitate the movement of water supply within water user categories.

If, and when, a new development is proposed within IID's service area, the district coordinates a predevelopment review during the land use authority's CEQA review process, and permitting phase, to ensure energy and water supply needs have an opportunity to be satisfactorily addressed. Generally, water infrastructure improvements that are tied to population growth are the responsibility of the retail service provider (entity providing treated water services to the new population). Energy infrastructure related to residential housing (tied to population growth) is the developer's responsibility.

IV. PUBLIC FACILITIES AND SERVICES

This Service Area Plan will address public facilities, services, and programs provided by the Imperial Irrigation District to its service areas over the course of a 5-year planning period. Although the Imperial Irrigation District has two primary departments for water and energy service delivery (the Water Department and the Power Department), IID offers other related services that are carried out by these two departments and supported through five other administrative departments: Executive, General Services, Information Technology, Finance and Human Resources (hereafter, Administrative Services). For the purpose of this Service Area Plan, facilities and services are presented in the following areas:

A. Irrigation Water Services & Facilities - Imperial Irrigation District
B. Drainage Facilities - Imperial Irrigation District/Municipalities
C. Power Facilities - Imperial Irrigation District
D. Conservation Programs - Imperial Irrigation District
E. Administrative Facilities - Imperial Irrigation District

An analysis of the listed facilities and services are provided under this chapter. Each facility is analyzed in detail based on the guidelines developed by LAFCO for Service Area Plans and on the performance standards established by the Imperial Irrigation District. Each respective service area provides a description of the nature of each service to be provided, a description of the service level capacity and a determination on whether adequate services are and will be provided within the projected demand and twenty-year planning time frame. Each facility's service analysis is presented in three detailed sections as follows:

1. ***Performance Standard*:** A description of the desired level of service that the respective public facility must provide.

2. ***Facility Planning and Adequacy Analysis*:** A description of the existing facilities, the current adequacy of the facilities, the future demand for facilities and the phasing of the demand for facilities as follows:

    a) Inventory of Existing Facilities
    b) Adequacy of Existing Facilities
    c) Future Demand and Planned Facilities
    d) Opportunities for Shared Facilities/Services
    e) Phasing of Facilities/Services

3. ***Mitigation*:** As applicable, recommendations to ensure that adequate facilities and services will be provided for are addressed under the respective service area.

This Service Area Plan further contains a Financial Plan. The Financial Plan offers information of how the facilities, services and programs extended by the Imperial Irrigation District are currently being funded and identifies opportunities of how future services, facilities and programs may be funded.

A. IRRIGATION WATER FACILITIES

IID diverts water from the Colorado River and delivers it to over 520,000 acres within its water service area in Imperial Valley. Imperial Dam, located about 20 miles north of Yuma, Arizona, is a diversion structure for the river, All-American Canal and Gila Canal water deliveries, serving southeastern California, Arizona and Mexico. The operations of IID's River Division Office at Imperial Dam, as well as water delivery to other contractors in Arizona, California and the Republic of Mexico, all fall under the direction of the US Bureau of Reclamation.

The IID's only source of water is its Colorado River entitlement. IID has a "present perfected" right to 2.6 million acre-feet (MAF). Because these vested rights preempt the 1902 Reclamation Law and are not subject to reclamation law limitations, in times of water shortage, present perfected rights must be satisfied first. Under the 2003 execution of the QSA and Related Agreements signed by the Secretary of Interior, Imperial IID, CVWD, MWD and the SDCWA, IID's annual consumptive use is capped at 3.1 million acre-feet (MAF) for a minimum 45-year term, with possible extension for another thirty-years. This Service Area Plan will consider the 3.1 MAF water resource to meet anticipated demands during this planning period.

Of the water that the IID conveyed in 2023, approximately 96 percent was used for agriculture purposes in the Imperial Valley to serve a total of 5,131 farm accounts. The remaining 4 percent was delivered to six cities, two special districts and a private water company that treat the water to safe drinking water standards and sell it to their residential and commercial clients through their independent distribution systems in addition to water deliveries to rural service pipes.

1. Performance Standards for Water Delivery

Water for Agricultural Use- IID must be able to deliver to the agricultural community water to irrigate approximately 475,000 acres of farm ground that has had a demand history of approximately 2.3 MAFY. This includes lands that have been fallowed or not farmed. The district has not adopted a performance standard for agricultural use, but has identified an annual average of 5.1 AF of water per acre of farmable land. This standard would be consistent with the 10-year average, water use history, per acre, of all fields in IID. The 5.1 AF/Acre will continue to be the desired maximum average for performance assessment of agricultural water use.

Water for Non-Agricultural Use- Other in-valley areas that receive water from IID are classified as industrial/urban uses for the purpose of this Service Area Plan. These uses include municipalities, feedlots, cattle yards, managed marsh land, recreation areas, rural service pipes and similar non-agricultural uses. The State of California adopted emergency measures during the last drought in 2013–2017. State-wide water conservation goals called for urban areas statewide to reduce their water use by 25 percent. These uses

encompassed 49,034 acres in 2017 and had an annual demand of 92,214 AF for the same year, averaging .53 AFY/AC. IID's performance standard for water availability to existing non-agricultural uses was set at a conservative .50 AFY/AC under the 2020 Service Area Plan. All new non-agricultural development would need to coordinate with IID for water supply available through water conservation programs and/or system conservation projects consistent with the district's IWSP as further described in Section D of this Service Area Plan.

Operational Water Storage- The use of operational reservoirs allows for increased delivery flexibility and provides conservation opportunities within the district. In 2019 IID set a goal to attain 8,750 AF of raw water storage for the operational efficiency of the 475,000 total farmable acreage served. Since not all irrigated farm-ground can benefit from an operational reservoir, the standard is not set per acre, but is hereby established as a set target district-wide. During the next planning period, the district is targeting a 10,000 AF water storage capacity for operational purposes.

2. Water Facility Planning and Adequacy Analysis

All water services and facilities are managed through the IID Water Department. The Water Department contains an administrative section and eight operational sections: 1) Engineering Services, 2) Agricultural Water Resources, 3) Water Quality Programs 4) Water Environmental Mitigation, 5) All-American Canal/Dam Operations & Maintenance, 6) System Control and Monitoring, 7) Operational Reporting, and 8) Southend O&M and Northend O&M. Two of these sections, the Agricultural Water Resources and the Water Environmental Mitigation Section have a primary focus on water conservation and environmental mitigation efforts and are therefore discussed in more detail under the Conservation Programs chapter of this Service Area Plan. The remaining Water Department sections with primary functions for water facilities operations and water delivery services are summarized below:

- **Water Administration Section** is responsible for the oversight of all operations, maintenance, engineering services, budgetary process and accountability for the Water Department. This section interfaces with the Board of Directors, general manager and the public to ensure effective communication and proper administration of policies and procedures. Water Administration also ensures that the sections and units within the Water Department are meeting goals and objectives established by and for the Water Department in their Strategic Plan.
- **Water Engineering Services Section** has three primary functions: 1) Provides engineering services for the water department, other agencies, developers, miscellaneous power and other capital maintenance and planning projects; 2) Manages the Capital Improvement Program (CIP), and 3) Serves as a liaison

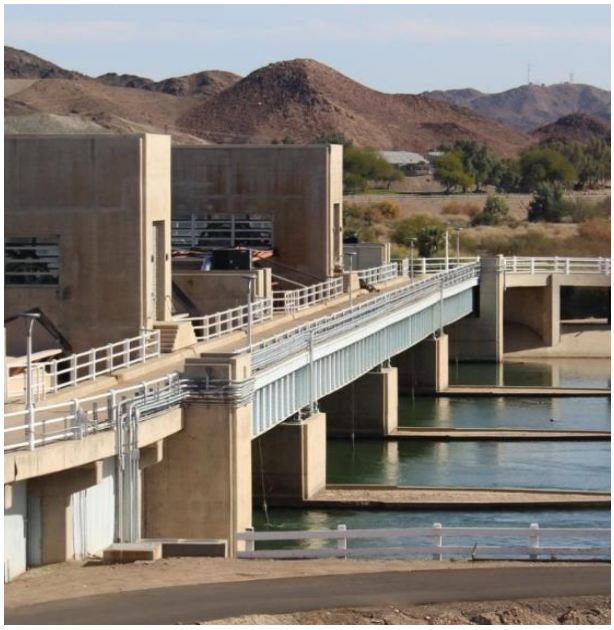
for the district and provides protection of district interests through planning and commenting on technical and legal documents and/or policies procedures, operation and maintenance.

- **Water Quality Programs Section** is comprised of the Water Quality and Water Biological Control units. This section is responsible for collecting, maintaining, and reporting water quality data for regulatory compliance purposes as well as coordination of Water Department weed spray activities. Areas of responsibility include TMDL/Ag Waiver, Safe Drinking Water, Title 22 Joint Monitoring and Vegetation Management Programs. This section is also responsible for the biological control of invasive species within the IID canal system by use of grown and raised grass carp.
- **The All-American Canal/Dam O&M Section** is responsible for transporting irrigation, industrial and municipal water through the main canals for scheduled deliveries. This section also plans, organizes, directs, prioritizes and implements comprehensive strategies and programs for the construction, maintenance and repair of Senator Wash, Imperial Dam, the main canals, and related structures.
- **Operational Reporting Section** estimates and orders Colorado River water for Imperial Valley irrigation distribution. The section makes the irrigation water available to the water divisions for delivery to farmland and cities by routing the available irrigation water through the main canal system using IID's SCADA system. This section prepares water analysis reports and water accounting from the All-American Canal Station 1117 to Station 4242 which becomes part of the USBR Colorado River accounting.
- **South-End & North-end O&M Section** has the primary responsibility of delivering irrigation water to its Southend and Northend customers, respectively, in the most economical and efficient manner. This section is responsible for the district's irrigation and drainage systems including the maintenance of open channel canals, pipeline canals, water deliveries, and open channel drains. The office staff interfaces with water customers involving water orders, water card process requests, service pipes and small acreage accounts.

a) Inventory of Existing Water Facilities

Water is diverted at the Imperial Dam through the 80-mile-long All-American Canal and into a vast gravity-flow water distribution system, which the district owns, operates and maintains. There are 11 main canal scheduling areas supported by 11 raw water storage reservoirs ranging in capacity from 200 to 1,251 AF. A smaller, 42

AF capacity, mid-lateral reservoir was constructed in 2023 for a combined capacity of over 4,300 AF. The reservoirs help absorb flow mismatches from the main canal reach upstream of the reservoir and allow delivery of scheduled flows into the next reach downstream. These operational measures constitute a supply-control process, where flows to meet scheduled water deliveries are released into canals and routed from upstream to downstream according to the operations schedule. A summary inventory of IID water facility system follows:



Imperial Dam- The Imperial Dam is IID's point of diversion from the Colorado River. It overlaps the California-Arizona border and AAC trash-rack and head-gates located adjacent to the California abutment of the dam. Three desilting basins (design capacity 4,000 cubic feet per second each) remove the sand and silt from the river water before it passes to the AAC. The sand and silt removed are continuously returned to the river at the California Sluiceway Channel. The Imperial Dam and Gila Headworks are operated and maintained by IID with costs shared by the Bureau of Reclamation and the California and Arizona water agencies also served by the facilities at a smaller share.

Water Distribution Facilities-The AAC is a federal canal that IID operates and maintains under contract for Reclamation. While the Bureau of Reclamation owns the physical structure, IID owns the AAC capacity and as such, operated and maintained by the district with share of costs from USBR and all the state water agencies it serves. Within the Imperial Valley, three main canals receive water from the AAC: the East Highline, Central Main, and Westside Main Canals, which are owned and operated by IID. From these main canals, the irrigation water is distributed through an extensive network of supply and lateral canals to numerous IID customers. Please see **Figure 5 Imperial Unit Canal Network**. The main and supply canals have diversions to lateral canals, and from lateral canals into customer's head ditches. The extensive network of irrigation conveyance facilities includes over 1,641 miles of open channel canals. IID maintains earthen, concrete lined and piped sections as noted **Table W- 1**.

Figure 5 Imperial Unit Canal Network

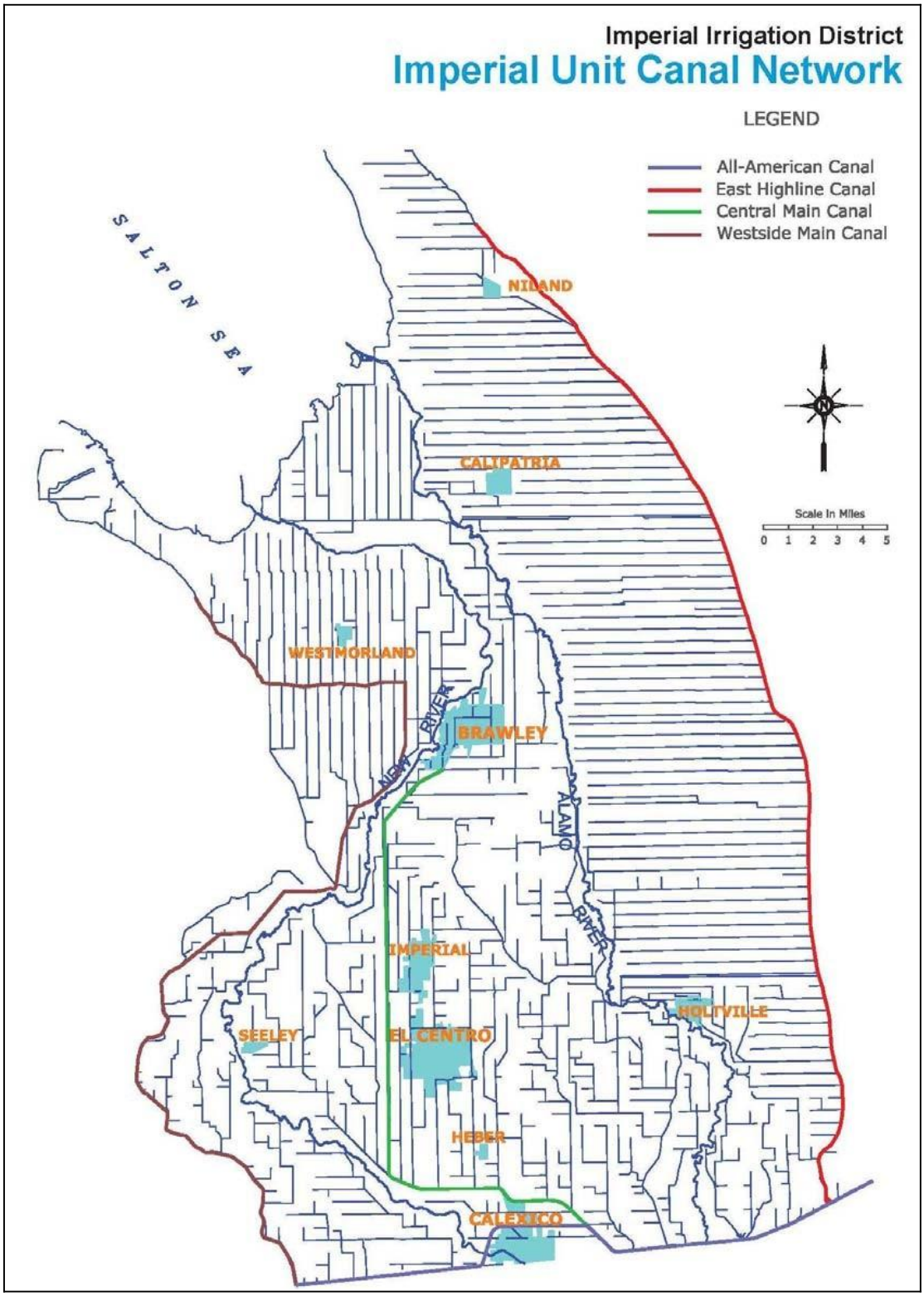


Table W- 1 2024 Water Distribution System

System	Earthen	Concrete Lined	Piped	Total Length Miles
All-American Canal[1]	56.720	23.000	.071	79.791
Main Canals	128.218	22.072	0.00	150.290
Lateral Canals	306.173	1,100.751	30.204	1,437.128
TOTAL	491.111	1,145.823	30.275	1,667.138

NOTE: The data is as of January 1, 2024

[1] The AAC is a federal canal that IID operates and maintains under contract for Reclamation. The New River Siphon is a 374-foot piped portion of the AAC.

Operational Reservoirs- Raw water storage is an integral component of the water distribution system for operational purposes. Operational reservoirs are important for water system delivery and control delivery efficiency and have grown increasingly critical to accommodate water transfers. IID's water distribution system includes seven regulating (R) and four interceptor (I) reservoirs and one mid-lateral reservoir with a combined water storage capacity of 4,414 acre-feet.
Table W- *2* provides an inventory of existing reservoir specifications as of January 2024.

Table W- 2 IID 2024 Reservoir Specifications

Reservoir	Surface Area	Storage Capacity, AF	Maximum Depth, FT	Flow Capacity	
				Inlet	Outlet
Singh (R)	32	323	11.0	100	100
Sheldon (R)	50	476	10.0	100	100
Fudge (R)	38	300	10.0	100	100
Sperber (R)	64	470	9.0	100	200
Carter (R)	32	350	11.3	150	50
Galleano (R)	40	425	21.0	150	75
Bevins	37	253	12.9	165	50
Young	47	275	9.0	100	100
Russell	29	200	8.3	100	50
Wiley	51	300	7.0	190	51
AAC Off-line Storage (R)	74	1,000	13.6	400	400
Lloyd Allen	15	42	9.0	40	20
TOTAL	**509**	**4,414**			

Source: IID Reservoir Webpage.

Water Control Center- In September 1993, IID completed the construction of a $3 million Water Control Center. The 10,000 square-foot building constructed at IID Headquarters houses hardware and software used to regulate automated gates for water control and to collect the information needed to verify efficiency. The building is equipped with a backup generator that ensures uninterrupted power service to the control system. Other technology at the Water Control Center includes earthquake disaster recovery features, computer generated screens displaying control room information and changeover procedures to allow for continuous 24-hour water delivery service. The district has numerous flow monitoring and control devices comprised of elements depicted on **Table W- 3.** IID has over 5,000 delivery gates serving agricultural, municipal and industrial water users, including some recreational uses.

Table W- 3 IID 2024 Flow Monitoring and Control Devices

Element	Approximate Number
Manual Farm Delivery Gates[1]	4,790
Manual Non-Ag Delivery Gates (including 51 feedlot)	336
Lateral Headings (55% automated)	233
Discharge/Flow Monitoring	208
Main & Supply Canal Check Gates (90% automated)	76
Non-Leak Gates	20
TOTAL	

Source: IID System Control/Monitoring and Data Management Section Staff, 2024
[1] Excludes 452 Inactive Gates

Water Measuring & Accounting Equipment- IID measures and records all water deliveries to users except for service pipes and small parcels. Flow is also measured and recorded throughout the water transportation system (and at key points in the drainage system) using SCADA technology by means of IID's WISKI which is an Oracle-based system to collect and process flow data in support of water management. IID has over 350 automated measurement systems and performs manual measurement on all delivery gates. While there are a number of meters at delivery gates serving industrial and municipal uses, the metered facilities are privately owned and not integrated into IID's SCADA system. The district also owns other miscellaneous metering equipment for efficient water accounting as noted in **Table W- 4 IID Metering Equipment.**

Table W- 4 IID Metering Equipment

Equipment Type	Number
All-American Propeller Meter	10
Flow Tracker/Point Velocity	2
ADCP (Rivercat-Sontek)	5
ADCP (Stream Pro RDI)	2
Marsh-McBurney	2
TOTAL	**21**

Source: 2021 Water Conservation Plan updated in 2024 by IID Staff.

Personnel and Vehicles-The Water Department (excluding the Agricultural Water Resources Section, and the Environmental Mitigation Section) is supported by a staff of 444 employees and 353 company owned vehicles. The particulars under each respective Water Department Section are noted below.

Water Department Personnel 2024 (444 Total FTE):

- Water Administration Section (6 FTE)
- Engineering Section (113 FTE)
- Water Environmental (9 FTE)
- Water Quality Programs (12 FTE)
- AA Canal/Dam O&M Section (34 FTE)
- Operational Reporting Section (34 FTE)
- Southend O&M Section (127 FTE)
- Northend O&M Section (109 FTE)

Water Department Vehicles in 2024 (353 Total):

- Water Administration (3 Vehicles)
- Engineering Section (130 Vehicles)
- Water Environmental (8 vehicles)
- Water Quality Programs (9 vehicles)
- AA Canal/Dam O&M Section (28 Vehicles)
- Operational Reporting Section (11 Vehicles)
- Southend O&M Section (91 Vehicles)
- Northend O&M Section (73 Vehicles)

b) Adequacy of Existing Water Facilities

IID's Colorado River 3.1 MAFY water entitlement is significant, and as the agency entrusted with these water rights, IID continues to responsibly manage Imperial Valleys Colorado River water supply and related resources in an efficient manner. Per the district's Provisional Water Balance, IID has a generally consistent, consumptive agricultural use water demand of 2.2 MAF/Year, on average (based on volume history). Total Non-Agricultural Water delivery is under 93,000 AFY. Including all other

water deliveries[16] (385,000 AFY) the total volume is 2.6 MAFY. IID water supply is discussed in more detail under the Conservation Section of this Service Area Plan. This section is strictly for assessment of the facilities needed to deliver IID's consumptive use in an efficient and reliable manner.

Imperial Dam – Water for the Imperial Valley is diverted at Imperial Dam. Diversion services at Imperial Dam benefit a number of other water contractors and is adequate in size and capacity, however, the facility was constructed over 80 years ago and much of the original equipment is experiencing deterioration. A number of the dam's assembly equipment is aging and in need of replacement or refurbishment. As such, a rigorous capital improvement plan will be continued and be coordinated among the U.S. Bureau of Reclamation, IID and all of the other benefitting agencies that have a cost share.

Operational Reservoirs- As previously noted, the district owns and operates twelve reservoirs system wide. Given the increased demand for water order delivery flexibility, the 4,414 acre-feet of reservoir capacity for operational flexibility has demonstrated to be insufficient to maximize the growers service demand within the district's water service area. The district has initiated the construction of a series of smaller (< 50 AF) mid lateral reservoirs and planning the development of a 2,100 AF capacity reservoir upstream of the district's distribution system. An additional 2,500 AF of operational water reservoirs are projected to be constructed over the next five years to accommodate the current agricultural system and irrigation clients. Operational reservoirs serve a dual purpose of regulating or intercepting water orders, accommodating grower cancellations and/or water order changes and subsequently reducing operational discharge and conserving water.

Water Distribution Facilities- IID's extensive water distribution system is sufficient to meet the needs of the district's water service area via its 1,660+ miles of gravity flow distribution channels. There are no water service expansions proposed, or anticipated that would necessitate the extension of water distribution facilities. New non-agricultural development is predominantly proposed to be located within the irrigated Imperial Unit. As new non-agricultural growth is contemplated, capacity of the distribution system is assessed by the proposed new development and the district, on a case by case basis, considering the project's water supply demand. Incorporation of mitigation measures, as may be necessary would be considered at the time and be the sole responsibility of the project developer. However, in support of water conservation efforts, the district strategically and continuously improves its

[16] Includes water delivery for environmental, recreational, canal seepage, operational discharge, mitigation, and evaporation.

water distribution facilities with the concrete lining of canals and construction of lateral interties throughout the IID irrigation system, as feasible. These projects are discussed under the conservation chapter of this SAP.

Water Control Center- The Water Control Center became operational in 1993 and is approximately 30 years old. In early 1998, IID was awarded the International Award of Excellence for Innovation Technology of its System Automation Program (Water Control Center and remove flow monitoring sites), which provides improved water management utilizing modern control technology. SCADA system upgrades, including computer and processing unit installations, are continuously budgeted and upgraded. IID is in the process of completing the final phase of a system-wide automated lateral headings for SCADA integration. The SCADA system allows the district to remotely monitor and control the automated lateral heading gates throughout the district. Through the SCADA system IID is able to also collect data for reporting and analysis, enabling real-time decision making.

Water Measuring & Accounting Equipment- IID has consistently invested in the installation of solar driven, 12-volt automated Rubicon Sonaray slipmeters to replace existing, manually operated gates at selected lateral headings throughout the IID distribution system and service area. The automated lateral headings allow for reduction of operational discharge, which is being monitored at the end of each lateral. As previously noted, an estimated 120 sites have been automated to date with an additional 42 sites scheduled for completion prior to the end of 2026. The current measurement and accounting equipment are sufficient to meet the rigorous water accounting and reporting that IID publishes annually for the State Water Resources Control Board, U.S. Bureau of Reclamation and its QSA partners.

c) Future Demand for Water Facilities & Planned Improvements

Water Supply - The adopted 2012 Imperial Integrated Regional Water Management Plan addresses the region's water supply and demand, including baseline and

forecasted values through 2050. In-valley water demand is separated from two sources of demand: 1) agricultural, and 2) non-agricultural (municipal /treated water providers), industrial (including commercial and solar). IID implements a water apportionment method for the distribution of water within its water service area. In efforts to address any potential water supply/demand imbalances, on June of 2022, IID adopted a revised Equitable Distribution Plan[17] for the apportionment of water to all water user categories. Apportionment is allocated based on water use history. The water supply that is apportioned annually is consistent with IID's consumptive/operational use of 2.6 million acre-feet per year, the water supply available after IID meets its water transfer obligations for the respective year.

Approximately 96 percent of water is distributed for agricultural uses while 4 percent of raw water is distributed for non-agricultural uses. During 2023, approximately one percent (1%) of the non-agricultural water demand went to public agencies for treatment to potable water standards. Any water supply demand resulting from new development must be satisfied in compliance with IID's Interim Water Supply Policy[18] for Non-Agricultural Uses via implementation of water conservation measures. The Water Conservation & Efficiency Section of this SAP describes the conservation and efficiency measures implemented by the district.

Planned Water Facilities- No new water facilities are anticipated as a result of the projected water supply demand, considering IID does not expect to expand its water service footprint nor does IID expect an increase in its water supply entitlement beyond its authorized consumptive use. By contrast, IID plans to implement a number of water reduction measures for overall water conservation and to accommodate water transfers (please refer to water conservation section.) Some of the existing water facilities, however, are planned for retrofit and rehabilitation for more efficient operation, as per the 5-Year Capital Improvement Plan of the Water Department (last revised July 2018) which may be modified from time to time. Any relevant water conservation data associated with capital projects is discussed under the Conservation Programs section of this Service Area Plan.

Imperial Dam Capital Improvements- A number of Imperial Dam projects are also projected to be completed within a five-year timeframe. Improvements under consideration at Imperial Dam are as follows.

- AAC Section 1-Basin Gallery Sludge Pipes Replacement
- AAC Section 1-Repair & Replace Clarifier Training Wall Caps
- AAC Section 1-Refurbish Station 48+50 Check Gates
- AAC Section 1-Refurbish Two Bypass & 14 Clarifier Inlet Gates

[17] Equitable Distribution Workshops and Presentations | Imperial Irrigation District (iid.com)
[18] https://www.iid.com/water/municipal-industrial-and-commercial-customers

- AAC Section 1-Repair California Trash Screen Railway
- AAC Section 1-Replace 588 Valves on Clarifiers
- AAC Section 3-Construct Floating Bulkhead for Pilot Knob
- AAC Section 1-California Sluiceway- Motor and Gate Replacement
- Common Works-Repair Unused Radial Gate
- Gila Headworks Motor & Gearbox Replacement
- Gila Headworks-Rebuild Diversion Motor, Gates and Gearbox Replacement
- Gila Headworks Diversion Gate Refurbishment
- Laguna Dam-Refurbish and Install Gate

Water Reservoirs- Operational reservoir storage capacity is critical in maximizing water management and efficiency. As previously noted, the district is in the planning and design phase of constructing an upstream reservoir almost twice as large as the largest reservoir in its distribution system at a 2,100 AF capacity that will be able to manage up to 365,000 AF of water per year. The following is a list of the planned main canal and mid-lateral reservoirs:

Table W- 5 Planned Operation Reservoirs

Main Canal Operational Reservoirs	Mid-Lateral Reservoirs
East Highline/AAC Reach Reservoir	East Highline Lateral
Trifolium 10 Reservoir	Rose Lateral
Westside Main Reservoir	E Lateral

Water Distribution Facilities- An estimated fifteen (15) miles of concrete lining is planned for the IID Canal System within the next five years. These improvements are continuous efforts expected to facilitate maintenance by replacing deteriorated segments or installing new concrete on earthen sections. Other planned capital improvements to the existing IID canal system include check structures and gate replacements for both Northend and Southend laterals. IID will also undertake customer initiated and customer financed projects for pipelining and undergrounding laterals in response to urban sprawl and new development.

Water Control Center-The Water Control Center recently underwent a number of annual upgrades during the last five years and through 2023 of approximately $120,000 annually. The improvements consisted of new computers and processing unit installations. No additional improvements are anticipated over the next five years.

Water Measuring & Accounting Equipment- IID continuously invests and upgrades water measurement towards the most advanced automation

equipment a total of five new automated check structures were installed within the last five years. IID anticipates numerous automation equipment purchases within the next five years proposed to be paid from water transfer revenues. Automation and measurement improvements are budgeted at approximately $675,000 per year. IID system projects also include the following:

- Automation of New Briar Check 4
- Automation of Turnip HAG Check
- Automation of East Highline Reservoir Gate Checks at E, H, J, K and Niland
- Automation of East Highline 37 and 46 Checks
- Automation of the Wistaria Heading Actuators and Hoists
- Automation of the Trifolium Extension Heading Actuators and Hoists

IID continues to advance into the next phase of modernized measurement at the delivery gate level. Currently, IID uses field pressure measurements to calculate water use at the point of delivery. There are over 5,550 delivery gates system-wide covering approximately 520,000 acres of irrigated land which make this method labor intensive and not as precise as metered deliveries. IID is assessing the feasibility of implementing automated SCADA integrated metered delivery systems. The right system may also be able to be adapted to integrate with other agriculture technologies.

IID is a wholesale irrigation water provider with existing facilities meeting the service area demands for the delivery of its full water entitlement. The District's water supplies are not expected to increase given the limitations of the Colorado River hydrology. Thus, IID's infrastructure is adequate for the water supply it will be managing over the course of the 5-year SAP planning period and beyond. Any shift in water demand location, that may result in changes to infrastructure capacity limitations, would be addressed during the CEQA review process and/or permitting phase of the proposed new development.

d) Opportunities for Shared Water Facilities

Numerous facilities under which IID has share of costs for operation and maintenance are also shared by and for the benefit of other water agencies. At the point of water diversion, Imperial Dam and associated costs are shared by numerous water agencies including Yuma Mesa Irrigation District, North Gila Valley Irrigation and Drainage District, Yuma Irrigation District (South Gila), Wellton Mohawk Irrigation District, Yuma Auxiliary Project, Valley Division, Bard Water District, Bureau of Indian Affairs and Coachella Valley Water District. IID's cost share of the common works at Imperial Dam is approximately 77%.

Another major facility under which IID has a share of cost for operation and maintenance is the All-American Canal. The AAC identifies seven distinct channel

sections, four of those sections continue to benefit some of the aforementioned water agencies which in turn share in the costs associated with the respective section operation and maintenance. Specifically, AAC use and costs are shared with Valley Division, Bard, BIA and CVWD. IID is responsible for approximately 76% to 88% of the costs within those four respective sections and is responsible for 100% of the costs under the remaining three sections.

IID does not share owned operational reservoirs but the District does make use of water storage opportunities in federally owned reservoir facilities as limited under the 2007 Interim Guidelines. Storage is limited by the Intentionally Created Surplus Forbearance Agreement[19]. Without an amendment, the total amount of Efficiency Conservation Intentionally Created Surplus that IID may store within its Lake Mead ICS account in any given year is an annual creation of 25,000 AF and a cumulative limit of 50,000 AF total. IID also makes use of conserved water storage via agreements through other partner agencies. As the post 2026 operating guidelines are negotiated, it is possible that in the future, the District will increase storage of water at Lake Mead for mutual shared benefits.

e) Phasing of Water Facilities

All of the district's short-term construction projects and major capital purchases are included in the Water Department's Capital Improvement Plan which spans over a five-year period. Proposed facilities beyond the five years are derived by the Water Departments' 2040 Capital Improvement Plan under development. Some of the operational projects identified under this section have a multi-benefit of water conservation and will be discussed further in the corresponding section of this SAP.

Short Term Improvements (Under 5 Years)

- Imperial Dam Upgrades
- Upstream Operational Reservoir at East Highline Canal
- Annual Concrete Lining of Canal and Lateral Segments
- Annual Replacement of Control Structures, Inlets, Outlets
- Automation Projects at Checks
- Automated Measurement Equipment

5-10 Year Improvements

- Imperial Dam Upgrades
- Multiple in-line operational reservoirs
- Annual Concrete Lining and/or pipelining

[19] An Agreement between State of Arizona, the Palo Verde Irrigation District, the IID, the City of Needles, the Coachella Valley Water District, the Metropolitan Water district of Southern California, the southern Nevada Water Authority and the Colorado River Commission of Nevada to encourage efficient use and management of Colorado River water, help avoid shortages in the Lower Basin, and benefit Lake Mead and Lake Powell.

- Annual Automation & Measurement Equipment projects
- Delivery Gate Metering Project Phasing

10-15 Year Improvements

- Continue Imperial Dam Upgrades
- Continue Development of Multiple in-line Operational Reservoirs
- Annual Concrete Lining and/or Pipelining
- Annual Automation & Measurement Equipment projects
- Delivery Gate Metering Project Phasing

3. Water Facilities and Services Mitigation

Imperial Irrigation District's water distribution is entirely gravity flow from the point of diversion throughout its extensive canal system with very isolated exceptions. The District's overall water supply goal is to live within its consumptive use by maximizing water use efficiency throughout its water service area. IID will continue to protect the Districts' water rights to ensure a long-term, verifiable, reliable and sustainable water supply to meet current and future agricultural, municipal, commercial, industrial, and environmental demands and to do so in a cost-effective manner. In this vein, IID will continue to pursue various means by which to provide for the efficient delivery of water service. The following are mitigation measures to achieve adequacy for water service facilities and service delivery:

W-1 Continue to implement projects, or programs, that will provide a firm, verifiable, and sustainable water supply of 50 to 100 thousand acre-feet per year (KAFY) for new municipal, commercial or industrial demands.

W-2 Ensure equitable and appropriate cost sharing among water users who would receive benefits from any proposed water management project.

W-3 Continue to protect Colorado River water rights in trust for its water users.

W-4 Optimize and sustain use of Colorado River entitlements through reservoir storage partnerships and strategies.

W-5 Ensure new development covers a fair share-of-cost associated with infrastructure capacity improvements necessary to accommodate any increase in demand.

W-6 Develop and implement a long-range capital improvement plan for aging water delivery system infrastructure.

W-7 Review, on a regular basis, the cost of water delivery service for water rate adequacy.

B. IRRIGATION DRAINAGE FACILITIES

Irrigation drainage facilities in the Imperial Valley are within the jurisdiction of the IID. The district operates and maintains an agricultural drainage system consisting of more than 1,450 miles of surface drains. The primary purpose of planning, designing, constructing and maintaining drainage facilities is to collect runoff from irrigated lands. Water entering the IID drainage system may originate from the following five sources: 1) irrigation system seepage from canals and laterals intercepted by IID drains; 2) operational discharge which is unused water that travels through the delivery system); and 3) on-farm tailwater (water passing tile drains for the purpose of leaching), 4) on-farm tailwater runoff (surface water runoff that exceeds infiltration), and 5) storm water runoff which is surface storm water that exceeds soil infiltration rate or storage capacity. IID's drains, as a matter of necessity, also collect treated wastewater discharge, and surface runoff from some non-agricultural uses. IID drains are not designed or intended to collect stormwater from urban land uses. The design and operation of urban stormwater and flood control lies within the respective jurisdiction with the land use authority. IID drainage facilities are designed to collect irrigation run-off and are not designed or intended to collect and transport stormwater.

IID has an extensive drainage collection system of nearly 1,300 miles. The drains collect irrigation water and discharge into the New River, Alamo River or directly into the Salton Sea. Highly contaminated waters from Mexico (five-year average of 150,000 acre-feet annually) also enter the Imperial Valley via the New River. All drainage flows ultimately discharge into the Salton Sea, averaging just under 1,000,000 AFY and can contribute to the degradation of water quality both within IID drains and within the Salton Sea without proper management. IID initiated a voluntary TMDL Compliance Program to monitor the levels of pollutants within Imperial Valley watersheds.

1. Performance Standard for Drainage Facilities

Drainage Facility Standard-For the purpose of collecting and conveying agricultural discharge, the district is obligated to provide drains at a sufficient depth, generally four to ten feet, to accept subsurface discharge from over 32,000 miles of tile drains underlying nearly 475,000 acres of farmland in the Imperial Valley. Where a drain cannot be maintained at sufficient depth, the district provides and maintains a sump and pump.

The limit on drainage received by IID facilities is set at five percent of the total volume of water received within a billing period. The maximum allowable flow rate is to be ten percent of the maximum flow rate of the water received, but shall not exceed 672 gallons per minute (1.5 cfs). These limitations are set as guidelines and individual contracts may be written with a water customer.

For non-agricultural discharges into IID drains, the requirements of the Colorado River Basin Water Quality Control Plan, Federal Emergency Management Agency and requirements established by the Imperial Irrigation District for storm water runoff are applicable. As authorized by the Clean Water Act (CWA), the NPDES Permit Program controls water pollution by regulating point sources that discharge pollutants into waters of the United States through Best Management Practices. All new development is required to comply with these standards and to retain storm water on site for a minimum of 72 hours prior to releasing it into an approved storm water conveyance system. Conveyance out of the retention basins is restricted by IID via the use of 12" diameter pipes. The outflow restriction into IID drains can result in detention times in excess of 72 hours (three days). Detention for longer than three days requires the implementation of a mosquito abatement program in order to comply with the County Health Department standard.

Water Quality Standard- IID has a Drain Water Quality Improvement Plan (DWQIP) that was prepared in 1994. The Plan was updated in 2016 to address Total Maximum Daily Loads (TMDLs) per the Federal Clean Water Act in order to improve the water quality of impaired surface waters (i.e. streams, rivers, lakes, etc.) that do not meet water quality objectives and revamped in 2022 as the Surface Water Monitoring Program and Quality Assurance Project Plan. A TMDL is the amount of a particular material that a water body can absorb while remaining safe for people and wildlife. A Board Order[20] of the discharge requirements was issued in 2021 by the Regional Water Quality Control Board for agricultural dischargers and drain maintenance operators in the Imperial Valley. The Order requires IID to implement a water quality monitoring and reporting program (please refer to the IID Drain Water Quality Improvement Plan for more detailed information).

A total of six TMDLs have been adopted for surface water bodies in the Imperial Valley. Four of them are for the New River to address pathogens, sedimentation/siltation, trash, and dissolved oxygen. One is for the Alamo River to address sedimentation/siltation. Another is for Imperial Valley Drains to address sedimentation/siltation. TMDL reporting began in July 1, 2004 and additional independent reporting under the Imperial Valley Coalition will begin in July 1, 2024. The final Sediment TMDL Numeric Target is as follows:

- **New River** total suspended solids (TSS) concentration of 243 mg/L
- **Alamo River** total TSS concentration of 180 mg/L
- **Imperial Valley Drains** total TSS concentration of 200 mg/L

[20] In December of 2021, the Regional Water Quality Control Board adopted Order R7-2021-0050-03, "General Waste Discharge Requirements for Discharges of Waste from Irrigated Agricultural Lands for Dischargers That Are Members of a Coalition Group in the Imperial Valley, Imperial County".

2. Irrigation Drainage Facility Planning and Adequacy Analysis

Water flows from the irrigation distribution system to farmland and then discharged into IID's drainage system. IID's agricultural drainage facilities were not designed for, and are not managed for, non-agricultural discharges, flood, or storm water management purposes. As previously noted, all non-agricultural urban areas in the Imperial Valley, through a permit process, may be allowed to discharge into IID drains when sufficient capacity exists. Discharge may drain into the New River or Alamo River, both of which are tributaries to the Salton Sea and where strict regulations apply.

a) Inventory of Existing Irrigation Drainage Facilities

IID operates and maintains an agricultural drainage system consisting of more than 1,450 miles of surface, gravity flow drains as referenced in **Table D- 1 IID Drainage System.** The drainage system is designed to collect IID's operational discharge, agricultural tilewater and tailwater from thousands of miles of subsurface (tile) drains that growers have installed and operate independently. To that end, 750 surface and subsurface drainage pumps, and approximately 430 control structures are installed along the drainage system.

Table D- 1 IID Drainage System

System	Earthen	Concrete Lined	Piped	Total Length in Miles
All-American Drains	37.410	0.000	12.700	**50.11**
Drains	1,296.264	1.180	108.996	**1,405.44**
Total Drains	**1,333.674**	**1.180**	**121.696**	**1,456.55**

Source: 2021 Water Conservation Plan and Pipeline Projects MWA from Water Department 2021-2023.

The All-American drains are designed to collect seepage water from the All-American Canal rather than irrigation discharge. The All-American drains initiated construction in 1947 as part of a seepage recovery program. The program returns seepage water with sufficiently low salinity levels back into the respective main canals. The East Highline Canal began this program in 1967 and it is further discussed under Conservation Programs of this Service Area Plan.

Personnel and Vehicles-The Water Department personnel and vehicles (excluding the Agricultural Water Resources Section and Environmental Mitigation Section) support all irrigation drainage system operation and maintenance, to some level. The Southend O&M Section personnel (127 FTE) and Northend O&M Section personnel (109 FTE) inclusive of their 164 vehicles, are assigned to either the water distribution system or drainage collection system operations. Additionally, the Water Quality Programs section (12 employees and 9 vehicles) plays a critical role in drain adequacy.

b) Adequacy of Existing Irrigation Drainage Facilities

Drain Capacity Adequacy-The current IID drain facilities are adequate and able to satisfy the service demand from existing agricultural farmland runoff. Since IID has no intention of expanding raw water territories beyond the existing agricultural service footprint, and industrial/commercial development is restricted from discharging into District drain facilities, IID has no plans for additional drainage facilities to meet the current and projected services demands.

IID has further communicated to local jurisdictions an interest in abandoning all facilities within incorporated urban areas which do not actively provide a service to agricultural operations. Under these circumstances each city would take over the respective drain systems. Compliance with the regulatory requirements of new development discharge and storm water facilities are solely borne to the developer/permittee in order to ensure new urban development provides for adequate on-site retention of storm water to mitigate against storm water impacts to properties and the IID system consistent with their respective flood control plans.

Drain Water Quality- IID monitors drain quality at fixed sampling sites. IID performs monthly water quality monitoring constituents of concern at 17 locations – incoming flow at All-American Canal Drop 4, and drainage water in nine river and seven drain sites throughout the water service area. (Please refer to **Figure 6**). IID reports the results to the Regional Board and provides flow data for 56 sites – incoming flow at AAC Mesa Lateral 5, and drainage flow for seven river and 48 drain sites throughout the Imperial Valley. IID also supplies the Regional Board with a list of current owners and tenants of agricultural land on a semi-annual basis. **Table D- 2** summarizes IID's monitoring practices as of 2024.

Figure 6 Water Quality Monitoring Sites

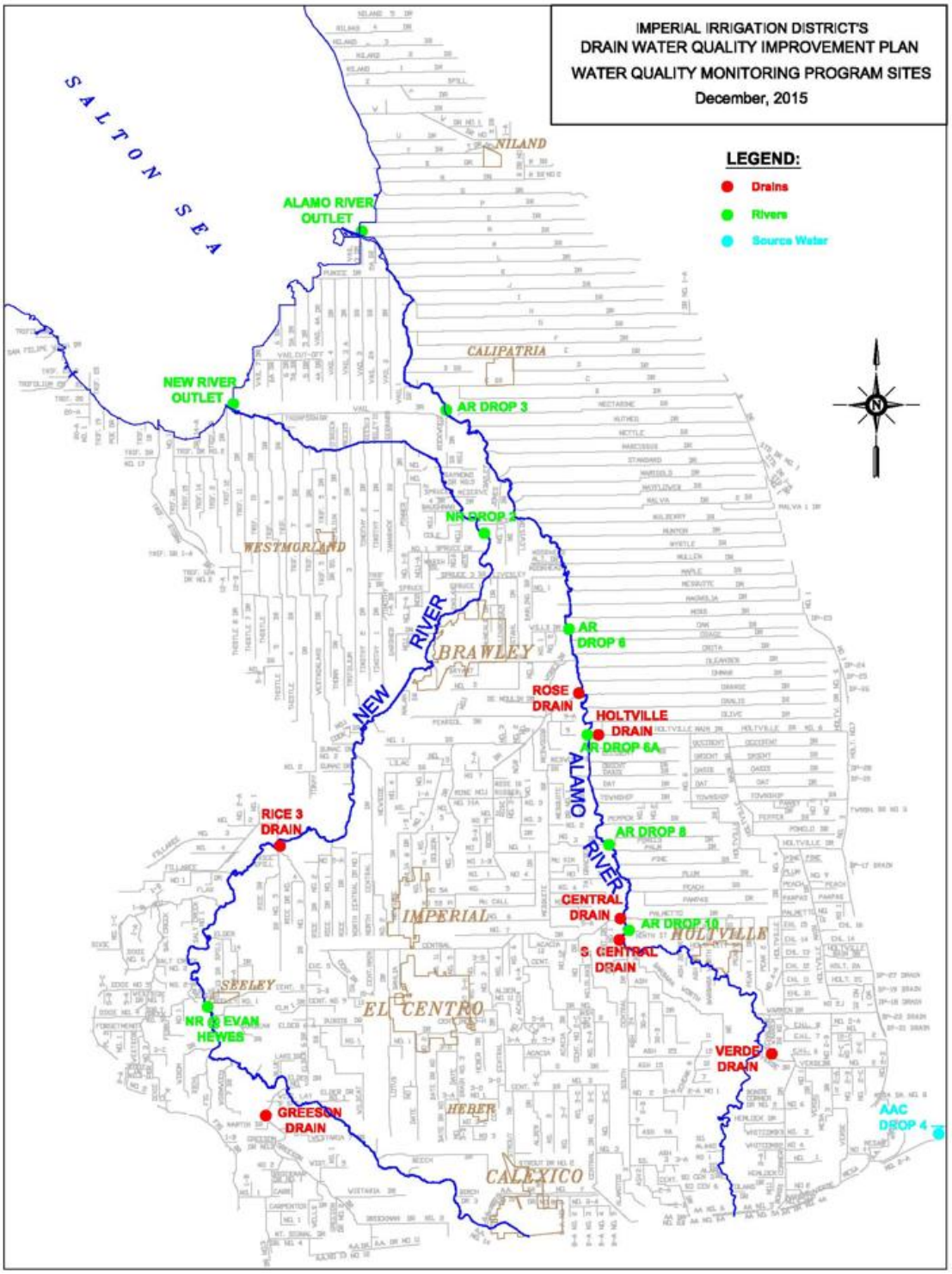


Table D- 2 IID Drain Monitoring Practices

Drain Water Location [1]	Practice	Frequency
Alamo River Outlet at Salton Sea New River Outlet at Salton Sea	TDS, pH, Ca+, Mg, Na+K, CO_3, HCO_3, SO_4, Cl, Temperature	Monthly
TMDL Drain Water Location[2]	**Practice**	**Frequency**
Major drains: 5 to Alamo River 2 to New River **River locations:** 6 in Alamo River 3 in New River	DO, EC, pH, selenium, TSS, NH_3-, NO_2-, NO_3, Kjeldahl-N, Total N, Total P, Total Hardness, Ca+, Mg, Total Alkalinity, HCO_3+CO_3, Cl^-, SO_4, E. Coli, BOD, TDS	Monthly

[1] Collected by IID; analysis by ATS Labs, Inc. Brawley, CA
[2] Collected by IID; analysis by BABCOCK Labs, Inc., Riverside, CA.

Field measurements were collected (water temperature, pH, dissolved oxygen, electrical conductivity, and turbidity), and water samples collected and analyzed for general chemistry (TSS, turbidity, hardness, and alkalinity), as well as chemical species of nutrients (nitrogen, phosphorus, sulfur). This monitoring program and the data generated from it is utilized to verify that individual drains meet water quality standards, identify problematic areas, and to model and calculate the concentration of various chemical species.

The 2023 Annual Monitoring Report for Total Suspended Solids (TSS) Levels showed that five of the seven main drain sites achieved the 200 mg/L goal. Only three of the nine river locations achieved the 200 mg/l goal. Moving forward, under implementation of the new Board Order, members of the Imperial Valley Coalition Group will need to submit a Report of Waste Discharge to the Colorado River Basin Water Board and obtain individual Waste Discharge Requirements. This added layer of accountability is expected to see improved drain water quality during the next planning period.

c) Future Demand for Irrigation Drainage Facilities and Planned Facilities

Urban sprawl may result in a net decrease of IID owned and operated drainage facilities designed to capture irrigation runoff. As future urban development occurs, storm water drainage systems must be installed and constructed into the project area by the developer/permittee to ensure adequate collection and conveyance of runoff. The type and extent of the development proposed will affect the demand of facilities. A significant increase in the amount of impervious surfaces will result in a greater amount of surface runoff. The exact size and location of future facilities will be determined at the time development is proposed and processed through each respective city or the county. All future development must continue to comply with IID policies regarding temporary retention of storm water to reduce the impacts to the IID drains.

Storm water runoff as well as other contributing factors has degraded both the New River and Alamo River. The recently updated Water Quality Control Plan for the Colorado River Basin Region prepared by the California Regional Water Quality Control Board contains strict requirements for the water quality conveyed into these rivers. Future facilities must be designed to adhere to the latest pollution control devices and NPDES requirements.

According to the Water Department Five-Year Capital Improvement Plan, IID continues to plan for and budget for the annual investment into irrigation drainage facilities. Slightly over $3 million is budged for, on an annual basis, for capital improvements to drain facilities.

d) Opportunities for Shared Irrigation Drainage Facilities

IID's irrigation drainage facilities are also used by non-agricultural operations. The IID drainage system provides a drainage outlet for each governmental subdivision of approximately 160 acres, but is not designed to convey storm water runoff from urbanized development. The District will continue to maintain all drain facilities that have a dual purpose of serving the agricultural community and collecting storm-water discharge from properly permitted entities. At this time, the management of these shared drainage facilities is effective and is not expected to change in the near future.

Administrative services related to drainage operations is also shared. In 2014, as previously noted, the State Water Resources Control Board determined that the existing Conditional Prohibition of Waste Discharges was not a sufficient mechanism to address non-point source pollution in the state. Instead, they mandated the implementation of Conditional Agricultural Waivers which were essentially the same as a Prohibition, but included an annual fee (Ag Waiver fee) that would be imposed upon the discharger. The Ag Waiver fees could be paid directly by the discharger ($1.27/acre or more), or, a voluntary coalition could be created (as approved by the state), and implemented by a local entity, which would reduce the mandatory fee rate substantially ($0.75/acre) for all coalition participants. In 2015, after discussion between the Imperial County Farm Bureau and the IID, it was agreed that the two entities would form the Imperial Irrigation District/Imperial County Farm Bureau Coalition Group Compliance Program. As a service to the Coalition, the District agreed to invoice all Imperial Valley land owners within the Salton Sea drain shed that were required to pay discharge fees. The IID fees are collected as a pass-through service (at no charge), and submits the collected funds to the State to fulfill the land owners' fee obligations at the discounted rate.

e) Phasing of Irrigation Drainage Facilities

The Imperial Irrigation District has no plans of expanding its irrigation service area thus there is no need for new expanded drainage facilities. IID, however, does continue rehabilitating, or replacing, some of its existing drainage facilities, control structures, inlets, and outlets on a continuous basis.

Short Term Improvements (Under 5 Years)

- Several Inlet and Outlet Drain Control Structures
- Vail 5A Drain Pump Station
- Mulberry Drain Pipeline
- Drain Crossing over HWY 115
- Several Large Drainage Projects

5-10 Year Improvements

- Redwood over Rose Outlet Drain Flume Replacement
- Control Structures, Inlets and Outlets
- Continuance of Large Drainage Projects

10-15 Year Improvements

- Continuance of Drainage Control Structures
- Continuance of Large Drainage Projects

3. Mitigation for Irrigation Drainage Facilities

The Imperial will continually monitor the existing irrigation drainage facilities to ensure the facilities are operating at an adequate level. The Imperial Irrigation District should further implement the following mitigation measures for drainage facilities:

D-1 All future non-agricultural development shall be required to construct storm drain facilities in accordance with the design standards of the respective jurisdiction and the Engineering Section of the IID Water Department and obtain an encroachment permit from IID before it is allowed to convey storm water into existing irrigation drains owned and managed by IID.

D-2 All future non-agricultural development shall retain storm water on-site, or within existing retention basins, to restrict storm water flow for a minimum period of 72 hours before discharging into IID facilities.

D-3 All future non-agricultural development shall ensure compliance with all local, state and federal rules and regulations related to the discharge of storm water.

D-4 All future non-agricultural development shall provide improvements constructed pursuant to best management practices as referenced in the *California Storm Water Best Management Practices Handbook*.

D-5 IID shall continue to implement the Drain Maintenance Checklist prior to scheduling drain maintenance to reduce unnecessary drain cleaning which contribute to re-suspension of the drain's bottom sediments.

D-6 Continue to enforce the Vegetation Management Plan developed to train equipment operators and weed spray contractors on the proper control of vegetation within drains to help maintain drain bank stability, reduce suspended sediment, and reduce unnecessary cleaning.

D-7 Encourage excavator-mounted GPS Units which allow excavator operators to conduct drain cleaning operations from upstream to downstream to filter nuisance vegetation before the vegetation is removed and help eliminate over-excavation.

D-8 Actively enforce Regulation No. 39 requiring that water users maintain a properly functioning tailwater box to prevent erosion at the tail end of their field and in the receiving drain.

D-9 Continue to monitor delivery and tailwater under the On-Farm Conservation Verification Program to ensure that excessive tailwater discharge does not occur during irrigation events and that tailwater boxes are in good condition.

D-10 Any need for drain abandonment will be addressed by the land use authority and IID during the CEQA review process and/or permitting phase of any new non-agricultural development and approved by the governing bodies.

C. POWER FACILITIES

IID entered into the electrical power business in 1936 to utilize the hydroelectric generation potential of the All-American Canal. By 1943, the district had acquired the electrical system and certain properties of the California Electric Company in Imperial County and parts of Riverside County becoming the source of electric energy for a 6,471 square-mile service area, including all of the Imperial Valley, parts of the Coachella Valley in Riverside County and a small portion of San Diego County as an emergency response partner. IID's Power Department, as of January 2024, provides electric power to more than 163,000 accounts (an increase of approximately 5% over five years when compared to 154,465 accounts reported in 2019) As the sixth largest utility in California, by peak load, IID Power controls more than 1,100 megawatts of energy derived from a diverse resource portfolio that includes its own generation, as well as long- and short-term power purchases.

As a Balancing Authority, IID must ensure the reliability of the electric system within its geographical boundaries by, among other requirements, maintaining a continual balance between electric resources and electricity demands. IID is subject to the reliability, safety and security regulations promulgated by the Federal Energy Regulatory Commission (FERC) and enforced by the Western Electricity Coordinating Council (WECC).

As a consumer-owned utility, IID Power works to efficiently and effectively meet customers' demands at the best possible rates, tying the IID area's low-cost of living directly with low-cost utilities. This must be met while making regulatory compliance-based decisions and strategic expansion-based decisions, currently and in the future, with system reliability as a foundational driving factor.

Due to the nature of the organization and interdependency of IID as a local organization along with numerous federal, state and local agencies and business entities, IID is cognizant and sensitive to the various and often differing goals of these external entities. Both federal and state-level policy drivers must be successfully integrated into every goal and objective. These policy and macro drivers form a fundamental foundation for the rest of the modeling assumptions of build-out, price formation and outputs used in energy resource planning. The district contracted Ascend Analytics to complete the energy resource planning modeling using the PowerSIMM™ stochastic modeling software platform for IID's 2024 Integrated Resource Plan. These macro-level drivers are noted in the proceeding diagram which are further detailed under IID's 2024 IRP.

Figure P 1 Fundamental Modeling Framework (Ascend Analytics)

1. Performance Standards for Power Facilities

Complying with energy efficiency laws and environmentally related requirements is an important objective for IID and a factor on the performance standards for energy generation, transmission and distribution facilities. Detailed discussion on energy conservation and emission reduction standards, however, are not discussed in this chapter, but rather located under the Conservation Programs chapter of this SAP.

Since IID is not a part of the CAISO, IID has the responsibility to provide reliable power to all of its customers, even in extreme events. This is a challenge, since IID is interconnected to several other Balancing Authorities, and this has an impact on the physical flow of electricity within the IID service area. IID works conscientiously to assure that the system operates properly under all conditions to the best of its ability. The effectiveness of the power system reliability is disturbed by many operational characteristics of generation facilities, transmission/ distribution interconnection strategies and other uncontrollable factors, thus system reliability is a foundational driving factor for all decisions made by IID. As a BA, the district has the obligation to:

- Match generation to load;
- Maintain scheduled interchanges with other Balancing Authorities;
- Maintain the frequency in real-time of the power system;
- Help/cooperate interconnection regulate and stabilize alternating current frequency;
- Avoid overloading transmission segments;
- Avoid inadvertent exchange of energy.

Reliability Standards- Reliability Standards are the planning and operating rules that IID follows to ensure the most reliable system possible. These standards are developed by the industry using a balanced, open, fair and inclusive process managed by the NERC Standards Committee. NERC develops and enforces reliability standards; assesses adequacy annually via a 10-year forecast, and summer and winter forecasts; monitors the bulk power system; and educates, trains and certifies industry personnel. IID's ability to balance its load and resources in the current environment with the solar resources on-line must be compliant with NERC balancing reliability standards. Specifically, Control Performance Standard No 1 and 2 (CPS1 and CPS2) measures[21].

Power Generation Facilities- IID produces power supply locally, using efficient, low-cost hydroelectric facilities, steam-generation facilities, as well as several natural-gas turbines and some solar photovoltaic projects. The design life of a typical energy generation facility is 30 years. The desired performance standard for IID is to match its generation level to its service load. IID does not have any planned generation targeted for export as all energy export is for reliability or emergency purposes and is developer driven.

As a balancing authority, the IID is required to have generation resources providing spinning reserves, non-spinning reserves, operating reserves and planning reserves, totaling about 15 percent of the forecasted load. The actual load within the IID service area has experienced a slight decrease over recent years. In 2023, IID had approximately 3,422 GWh in energy sales, a decline from 2022, and a modest decrease when compared to 3,738 GWh sales in 2017. The energy requirements consist of sales to end use customers and make-up energy for any system losses. IID is set to procure additional solar resources in response to forecasted loads based on projected growth.

Power Storage Facilities- AB 2514 (Skinner, Chapter 469, Statues of 2010), as amended by AB 227 (Bradford, Chapter 606, Statures of 2012) and as codified at Public Utilities Code Sections 2835-2839 and Section 9506, requires local publicly owned electric utilities, such as IID, to determine targets for procurement of viable and cost-effective energy storage. California's three investor-owned utilities are required to procure at least 1,325 MW of battery storage and to be installed no later than 2024. Although IID is a publicly owned facility, energy storage is becoming an important resource as variable generation resources such as solar and wind are increasingly adopted and integrated into the district's portfolio. Energy storage availability can address the district's concern regarding overgeneration and critical for capacity expansion.

Power Transmission Facilities-The Federal Energy Regulatory Commission (FERC) requires each public utility transmission provider to offer intra-hourly transmission

[21] CPS is a frequency-sensitive evaluation of how well a Balancing Authority's demand requirements were met for all control areas in an interconnection. CPS1 is based on a 12-moth rolling average and should not be less than 100 percent. CPS2 takes over a clock ten minute period (six non-overlapping periods per hour) and should not be less than 90%.

scheduling to ensure charges for energy imbalance services are just and reasonable. The intra-hour scheduling provisions provide opportunity for variable energy resources to align the energy schedules with forecasted production as conditions change within the hour.

Power Distribution Facilities- Power distribution facilities standards are based on reliability and ability to support future load growth from new development. A system's effectiveness, stability and reliability in providing power services is critical as a balancing authority. Reliability is the consistency of a measure of service when it produces similar results/uninterrupted services under consistent conditions.

2. Power Facility Planning and Adequacy Analysis

In an effort to align the Power Department in a manner that more efficiently accomplishes the goals of the Strategic Plan, the Power Department has undergone reorganization which resulted in the reallocation of resources and numerous positions to various units across separate energy sections. These changes resulted in the Power Department's addition of numerous sections and units, with responsibilities as follows:

- **Power Administration Section** is responsible for the oversight and management of all operations, maintenance, engineering services, reliability and accountability for the Power Department. This section interfaces with the Board of Directors, general manager, and the public to ensure effective communication and proper administration of policies and procedures and oversees the Power Department Strategic Plan and ensures that all other sections and units within the department are meeting the established goals and objectives.
- **Power Transmission Planning Section** is responsible for identifying the need for new transmission, including upgrades and maintenance of existing transmission facilities. The unit is also responsible for design of new facilities.
- **Power Operations & Resources Section** is responsible for the safe and reliable operation and dispatch of the district's generation, transmission, and distribution systems. This unit consists of seven sub-sections:
    1) ***Public Benefits and Regulatory*** -is responsible for the development of strategic business relationships to promote growth/change and support renewable energy development and to protect the balancing authority by leveraging existing assets. This section designs and implements programs to encourage customer conservation as a cost-effective alternative.
    2) ***Project Management and Substation Operations***- is responsible for managing and overseeing all capital projects and assisting the

department with planning and development initiatives in order to meet schedules, cost and quality of deliverables. This sub-section is responsible for existing substation construction, maintenance and repairs.

3) ***System Operations*** - is responsible for the safe and reliable operation and dispatch of the district's Balancing Authority, generation, transmission and distribution systems. System Operations is also responsible for monitoring NERC and WECC reporting requirements and submission of compliance filings.

4) ***System Engineering & Protection***- identifies the need for new transmission and distribution resources, upgrades and maintenance of existing transmission and distribution facilities. Additional responsibilities include the designing of communications networks for system protection circuits and relay protection devices on all district transmission, distribution and generation equipment.

5) ***Power Supply & Trading*** - is responsible for aligning the Power Department's financial goals with its customer and system operations requirements.

6) ***Energy Production***- is responsible for providing cost competitive, reliable and environmental compliant bulk electricity.

7) ***Office of Emergency Services*** provides emergency and disaster preparedness services for all district department. Those services include emergency and disaster preparedness, mitigation and recovery through emergency operation plan development, training, exercises and mutual aid implementation.

- **Infrastructure and Customer Project Services Section** is responsible for maintaining the integrity and reliability of existing transmission and distribution facilities and construction of new overhead and underground assets including customer projects. The section is comprised of two subsections: 1) Construction & Maintenance and 2) Power Troubleshooting.
- **Customer Operations La Quinta Section** is responsible for maintaining the integrity and reliability of existing distribution facilities and construction of new overhead and underground assets including customer projects. This Section is comprised of five sub-sections as follows:

1) ***Construction and Maintenance*** -is responsible for the physical construction or maintenance of transmission and distribution systems.

2) **Power Troubleshooting**- is responsible for first response to system disturbances and restoration.

3) ***Meter Shop***- is responsible for installation, maintenance and testing of meters.

4) ***Distribution Planning & Engineering*** – ensures the availability of reliable distribution resources to deliver energy to customers and identifies the need for new distribution resources, upgrades and maintenance of existing distribution facilities. Additional responsibilities include the design of new facilities.

5) ***C&M Safety & Compliance*** is responsible for developing, preparing, implementing and providing training in regards to standard operating procedures and work practices to ensure the Power Department complies with state and federal safety rule and regulations.

a) Inventory of Existing Power Facilities

The district owns and operates the electrical system, which includes generation, storage, transmission and distribution facilities. Substations and transformer components are also an integral part of the energy system.

Power Generation Facilities- IID maintains a steady focus on diversifying its portfolio of resources to serve load, including purchases and internal generation. The following subsections are a brief overview of IID's generation resource portfolio, which is in excess of 1,100 MW inclusive of hydroelectric, thermal, geothermal, biomass, nuclear and solar generation and are anticipated to occur requiring the addition of new resources to meet such demand. **Figure 7** below details the distribution which are further described in the sub-sections that follow.

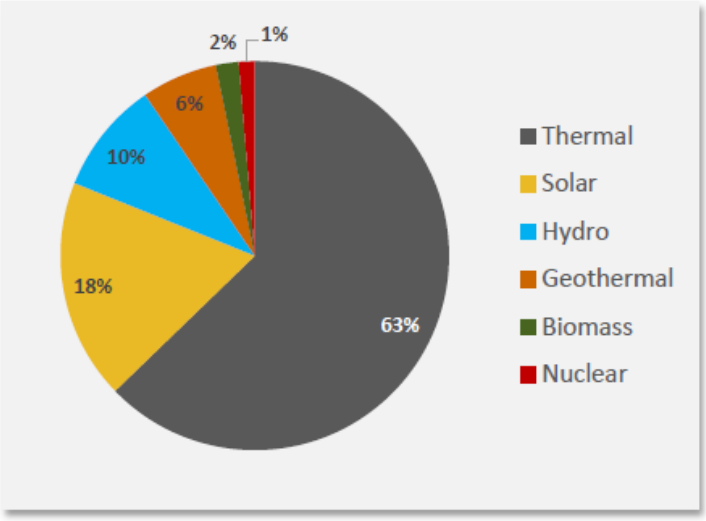


Figure 7 IID's Generation's Resource Portfolio

- ***AAC Hydroelectric Resources-*** IID has a number of small hydroelectric facilities located on the All-American Canal and nearby branches. The hydroelectric units have a combined rating of about 85MW, although, due to seasonal water flows the summer capacity rating is around 32MW as they are directly dependent upon the needs of the local area agricultural crops. Therefore, production will vary from season to season, but over the course of the year, the average hourly output from the hydroelectric facilities is about 32MW. IID's hydroelectric projects are considered green resources and the annual energy production from these units is approximately 270,000-280,000 MWh. The unit names, technology and performance are summarized in **Table P- 1 IID Hydroelectric Generation Plants/units, January 2023.**

Table P- 1 IID Hydroelectric Generation Plants/units, January 2023

Name	Commercial Operation	Generator Nameplate (MVA)	Project Operator/ Location	Operating/ Contracted Capacity (MW)
Drop 1 Unit 1	1984	Not Listed	IID/All-American	2
Drop 1 Unit 2	1984	Not Listed	IID/All-American	2
Drop 1 Unit 3	1984	Not Listed	IID/All-American	2
Drop 2 Unit 1	1953	6.25	IID/All-American	5
Drop 2 Unit 2	1953	6.25	IID/All-American	5
Drop 3 Unit 1	1941	5	IID/All-American	5
Drop 3 Unit 2	1966	5	IID/All-American	5
Drop 4 Unit 1	1950	12.5	IID/All-American	10
Drop 4 Unit 2	2006	12.5	IID/All-American	11
Drop 5 Unit 1	1982	2.5	IID/All-American	2
Drop 5 Unit 2	1982	2.5	IID/All-American	2
East Highline Unit 1	1984	3.019	IID/All-American	2.4
Pilot Knob Unit 1 & 2	1957	20	IID/All-American	16.5
Double Weir Unit 1	2005	0.226	IID/Central Main	0.18
Double Weir Unit 2	2005	0.226	IID/Central Main	0.18
Turnip Unit 1	1964	Not Listed	IID/Westside Main	0.42
Boulder Canyon	1936	2,080*	WAPA/Hoover Dam	5
Parker Davis	1954	240*	WAPA/Parker Dam	26-32
			TOTAL	106 MW

Source: IID 2021 Service Area Plan and updates from Integrated Resource Plan 2024; *U.S.B.R. is in MW

- ***Western Area Power Administration (WAPA) Parker-Davis Dam***- IID was allotted a portion of the upgraded Hoover Dam/Boulder Canyon Project equivalent to 2 MW. IID also has an entitlement of 32.6MW (summer) in the Parker-Davis Hydroelectric Project (Parker-Davis) in western Arizona. Energy from Parker-Davis is provided by WAPA at the rate of 3,679 MWh per MW of capacity per month. Parker-Davis energy can be primarily used during the on-peak periods, although a small portion of the energy must be scheduled during the off-peak periods due to water management requirements of the Parker and Davis dams by WAPA. While Parker-Davis is a hydroelectric project, it is not considered a renewable project by the state for RPS requirements. Hydroelectric projects must be less than 30MW to qualify as renewable projects. Parker-Davis capacity is a source of inexpensive capacity and energy.

- ***Internal Thermal Generation***- IID owns thirteen thermal generation units within its service territory, the Yucca generation facility in Yuma and also nine multi-unit hydroelectric facilities. The unit names, technology and performance are summarized in **Table P- 2 IID Thermal Generation Plants/Units, January 2023**. The Units produce just under 600 MW.

Table P- 2 IID Thermal Generation Plants/Units, January 2023

Unit Name	Commercial Operation	Generator Nameplate (MVA)	Fuel Type	Location
ECGS Unit 2-1	1993	75.8	Dual Fuel	El Centro, CA
ECGS Unit 2-2	1993	105.20	Dual Fuel	El Centro, CA
ECGS Unit 4	1968	67.60	Natural Gas	El Centro, CA
ECGS Unit 30	2013	77.5	Natural Gas	El Centro, CA
ECGS Unit 31	2012	54.00	Natural Gas	El Centro, CA
ECGS Unit 32	2012	54.00	Natural Gas	El Centro, CA
EC Mobile Mall*	2021	21.00	Diesel	El Centro, CA
EC Mobile Terminal*	2021	21.00	Diesel	El Centro, CA
Bravo Mobile*	2021	21.00	Diesel	Calexico, CA
Niland Unit 1	2008	43.70	Natural Gas	Niland, CA
Niland Unit 2	2008	42.60	Natural Gas	Niland, CA
Rockwood Unit 1	1979	23.20	Dual Fuel	Brawley, CA
Rockwood Unit 2	1980	23.00	Diesel	Brawley, CA
Coachella Unit 1	1973	18.60	Dual Fuel	Coachella, CA
Coachella Unit 2	1973	19.00	Dual Fuel	Coachella, CA
Coachella Unit 3	1974	18.3	Dual Fuel	Coachella, CA
Coachella Unit 4	1976	18.00	Dual Fuel	Coachella, CA
Yucca CT 21	1979	18.90	Diesel	Yuma, AZ
Yucca Steam	1959	74.00	Natural Gas	Yuma, AZ

Source: IID 2021 Service Area Plan and updates from Integrated Resource Plan 2024. The Power Purchase Agreement for the mobile units expire in September of 2025.

- ***Geothermal Generation Resource***- IID is uniquely located to take advantage of geothermal generation within the IID service territory. Since 2016 IID has contracted with four geothermal projects in the Imperial Valley for a total of 117 MW: CalEnergy Operations (BHE); Heber 1 Geothermal; Hell's Kitchen Geothermal Project; and Ormat Ormesa. These facilities are either operational or expected to be operational within the five-year planning period.

- ***Yucca Steam Plant*** -One of IID's most important units is the Yucca Plant in Yuma, Arizona. This steam unit has a nominal rating of 75MW (an operational rating of 70MW) and has been used for energy and ancillary services, including regulation, on the IID's system. There is also an associated gas-fired turbine (19.7MW) at Yuma that is seldom used due to the poor heat rate of the unit. The Arizona Public Service electric company operates the Yucca Plant under an operating agreement with IID. In 2024, the district was in the process of retiring its owned portion of the aging Yucca Steam Plant.

- ***Palo Verde Nuclear Generating Station***- IID has a small entitlement of capacity in each of three units at the Palo Verde Nuclear Generating Station (PVNGS). IID's total (delivered) capacity is 14 MW (5 MW from each of the three PVNGS units less losses). One of the greatest benefits of nuclear generation is the lack of any greenhouse gas emissions. Energy from PVNGS is expensive compared to current market prices although the reduction in greenhouse gas emissions helps the IID's efforts to meet GHG emission levels.

- ***Solar Photovoltaic Generation Resources***- The Imperial Valley is one of the best places in California to install solar panels, many of which have been constructed and are under operation.

- **Table P- 3** identifies solar projects under, contracted to provide energy to the IID system and now a part of the district's portfolio.

Table P- 3 Solar Photovoltaic Generation, January 2023

Name	Commercial Operation	California Location	Power Factor	Nameplate Capacity (MW)
Augustine Solar Energy	2009-2012	Coachella	PPA (20 yr.)	3.30
Citizens	2019	Calipatria	PPA (23 yr.)	30.00
El Centro Solar Park	2013	El Centro	PPA (25 yrs.)	20.00
Imperial Solar	2014	Heber	PPA (20 yr.)	10.00
Imperial Valley College Solar	2017	Imperial	IID Owned	2.54
Midway solar II	2017	Calipatria	PPA (25 yrs.)	30.00
SDSU PV 1	2014	Brawley	PPA (25 yrs.)	5.00
SEPV East	2017	Dixieland	FIT PPA (20 yr.)	2.00
SEPV West	2017	Dixieland	FIT PPA (20 yr.)	3.00
Seville No. 2	2016	Ocotillo Wells	PPA (25 yrs.)	30.00
IVSC Sun Peak 1	2012	Niland	IID Owned	23.00
IVSC Sun Peak 2	2015	Niland	PPA (30 yrs.)	20.00
Valencia 1	2017	Westmorland	FIT PPA (20 yr.)	3.00
Valencia 2	2020	Brawley	FIT PPA (20 yr.)	3.00
Valencia 3	2021	Imperial	FIT PPA (20 yr.)	3.00
			TOTAL	188 MW

Source: 2024 Integrated Resource Plan

Power Storage Facilities- IID has installed a Battery Energy Storage System (BESS). The BESS facility is located on the outskirts of El Centro on the site of IID's El Centro Generating Station and the adjacent Sol Orchard Solar Farm. BESS is a high power, low energy resource rated at 30 MVA of power and 20 MWh of energy and consists of the following components:

- 30 separate battery banks made up of 16 strings of battery modules and components containing 5,760 Samsung lithium ion battery trays, and associated battery management system controls and monitoring equipment.
- 30 GE Brilliance inverters rated at 1.25 MVA up to 45 degrees centigrade and 1.1 MVA up to 55 degrees centigrade, with a rated power factor of +/-0.93.
- 30 GE Prolec 1.25 MVA isolation transformers
- GE Mark VIe controllers.
- 8 Trane, 30 ton heat pumps and 4 Trane, 25 ton air conditioning units.
- 34.5kV/92kV substation that interconnects the BESS to IID's transmission grid.
- BESS building that houses the lithium batteries.

El Centro Battery Energy Storage System Facility

A Second battery storage facility was constructed within the City of Holtville and became operational in mid-2024. The Greenbacker Capital Management facility in Holtville has a 30 MVA capacity and a 120 MWh storage capacity. IID procured those services under a Power Purchase Tolling arrangement. Tolling agreements are a common feature of the energy industry. Through these agreements, a buyer will supply fuel to an electric generator and, in return, the generator will provide power back to the buyer.

Power Transmission Facilities-The Imperial Irrigation District transmission and sub transmission system includes over 1,800 miles of overhead transmission lines. IID's transmission system consists of 500kV, 230kV, 161kV and 92kV transmission lines. Whenever IID purchases energy from outside its service territory, it may be required to purchase transmission capacity. The transmission system is used to wheel bulk power supplies into the IID's balancing authority.

- ***500kV Transmission system-*** IID owns a portion of the Southwest Power Link 500kV line that connects the Palo Verde Substation to the North Gila 500kV-69kV substation near Yuma, Arizona. The line continues from North Gila to the Imperial Valley 500kV-230kV Substation in El Centro. IID also owns a portion of the 500kV HANG2 line that connects Hassayampa to North Gila 500kV substations.
- ***230kV Transmission system-***There are two major components that comprise IIDs 230kV transmission system. The first is a single circuit line between IID's El Centro Switching Station in El Centro and the Imperial Valley Substation which is jointly owned by IID and SDG&E. The second is a double-circuit transmission line that runs south to north through the IID's service territory and with SCE at the Mirage substation (KN/KS lines).

- **230kV Collector system**- Also known as KN/KS and runs south to north across the IID's service area to SCE's Mirage Substation. The lines were constructed in 1983 for the primary purpose of delivering over 500MW of "power generating facilities," mostly consisting of renewable resources in the IID system and contracted to SCE at that time.

- ***161kV Transmission System*** **-**The 161kV transmission system consists of two separate lines across the IID service area that interconnects several 161kV/92kV transmission stations. It also provides interconnection to WAPA through two 161kV transmission lines, from IIDs Niland Substation to WAPA's Blythe substation and from IIDs Pilot Knob Substation to WAPA's Knob Substation and one interconnection from IID's Pilot Knob to the Arizona Public Service Yucca Substations.

- ***92kV Transmission System*****-**The 92kV transmission/sub-transmission system consists of multiple transmission lines that provide interconnection to the distribution substations (92kV/13.2kV) that are periodically constructed and upgraded to provide transformation capacity to the distribution system.

Substations- IID continued to operate 128 substations in 2023 to serve a 6,471 square mile electric service territory. The substations transform voltage from high to low, or the reverse, or perform any of several other important functions for efficient operation. Although no new substations were constructed over the last five years, a number of substations implemented capacity improvements.

Power Distribution Facilities-The IID distribution system includes over 4,400 miles of overhead distribution lines and over 1,700 miles of underground lines.

Power Department Personnel 2024 (474 Total FTE):

- Energy Administration Section (*3 FTE*)
- Transmission Planning Section (9 FTE)
- Energy Operations & Resources (252 FTE)
- Infrastructure & Customer Project Services (85 FTE)
- Customer Operations La Quinta (125 FTE)

Power Department Vehicles in 2024 (279 Total Vehicles):

- Energy Administration Section (6 Vehicles)
- Transmission Planning Section (0 Vehicles)
- Energy Operations & Resources (96 Vehicles)
- Infrastructure & Customer Project Services (78 Vehicles)
- Customer Operations La Quinta (99 Vehicles)

IID Hydro Plant – Drop 2

b) Adequacy of Existing Power Facilities & Planned Facilities

Reliability Standards Adequacy- As concluded in IID's 2024 IRP, the district's ability to balance its load and resources in the current environment with the solar resources on-line is compliant with NERC balancing reliability standards. IID is highly compliant based on Control Performance Standard No 1 and 2 (CPS1 and CPS2) measures. With the expectation that IID will add additional solar resources to its portfolio, IID's ability to comply with NERC balancing standards may be more of a challenge in the future. IID limits existing ramping capability for its resources to effectively integrate the committed solar projects while maintaining reliable operation.

Power Generation Facilities Adequacy – IID's energy generation of 2,782,233 MWhr and purchase of 1,116,175 MWhr in 2023 matched the service demand for that year. IID Generation Hydroelectric and thermal assets are maintained and operated according to the original equipment manufacturers recommendations. Improvements are made to each unit based on an identified need for improved safety, environmental and regulatory compliance, reliability, or efficiency. While IID has made significant investments in recent years to upgrade its generation assets, three IID Automatic Generation Control capable units (Yucca Steam Unit, El Centro Unit 4 and El Centro Unit 2) are 55 years old, 46 years old and 21 years old, respectively. With a typical plant design life of 30 years and the five plus years to design, develop and construct a new plant more than 100MW, consideration of future generation assets is ongoing.

With the exception of the Niland Units, El Centro Generation Station Unit 2 and the newly repowered El Centro Generation Station Unit 3 (which are the most modern of IID's thermal resources), the rest of IID's thermal resources are less efficient but continue to contribute to system reliability. However, IID's existing resources and power purchase agreements were sufficient to meet the load for 2022. Portfolio modeling revealed a capacity shortfall for 2023 and 2024 which was mitigated through term energy purchases Such shortages are regularly caused by seasonal peeks and satisfied by seasonal purchases and are anticipated to occur unless new resources to meet these demands are secured. Identifying the right mix of new resources to meet IID's 2024 resource deficit and future demand is critical. IID must balance with a correct resource mix to maintain compliance with regulatory requirements and attempting to minimize annual costs. Any needed facilities would be constructed within IID's existing Balancing Authority service area.

Power Storage Facilities Adequacy- The existing 20MWh/30 MVA battery storage facility (BESS) has greatly reduced the volatility of impact from intermittent resources. The addition of the 120 MWh provides for a combined storage capacity of 140 MWh and power capacity of 60 MW. IID's ability to balance its load and resources in the current environment with the solar resources on-line is compliant with NERC balancing reliability standards. In fact, IID is highly compliant based on Control Performance Standard No 1 and 2 (CPS1 and CPS2) measures. With the expectation that IID will add additional solar resources to its portfolio, IID's ability to comply with NERC balancing standards may be more of a challenge in the future. The battery has an efficiency ratio of 1:.85, so the dispatch price must be at least 15 percent better when strategically dispatching the battery to address system needs.

Power Transmission Facilities- Consistent with NERC/WECC planning standards, IID performed an IID Transmission Assessment. This five year and 10-year assessment of the IIDs electric system was performed to ensure IID has enough generation and transmission resources to serve its load reliably and to ensure grid reliability at all demand levels over a 10-year planning horizon under normal and contingency operating conditions. Below is an overview of findings (see 2024 IRP for more details).

- ***92kV CN and CL Transmission System-***The 92kV transmission/sub-transmission system consists of multiple transmission lines that are constantly constructed and upgraded in order to provide transformation capacity to the distribution system.
- ***92kV ECSS Breakers -*** Most breakers were found to be overburdened during the Transmission Planning Assessment requiring replacement.
- ***230kV Ramon – Mirage 2 Transmission Circuit***- Reliability and system stability issues were discovered during the Transmission Planning

assessment. The installation of a second 230kV circuit between Ramon and Mirage would increase the resiliency of the system and bring performance within IID and WECC criteria.

- ***Transmission System***- The existing transmission system would not be able to adequately support the interconnection of merchant generation with the IID Balancing Authority without transmission system upgrades.

Power Distribution Facilities – As previously stated, the IID distribution system covers a service territory of over 6,471 square miles and includes over 4,400 miles of overhead distribution lines and over 1,700 miles of underground lines. The Coachella Valley area continues to receive a large number of energy requests forecasted at 816 MVA within the next 10-20 year period. Challenges in the Coachella Valley are related to new loading requirements in addition to the standard development load.

The Imperial Valley has a significant number of potential clients who are seeking interconnection at the transmission level. The projected load of these potential customers falls within the range of 25 MW to 40 MW and new substations will be required since this level of energy demand cannot be adequately met through distribution feeders alone.

There has been significant interest from residents and businesses in the IID service territory in distributed/ on-site generation projects. As of October 2023, 131 MW of distributed capacity has already been installed: an estimated 6,000 systems totaling 83 MW in Coachella Valley and 2,600 systems totaling 48 MW in the Imperial Valley. IID continues to face some challenges over the impact of these distributed generation on system losses. IID continues to manage and identify losses found in its power system. Reduction of these losses allows IID to provide a more efficient, more reliable and higher quality electric service.

c) Future Demand for Power Facilities & Planned Improvements

The 2023 energy load for IID was 3,755,413 MWh. Three California Energy Commission load forecasts were presented and the Mid Demand/Mid AAEE-AAFS Case was used as the starting point for the CASIO peak demand and total energy forecasts applied under the 2024 IRP. The model Baseline scenario used the Mid load scenario in comparison with Low load and High load forecasts. A Low Load considers a flatter future demand consistent with fewer resources needed to satisfy capacity and energy constraints while the High load scenario considers additional capacity needed to satisfy the capacity and energy constraints. Annual values for the IID system demand forecast are provided in **Table P- 4 2023 Energy Load Forecast for Low, Mid and High Demand**. The one in ten peak load forecast expectations during the same time period ranged between 1,167 MW to 1,455 MW.

Table P- 4 2023 Energy Load Forecast for Low, Mid and High Demand

Year	Annual Energy Demand (MWh)		
	LOW	MID	HIGH
2024	3,937,000	4,050,000	4,179,000
2025	3,966,000	4,094,000	4,233,000
2026	3,998,000	4,139,000	4,297,000
2027	4,028,000	4,186,000	4,361,000
2028	4,058,000	4,232,000	4,426,000
2029	4,076,000	4,271,000	4,482,000
2030	4,088,000	4,306,000	4,537,000
2031	4,057,000	4,337,000	4,581,000
2032	4,078,000	4,365,000	4,624,000
2033	4,059,000	4,387,000	4,666,000
2034	4,026,000	4,403,000	4,702,000
2035	3,981,000	4,412,000	4,734,000
2036	3,988,000	4,438,000	4,780,000
2037	3,999,000	4,470,000	4,830,000
2038	4,009,000	4,503,000	4,880,000
2039	4,019,000	4,535,000	4,929,000
2040	4,030,000	4,567,000	4,979,000

Source: 2024 Energy Integrated Resource Plan

Planned Power Generation Facilities- IID has been exploring the currently existing water infrastructure to develop small hydroelectric facilities. IID is considering the construction of two low head hydroelectric plants at the West Side Main Check No. 8 and at the Foxglove canal heading.

IID is also investigating several local geothermal projects, both existing facilities and to be newly developed generating facilities. Additionally, IID continues to assess the possibility of a public-private partnership with geothermal developers to develop IID-owned lands with a geothermal potential located near the Salton Sea.

Planned Substations- There are near-term plans for electrical substations throughout the IID service territory. In response to new development proposed, IID anticipates up to eighteen (18) new substations, with the majority of the substations in the Riverside County service area. Any substation and/or related facilities resulting from growth demand would be constructed within the IID service area and within its the

balancing authority boundaries. Over the 10- to 20-year horizon, it is anticipated that approximately 22 new substations will be needed.

Planned Power Transmission Lines- A major new transmission line continues to be needed in the Imperial Valley with a number of new 500kV transmission lines proposed by private and public entities. IID will work with a merchant project sponsor to develop a line that maximizes the benefits to the IID and its ratepayers. IID will oppose any new lines that threaten its balancing authority rights, or which could result in stranding the IID's investment in transmission resources.

On a regional level, IID has established plans with state and regional transmission planning agencies under the Strategic Transmission Expansion Plan (STEP) that have materialized, while in other instances separate smaller projects have evolved. The transmission expansion plans aim to provide plans to achieve diversity, sustainability and resilience to the bulk transmission system, distribution system and local communities while improving reliability. The following is a sampling of projects nearing completion or planned improvements identified through its ten-year reliability assessment (please see IID's IRP for detailed listing).

- ***92kV CN and CL Transmission System Upgrades -***Continued upgrades are planned to provide transformation capacity to the distribution system. These consist of reconductoring approximately five circuit miles of wood poles, the reinforcement of one mile of existing double circuit lattice towers and the installation of 3.5 miles of fiber optic cable.
- ***92kV Grapefruit Switching Station*** - The Grapefruit Switching Station Project consists of the design and construction of a new switching station and the rerouting six transmission lines from the Coachella Switching Station to the new switching station. The Grapefruit Switching Station will functionally replace the existing Coachella Switching Station.
- ***92kV Avenue 52 Capacitor Bank-*** A new 92kV capacitor bank will be needed to cover the NERC standard.
- ***92kV ECSS Breaker Replacement-*** A breaker replacement plan has incorporated the necessary updates
- ***230kV Ramon – Mirage 2 Transmission Circuit***- A new 230kV Transmission circuit between IID's Ramon Substation and SCE's Mirage Substation is being planned for due to reliability and system stability issues discovered during Transmission Planning assessment.
- ***Miscellaneous Network Updates to Transmission System***- In addition to the

projects listed above, numerous network upgrades will be triggered by the interconnection of merchant generation with the IID Balancing Authority. These include the following:

- ✓ 230kV S-line Upgrade of 18.6 miles of transmission line that spans between the El Centro Substation and the Imperial Valley Substation;
- ✓ 230kV ECSS Bank No. 5 transformer to be installed in parallel to the existing Bank No. 4 at the El Centro Switching Station.
- ✓ 230kV Salton Sea Transmission Line consisting of new construction for the interconnection of three new geothermal plants in Calipatria up to the Coachella Valley Substation, with a combined output of approximately 350 MW.
- ✓ 92kV R-Line Upgrade of approximately 33.8 miles of transmission line from Dixieland to Anza Substation.

- ***Transmission Planning*** over the next five years anticipates ramped up coordination with private geothermal developers for an energy export solution via a new transmission line originating in Imperial Valley with the goal of maximizing IID's ability to export energy generated by Independent Power Producers (IPP's) out of the District's BA.

Transmission Facility In Coachella Valley

Planned Power Distribution Facilities - As previously noted, project needs were identified for system reliability, customer interconnections associated with forecasted growth, and new generation distribution demand from residential and business operations. Much of the previously planned development did not fully materialize and continue to be identified as planned or removed altogether due to lack of developer progress. Some of the distribution projects identified by IID within the 2025-2030 five-year time frame for the Riverside County Service area include the following in addition to nine energy banks throughout the Coachella Valley:

- (2-28 MVA) Northgate Substation/Majestic Project
- (3-28 MVA) Indio Downtown Substation
- (2-28 MVA) Rio Del Sol Substation
- (2-28 MVA) Gerald Ford Substation
- (2-50 MVA) Classic Club 1 Substation
- (2-28 MVA) Avenue 40 Substation
- (2-50 MVA) Equestrian Substation
- (2-28 MVA) Thermal Airport Substation
- (2-50 MVA) North Indio Substation
- (2-50 MVA) The Ranch Substation
- (2-40 MVA) Cannabis #1 AWZ Coachella Substation
- (2-28 MVA) Avenue 44 Substation
- (2-28 MVA) Old Highway 86 Substation
- (2-28 MVA) Classic Club 2 Substation
- (2-28 MVA) Dinah Shore Substation
- (2-28 MVA) La Entrada North Substation

Similarly, a handful of previously identified substation projects did not materialize within the Imperial County during the last planning period because no progress was made by the respective developer. Some of the distribution projects identified by IID within the 2025-2030 five-year time frame for the Imperial County Service area include the following substations in addition to two, 25 MVA expansions at the Gateway Subdivision and at the Heber Subdivision:

- 25 MVA Kloke Substation
- 25 MVA Victoria Ranch Substation
- 25 MVA Lucky Ranch Substation
- 25 MVA Lavinge Distribution Substation

With the implementation of Advanced Metering Infrastructure finalized in 2024, the District is able to collect data at the customer and panel level, including demand, voltage, power factor, and billing data. This information is becoming increasingly important for distribution system planning to determine service levels, loading at

panels, transformers, loading factors, coincident factors, and voltage levels on circuits with distributed generation. This data can be studied in combination with SCADA demand, voltage levels for feeders, and transformer banks at substations. IID expects to have all AMI meter data available and integrated with DNV GL software for distribution system planning circuit analysis by the end of 2024.

With current and projected power demands evolving and increasing for residential and commercial units as well as new industrial proposals and interconnection or transmission services within IID's power service area, it is important for developers to work with IID to establish a comprehensive development plan. IID offers a **Developer Planning Guide and a detailed Customer Project Application** in order to coordinate and respond to residential and commercial project needs: The District also has a dedicated contracts team for transmission and interconnection services. Staff collaborates extensively with transmission and distribution planning teams to ensure the forecast incorporates accurate modeling of anticipated load variations, system expansion requirements, and demand-side developments within IID's service territory. These resources support existing and planned power facility adequacy.

d) Opportunities for Shared Energy Power Facilities

IID has two allotments of large, zero-carbon eligible hydroelectric power through Western Area Power Administration (WAPA): the first is a 3 MW share of the Boulder Canyon project and the second is a share of the Parker Davis hydroelectric project, which is a capacity share that varies between 32 MW in the summer and 26 MW in the winter. The Imperial Irrigation District also utilizes interregional partnerships in efforts to plan for extreme events. This includes shared transmission projects that provide access to various energy markets. IID has a share of the Hassayampa – North Gila 500 kV line No. 2 (HANG2) in Arizona which terminates at North Gila (N. Gila) substation. This share can provide access to the Palo Verde market.

IID is currently exploring the possibilities of participating in the North Gila – Imperial Valley 2 project. This project would allow IID to take advantage of its 20% share on the HANG2 line as well as provide additional reliability benefits. This project would most likely increase the allowable flow on HANG2 from 500MW to over 1000MW which would allow IID to move over 200MW through HANG2. IID, in collaboration with other transmission developers to submit proposals into the CAISO competitive solicitation process.

IID is also able to participate in Southern California Public Power Authority (SCPPA) projects. The SCPPA acts as a funding entity for transmission, generation, fuel and energy efficiency projects. The SCPPA will issue debt for the construction of new resources and then secure this debt with take-or-pay contracts with project participants. When IID is a party in a transaction with SCPPA and member utilities, the

debt falls on SCPPA and therefore there are minimal impacts to the IID's credit ratings (an unequivocal advantage of being a member of SCPPA). Another advantage is that joint action entities like SCPPA allow small entities the opportunity to participate in larger, cost-effective generation resources.

e) Phasing of Power Facilities

In order to maintain an adequate energy supply to IID customers, IID analyzed and evaluated all of the relevant supply-side and demand-side resource impacts to the current and future financial health of the District. The following projects (not all-inclusive) are anticipated to be implemented during the twenty-year planning period:

Short Term Improvements (Within 5 Years)

- Phased transmission improvements via implementation of STEP
- Coachella Valley Routine Overhead Distribution Program
- Fifteen (15) new substations in Riverside County
- Imperial Valley Distribution Grid Program
- Four (4) new substations in Imperial County
- Two (2) substation expansion in Imperial County (25 MVA each)
- Nine (9) energy storage banks in Riverside County
- Distribution Reliability Enhancements in Imperial Valley
- Multiple Hydroplant Power Generation Unit Refurbishment
- Ongoing El Centro Generation Station Rehabilitation Projects
- El Centro Generation Station Major Wastewater Mitigation
- Yucca Steam Plant Repower

Mid-Term 6-10 Year Improvements

- Phased transmission improvements via implementation of STEP
- Continued Coachella Valley Routine Overhead Distribution Program
- Continued Imperial Valley Distribution Grids Program
- Continued El Centro Generation Station Component Replacement
- Continued Multiple Hydroplant Refurbishment Projects
- Imperial Valley-Strategic Transmission Line Project
- Coachella Valley- Strategic Transmission Line Project
- Yucca Steam Plant Multi-Component Replacement
- Multiple Distribution Projects in Imperial Valley and Coachella Valley

Long Term 10-15 Year Improvements

- Continued Reliability & Distribution System Enhancement
- Continued Coachella Valley Strategic Transmission
- New Resource Development for Future Generation
- IID Comisión Federal de Electricidad 230kV Transmission Project

3. Mitigation of Power Facilities

IID has a comprehensive Integrated Resource Plan (IRP) prepared for the Power Department, adopted in 2024. The goals in the IRP provide the Power Department an integrated approach to identifying the generation and power system resources needed to sustain IID's service to the communities in a fiscally responsible, reliable, efficient and affordable manner. The IRP should be reviewed for more detailed information; however, the following are summary recommendations to achieve adequacy of energy service facilities:

P-1 Continue to implement the goals identified under the IID Integrated Resource Plan regarding Cost and Operation, Efficiency, Regulatory Compliance and Regional Development.

P-2 Explore and implement potential energy loss reduction strategies such as installing additional distribution capacitor banks, extending existing transmission lines to improve service to concentrated loads, and establish a distribution line re-conductor program.

P-3 Complete all necessary distribution system upgrades.

P-4 IID should diversity its generation resource mix in all things and all approaches thus reducing various risks.

P-5 Continue to invest in IID-based and region-wide transmission infrastructure.

P-6 Study and explore the location and technology type of a peaking generator to be installed and operating in the near-term to provide the necessary support the IID system needs to maintain reliability in the wake of a heavy influx of intermittent renewable resource integration.

P-7 IID shall continue to work on the development of a capital replacement plan to address the aging fleet of thermal generation units.

D. EFFICIENCY & CONSERVATION PROGRAMS AND SERVICES

IID is located at the heart of many available natural resources to develop renewable energy generation facilities as well as energy efficiency and conservation. The same can't be said about IID's water supply considering the District's Colorado River entitlement is IID's sole source of water supply. IID's extensive rights to the use of Colorado River water are based on state law appropriation history that are senior to most other Colorado River contractors.[22] These water and energy factors drive IID's decision-making process since many of the laws that have been developed over the past several years, for the protection of both of these resources, change the entire dynamic of strategic resource planning and the integration of resources.

Water Efficiency & Conservation Overview

Challenges presented by new in-valley water demands and land use changes are intensified by the annual cap on Imperial Region's Colorado River water supply of 3.1 million acre-feet of annual entitlement, while the near 500,000 AFY transfers under the 2003 Quantification Settlement Agreement is in effect. Challenges beyond these limits is the unpredictability associated with varying annual demands and competing uses within the Imperial Region. The 2012 Imperial Integrated Regional Water Management Plan (IRWMP) is the result of stakeholders, who represent a wide array of interests, working together to formulate and support implementation of long-term water management solutions many of which are represented under IID's water conservation programs described in more detail in IID's Water Conservation Plan. These water conservation programs are what enable the District to be a party to the nation's largest agriculture-to-urban water conservation and transfer agreement, implementing efficiency-based conservation programs in coordination with its agricultural water users that create just under 500,000 acre-feet annually of conserved water (from 2003 baseline year) for use by its funding partners under the 2003 QSA.

Another challenge to water supplies continues to be an increasing uncertainty associated with drought conditions at the Colorado River Basin level. In June 2022, the U.S. Department of Interior called for the Basin states to develop a plan before the end of the year to reduce demands by 2-4 million acre-feet per year, through 2026, or the Secretary of the Interior would take regulatory action to force these reductions in order to protect the Colorado River system in light of the prolonged drought conditions and climate change impacts. California submitted a voluntary conservation proposal in 2023 to Reclamation to conserve up to 400,000 AFY through 2026 as its commitment to Lake Mead and the Colorado River System. IID is working diligently with federal agencies and Colorado River contractors to minimize impacts to the local community while simultaneously ramping up water conservation

[22] IID holds legal title to all its water and water rights in trust for landowners within the district: California Water Code §20529 and §22437; and Bryant v. Yellen, 447 U.S. 352, 371 (1980), fn. 23.

programs in an effort to augment local water supplies, to some degree, should future Basin-wide cuts be unavoidable. IID's Board of Directors proposed to increase its conservation targets to build elevation at Lake Mead by up to 250,000 AFY through 2026, bringing the districts cumulative conservation goals up to 750,000 AFY (24% of its total entitlement).

Energy Efficiency & Conservation Overview

California has shown aggressive decarbonization and renewable energy efforts. Senate Bill 350, the Clean Energy and Pollution Reduction Act, passed in the 2015 California Legislative Session, requires IID compliance with renewable portfolio standards laws and emissions laws. IID must achieve a target range of between 524,000 and 667,000 metric tons of CO_2 per year by 2030. Greenhouse Gas Emission reductions, under SB100 which in 2018 established the 100% zero-carbon electricity by 2045 target, are also planned for by IID in order to avoid having to purchase emission credits. The passage of Senate Bill 1020 in 2022 established intermediate zero-carbon energy targets of 90% and 95% in 2035 and 2040, respectively.

IID is always on the forefront of compliance with emerging and changing State and Federal mandates impacting renewable energy portfolio standards. IID implements a comprehensive energy conservation portfolio similar to California which leads the nation in energy efficiency and renewable energy programs. Assembly Bill (AB) 2021 requires each publicly owned utility to identify all potentially achievable cost-effective electricity efficiency savings and to establish annual targets for energy efficiency savings and demand reduction for the next 10-year period. IID has joined California Municipal Utilities Association (CMUA) in partnership with Northern California Power Agency (NCPA) and the Southern California Public Power Authority (SCPPA) to collaborate on the development of individual utility energy efficiency and demand-reduction targets. IID implements an aggressive energy-efficiency portfolio with the goal of reducing both energy consumption and peak demand. Energy-efficiency programs may be classified as either conservation programs, or demand-side management (DSM) programs. Conservation programs attempt to reduce the total amount of energy required by consumers while DSM programs attempt to change the timing of energy use.

The information provided in this Section of the SAP is a comprehensive summary of the numerous water and energy programs implemented by the District in efforts to maximize efficiency and conservations of these valuable resources. For more detailed information, interested parties are encouraged to visit iid.com and review IID's most current Water Conservation Plan for water and most current Integrated Resource Plan for energy.

WATER EFFICIENCY & CONSERVATION

Under California state law, water must be distributed equitably as determined by the IID Board of Directors. On November 28, 2006 the IID Board of Directors adopted Resolution No. 22-2006 approving the development and implementation of an Equitable Distribution Plan to better manage IID's annual Colorado River water supply. The District apportions its full water supply based on water use history of Potable Water Users, Industrial/Commercial Water Users and Agricultural Water Users after setting aside Operational and System Water. Given that IID's 3.1 MAFY water entitlement does not increase over time, the District has to maximize the water use efficiency of existing uses, not only to meet transfer obligations but also to conserve water that in turn will meet water supply demands for new growth and development within its water service area. No service requests outside the water service area are pending.

Water Supply Demand

Operation and System Water. Water used by the district for system operations and maintenance including operational carriage and discharge water, system losses, seepage, evaporation, or other losses in the District's distribution system such as unmetered small parcel and pipe water services, recreational lakes and feedlots are adjusted for calculated allocation every year and not available for apportionment. This water operational water pool also includes water conserved by IID's System Conservation Projects/Programs that would have otherwise remained unavailable for apportionment but for the conservation projects/programs (in turn available for transfer obligations). Annual operational water demand fluctuates from year to year based on factors such us level of conservation projects in place, cropping changes, delivery flexibility from farmers and responsive water management by IID. The general range of operational water is 200,000 AFY to 300,000 AFY.

Non-Agricultural Uses Demand. Industrial, commercial and similar urban (Non-agricultural) water demands are anticipated to increase over the planning period. The Imperial Integrated Regional Water Management Plan determined a per capita municipal raw water demand history of .23 AFY (weighted average) which is equal to 205 gallons per day, per capita, and accounts for all municipal water use and not just residential, prior to treatment and distribution. As of 2023, the Municipal Water Demand (for treated water purveyors) was approximately 32,000 AFY and accounted for approximately 33 percent of the total (97,000 AFY) non-agricultural water delivery throughout the Imperial Valley averaging less per capita.

The same per-capita measure will be applied to future population projections. This measure is conservative considering the increasing water conservation measures being employed by the respective cities and water agencies in respond to state mandates for

conservation. **Table W- 6** projects Municipal water demand separate from the projected demand from other non-agricultural uses within rural areas not being serviced by a water treatment agency. Water demand from these other non-agricultural areas is anticipated to increase modestly throughout the planning period. These estimates are conservative enough to cover the anticipated geothermal and lithium development and any indirect inducement of population. It is important to note that water is apportioned based on water use history only. Although new industries are accounted for under water supply demand projections, water supplies to meet the new demands must come from conservation efforts, as described in IID's Interim Water Supply Policy under the water conservation programs section of this SAP. The water demand specifically tied to lithium is unknown as no actual lithium plants are in operation to establish a basis for water demand per plant.

Table W- 6 IRWMP Non-Agricultural Water Demand Projections

Year	Projected Population	Municipal Demand (AFY) Projections	Industrial Demand	Other Non-Ag Demand (AFY) Projections	All Non-Agricultural Demand AFY
2025	185,550	36,800	39,800	59,500	**136,100**
2030	193,326	39,800	46,500	59,500	**145,800**
2035	199,157	41,500	53,200	59,500	**154,200**
2040	203,470	46,300	59,900	59,500	**165,700**

Source: Imperial Integrated Regional Water Management Plan 2012.

Agricultural Uses Demand. As has been the case historically, annual agricultural demands are expected to modestly fluctuate from year-to-year based on commodity markets, rainfall, temporary (or long-term) fallowing and other factors. The projected raw water demand for agricultural use is expected to remain constant between 2025 and 2030. Should non-agricultural development in rural areas occur, the agricultural demand would be expected to decrease. These permanent changes would be directly correlated to the increase in population, via urban sprawl and conversion of farmland to urban uses. **Table W- 7** combines Agricultural Water Demand & Non-Agricultural Water Demand for a total water demand during the planning period.

Table W- 7 Agricultural Water Demand Projections & Total Water Demand

Year	Agricultural AFY Demand Projections	All Non-Agricultural AFY Demand Projections	Total Projected AFY Demand
2025	**2,259,500**	136,100	**2,395,600**
2030	**2,209,500**	145,800	**2,355,300**
2035	**2,209,500**	154,200	**2,363,700**
2040	**2,209,500**	165,700	**2,375,200**

Source: 2012 Imperial Integrated Regional Water Management Plan.

Transfer Obligations. As previously noted, the District is a party to the nation's largest agriculture-to-urban water conservation and transfer agreement. As such, implementing efficiency-based conservation programs in coordination with its agricultural water is essential for the creation of just under 500,000 acre-feet annually of conserved water (from 2003 baseline year) to meet the 2003 QSA transfer obligations. In this vein, IID has spent the last two decades setting up a robust, district-wide Efficiency Conservation Program which includes System Conservation and On-Farm Efficiency Conservation measures in order to meet its transfer commitments. Transfer commitments, and thus conservation efforts, are expected to temporarily hike for years 2024, 2025 and 2026 in direct response to a System Conservation Implementation Agreement with Reclamation for up to 250,000 AFY and then remain constant through year 2030 and beyond.

1. Performance Standards for Water Efficiency & Conservation

Water Conservation Standard-The Imperial Irrigation District does not have any performance standards adopted for water conservation, however, the district's Water Department, consistent with the Imperial Integrated Regional Water Management Plan (2012) and IID's Water Conservation Plan (2021), does implement several strategies to manage in-valley water demand to live within the established consumptive use history. IID's Equitable Distribution Plan, adopted in 2022, intends to satisfactorily address any potential water supply/demand imbalances. Water is apportioned to all water user categories which is calculated by the calendar year average of the water use history for that Water User Category as a whole during the years 2003 to 2012, eliminating the highest calendar year and lowest calendar year of water use history

The performance standard is therefore established as performing the same activities, operations and crop yields, but more efficiently and with less water use than totals over history. The minimum conservation target shall be conservation yields consistent with all IWSP Water Supply Agreements in place for the given year, the Quantification Settlement Agreement (QSA) and any other System Conservation Implementation Agreements entered into between IID and Reclamation to implement the Lower Colorado Conservation and Efficiency Program. The IWSP is currently capped at 25,000 AFY. The QSA specified 487,200 AFY of water will need to be conserved by 2026 by the IID considering all IID Quantification and Transfers. Any additionally voluntary transfers under a SCIA would have an annual cap of 250,000 AFY. These limits are the maximum IID would conserve on any given year during the next five-year planning period under existing and anticipated water supply and transfer agreements.

Linear Irrigation System Under On-Farm Efficiency Conservation

2. Water Efficiency & Conservation Program Planning and Adequacy Analysis

Water Department Conservation Programs

IID generates just under 500,000 AFY of conserved water to meet the needs of the QSA water transfers by making water efficiency improvements in its delivery system and by partnering up with the agricultural community for the implementation of on-farm efficiency conservation measures. Non-agricultural water demand under the IWSP was nominal in 2023 with an operational demand of 1,800 AFY, albeit other commitments amounting to just under 6,000 AFY may become operational within the 5-year planning period. IID's established water conservation programs are designed on best management practices and water accounting principles with ample resources to be able to fulfill these existing and projected water supply demands under existing and planned water conservation programs.

Water conservation efforts are entirely managed and delivered in-house through IID's Water Department. The Water Department is comprised of eight sections all of which support conservation measures to some extent, however, two sections and one department are primarily and/or solely dedicated to Water Conservation efforts and Water Conservation Program implementation. Additionally, the Water Department oversees the Water Transfer Operation and Maintenance Section, that has multiple sub-sections all responsible for water conservation support services. A description of the primary duties of each respective section follows:

- **Agricultural Water Resources Section** is responsible for long-term implementation of water conservation and transfer programs between IID and other agencies. Areas of responsibility include the management of fallowing, apportionment, and agricultural water clearinghouse and on-farm conservation programs. Staff sets program objectives, develops budgets, provides short and long-term planning and implements the work developed for each individual program. Staff provides regular updates to the IID Board of Directors as well as stakeholder agencies regarding budget, expenditures and program schedules and objectives.
- **Environmental Mitigation Section** is responsible for Water Department and QSA water transfer environmental mitigation implementation. This section includes wildlife species monitoring and conservation, managed marsh complex construction, operation and maintenance, desert pupfish refugium construction, and Salton Sea air quality mitigation. This section is responsible for compliance with QSA EIR/EIS, biological opinion, Incidental Take Permit (ITP 2081) and other environmental permits for various projects.
- **Water Transfer Operation & Maintenance Unit** provides for the operation and maintenance activities necessary to accomplish the conservation of water.

    (1) *Water Transfer Operation & Maintenance Mitigation Section* is responsible for the QSA-Joint Power Agreement mitigations tasks under the JPA. *Mitigation* covers QSA agreement payment for the Salton Sea Restoration Fund and QSA-JPA, other non-QSA environmental permits and non-QSA mitigation projects which will be granted and state funded.

    (2) *Water Transfer Operation & Maintenance Efficiency Section* covers operation and maintenance of system conservation projects, such as the seepage pump interceptors and also includes the development and implementation of the on-farm conservation program.

    (3) *Water Transfer Operation & Maintenance Program Management Section* includes the general support and administration of Water Transfer related activities. The planning, oversight and direction of general activities, including budgeting and reporting needs for the Water Transfer activities.

    (4) *Western Farm Lands Operation & Maintenance Land Management Section* is responsible for the management of the Western Farm Lands owned by the District. The activities for this section include the maintenance, rental and any costs associated with the sale of these properties.

a) Inventory of Existing Water Efficiency & Conservation Programs/Resources

Water Conservation Programs & Resources- Water Resource Management under the Water Department are focused on three areas of efficiency: 1) System Efficiency, 2) Agricultural Water use Efficiency, and 3) Non-Agricultural Water Use Efficiency. A brief overview of the existing programs and services is described under each focus area below.

Photo of Lateral Heading Automation

1) **System Efficiency** - IID has a very successful System Conservation Program which implements numerous system conservation measures that generated just under 60,000 acre-feet of conserved water in 2024, with the goal of reaching 103,000 acre-feet in 2026 and annually thereafter. System efficiency involves major capital investment in IID's distribution system. Every year, the district invests in the development of Main Canal Seepage Interception Projects, Operation Discharge Reduction Projects, Mid-Lateral Operational Reservoirs and/or Main Canal System Reservoirs as well as numerous automation projects. Under system improvements, IID has constructed and operates twelve operational reservoirs throughout its distribution system to maximize water management flexibility. IID has installed telemetry system with automated structures on upper reaches of main canals and SCADA system with computers, radio and microwave communication for all Zanjeros. In 1993 IID constructed a state-of-the-art Water Control Center and numerous SCADA controlled water management projects

throughout its distribution system. Water measurements for all automated flow structures are stored in IID's WISKI, where quality assurance and quality control is performed.

2) **Agricultural Water Use Efficiency-** Improving water use efficiency in close collaboration with the agricultural industry has been an important goal for the District and the Imperial Valley farming community. IID and Imperial Valley growers have worked aggressively to implement on-farm water conservation efficiency measures. Under IID's On-Farm Efficiency Conservation Program, payment is made to participants for efficiency improvements that in turn conserve water. Contracts are issued for individual crop seasons which correlates to the time period over which a specific crop is grown on a specific acreage, based on plant and harvest dates. This is a successful on-farm efficiency program that generates over 200,000 acre-feet in 2023. The primary conservation measures are drip irrigation systems, tailwater return systems, sprinkler irrigation systems, field reconfiguration and land leveling.

3) **Non-Agricultural Water Use Efficiency-** Non-Agricultural development, particularly in the renewable energy industry and potential lithium extraction represents a significant economic development opportunity within the IID Water Service Area and has the largest forecasted increase in future water demand, requiring a reliable long-term supply that that needs to be structured in a manner that would not adversely impact agricultural productivity. The 2009 IID IWSP provides for up to 25,000 AFY of conservation potential for new demands generated by new development of renewable energy industries. The policy adopts an established water rate structure that is adjusted annually, consistent with the CPI, to cover the costs of implementing conservation projects and/or programs for the benefit of the new development. The following are additional Best Management Practices that IID considers when reviewing new non-agricultural projects or expansions:

    - Support the use of dry or hybrid cooling.
    - Consider use of recycled municipal water for cooling.
    - Consider use of desalinated brackish water for cooling.
    - Consider groundwater bank as a water supply.
    - Require appropriate water use efficiency BMP's per the California Urban Water Conservation Council, California Energy Commission, and those adopted by IID.

In order to advance all of these water conservation programs, objectives and measures, the Imperial Irrigation District has allocated the following resources within the two sections in the Water Department implementing water conservation efforts:

Water Conservation Programs Personnel 2024 (97 Total FTE):

- Agricultural Water Resources (22 FTE)
- Water Environmental Section (9 FTE)
- Water Transfer O&M Mitigation Section (20 FTE**)**
- Water Transfer O&M Efficiency Section (45 FTE)
- Western Farm Lands Land Management (1 FTE)

Water Conservation Program Department Vehicles 2024 (52 Vehicles):

- Agricultural Water Resources Section (7 Vehicles)
- Water Environmental Section (8 Vehicles)
- Water Transfer O&M Mitigation Section (10 Vehicles**)**
- Water Transfer O&M Efficiency Section (26 Vehicles)
- Western Farm Lands Land Management (1 Vehicle)

b) Adequacy of Existing Water Efficiency & Conservation Programs

IID has been successful in meeting its water transfer obligations pursuant to the agreements in place through 2023 which included QSA obligations and a 2023 SCIA with Reclamation for the benefit of Lake Mead. IID further entered into three IWSP Water Supply Agreements between 2022 and 2023, under which one of the projects was operational and two others under development. The numerous conservation projects and programs that have been implemented by the District are considered adequate as they have resulted in quantifiable water conservation and reliability to meet existing water supply demands and transfer obligations. The following is a brief summary of program results.

System Conservation Programs – IID continues to implement numerous system conservations programs and projects under the 1988 IID/Metropolitan Water District of Southern California (MWD) Water Conservation Agreement. Since implementation of the IID/MWD Conservation Program the associated water savings has fluctuated between 97,150 AFY to 113,000 AFY. In 2003, IID amended the agreement to align the agreement end date with the Quantification Settlement Agreement and a 2014 Letter of Agreement provides that effective January 2016, the total amount of conserved water for transfer to MWD is fixed at 105,000 AFY.

IID continues to perform numerous system upgrades to meet the additional needs of the QSA Water Transfers by making water efficiency improvements in its delivery system on an annual basis. Components of the System Conservation Program include:

- ***System Discharge Reduction Program***
  - Communication upgrades (100% complete)
  - Installation of automated lateral headings
  - Design and installation of monitored discharge sites
  - Laptop computers for Zanjeros (100% complete)

- SCADA integration and monitoring
- Additional Operational Labor (14 Zanjero positions)

- ***Other Operational Discharge Reduction Projects***
  - Main Canal Seepage Recovery Pumps
  - Lateral Interties
  - Interceptor Channels
  - Main Canal Operational Reservoirs
  - Mid-Lateral off-line operational reservoirs
  - Mid-Lateral Regulating Reservoirs

In addition to the 1988 IID/MWD Water Conservation Agreement and AAC Lining Project yields, IID system efficiency conservation measures are expected to generate an additional 103,000 AFY by 2026 to meet the QSA obligations. Monitoring results for System Conservation have demonstrated adequate, increasing annual conservation yields. **Table CW-1** identifies the conservation yields that IID has conserved over the last ten years, in 3-year intervals, under system efficiency conservation projects and programs.

Table CW- 1 System Conservation Program Conservation Yield History

System Conservation Program	2014 AFY	2017 AFY	2020 AFY	2023 AFY
1988 IID/MWD Conservation	104,100	105,000	105,000	105,000
All-American Canal Lining	67,700	67,700	67,700	67,700
Seepage Recovery	32,231	35,026	39,034	38,648
Other System Efficiency	0	29,186	33,973	35,530
TOTAL SYSTEM CONSERVATION	**204,031**	**236,912**	**245,707**	**246,878**

Source: IID Internal Water Accounting Records from WIS/WISKI Verified Savings History at River.

Temporary Land Conversion Fallowing Program-The IID Board adopted a Temporary Land Conversion Fallowing Policy (TLCFP) on May 8, 2012, and revised it on March 29, 2016. Fallowing is the practice of temporarily taking active farmland out of production. Water, which under normal circumstances would have gone to the land to produce crops, is considered conserved under the fallowing program. Conserved water from fallowing is transferred to the San Diego County Water Authority, used for delivery to the Salton Sea (through 2017) to mitigate the environmental impacts of these transfers, and for payback or storage purposes. The water transfer schedules called for the district to generate 150,000 acre-feet annually through fallowing from 2013 through 2017, concluding IID's required fallowing.

The fallowing program revisions of March 29, 2016, provided 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. IID concluded that certain lower water use projects, such as solar power facilities, may still provide benefits to local water users, albeit temporary. Water demands for certain non-agricultural projects can be less than water required for agricultural production; this reduced demand allows water to be made available for other users under IID's annual consumptive use cap. **Table CW- 2** identifies the solar fallowing conservation yield over the last 10 years.

Table CW- 2 TLCFP Conservation Yield History

Implementation Year	Participating Acres	Documented AF Conservation Yield
2014	6,912	36,265
2015	7,104	37,320
2016	7,864	38,717
2017	10,146	48,040
2018	12,354	66,034
2019	12,404	65,791
2020	12,404	65,964
2021	13,165	69,623
2022	13,177	69,898
2023	13,177	69,898

Source: Fallowing Conservation Reports at IID TLCFP. Volumes in table reflect acre-feet at Imperial Dam

These TLCFP water conservation yields provide the district some relief during the term of the QSA/Transfer Agreements from having to create conserved water through projects that may require capital investment or traditional financing. This conserved water can be used to satisfy some of the district's water transfer obligations or free up conserved water for new non-agricultural demands.

On-Farm Efficiency Conservation Program - One of the most successful water conservation programs is the On-Farm Conservation Program which is in partnership with the local grower community. The OFECP allows for broad farmer participation on a variety of crops and growing seasons. Landowners and tenants voluntarily propose conservation measures, delivery reduction volume, contract duration, and a cropping plan for IID consideration. After review and consultation, IID accepts proposals until conservation obligations are fulfilled. Water conservation is measured relative to a ten-year history baseline specific to each field and crop participating. IID has an on-farm conservation target that is set every year by the IID Board of Directors. Monitoring results have demonstrated increasing annual conservation yields as noted in **Table CW- 3.**

Table CW- 3 On-Farm Efficiency Conservation Program Conservation Yields History

Implementation Year	Participating Acres	Documented Conservation Yield
2014	54,345	44,371 AF
2015	115,173	87,721 AF
2016	189,823	138,585 AF
2017	250,022	151,750 AF
2018	318,193	190,969 AF
2019	238,764	178,742 AF
2020	201,335	177,552 AF
2021	196,180	163,069 AF
2022	328,786	179,620 AF
2023	317,546	215,382 AF

NOTE: Participating Acres includes all acres enrolled in the OFECP for the applicable year the crop was harvested including acres without water savings. Volumes in acre-feet at Imperial Dam.

IID maintains annual water accounting summaries. The Annual Water & QSA Implementation Report[23] provides water accounting for conservation efficiency relative to the transfer obligations and system efficiency as well as all other IID water conservation initiatives. **Table CW- 4** provides a summary of the reported conservation volumes, depicting the generated conservation for the last five years, meeting all obligations and conserving additional volumes as Intentionally Created Surplus or for the benefit of Lake Mead, thus demonstrating an adequate conservation performance.

Table CW- 4 Water Conservation Programs Distribution Schedule

Purpose	2019 AFY	2020 AFY	2021 AFY	2022 AFY	2023 AFY
1988 IID/MWD Transfer	105,000	105,000	105,000	105,000	105,000
SDCWA Transfer	160,000	192,500	205,000	202,500	150,000
CVWD Transfer	68,000	73,000	78,000	83,000	88,000
AAC Lining Project Transfer	67,700	67,700	67,700	67,700	67,700
Intentionally Created Surplus*	43,405	51,023	30,008	13,365	0
Lake Mead Voluntary Conservation	NA	NA	NA	25,000	106,111
TOTAL CONSERVATION	**444,105**	**489,223**	**485,708**	**496,565**	**516,811**

*Intentionally Created Surplus is water conserved by the District using efficiency measures and stored at Lake Mead for future availability to the District (within IID's storage limits). Conserved water beyond these limits left for the benefit of the system and not credited to IID was in excess of 90,000 AF (2019- 41,826 AF; 2020-49,444; 2021-1,762).

[23] QSA Annual Reports | Imperial Irrigation District (iid.com)

c) Future Demand for Water Efficiency & Conservation Facilities/Improvements

As the Imperial Valley grows, and as its economy diversifies, so do the functions and role of IID's Water Department. By implementing extraordinary conservation projects, developing innovative efficiency measures and utilizing progressive management tools, the Water Department is working to ensure both the reliability of water for agriculture, new in-valley growth and the continued protection of water resources for long-term sustainability.

Water Conservation Targets – IID has existing water transfer obligations and commitments under the QSA through the next 20-year planning period. By 2026, IID will need to conserve 487,200 to satisfy the QSA water transfer agreements in place. For years 2025 through 2027, it is expected that IID will conserve up to an additional 250,000 AFY under a System Conservation Implementation Agreement with Reclamation. The planned water conservation targets for the Imperial Valley service area are noted in **Table CW- 1 System Conservation Program Conservation Yield History.**

Table CW- 5 Anticipated Water Conservation Planning Targets

Year	Entitlement Amount AFY	QSA Conservation Targets AFY	SCIA Conservation Targets AFY	IID Net For Consumptive Use AFY
2025	**3,100,000**	482,200	≤ 250,000	**2,367,800**
2030	**3,100,000**	487,200	0	**2,612,800**
2035	**3,000,000**	487,200	0	**2,612,800**
2040	**3,100,000**	487,200	0	**2,612,800**
2045	**3,000,000**	487,200	0	**2,612,800**

Source: CRWDA Exhibit B and System Conservation Implementation Agreement with Reclamation.

As previously noted, IID has a system conservation target of 103,000 AFY to meet QSA Transfer obligations. An additional 105,000 AFY is conserved under the IID/MWD Water Conservation Program (MWD investment into construction, operation and maintenance projects that conserve water) and 67,600 AFY from All-American Canal Lining for transfer to the Coachella Valley Water District. All of the measures utilized for conservation under these programs are completed and in place thus not included in future projects and only requiring operation and maintenance activities. The remaining reduction of up to 11,500 AFY for miscellaneous and Indian present perfected rights is not required to be from efficiency conservation and is satisfactorily met by the District every year. IID has several projects planned to help meet the water conservation goals over the next five-year planning period.

Planned New Voluntary Water Conservation Programs

IID will continue to implement its existing system and on-farm water conservation programs. In efforts to address new and additional conservation goals under the SCIA with Reclamation, the District adopted a hybrid seasonal, or rotational, fallowing program. The "Deficit Irrigation Program" was adopted by the IID Board of Directors in 2024 and began in August 2024. The DIP incentivizes growers to engage in the seasonal, deficit irrigation of forage crops over a 45-day to 60-day time period during the summer months of June through September, under normal implementation. The DIP is expected to be temporary, over a three-year period (2024-2026). Specifically, Alfalfa, Bermuda grass and Klein grass would be encouraged to delay irrigation for a minimum of 45 days and maximum of 60 days during a single, specified summer growing period. Implementation of the program requires environmental clearance and mitigation monitoring, as assessed under the California Environmental Quality Act and National Environmental Policy Act, a federally initiated environmental assessment. The anticipated conserved water would remain in Lake Mead for the benefit of the reservoir's elevation. In exchange, IID will receive funding for program participant compensation and other conservation initiatives. The local farming community has expressed their support of these temporary, voluntary measures.

Planned Water Efficiency & Conservation Projects

- Main Canal, Upstream Operational Reservoir
- Mid-lateral Operational Reservoir/Interceptor Projects (2 total)
- Lateral Intertie Projects (10 total)
- New & Rehabilitation of Seepage Recovery Sites
- Advance Automation of Flow Control and Measurement

Operational Reservoir Projects- Operational reservoirs allow for the temporary storage of water to accommodate changes in demand from canceled water order, rain events or other unexpected conditions. Since IID is unable to return any water previously ordered from Hoover Dam, the reservoirs function as a temporary "parking lot" until the water is needed again downstream. These operational facilities are able to manage and balance supply and demand in a manner that reduces operational discharge and conserves water. Reservoirs stabilize water delivery and make IID's delivery system more efficient. IID has a number of planned operational reservoirs, including small in-line facilities, mid-lateral reservoirs that are a part of an interceptor system and a regional main canal system reservoir that is proposed to be located upstream of IID's distribution system. These projects are expected to result in district-wide water conservation. **Table CW- 6** identifies the planned reservoirs expected to be completed within a five-year time frame and the estimated annual conservation yield.

Table CW- 6 Planned Operational Reservoirs & Estimated Conservation Yields

Operational Reservoir	Timeframe	Reservoir Maximum AF Capacity	Estimated Conservation Yield (AFY)
Upstream East Highline & AAC	Near-term	2,100 AF	15,000
East Highline North	Near-term	250 AF	1,500
Trifolium 11	Near-term	300 AF	1,500
West Side Main	Near-term	500 AF	3,000
Fern Canal Reservoir	Mid-term	250 AF	1,000
Central Main Reservoir	Mid-term	350 AF	1,500
Wisteria Canal Reservoir	Mid-term	250 AF	1,000
Multiple Mid-Lateral Reservoirs	Mid-term	(8 x 12 AF)	TBD
	TOTAL	**4,096 AF**	**23,500 AFY**

NOTE: Near-term is under five years; Mid-term is 5-10 years.

Intertie Projects -IID has multiple intertie projects planned for near-term and mid-term development that may, or may not, be tied to the aforementioned planned reservoirs. An intertie is a connection between two existing canals/laterals to prevent one of them from continuing into an operational discharge, or drain system. Interties may be lined canals or pipelines and may or may not be connected to temporary storage facilities (operational reservoirs).

Planned inter-tie projects are mostly constructed as piped connections to facilitate metering and monitoring of conserved water. Although there are over forty intertie opportunities, only the near-term projects with a completion date of under five years are listed in **Table CW- 7** and the estimated conservation yield annually.

Table CW- 7 Planned Intertie Project and Conservation Yields

Proposed Intertie	Timeframe	Estimated Conservation Yield (AFY)
EHL Lateral 7 to Pear Main	Near-term	420
EHL Lateral 8 to Pear Main	Near-term	400
Orient to Plum-Oasis	Near-term	800
Rose Canal to Rockwood	Mid-term	15,000*
Acacia Lateral 7 to Acacia Lateral 11	Near-term	*
Lilac to Rose Canal	Near-term	*
Acacia Lateral 9 to Roselle	Near-term	*
	Estimated Total Yield	16,620 AFY

*The Rose Canal to Rockwood Canal Project is a large cluster of interties with a 250 AF reservoir that as a group are anticipated to save a minimum of 15,000 AFY.
Source: IID Water Department, System Conservation.

Seepage Recovery Projects – The recovery of canal seepage from earthen main canals due to permeable soils, is accomplished through strategically placed dewatering pump (DP) systems. Implementation of seepage recovery projects within IID's distribution system began as early as 1947 along the AAC and along the East Highline Canal in 1967. Seepage recovery projects to meet QSA/Transfer Agreement obligations began in 2009. Through a process of seepage recovery, a vertical pump recovers the water and injects it back in to the main canal. The project sits are equipped with Siemens Flow Meters on discharge tubes. The metered discharge data is transmitted to the WISKI via IID's SCADA system. IID currently implements a total of 32 seepage interception sites for canal seepage recovery.

As of 2023, the 32 operational seepage recovery sites were producing 38,648 AFY of conservation efficiency savings. The total costs, through 2023, for all seepage recovery projects is estimated at $16 million with an annual operation and maintenance cost of $623,000, providing an attractive cost per acre-foot of approximately $36/AF. IID is planning for two additional seepage recovery projects with the next 5-year planning period.

Seepage Recovery Project, Before and After

d) Opportunities for Joint Water Efficiency & Conservation Programs/Services

Joint Agency Program and Project Partnerships. IID makes every effort to involve multiple stakeholders in its water efficiency projects and water conservation programs with a very successful track record. As previously noted, water efficiency projects and programs implemented throughout the District are paid for by, and in collaboration with, multiple stakeholders, including, but not limited to the Metropolitan Water District of Southern California (which is a multi-agency organization), San Diego County Water Authority, Coachella Valley Water District, and other related agencies for the generation of just under 500,000 AFY of conserved water. The U.S. Bureau of Reclamation has also entered into system conservation agreements with IID for the benefit of Colorado River system.

Joint Partnership with Private Developers. IID also partners with multiple in-valley non-agricultural project owners for the development of conserved water. Industrial/commercial water users may contract with IID for the development of conserved water. Under the IWSP, Developers may implement their own water conservation projects or agree to an annual Water Supply Development Fee for the contracted water volume of water projected to be needed for their development project. The collected funds are used solely to assist in funding new water supply projects to fulfill the projects' demands.

Joint Partnership with Agriculture Growers. The District, in partnership with the local grower community, responds to water supply requests from transfer commitments and new development, beyond what can be accommodated through system conservation and the existing TLCFP. The difference between available conservation and actual demand is assessed annually and fulfilled with a strategic budget to fund

the annual implementation of the OFECP. These joint opportunities provide farmers with capital to invest in water efficiency measures with long-term benefits in Imperial Valley and the broader region.

Joint Partnership with Power Department. Joint efficiency and water conservation opportunities are not just limited to water users. The IID Board of Directors developed a joint energy and power partnership for rural energy system distribution expansion into areas not previously served with power, for the benefit of on-farm efficiency conservation projects. The District has been collecting backfeed power service payments for a number of years from generating facilities located within IID's service area. These generators are interconnected to the transmission system operated by the California Independent System Operator and receive backfeed power service at transmission voltage-levels of 34.5 kV or higher to operate its generating facilities on the transmission system under the operational control of the CAISO instead of IID. Since the District has given up its exclusive right to serve these generators within IID's electrical service area, the Power Department assesses a backfeed power service charge for all energy produced by the generator. In addition to the backfeed power service payments, generators that opt out of receiving distribution station power service from IID are required to pay a one-time $1,000,000 limited waiver fee.

On March 4, 2014, the board directed that both the limited waiver fee and backfeed power service payments be held in a cash account and utilized solely to fund the expansion of the rural energy distribution system in support of on-farm water conservation projects. The benefit is both an increase in electrical service revenue from agricultural customers and an increase in conserved water from OFECP participation. The annual funding cap is limited to $200,000 per farm-unit and IID's cost-share is 85% of the electrical upgrade (not to exceed $170,000)

e) Phasing of Water Conservation Projects/Programs

All of the district's conservation projects are included in the Capital Improvement Plan which spans over a five-year period. Conservation programs and projects beyond five years are subject to change or expand depending on funding opportunities and availability.

Short Term Improvements (Under 5 Years)

- Upstream Operational Reservoir at East Highline Canal Project
- Canal Intertie and Interceptor Projects
- Automation of Check Structure Projects
- Deficit Irrigation Program
- On-Farm Efficiency Conservation Program
- Solar Temporary Land Conversion Fallowing Program

5-10 Year Improvements

- Multiple in-line operational reservoirs
- Continuance of OFECP and Solar TLCFP

10-15 Year Improvements

- Continue Development of Multiple in-line Operational Reservoirs
- Continuance of OFECP and Solar TLCFP

1. Mitigation for Water Efficiency & Conservation Efforts

IID should continue to pursue various means by which to maximize water use efficiency and conservation while maintaining adequate water services to the IID Water Service Area as a priority. The following mitigation measures are recommended for Water Efficiency and Conservation (WC):

WC-1 Continue to implement key elements of the Integrated Regional Water Management Plan and System Conservation Program as actions planned under the adopted Water Conservation Plan to fulfill obligations under the Quantification Settlement Agreement/Transfer Agreements.

WC-2 Explore financing mechanisms to construct the "not built" Quantification Settlement Agreement projects as a near-to-mid-term solution to provide up to 8,000 AFY for future non-agricultural uses.

WC-3 Review and track development of the in-valley, voluntary fallowing program that expands on, or modifies the Fallowing Program that ended in 2017.

WC-4 IID should continue to provide support to municipal purveyors responsible for developing their urban water conservation programs and coordinating regional efforts when resources are provided for this purpose.

ENERGY EFFICIENCY & CONSERVATION

IID is a longtime proponent of renewable energy. The Imperial Valley has abundant resources of solar, geothermal, hydroelectric, wind and other renewable potential. Recognizing that there are many choices and ways to procure renewable energy, the district procures almost all of its renewable energy from local resources as they contribute jobs and economic development in the communities served by IID. In this vein, IID has exceeded that target goals and the Power Department has a suite of ongoing energy efficiency and demand response programs with a record of helping both residential, commercial, and industrial customers be more efficient, avoid wasted electricity and save money.

1. Performance Standards for Energy Efficiency

Energy Efficiency & Conservation Standards- Consistent with Senate Bill 350, the Clean Energy and Pollution Reduction Act, passed in the 2015 California Legislative Session, the IID Power Department adopted energy efficiency standards under its 2018 Integrated Resource Plan which continue to be in effect under the 2024 IRP. The new IID adopted Energy Savings Target requires 100% of retail electricity sales to be zero-carbon by 2045, with interim targets of 44% by 2024, 52% by 2027, and 60% by 2020. The district's energy target contains the two categories MWh from Market Potential from Programs and MWh from Codes and Standards. The district must increase energy efficiency achievement in buildings by 50 percent (with special emphasis on participation from low-income communities).

Renewable Energy Standards- To reduce the carbon footprint caused by utility-wide emissions, California's Renewables Portfolio Standard was established by legislation in 2002. The mandate requires that all electric utilities procure energy generated by renewable resources into their portfolio. The district must meet Renewable Portfolio Standards which are targeted to reach 50 percent of total retail energy sales by 2030. This is equivalent to 50-75 MW of baseload energy and around 100-150MW of solar generation, or some other intermittent resource such as wind, with an annual capacity factor around 30 percent.

Emission Reduction Standards-The Global Warming Solutions Act (AB 32) mandates public utilities, such as IID, to reduce total company wide emissions to 1990 levels by 2020 and an 80 percent of 1990 levels reduction by 2050 – a state reduction of about 30 percent and a reduction of about 7-10 percent for IID. Greenhouse Gas Emission (GHG) standards also have to be complied with by the IID. The district adopted the target goal of GHG emission reduction to 40 percent below the 1990 levels. To meet this goal, IID must reduce GHG emissions to 1,100 lbs./MWh, on average. In the case of the IID, the reduction of overall organizational emissions will be mainly rendered through a rigorous renewable portfolio program already in progress by the IID Energy Resource Planning Unit.

2. Energy Efficiency Program Planning Adequacy and Analysis

Power Department Conservation Program

The 2003 SB 1037 requires public and private gas and electric utilities to first acquire all available energy efficiency and demand reduction resources that are cost effective, reliable and feasible before conventional generation, or other resources. IID offers a variety of energy conservation and design side management (DSM) programs intended, in part, to alleviate electric generation requirements and avoid expensive peak purchases of power on the market. Energy conservation programs are designed to reduce the total amount of energy used while DSM programs are designed to shift energy use from high cost periods to low cost periods and reduce the cost of supplying customers.

Most programs within IID's portfolio are conservation programs with the goal of reducing the customer's consumption and cost of energy. However, future programs may be designed to shift customer on-peak use to off-peak hours. Energy conservation efforts are managed and delivered through IID's Power Department. The following sections actively support energy efficiency, conservation and greenhouse gas emission reductions.

- **Power Administration Section** is responsible for the oversight and management of all operations, maintenance, engineering services, reliability and accountability for the Power Department. This section interfaces with the Board of Directors, general manager, and the public to ensure effective communication and proper administration of policies and procedures and oversees the Power Department Strategic Plan and ensures that all other sections and units within the department are meeting the established goals and objectives.
- **Power Operations & Resources Section** is responsible for the safe and reliable operation and dispatch of the district's generation, transmission, and distribution systems. Sub-sections focused on supporting energy efficiency, conservation or greenhouse gas emission reductions are as follows:
    1) ***Public Benefits and Regulatory*** -is responsible, amongst other duties, to support renewable energy development and to protect the balancing authority by leveraging existing assets. This sub-section designs and implements programs to encourage customer conservation as a cost-effective alternative.
    2) ***System Operations*** - is responsible for the safe and reliable operation and dispatch of the district's generation, transmission and distribution systems. System Operations is also responsible for monitoring NERC and WECC reporting requirements and submission of compliance filings.
    3) ***Power Supply & Trading*** - is responsible for aligning the Power Department's financial goals with its customer and system operations requirements.

4) ***Power Production***- is responsible for providing cost competitive, reliable and environmental compliant bulk electricity.

a) Inventory of Existing Energy Efficiency & Conservation Programs & Resources

Energy efficiency and conservation programs are designed to reduce the total amount of energy used while design side management programs are structured to shift energy use from high cost periods to low cost periods and reduce the cost of supplying customers. A brief overview of the existing programs and services is described under each focus area follows.

1) **Energy Efficiency Programs-** Improving energy use efficiency has been an important goal for the IID and in line with Statewide objectives. IID has worked aggressively to implement system-wide energy conservation measures to meet the needs of all client categories. The following is a list of some of the energy efficiency programs currently in place under the district's overall energy Conservation and Energy Efficiency Programs for residential and commercial rate customers:

Residential Programs

- ***Residential Weatherization Program-*** allows participating IID energy, residential customers to receive up to $1,000 in recommended energy saving services and equipment for their residence. The program is open to all IID residential customers on a first-come, first-serve basis. IID partners with a service provider that can evaluate and suggest a home's energy efficiency improvements.
- ***Energy Rewards Rebate Programs***- This program offers residential prescriptive rebates for qualified energy efficient measures such as air conditioners, ENERGY STAR® refrigerators, windows, attic insulation and pool pumps.
- ***Tree for All program***- provides customers with a free shade tree, planted to maximize energy savings.
- ***ReCharge***! **EV Charger Program** – IID now offers rebates of $500 to customers who purchase and install a Level 2 (240V) plug-in electric vehicle home charger. IID dedicates a web-page to the Program where interested parties can explore other potential incentives and tax credits as well: IID EVolve | Home.

Commercial Programs

- ***Customer Energy Solutions Program (CESP)***-CESP offers financial incentives to commercial customers intended to offset the cost to purchase and install qualifying energy efficiency measures. The measures must retrofit, replace, or upgrade, old equipment with new, energy-efficient technologies. IID offers technical assistance.
- ***Green Grants Program-*** is offered to non-profit organizations located in IID's service area. Funding is limited to energy efficiency/management upgrades and investments in renewable resources that are not covered under any other existing public benefit program offered by IID.
- ***Energy Rewards Rebate Program***- IID offers nonresidential customers prescriptive rebates for qualified energy-efficient measures. Measures must retrofit, replace, or upgrade, old equipment with new, energy-efficient technologies that meet and exceed the Title 24 standards. Qualifying product categories include programmable thermostats, HVAC equipment and motors.

2) **Renewable Energy Program -** The renewable energy industry represents a significant economic development opportunity within the IID service area. The bulk availability of renewable energy generation comes from intermittent resources such as solar and wind-based generation. Since IID's service territory has sufficient supply of available land, transmission, and sunshine, solar-based generation facilities are expected to increase over the next 10-20 years. **Figure 7** provided a breakdown of IID's current renewable resources.

   To help customers fully benefit from investments in various renewable options, IID currently offers the following retail renewable programs for customers interested in meeting all, or a portion, of their load with a renewable resource:

   - ***Green Energy Rate Program***-The Green Energy Rate Program will allow customers to designate how much renewable energy they wish to be served with. Any customers (with exception of those who have installed on-site renewable systems, or wholesale power customers receiving standby service) who elect participation in the new Green Energy Rate Program, can choose to be served with an even greater percentage of renewables, up to 100 percent. The program had its full first year of operation at end of 2019. It is estimated that the program will increase customers' per kilowatt-hour rate by 0.05 to 0.2 cents (June 2025). The monthly rate will fluctuate based on IID's cost to procure renewable resources. As of June 2025, no customers were actively enrolled, thus there are no current contributions to IID's renewable portfolio.

- ***Net Energy Metering Program***- Net Energy Metering (NEM) is a program that was designed to benefit IID customers who generate their own electricity using solar, wind, biogas, fuel cell, or a hybrid of these technologies. The program included generating facilities up to 1MW and was offered on a first-come, first-served basis. IID's NEM program capacity is 50.2MW, five percent of IID's peak demand. As of the end of 2023, the NEM program was fully subscribed.

- ***Net Billing Program***-The Net Billing Program, successor to the Net Metering Program, extended the Net Metering Program by an estimated 9.6MW to allow for additional customer participation. The program paves the way for new solar development while at the same time reducing cross-customer subsidization between those with and without solar.

- ***Feed-In Tariff Program***- The tariff provides a simple mechanism for small renewable generators (less than 3MW) to sell power to the utility at predefined terms and conditions, without engaging in contract negotiations. The Program cap is estimated at approximately 14 MW; Generating Facilities participating in the Feed-in Tariff program may not offset load at the site/facility nor are they eligible for any other IID for renewable technologies program (i.e., net metering rate, virtual net metering rate, etc.). As of the end of 2023, there were five projects in the FIT program.

3) **Emission Reduction Program-**The proposed Cap-and-Trade Program establishes a declining annual aggregate emissions limit for regulated sources and provides rules for the sale of emission allowances pursuant to AB 32. The Program then allows utilities, manufacturers and other emitters to "trade" pollution permits, or allowances, among themselves. IID's amount of allowed emissions is not decreasing. This is mainly due to the methodology that was used by the state and Southern California Public Power Authority (SCPPA) members. The SCPPA is a joint action agency comprised of the cities of Los Angeles, Glendale, Burbank, Cerritos, Vernon, Pasadena, Anaheim, Riverside, Azusa, Banning and Colton and the IID (the only non-municipal member of SCPPA). The distribution of allowances factors in growth and utility resource portfolio trends. Therefore, IID's allowances are fairly flat and this is mainly due to IID's higher than normal forecasted load growth rate and the associated resources that are in place to supply the energy for that growth. The following is an emission reduction program initiated in 2018:

E-Green Program-The IID initiated a process to bring inexpensive utility scale solar to its low-income residents and the ability to "go-green" to individual households. The eGreen Program was customized to bring solar energy to low-income families

while benefiting from IID's ability to acquire attractive energy pricing. eGreen allows IID's customers to reap the benefits of clean, renewable solar power without the need for on-site installation. The eGreen Program will allow all IID customers to benefit from solar without concern of property ownership, structural integrity, or financial ability. It enhances the ability for all IID customers to benefit from solar. IID entered into a 23-year power purchase agreement with Citizens Energy Corporation for 30 Megawatts of solar energy to serve approximately 15,000 low-income electric customers with a beginning cost of $29.75 per MWhr and a start date of June 2019. Citizens Solar is contributing approximately 10 additional MWhrs to IID under a Low-Income solar Contribution Agreement, bringing the blended cost of the 30MW to approximately $20 per MWhr.

b) Adequacy of Energy Conservation & Emission Reduction Programs

Energy Conservation Program Adequacy-The numerous energy efficiency programs implemented by the IID over recent years have proven popular and successful in contributing to energy conservation. Gross savings reported from conservation programs implemented by the district in 2019-2021 saved participating customers over 35,000,000 kWh and a cumulative verified net savings of over 35,000 MWh. The most successful programs, in terms of energy saved, has been the Custom Energy Solutions Program (CESP) and the Energy Rewards Rebate Program. Overall reported savings were a result of various measures within the residential and commercial sectors. Overall verified gross savings realized through the projects were at 92 percent of expected savings. It is recognized, however, that the Weatherization Programs were not evaluated during this time period.

Renewable Energy Program- Since 2018 IID has contracted with four geothermal projects for a total of 105 MW. IID has met the mandate to achieve California's RPS target of 33% of delivered energy coming from renewable resources by 2020 and is on target to reach 60% of delivered energy sales by 2030 and beyond as required under SB350. This is equivalent of approximately 370 MW by 2030, increasing to 960 MW by 2035 of solar generation, or some other intermittent resource such as wind. In 2018, the district was within the 35 percent target for IID's overall energy generation delivery to customers coming from renewable energy sources. IID was on target (41%) in 2023 to meet the 2025 goal of 44% of its total energy deriving from renewable resources.

Emission Reduction program Adequacy-In an effort to meet annual GHG emission standards IID retired its ownership in a portion of the San Juan Generating Station, Unit 4 (SJGS) in 2018, reducing emissions throughout the last planning period. This was a coal-fired plant in New Mexico that had relatively high GHG per MWh of generation, approximately 2,400 lbs. per 1MWh compared to the legislated standard of 1,100 lbs./MWh. The 106 MW baseload capacity from San Juan has been fully replaced with

renewable generation. In 2024, the district initiated the process of also retiring its owned portion of the aging Yucca Steam Plant in Arizona and repowering it within the next five years. Repowering options include hybrid solutions such as fast-start gas turbines with or without battery storage. By 2035, all thermal units are expected to operate on a blend of hydrogen and natural gas. These changes in addition to new renewable energy and storage contracts have been procured by IID to facilitate compliance with existing and upcoming clean energy targets of 90 percent of retail sales by 2035.

c) Future Demand for Energy Efficiency & Conservation Facilities/Improvements

Energy Conservation Targets - By 2030, IID expects to reach new energy efficiency targets of 26,960 MWh. The planned energy efficiency targets for the next seven years are noted in **Table CE- 1 IID Board Adopted Energy Savings Targets** IID expects to accomplish these targets with incorporation of at least three new energy savings programs within the planning period.

Table CE- 1 IID Board Adopted Energy Savings Targets

Year	MWh (Market Potential Programs)	MWh (Codes & Standards)	New EE Targets (MWh Total)
2024	12,941	25, 752	**38,693**
2025	13,156	24,841	**37,997**
2026	13,172	22,933	**36,105**
2027	13,256	21,152	**34,408**
2028	13,098	18,740	**31,838**
2029	13,163	16,398	**29,561**
2030	13,167	13,793	**26,960**

Source: 2024 Draft Energy Integrated Resource Plan.

Renewable Energy Targets

As previously noted, future renewable energy targets are at 370 MW by 2030, increasing to 960 MW by 2035 and 1,225 MW by 2045. IID plans to increase its renewable energy portfolio predominantly with solar due to wind and solar limitations within the near- and mid-term planning periods. New solar capacity is expected to steadily increase from 2027 through the mid-2030s. The planned solar capacity, when added to the portfolio would meet the 2030 RPS target of 60% (measured as a percentage of retail sales) and the subsequent zero-carbon targets of 90% retail sales by 2035, 95% of retail sales by 2040, and 100% of retail sales by 2045.

Emission Reduction Targets. Implementation of the aforementioned programs and initiatives will enable IID to also meets its emission reduction targets. As noted, the fossil fuel capacity in IID's overall proposed IRP can run on renewable hydrogen blended with natural gas. Further, El Centro Generating Station (ECGS) is developing project alternatives to treat and reuse wastewater generated from power generation operations, aiming to eliminate surface water discharge and approach a zero liquid discharge facility.

Planned Energy Efficiency & Renewable Energy Projects

- Hell's Kitchen Geothermal Project (50 MW)
- Brawley Solar (49.9 MW)
- Big Rock Solar Farms (200 MW)

Planned, New Energy Efficiency & Emission Reduction Programs

- Refrigerator Recycle Program
- Light the Way Program (LED Lighting for Sports Facilities Replacement)
- Festival of Lights Program (LED Lighting for Holiday Lighting Replacement)

d) Opportunities for Joint Energy Conservation Programs/Services

IID's Path 42 Transmission Line Rebuild Project will rebuild two existing 20.6-mile transmission lines in the Coachella Valley. The rebuild of the Coachella Valley-Ramon transmission line, in conjunction with neighboring Southern California Edison's upgrade of its portion of Path 42, will address the "most restrictive" element in transmission in renewable energy-rich Southern California. By upgrading from single to double conductor per phase, the increased transmission capacity will reduce congestion and enable the efficient flow of green energy to and from IID's service area.

Additional opportunities exist with private renewable energy developers. As previously noted, IID anticipates coordination with private geothermal developers for an energy export solution via a new transmission line originating in Imperial Valley with the goal of maximizing IID's ability to export energy generated by Independent Power Producers (IPP's) out of the District's BA.

e) Phasing of Energy Efficiency & Conservation Projects/Programs

Short Term Improvements (Under 5 Years)

- Multiple Transmission Lines in IV to Accommodate Solar Generation
- Additional grid scale storage devices
- Geothermal Strategic Transmission (CTR)

- Hydroplant Refurbishment Drops 1, 2, 3, 4, & 5
- Yucca Steam Plant Repowering
- El Centro Unit 4 Repowering
- Electric Vehicle Investment

Mid-Term 5-10 Year Improvements

- Pilot Knob Hydroplant Rehabilitation and Major Refurbishment
- New Resource Assessment and Development
- Salton Sea Strategic Transmission

Long Term 10-15 Year Improvements

- Salton Sea Renewable Energy Initiative

3. Mitigation for Energy Efficiency & Conservation Efforts

IID should continue to pursue various means by which to maximize energy efficiency and conservation benefits while maintaining adequate energy services to the IID Service Area as a priority. The following mitigation measures are recommended for both Energy Efficiency and Conservation (EC):

EC-1 Explore seasonally based resources, especially renewable resources as much as possible.

EC-2 Continue to implement conservation and demand-side energy management activities.

EC-3 IID should further investigate the option of self-managing a "build and own" structure for a solar plant and other generation facility technologies on IID-owned land as opposed to paying a developer to manage the project development.

EC-4 Continue to implement IID's hedging program to mitigate risks anticipated from expected natural rise of energy and gas costs as well as emissions and renewable costs.

EC-5 Develop a program for emissions trading and renewable energy products under the Risk Management Policy to empower IID to further ensure budgetary certainty and stabilize consumer rates.

EC-6 Continue to enter into power supply agreements from geothermal generation and solar generation to meet Renewable Portfolio Standards and Green House Gas emission goals.

E. ADMINISTRATION SERVICE AND SUPPORT FACILITIES

As previously noted, the Imperial Irrigation District has two primary departments, the Water Department and the Power Department. IID operates five additional support service departments: Executive, General Services, Information Technology, Finance and Human Resources. IID administrative facilities include all office buildings that house administrative staff and provide general administrative and support services for the efficient delivery of water services and energy services to its client base. Examples of administrative services include management staff, clerk services, promotions of special events, management and direction of planning and development services, utility billing and collection, procurement and contract administration and other administrative functions of the district described under these five support departments as summarized below along with their corresponding business sections:

Executive Department-The Executive Department supports internal and external public relations and contains nine executive sections, each with numerous administrative responsibilities as noted below:

- **Board of Directors Section** performs major district functions such as defining IID goals and objectives, acting as the custodian of IID property and resources, establishing IID policies, reviewing all IID operations and employing IID executive management.
- **Internal Audit Section** is in charge of the district's audit and at times the investigation functions. The audit schedule is prepared by the Chief Internal Auditor during the fourth quarter for the following year. Audits can also be requested at any time by the Board of Directors.
- **General Manager's Section** operates under the direction of the Board of Directors. This section develops and implements overall goals, objectives, plans, policies and organization of the Imperial Irrigation District.
- **General Counsel's Office Section** serves as the General legal Counsel for the district and directs and controls all legal functions, claims and litigation activities, and activities of retained outside counsel.
- **Public Affairs & Legislative Activity Section** works under the guidance of the general manager's office to ensure the district's public affairs and legislative activities are representative of the board's policy priorities and programs and oversees all communication to its customers and key stakeholders and local, state and federal elected officials as well as membership associations.
- **Reliability Compliance Section** is responsible for monitoring North American Electric Reliability Corporation (NERC) and Western Electricity Coordinating Council (WECC) reporting requirements as they relate to the district.

- **Enterprise Risk Management Section** is responsible for the administration of a comprehensive risk management program, including risk identification and evaluation and the design and implementation of appropriate risk mitigation strategies. This section has risk oversight for projects, operations, the merchant function, insurance, and new initiatives. It also provides redundancy for the treasury function.

- **Real Estate Section** is responsible for the administration of all district real estate activity. Functions consist of the acquisition, disposition, and maintenance of sustainable activities of district lands and facilities, including Western Farm Lands. Services include right-of-way and easements, building leases and agreements, encroachments and permissions, quitclaims and deeds and Salton Sea issues. This Section is also responsible for ownership records as well as maintaining records of the district boundary and service area.

General Services Department-The General Services Department provides numerous support services, primarily to internal staff, and contains nine sections, each with responsibilities as noted below.

- **GS Administration Section** provides overall support and management of the activities of General Services' Department; Facilities Management, Fleet Services, General Services Asset Management, and Supply Chain Management: Purchasing, Contracts and Materials and Stores. General Services provides management and maintenance of district physical and rolling assets, and is responsible in accordance with policy for the central procurement of goods and services in addition to the storage and distribution of materials which support all IID operations.

- **Fleet Services Section** consists of four support units: Machine/Welding Shop, Heavy Equipment Shop, Auto Shop, and Service Station. They provide the services that support the company's transportation needs for the rolling stock of fleet vehicles, off-road heavy equipment, sump pumps, generators, compressors, portable pumps, utility and equipment trailers and tools.

- **Facilities Management Section** is responsible for the administration, engineering, planning, maintenance, construction and repair of over 700,000 SF of gross building space which includes offices, shops, warehouses, service stations and other use buildings throughout the district. The section is responsible for all levels of logistics including HVAC, plumbing, construction, fire protection system, doors, keys, locks and network cat 5 installations. This Section is also responsible for janitorial and landscape services throughout district facilities.

- **Purchasing Section** procures the district's materials and outside service needs directed by the Purchasing Policy. This Section processes requisitions and reservation needs for Imperial and La Quinta network projects, maintenance orders and overhead expense cost centers. They create, standardize, disseminate and administer formal bids, requests for quotations/proposals, and informal quotes consistent with established solicitation process, purchasing policy and IID procedures and applicable laws.

- **Contract Administration Section** provides services to departmental personnel in drafting, negotiating, and administering resource contract needs, professional service agreements, and construction contracts. They assist departments in assembling and evaluating formal solicitation packages, performing project risk assessment and ensuring all requirements are met in accordance with IID policies and procedures.

- **Asset Management Section** is responsible for managing the General Services Asset Management Program, primarily for Facilities Management and Fleet Services sections. This section provides strategic direction, reporting on program initiatives and manages the department's capital projects, facilities and equipment by promoting proactive maintenance and capital renewal.

- **Materials Resources and Dispersal Section** is responsible for the receipt, issuance and storage of all materials purchased by the district. Material Resources staff are responsible for "first responder" hazmat responses, and dispose of all obsolete, scrap and other materials that are deemed to be of no further use to the district.

- **Regulatory and Environmental Compliance Section** provides regulatory compliance development, implementation and monitoring services that meets the expected goals of complying with mandated regulatory agency requirements. This Section provides environmental assessment and permitting for all district projects and reviews external environmental documents for potential impacts to the district and consults with outside agencies on behalf of the district.

- **Hazmat Section** provides regulatory compliance services for all district departments. These services include regulatory assessments, oversight and auditing for all district facilities and projects, consultation with regulatory and resource agencies, hazardous materials and waste identification, including handling, storage and disposal, emergency response and regulatory training.

Information Technology Department-The Information Technology Department implemented strategic organization and now contains thirteen sections, all in support of IID operations and each with responsibilities as noted below.

- **Information Technology Management Administration Section** - The primary responsibility of this group is to manage the department's resources and to provide

strategic direction, report on department initiatives and manage the district's Information Technology Systems.

- **IT/OT Infrastructure & Operations Section -** This section is comprised of the Network Support unit which provides IID technology users support services for desktop PCs, laptops, tablets, IP telephones, multifunction printers, smartphones, TV/monitors and projectors along with network connection and firewall protection services. Specialists provide design, configuration, administration, maintenance and support of Local Area Networks (LAN), Wide Area Networks (WAN), Wireless Local Area Networks (WLAN), Virtual Private Networks (VPN), Voice over Internet Protocol (VoIP) technologies, Water Control Center network and Energy Management Systems network support. Focused attention is also towards network resiliency and meeting reliability compliance security measures for documenting NERC CIPS standards. Evidential documentation and monitoring for pertinent Compliance standards are all maintained up to date for Western Electrical Coordinating Council (WECC) audits.

- **Information Technology Services Support Section –** The major area of responsibility for this section is to serve as a first point of contact for the district's information technology needs. A Service Desk is a strategic asset to the district, and is used to identify areas of improvement to help keep IID employees performing at the highest possible level.

- **GIS Section –** This section is responsible for developing and adhering to consistent business practices and processes throughout the organization to meet customers' needs. The unit's mission is to: 1) Develop strategies to align IID with enterprise goals set by board and general manager; 2) Develop and adhere to consistent business practices and processes throughout IID to meet customers' and staff needs; 3) Provide a robust and high-quality geographic information system that empowers users to efficiently access, manage, maintain and share accurate reliable and consistent geographic data , easily and quickly analyze and obtain information in various formats on demand; and 4) Create and implement an applications strategy to address specialized application requirements including real time, mobile and responsive application design.

- **EMS/CIPS Compliance Section -** This section is responsible for the operation of the computer systems used for the control, operation and scheduling of the electric system including the operation of the automatic generation control (AGC), energy trading and accounting systems, NERC electronic tagging system and other computer hardware and software. EMS is responsible for NERC CIPS compliance for Power Department's System Operations Center (SOC).

- **Customer Applications Section-** The Customer Applications Support section is

responsible for providing Functional and Technical IT support to the Meter-To-Cash (M2C) business processes in the context of SAP and other Third-Party system applications. This section is also responsible for the Analysis, Design, Configuration, Development and Testing of application solutions such as, but not limited to Billing, Credit and Collections, Payment Processing, Call Center Operations, Field Services and Device Management to support our AMI/AMR infrastructure. This section also plays a critical role in Continuous Process Improvement initiatives and the associated project implementations in order to meet the needs of ongoing Business Unit operations.

- **Development & Portals Support Section** provides management support, standards, methods, and coordination of application development to help improve, or automate business processes. The section proposes testing methods for new or enhanced applications and design application solutions and interconnections improvements to enhance functional area processes and reduce costs. This section diagnoses, fixes, maintains, designs, installs, tests, and develops computer applications and interfaces between different computer systems.

- **Corporate Infrastructure Engineering Section** is responsible for the engineering design, strategic alignment, lifecycle management, security and administration of all server-based computing and network systems. This Section is also responsible for the management of the data center and for the delivery of technical support to IID technology users and to certain contracted partners utilizing IID's technology infrastructure. The section also provides tier two and above desktop support, which includes deployment and support of applications, workstations, monitors, laptops, UPS devices, and other associated peripherals. Enterprise systems/environments include SAP, GIS, Netweaver, WIS, SharePoint, Intranet, Oracle, File & Print services, servers, email system, backup & recovery, user identity management, physical access systems, and other application servers located in the IID's IT data centers. this section additionally provides technical, architectural engineering and systems engineering support to the Power Systems Operations Center and associated facilities.

- **Work and Asset Management Applications Section –** This section provides management support, standards, methods and coordination to support Work & Asset Management related applications. The section also develops testing methods, process improvements, SAP configuration, and design of application improvements to enhance functional area processes and reduce costs. This section also diagnoses, fixes, maintains, designs, installs, tests, and develops computer applications, document management and third-party computer applications.

- **Enterprise Applications Section –** This section manages the definition, design, configuration, development, testing, implementation and on-going support of new,

or improved, existing enterprise applications and systems. This section provides management support, business analysis, operational assessments, process documentation, technological and functional solutions, recommendations, training and change management to support the design and implementation of application and/or process improvements to enhance productivity.

- **Finance & HR Applications Section -**This section provides management support, business analysis, process documentation, technological and training for the development, maintenance and support of existing and new business systems and applications to help improve the district's processes and enhance productivity.
- **Telecommunications Section** provides SCADA and data communications for substations, generation facilities and interconnections, and the water department canal systems; provides communication networks for system protection circuits; installs and maintains generation and interconnect meters; upgrades and maintains the advanced metering infrastructure field area networks; upgrades and maintains the two-way radio system, telephone, video surveillance and substation security systems.
- **Records Management Section** is responsible for the administration of company-wide records management activities, mail services and electronic document management services and provides efficient and excellent service to IID's internal and external customers.

Finance Department- The Finance Department contains six sections, providing services for IID operations as well as internal and external customers. The responsibilities of each section are noted as follows:

- **Chief Financial Officer Administration Section** is responsible for the administration of the Finance Department including controlling, accounting, treasury, financing, budgeting and enterprise risk management.
- **Business Systems & Support Section** provides business analysis, operational assessments, process documentation, technological and functional solutions recommendations, training and change management to support the design and implementation of applications and for process improvements to enhance productivity to the Finance Department.
- **Treasury Section** is responsible for IID's cash management and investment and objectives include investing IID's cash safely and in conformance with IID's investment policy and Government code through monitoring, managing, projecting and reporting the district's operating cash requirements to ensure the district's liquidity needs are met.

- **General Accounting Section** is responsible for IID's general accounting, payroll, accounts payable and objectives include creating, maintaining, balancing and reporting the district's general ledger and financial statements, disbursing accounts payable and payroll funds accurately and in a timely manner.
- **Enterprise Budget, Financial Performance & Rates Section** is responsible for budgeting, financial and economic analysis, controlling and process analysis and rates and contracts functions. All study findings and recommendations are made to the Board of Directors and public.
- **Customer Service Section** is responsible for the meter to cash processes, including bill print, mail, call center, credit and collections. This section also handles court subpoenas, liens, bankruptcies, bad debt, works with agencies for customer funding and monitors/contacts delinquent commercial accounts for payment or disconnect.

Human Resources Department-The Human Resources Department contains nine sections, primarily with internal support services. The Human Resource responsibilities are noted below for each section.

- **HR Administration Section** manages functions, activities and personnel engaged in employment and compensation, training and employee development, employee benefits and workers' compensation, human resource records and employee relations, conducts human resources research studies and directs the maintenance of personnel files.
- **Employee Relations Section** is responsible to provide professional human resources services to both internal and external customers. In addition to employment relations and training they are responsible for compensation management, Affirmative Action and labor compliance with state and federal regulations. The section is responsible for payroll records, statistical reporting, mandated reports and surveys and responding to discrimination complaints and assisting legal with litigation and responding to unemployment insurance claims.
- **Recruitment and Selection Section** is responsible for the administration of all recruitment and selection activities including screening applications, reviewing personnel files, administering tests, interviews, reference checks and detailed background checks to all initial hires.
- **Business Processes Unit** has the main responsibility to lead business project assignments and analyze business functions to determine computer system application requirements, and improve business processes, application design, test and implementation as well as payroll records including HRIS, statistical reporting, costing and controlling of District staffing, submitting mandated reports and surveys to state and federal agencies providing documentation to implement and support the Human Resources Department.

- **Employee Benefits and Disability Services Section** is responsible for the administration of all district health, retirement and benefit plans along with the Integrated Disability Management Program. The staff works with plan administrators, carriers, consultants, advisory groups, management, the Board of Directors, employees, supervisors, retirees, dependents, legal counsel and others to provide information and services.
- **Personnel Development Section** administers and coordinates all personnel development functions for the district. The section is responsible for tuition reimbursement, software instruction, apprentice programs, academic and career counseling and planning and similar services.
- **Safety Services Section** is responsible for workplace safety, minimizing district liability as it relates to accidents, illnesses and injuries and reducing accidents and injuries. This section assists and trains supervisor in performance of their safety related duties and coordinates Safety committee activities and over 100 mandated programs and over 100 certifications.
- **Security Services Section** ensures the district meets physical security portions of the applicable policies and regulations, it investigates all incidents involving property damage, theft, vandalism, or any other activity requiring investigations, and oversees and maintains drug and alcohol testing programs. It also emphasizes the Revenue Protection program on meter tampering/energy theft.

1. Performance Standards for Administration Services & Facilities

Administrative Personnel-Most public agencies/jurisdictions adopt administration service standards based on personnel (full-time employee or FTE) per population served. The performance standard for providing administrative personnel is generally established at a range of 0.50 to .75 FTE per 1,000 in population served. IID's performance standard for administrative personnel has been pre-established at .75 FTE per 1,000 residents served. Based on the 2023 estimated population of 420,778, a total of 315 FTE is required in order for IID to meet this performance standard, calculated as follows:

.75 FTE	***x***	***Population Served /1,000***	***=***	***Total 2024 FTE Demand***
.75 FTE	*x*	*420,778/1,000*	*=*	*315 FTE*

Administrative Facility Space-Generally, a performance standard for administrative facilities ranges from 500-600 square feet per 1,000 in population served. Management determined that the 2018 facility space was adequate to serve the existing populations and therefore, the performance standard for administrative facilities for IID was established at that time at 450 square feet of building space per every 1,000 of population served. Based on this pre-established standard, the current demand for administrative facilities is 189,350 SF as calculated below.

450 SF	***x***	***Population Served/1,000***	***=***	***Total 2024 Admin Space Demand***
450 SF	*x*	*420,778/1,000*	*=*	*189,350 SF*

The building area available per full-time employee must also be adequate. The general rule of thumb is to allow anywhere between 125 and 225 square feet of usable office space per person. IID completed an assessment of space requirements in July of 2012[24] which recommends a range of space between 120 and 360 square feet of usable office space per employee that varies by position and/or title. The Standard for IID administrative staff was thereby established at 125 SF of usable office space per administrative/support FTE which includes all of staff within the Executive, Human Resources, Information Technology, Finance and General Services Departments. This performance ratio will be applied when examining each of the departments independently, but not to the section levels.

125 SF	***x***	***Admin FTE***	***=***	***Building Space Demand/Department***

2. Administration/Support Facility Planning and Adequacy Analysis

An inventory of the existing IID Administrative and Support Facilities owned, or leased, by the Imperial Irrigation District is presented herein, as well as the future demand for administrative facilities and their projected phasing schedule. The purpose of this analysis is to determine if the existing facilities are adequate in size for the existing and projected future demand. The condition of the existing facilities is not examined in this Service Area Plan.

a) Inventory of Existing Administrative/Support Facilities

IID Administrative and Support Facilities are located in numerous communities throughout Imperial and Riverside counties. The administrative facilities in 2018 consisted of a total of 189,912 square feet and increased to 191,442 square feet by 2024 as noted in **Table A- 1.** The facilities support a total of 500 employees in 2024, a

[24] Final Report of Space Requirements HQ Facilities Development Program Management Project by Griffin-Lyon Program and Construction Managers, LLC., July 18, 2012.

difference of approximately -13% from the 463 full-time equivalent employees in 2018. There are additional common areas that are shared with the Water and/or Power Departments and those are excluded from assessment.

Table A- 1 Administration and Support Facilities Inventory

Department	2018 Total Dedicated Office Space SF	2024 Total SF	2024 Total Dedicated Office Space SF
Executive	11,167	14,375	12,058
General Services	19,098	25,465	24,988
Information Technology	24,469	25,486	24,691
Finance	15,398	16,195	15,398
Human Resources	15,421	15,934	14,191
Total SF	**85,553**	**97,455**	**91,326**
Exclusive Admin Common Areas	**0**	**93,987**	**0**
Total Administration SF	**85,553**	**191,442**	**91,326**

Source: IID General Services staff, Building Inventory and Dedicated Office Space March 2024.

Total Administrative Personnel per 2024 Budget by Department (500 FTE)

Executive Department Personnel 2024 (48 Total Positions):

- Board of Directors (5 positions)
- Internal Audit Section (4 FTE)
- General Manager's Section (4 FTE)
- General Counsel's Office Section (8 FTE)
- Public Affairs Section (13 FTE)
- Reliability Compliance Section (4 FTE)
- Enterprise Risk Management (1 FTE)
- Real Estate Section (9 FTE)

General Services Department Personnel 2024 (147 Total Positions):

- Administration Section (4 FTE)
- Fleet Services (50 FTE)
- Facilities Management Section (32 FTE)
- Purchasing Section (13 FTE)
- Contract Administration Section (6 FTE)
- Asset Management Section (9 FTE)
- Materials Resources and Disposal Section (24 FTE)
- Regulatory & Environmental Compliance Section (4 FTE)
- Hazmat Section (5 FTE)

Information Technology Department Personnel 2024 (129 Total Positions):

- Management Administration Section (8 FTE)
- Networks & PC Support Section (10 FTE)
- GIS Section (10 FTE)
- EMS CIPS Compliance (15 FTE)
- Customer Support Center Section (5 FTE)
- Customer Applications Section (4 FTE)
- Development & Portal Support Section (7 FTE)
- Corporate Infrastructure Engineering Section (13 FTE)
- Work and Asset Management Applications Section (5 FTE)
- Enterprise Applications Section (2 FTE)
- Finance & HR Applications Section (4 FTE)
- Telecommunications Section (33 FTE)
- Records Management Section (13 FTE)

Finance Department Personnel 2024 (133 Total Positions):

- Chief Finance Office Administration Section (5 FTE)
- Business System Support Section (3 FTE)
- Treasury Section (2 FTE)
- General Accounting Section (11 FTE)
- Enterprise Budget, Financial Performance & Rates (9 FTE)
- Customer Service Section (103 FTE)

Human Resources Department Personnel 2024 (41 Total Positions):

- Administration Section (2 FTE)
- Employee Relations Section (7 FTE)
- Recruitment and Selection Section (5 FTE)
- Employee Benefits & Disability Section (7 FTE)
- Personnel Development Section (4 FTE)
- Safety Services Section (6 FTE)
- Risk Management/Security, Claims and Investigations Section (10 FTE)

Total Admin/Support Vehicles per 2024 Budget (169 Total Vehicles):

- Executive Department - 13 Total Vehicles
- General Services Department - 60 Total Vehicles
- Information Technology Department - 42 Total Vehicles
- Finance Department - 26 Total Vehicles
- Human Resources Department - 19 Total Vehicles

b) Adequacy of Existing Administrative/Support Facilities

Administrative Personnel- The performance standard for providing administrative personnel was established at a minimum of .75 FTE per 1,000 in population served. Evaluation of this standard would then be based on the current level of administrative staff (500 FTE) per population served by the district (420,778), divided by 1,000. The total population within the IID Service areas (water and energy service areas) was calculated using Department of Finance data and discounted proportional share of

Coachella Valley communities not entirely served by the IID. Per 2024 conditions, IID exceeded the established performance standard for administrative personnel of .75 FTE per 1,000 in population served as noted below:

Total Admin Staff	***÷***	***Population Served/1000***	***=***	***Performance Level***
500 FTE		420,778/1,000		1.19 FTE

Administrative Facility Space-The performance standard for administrative facility space was established at 450 square feet of building space per every 1,000 of population served. The existing and dedicated administrative space of 97,455 SF coupled with an additional 93,987 square feet of common areas that are shared only by administrative staff, slightly exceeds the established performance level. Not all common areas were accounted for under this assessment (power department and water department administration facilities) because they are not exclusive to administration/support departments.

Total Building Area	***÷***	***Population Served/1,000***	***=***	***Performance Level***
191,442		420,778/1,000		455 SF

Office Space per Full-Time Employee- Adequacy of building area is supported by the level of dedicated (usable) office space per full-time employee. The dedicated and usable office space available per full-time employee was assessed against the 125 SF per FTE standard, District-wide for administrative facilities as a whole. It has been determined that the office space available for the 500 administrative support employees exceeded the established standard in 2024 providing an average of 183 SF per FTE. The findings were determined by taking all Administrative/Support Services Department office space in 2024[25], excluding all common areas, and dividing it by the full tally of administrative/support staff for the respective year:

Total Usable Office Space	***÷***	***Total Admin Staff***	***=***	***Space Per FTE***
91,326 SF		500 FTE		183 SF/FTE

The available office space per employee standard was has also been applied to each independent administrative department, at its respective staff level, to identify the adequacy of office space within each given unit. The Finance Department is the only unit demonstrating a slight deficiency at an average of 116 SF per employee. The 2024 findings are summarized in **Table A- 2** and in the narrative that follows.

[25] Office Space was provided by General Service Staff after discounting unusable space and storage facilities from total building area. The feasibility of future space conversion is not taken into account at this time.

Table A- 2 2024 Office Space Adequacy for Administrative and Support Staff

Department	Total SF of Dedicated Office Space	Total Department FTE	SF of Usable Office Space Available Per FTE
Executive	12,058	48	251
General Services	24,988	147	170
Information Technology	24,691	129	191
Finance	15,398	133	116
Human Resources	14,191	41	346
Total 2024 SF	**91,326**	**498**	

Source: IID General Services staff, Building Inventory 2024 and Dedicated Office Space March 2024 and FTE Data from Adopted 2024 Budget.

Executive Department (48 Total Positions):

There are 48 Full Time Equivalent Employees in the Executive Department operating under 14,375 SF of administrative facilities. Of this space, only 12,058 SF is usable office space, which is the equivalent of 251 SF of office space per employee. Using the performance formula established of 125 SF of office space per FTE, the Executive Department facilities are adequate containing a substantial surplus of administrative office space to accommodate future growth.

Existing Executive Department Office Space – Current Demand = Adequacy

12,058 SF – 6,000 SF Demand = 6,058 SF Surplus

General Services Department (149 Total Positions):

There are 147 Full Time Equivalent Employees operating in the General Services Department under 25,465 SF of administrative facilities. Of this space, only 24,988 SF is dedicated office space which is the equivalent of 168 SF of building space per employee. Using the performance standard of 125 SF of usable office space per FTE, the existing demand for General Services administrative office space is above satisfactorily and demonstrated a 2024 surplus of 6,613 square feet. This department also shares over 29,000 SF of common areas exclusive to administrative services.

Existing General Service Office Space – Current Demand = Adequacy

24,988 SF – 18,375 SF Demand = 6,613 SF Surplus

Information Technology Department (129 Total Positions):

There are 129 Full Time Equivalent Employees operating in the Information Technology Department under 25,486 SF of administrative facilities. Of this space, only 24,691 SF is dedicated office space which is the equivalent of 191 SF of dedicated office space per employee. Using the performance standard of 125 SF of office space per FTE, the existing demand for administrative office space in the IT Department is being satisfied and has a moderate surplus that may accommodate future growth.

Existing Information Technology Office Space – Current Demand = Adequacy

24,691 SF – 16,125 SF Demand = 11,597 SF Surplus

Finance Department (133 Total Positions):

There are 133 Full Time Equivalent Employees operating in the Finance Department under 16,195 SF of administrative facilities. Of this space, only 15,398 SF is usable office space, which is the equivalent of 116 SF of office space per employee. Applying the performance standard of 125 SF/FTE, results in modest office space deficiencies for the Finance Department as follows.

Existing Finance Office Space – Current Demand = Adequacy

15,398 SF – 16,625 SF Demand = -1,227 SF Deficiency

A contributing factor to the reduced SF per FTE of the Finance Department is the call center under which 29 personnel work off of a smaller work area not commensurate to a traditional office. Another factor is finance personnel dedicated to Water Department and finance personnel dedicated to Power Department have dedicated space within the respective Water and Power department offices. These findings do not warrant the need for expanded facilities to accommodate Finance staff.

Human Resources Department (41 Total Positions):

There is a total of 41 Full Time Equivalent Employees operating in the Human Resources Department under 15,934 SF of administrative facilities. Of this space, only 14,191 SF is usable office space which is the equivalent of 335 SF of building space per employee. Using the performance formula of 125 SF of office space per FTE as calculated below, the existing demand for administrative facilities is 5,125 square feet resulting in a 2024 surplus of office space for the Human Resources Department.

Existing Human Resource Office Space – Current Demand = Adequacy

14,191 SF – 5,125 SF Demand = 9,066 SF Surplus

c) Future Demand for Administrative Facilities & Planned Facilities

Future Demand-For the purpose of calculating future demand, and as previously noted, growth rate history is applied to current population estimates to project population demand. Using the existing performance standard formula of 450 SF per 1,000 in population served, IID may need 328,063 square feet of administrative space by the year 2040. Facilities can be expanded and/or planned for as new hires are projected, or as noted under **Table A- 3** Administrative Facilities Future Demand. It is worth noting, however, that the current population (2024) is estimated at 420,778, substantially below what was originally projected through 2040. A projection adjustment will likely be warranted in 2030 for another 20-year outlook.

Table A- 3 Administrative Facilities Future Demand

Year	Population Projections All Service Areas	Administrative Space Demand
2025	523,890	235,890 SF
2030	584,260	262,917 SF
2035	643,749	289,687 SF
2040	729,028	328,063 SF

The total amount of space available for administrative facilities in 2024 was 191,442 square feet (an increase from 189,912 square feet in 2018). As the served population increases, there will be an inherent need for additional administrative facilities.

Planned Administrative Facilities- All of the district's construction projects and major capital purchases are included in the Capital Improvement Plan which is incorporated into the district's annual budget as a two-year plan. As of the date of this 2025 Service Area Plan, there continues to be a consistent $2 to $5 million annual budget of capital investment for building upgrades but no new planned Administrative Facilities for personnel given that the available space largely meets and/or exceeds the adopted standards. It is anticipated, however, that within the next five-year timeframe design and planning costs will be budgeted for a new System Operations Center facility with construction tentatively scheduled to initiate in 2028. The Southend Consolidation would also initiate during this upcoming planning period for the benefit of the Water Department. A major undertaking will also be the design and development of new Administrative Building consolidation is also expected to initiate within the next five-year planning period.

d) Opportunities for Shared Administrative Facilities & Services

The majority of IID building facilities are shared by multiple departments internally and inclusively have an estimated 594,258 square feet of common areas. While only 93,987 are common areas exclusive to administration and support departments, there are over 500,000 square feet of common areas that are shared facilities with other departments, aside from administration. This space can be evaluated and considered for reconfiguration in the future to accommodate additional need for space or exclusive office use.

IID provides for all of its administrative needs using full-time, part-time and contract workers. Cross-utilization of services within the District departments and Service Sections is facilitated throughout the organization. Senior staff members in the Water Department and Power Department provide their expertise for administrative functions and services. For example, the Water Department Managers and several other employees of the Water Engineering section will complete tasks that are administrative in nature, and indirectly related to the needs of various water facilities and services. These tasks are funded through the respective section budgets of the various departments from which the tasks are being completed. This method of cross-utilization is an efficient use of existing resources.

IID will often provide administrative services to regional groups and organizations that will provide a beneficial service to the communities served by the District. For example, IID provides administrative and technical support to the Imperial County Farm Bureau (ICFB) for TMDL reporting efforts. Regulatory fees imposed by the State Water Resources Control Board are collected by IID from agricultural land owners on behalf of the ICFB (representing the Imperial Valley Coalition) and administratively accounted for and paid to the SWRCB. Additionally, IID subsidizes the cost of ICFB staff for the administration and implementation of the TMDL program. Since 2000, IID has provided over $2 million in funding to the ICFB for program implementation, and in 2024 contributed $421,605.

e) Phasing of Administrative Facilities

Other than the planned design of a new System Operations Center facility over the next five-year timeframe design IID has two other planned facilities, one of which is the planned designed and development for consolidated administrative support services in the latter part of the planning period. It is noted, however, that there is ample building space within all District facilities to explore the possibilities of reorganization and relocation, if necessary.

3. Mitigation for Administrative Facilities

IID will continue to review the personnel level and facility space available against the demand for facilities based on the established performance standards. Additional facilities will be planned for and provided on an as needed basis. The following are mitigation measures for administrative facilities:

A-1 IID should consider updating the Headquarters Space Assessment & Strategic Business Plan Summary last modified in May 28, 2013.

A-2 By the year 2030 a reassessment of the population growth shall be updated and incorporated (over a 20-year time period), a at which time additional square feet of administrative facilities should be planned for, or reconfigured, in order to meet the projected service demand through 2050.

V. FINANCING PLAN

The most current available Financial Statement for the Imperial Irrigation District was reviewed for 2022 and 2023 calendar years. As of December 31, 2023, the assets and deferred outflows of resources of the District exceeded its liabilities and deferred inflows of resources by $2.01 billion (net position); made up by Energy $1.08 billion and Water $0.93 billion. The Financial Statements show that IID reported positive balances in net position of which approximately 75.1% and 77.2%, (2022 and 2023, respectively), were in capital assets. The district's total 2023 unrestricted portion of its net position had a slight (1.2%) increase from prior year ending at $441 million. The district's total outstanding debt from Revenue Bonds, Pension Obligation Bonds, and Capital Leases, as long-term debt, was $614.9 million as of December 31, 2023 (decrease by $31.1 million in 2023). This data represents a snapshot of the district's overall financial health. A complete copy of the December 31, 2023 and 2022 Audited Financial Report may be found at: Reports | Imperial Irrigation District (iid.com) and included as **Appendix A.**

IID's 2025 budget of $1.1 billion is primarily funded through established rate structures but also supported via numerous financing mechanisms. This Financing Plan section of the Service Area Plan lists and describes existing and potential revenue sources and the various financing mechanisms that may be available to the District in efforts to continue to meet the projected level of service and facility demands identified earlier in this document. Content describes existing facilities and services, their current finance source(s) and how future financial demands for these facilities and services may be secured.

A. EXISTING REVENUE SOURCES

The following list presents sources of revenue that are currently utilized by the Water Department and/or the Power Department to satisfy finances necessary to develop and operate the various facilities and services discussed within the Service Area Plan. For context, it shall be noted that the Power Department has an annual revenue budget of over $813 million, which is more than double of the Water Department's annual revenue budget of $320 million, as per the adopted 2025 Budget. Complete budgetary information for financing mechanisms currently utilized is available on-line for viewing at IID Budget Plan | Imperial Irrigation District.

Water Department Revenue Sources

The District's goal is to deliver irrigation water cost effectively, efficiently and reliably to its water users. Revenues for the Water Department come from the following sources:

1. **Water Sales**- Local water sales accounts for an estimated 14% of the Water Department Budget as documented for 2023. Direct water sales to service area customers had an average cost of $21.13 per acre-foot, generating over $50 million in water sales revenue.

This revenue source will continue to be available through the next five-year planning period.

2. **Water Transfer Revenues-** The primary sources (57%) of revenue for the Water Department are the water transfer sales. Water Transfer sales were documented at $176 million in 2023. Water Transfer sales are anticipated to continue throughout the planning period and increase in volume and value through the planning period and be augmented in years 2024 through 2026 under a temporary System Conservation Implementation Agreement with the U.S. Bureau of Reclamation. These revenues are generated from water transfers to the San Diego County Water Authority (SDCWA), the Metropolitan Water District (MWD), the Coachella Valley Water District (CVWD) and, temporarily, to Reclamation.

3. **All-American Canal Reimbursements-** The Water Department receives slightly under 4% of its annual revenue from All-American Canal Reimbursements. The District received over $12.6 million in reimbursements during 2023 from agencies for the costs of construction and annual charges for the operation and maintenance of the canal.

4. **Water Availability Fees**- The Water Department receives approximately .5% of its revenue from Water Availability Fees. The Water Availability fee is a $4 ($3.80 net) per acre fee charged to water customers. The Water Availability Fee is charged annually, generated $1.9 million in 2023, and is anticipated to stay fairly constant throughout the planning period.

5. **Rental Income (Leased Lands)-** An estimated 1% of all Water Department revenues come from Rental Income. That amount is derived from Western Farm Lands (WFL) leased for agricultural production and from land leased to geothermal interests. IID purchased 41,761 acres of agricultural land, WFL's, in 2004 in order to facilitate the District's ability to perform transfer obligations, should fallowing be unavoidable. In 2015, 185.4 acres were sold and the remaining acreage is leased to local growers. The District received $1.6 million in lease revenue from WFL's in 2023. The amount of revenue derived from geothermal leases around the Salton Sea area was approximately $1.1 Million for the same calendar year. The District anticipates a modest increase for subsequent years to compensate for inflation.

6. **Capital Contribution Proceeds Support & Customer Projects-** This revenue source consists of prefunded and reserved resources. This source of revenue may be loans tied to vehicle purchases or capital projects funded by others. As part of the water transfer agreements, there are a number of capital projects that have been prioritized and paid for by the SDCWA. Other capital contributions come from customers projects including cities and private developers. This revenue is restricted and carries over when a project is not carried out.

7. **Lost Water Sales**- Approximately 1.9% of the annual revenue is from Lost Water Sales,

amounting to $5.7 million in 2023. Reduced water sales (attributed to water transfers) result in IID's operation and maintenance costs being spread over a smaller sales base. Normally, this would result in an increase in water rates. However, rather than allow rates to rise to the detriment of the local agricultural economy, lost water sales revenues attributable to water transfers are allocated to the general Water Department operations from water transfer revenues.

8. **Quantification Settlement Agreement/JPA Revenues**- IID receives an estimated 5% of Water Department Revenue from the Joint Powers Agreement under the QSA. These revenues, which amounted to $14.9 million in 2023, are reimbursements for costs incurred for Environmental Mitigation and for Salton Sea Restoration beyond IID's stipulated share between the Coachella Valley Water District, IID and San Diego County Water Authority. Any costs beyond the JPA limitations would be satisfied by the State (Department of Fish and Wildlife).

9. **Water Supply Development Fees-** The Water Department receives just under $2 million annually from private developers via Water Supply Development Fees. These funds are placed in a reserve account for the development of water conservation projects in support of the development's water supply demand. This fund resource is developer driven and thus projected to remain constant, but with a potential to increase depending on the building market. The annual fee is applicable for new non-agricultural projects as established under the Interim Water Supply Policy. A project is subject to the Development fee when 1) the water demand for the municipal use project is in excess of the project's estimated population multiplied by the district-wide per capita usage; 2) a project will require water for an industrial use in an unincorporated area of the County of Imperial; or 3) mixed use projects. The calculation is based on a tiered fee schedule as noted in **Table F- 1** below, charged per acre-foot, annually.

Table F- 1 2024 Interim Water Supply Policy Development Fee

Annual Demand (Acre-Feet)	Development Fee*
0-500	$355.07
501-1000	$499.94
1001-2500	$627.76
2501-5000	$775.47

*To be adjusted annually in accordance with the consumer Price Index (CPI)

10. **Water Reservation Fees-**The Water Reservation Fee is also a developer driven fee that is a non-refundable fee charged by the District when an application for water supply for a non-agricultural project is deemed complete and approved. This fee places the projected water supply in a queue up to the start-up of construction, by which time IID will need to have the water demand volume available from conservation efforts. The reservation

period is for a maximum period of two years (renewable for another two years subject to an additional fee per renewal). The Water Department receives a nominal amount of revenue from Water Reservation Fees and is typically not a projected income. This revenue may become an important source of income if an influx of new development is experienced during the planning period. The following table depicts the applicable reservation fee calculated per acre-foot demand annually.

Table F- 2 2024 Interim Water Supply Policy Reservation Fee

Annual Demand (Acre-Feet)	Reservation Fee*
0-500	$88.77
501-1000	$124.98
1001-2500	$156.94
2501-5000	$193.87

*To be adjusted annually in accordance with the Consumer Price Index (CPI)

11. **Federal and State Grant Programs-** IID is eligible to apply for state and federal grant funding to augment and supplement local revenues earmarked for capital improvements or special programs. IID has been successful in obtaining some level of grant funding for Water Department projects with the most recent award in 2023 for a total of $16.5 million. Grant revenues are unpredictable and it is estimated that a very small percentage of IID's budget will be generated from grant sources at any given time.

Power Department Revenue Sources

As a consumer-owned utility, IID works to efficiently, and effectively, meet its customers' energy demands at the best possible rates, tying the area's low-cost of living directly with low-cost utilities. The Power Department utilizes the following sources for revenues:

1. **Energy Sales**— Energy sales accounted for approximately 76% of the Power Department Budget in 2023. Retail sales are concentrated in the commercial and residential sector with less than 3% of the revenue coming from industrial operations.
2. **CSP Capital Contributions**- Customer Service Proposal (CSP) revenues account for an estimated 3% to 5% of the Energy Budget. IID has an adopted CSP pricing sheet for construction, material, inspection, metering and installation services requested. CSP contributions were an estimated at $26 million or 3.4% of the 2023 budget. Generally, these contributions are prefunded private developer or customer funded.
3. **Energy Cost Adjustment Factor Revenues-**The Energy Cost Adjustment (ECA) was adopted in 2015 and is applicable to all electric customers served by the District and applied to all kilowatt-hours (kWh) billed under all rate schedules and applicable special contracts. The ECAF recovers the costs of, fuel, energy, capacity, transmission, purchased

power and transmission costs, and revenues from wholesale sales not recovered in the base energy charge of the District.

4. **Dispatching and Wheeling Charges-** Fees for the third-party transportation of energy **(**wheeling**)** on the IID transmission system are also collected by the District. IID Power Department may average up to 4% of its annual revenue in dispatching and wheeling charges. The 2023 budget accounted for $26.4 in income from these sources (3.4%).

5. **Certificates of Participation Proceeds-**A Certificate of Participation (COP) is a financial instrument (a form of financing), used by IID, which allows an individual to buy a share of the lease revenue (unlike a bond) of an agreement entered by IID. This source includes capital loans for capital loans for support services. COP Proceeds accounted for an estimated 2.5% of the Power Department Budget in 2023 ($20 million).

6. **Wholesale Power and Gas Sales-** Wholesale rates are established for industrial, commercial and agricultural purpose subject to special conditions such as standby or breakdown service where the entire electric power requirements are not regularly supplied by the District. That Power Department received less than 2% from Wholesale Power and Gas Sales in 2023, an estimated $6.9 million**.**

7. **Capital Loans** (Support Services)-Over $9 million was budgeted in 2023 from capital loans representing an estimated 1.2% of total revenues for the Power Department.

8. **Government/Other Reimbursements**- Over $48 million was budgeted for special Government and/or Generator Customer funded projects representing 6.2% of total revenues and funding for the Power Department. These reimbursements may be associated with Generator Interconnection Agreements and similar capital projects that are largely dependent on the market.

9. **Public Benefit Charge (PBC)** -The PBC (Public Goods Charge AB 1890) is a legal charge under which each IID Customer pays an adjustment amount (2.85%) applicable to all rate schedules and special contracts. Proceeds are to be used to fund public benefits programs as mandated by Assembly Bill 1890. An estimated $16.5 million was collected in 2023 with a combined total over the last five years of $90.3 million supporting the energy efficiency programs described under chapter IV. D of this service area plan as well as the following community assistance programs and grants:

    - READY-Residential Energy Assistance Designed for You
    - CARE-Customer Assistance for Residential Emergencies
    - EASE-Energy Assistance for Special Equipment
    - SHIELD-Senior Health & Income Energy Lifeline Discount
    - Non-Residential Lighting Grants
    - School or Non-Profit HVAC Grants

10. **Interest Income**- IID may earn interest on investments, savings accounts, bonds, etc. Interest income was less than 1% of the total annual energy revenues in 2023, accounting for $6 million of total Power Department revenue.

Unlike the Water Department, the Energy Department must respond to volatility in the fuel and purchased power markets. The District, through its Power Risk Management Policy, continues to employ structured hedging strategies to minimize exposure to key market and operational risks. These strategies are designed to mitigate uncertainties related to:

- Load fluctuations
- Generation and production variability
- Fuel price volatility
- Capacity costs
- Wholesale energy market price volatility

By proactively managing these risks, the District enhances rate stability and ensures more predictable energy procurement costs for its customers.

To maintain rate stability and protect customers from market volatility, the District continues to maintain a Rate Stabilization Fund. In addition, the Energy Cost Adjustment (ECA) factor remains available as a flexible tool to address unexpected increases in fuel and purchased power costs. Together, these mechanisms help the District respond effectively to unforeseen financial pressures while minimizing impacts on customers.

These financial mechanisms allow IID to respond to market conditions effectively via rate changes. By updating its rate structures, the District in not only ensuring cost recovery but also securing funding for capital improvement needs in support of aging infrastructure. This approach helps maintain system reliability and support long-term improvements while keeping financial resilience strong.

B. CURRENT FACILITY FINANCING AND RECOMMENDATIONS

1. Water Facility Financing

a) Current Water Facilities Funding Mechanisms

The Water Department is anticipated to generate over $347 million in total revenue during the 2024 calendar year from all revenue sources. The primary funding source (57%) of revenue for the Water Department are the water transfer sales which are anticipated to increase in volume and value and peak at year 2026. Although these funds are predominantly used for conservation projects and programs, the balance of the funds are reinvested in IID O&M expenses, relieving monies for capital investments.

Over 47% of the total Water Department revenue budgeted for 2025 was from water transfer revenue ($97.6 million). By far, the largest water transfer revenue comes from water transfers to the Sand Diego County Water Authority which is anticipated to generate over $164 million in 2025 (an average of $662.13 per acre-foot). Water transfers to the Metropolitan Water District are expected to generate approximately $18 million in revenue in 2025 and over $18 million in revenue is expected from the Coachella Valley Water District.

Another temporary revenue source (for years 2024-2026) is expected to be generated under the Lower Colorado River Basin System Conservation and Efficiency Program, SCIA which IID entered into with Reclamation for up to 250,000 AFY of conserved water. The proposed SCIA conservation payments to IID for water conserved are based on the 2023 SDCWA transfer pricing of $776.97/AF with a 4% annual inflation adjustment as noted in **Table F- 3**, resulting in the following annual payment rates for conserved water to remain in Lake Mead.

Table F- 3 SCIA System Conservation Water Payment Rate

Year	System Conservation Water Rate
2024	$808.05/AF
2025	$840.37/AF
2026	$873.99/AF

Direct local water sales to service area customers generate an estimated 14% of the Water Department revenue. Water sale revenues are collected for the continued operation and maintenance of the water distribution and drainage system. The last comprehensive update of fees was in 2009 and a Cost of Service study was underway

in 2024 and 2025, consistent with Proposition 218, and any resulting rate increases would be expected to be implemented before the end of the 5-year planning period of this SAP. Cost of Service findings are expected to be publicly available in early 2026. The current water sale costs, as adopted by the IID Board, are shown in **Table F- 4**. Please refer to the respective full schedule for detailed conditions under each respective service.

Table F- 4 Adopted 2024 Water Rate Schedule

Customer Classification	Flat Rate	Water Rates Per AF	Tiered Water Rates Applicable		
			6 AFY/ ACRE	6-8AFY/ ACRE	>8AFY/ ACRE
General Agricultural[1]		$20.00			
Mesa Agricultural[2]			$20.00	$40.00	$80.00
Pump Service[3]			$20.00		
Pipe & Small Parcel Tier 1[4]	$250.00/YR				
Pipe & Small parcel Tier 2[4]			$100/YR	$100/YR	$100/YR
Wholesale Service Tier 1		$20.00			
Wholesale Service Tier 2[5]			$105/YR	$105/YR	$105/YR
General Industrial[6]		$85.00			
Municipal Service		$20.00			
Stand-by-Service[7]	$4.00/AC				
Penalty for Gate Adjustment[8]	$100.00/EA				
Conserved Water[9]		$542.85/AF			

NOTE: At the end of 2024, IID was in the process of conducting a Cost of Service Study. It is anticipated that a rate adjustment will occur within the five-year planning period.

[1] For properties within Imperial Unit. There is a Stock Water Charge of $10/day minimum.

[2] Mesa lands are all lands located above the 1030 foot contour line with Mean Sea Level being referenced at the 1,000 foot elevation. There is a Stock Water Charge of $10/day minimum.

[3] Up to $120/Year.

[4] Tier 1 for diameter ≤ 2 inch and Tier 2 is for diameters over 2 inch but < 6 inch (2 acre minimum)

[5] Annual Rate Based on Gross Acreage: Where customer facilities make it impractical for IID to install measuring equipment, annual charge per acre shall apply (2 acre minimum)

[6] Temporary Water Service has a minimum charge of $425/Year and excess discharge into IID will also have a $258/AF charge.

[7] Applicable to all lands within Imperial Unit that are entitled to water whether water was used or not. (After 5% allowance for any right-of-way, net charge is $3.80/AC)

[8] Applicable to anyone who adjusts a delivery gate which results in a change in the amount of water delivered, without prior authorization from IID.

[9] Applicable to water delivered outside of the district boundary but inside the Imperial County. To be adjusted annually after 1988 in accordance with the Consumer Price Index (CPI)

b) Planned Capital Water Project Costs

IID has several planned water capital projects under the Water Department's 5-Year Capital Improvement Plan estimated between $50 to $60 million per year. The 2025-2029 planning period includes an extraordinary expense associated with a partially grant funded operational reservoir (EHL Reservoir) which is anticipated to double the normal range to $103.4 million in year 2026. **Table F- 5** has a summary of the projected capital improvements between 2025 and 2029.

Table F- 5 Planned Water Capital Project Costs*

Water Capital	Year 2025	Year 2026	Year 2027	Year 2028	Year 2029
Imperial Dam	$12,905,000	$20,084,000	$16,200,000	$16,300,000	$13,145,000
Automation	$624,000	$640,000	$655,000	$671,000	$688,000
Lateral Canals	$4,865,000	$4,663,000	$5,212,000	$6,771,000	$5,486,000
Concrete Lining	$15,726,000	$18,288,000	$19,506,000	$21,096,000	$21,392,000
Customer Projects	$6,625,000	$7,000,000	$7,500,000	$7,500,000	$10,000,000
EHL Reservoir**	$11,300,000	$52,700,000	$8,000,000	$0	$0
TOTAL	$52,045,000	$103,375,000	$57,073,000	$52,338,000	$50,711,000

*Costs are rounded up to the nearest $1,000

**EHL Reservoir is a special project which will be partially funded with $16.5 million from grant funds and water transfer revenues, as appropriate.

Source: 2024 Budget Plan & Water Department Five Year Improvement Plan for years 2025-2029. Operational Reservoirs & Water Transfer Projects are excluded from this table and discussed under Conservation.

Capital projects that generate conserved water, such as Seepage Recovery Projects, Interties and Operational Reservoirs are paid strictly from water transfer revenues and presented under the Conservation section of this Finance Chapter.

c) Cost Avoidance Opportunities for Water Facilities

IID requires all developers, private, or public, that require raw water services to new facilities to cover all costs for the adequate conveyance and metering to their respective project site(s). The proposed development also incurs costs associated with any corresponding engineering services and studies. It is noted that Customer Projects within the District's service area are paid 100% by private customers or the requesting public agency. These include projects such as those requested by industrial operations, geothermal operations, and similar non-agricultural uses.

As previously noted, Imperial Dam facilities are also shared by and provide benefit to other water agencies. IID avoids incurring costs that correspond to associated capital improvement costs that are shared by other benefitting water agencies, including YMIDD, NGVIDD, YID (South Gila), WMID, YA Project, Valley Division, Bard, BIA and CVWD. IID's cost share of the common works at Imperial Dam is approximately 77%.

Another major facility under which IID avoids costs beyond its fair share if for the operation and maintenance of the ACC. The AAC identifies seven distinct channel sections, four of those sections continue to benefit some of the aforementioned water agencies which in turn share in the costs associated with the respective sections of the AAC's operation and maintenance. Specifically, AAC use and costs are shared with

Valley Division, Bard, BIA and CVWD. IID is responsible for approximately 76% to 88% of the costs within those four respective sections and is responsible for 100% of the costs under the remaining three sections.

IID was able to secure over $16.5 million in grant funding between 2019 and 2024 through the Water Department. Funds were awarded for water measurement equipment, design and construction of the EHL operational reservoir and for planning and design of metered delivery gates. All funding came from grant programs offered through the U.S. Bureau of Reclamation. This demonstrates that IID is competitive and able to subsidize local projects, avoiding full project costs to better serve its customer base.

d) Recommended Funding for Water Facilities

IID will continue to utilize the funding sources currently in place in addition to searching for other sources to improve the efficiency of the water distribution system and for planned investment in development of additional operational reservoirs.

Water sales are the primary funding source of revenue used for capital investments and for operation and maintenance costs. Reduced water sales (attributed to changes in water transfers) can result in IID's operation and maintenance costs being spread over a smaller sales base. Generally, this would result in an increase in water rates. Consistent with recommendations of the last SAP, IID is reviewing water service fees under a Cost of Service study that was commissioned in 2024. Findings will be taken into consideration prior to implementation of any necessary rate adjustments.

Although there are a number of financing mechanisms already applied by the District in order to assist in the funding for capital facilities, there are, a number of State and Federal grant and loan programs available for public utility districts through a number of public and private agencies that the District should pursue. Further descriptions of these opportunities are provided at the end of this chapter.

2. Irrigation Drainage Facility Financing

a) Current Drainage Facility Funding

The current revenue sources for drainage facilities also come from Water Department Revenue sources. As previously noted, direct water sales to service area customers generate an estimated 14 percent of the Water Department revenue and applied to the continued operation and maintenance of both the water distribution and drainage collection system. Similarly, to water facilities, drainage improvements, operation and maintenance is also substantially subsidized by water transfer revenues. Another major source of revenue for drainage facilities may be customer driven (and thus customer funded) projects deriving for a need to abandon

or underground segments of the drain collection facilities due to urbanization and development sprawl.

There are no costs for drain collection services within the Imperial Unit, which generally includes all IID water users, with few exceptions. Under IID's Water Rules and Regulations (No. 45), IID may levy assessment against excess surface agricultural discharge water as a means of control. Irrigation farm land discharge amount equal or greater than 15% of the water being delivered and measured may be subject to the levy.

Discharge from industrial uses is generally limited to controlled stormwater discharge as allowed by the laws of the respective regulating agencies. Consistent with Regulation No. 46, the limit on drainage is set at 10 percent of the maximum flow rate for the water received, but shall not exceed 672 gallons per minute (1.5 cfs). Excess water is charged at the $750 per acre-foot rate. Assessment fees for drain discharge are negligible, if applicable and noted under **Table F- 6**. Please refer to the respective full schedule for detailed conditions.

Table F- 6 Charge for Drainage Service

Facilities Outside the Imperial Unit	Flat Rate	Service Rates Per AF of Discharge
Drainage Service	NA	$250.00
Assessment Charge (excess)	NA	$750.00
Drain Outlet Construction	$30/AC	

Note: a minimum drainage charge per month is set at $200 per discharge point.

b) Planned Capital Project Costs for Drainage Facilities

IID has a continuous operation and maintenance budget for the IID drainage system. The entire drainage is system is gravity flow, substantially earthen drains that flow into the New River or Alamo River with a handful of drains directly discharging into the Salton Sea. For these reasons, annual capital drain improvement costs are nominal in comparison to the overall Water Department budget and range between $3.3 to $3.8 million. Planned drainage capital projects under the approved 2024 Capital Improvement Plan are identified in **Table F- 7 Projected Drainage Facilities Costs** as a summary of the planned costs for control structures, inlets and outlets proposed to be improved between 2025 through 2029 district-wide. The costs are separated by Northern and Southern Divisions.

Table F- 7 Projected Drainage Facilities Costs

Year	Northend Division	Southend Division	Total Planned Drainage Facility Costs
2025	$1,914,000	$1,853,000	**$3,767,000**
2026	$1,338,000	$1,913,000	**$3,251,000**
2027	$1,943,000	$1,942,000	**$3,885,000**
2028	$1,973,000	$1,973,000	**$3,946,000**
2029	$2,053,500	$2,053,500	**$4,107,000**

Source: 2024 Water Department Capital Improvement Five Year Projections.

c) Cost Avoidance Opportunities for Drainage Facilities

IID is able to avoid costs resulting from new development that will necessitate new drainage facilities by requiring developers to construct adequate facilities and retention basins for their projects, inclusive of undergrounding open drains when they may pose a risk to residents from the proposed new land use(s).

Additionally, local cities and the county have been able to access grant funds when necessary drain improvements are within eligible transportation route extensions and or shared rights-of-way. Design and construction are often prepared in collaboration with local municipalities and in response to urban sprawl. This may include funding for bridges over drains, drain culverts or drain piping and undergrounding implemented to IID standards while avoiding costs.

d) Recommended Funding for Drainage Facilities

IID will continue to use the existing funding sources for the maintenance and operation of irrigation drainage facilities. However, the established drain fees have not been updated since 1987 and are negligible sources of revenue since they don't apply to the Imperial Unit, the Districts primary water service area. Considering the emerging challenges with vegetation control, undergrounding of drains may be more cost effective in certain areas. Thus, revisiting the drainage rate schedule may be warranted.

IID has entered into a Master Agreement with the Department of Transportation in 2025 to enable the District access to transportation funds to cover capital costs associated with drain infrastructure relocation, underground or modification within planned public streets and roadways, bike routes or pedestrian facilities. Joint partnerships with local jurisdictions should be pursued.

3. Power Facilities & Services Financing

a) Current Energy Facilities Funding

Energy sales accounts for over 75% of the Power Department Budget. IID maintains a rate schedule that covers over twenty customer classifications from General Wholesale Power Service to Residential Service and a diverse set of categories in between. The following provides a limited overview of some of the more common schedule rates as of 2025:

Table F- 8 Limited Schedule of Energy Rates

Customer Classification		2025 Customer Charge	Demand Charge per kW	Energy Charge per kWh	Tiered Charge per kWh			Energy Cost Adjust-ment
					First 1,000 kWh	1001-6,000 kWh	>7,000 kWh	
ECA	Energy Cost Adjustment	Actual*						
ECA-R	ECA Renewable	Actual*						
D	Residential	$10.50		19.76¢				X
MH	Master Meter (MH Park)	$10.50		18.84¢				X
GS	Small General	$17.50			19.60¢	19.19¢	18.61¢	X
GL	Large General	$140.00	$11.00	13.95¢				X
AG	Agricultural General	$140.00	$4.75	15.65¢				X
A-2	General Wholesale	$90	$3.20	15.23¢				X
PA	Agricultural Pumping	$40.00	$3.90	15.33¢				X
PM	Municipal Service	$17.50		17.23¢				X

*ECA: The Energy Cost Adjustment is the amount computed in accordance with Schedule ECA and ECA-R. The ECA is added to the base rate calculation for the actual cost of power. The ECA recovers the costs of fuel, energy, capacity, transmission, purchased power and transmission costs netted against revenues from wholesale sales not revered in the base energy charge by the District. Similarly the ECA-R is applicable to all rates associated with renewable portfolio market purchase pursuant to SB X1-2. Please see full schedule for details and special conditions under IID Energy Rates. For 2025 the ECA is zero.

A Power Factor Adjustment is also Applicable-A charge of $0.26 per kilovar of reactive demand as measured by the incoming kilovar demand meter for each kilovar in excess of .60 times the kilowatt demand measured and supplied by the district.

IID also charges energy costs for outdoor lighting and street and highway lighting, categorized by lamp rating (lumens) and wattage. IID maintains respective fee schedules for Outdoor Area Lighting, Street and Highway Lighting, State Highway Lighting and Street and Highway Lighting. Services are furnished from dusk to dawn where this service can be supplied from existing secondary overhead facilities of the district of suitable voltage.

It is noted that approximately 6.9% of the total energy accounts receive energy assistance discounts. The total amount of discounts applied in calendar year 2024 was $7.9 million to residential customers. These subsidies are entirely funded by the Public Benefit Charge applicable to all rate schedules. In March of 2025, the IID Board

approved the deployment of $10 million in Public Benefits funding to enhance and expand the current programs.

b) Planned Capital Energy Project Costs

IID has several planned capital projects under the approved 2025-26 Budget Plan for 2025, amounting to $410 million. **Table F- 9 Planned Capital Energy Project Costs (1,000's)**has a summary of the approved budget allocation for 2025 and anticipated budgets for the years that follow. These figures, in total, are comparable to allocation history and anticipated to remain comparable in 2026 and beyond to support the planned energy projects.

Table F- 9 Planned Capital Energy Project Costs (1,000's)

	Generation	Transmission	Distribution	General Plant	Total Budget
2025	$151,872	$192,000	$51,274	$15,326	$410,472
2026	$139,482	$130,379	$47,629	$8,274	$325,764
2027	$104,293	$127,954	$48,974	$6,671	$287,891
2028	$28,575	$151,410	$50, 025	$5,974	$235,984
2029	$24,225	$127,541	$51,752	$6,264	$209,782

Source: Energy Business Internal Controls

An additional amount is budgeted annually for aging infrastructures within Power Generation, Transmission and Distribution. Over the five-year planning period, it is anticipated that up to $148 million will be budgeted for Generation, up to $88 million for Transmission and up to $276 million for Distribution.

c) Cost Avoidance Opportunities for Power Facilities

The district imposes an Energy Cost Adjustment (ECA), applicable to all electric customers served by the district and applied to all kilowatt-hours (kWh) billed under all rate schedules and applicable special contracts. The ECA recovers the costs of, fuel, energy, capacity, transmission, purchased power and transmission costs, and revenues from wholesale sales not recovered in the base energy charge of the district. The district targets a minimum level of $100 million in the rate stabilization fund to be utilized as an emergency fund to mitigate, or partially offset, unexpected fuel and purchased power costs.

Additionally, the majority of the transmission projects are customer funded projects. There is over $1 billion dollars projected for strategic energy transmission during the next five-year planning period to accommodate new development. Routine distribution lines are also developer funded.

d) Recommended Funding for Power Facilities

The Imperial Irrigation District will continue to use the existing funding sources for energy facilities and services. It should be noted, however, that coordinated scheduling with a broader region might bring revenue to California by selling more solar to other states that in turn would save money. To the degree that regionalization benefits California, IID could also benefit due to efficiencies and increased renewable energy contributions to serving load. If IID generation is the lowest cost generation to serve its load, then effectively, IID will continue to serve its load using its existing generation, and any excess generation beyond IID's load will be offered into the market to serve other's load and IID will be paid the market price for the excess generation, thereby, providing an additional revenue stream for IID.

The Power Department has also begun to pursue grant funding resources and most recently secured a $23.8 million grant to improve system resiliency. State and federal funding are a significant resource to the IID given its operational capacity and demographics of its customer base.

In late 2024 IID secured an additional $18.3 million award from the U.S. Department of Energy's Grid Resilience and Innovation Partnerships (GRIP) Program. This federal funding, when matched with $18.3 million provided by IID, will enable IID to deploy $36.7 million for an Advanced Distribution Management System (ADMS) to modernize its electrical grid and enhance reliability for its 165,000 customers across both Imperial and Riverside Counties, with special emphasis on the Imperial and Coachella valleys, as well as parts of San Diego county.

4. Efficiency & Conservation Program Financing

a) Current Efficiency & Conservation Project Funding

Water Efficiency & Conservation Project Funding-With few exceptions, system efficiency projects and/or programs are paid for with water transfer sales which are anticipated to increase in volume and value and peak at year 2026. A temporary increase by up to 50% is anticipated during plan years 2025 and 2026 due to implementation of the SCIA that was entered into in 2024 between Reclamation and IID for the conservation water for the benefit of Lake Mead.

Energy Efficiency Project Funding- IID will at times incur debt for large capital projects. IID is a member of the Southern California Public power Authority (SCPPA). The SCPPA is a joint action agency comprised of the cities of Los Angeles, Glendale, Burbank, Cerritos, Vernon, Pasadena, Anaheim, Riverside, Azusa, Banning and Colton and IID (the only non-municipal member of SCPPA). SCPPA acts as a funding entity for transmission, generation, fuel and energy efficiency projects. SCPPA will issue debt

for the construction of new resources and then secure this debt with take-or-pay contracts with project participants. Renewable energy costs account for approximately 23% if the Power Department's budget.

When IID is a party in a transaction with SCPPA and member utilities, the debt falls on SCPPA and therefore minimally impacts the IID's credit ratings. This is an unequivocal advantage of being a member of SCPPA. Joint action entities like SCPPA allow small entities the opportunity to participate in larger, cost-effective generation resources. A publicly-owned utility that is too small to buy an entire project can enter into a take-or-pay contract with SCPPA that will aggregate the needs of all its members. SCPPA will then issue debt to construct, or purchase, the generation resource and recover its debt service costs through take-or-pay contracts with the project participants. This means that the participants pay the cost even if no energy is produced, or they choose not to dispatch the generation project.

Energy Efficiency Program Funding- The Public Benefit Charge collected covers all costs related to the energy efficiency and renewable programs as well as customer assistance programs and non-residential grants. Generally, the funding is allocated evenly between Imperial and Riverside County regardless of customer class, while prescriptive rebate programs vary in geographic region as they are distributed on a first-come, first-serve basis. The refrigerator exchange program is based on customer class, as it is tailored exclusively to income-qualified customers.

b) Planned Capital Efficiency & Conservation Project Costs

Water Conservation Projects-IID has several planned projects to help meet the target water conservation goal of 487,200 AFY. The projects are programmed over a five-year plan period and include the projects noted in **Table F- 10**.

Table F- 10 Planned Water Transfer Capital Project Costs (1,000's)

	Year 2025	Year 2026	Year 2027	Year 2028	Year 2029
Discharge Monitoring	$725	$255	$125	**125**	125
Lateral Headings	$4,800	$1,200	$0	**$0**	$0
Interties	$2,995	$5,900	$12,400	$17,200	$5,200
SCADA Upgrades[1]	$0	$0	$0		
Operational Reservoirs[2]	$13,500	$65,900	$28,900	$16,700	$28,200
Seepage Recovery	$1,600	$0	$0	$0	$0
TOTAL	$23,620.00	$73,255.00	$41,425.00	$16,700.00	$28,200.00

Source: Adopted 2024 Budget Plan & Water Department Five Year Improvement Plan for years 2025 through 2027.

[1] SCADA upgrades have been an ongoing system conservation project that came into completion in 2024.

[2] IID initiated in 2024 the design and construction of a 2,100 AF capacity operational reservoir.

Energy Efficiency Projects- Renewable energy and energy efficiency are integrated into the overall budget for the Power Department as previously identified in **Table F-9**. For example, included within the five-year planning period are some of the following capital investments: Yucca Steam Plan Generation Repower ($260 million); Hydro Plant Refurbishment and Upgrades ($50 million).

Energy Efficiency Programs-All of the existing energy efficiency programs, customer service programs and non-residential grants supported by the Public Benefit Charge are anticipated to continue through the planning period. Additional programs under development that may be launched during the planning period include an Online Marketplace and a Virtual Power Plant demand response program. The Online Marketplace would be an IID branded eCommerce website to provide energy savings products with customer validation and instant rebate processing. VPP would launch as a program to allow the positioning of new and existing customer resources as load flexibility tools for IID. The VPP has the potential for EE Savings, Peak Demand Reduction, Reduced Fuel Purchase and Decarbonization.

c) Cost Avoidance Opportunities for Efficiency & Conservation Projects

Water Conservation Cost Avoidance- The Imperial Irrigation District has water transfer agreements in place that ensure all capital projects that will result in water conservation for the purpose of water transfer benefits are paid by the benefitting partners. IID has also adopted an Interim Water Supply Policy for Non-Agricultural Projects. The District's IWSP for new Non-Agricultural Projects provides a mechanism and process to develop a water supply agreement for any appropriately permitted project in the IID water service area. The policy establishes the framework and set of fees necessary to ensure that the water supplies used to meet any new water demands do not adversely affect existing users by funding water conservation or augmentation projects in support of that new demand.

Under the IWSP, up to 25,000 acre-feet of IID's annual Colorado River water supply may be conserved and made available for these new non-agricultural projects. All new industrial-use projects are subject to a development fee, while new municipal and mixed-use projects may be subject to the fee if the projects' water demands exceed certain district-wide average-per-capita use standards. The applicable reservation fee and development fee are discussed under Water Fees No. 9 and No. 10 of this Finance chapter and a nominal revenue is collected as of 2024. New users would continue to be subject to the established service charges on the fee schedule.

Energy Efficiency Cost Avoidance- Within IID's region, there is an ample supply of local renewable resource generation that can be developed, and under development, at a reasonable cost and, in turn, sold at a reasonable price to IID customers. Further,

if IID chooses, there is an ample supply of renewable resources that qualify as Category 1 renewable resources in and surrounding the state of California. IID is currently going a step further by placing a priority on locally generated resources, since they can directly connect to the IID system and, theoretically, generate a cost savings for both the developer and IID.

Costs associated with new strategic capital transmission projects to address power generation from solar and/or geothermal are also borne to the customer/developer of the generation facilities. Some of the transmission costs from these planned developments may be shared from facilities in the Imperial Valley region and into the facilities in the Coachella Valley region.

d) Recommended Funding for Efficiency & Conservation Efforts

Recommended Funding for Water Conservation-IID will continue to use the same resources for Water Conservation and Efficiency Projects and is accessing new resources, including federal grant funding. IID received a grant award of over $16.5 million that will be expended 2024-2027 for an operational reservoir that will conserve up to 15,000 AFY. However, IID has not had the need to bond or borrow for capital costs and loans should be explored as a potential opportunity. A number of potential agencies and funding programs are identified at the end of this chapter.

Recommended Funding for Energy Conservation-Given current funding levels of the energy efficiency portfolio, and absent additional funding, the Power Department should consider reallocation of a larger portion of the overall energy efficiency public program budget toward the Customs Energy Solutions program to capture savings from a customer segment with the largest potential. The District should also continue to pursue state and federal grant resources for energy efficiency and renewable energy projects as opportunities arise.

5. Administrative Service and Facilities Financing

a) Current Administrative Facilities Funding

Administrative Facilities and Services are funded by both the Water Department and Power Department revenues. Approximately $100 million is budgeted for all administrative support service costs. Support Service costs are shared between the Energy and Water Departments. Factors considered for level of contribution include: 1) the level of service demanded by the respective department in the preceding year, and 2) projected service demand as anticipated by management. All of the District's support services are initially accounted and budgeted for in their own departments and then linked to functions of either the Water or Energy (or both) Departments. The percentage share by the two respective departments may vary from year to year.

See **Appendix B** – **2024 Budget Plan, Amended April 1, 2025** (Summary of Support Services Expenditures Allocation Assumptions on pages H-9 to H-10). Cost allocation from Power Department and water department for support services is based on criteria established by policy. Please see **Appendix C-Policy and Procedures 2450** for a detailed description.

b) Planned Administrative Capital Project Costs

There are a number of Capital Improvement Projects budgeted for administrative/support facilities as noted in **Table F- 11.** However, it should be noted that none of the capital projects are for expansion of facilities with the exception of new construction associated with a System Operations Control building for the Power Department and a new Southend Consolidation project for the Water Department. Over $1 million is budgeted annually in support of zero emission vehicle transition.

Table F- 11 Planned Administrative Facilities Capital project Costs (1,000's)

Department/Unit	2025	2026	2027	2028	2029
New Facilities	$0	$0	$6,000	$25,582	$37,417
Facility Upgrades	$2,597	$1,259	$1,840	$656	$674
EV Infrastructure	$1,000	$1,100	$1,265	$1,518	$1,898
Parking Lots/Fencing	$0	$3,998	$11,379	$7,023	$12,116

Source: 2025 Draft Capital Budget General Services

c) Cost Avoidance Opportunities for Administrative Facilities

Administrative service costs may be further reduced by outsourcing some administrative services including planning, legal, engineering, and special project managers. Another successful practice is cross administration between departments.

d) Recommended Funding for Administrative Facilities

Existing funding sources from the Water Department and the Power Department will continue to be used to support administrative services and facilities. Support staff will continue to share facilities with these two departments as appropriate.

C. POTENTIAL ADDITIONAL REVENUE SOURCES FOR CAPITAL NEEDS

IID is eligible to apply for numerous funding sources as a public utility district and also as a conservation district, when necessary. Not only is the District able to apply for numerous funding sources, IID is also within a highly competitive position given its performance capacity as the sixth largest utility district in the nation and as an essential service provider to an area which is predominantly composed of economically distressed and disadvantaged communities most of which hold some of the highest pollution burdens and vulnerabilities in the State of California[26]. This section of the SAP identifies a small sampling of potential resources.

1. Private Financial Institutions Under CRA Objectives

A financing opportunity for IID may be via competitive revenue bonds through private financial institutions as part of a banks Community Reinvestment Act (CRA) obligations. The Community Reinvestment Act was enacted by the U.S. Congress in 1977 to encourage depository institutions to help meet the credit needs of the communities in which they operate, with special emphasis on low- and moderate-income neighborhoods, consistent with safe and sound banking operations. The Community Reinvestment Act requires federal financial supervisory agencies to use their authority when examining financial institutions subject to supervision, to assess the institution's record of meeting the credit needs of its entire community, including low- and moderate-income neighborhoods.

Financial institutions must keep a good standing in order to continue to merge, acquire or grow, thus investment opportunities into small community capital improvements or community financing are actively sought by responsible financial institutions. Ratings can range from Outstanding, High Satisfactory, Satisfactory and Needs to Improve. The District has opportunities to work with local community banks to set up low interest loan programs for its customers wishing to invest in residential solar, agricultural customers wishing to invest in irrigation efficiency equipment, and other similar investments. The following local lending institutions have CRA obligations, noting a potential opportunity for local investment:

- Bank of America
- Community Valley Bank
- Mechanics Bank
- Union Bank of California
- Wells Fargo Bank

[26] CalEnviroScreen 4.0 from Office of Environmental Health Hazard Assessment.

2. Public Financial Institutions

California Infrastructure and Economic Development Bank (IBank)-The California Infrastructure and Economic Development Bank (IBank) is the State of California's only general-purpose financing authority. The Legislature created IBank in 1994 to finance public infrastructure and private development that promote a healthy climate for jobs, contribute to a strong economy, and improve the quality of life in California communities**.** IBank offers a Bond Financing Program and an Infrastructure Loan Program.

- **Infrastructure State Revolving Fund (ISRF) Program** provides low-cost financing to public agencies for a wide variety of infrastructure projects. ISRF Program funding is available in amounts ranging from $1 million to $65 million, with loan terms of up to 30 years (or useful life of the project, whichever is less). Interest rates are set on a monthly basis.
- **Climate Catalyst Revolving Loan Fund (CCRLF)** was created by IBank with guidance from the California Lending for Energy and Environmental Needs Center – CLEEN Center – to help meet the State's Greenhouse Gas Reduction Goals. The loan program provides flexible low-cost credit and credit support. The program can fund:
    - Clean Energy Transmission project infrastructure and other necessary elements such as environmental planning, permitting and prec9onstruction costs for projects are eligible.
    - Climate Smart Agriculture supports projects that promote climate-smart technologies, including but not limited to on-farm renewable energy, including electricity and fuels; energy, water and materials efficiency, energy storage and equipment replacements.

North American Development Bank (NADBank)-NADBank is a binational financial institution capitalized and governed equally by the United States and Mexico for the purpose of financing environmental projects and has now merged with the Border Environment Cooperation Commission (BECC). The two institutions work together with communities and project sponsors in both countries to develop and finance infrastructure necessary for a clean and healthy environment for border residents. The team can make grants and loans to public and private borrowers for the implementation of environmental infrastructure projects located in the U.S.-Mexico border region. Funding is available for the implementation of projects in all environmental sectors in which the NADBank operates. See BECC grant program details under Federal Grant Agencies.

3. Federal Funding Agencies

U.S. Bureau of Reclamation-The Bureau of Reclamation was established in 1902 and has grown to become a contemporary water management agency with a strategic plan and numerous programs and initiatives that will help the Western States, Native American Tribes and others meet new water needs and balance the multitude of competing uses of water in the West. The Bureau of Reclamation has a number of grant programs in place and has awarded numerous water and energy efficiency grants.

- **WaterSMART -**Through the Water SMART programs, states, tribes, and local entities can plan for and implement actions to increase water supply through investments to modernize existing infrastructure and attention to local water conflicts. The projects funded with these grants may include installation of flow measurement devices and automation technology, canal lining, or piping to address seepage, municipal meter upgrades, and other capital projects to conserve water or improve resiliency to drought conditions. There are a number of funding programs offered through WaterSMART with varying objectives and funding limits. Below is a sampling of grant programs that may benefit IID:
    - **Water and Energy Efficiency Grants** -This funding is for projects that conserve and use water more efficiently; increase the production of hydropower; mitigate conflict risk in areas at a high risk of future water conflict; and accomplish other benefits that contribute to water supply reliability in the western United States. As much as $5 million may be applied for and Reclamation may fund between 50% to 75%, depending on the type of project.
    - ***Environmental Water Resource Program***- Provides funding for projects that focus on environmental benefits and that have been developed as part of a collaborative process to help carry out strategies that increase reliability of water resources. Up to $3 million in funding may be applied for with a cost share minimum of 25% required.
    - ***Small Program Storage***– Provides funding for water storage capacity that increases surface water or groundwater storage. Up to $30 million may be available per project up to 25% of total project costs.
    - **Planning Project Design Grants** - Up to $100,000 is available per project and funding to conduct project-specific planning and design for projects to improve water management. A 50% local cost share is required for participation.
    - **Small-Scale Water Efficiency Program**- Funding is provided under this program in a 50/50 cost share for small water efficiency improvements

that have been identified through previous planning efforts. Projects eligible for funding include installation of flow measurement or automation in a specific part of a water delivery system, lining of a section of a canal to address seepage, in amounts up to $75,000.

- ***Water Strategy Grants*-** Up to $400,000 is available per project and funding to conduct planning to support water supply and management solutions (e.g., domestic water supply projects for disadvantaged communities, water marketing, water conservation, drought resilience, and ecological resilience). Funding can be up to 100% under the Inflation Reduction Act.

U.S. Department of Agriculture-The USDA has a number of funding resources to facilitate economic growth for all rural Americans under its Rural Development offices. Some of the funding opportunities that may be in line with IID's mission are listed below:

- **Community Facilities Direct Loan & Grant Program-** This program provides affordable funding to develop essential community facilities in rural areas. An essential community facility is defined as a facility that provides an essential service to the local community for the orderly development of the community in a primarily rural area, and does not include private, commercial or business undertakings. Project that benefit a population of 5,000 or fewer have a grant limit of up to 75% of project costs when the median household income of the service area is below 60% of the state's median income.

- **Distributed Generation Energy Project Financing** can work in partnership with energy producers in the area. The program can provide loans and loan guarantees to energy project developers for distributed energy projects including renewables that provide wholesale or retail electricity to existing Electric Program borrowers or to rural communities served by other utilities. The program requires a minimum 25% cash equity. The typical loan term is 20 years (for solar) and interest rates are typically Treasury + 1/8.

- **Electric Infrastructure Loan & Loan Guarantee Program** makes insured loans and loan guarantees to non-profits, including utilities to finance the construction of electric distribution facilities in rural areas. The guaranteed loan program has been expanded and is now available to finance generation, transmission, and distribution facilities including system improvements and replacement required to furnish and improve electric service in rural areas, as well as demand side management, energy conservation programs, and on-grid and off-grid renewable energy systems. The maximum repayment schedule is 35 years and also tied to Treasury + 1/8. Hardship Loans may be used (fixed at 5%), at the sole discretion

of the Rural Utilities Service, to assist applicants in rural areas that are either economically distressed.

U.S. Environmental Protection Agency (EPA) - USEPA's mission is to protect human health and the environment. Nearly half of their budget goes towards grants to state environmental programs, non-profits, educational institutions, and others. The funds are used for a wide variety of projects, from scientific studies that assist in EPA making decisions to community cleanups. Overall, grants assist EPA in achieving their overall mission: protect human health and the environment. EPA's Border Water Infrastructure Program provides grant assistance to communities along the U.S./Mexico border to develop and construct infrastructure to provide safe drinking water and adequate sanitation, and to improve water quality in shared and trans-boundary waters. EPA funds grant programs through the Border Environmental Cooperation Commission created in 1993 under a side agreement to the North American Free Trade Agreement (NAFTA) for the purpose of enhancing the environmental conditions of the US-Mexico border region. BECC and NADBank work closely with other border stakeholders including federal, state, and local agencies, the private-sector and civil society to identify, develop, finance and implement environmental infrastructure projects on both sides of the US-Mexico border. Three Grant Programs available through BECC are the Community Assistance Program (CAP), the Project Development Assistance Program (PDAP) and Border Environmental Infrastructure Fund (BEIF) as follows:

- **BECC Community Assistance Program (CAP)**: The Community Assistance Program is administered through BECC and funds smaller shovel-ready projects up to $500,000. Funded with NADB's retained earnings, this program offers grant financing to support the implementation of projects sponsored by public entities in all environmental sectors. The objective of this program is to support the implementation of critical environmental infrastructure projects for sponsors with limited capacity to incur debt. Projects must be located within 100 kilometers (62 miles) of the international border. Eligible projects, include, but are not limited to:

    1) Potable water supply, wastewater treatment/reuse, water conservation, storm drainage & flood control
    2) Clean/renewable energy-Solar, wind biogas, biofuels, hydroelectric, geothermal

- **BECC Project Development Assistance Program (PDAP):** Funding is available for project development activities necessary for certification of potential NADBank funded projects including, but not limited to, planning studies, environmental assessment, final design, financial feasibility, community participation, and

development of sustainability elements. Funding is available for project benefitting areas within 100 kilometers of the U.S./Mexico border.

- **BECC/NADBank Border Environmental Infrastructure Fund (BEIF):** Grants are intended to supplement funding from other sources in order to complete a project's financial package. The objective of the program is to make water infrastructure project affordable where utility customers would face undue financial hardship and/or otherwise projects would not otherwise be implemented. Applicants must seek other sources of funding since BEIF is considered to be the funding of last resort. Actual BEIF participation is considered on a project-by-project basis and determined according to funding availability and based on an affordability analysis to be conducted by BECC/NADBank during project development.

4. State Agencies

State Water Resources Control Board- The mission of the State Water Resources Control Board is to preserve, enhance, and restore the quality of California's water resources. The Division of Financial Assistance (DFA) administers the implementation of the State Water Resources Control Board's (State Water Board) financial assistance programs that include loan and grant funding for construction of public sewage and water recycling facilities, remediation for underground storage tank releases, watershed protection projects, nonpoint source pollution control projects, and other similar projects. An overview of Program information is noted below.

- **Nonpoint Source Pollution (NPS) Grant Funding-** This Program administers grant money it receives from United States Environmental Protection Agency through Section 319 of the Federal Clean Water Act. These grant funds can be used to implement projects, or programs, that will help to reduce NPS pollution. Projects that qualify for funding must be conducted within the state's NPS priority watersheds. Project proposals that address TMDL implementation and those that address problems in impaired waters are favored in the selection process. The maximum grant amount is $1,000,000 for implementation projects. Planning projects can apply for up to $250,000. All funding requires a minimum 25 percent match.

- **Clean Water State Revolving Fund Program (CWSRF) -** The Clean Water State Revolving Fund Program accepts applications on a continuous basis. The Federal Water Pollution Control Act (Clean Water Act or CWA), as amended in 1987, established the Clean Water State Revolving Fund (CWSRF) program. The CWSRF program offers low interest financing agreements with some interest free options. They offer loan forgiveness for disadvantaged communities and

stormwater, sustainability or conservation projects. There is no minimum or maximum project size and typical funding range is $50,000 to $25 million. Using a combination of State and EPA funding, the CWSRF funds projects that may be beneficial to IID as follows:

1) Stormwater management
2) Water conservation, efficiency, and reuse
3) Agricultural/silvicultural best management practices
4) Habitat protection and restoration
5) Surface water protection, and
6) Publicly owned treatment works projects.

Department of Water Resources provides funding under its Integrated Regional Water Management (IRWM) Grant Program. The program encourages a collaborative effort to manage all aspects of water resources in a region. IRWM crosses jurisdictional, watershed, and political boundaries; involves multiple agencies, stakeholders, individuals, and groups; and attempts to address the issues and differing perspectives of all the entities involved through mutually beneficial solutions. To access the program and applicant must work through the IRWM that covers IID's water service area which is the Imperial IRWM. There are a number of funding opportunities, including but not limited the following:

- Proposition 1 IRWM Implementation – A total of $222 million was made available under the last round. Projects require a 50% cost share.
- Sustainable Groundwater Management Proposition 68 – Between $2 and $5 million in grant funding requiring a 25% cost share.
- CalConserve Water Use Efficiency Loan Program – Up to $7 million in loan funding available requiring a 50% cost share.

Resources and References

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