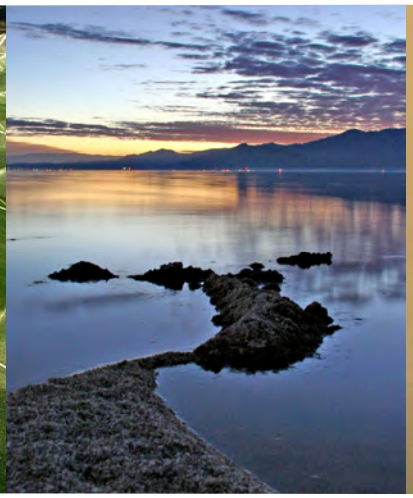
A CRITICAL PATH FORWARD:


A QSA Plan B for Protecting Water Rights, the Environment, and the People of the Imperial Valley

September, 2012

Law & Resource Planning Associates, P.C.
Attorneys at Law

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ABBREVIATIONS

CVWD.....Coachella Valley Water District

DWR ..... Department of Water Resources

IID ..... Imperial Irrigation District

JPA .....Joint Powers Authority

MWD .....Metropolitan Water District

QSA .....Quantification Settlement Agreement

SDCWA ..... San Diego County Water Authority

SWRCB..... State Water Resources Control Board

EXECUTIVE SUMMARY

The collection of agreements referred to as the Quantification Settlement Agreement ("QSA") involves what has been described as the largest agriculture-to-urban water transfer in United States history. The documents creating the transfer are voluminous, and the endeavor has been complicated by multiple policy twists and turns as well as decades of litigation. The complexity of the transfer is due in part to its unique nature; in traditional water rights transfers, the agricultural use of water is terminated to allow urban users to make use of the water right. The purchase price paid on behalf of urban users covers not only the water, but also the lost opportunity of continued farming by agricultural users.

The QSA has as its core the laudable goal of preserving the benefits of agriculture while at the same time allowing new urban uses. It purports to achieve this result through conservation and full coverage of the environmental externality costs by the State of California. Two critical ingredients to this plan are self-evident: (1) that the proposed conservation actually works to produce a win/win; and (2) that the State pays for the externality costs. The need for the parties to hypothesize a conservation and environmental win/win scenario is largely a product of history. This Report could not conceivably document all of this complex

history, but hopefully it provides a flavor of the process that brought us to this point.

California has long over-relied upon the Colorado River, with the result that its use exceeds its lawful entitlement. The IID's entitlements, however, are senior enough to be nearly coextensive with California's entitlement. California's problem of overuse of the Colorado River is not the IID's problem, but as the senior user on an over-appropriated river, the IID has no choice but to deal with the consequences of this overuse. This is not to say that the State of California's overuse entitles it to turn to the IID to solve the water crisis. Rather, the law of supply and demand and the political penchant for governments to seek to redefine rights in resources so that they can wield them for political gain have put the IID in the political crosshairs.

The IID has been under constant attack since the State Water Resources Control Board's Decision 1600 was issued. There, the SWRCB seemed to conclude that the IID's use of water, although beneficial, was unreasonable because the excess irrigation runoff going into the Salton Sea was "waste." The United States Bureau of Reclamation likewise put pressure on the IID through its abortive Part 417 proceeding. Both of these proceedings led to the IID engaging in conserved water transfers. By forcing such

transfers on the IID, California attempted to have its cake and eat it too. Rather than reducing aggregate consumption by enforcing priorities or engaging in the transfer of water rights from senior agricultural uses to junior municipal ones, the QSA is an attempt to maintain both uses, generating water for municipal uses through conservation, spurred by the additional incentive of the State picking up all of the environmental costs that exceed $133,000,000.

At every step of the way, these choices have resulted in litigation. This Report does not address the wisdom of the ongoing litigation or defenses to it. Instead, it provides recommendations that the IID could implement, which would, in the view of the authors, represent the first step on a critical path towards the ultimate preservation of a sustainable water supply for the Imperial Valley. Critical to this calculus is that the IID must reject in every forum, both publicly and privately, the concept that by preserving the Salton Sea, the IID is a wasteful entity which does not deserve the water delivered to it under its early priority date. To the contrary, the IID and its predecessors-in-interest created the bulk of the water rights in the State of California under the doctrine of prior appropriation, and holds those rights in trust for future generations of irrigators and residents of the Valley who receive direct and indirect benefits as a result. In so doing, the IID

has been, and will continue to be, a responsible partner in the coalition of water users utilizing the Colorado River.

This Report makes several findings and recommendations as it relates to the QSA transfers in the following categories: (1) Institutional/Legal, (2) Conservation, (3) Environmental, and (4) Financial. The Findings and Recommendations are not segregated insofar as they dependent upon one another. Those Findings and Recommendations are:

A. Institutional/Legal:

- Preservation of the air quality and other environmental interests of the Imperial Valley are values which have been publicly embraced by the IID. Avoiding liability for shouldering a share of this responsibility should not be considered an end goal, unlike avoiding liability for an automobile accident, or discharging an obligation in a bankruptcy proceeding, for example.

- The IID has provided extensive support for the fisheries, bird estuaries and other environmental amenities brought to the region by the Salton Sea. Even though the IID could not conceivably pay all the costs of restoration, the IID should not consider itself a disinterested spectator of the death of the Salton Sea.

- The Definite Plan Report expended millions of planning dollars to involve individual irrigators in the on-farm conservation program. The IID is exercising its best efforts to make this on-farm conservation plan work as it evolves. The IID should never accept the argument in any forum that it was the intent of the Board to guarantee water to any third party if good faith conservation efforts fail.

- Decisions in legal cases can only preserve the status quo; they cannot order solutions which would preserve the water rights in the Valley, protect the environment of the Valley or provide leadership by the IID Board. Accordingly, while the IID should vigorously defend its position in litigation, these defenses will not be sufficient to protect the needs of present and future generations of residents in the Valley.

- Because efforts in conservation can lead to short term dollar benefits to the IID as a political institution, and because development of infrastructure and reduced fees for water users are both laudable goals, it is understandable that bottom line outcomes and reduced fee burdens may dominate Board activity. However, the IID is not a private corporation with the bottom line as the sole goal of its stockholders. It is a political subdivision that cannot constitutionally go out of business. It

cannot accept unconscionable risk with the remedy of someday going into bankruptcy. Rather, the IID is the main economic and environmental engine for a community. It cannot lose sight of this fact.

- When parties are in litigation, the inevitable result is that the opposing party is presumed to be the enemy. That is not true among the parties in the Imperial Valley. The environment of the Imperial Valley, the Salton Sea and the local institutions that protect it are not the enemies of the IID. While litigation over water rights is as old as the western United States, irrigators who are being asked to engage in conservation within the Imperial Valley are not the enemies of the IID. It is vital that the litigation mindset not be allowed to bleed over into the policy goals of the IID, and that the institutions themselves solve their problems rather than allow the Courts to keep them apart.

- The IID must resist in every forum the citation of SWRCB Decision 1600 for the principle that the actions of the IID, in providing irrigation runoff to the Salton Sea, were or are wasteful. While the flooding of lands in 1984 was not a reasonable use, that principle has no application today. At every opportunity, whether in the Court of public opinion,

before the SWRCB, or before any federal agency, that principle must be rejected.

- The IID must continue expanding its emerging principles of transparency, and explaining the benefits of its efforts in creating an early priority Colorado river water right for California; namely, how this enables sustainable production of food products at a time when the California economy has shifted radically, and how the IID is a steward for the environment of the Valley and the region.

B. Conservation:

- The type of water transfer utilized by the QSA—a conserved water transfer—differs from most water rights transfers in the western United States. Rather than transferring the right to use water from one location to the next, it seeks to maintain both agricultural and municipal uses by generating conserved water savings. Unlike a more typical water rights transfer, where the transferor need only cease irrigation to make the water available at another location, there is a risk here that the IID will not be able to produce the water necessary for the QSA through system and on-farm conservation measures. We recommend the following

practical considerations related to the implementation of the on-farm program:

- The most important initial step for the Board to take is to determine the proper baseline against which on-farm conservation will be measured. We recommend that the IID keep it simple by defining the baseline by determining, for each soil type, crop and season, a "reasonable" (not actual) use of water for a field undertaking defined ordinary irrigation measures. That number should then be compared to the actual water use on the field since 2003 (the year of the execution of the QSA) and, provided the disparity is not outside an accepted tolerance, it should be used as the baseline.

- Given the high participation rates required to make the program a success (79%-80% of farmable acreage), the IID must balance administrative ease of enrollment in the program against the attractiveness of the program to each landowner. We recommend that the IID simplify the enrollment process, target larger farm units first, and require that on-farm

efficiency contracts, in most cases, be at least four years in order to make the program manageable.

- Because the QSA will ultimately result in 10% of the IID's annual allotment being conserved—changing the mission of the IID from delivery of water to delivery and conservation of water—it is important to develop the institutional expertise for this changed mission. We recommend that the IID re-evaluate its reliance upon outside contractors for work that will become a long-term or permanent function for the District, and to the greatest degree possible, bring that work "in house" and continue to build the in-house capacity to perform that work.

- The IID should rely upon the expertise of the Water Conservation Advisory Board to adaptively manage the on-farm efficiency program. The program will necessarily evolve over time and the IID should continue to communicate with, and rely upon, the considerable technical information and farming talent in the Imperial Valley.

- At the same time, the IID's delivery of water is not, nor should it be, considered waste, even if conservation efforts funded by others use less water. Because a conserved water transfer attempts to maintain both the agricultural and municipal uses of water through conservation rather than the transfer of water rights, any agreement to transfer conserved water must recognize the potential limitation on the transferor to produce the conserved water. Any voluntary program to induce on-farm conservation, even if perfectly executed, may not produce the amount of water sought due to external factors such as economics. The point below which incentives fail to produce the conserved water should be viewed as the point beyond which any conserved water transfer cannot go. To the extent that the QSA agreements impose an absolute obligation to produce conserved water, without regard to whether such conservation is possible, they need modification.

- The principle focus of the Definite Plan is to involve on-farm conservation to the greatest degree possible and to reward irrigators who shoulder the burden of these efforts. However, only if on-farm efforts were to prove insufficient and only if there were sufficient revenues available to pay for

infrastructure and environmental mitigation costs, then the IID would be remiss not to at least consider a more dramatic, but considerably more expensive, program to completely modernize the delivery system, even if such a program requires more expense than provided by the QSA and produces more conserved water than necessary to meet requirements under the QSA. That additional conserved water might readily be used to place more lands under irrigation. For example, while it has likely been reviewed in the past, the IID might evaluate and consider a project that replaces a lateral with a pressurized piping system and, if it proves successful, implement such a project on a wider scale. If this were to prove cost-effective, it could result in a system-level improvement that would present great potential for improving on-farm savings through reduction in tail water and precise irrigation control. While such an "all-in" approach can be implemented on a lateral-by lateral basis, if it were to be successful, its wide deployment would have the potential to save more water than required by the QSA. The environmental consequences of implementing such a system would, of course, have to be thoroughly studied. However, as noted above, should this occur and were there to be a greater

savings in overall conserved water, IID should be prepared to put the excess conserved water to beneficial use through 1) increased deliveries to existing farms, resulting in increased production; or 2) developing new irrigated acreage.

C. Environmental:

- The QSA water transfers as currently designed and implemented impose a serious and multifaceted environmental risk on the IID, the County of Imperial, the Imperial Valley and the Salton Sea ecosystem: the State of California administrative and financial leadership will not be forthcoming to prevent potential environmental injury and costs from exceeding those allocated by agreement to the QSA partners.

- Any suggestion that the IID is insulated from the fallout of State inability or unwillingness to fulfill its environmental obligations ignores the fact that the IID does not operate in isolation from the health of the regional economy, regulatory compliance and ecosystems.

- The potential environmental injury and costs are already becoming realized, while the necessary State leadership, despite some recent accomplishments, still appears less than forthcoming.

- A proactive posture on the part of the IID is needed to readjust the burden of this set of uncertainties, and prompt a more adequate and accelerated approach to Salton Sea

mitigation and restoration, in order to make the QSA water transfers sustainable over the long term.

Accordingly, this Report offers the following recommendations:

- The QSA water transfers can only remain sustainable if the accelerating pace and costs of necessary mitigation and eventual restoration are incorporated into the operational parameters of the QSA as a comprehensive affirmative program for a sustainable ecosystem, economy and regulatory climate, rather than being conceived as a potential "liability" to be minimized and avoided. The IID should work with State and Federal natural resource agencies, the Salton Sea Authority and environmental experts to develop short term and far-sighted proposals for undertaking combined habitat creation and air quality mitigation at an accelerated pace. The Board should also indicate to its JPA partners that the anticipated costs for mitigation in excess of the cap on QSA party expenditures should be allocated among the beneficiaries of the transfer.

- Ongoing litigation and negotiations between the Imperial County Air Pollution Control District and the U.S. Environmental Protection Agency regarding Clean Air Act Fugitive Dust rules will to a large extent determine the regulatory environment in which agricultural and construction activities can be commenced and maintained, including funding and permitting constraints as a result of EPA sanctions. Although the IID is formally in an adversarial relationship with the County and APCD regarding QSA litigation, the IID should work affirmatively with the County and APCD to oppose EPA sanctions that could impose unnecessary costs on IID and the community. At a minimum, the IID Board should request regular updates from APCD officials on the progress of EPA negotiations and litigation, and how these may impact the IID and regional agricultural and economic operations.

- Underlying the environmental risks imposed on the IID was the principle sometimes cited from SWRCB Decision 1600 that agricultural runoff sustaining the Sea could be characterized as an unreasonable and wasteful use of water, along with federal pressure to transfer the water

proceeds of feasible IID conservation away from the Sea to the urban coastal water districts. Should the principle suggested by Decision 1600 be implicated in the context of future negotiations, administrative proceedings or litigation, the IID must clearly and formally reject this principle in public forums and before the State Water Resources Control Board.

D. Financial:

- A review of the past financial statements as well as the forty-year financial model reveals that QSA revenues have been, and may continue to be, used to cover the Water Department's depreciation and replacement costs, even for non-QSA related infrastructure. The practical and long term effects of this practice must be carefully evaluated, and a conclusion reached as to how and whether this practice should continue in the way it has to this point.

- The margin to hedge against risk produced by the IID's forty-year, $7.87 billion investment in the QSA is only about 1%. For projects of this magnitude and changes over time, this margin may well prove to be insufficient to justify the risk absorbed. Already, only one decade into the program, the

IID and SDCWA have petitioned the SWRCB to make a significant change to the original plan.

- Part of the cause of this small margin is the low price of the water being made available to the Salton Sea through the JPA entity and of the water made available to the CVWD when compared to the actual potential for costs over the life of the project.

- The IID will issue $39,270,100 in debt over the term of the model. Because debt is based upon anticipated revenues, debt financing requires accepting additional risk because it is based upon the assumption of the revenue stream continuing uninterrupted by political, legal, economic, climate-related and other changes.

- A few not unreasonable changes in the assumptions underlying the forty-year plan would produce a significant shortfall of $1,043,378,374. The IID should immediately and rigorously continue, as it is beginning to do, to account for and segregate QSA funds from Water Department funds.

- The IID should conduct a complete analysis of how the QSA funds should be utilized in the future, based on the estimates of future risk due to political, legal economic, climate-related

and other changes. Under no circumstances should the IID allow a practice to continue if it has not fully analyzed the degree of risk associated with it. To act only after a crisis occurs could prove devastating to the IID.

INTRODUCTION

But for the vision and efforts of the early pioneers in the Imperial Valley, there would be no dispute and no QSA. It was the incredible grit and tenacity shown by the pioneers that allowed them to put water to beneficial use and to sustain that use without abandonment, an accomplishment heralded to this day. Their early efforts yielded benefits for all of California, because under the doctrine of prior appropriation, the law on the Colorado River, they carved a future water supply for California that could be claimed as against other states and junior users. They did so by moving water hundreds of miles and searching out and utilizing fertile soil where the State of California could sustain its need for food supplies. Conflict over this most precious water in the Southwestern United States stretches back over a century.

Tensions have come to a head over the highest and best use of Colorado River water—whether to maintain a sustainable food supply or to provide inexpensive water to coastal urban water users who struggle to find water supplies to match their unlimited growth.

The matter is complicated by the prospect of drought on the Colorado, the emerging concern over the effects of climate change,

expanding attempts by federal agencies to pre-empt state water law, and the overall collapse of the California economy—a state which presumed that permanent expansion and growth were inevitable. That presumption has now been proved patently false.

The following quotes from the QSA litigation illustrate the complexity of the conflict and the need for resolution and leadership by the Board of Directors of the IID.

> "The ruling makes it clear that IID is transferring the water at its own risk, and water agencies can't require the state to pay for Salton Sea restoration. It also keeps the environmental claims that the County is making alive and orders a prompt resolution for them."
>
> *-Michael Rood, Imperial County Counsel*

> "Water supplies from the QSA are the cornerstone of the (San Diego County) Water Authority's long-term water supply diversification program. These supplies are vital to the health of our region's economy and to the quality of life of not only today's population, but for generations to come."
>
> - *Michael T. Hogan, Chair of the Water Authority Board of Directors*

> "There's still considerable work to do in turning this agreement into one that is environmentally sustainable for the Salton Sea and economically viable for Imperial Valley agriculture."
>
> - *Kevin Kelley, IID General Manager*

> "Thus, despite state and federal articulated desires to embark on some sort of a restoration project, they have simply refused to commit to any plan or to fund anything (other than studies). From a political standpoint this may make sense in a deficit-focused Washington, D.C., and in a cash-strapped Sacramento. However, this inactivity means that the habitat provided by the Salton Sea continues to deteriorate

significantly. Petitioners contend that unless the state and/or federal governments actually choose, fund, and begin physical work on implementing a restoration plan by the start of 2014, Petitioners' water transfer mitigation funds for 2014-2017 are better spent on early habitat mitigation for various species, rather than more water to the Sea."

- *Joint Petition for Modification of Revised Order WRO 2002-0013 by the Imperial Irrigation District and the San Diego County Water Authority at 18, In the Matter of Imperial Irrigation District and San Diego County Water Authority's Amended Joint Petition for Approval of a Long-Term Transfer of Conserved Water from IID to SDCWA and to Change the Point of Diversion, Place of Use and Purpose of Use Under Permit 7643 Issued on Application 7482 of Imperial Irrigation District, State Water Resources Control Board, State of California*

In recognition of this need, the Board commissioned this Report. It is not intended as a legal brief on the intricacies of the QSA litigation, which has been extensive. The goal was to draft the Report in such a way that it is readable to all persons concerned about the issue. The Report has been circulated for comment and input from concerned and interested stakeholders, and their comments are contained in Appendix B. The purpose of the Report is not to look back and second guess past choices; its function is to propose actions to move forward. **Most importantly, this Report does not represent the position of the IID Board on any issue. Any attempt to cite the Report for that purpose would be misplaced. Rather, it is for the consideration of the Board and**

the citizens of the Imperial Valley.

The Report is organized into essentially six sections. The first is the minimum amount of history of the controversy needed to orient the reader. Much better summaries have been written elsewhere, but the nature of the debate is incomplete without some background. In the interest of brevity, the historical background may omit certain legal arguments and decisions, but hopefully sets the scene for the balance of the Report. The next section attempts to capture the institutional difficulties facing the IID, such as the inaccurate perceptions that the IID is wasteful, that the Imperial Valley is at war with itself, and idea that the courts can lead the Valley out of this major institutional conflict. The third section addresses the feasibility of achieving the conservation required of irrigators within the Valley to comply with the QSA, and possible responses if this is not feasible. The fourth section addresses the challenge of environmental mitigation for effects of the transfer on the Salton Sea, given that the State has been held as not obligated to commit funds for this purpose. The fifth section addresses the use of the funds paid under the QSA, and the possibility of a dramatic financial shortfall based upon the estimated costs of mitigation contained in the Definite Plan Report. The final section provides

Conclusions and Recommendations.

This Report is submitted for the consideration of the IID Board and the people of the Imperial Valley at the Board's request. The authors would like to thank the Board for authorizing its preparation, and members of the community for their comments. Specifically, this Report is submitted to fulfill a "Scope of Work" submitted to the General Manager of the IID. The Scope of Work was submitted after the Board of the Imperial Irrigation District passed Resolution 22-2011 requesting preparation of a "contingency plan" related to the QSA. The Resolution is set forth here in full as Figure "1" so as to clarify the intended purpose of this Report and delineate what was is and is not intended to be addressed by the Report. The Resolution's Scope of Work is included in the Appendix. While Law & Resource Planning Associates, P.C. ("LRPA") is a law firm with a great deal of litigation experience, and the firm contains a member of the California Bar, LRPA was specifically directed not to provide legal advice on the numerous cases in which the IID is involved. Discussion of these cases is thus excluded not because LRPA does not consider them significant, but rather, because LRPA was specifically precluded from doing so. Therefore, while there may be the need for a discussion of the legal consequences of

some pending case or appeals at certain critical junctures, this Report does not address those issues. Furthermore, it was the understanding of LRPA that the Board was not interested in knowing what actions its legal counsel might force a court to take. Rather, the question was what actions the Board could take which, as the authorizing Resolution states, "places the interests of the region and people ahead of all other considerations."

Imperial Valley Irrigation

IMPERIAL IRRIGATION DISTRICT
RESOLUTION NO. 22-2011

Quantification Settlement Agreement Contingency Plan

WHEREAS, in the wake of a Sacramento Superior Court ruling that invalidated the Quantification Settlement Agreement in 2010, and the subsequent appeal and stay of that decision before the Third District Court of Appeals, the Imperial Irrigation District Board of Directors passed Resolution No. 2-2010 on January 5, 2010, in which it signaled its clear intention "to preserve not only its rights but also its options;" and,

WHEREAS, consistent with that resolution the IID board has been engaged in direct talks with the QSA parties and others in an ongoing effort to arrive at a consensus position that clarifies roles and responsibilities having to do with the mitigation of impacts to the Salton Sea caused by the QSA and the nation's largest agricultural-to-urban water transfer it authorized; and,

WHEREAS, the IID board has called for the development of a contingency plan that anticipates any eventuality in the current QSA litigation and believes that the district, its water users and the region can only benefit from a fresh perspective and divergent views in the preparation of such a document; and,

WHEREAS, noted water authority Charles T. DuMars has distinguished himself as an independent thinker in regard to the QSA, the Salton Sea and any number of related issues surrounding the transfer of water from the farms and fields of the Imperial Valley to urban Southern California ; and,

WHEREAS, Mr. DuMars is uniquely suited to the task of advising the general manager in conjunction with the board in identifying a critical path forward for the district that protects its water rights, respects its standing as a careful steward of the environment and responsible Colorado River water contractor and places the interests of the region and its people ahead of all other considerations.

NOW, THEREFORE, BE IT RESOLVED that the Imperial Irrigation District Board of Directors requests that the general manager confer with Charles T. DuMars to craft a scope of work, timeline and mutually acceptable terms for the development of a contingency plan that addresses all possible outcomes in the disposition of the QSA but is to be treated as separate and distinct from the current QSA litigation within the limits of California law.

PASSED AND ADOPTED this 9th day of August, 2011.

IMPERIAL IRRIGATION DISTRICT

President

Secretary

IMPERIAL IRRIGATION DISTRICT
ORGANIZED
JULY 25, 1911
EL CENTRO, CALIFORNIA

Figure 1

BACKGROUND

I. EARLY DIVERSIONS OF COLORADO RIVER WATER TO THE IMPERIAL VALLEY BY PIONEER IRRIGATORS CREATED CALIFORNIA'S EARLY WATER ENTITLEMENTS.

The water at issue in this case begins its journey miles from the Imperial Valley, the Salton Sea, and the San Diego metropolitan area. The water winds its way down gradient from the Rocky Mountains through small streams to the rushing Colorado River. It then waits in reservoirs to be called for by beneficial users downstream.

When released, the water continues its journey along the river bed, suffering losses to seepage and phreatophytes, and eventually turns further west into large canals heading toward the Imperial Valley. This infrastructure is a tribute to engineering persistence and water policy foresight regarding the importance of sustainable water for irrigated agriculture.

"This infrastructure is a tribute to engineering persistence and water policy foresight regarding the importance of sustainable water for irrigated agriculture."

Imperial Canal Construction, 1910

Ultimately, the water arrives at the IID's headgates. From there, it flows through ditches onto the fields of irrigators. The water then percolates through the soil, providing sustenance to crops. Following the law of gravity, the return flows finally arrive at the point of lowest elevation in the Imperial Valley—the Salton Sea.

The irrigation system that ultimately evolved into the IID began as the result of the far-sighted efforts of several individuals in the late nineteenth century who proposed irrigating the Salton Sink through a gravity-fed diversion of Colorado River water through the dry Alamo River bed. The Alamo Canal, later known as the Imperial Canal, was the first attempt at that diversion. The California Development Company started construction of the canal in 1900.

The IID was formed in 1911 to acquire the properties of the bankrupt California Development Company and its Mexican subsidiary. By 1922, the IID had acquired 13 mutual water companies and was responsible for the development and operation of a vast system of distribution canals throughout the Imperial Valley.

Imperial Dam was constructed between 1935 and 1938 as part of the Boulder Canyon Project Act of 1928. Prior to that, the

Imperial Valley received water through the Alamo Canal. Without any dams along its course, the flow of the river varied widely between drought and flood conditions. The construction of the Dam and the All-American Canal brought life to Imperial Valley farmers and others suffering from the Great Depression, providing jobs and a reliable water supply protected from the devastating effects of flooding.

Construction of the All-American Canal

An enormous quantity of water rights is necessary to divert the water that fuels the IID's network of ditches and canals. Beginning in 1885, the IID's predecessors-in-interest made a series of appropriations of Colorado River water under state law for use in the Imperial Valley. Prior to the limitations imposed by the Seven-Party Agreement, the total appropriations held by the IID were approximately 7 mafy. The effort put forth by the IID and its predecessors-in-interest in creating the infrastructure

"The effort put forth by IID and its predecessors-in- interest in creating the infrastructure necessary to beneficially use this massive amount of water is responsible for creating the bulk of the water rights in the State of California today."

necessary to beneficially use this massive amount of water is largely responsible for creating the bulk of the water rights in the State of California today. One can scarcely imagine the institutional complexity and political struggles that have developed in the fight over this precious resource.

"One can scarcely imagine the institutional complexity and political struggles that have developed in the fight over this precious resource."

The quantities of water arriving at the IID are determined by the "Law of the River"—a subject of institutional complexity understood by few. (*See generally* Charles J. Meyers, *The Colorado River*, 19 Stan. L. Rev. 1 (1966)). The Law includes an international treaty, numerous Supreme Court cases and congressional apportionment of the lower basin, to mention only part of the complex web of federal case law and legislation.

Many have written notably regarding the Law of the River. It is discussed at length in the Court of Appeal decision upholding the QSA against constitutional attack. *See In re Quantification Settlement Agreement Cases*, 201 Cal.App.4d 758 (Cal. Ct. App. 3rd 2011). This Report will not revisit and restate all of the discussion contained in the Court of Appeal decision. However, for purposes of this discussion, a few basic facts as outlined below are important.

California's apportionment of Colorado River water under a complex web of federal laws and Supreme Court case law is 4.4

mafy per year, plus half of any surplus water. However, in the Seven-Party Agreement, contractors for water from federal facilities agreed to apportion 5.362 mafy of Colorado River Water to California. They assumed California would always receive surplus waters, presumably because the upper basin of the Colorado was not expected to fully develop and require its full allocation of water, meaning that sufficient excess supply would always be available to meet this quantity.

Under the Seven-Party Agreement of 1931, the parties agreed to the following priorities and allocations:

- IID, along with "other lands under or that will be served from the All-American Canal in Imperial and Coachella Valleys," was allocated Priority 3(a), equal to PVID's Priority 3(b).
- Priorities 1 (PVID), 2 (Yuma Project), 3(a) (IID/CVWD) and 3(b) (PVID) were allocated 3.85 mafy of California's 4.4 mafy allocation under non-surplus conditions.
- None of Priorities 1, 2, 3(a) or 3(b) were defined in terms of acre-feet per annum, but instead by the number of acres on which these irrigation rights would be used.
- IID, along with "other lands under or that will be served from the All-American Canal in Imperial and Coachella Valleys," was also allocated Priority 6(a) which, together with Priority 6(b) (PVID), equals 300,000 afy.

Under the 1979 Supplemental Decree in *Arizona v. California*, 439 U.S. 419 (1979), the IID was adjudicated a present

perfected right, with a 1901 priority, "in annual quantities not to exceed (i) 2,600,000 acre-feet of diversions from the mainstem, or (ii) the quantity of mainstream water necessary to supply the consumptive use required for irrigation of 424,145 acres and for the satisfaction of related uses, whichever of (i) or (ii) is less."

The Chart denoted as Figure 2 describes delivery amounts under the Seven-Party Agreement and subsequent agreements as Pre-QSA Apportionments; the delivery amounts after the adoption of the QSA are described as Post-QSA Apportionments.

As the Chart reflects, the IID holds the largest quantity of senior rights on the Colorado. In contrast, CVWD's junior priority requires it to cut back in times of shortage under the initial apportionment scenarios directing water to the first three priorities. All surface irrigation projects result in unused tail water at the bottom end of the projects, and that remaining water must go somewhere. In this case, the excess water flows were anticipated to run to the Salton Sea. The cycle of diversions into the Imperial Valley, irrigation through the projects and delivery of water to the Salton Sea has continued to the present day. The result has been the creation of a relationship that existed in relative harmony—the irrigators received Colorado River water, including excess supplies, and used it to grow crops,

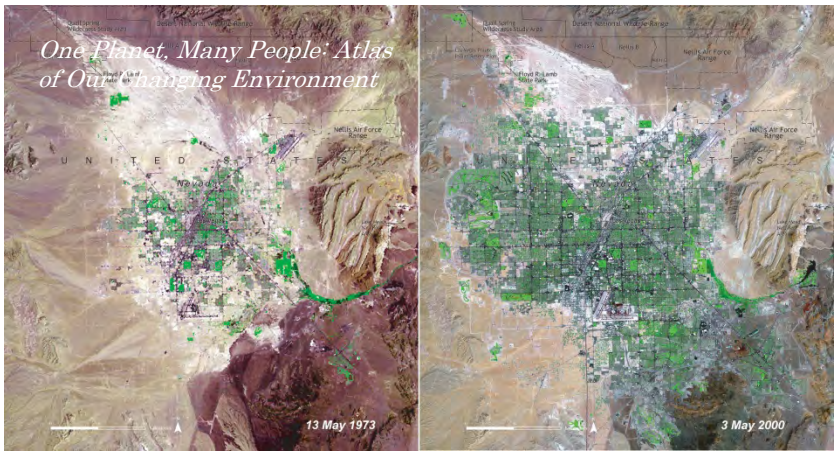
Priority	Water User	Pre-QSA Apportionment	Post-QSA Apportionment
1	PVID "for beneficial use exclusively on … a gross area of 104,500 acres, such waters as may be required by said lands"	3,850,000 afy	420,000 afa
2	Yuma Project "for beneficial use upon not exceeding a gross area of 25,000 acres …, such waters as may be required by said lands."		
3(b)	PVID "for use exclusively on 16,000 acres of land in that area known as the 'Lower Palo Verde Mesa'"		
3(a)	IID "and other lands under or that will be served from the All-American Canal in Imperial and Coachella Valleys"		CVWD: 330,000 afa
4	MWD "for beneficial consumptive use, by themselves and/or others, on the coastal plain of Southern California"	550,000 afy	550,000 afa + (420,000 afa - actual 1,2,3(b) use)
Subtotal (California's limit under BCPA):		**4,400,000 afy**	**4,400,000 afy**
5(a)	MWD and/or City of Las Angeles "for beneficial consumptive use, by themselves and/or others, on the coastal plain of Southern California"	550,000 afy	662,000 afa (MWD)
5(b)	City and/or County of San Diego "for beneficial consumptive use" **[Previously assigned to MWD]**	112,000 afy	
6(b)	PVID "for use exclusively on 16,000 acres of land in that area known as the 'Lower Palo Verde Mesa'"	300,000 afy	Not specified.
6(a)	IID "and other lands under or that will be served from the All-American Canal in Imperial and Coachella Valleys"		1. 38,000 afa to MWD 2. 63,000 afa to IID, 3. 119,000 afa to CVWD
7	"for agricultural use in the Colorado River Basin in California, as said basin is designated on map No. 23000 of the [BOR]"	All remaining available water	4. "Any balance of Priority 6a and 7 water available in accordance with the priorities identified in IID, CVWD and MWD Section 5 contracts, as in effect on October 15, 1999."
Total:		**5,362,000+ afy**	**5,362,000+ afy**

Figure 2

flush the salts from their soils and deliver the water that was not used to sustain the Salton Sea.

II. PRESSURE MOUNTS TO WREST WATER AWAY FROM THE IMPERIAL IRRIGATION DISTRICT.

Development in the upper basin of the Colorado did not remain dormant for long, nor did Arizona remain content to utilize supplies from within its borders. Increased demand from the Central Arizona Project, the growth of Las Vegas in Nevada, and increased use by users on the upper San Juan all began to carve into the anticipated surplus.



Las Vegas, Nevada: 1973 compared to 2000

Plans were made to route water from the north to the major southern California water users—urban users in Los Angeles and San Diego—suffering a deficit as a result of the lack of a surplus. It was not long before attention was directed to the senior user of Colorado River water—the IID.

By mid-1984, the United States Bureau of Reclamation began aggressively exploring whether the excess water lost to other users could be made up by reducing "waste" from the IID that resulted in water flowing into the Salton Sea. This coincided with the State of California Water Resources Control Board's Decision 1600, and Orders 88-12 and 88-20, which seemed to conclude that the IID's actions in allowing irrigation drainage flow to reach the Salton Sea were wasteful and that action should be taken to stop this "waste." Ironically, in that case, the complaint was that excess water was causing flooding of property abutting the Salton Sea. With that decision, the perception was created that the IID is composed of wasteful farmers whose irrigation practices allow water to sink into a basin in the desert—the Salton Sea. This perception persists to this day, even though is now known to be incorrect. Because the IID's allowing water to flow to the Salton Sea was considered waste, it would be only logical that the IID should either allow the excess runoff water to flow to the urban users, or that a court should rule that the IID was wasting water and reduce its priority under the Seven-Party Agreement.

"With Decision 1600, the perception was created that the IID is composed of wasteful farmers whose irrigation practices allow water to sink into a basin in the desert—the Salton Sea."

III. THE BUREAU OF RECLAMATION JOINS THE POLITICAL BLOCK TO WREST WATER AWAY FROM THE IID.

The pressure on the IID to use its water to sustain the coastal communities was immense. In 1988, the IID agreed to conserve and transfer 100,000 acre-feet to the MWD to comply with Order 88-20 to cease waste. This was not sufficient for the United States Bureau of Reclamation ("Bureau"). The Bureau had no more dams to build or irrigation projects to construct, and had changed its role to act as a western water manager. As the federal water master, the Bureau considered its first and foremost task not to promote and expand agriculture by using wasted flows to put more land under irrigation, but rather to squeeze water out of irrigation projects to make it available for urban use.

"As the federal water master, the Bureau of Reclamation considered its first and foremost task to squeeze water out of irrigation projects and make it available for urban use."

Consistent with this new mission, and under the erroneous assumption that federal law, not state law, determined the scope of the water right for agricultural users, the Bureau ignored the finding under state law that the transfer to the MWD addressed the issue of waste. The Bureau sought to squeeze even more water from the IID in order to make water available for junior users on the Colorado. The methodologies were straightforward: quantify the top priority users as having less water than anticipated and shift the surplus to the urban users on the coast.

When the IID and others disagreed with the Bureau, it issued its opinion on the quantity required under IID's permit at 2.835 mafy. The IID objected, and the Bureau began to further scrutinize water use under its alleged authority under federal law. The IID was successful in fending off the federal pressure to reduce its consumption and quantify its rights at a low number, at least for a period of time.

"The IID was successful in fending off the federal pressure to reduce its consumption and quantify its rights at a low number, at least for a period of time."

IV. THE IID TURNS TO THE QSA IN AN ATTEMPT TO RESPOND TO EXTERNAL PRESSURES.

The IID began to negotiate a 200 kafy transfer to the SDCWA, but the MWD and other junior users wanted to participate in carving up the surplus. To add additional pressure, in 1997, Secretary of the Interior Babbitt denied water to the IID for the first time, even though there was no shortage. He indicated in general that he would withhold deliveries to the IID until the agriculture to urban transfers of Colorado River water were completed.

Pressure from the MWD and the Bureau to transfer water away from agricultural use continued. Finally, in 1998, the IID responded to federal demands by proposing the possibility that it transfer 300 kafy to the SDCWA. This proposal was supported by a joint petition from the IID and the SDCWA to the State of California Water Resources Board to allow the transfer. The

CVWD protested the petition, arguing that only the Secretary of the Interior had jurisdiction to allow such a transfer, and furthermore, that it violated the priorities among water users. Negotiations continued among the parties.

With the MWD being a powerful political player anxious for more water and the Department of the Interior asserting tremendous pressure on the IID with threats to force a federal quantification, and both parties playing the "waste" card, the IID moved in the direction of further quantification, attempting in every possible way to resist the federal pressure. However, in 1999, the MWD once again pressed for further scrutiny of the IID's water use. In October of 1999, the IID agreed to "key" terms for the QSA, providing, *inter alia,* that the IID's previously unrestricted Priority 3(a) rights would be limited and quantified at 3.1 mafy, and the CVWD would receive 330 kafy not contingent upon the IID's earlier priority. The SDCWA's quantity was reduced to 200 kafy per year with the remaining 100 kafy slated for transfer to the CVWD, but it could be taken by the MWD if the CVWD did not take it. It was no secret that the Bureau's overreaching position was that if the IID did not execute the QSA, the Bureau would take the water.

"It was no secret that the Bureau's overreaching position was that if IID did not execute the QSA, the Bureau would take the water."

The Secretary of the Interior held the ultimate hammer—reduce California's use to 4.4 mafy or the coastal areas served by MWD and SDCWA would not have a guaranteed supply. This draconian measure could be avoided if the Secretary were to conclude that there was surplus water in Lake Mead based upon reservoir levels. The Secretary agreed to put in place "Interim Surplus Guidelines" that held in place Colorado River water supplies to urban users by assuming the MWD was receiving surplus waters. However, the *quid pro quo* required to postpone enforcement of the 4.4 maf against California was that the IID would make its irrigation runoff water available to the coastal areas by reducing the IID's water use along certain bench marks and agreeing to those terms in an executed QSA. If the QSA was not executed and the "waste" did not stop, then the Secretary would evaluate the IID and determine that it was not making a reasonable and beneficial use of its water.

"If the QSA was not executed and the "waste" did not stop, then the Secretary would evaluate IID and determine that it was not making a reasonable and beneficial use of its water."

Downtown San Diego

In the fall of 2002, with Interior having imposed a deadline of December 31, 2002 to have the QSA finalized, with multiple issues relating to environmental mitigation and fallowing as mitigation measures, the IID agreed to fallow farmland for an interim 15-year period, during which "mitigation" water could be made available to the Salton Sea. After revisions to the IID-QSA water transfer, the State of California Water Resources Control Board conditionally approved the water transfers on October 28, 2002. WRO 2002-0013.

But Interior was not done applying pressure. Threats of additional proceedings to federally quantify and reduce the IID's entitlement continued. Even so, in early December, while the other QSA agencies supported its execution, the IID resisted in response in part to federal pressure from the Bureau and threats to place California in jeopardy by suspending the Interim Surplus Guidelines.

"Threats of additional proceedings to federally quantify and reduce the IID's entitlement continued."

True to its word, Interior delayed approval of the water orders from Lake Mead for the MWD and the IID, indicating it would delay action to see if an "acceptable" QSA was executed by December 31, 2002. Implicit in all of this was the threat perceived by some that the IID's water order could be redirected

to the MWD. In any event, the IID would be restricted by the exercise of raw federal power.

On December 31, 2002, the IID approved a version of the QSA it considered acceptable, but it was not the same as the versions approved by other parties, and was not acceptable to the Bureau. The Bureau marched forward to take control of the IID's water rights, under the alleged authority of 43 U.S.C Part 417, reducing the IID's 2003 water order in the amount that was contemplated to be transferred under the QSA. The IID successfully filed suit against the Bureau, prevailing on procedural grounds, while also correctly arguing that the Bureau's action was an invalid usurpation of state power to regulate water, particularly when the goal was to confiscate water owned by one entity and redirect it to another for political reasons.

V. THE IID SIGNS THE QSA, AND IT IS IMMEDIATELY CHALLENGED.

After renewed efforts by the federal agencies and MWD to apply more pressure on the IID, and additional modifications of a revised 417 determination, which raised its number to 2,835,500 acre-feet, in September, 2003 an announcement was finally made that the parties had reached a deal on the QSA.

A total of eleven lawsuits were filed in California State Court in the aftermath of the QSA, including a validation action

by the IID. The United States chose not to participate. In January, 2010, the Court declared, *inter alia*, that the State had committed itself to an unlimited amount of liability in violation of the State's Constitution and declared twelve of the contracts invalid, as all were determined to be dependent upon one another. The decision was appealed and reversed by the California Court of Appeal, which found that the State had not committed to appropriate funds in violation of the California State Constitution. While the State had committed to fund the excess mitigation costs arising from the QSA, it had not agreed to bind future Legislatures to appropriate money to do so. Hence, it was a valid promise, but not one that could be enforced unless the Legislature agreed to actual appropriations. The case has been remanded to the lower court for an evaluation of the remaining environmental issues under federal and state environmental laws.

"The California Supreme Court found that the State had not committed to appropriate funds in violation of the California State Constitution because it had not agreed to bind future legislatures to appropriate money to do so."

VI. THE RELATIONSHIP BETWEEN THE QSA AND THE FUTURE OF THE IMPERIAL VALLEY.

A. Constituents Served by the QSA.

The significance of the history of the QSA development in this Report is not to provide a historical recitation to replicate the function of a treatise on legal history. Rather, this brief summary attempts to demonstrate that the QSA is not a product of hydrology or of good or effective agricultural engineering, nor is it

a product of the application of doctrines of western and California water law defining beneficial and reasonable use of water. Rather, it is the product of a political battle of epic proportions in which powerful urban constituencies have aligned themselves to create a David versus Goliath contest. In this case, David developed the water rights through hard work and beneficial use over the course of a century. The urban users, supported by a national constituency of congressional delegates from the entire State of California, set out to force the IID to disgorge a portion of its water resources and have been successful in doing so. However, the IID is not a private sector business that can be the subject of a hostile takeover. It is a political subdivision that serves a complex of constituents, all of whose interests must be served by the transfer.

"The QSA is the product of a political battle of epic proportions in which powerful urban constituencies have aligned themselves to create a David versus Goliath contest."

While the IID valiantly resisted attempts to overpower it, in the end, it succumbed because it had very little choice. Separate and apart from the sheer political force to disgorge water resources, the QSA was ultimately agreed to because it was anticipated it would address the needs of all of the IID's constituents.

There are three independent constituencies that must be served by the QSA if it is to not destroy the community that

agreed to it. The first is the farming community. The IID is premised on the assumption that water can, in fact, be conserved at no cost to irrigators and users of water—that the promises of the Definite Plan Report, discussed below, can be fulfilled. If they cannot, then the cost of that failure cannot be visited upon the IID.

Harvesting Lettuce

The second constituency is the environmental community of the Imperial Valley. There is no question that the Imperial Valley contains two significant environmental amenities that must be nurtured and preserved to avoid injury to the bird life, the wildlife, and the air quality of all of its residents. The QSA was agreed to on the assumption that the State would pay for all environmental mitigation costs resulting from the transfer over a set amount. If that does not come to pass, then life in the Imperial Valley cannot be sustained. As discussed below, a

"The QSA was agreed to on the assumption that the State would pay for all environmental mitigation costs resulting from the transfer over a set amount."

mechanism must be developed to ensure those costs are born by the beneficiaries of the transfer. If the promises of environmental mitigation cannot be fulfilled, then once again, the QSA is a flawed agreement that must be improved to address this problem.

Finally, there are the residents of the Imperial Valley who rely on the economic engines of irrigation farming for their livelihood. If the QSA is converted from a water conservation program into a fallowing program, then the loss of the economic drivers for the Imperial Valley is the inevitable result. If the QSA cannot ensure and support the long-term survival of the residents of the Imperial Valley then it is a flawed agreement that must be improved to address this problem.

"If the QSA is converted from a water conservation program into a fallowing program, then the loss of the economic drivers for the Imperial Valley is the inevitable result."

Despite the complexity of the QSA, to the point of not being understandable, even by its drafters, it is clear the QSA is based upon certain presumed facts. First, if the IID is forced to be more efficient and thereby divert less water to its fields, then the water not delivered can be transferred out of the Valley to urban users without causing any net loss of farmland in the Imperial Valley. Second, while all concede that diverting water to urban users will cause some injury to the Salton Sea, resulting in less water available for this environmental treasure, there will be no additional financial costs incurred by Imperial Valley residents.

All concede that those costs will run into multiple millions of dollars and all assumed they would ultimately be borne by taxpayers throughout California. As discussed below, it is far from clear that the taxpayers can, or will be, willing to bear those costs.

The following discussion questions the veracity of the factual predicate that "conservation" by the IID will create new water at no cost to other institutions or the environment. The act of irrigation in gravity flow systems inevitably creates dependence on drain flows in a desert environment. True savings of water are those that occur when less water is provided and the same quantum of crop is produced and no third party is affected. .

When water is placed on a field, the only water consumed is that which is lost to surface evaporation or transpired into the atmosphere through the leaves of plants. The balance of the water is not consumed in crop production; rather, it simply flows through the subsurface alluvium or in drains by gravity to the point of lowest elevation, in this case, ending up in the Salton Sea. The following discussion also questions whether the quantum of conservation promised is feasible, given the lack of clarity on cost, the reliance on actions of individual water users, and simple mechanics of water conservation technology.

Conservation is the act of reducing the amount of water consumed from the hydrologic system through transpiration from plants, from evaporation from open systems, and from percolation into deep, non-potable aquifers. (*See* Committee on Irrigation-Induced Water Quality Problems, Nat'l Research Council, *Irrigation Induced Water Quality Problems*, 8-10 (1989).)[i] Thus, to change the place of use of the IID's irrigation runoff from the Salton Sea to coastal urban water users is a choice that urban use is preferable to use in and by the Salton Sea. In addition, this choice contemplates that the QSA must be financially adequate to cover the costs borne by IID when the irrigation runoff moves from environmental use to urban use.

"To change the place of use of the IID's irrigation runoff from the Salton Sea to coastal urban water users is a choice that urban use is preferable to use in and by the Salton Sea."

This calculus is both complicated and simple, but ultimately comes down to three questions: (1) do we know the quantifiable costs related to conservation of water and will the revenues from the IID cover those costs?; (2) do we know the quantifiable costs related to environmental mitigation, including

deterioration of air quality, and will the QSA revenues cover those costs?; and (3) do we know the costs to the residents of the Imperial Valley in terms of public infrastructure, jobs, and quality of life as a result of the QSA? If the QSA devolves into a program for fallowing land to produce water for urban users, then there will be direct costs to the community. If the QSA does not address those costs, then it must be revised to cover those costs.

A major premise of this Report is that, because urban users propose to take water from the Salton Sea and transfer it to urban users, it is both eminently logical and fair that the new urban beneficial users, having received the benefits from this transfer, should pay for its environmental costs. (*See*, *e.g.*, David H. Getches, *Water Use Efficiency: The Value of Water in the West*, 8 Pub. Land L. Rev. 1 (1987); Ronald B. Robie, *Modernizing State Water Rights Laws: Some Suggestions for New Directions*, 1974 Utah L. Rev. 760 (1974).) Likewise, it is both eminently logical and fair that if the transfer anticipates water conservation with no net loss of farmland, which must be the underlying premise of the QSA, then the new urban beneficial users, having received the benefits of this transfer, should pay all of the costs of conservation, or if conservation is not practical or feasible, that the new urban beneficial users accept a transfer of less water.

"It is both eminently logical and fair that the new urban beneficial users, having received the benefits from this transfer, should pay for its environmental costs, the costs of conservation, and the cost of impacts on the community."

Finally, it is both eminently logical and fair that if there are additional costs to be borne by the community at large as a result of the transfer, then the new urban beneficial users, having received the benefits of this transfer, should pay for the costs of these impacts on the community.

Particularly troubling is the issue of environmental costs. There is no entity that is prepared to provide what it considers to be an accurate accounting of total environmental costs. All conclude it is immense. In any event, the Court of Appeal has indicated that the State cannot constitutionally be compelled to absorb all of the costs generated by the transfer of water from the Salton Sea to urban users. The State may refuse to write a check, or the State's blank check may bounce because the State is insolvent.

"There is no entity that is prepared to provide what it considers to be an accurate accounting of total environmental costs."

Likewise troubling is the massive amount of water conservation that is required to produce water for the urban coast, a project untested and without comparison in any other setting. The Definite Plan Report contains proposals but is untested; already the estimates for fallowing and infrastructure costs are proving uncertain and a proposal is being offered by the parties to modify the fallowing recommendations. Although the Court of Appeal found Article XVI, Sections 1 and 7 to be inapplicable to

the bargain contained in the QSA as a matter of law, from a policy perspective there is a lesson to be learned. The essential principle animating these constitutional provisions of not allowing states to contract with the people's money or assets for items that cannot be paid for is "to force government to live within its means and not saddle future generations with the cost of current obligations." (*Taxpayers for Improving Public Safety v. Schwarzenegger* [*TIPS*] (2009) 172 Cal.App.4th 749, 765.) The question LRPA was asked to evaluate was whether the bargain struck in the QSA was such that, at the end of the day, the people of the Valley will be living within their means and not saddling future generations with the costs of current obligations under the QSA.

"Was the bargain struck in the QSA was such that at the end of the day, the people of the Valley are going to be living within their means and not saddling future generations with costs of current obligations under the QSA?"

There are additional policy and growth issues that are implicated when the residents of the Imperial Valley, dependent upon agriculture and proximate to the Salton Sea, a geographic feature that holds the promise of air quality demise, are pitted against urban user demand for water to sustain their growth. There is no doubt that urban growth in the San Diego region has outstripped its supply of water, and because perpetuating that growth has become itself a source of revenue through real estate sales, and because its own sources of water are unsustainable, it

is rational for that region to look for a sustainable supply elsewhere.

This impulse to feed the next bubble of growth should hardly be surprising in light of California's boom and bust history. While following the lodestar of ever increasing growth rates, California has ignored, and in some ways punished, the users of sustainable natural resources—land and water—in agricultural production.

Delmar, California, site of the Bully Hill Mine; early 1900s

It would have been better if California had been able to secure a water supply of 6 mafy per year from the Colorado to sustain both its demand and that of the MWD. This did not happen. The megalopolis of Los Angeles underwent its growth first and now the SDCWA and the MWD are in a death struggle over wheeling limited water supplies to San Diego. But, from a policy perspective, is it wise to wheel water from the sustainable production of agriculture products to support communities reliant

"From a policy perspective, is it wise to wheel water from the production of sustainable product in agriculture to support communities reliant on resources that have now been demonstrated to be not as sustainable as anticipated?"

on resources that have now been demonstrated to be not as sustainable as anticipated? Is it wise policy for the Imperial Valley to move the water to urban jobs, or would it make more sense to move the jobs to the Imperial Valley because of the water?

B. The Imperial Valley and the Salton Sea

The agricultural economy of the Imperial Valley exceeds one billion dollars per year and is dependent on the IID's senior Colorado River water rights as the sole source of its fresh water. Due to its uniquely temperate winter climate, the Valley enjoys a year-round growing season that enables it to provide what has been estimated to be 90% of the vegetables that Americans consume in the winter, including lettuce, potatoes, sweet corn, carrots, broccoli and cauliflower, as well as an abundance of forage crops in the heat of the summer, such as alfalfa, maize, wheat and related grains. The Valley exists in a symbiotic relationship with the Salton Sea.

The history of the Salton Sea begins thousands of years ago, long before the advent of irrigation in the Imperial Valley. Over the millennia, the Colorado River has spilled into the Salton Basin many times, creating ephemeral lakes that grew and ebbed as climatic conditions changed. Between 1824 and 1904, it is

estimated that the Colorado flooded the Salton Basin no less than eight times.

The Salton Sea we know today was formed in 1905 after the California Development Company began construction of the irrigation canals that were to become part of the IID. Within two years of its construction, however, the Imperial Canal became filled with silt from the Colorado River, impeding the flow of water to irrigators in the Valley. Engineers' efforts to alleviate the blockages were to no avail. Heavy rains and snowmelt in 1905 led to flood waters that overran the headgates for the Imperial Canal, breaching the Canal, and causing nearly the entire flow of the river to be diverted into the Salton Sink, forming the Salton Sea.

The massive lake created by the flooding became a tourist attraction in the 1920s, fueling a small development boom as a resort area. More importantly, the Sea and the Imperial Valley became a critical part of an ecosystem that supports hundreds of species of birds and other wildlife. It is a major resting stop on the Pacific Flyway, and one of the most important bird areas in the Western Hemisphere.[ii]

Migrating Snow Geese

Breaking the historical cycle of filling and evaporation, the Salton Sea is now maintained by agricultural runoff from irrigation in the Imperial and Coachella valleys. It is the largest lake in California, covering an area of roughly 376 square miles.

Reductions in agricultural drain inflows resulting from the agriculture-to-urban transfers directed by the QSA produce direct impacts on the elevation and salinity of the Sea, hastening its demise into what the National Audubon Society has labelled an "environmental Chernobyl" for fish and wildlife. The relatively high salinity of the inflow into the Sea and the lack of an outflow mean that the Sea is now saltier than sea water. Further, as discussed extensively below, due to exposed playas and high winds, the reduced inflow will cause the Sea to become the source of a regional toxic dust catastrophe. As less and less water flows into the Sea, it continues to shrink, exposing miles of the Sea's lakebed. Strong winds blowing across the region pick up salt,

"Reductions in agricultural drain inflows resulting from the agriculture-to-urban transfers directed by the QSA produce direct impacts on the elevation and salinity of the Sea, hastening its demise into what the Audubon Society has labelled an "environmental Chernobyl" for fish and wildlife."

selenium, and other contaminants and deposit them in a fine shower across the Imperial and Coachella Valleys, creating major air quality problems and posing a significant risk to the public health.

VII. THE NEED TO ERASE THE PREMISE OF DECISION 1600 THAT THE IID'S IRRIGATION PRACTICES ARE WASTEFUL AND THAT THE CONTRIBUTIONS TO THE SALTON SEA PROVIDE NO BENEFIT TO THE IMPERIAL VALLEY.

The SWRCB hearings and Decision 1600 addressed claims that IID water management practices resulted in waste or unreasonable use of water. Specifically, the so-called waste occurred because irrigation practices produced tail water that maintained the surface water elevation of the Salton Sea. Indeed, the "waste" was causing flooding of the property of the person who brought the claim.

The SWRCB was cognizant of the effects of reducing return flows to the Salton Sea at that time, but on the evidence available

to them concluded: (1) that a long-term reduction in the average rate of IID inflow by about 100,000 afa "would eventually stabilize the water level at or near the -227.55 level existing in December 1982"; (2) that "a more substantial long-term reduction of IID inflow" would eventually stabilize the Sea at a lower level; (3) that there exists a correlation between agricultural drain inflows and water salinity, toxicity and pollutant concentrations; but (4) that IID "conservation" measures would produce "significant beneficial impacts" through local economic stimulus from conservation programs, construction and from "the availability of conserved water for other uses." (Decision 1600 at 60-61, Order 88-20 at 29.) As the multiple briefs in this case by those with expertise regarding the Salton Sea demonstrate, these predictions have not come to pass.

For example, the elevation of the Salton Sea is now projected to drop to below -233 feet by 2018, with possibly fatal results for all the Sea's fish habitat, and even more extreme impacts expected in the following decade when as much as 130 square miles of lakebed will be exposed. Thus, despite the best efforts of those involved, the importance of the IID outflows was not properly credited in Decision 1600. Nor have the substantial economic benefits from conservation been realized. Imperial

"Despite the best efforts of those involved, the importance of the IID outflows was not properly credited in Decision 1600. Nor have the substantial economic benefits from conservation come to pass."

County remains the poorest in California while having the highest level of national unemployment. (*See* Elizabeth Varin, *El Centro Keeps Highest Unemployment Rate in Nation*, Imperial Valley Press, Dec. 7, 2010).

The SWRCB found that the "need for substantial additional water supplies in California and the prospects for substantial water conservation in the IID have been well established." (Statement of Decision 25, AR 3/30/114567/114614.) Further, the SWRCB instructed IID to complete "an executed agreement with a separate entity willing to finance water conservation measures in Imperial Irrigation District," or take other measures achieving similar results. (Statement of Decision 25, AR 3/30/114567/114615.)

There were also arguments that lowering the Salton Sea to the -227.55 foot level would have several "beneficial effects," including exposing presently submerged land for geothermal energy development. This "conservation" was anticipated to benefit the IID by reducing its pumping costs, and by the avoidance of lawsuits. (Decision 1600 at 60-61.)

The SWRCB concluded:

> It is impossible to predict when the salinity will adversely affect the fishery either with or without a planned reduction in IID inflow. However, the rapid rise in salinity between 1980 and 1982 shows that salinity could exceed

> 40,000 ppm, the danger level for fish reproduction, in less than five years whether or not a planned reduction in inflow takes place. Therefore, it is apparent that a prolonged delay in water conservation measures would not save the fishery for an appreciable length of time.

(*Id.*) The SWRCB was absolutely convinced that the highest and best use of the water, held in first priority by the IID, was urban use:

> The need for substantial additional water supplies in California and the prospects for substantial water conservation in IID have been well established. Development of a definite schedule and implementation plan for conserving at least 100,000 acre-feet per annum should be regarded as an initial step in developing and implementing an overall water conservation program which will assist in meeting identified needs. Based on presently available information, the Board finds that conservation of 367,900 acre-feet per annum as proposed in IID Exhibit 25 is a reasonable long-term goal which will assist in meeting future water demands.

(Order 88-20 at 44.)[iii]

This decision, while upheld by appellate courts, nevertheless became the lynch pin for all subsequent political actions to wrest water away from the Imperial Valley. Because the decision was based upon the absence of good environmental information and knowledge regarding the feasibility of water conservation from a practical and cost-benefit perspective, it now saddles the IID with a myth—that the IID is a wasteful user of agricultural water. Under this faulty paradigm, the IID is wasteful because sustaining flows into the Salton Sea for

"Because the decision was based upon the absence of good environmental information and knowledge regarding the feasibility of water conservation from a practical and cost-benefit perspective, it now saddles the IID with a myth—that the IID is a wasteful user of agricultural water."

mitigation purposes in addressing the declines in the Sea's level is a waste of water. For this reason, the principle seemingly espoused in Decision 1600 must be rejected both in public forums and before the SWRCB if necessary, in on-going proceedings or in a new proceeding should the issue arise in another context.

VIII. PROPOSAL TO HAVE THE BOARD, THE AGRICULTURAL COMMUNITY, THE ENVIRONMENTAL COMMUNITY AND THE RESIDENTS OF THE IMPERIAL VALLEY, COLLECTIVELY DETERMINE CHOICES REGARDING IMPLEMENTATION OF THE QSA.

The Resolution calling for the development of this Report directs that Charles DuMars confer with the General Manager of IID and develop, *inter alia*, "a contingency plan for the IID that addresses all possible outcomes in the disposition of the QSA."

After conferring with the General Manager of the IID, it was decided that the analyses of the possible outcomes will be measured against the following criteria:

1. The degree to which the outcome would limit any future reasonable and beneficial use challenges to the IID in the use of its water rights.

2. The degree to which the outcome would provide protection against future challenges from whatever source to the existence of the water rights exercised within the Imperial Valley by users within the IID.

3. The degree to which the outcome would ensure that agriculture within the Valley remains sustainable, provides a financial base for infrastructure and economic development, and allows agricultural to be carried out at rates that are within the limits of agriculture to function productively.

4. The degree to which the outcome would promote and support actual conservation of water as opposed to simply fallowing of agricultural lands as a means of providing water to non-agricultural users.

5. The degree to which the outcome addresses the actual environmental costs to the region associated with effects on the Salton Sea and imposes the costs of mitigation upon those altering the ecosystem and that are receiving benefits for having done so.

6. The degree to which the outcome ensures that the price paid by those who would move water out of the Imperial Valley is sufficient to pay for all of the actual economic, environmental and social costs associated with the transfer.

The ensuing discussion in the body of this Report relating to financial, conservation and environmental issues addresses Items 1 and 3 through 6 on the above list. Item 2, however, asks for recommendations that would ensure, in effect, that the water rights of the IID remain in the Imperial Valley and be exercised for agricultural purposes or for purposes that would provide

economic benefit to the Valley. We do not take this to be a call for a lawyer's guess as to what legal outcomes might come from the courts. Indeed, the Scope of Work expressly prohibits advice "relative to the legal positions to be taken in the ongoing QSA litigation or any other litigation".

We are of the view that this analysis requests policy advice as to how the Board, acting outside the ongoing court proceedings and as a member of the Imperial Valley community, can best take action to preserve the water rights of the IID in perpetuity in the Valley so as to ensure they continue to provide the multiple benefits they bring to the region.

A. Recognize that the irrigators, environmental institutions and residents of the Imperial Valley all benefit from a QSA that serves their collective needs. Litigation does not promote affirmative solutions; it simply holds the status quo.

To say that the IID has been besieged by litigation over the QSA is a major understatement. Many of these lawsuits are not of the IID's making—if one is a defendant in a lawsuit there is no choice but to defend. However, there are multiple reasons for the filing of lawsuits. For example, it may be necessary to file a "placeholder" suit to protect a claim that may otherwise be forever barred simply by failing to file suit. A lawsuit can be used to make a political statement or as a means of obtaining documents.

"To say that the IID has been besieged by litigation over the QSA is a major understatement."

The fact that a political subdivision is involved in litigation does not preclude its governing body from taking the political action necessary to try and resolve a policy dispute. This is particularly true where the political subdivision shares power and common interests with the other parties to the litigation. Historically, the existence of litigation between and among the common interests in the Valley has frozen their ability to address issues. To the degree that portions of the QSA could be modified to promote common goals, this should be pursued. This Report includes some suggestions for modifications to the QSA.

"The fact that a political subdivision is in litigation does not preclude its governing body from taking the political action necessary to try and resolve a policy dispute."

Litigation does not preclude political action. Stated more bluntly, none of the litigation that has taken place will help provide leadership for problem-solving in the Valley. Courts cannot fashion affirmative solutions to make economical that which is uneconomical, to make feasible that which is infeasible, or to improve the quality of life in the Imperial Valley. Only the Board, in conjunction with the other interest groups and other political subdivisions in the Valley, can achieve this result.

"Courts cannot fashion affirmative solutions to make economical that which is uneconomical, to make feasible that which is infeasible, or to improve the quality of life in the Imperial Valley."

B. The QSA should be viewed as a starting point, not an ending point. The Board should not be defensive about its contents or frightened of consequences that could flow from making it a better document.

The QSA was the result of a tremendous amount of work by multiple law firms for the IID, San Diego, the State, Coachella, and many other experts. However, the probability that any agreement will provide the ultimate solution to a complex political problem is inversely proportional to its complexity. Here, the QSA is extraordinarily complicated; thus the probability that it is perfect in all respects is near zero. Indeed, in the case of the QSA, the assumptions regarding the success of the QSA relating to the feasibility of conservation, environmental mitigation, and the sufficiency of the financial remuneration to cover these items are grandiose. This is not to say these assumptions are incorrect - it is to say that time and circumstance will measure these assumptions against reality.

"The probability that any agreement will provide the ultimate final solution to a complex political problem is inversely proportional to its complexity."

As discussed below, it appears many constituents believed that the State was irrevocably committed to pay for mitigation costs that exceed $133,000,000.00, but the California Court of Appeal ruled that it was not. The IID and the SDCWA themselves sought to modify the underlying transfer permit based upon what has been described as changed conditions. The

anticipated price for fallowing land has changed dramatically from what was anticipated, and expenditures of QSA funds have been modified by internal decisions. These are all modifications in reaction to changed circumstances. It is clear there will be more. Indeed, the

> "primary goal of this report is to provide a 'fresh perspective and divert views' on the issue of, transfer of water from the farms and fields of the Imperial Valley to Southern California' and ideally to aid in the task of providing a 'critical path forward for the district that protects its water rights, respects its standing as a careful steward of the environment and responsible Colorado River water contractor and places the interest of the region and its people ahead of all other considerations."

The Board can only respond to a recommendation as to what is the best "critical path forward" if it accepts the proposition that modification of the QSA to meet changing realities may be essential for following that critical path.

"The Board can only respond to a recommendation as to what is the best "critical path forward" if it accepts the proposition that modification of the QSA to meet changing realities may be essential for following that critical path."

C. The challenges for the Board are daunting, and given that political and factual circumstances will inevitably change, the Board must be proactive and evaluate all future scenarios. Where a change is possible, the Board should anticipate that change and be prepared practically and financially to deal with it.

Governmental entities like the IID must continually make choices as to how to govern. When governments are under attack financially and politically, the best method is to do very little until the attack ceases and the full extent of risk and benefit is known.

As discussed above, the QSA is the result of tremendous political pressure on the IID. The IID Board has faced up to that pressure and worked to adopt the best solution it could under the circumstances. Conversely, when political, economic and legal compromise has yielded a result such as the QSA, the role of the Board changes. The QSA is now in place; it is the status quo. Undoubtedly, however, the status quo is subject to change. Reports like this one demonstrate that changes have already occurred, or could occur in the future, which will yield significant consequences for the IID. At this juncture, there are two possible reactions from the Board. One is to continue to deny the existence of, or need, for any change. The other is to accept the reality of what has occurred and will occur, and to adapt proactively to stay ahead of changing conditions. In complex systems, where change is inevitable, all institutions profit by being "ahead of the curve." The purpose of this Report is to provide recommendations that will keep the IID ahead of the curve.

There are significant reasons why the Board needs to be proactive rather than reactive with respect to the operation of the QSA. If an institution, like the IID, waits until after events that have draconian political and economic consequences have

"There are significant reasons why the Board needs to be proactive and not reactive with respect to the operation of the QSA."

occurred, its position will inevitably be weaker than it would have been with advance planning.

For example, and as discussed in the section on Environmental Issues below, suppose that the environmental costs are so high that the State does not pay for mitigation. Failure to follow through with proper mitigation would violate the SWRCB permit, among other consequences. Without a valid transfer permit, the water cannot be transferred. If it cannot be transferred, it will not be paid for. To suddenly lose this revenue stream would be untenable for the IID. Without advance planning, the IID could lose a revenue stream it has relied on and find itself in a weakened bargaining position, not only to demand complete remuneration to keep the water flowing to San Diego, but also to force responsible parties to pay for all mitigation costs.

In other words, if a problem relating to conservation, environmental mitigation, financial compensation for IID water or internal accounting for revenues is visible on the horizon, it needs to be examined, a response formulated and action taken in advance to avert a crisis. The Board should not wait until the crisis hits to react to it.

CONSERVATION

I. WILL THE PROPOSED SYSTEM AND ON-FARM CONSERVATION APPROACH IN THE DEFINITE PLAN YIELD THE SAVINGS ULTIMATELY REQUIRED BY THE QSA?

A. Background: Western Water Transfers

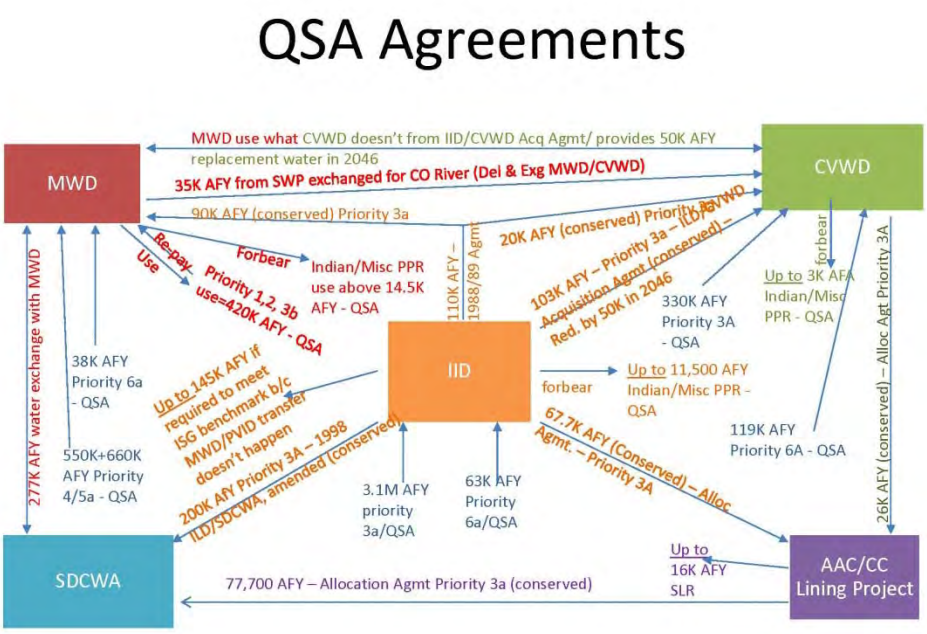
The most pressing question facing the IID is whether it can achieve the conservation requirements of the QSA, as set forth in the QSA itself and the related agreements with MWD, SDCWA, CVWD and DWR. That this is a question at all demonstrates how unique the transfers described in the QSA are. Transfers of water from agricultural to municipal and industrial ("M&I") uses are hardly unusual in the western United States; indeed, they are a common and beneficial feature of the appropriative and priority-based water law systems that predominate in the West. Through this process, the water that is necessary for all facets of life can be effectively apportioned among users as the needs of the society evolve. The QSA transfers, however, are unique in at least three respects.

"The most pressing question facing the IID is whether it can achieve the conservation requirements of the QSA"

First, the sheer scope of the transfer is immense. At full build-out, the IID will transfer 303,000 acre-feet per annum of water to the SDCWA and the CVWD (or the MWD, if the CVWD declines). This is on top of the 105,000 acre-feet per annum already transferred to the MWD and the CVWD under the earlier

"At full build-out, IID will transfer 303,000 acre-feet per annum of water to SDCWA and CVWD"

agreement. The 303,000 acre-feet represents almost 10% of the IID's Colorado River Priority 3(a) entitlement quantified by the QSA. The QSA, not without reason, has been described as the largest ag-to-urban transfer in United States history. In addition to its scale, it is complex, as reflected in the following chart:



Second, the QSA transfers do not attempt to transfer water rights from one use to another, but instead, transfer conserved water. In most western states, water is a public resource not subject to of private ownership. However, water can be appropriated and water *rights* developed thereby. In such systems, water rights are characterized by the beneficial use of water for a particular purpose and with a particular priority date developed by the first use of the water. When existing supplies of

water are inadequate to meet all uses within a water system, those rights with a senior priority date are met first and junior uses can be curtailed.

A typical feature of these appropriative systems is that the water rights are transferable. That is, the owner of a right to the use of water diverted from a river, run through a ditch and put to beneficial use on a farm can change the point of diversion, the place of use or the purpose of use of the water right, and maintain the original priority date of the water right. The rights can also be sold to persons or entities who intend to use them at a different location and for a different purpose. In such cases, an administrative process is often undertaken to ensure that the new point of diversion, place of use, and purpose of use will not impair existing water rights in the new area.

"A typical feature of these appropriative systems is that the water rights are transferable."

Due to the historical development of the west, agricultural water rights tend to hold the earliest priorities. When the West industrialized and its cities grew, many locations found their water resources fully appropriated. In order to grow, the senior (agricultural) water rights were transferred to new M&I uses. Typically, for such ag-to-M&I transfers, the new M&I user would purchase the water right from the agricultural user, who would sever the right from the land being irrigated and dry it up. The

M&I user would then apply for the permit to change the water right to the new point of diversion, place of use and purpose of use with the appropriate administrative agency. When the permit is issued, the agricultural use of water ceases and the new M&I use commences. By contrast, no such water rights transfer is contemplated by the QSA or its related agreements. Rather than transfer senior agricultural water rights to new M&I uses, with the resulting cessation of the prior agricultural use, the agreements contemplate that the IID will make water available through water conservation efforts. Thus, the agricultural uses remain, but water being realized through efficiency gains is transferred to new points of diversion and places of use.

In theory, at least, this type of transfer has a tremendous advantage: through water conservation efforts, senior agricultural uses can coexist with junior M&I uses, and the transfer of water does not result in the drying up of agricultural lands or the reduction of agricultural production. However, also unlike the typical water rights transfer process, the QSA conserved water transfers bear a risk of failure. In a typical water rights transfer, the transferee knows how much water was used at the original location and, assuming that there are no issues of impairment, can utilize the full consumptive use amount

"…unlike the typical water rights transfer process, the QSA conserved water transfers bear a risk of failure."

at the new location. Likewise, the transferor fulfills his or her obligation simply by ceasing irrigation of the field (or obtaining a different source of supply). In such a transaction, there is no risk of failure; the cessation of irrigation is all that is required to make the water available for the new uses. In the QSA transfers, however, there is no guarantee that water can be conserved in sufficient amounts for delivery to the new users.

"In the QSA transfers, there is no guarantee that water can be conserved in sufficient amounts for delivery to the new users."

Lastly, the QSA transfer differs from a typical western water right transfer in that the agreement is between two large public institutions, not between two individuals or between an individual and a public institution. As it relates to the on-farm efficiency component of the conservation plan, this aspect of the transfer is contrasted with a more typical water rights transfer. There, the transferee of the water contracts directly with the landowner drying up the land, rather than contracting with an entity to enter into further contracts with landowners to engage in conservation.

Tail water capture and re-use pond

B. Background: the MWD Transfer

Another, more immediate, point of comparison for the QSA transfers is the MWD transfer agreement, executed in 1988. In that agreement, the MWD did not pay for conserved water on a per-unit basis; rather, the parties identified, and MWD funded, water conservation projects that would yield anticipated water savings. The MWD was only entitled to water to the extent that the projects actually realized those savings in a verifiable manner. The agreement contemplated on-the-ground verification of the savings because, at that time, the IID did not have a quantified entitlement to water under its Priority 3(a) Colorado River water right. Thus, conservation was not measured against a right to divert a specified amount at Imperial Dam, but rather whether the IID diverted less than it otherwise would have without the conservation measures.

C. The QSA Transfer Requirements and the Definite Plan's Approach

The QSA's "Exhibit C: Compromise IID/SDCWA and QSA Delivery Schedule" set forth the annual delivery obligations of the IID and identified the annual amount of each year's obligation that would be satisfied through efficiency programs and the amount achieved through fallowing. The fallowing program—more akin to a traditional water transfer described above, albeit a

temporary one—expires in 2017. Stripped of the fallowing component, the QSA's Exhibit C imposes the following conservation/delivery requirements on the IID (in thousands of acre-feet):

Agmt. Yr.	Cal. Yr.	SDCWA	CVWD	MWD	Total
1	2003	0	0	0	0
2	2004	0	0	0	0
3	2005	0	0	0	0
4	2006	0	0	0	0
5	2007	0	0	0	0
6	2008	0	4	0	4
7	2009	0	8	0	8
8	2010	0	12	0	12
9	2011	0	16	0	16
10	2012	0	21	0	21
11	2013	20	26	0	46
12	2014	40	31	0	71
13	2015	60	36	0	96
14	2016	80	41	0	121
15	2017	100	45	0	145
16	2018	130	63	0	193
17	2019	160	68	0	228
18	2020	192.5	73	2.5	268
19	2021	205	78	5	288
20	2022	202.5	83	2.5	288
21	2023	200	88	0	288
22	2024	200	93	0	293
23	2025	200	98	0	298
24	2026	200	103	0	303
25	2027	200	103	0	303
26	2028	200	103	0	303
27-45	2029-2047	200	103	0	303
46-75	2048-2077	200	50	0	250

Under the 1998 IID/SDCWA Agreement, "The IID effects a transfer of Conserved Water … by reducing its annual diversion (less return flows) from the Colorado River at Imperial Dam by an amount equal to the Conserved Water to be transferred. When the IID effects a transfer in that manner, the IID has satisfied its obligation to transfer such Conserved Water." (SDCWA Agreement, § 6.5). Likewise, under the QSA itself, "IID performs its obligations to make Conserved Water available for CVWD and MWD acquisition … by reducing its Consumptive Use at Imperial Dam by an amount equal to the Conserved Water to be acquired. When IID acts in this manner, IID has satisfied its obligation to make Conserved Water available for acquisition." (QSA, § 2.1(4)).

This obligation differs from the comparable Article III of the 1988 IID/MWD Agreement:

> The extent of this IID obligation to make conserved water available is for IID to reduce its annual diversion from the Colorado River below that which it otherwise would have been absent the projects of the Program (in an amount equal to the quantity of water conserved by the Program) to permit the conserved water so made available to be delivered by the Secretary to MWD. This IID expressly agrees to do to permit the water so made available to be delivered by the Secretary to MWD through an increase by an equal amount in MWD's diversions at its Intake Pumping Plant on Lake Havasu.

(IID/MWD Agreement, Art. III).

At the time of the MWD Agreement, the IID's water entitlement had not been quantified and could fluctuate based on

changes in cropping patterns and irrigation demand; as a result, the obligation to transfer conserved water is measured against the amount the IID "otherwise would have been absent the projects of the Program." This required on-the-ground verification of the savings realized by the system efficiency projects in the Program. Because the QSA quantified the IID's entitlement at 3.1 million acre-feet per annum, the savings need not be verified through engineering studies, but must actually result in a reduced diversion of water at Imperial Dam.

"Because the QSA quantified IID's entitlement at 3.1 million acre-feet per annum, the savings need not be verified through engineering studies, but must actually result in a reduced diversion of water at Imperial Dam."

The On-Farm Efficiency Conservation Program, currently in development, would implement the Definite Plan's targeted goal of 180,000-210,000 acre-feet in annual on-farm savings (the remaining 93,000-123,000 acre-feet of conservation would, under the Definite Plan, be created through system improvements). This balance between system and on-farm targets was influenced by a variety of factors—including, no doubt, the equities of maximizing the QSA funds flowing to the irrigators, the actual beneficial users of the water—but another major factor was the cost-effectiveness of the system efficiency programs. Further, certain system improvements are required in order to realize the savings created by the on-farm improvements. The on-farm program would contract with landowners to install a metering

device, propose conservation methods and estimate the savings, and to agree to limit actual deliveries to the land, which would accumulate to reduce river diversions. In exchange, the IID would make payments to the landowner on a per-acre-foot of actual savings basis. The projected savings of the system efficiency programs are easier to project, but it is the efficacy of the on-farm program that raises the most concerns.

"The on-farm program will require participation of 76% to 89% of the total farmable acres – a daunting percentage."

The minimum savings currently proposed for acceptance of a farm unit into the program is 0.2 acre-feet per acre. Even assuming that each acre in the program can save 0.5 acre-feet per acre, the maximum savings is 236,500 acre-feet, based on the roughly 473,000 acres of farmable land within the IID. This requires a participation rate that ranges from 76% of the total farmable acres for 180,000 acre-feet of savings to 89% of the total farmable acres for 210,000 acre-feet of savings. That is a daunting percentage, which is further complicated by other factors.

"because the QSA transfers…are measured by actual reductions in diversions at Imperial Dam, changes in cropping patterns will impact aggregate water demand and complicate savings measures"

First, because the QSA transfers, unlike the MWD transfer, are measured by actual reductions in diversions at Imperial Dam, changes in cropping patterns will impact aggregate water demand and complicate savings measures. Cropping patterns are determined, or at least for a healthy agricultural economy, *should*

be determined by economics, over which the IID has no control. If non-participating farms switch to a higher water-use crop, based on the projected demand for that crop for the season, such a switch would undo the water savings realized by a participating farm.

Similarly, all changes in water use bear certain risks to the grower. The grower's tolerance for that risk will determine the necessary price-point for inducement into a water conservation program. Again, however, this tolerance will fluctuate based on commodity prices, over which the IID has no control.

Winter Produce

Finally, the land ownership patterns in the IID present a challenge. According to the 2010 Water Department Annual Report, 60% of the irrigation farm accounts are owned by tenant farmers. The proposed On-Farm Efficiency Conservation Program, in the most technical terms, would currently require

landowner authorization for implementation of conservation infrastructure contracts. Although this requirement certainly makes sense when the required participation levels are high and the contracts are for terms of years, there appears to be no rationale for imposing this requirement on short term contracts, such as by crop or equivalent periods of time. In the end, any barriers to voluntary participation present a problem for the IID.

"When the required participation levels are high any barriers to voluntary participation present a problem for IID."

II. HOW CAN THE IID MAXIMIZE THE LIKELIHOOD OF COMPLIANCE WITH THE QSA TRANSFERS AND PROTECT ITS WATER RIGHTS?

As noted, the QSA transfers, unlike the MWD transfer, place the risk that the conservation measures will not produce sufficient water on the IID. For example, under the SDCWA Agreement, it is an event of default if "[t]he IID fails to transfer Conserved Water or Early Transfer Water in the quantities and on the schedule specified in this Agreement…." (SDCWA Agreement, at § 15.2(a)). As also noted, the generation of sufficient water through the on-farm program is a daunting task. We recommend that the IID take certain practical steps to maximize the chance of success of the on-farm program, but to also gain acceptance of the fact that the failure to produce conserved water through reasonable efforts to induce such change

does not indicate that the IID is currently wasting water and should not trigger a breach of the QSA transfer.

A. Practical Strategies to Maximize On-Farm Savings

LRPA proposes the following practical strategies to maximize the chance of success for the on-farm efficiency program. LRPA and its agricultural consultants have met with IID Staff in the development of these recommendations, and it is our understanding that many have been, or are in the process of being, integrated into the on-farm program.

1. Determine the proper baseline against which conservation will be measured.

The success of the on-farm conservation program will depend, in part, on the proper determination of the baseline against which the conservation should be measured, but that is not an easy task. The baseline for diversion established by the QSA – 3.1 million acre-feet per year – is a comparatively simple matter. Developing a baseline for the thousands of individual fields in the IID, each with its own characteristics and history, but that in aggregate must reduce farm deliveries to meet the diversion reduction goal, presents a daunting task. It should, however, be one of the first tasks the Board undertakes. Several factors complicate the analysis.

"The success of the on-farm conservation program will depend, in part, on the proper determination of the baseline against which the conservation should be measured."

For example, some landowners/growers in the IID have long instituted voluntary water conservation measures. Others have not, in particular because the cost of irrigation water is low and does not encourage voluntary conservation. Also, current metering of water deliveries is insufficiently accurate for the program, and requires the installation of more accurate meters. Moreover, cropping patterns have changed over time, making a determination of a "baseline" water use for a particular field or farm difficult.

Water conservation is usually induced through either a carrot or a stick approach or, more commonly, a combination of the two. Water conservation under the On-Farm Efficiency Conservation Program has to be real, as under the SDCWA Transfer Agreement, "[t]he IID effects a transfer of Conserved Water under this Agreement by reducing its annual diversion (less return flows) from the Colorado River at Imperial Dam by an amount equal to the Conserved Water to be transferred." Thus, in order to reduce deliveries of water to the IID from Imperial Dam, the collective actual on-farm use must be reduced. On the other hand, equity is also important; because the savings of water that will entitle the landowner to compensation under the program is measured against the baseline, the program should, to the

"Water conservation is usually induced through either a carrot or a stick approach or, more commonly, a combination of the two."

greatest extent possible, define that baseline in such a way as not to punish the landowner who previously undertook conservation measures, or excessively reward the landowner who previously had a history of high water use that could be reduced with comparatively little effort or investment.

These two goals of an incentive program are in tension. To the extent the program tries to be more "equitable" by defining the baseline in such a way as exclude the past voluntary conservation measures, it will lessen the actual wet water conservation being produced thereby. Also, the program has to be manageable by IID staff.

"To the extent the program tries to be more "equitable" by defining the baseline in such a way as exclude the past voluntary conservation measures, it will lessen the actual wet water conservation being produced thereby."

We recommend that the IID should keep it simple by defining the baseline by determining, for each soil type, crop and season, a "reasonable" (not actual) use of water for a field undertaking defined ordinary irrigation measures. That number should then be compared to the actual water use on the field since 2003 (the year of the execution of the QSA) and, provided the disparity is not outside an accepted tolerance, it should be used as the baseline.

Pump in drain returning seepage to main canal (East Highline Main)

2. Simplify the process, target larger farm units first, and require on-farm efficiency contracts of a sufficiently long duration to make the program manageable.

The success of the on-farm conservation program will depend, in part, on the use of contracts with a sufficiently long term and with a process that is attractive to landowners and farms, while maintaining relative administrative ease. It is initially recommended that contracts for on-farm water conservation should be for a term of at least three years. Otherwise, the administrative burden on the IID is too great. The three year term would cover a variety of crops in rotation, full cycles for alfalfa, and provide assurance and incentives for investment in on-farm irrigation technology and management improvements. There will undoubtedly be instances for which a minimum three year term may not be feasible, and the IID would

"The success of the on-farm conservation program will depend, in part, on the use of contracts with a sufficiently long term and with a process that is attractive to land owners and farms, while maintaining relative administrative ease."

not want to prohibit participation in many such cases. Some flexibility would need to be provided for contingencies such as fitting with renter contracts. The Board, however, should make the final determination on the minimum length of the contracts at the outset of the program.

Given the need to involve approximately 80% of the farmable acreage in the program, there should be as few barriers to participation as possible.

3. Bring as many of the system and on-farm efficiency programs as possible "in-house."

The QSA conservation requirements will result in the IID devoting a significant portion of its mission to water conservation for the long-term. The amount being transferred under the QSA—303,000 acre-feet per annum—is roughly 10% of the IID's annual allotment. This will cause a dramatic shift in the mission of the IID—from simply providing low-cost water with good service to *also* undertaking system conservation measures, overseeing on-farm conservation contracts, and coordinating these two efforts. As a result, for the term of the QSA, the IID is heavily invested in the water conservation business, which is not an end in itself, but rather only has value if it serves the needs of irrigators and the IID.

"For the term of the QSA, the IID is heavily invested in the water conservation business."

In general, unique or custom jobs that an organization requires are much more effectively contracted out. Routine, long-term, or permanent functions can achieve an economy of scale such that developing the in-house capacity to carry them out is the most cost-effective approach. Cost savings for many of the water conservation measures that are necessary to the IID in the future could be realized by bringing many of the planning, design and maintenance functions in-house. More importantly, bringing such functions in-house will serve to develop the institutional

expertise of the IID over the lengthy term of the QSA and any similar efforts that may arise in the future. This applies to construction, maintenance, and technical/design services.

Thus, the IID should re-evaluate its reliance on outside contractors for work that will become a long-term or permanent function for the IID, and to the greatest degree possible, bring that work "in house" and continue to build the in-house capacity to perform that work.

4. Rely on the expertise of the Water Conservation Advisory Board to adaptively manage the on-farm efficiency program.

During LRPA's visits to the Imperial Valley, we have observed that there is a great deal of interest in having the actual irrigators, acting through the Water Conservation Advisory Board, develop and determine methods to ensure actual, practical on-farm conservation methods. The Imperial Valley is not only blessed with plenty of farmland and a year-round growing season, it is also blessed with a large and knowledgeable farming community. The on-farm program will depend on participation of a significant proportion of that community. The best interface between the IID and the community farming appears to us to be the Water Conservation Advisory Board. The IID should continue to meet regularly with that body to develop the program with the best information about farming practices. This is not simply true

"The on-farm program will depend on participation of a significant proportion of the farming community."

at the outset; as IID staff has indicated in interviews, the on-farm program will have to be adaptively managed,[iv] particularly as the delivery requirements ramp up over time. The IID should continue to work closely with irrigators and with the Water Conservation Advisory Board to finalize and implement a simple, workable on-farm conservation program.

Recently, positive steps were taken toward developing an effective on-farm conservation program when the Water Conservation Advisory Board presented its recommendations to the IID Board. The recommendations include a flexible combination of short and long term contracts, and include innovative proposals for difficult issues such as reducing tensions between landlords and tenants, and establishing a baseline for farmers who have already taken conservation measures. Implementing the recommendations in a workable program will require continued cooperation between the IID and the Water Conservation Advisory Board. The recommendations below strongly urge the IID Board to support and promote this type of involvement through an expanded program of outreach.

B. Protection of IID's Water Rights against Claims of Waste of Water

As described above, the QSA transfers, like the MWD transfer, did not transfer water rights from one use and location

to a new one. Instead, they assumed that the IID could conserve water, while maintaining agricultural production, and allow urban users to benefit from the IID's conservation. That this approach was taken is largely a product of history and California's chosen approach to dealing with municipal over-reliance on the Colorado River. As described in an earlier section of this Report, California had long used more from the Colorado River than it had any entitlement for. Ordinarily, in the West, when a system is over-appropriated, the senior water users receive their entitlement, and it is the junior users who are curtailed. In those systems, if urban use grows, it is generally required to acquire and transfer the senior water rights to meet that need.

As applied to this situation, since the IID's Priority 3(a) water rights were fully covered by California's lawful entitlement, it should have been protected in the case of any priority call. That did not happen; instead, the IID has repeatedly faced accusations of water waste and has faced external pressure to curtail uses so that junior urban water needs can be met. In Decision 1600, the SWRCB essentially forced the IID into the MWD agreement. During the final days of the QSA negotiation, the Bureau attempted to reduce the IID's allotment through a Part 417 proceeding. California's belief that it could forestall priority

"California's belief that it could forestall priority enforcement by squeezing "conserved water" from IID has put IID in a position of weakness when dealing with the 1988 MWD Agreement and the QSA transfers."

enforcement by squeezing "conserved water" from the IID has put the IID in a position of weakness when dealing with the 1988 MWD Agreement and the QSA transfers. However the IID chooses to address its QSA obligations, this assumption must be challenged.[v]

The following charts demonstrate the end use of water within the IID.

As shown on Chart 1, main canal spill is small, and the storage capacity is valuable to IID operations. Lateral spill is huge, and should the main target for system level improvement. The Definite Plan focuses on automation, information flow, and reservoirs. Seepage occurs mostly in the main system as most of the laterals have been concrete-lined, and a pump-back recovery system recaptures some of the main loss. Direct evaporation is relatively small. The Definite Plan misses opportunities to implement main system improvements that dramatically enhance potential participation and conservation on-farm, where the big water savings are. Nonetheless, it is important to note that a reduction in return flows from system level or on-farm conservation will take water from the Salton Sea, whose mitigation supply has gone up since 2007, but will end (supposedly) in 2017.

"The Definite Plan misses opportunities to implement main system improvements that dramatically enhance potential participation and conservation on-farm, where the big water savings are."

IID Main System Hydrologic Budget

From 2007 Definite Plan, all quantities in Acre-feet per year

All American Canal inflow		2,875,000
Main canal spill	3,000	
Lateral spill	121,000	
Canal seepage (main + lateral)	86,000	
Evaporation (main + lateral)	22,000	
Municipal/Industrial Delivery	89,000	
Salton Sea Mitigation	5,000	
Farm Delivery	2,549,000	
Net		0

Chart 1

Likewise, the use of water on farms within the IID does not reflect waste, although Chart 2 likewise does show areas where conservation could occur.

IID On-Farm Hydrologic Budget

From 2007 Definite Plan, all quantities in Acre-feet per year

Farm Delivery		2,549,000
Crop Evapotranspiration	1,699,000	
Tail Water	433,000	
Tile Water	417,000	
Net		0

Chart 2

Farm delivery is carried over from Chart 1. Crop Evapo-transpiration ("ET") is why farmers irrigate. It drives the physiological processes that produce yield, quality, and revenue - all the reasons farmers are in the business. If anything, the IID should want to maximize ET for most given crops, subject to market demands and requirements. Tail water is the inevitable result of a gravity ditch system, and is not waste. Farmers can either put on too much water or not enough; they will never get it perfect. If one does not put on enough, the irrigation will not make it to the end of the field to allow sufficient time to infiltrate at the tail, and the tail of the field will be stressed because it is not getting enough water. If this is done often enough, the tail of the field will be sterilized with salt build-up. If one puts on more

than enough water, one produces tail water, which is far better than stunting the crop and ruining the tail of the field. It can be controlled, but it is a tense balance.

Tail water should be a primary target of on-farm conservation. Tail water consists primarily of deep percolation from on-farm irrigation, which leaches salt out of the root zone, an absolutely necessary function. The tail water at the IID also includes canal seepage, which is not necessary for soil health, and is not recognized in the Definite Plan. Tail water can be reduced by reducing canal seepage, which will not compromise crop production, and by better managing on-farm irrigation. However, adequate leaching of salt must be maintained. More uniform application, with sprinkler, drip, or better-managed surface irrigation, can achieve the leaching requirement while cutting down on the on-farm unintended deep percolation. If farmers are not adequately leaching the tail of their fields with surface irrigation, then they are likely leaching the head of the field more than is necessary. Better control over surface inflow can help balance the deep percolation, and achieve the leaching objective. While tail water is a target of on-farm and system conservation, the leaching function should not be compromised.

"Tail water consists primarily of deep percolation from on-farm irrigation, which leaches salt out of the root zone, an absolutely necessary function."

In the 2002 Part 417 proceeding, which the IID rightfully and forcefully challenged, the Bureau concluded that the maximum reasonable use of water diverted by the IID at Imperial Dam was 2,835,500 acre-feet, despite the fact that the IID had diverted more than that in 28 of the prior 40 years (see Charts 3 and 4 on following page).

Ironically, as a result of the QSA, the IID's allotment of Colorado River Water is even lower:

3,100,000 afy	Quantified Priority 3(a) amount under the Main QSA Agreement
Less:	
200,000 afy	Total amount to SDCWA (on a ramp-up schedule) under the 1998 IID/SDCWA Agreement
103,000 afy	Total to CVWD/MWD (on a ramp-up schedule) under the Acquisition Agreements (MWD assumes 50,000 afy delivery obligation to CVWD after year 46)
110,000 afy	Total amount to MWD (90,000 afy) and CVWD (20,000 afy) under the 1988/1989 Agreements (later adjusted to 105,000 afy)
67,000 afy	Amount conserved by lining the All-American Canal; made available to others under the Allocation Agreement
11,500 afy	Indian/Misc. PPR Rights; under Main QSA Agreement, IID must forbear in an amount to allow delivery of this amount to these PPR rights; assignable to Prior. 3(a), 6(a), or 7
2,607,800 afy	**Total amount available to IID under Priority 3(a) during QSA, after ramp-up**

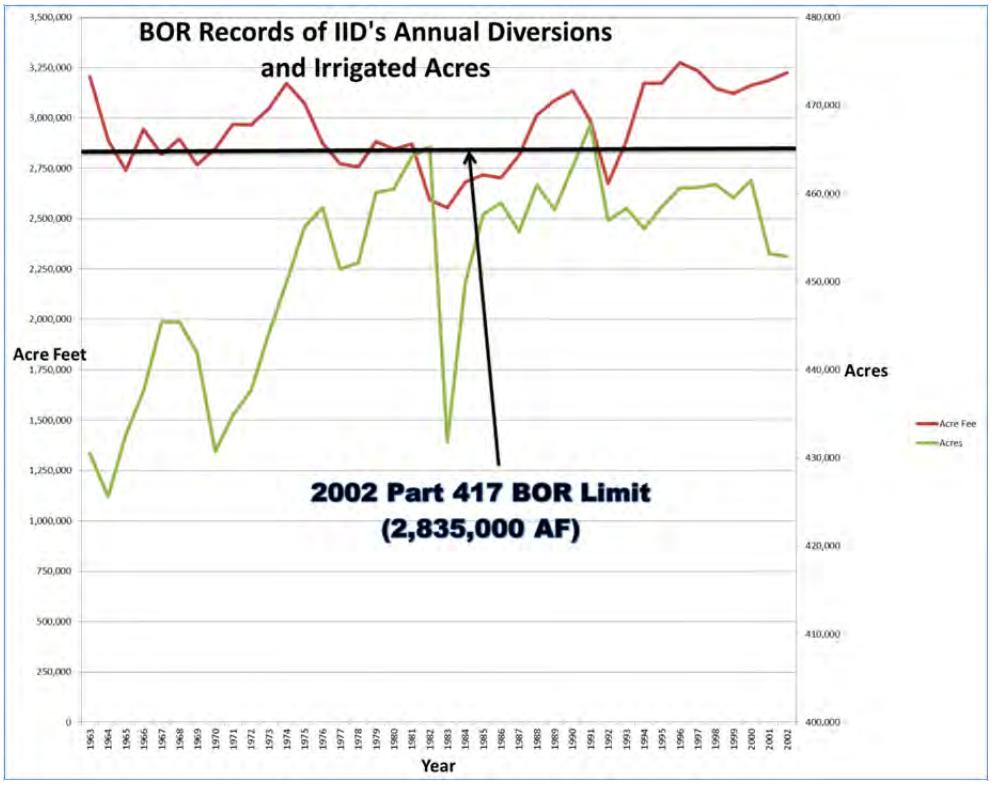


Chart 3

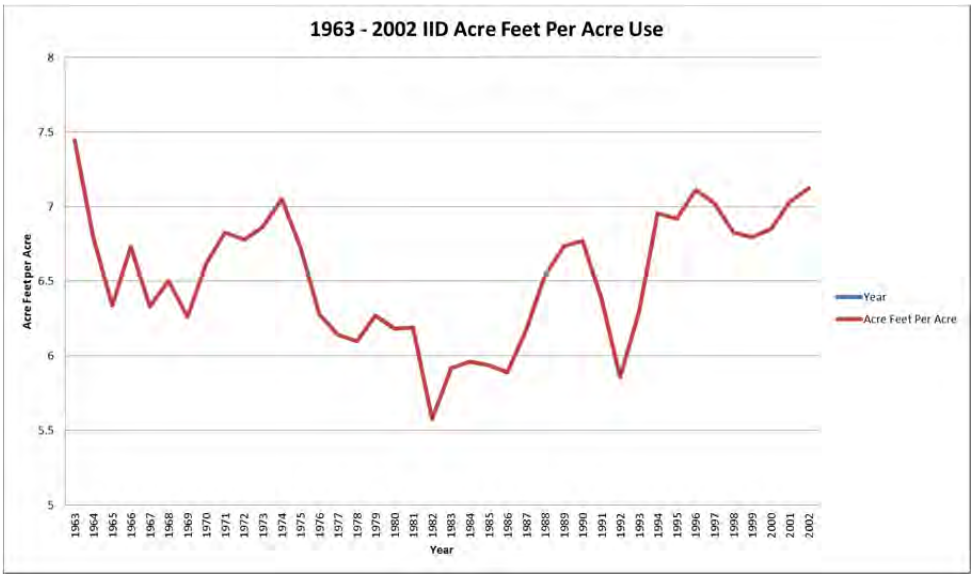


Chart 4

Through the process of conserved water transfers, the IID will divert less water than the Bureau determined was a reasonable allotment. It does not follow, however, that the amount used by the IID absent the conservation measures is waste, and not part of the IID's water right. Indeed, even at the time of the 417 Proceeding, the IID understood that the reduction of in-flows to the valley would result in damage to the local environment.[vi] The full IID allotment is not an "unreasonable use" of water subject to forfeiture or challenge if reasonable incentive program fails to induce on-farm savings due to economics or other matters outside the IID's control. This is particularly true in the case of the IID; in an ordinary irrigation district immediately adjacent to a river system and with a downstream user of water, the water currently called "waste" because it flows into the Salton Sea would instead be known as return flows subject to downstream re-use. In a closed system, the only water that is truly waste is surface evaporation.

"It does not follow that the amount used by IID absent the conservation measures is waste and not part of IID's water right."

The IID is geographically situated such that its return flows do not actually return to the river system for further use by downstream users—instead, they flow to the Salton Sea, and support that unique ecological feature. A drastic reduction in return flows will hasten the collapse of the Salton Sea ecosystem.

While this is currently recognized as a future consequence by all closely involved with the QSA, the IID should expect significant resistance from various directions as the Salton Sea decline gets more and more critical. The transfer of conserved water to urban uses depletes in-flows to the Salton Sea necessary to maintain its salinity and elevation. The QSA transfer is no different in effect from the SDCWA installing a desalinization plant on the Salton Sea and piping the treated water to the city, an act that would surely trigger public outrage.

"The IID should expect significant resistance from various directions as the Salton Sea decline gets more and more critical."

That IID growers could potentially produce the same crop yields with less water when the conservation measures are subsidized by outside agencies does not mean that the water conserved was waste. Put differently, a "reasonable beneficial use" of water does not become unreasonable simply because extreme conservation measures could produce additional savings. To the extent that the QSA transfer agreements put an absolute obligation on the IID to conserve and transfer water beyond that which can be accomplished through reasonable efforts, they must be reworked. That is, because the full IID allotment is not an "unreasonable use" of water subject to forfeiture or challenge if reasonable incentive program fails to induce on-farm savings due to economics or other matters outside the IID's control, the

"A 'reasonable beneficial use' of water does not become unreasonable simply because extreme conservation measures could produce additional savings."

transfer agreements (with the SDCWA and the CVWD, particularly) need modification.

II. THE IID COULD EVALUATE OTHER SYSTEM WIDE APPROACHES FOR WATER CONSERVATION.

While the Boards of Directors of irrigation districts are, and should be, measured and conservative in their policies, they should also be aware of outside-of-the-box options. The "all-in" approach described here is intended to stimulate thought along those lines; it would clearly require additional technical design and economic assessment.

"While the Boards of Directors of irrigation districts are, and should be, measured and conservative in their policies, they should also be aware of outside-of-the-box options."

The principle focus of the Definite Plan is to involve on-farm conservation to the greatest degree possible and to reward Irrigators who shoulder the burden of these efforts. However, only if on-farm efforts were to prove insufficient and only if there were sufficient revenues available to pay for costs, not only of infrastructure but for environmental mitigation, then the IID would be remiss not to at least consider a more dramatic, but considerably more expensive, program to completely modernize the delivery system, even if such a program requires more expense than provided by the QSA and produces more conserved water than necessary to meet requirements under the QSA. That conserved water might readily be used to place more lands under irrigation. For example, while it has likely been reviewed in the past, the IID

might evaluate and consider a project that replaces a lateral with a pressurized piping system and, if that is successful, implement such a project on a wider scale. If this were to prove cost-effective then it could result in a system-level improvement that presents great potential for improving on-farm savings through reduction in tail water and precise irrigation control. While such an "all-in" approach can be implemented on a lateral-by lateral basis, if it is successful, its wide deployment has the potential to save more water than required by the QSA. The environmental consequences of implementing such a system would of course have to be thoroughly studied. However, as noted above, should this occur and were there to be a greater savings in overall conserved water, IID should be prepared to put the excess conserved water to beneficial use through 1) increased deliveries, resulting in increased production, to existing farms, or 2) developing new irrigated acreage.

The Definite Plan looks at incremental measures to try to develop the required 303 kAF of conserved water, and as stated previously, it may fall short. In its evaluation of lining of laterals, the Definite Plan considered only the reduction in seepage, and found the alternative to be unattractive as it would cost from $100 to $500 per acre-foot of reduced seepage. Placing laterals in pipe

has the potential to reduce seepage and operational spill from the laterals. With estimated annual operational spills of 121 kAF (some of which is recaptured and delivered to farms), there is potential for much more benefit in the delivery system.

Further, delivery of water through a piped lateral offers much better control for on-farm irrigation. The ability to easily and automatically control surface irrigation inflow rate to provide a relatively high flow to push water down the field during the advance phase, and reduce it as the water nears the tail of the field for the storage phase, could reduce tail water substantially. Piping would also provide an incentive for conversion to drip or sprinkler irrigation (see 6.3 below), which would virtually eliminate tail water on the fields that do so. Estimated at 433 kAF per year, tail water is clearly a major target for reduction, and piping laterals in the delivery system would facilitate this process on-farm.

Piping laterals offers the option of gravity flow for improved control and efficiency of surface irrigation. Another option would be to place a filtration unit at the heading of a lateral at the main canal and provide pressurized filtered water in a piped lateral. The IID already has primary sediment removal at Imperial Dam, with the settling basins at the AAC heading. A sand filter unit at

the lateral heading could further filter the water and back-flush into the main canal, thus conserving the back-flush water. Farmers using drip irrigation systems could then use the water with a final filtration unit at their heading. Farmers with sprinklers could boost the pressure with no additional filtration. Surface water farmers could use the water as-is, though the use for surface irrigation would require an increase in the capacity of the pipeline.

Delivering water under pressure, particularly at the lower flow rates for drip and sprinkler irrigation, would reduce the required pipe size and cost relative to gravity pipe flow. Depending on the relative demand for gravity and pressurized irrigation on a given lateral, it may even be cost-effective to put in a gravity pipe directly off the main canal for surface irrigators and a pressurized pipe for drip and sprinkler irrigators. This is another system-level improvement that could enhance implementation of highly effective on-farm conservation.

Many laterals in the IID have already been lined with concrete. These would certainly be lower priority for placing in pipe, but not out of the question. The drastic reduction in operational spill and tail water achievable with a piped supply may ultimately justify their replacement.

Seepage return into East Highline Main Canal

Piping laterals would certainly be a major investment in the IID delivery system, but IID is seeking to develop on-farm investment in conservation. It is important to understand that the interaction between the delivery system and on-farm conservation is profound, and simply improving the delivery system as described here adds real value to the fields it serves. It also creates greater motivation for on-farm conservation measures, both in terms of incentive programs using improved surface irrigation or conversion to sprinkler or drip, and improved yield and quality of crop.

"Simply improving the delivery system adds real value to the fields it serves."

The incremental approach of the Definite Plan would achieve relatively small on-farm water conservation savings per acre that would require a very high level of participation among IID constituents to reach the designated targets. The approach described here would achieve higher per acre conservation levels at the integrated system and on-farm levels, and thus fewer acres

would be required to participate to meet targets. However, the coordination among farmers along entire laterals could be problematic. Again, the IID Board must assess its policies regarding the relative proportions of carrot and stick in incentivizing constituents.

The IID invests some resources in dealing with Total Maximum Daily Load ("TMDL") requirements for turbidity in its return flows. The source of the turbidity is primarily tail water, which picks up very fine particles from farm fields. Drastic reduction of tail water would go a long way to reducing this effort, potentially even to removing the impairment listing.

The main canal system (above the lateral tier) would be a lower priority, as there is much less spill from the main system (only about 3 kAF/year according to the Definite Plan), the storage volume is a valuable reservoir to IID operators, and much of the seepage loss is pumped back into the main canal already. Main canals are not subject to the demand fluctuations that laterals are, because main canal demand is averaged out over a much larger number of users that that of the laterals.

While the "all-in" approach can be implemented on a lateral-by lateral basis, if it is successful, its wide deployment has the potential to save more water than required by the QSA.

"While the "all-in" approach can be implemented on a lateral-by lateral basis, if it is successful, its wide deployment has the potential to save more water than required by the QSA."

Should this occur, the IID should be prepared to put the excess conserved water to beneficial use through 1) increased deliveries to existing farms, resulting in increased production; 2) developing new irrigated acreage; or 3) leasing the water from a strong marketing position based on opportunities for use in the previous two points. For these reasons, the IID should evaluate and consider a project that replaces a lateral with a pressurized piping system and, if that is successful, implement such a project on a wider scale. This is a system-level improvement that presents great potential for improving on-farm savings through reduction in tail water and precise irrigation control.

ENVIRONMENT

Water conservation measures mandated within the IID service area, to allow the QSA water transfers, also reduce the agricultural runoff which is the Salton Sea's primary source of water. Under State Water Resources Control Board Revised Water Rights Order 2002-0013, IID is required through 2017 to send conserved "mitigation water" to the Sea to maintain the Sea's elevation and salinity at acceptable levels. At the time the QSA was executed in 2003, it was envisioned that this mitigation water would provide time for the State of California to follow through on its commitment to evaluate restoration alternatives and commence restoration planning and implementation.[vii] Absent restoration, declining inflows in the years after cessation of mitigation water are likely to quickly increase the Sea's salinity to above 60 parts per thousand, severely diminishing the resident fish's reproductive limit and resulting in the collapse of the Sea's ecosystem.

"Absent restoration, declining inflows in the years after cessation of mitigation water are likely to quickly increase the Sea's salinity to above 60 parts per thousand, severely diminishing the resident fish's reproductive limit and resulting in the collapse of the Sea's ecosystem."

The State of California undertook commitments to mitigate the water transfers' environmental impacts and to initiate restoration efforts at the time the QSA was under negotiation. Both within the QSA JPA Agreement and reflected in the Environmental Cost Sharing Agreement among IID, SDCWA and CVWD enabling the QSA to go forward, the obligation for the State to pay for any

environmental mitigation costs exceeding the water districts' contribution of $133 million was expressed as an "unconditional contractual obligation of the State of California," which was "not conditioned upon an appropriation by the Legislature."[viii] Legislation was also enacted limiting the water districts' obligations for Salton Sea restoration and providing that "[a]ny future state actions to restore the Salton Sea will be the sole responsibility of the State of California."[ix]

Initially, the State appeared committed to funding Salton Sea restoration and excess QSA water transfer environmental mitigation costs and promised multiple times to do so. Intervening events have made the fulfillment of this promise extraordinarily difficult. The State has gone so far as to select a preferred alternative for Salton Sea restoration, at a projected cost approaching $9 billion, and it has begun the process of implementing its Species Conservation Habitat initiative as an adaptive management model for future restoration projects. As a result of the State of California's well-documented financial woes, the State may find it difficult if not impossible to appropriate the hundreds of millions or billions of dollars necessary to implement a comprehensive mitigation and restoration effort in the face of many competing priorities and urgent funding needs such as highway

"…the State may find it difficult to appropriate the hundreds of millions or billions of dollars necessary to implement a comprehensive mitigation and restoration effort…"

infrastructure, schools, state salaries and the costs of government in general.

The IID's Petition for Change of SWRCB Revised WRO 2002-0013 acknowledged this uncertainty in asserting, as the fundamental rationale for eliminating the District's mitigation requirement in 2014, the "inaction" of the State and its failure to follow through on promises made during QSA negotiations to "embark on some form of meaningful restoration of the Salton Sea" during the 15 year period from 2003 through 2017, which promises also underlay SWRCB expectations as to the usefulness of the IID's provision of the mitigation water to begin with.[x]

Moreover, the California Court of Appeal's interpretation of the State's environmental mitigation funding obligation is not encouraging for the prospect of comprehensive and timely environmental mitigation funding. A California Superior Court judge had invalidated the QSA JPA and related agreements in a January 2010 decision, finding that the State's unconditional commitment of an uncertain amount of State funds contravened the requirement in the California Constitution that money may be drawn from the State Treasury only through an appropriation enacted by the Legislature.[xi] The Court of Appeal reversed the Superior Court on the constitutional issue, finding that the

imposition of QSA JPA Section 9.2's unconditional obligation does not violate the California Constitution's appropriation requirement just because it does not give the IID and other water districts "the right to enforce that obligation by drawing money from the Treasury without an appropriation."[xii] If the conditions were to arise for the State's payment of excess mitigation costs and the State refused to appropriate the money to pay those costs, then the IID would have a breach of contract claim against the State, but even if a judgment were obtained against the State to pay these costs, it could not be enforced, because separation of powers precludes a court from compelling the State Legislature to enact an appropriation. The Court concluded: "Thus, in the face of legislative intransigence, it is possible the water agencies could be left with an unenforceable judgment for the unpaid excess mitigation costs, despite the state's unconditional contractual obligation to pay those costs."[xiii] Thus, even if there were the "will" to pay an uncollected judgment waiting in line with many others, if there is no "way" to pay it, then the promise made by the State will prove to be an empty one.

"Thus, in the face of legislative intransigence, it is possible the water agencies could be left with an unenforceable judgment for the unpaid excess mitigation costs, despite the state's unconditional contractual obligation to pay those costs."

Rather than the IID resting on the assumption of eventual State action, our environmental recommendations reflect that it would be a far more reasonable course for the IID to take a

proactive posture in order to avert an impasse with the State and the other water districts over environmental mitigation funding. From the improved vantage point of hindsight, such an impasse could reveal the QSA set of agreements to have been unsustainable from the outset, and to have been based on expectations as to the limited scope of the problems to be faced and the extent of external support to be provided that will have proved to have been far too optimistic or colored by the imperatives of the time to "get the deal done." This is certainly not to support in any way the proposition that the IID must undertake the burden of paying for excess mitigation costs; the equities for payment of that cost plainly fall on the beneficiaries of the transfer. However, at this juncture it would be unrealistic at best, and perhaps foolhardy at worst, to presume that the State will pay for these costs in the face of current political and economic circumstances. To not anticipate this possibility and fail to address it now would be a travesty for the Imperial Valley.

"It would be a far more reasonable course for the IID to take a proactive posture in order to avert an impasse with the State and the other water districts over environmental mitigation funding."

I. MITIGATION EFFICIENCIES AND PROSPECTS

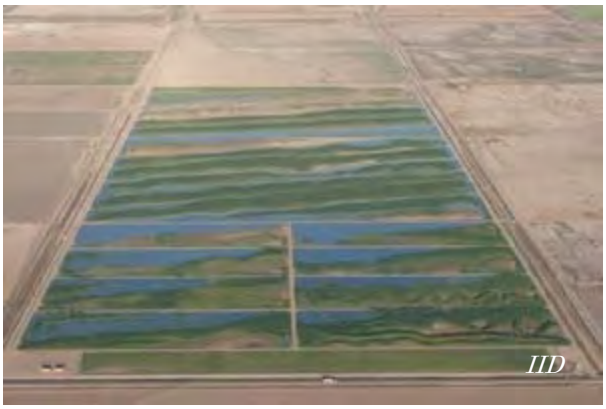
A. Mitigation and Habitat Measures Becoming More Efficient

Environmental remediation projects surrounding the Salton Sea are not a creature of the QSA water transfers alone. The Salton Sea has been on a downward elevation projection since the late

1990s or very early 2000s. This is partly attributable to the agricultural water conservation mandates visited upon the IID and the previous conserved water transfer to the Metropolitan Water District motivated by the California Water Resources Control Board's Decisions 1600, 84-12 and 88-20, as well as the threat of a reduction in IID diversions prosecuted by the BOR.

The QSA JPA began undertaking environmental mitigation projects in 2003-2004, after the JPA was created and funded as part of the water transfer agreements. Air quality monitoring was ordered by the California Water Board as a condition of the QSA transfers, and the JPA and the IID have operated and maintained six air monitoring stations to identify and predict sources of particulate matter emissions. Technically, air quality mitigation is not required until after the cessation of mitigation water deliveries, but because of the potential seriousness of the problem, some 300 acres of playa have been covered by the IID with air quality pilot projects. Some of these projects have been fashioned to serve dual purposes, implementing pilot projects for playa exposure mitigation and dust suppression along with enhanced habitat elements of the Final Environmental Impact Report and Habitat Conservation Plan also ordered within Revised WRO 2002-0013.

QSA JPA mitigation expenditures have totaled some $39.5 million to date. $17.5 million of this has been for Salton Sea mitigation water, while $22 million has been spent on actual mitigation measures and projects relating to habitat or species management and air quality mitigation. The centerpiece of the habitat creation effort has been the $5.3 million Managed Marsh Complex, constructed as part of the Drain Habitat Conservation Strategy (again, ordered by WRO 2002-0013) and Habitat Conservation Plan. The Managed Marsh will be built out in three phases by 2019 and will encompass 959 acres of higher quality habitat for birds and small mammals that are currently found in IID canals and drains. The initial phase of 365 acres is currently operational and serves as an experimental ground for efficiency and effectiveness of water and other resource use, habitat value, management techniques and construction impacts. A similar amount has been spent on multi-year species surveys required under the HCP, and somewhat lesser amounts on burrowing owl mitigation and air quality monitoring and pilot projects.



Managed Marsh Complex

Across the board, the experience gained from these several years of designing and implementing mitigation and habitat projects, current JPA mitigation and HCP habitat creation measures and air quality mitigation pilot projects often "cross-pollinate", so to speak, and are being made more effective and cost efficient, and less resource intensive. The Red Hill Bay project commenced jointly with the U.S. Fish and Wildlife Service in 2010, for example, uses water pumped from the Alamo River or inundating the bay due to high winds and low berms across the bay to create incremental habitat for wading birds even as it mitigates playa exposure and dust emissions over a wide area. A similar extensive playa flooding project is progressing near the mouth of the New River.

"JPA mitigation and HCP habitat creation measures and air quality mitigation pilot projects often "cross-pollinate"… [becoming] more effective and cost efficient and less resource intensive."

B. Benefits of Accelerated Pace of Mitigation and Habitat Creation

An accelerated pace of mitigation and incremental habitat creation may be more effective than the projected rate in tackling

the scope of the current problem. As the Salton Sea's elevation drops over the coming decades, the QSA transfers are expected to account for exposure of approximately 40,000 acres of playa. Due to the downward elevation trend of the Sea pre-QSA, preliminary modeling indicates that around 28,000 acres of new exposure would be expected by 2047 even without the transfers, and the same models predict approximately 65,000 acres of new playa by 2047 with the transfers ramping up on schedule. Additional modeling indicates that an extraordinarily high 55% of this new playa can be expected to be emissive for air quality impacts.

"Around 28,000 acres of new exposure would be expected by 2047 even without the transfers…"

Current air quality mitigation pilot projects cover 300 acres, including the New River and Red Hill Bay playa flooding projects, an adjoining Red Hill Bay surfactant project, and some limited vegetation enhancement projects, at a cost of $75,000. Because air quality mitigation does not officially commence until after the cessation of the mitigation water program, achieving the combined benefits of more effective and efficient dual-purpose air quality mitigation and habitat creation is significantly constrained by the SWRCB's water delivery requirement. The IID's Petition for Change of WRO 2002-0013, lifting the delivery requirement for 2014-17 and allowing accelerated transfers to SDCWA or MWD, the proceeds of which could fund accelerated and expanded habitat

creation, presents a number of significant opportunities. It can be an important step toward putting mitigation on pace with the anticipated deterioration of the Sea's condition. It would also allow the JPA to take advantage of synergies in project design and water delivery infrastructure that will be developed for the State's Species Conservation Habitat program. And, significantly, it presents an opportunity to appear before the SCWRB and dispel any vestiges of the principles in early decisions that actions of the IID in sustaining the Salton Sea for decades was an unreasonable waste of water. Accordingly, as discussed above in the discussion of water conservation, failure to achieve absolute conservation of water with the result that runoff is returned to the Sea or diverted for mitigation or other purposes, would not be a violation of the rights of any junior users.

"The IID's Petition for Change of WRO 2002-0013… can be an important step toward putting mitigation on pace with anticipated deterioration of the Sea's condition."

C. Early Transition from Mitigation Water and Current Prospects for Mitigation and Restoration

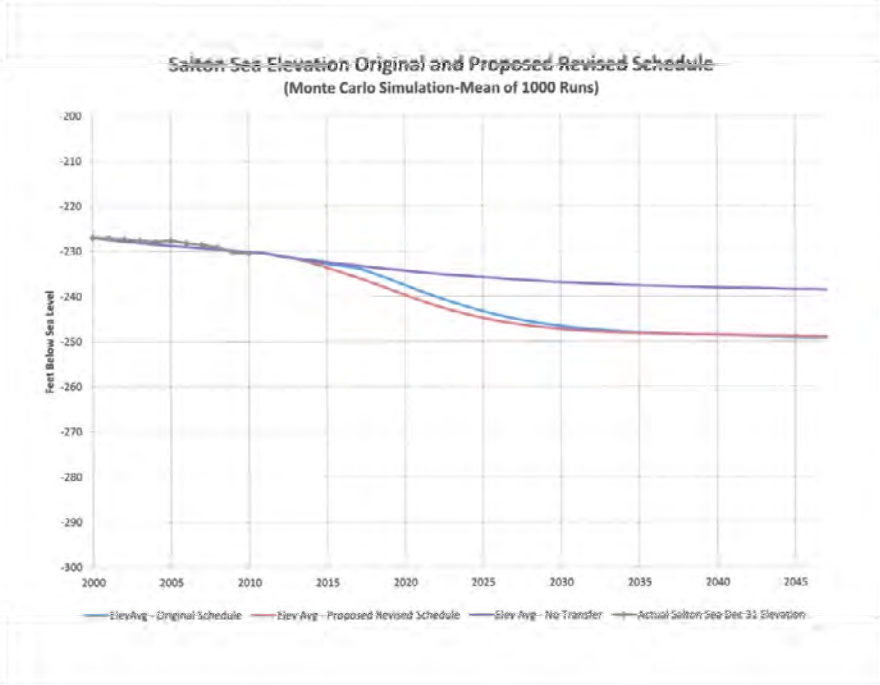
As of early 2012, the State of California was poised to begin implementation of its Species Conservation Habitat (SCH) Project. This project will restore up to 3,770 acres of shallow water habitat at the southern end of the Salton Sea, near the mouths of the Alamo and New Rivers, putting into operation habitat characteristics and strategies to serve, through adaptive management, as a "proof of concept" for future QSA shallow water

habitat mitigation and restoration projects.[xiv] As already suggested, recent design and implementation of IID / JPA habitat and air quality projects and studies envision an eventual synergistic relationship with State and other agency projects. Additionally, the State's SCH experience could demonstrate the viability of more cost- and resource-effective habitat mitigation projects to be undertaken by the IID / JPA.

Meanwhile, a bill before the California Assembly and endorsed by the Salton Sea Authority, AB 939, would transfer the mandate of the Salton Sea Restoration Council, a State agency within the Natural Resources Agency, to the Salton Sea Authority, a more locally representative joint powers authority. This bill has been represented as realizing a new governance model to guide Salton Sea restoration, given the uncertainty of State appropriations for a comprehensive restoration effort. It would empower the Authority to undertake a feasibility and effectiveness review of mitigation and restoration projects for use in putting together an achievable plan for restoring the Sea.

Though there exist concerns with transferring authority away from the State at a time when comprehensive restoration becomes more urgent, the IID's Petition for Change notes the State's refusal in the nine years since the QSA was signed to

commit to any restoration plan or funding. The purpose of the mitigation water requirement was to maintain the salinity of the Sea and its elevation during the period when the State of California was expected to be developing, evaluating and beginning to implement its restoration alternatives. According to studies projecting Salton Sea conditions decades ahead, ceasing mitigation water deliveries in 2014 will have little impact on the long-term health of the Sea. Previous model runs suggested that ceasing mitigation water early will produce some accelerated playa exposure—amounting to approximately 5,000 acres—but that results will converge with the 2014-2017 mitigation water delivery scenario by about 2030. The IID is currently in the process of refining the hydrology model to compare salinity and elevation changes if the Salton Sea mitigation water is stopped early, and final results are pending.



The incremental habitat plans developed by the IID as part of the Petition's environmental review documents, together with a locally motivated feasibility study and expanded scope of the IID's habitat projects and funding from an amended Water Board order, could spell at least a needed interim step toward accelerated mitigation.

D. Tougher EPA Air Quality Standards and Implications for the IID

Another category of environmental regulatory requirements not considered as "environmental mitigation costs" within the QSA statutory and contractual framework also poses potential economic and financial implications for the IID, both as a local landowner and as a collection of irrigators. Since 2001 and especially within

the past two years, the U.S. Environmental Protection Agency has been applying pressure on the County of Imperial and the Imperial County Air Pollution Control District to set and meet stronger air quality standards.

In 2004, the EPA issued a finding under the Clean Air Act reclassifying Imperial County from a "moderate" to a "serious" nonattainment area for emissions of particulate matter of 10 microns or less, known as "PM10."[xv] These elevated dust levels were attributed to many sources, but primarily to soil disturbance by wind, unpaved roads and agricultural activity. They have been cited as causes of premature mortality, aggravation of respiratory and cardiovascular disease, decreased lung function, and damage to vegetation and ecosystems. This finding was based on air quality readings from 1999 through 2001. This designation triggered the need for the Air District to submit State Implementation Plan "Regulation VIII" fugitive dust regulations to address significant sources of PM10 emissions and to implement thorough Best Available Control Measures ("BACM", defined in part as the maximum degree of emission reduction achievable from a source category), to be determined on a case-by-case basis considering energy, economic, and environmental impacts, as well as other costs.

In 2005 and 2006, and again in 2009, the Air District adopted, and the California Air Resources Board submitted to EPA, seven Regulation VIII fugitive dust rules[xvi] to bring Imperial County into attainment of Clean Air Act standards for PM10. Finally, in July 2010, the EPA issued a limited approval and limited disapproval of the Air District's revisions to the State Implementation Plan.[xvii] EPA compared the Air District's regulations with control measures adopted or implemented in other areas for similar source categories. EPA found deficiencies in the Air District's approach to regulating unpaved roads, both on-farm and non-farm, to regulating tilling and harvesting activities, and to imposing BACM measures to control windblown dust from active or fallow agricultural fields. The EPA took the position that:

> CAA section 189(b)(1)(B) and EPA guidance–require that BACM be implemented for all significant source categories–in serious PM10 nonattainment areas such as Imperial County. As explained in our proposal, we determined that each of the subcategories under open areas, unpaved roads and agricultural lands below meet or exceed the 5 µg/m de minimis level in our guidance and are therefore significant source categories in Imperial County.

"This federal pressure on the Air Pollution Control District and Imperial County has the potential to impact IID operations and maintenance, and Imperial Valley agriculture, construction and other economic drivers."

This federal pressure on the Air Pollution Control District and Imperial County has the potential to impact IID operations and maintenance, as well as Imperial Valley agriculture, construction and other economic drivers. First, due to the "serious

nonattainment" designation for the Valley, the Air District cannot allow any increase in PM10, regardless of source. Second, the Clean Air Act empowers the EPA to impose sanctions on air quality nonattainment areas beginning 18 months after an official disapproval issuance if deficiencies are not corrected.[xviii] "Level one" or "offset" sanctions impose a requirement that new or modified sources of emissions for which a permit is required are offset elsewhere in a ratio of at least 2:1. The EPA has already imposed these "2:1 offsets" on Imperial County as of February of 2012. Six months after the first set of sanctions, or in August of 2012, the EPA may impose "level two" or "highway" sanctions, under which EPA can prohibit the Secretary of Transportation from awarding any federal Title 23 grants to the nonattainment area. This would halt the approval of infrastructure projects under the Surface Transportation Program and the National Highway System, with some exceptions for safety projects.

Thus, while other parties to the QSA suite of agreements have little direct stake in the air quality impacts attributable to the QSA water transfers after 2017, the IID can potentially be significantly impacted by EPA sanctions and Air District efforts to comply with EPA standards. Although the IID is taking a strong legal position against the County and the Air District in the QSA

"IID can potentially be significantly impacted by EPA sanctions and Air District efforts to comply with EPA standards."

CEQA/NEPA cases, from a policy perspective these entities share common interests in addressing the environmental problems affecting the region.

II. POTENTIAL MITIGATION DEFICITS AND ALLOCATION

A. Prospective Mitigation Deficits

Reports prepared during QSA negotiations included an estimated State "obligation" for environmental mitigation costs of $1.15 billion (i.e. costs in excess of $133 million nominal contribution by QSA parties). While this figure may have been something of a placeholder for the sake of negotiations, it does realistically reflect that costs of mitigating reduced elevation and increased exposed playa surrounding the Salton Sea could approach or exceed $1 billion over and above the QSA parties' contributions.

"The costs of mitigating reduced elevation and increased exposed playa surrounding the Salton Sea could approach or exceed $1 billion over and above the QSA parties' contributions."

The Owens Lake in east-central California provides a cautionary example. About 100 years ago the Los Angeles Department of Water and Power began diverting into the Los Angeles Aqueduct the river and streams that fed the 100 square-mile lake, eventually exposing nearly all of its lakebed. Owens Lake became the single largest source of pollution in America, producing PM10 emissions well over 10 times Clean Air Act standards. In 1998, the Great Basin Unified Air Pollution Control District and the City of Los Angeles reached a settlement according to which the

City was required to implement Best Available Control Measures—including shallow flooding, vegetation management, and gravel covering—to suppress windblown dust emissions. In a recent lawsuit challenging the State's demand for further dust abatement, the City claims that it has already spent $1 billion to mitigate dust over 40 square miles (approximately 25,000 acres) of lakebed and plans to spend in excess of $216 million more, not including future operation and maintenance costs, for an additional 5 square miles. The LADWP operations manager joked that "it would have been cheaper to cover the lakebed with dollar bills."[xix]

This estimation of potential excess mitigation costs is also useful and significant as an index for potential IID risk in the absence of State support. While the QSA suite of statutes and agreements purports to relieve the IID of much of its liability for mitigating the effects of water conservation to fulfill its transfer obligations, it is important to acknowledge that the IID, because it owns property and conducts operations in the immediate vicinity of the Sea, nevertheless remains exposed to the risk of having mitigation measures, with their attendant cost, imposed on it under federal environmental regulation and the common law of nuisance. The IID also faces the imperative of undertaking massive open-ended environmental remediation simply as a pre-condition of

"IID remains exposed to the risk of having mitigation measures, with their attendant cost, imposed on it …as well as facing the imperative of undertaking massive open-ended environmental remediation."

keeping the Valley livable and its agricultural operations sustainable.

FINANCIAL

LRPA engaged the services of consulting CPAs to review the IID's cost accounting and financial projections for the QSA. The Appendix to this Report contains detailed charts and graphs showing the full result of that analysis. The purpose of this portion of the Report is not in any way to provide a criticism of what the accounting records show to have been policy choices of the Board. Rather, these data have been produced and checked by the CFO for the IID and simply illustrate what is, not what should be. Based on these findings, the Report strongly recommends that the IID rigorously segregate the revenues and expenses from the QSA from those of the ordinary Water Department operations as it has begun to do. The Report also recommends that projections of breakeven points and alternative sources of revenue be identified and planned for as the inevitable changes in the operation of the QSA take place. Finally, the financial data are intended to reflect the potential of a shortfall in revenues even if the QSA continues for the full term of the agreements.

Finding 1: As Chart 1 illustrates, from 2003-2010, the QSA generated a surplus of $118,492,426. That money has been used to cover the IID Water Department's depreciation expense of

$117,281,513, even though the assets being depreciated largely consist of non-QSA infrastructure. In the absence of more information to the contrary, the net result of this practice appears to be an indirect support of IID water rates through QSA revenues. Over the long-term, this is not a sustainable practice in the absence of a substantial infusion of revenue from other sources.

"The net result of this practice appears to be an indirect support of IID water rates through QSA revenues which, over the long-term, is not a sustainable practice."

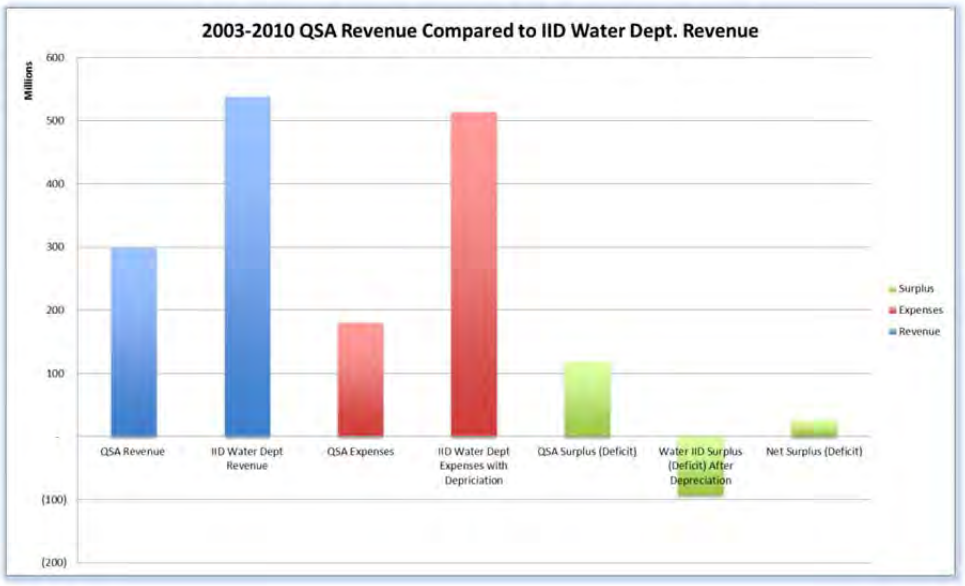


Chart 1

Finding 2: As Chart 2 illustrates, the IID 40-Year Financial Model projects the use of QSA surplus revenues to cover the replacement costs of the IID Water Department, even though the infrastructure is largely non-QSA related. Again, this appears to result in a redirection of funds in support of the IID Water Department in general.

Projected Surplus/(Deficit) - IID Water Dept. & MWD	
2007-2047	
Revenue:	$4,563,702,413
Loans and Grants:	513,622,232
Less Expenses:	(4,834,002,741)
Less Capital Expenditures:	(591,151,075)
Projected Surplus/(Deficit)	**-$347,829,171**
(w/o depreciation)	

Cumulative Effect of IID Water Dept. & MWD on QSA Surplus

2007 - 2047

Projected Surplus - QSA	$2,635,405,734
Projected Deficit - IID Water Dept. & MWD (w/o depreciation)	(347,829,171)
Projected IID Water Dept. Replacement Costs	(1,385,053,890)
Projected Surplus/(Deficit)	**$902,522,673**

Chart 2

Finding 3: As Chart 3 illustrates, the IID 40-Year Financial Model projects a very narrow margin of 1% over forty years on $7.87 billion in Water Transfer adjusted revenue. The risk IID assumed in the QSA would justify a much higher margin of protection. Indeed, any financial projection over forty years, based on year one assumptions, is likely to misstate the total final costs of the project and/or miscalculate the total revenues. Anticipating costs to increase over those projected in water

projects is standard engineering practice. Because the price of water is set forth in the agreements, the revenue predictions in the 40-Year Financial Model are likely accurate. However, a looming question for the IID is how accurate the cost projections are and how reasonable the assumptions that drove those projections are. Given how incredibly close the margin is, these assumptions need to be well-founded. Moreover, even if the current assumptions are accurate, circumstances are likely to change on a forty-year horizon. Indeed, change based upon environmental, economic and engineering factors is inevitable. Already, the anticipated costs for fallowing have increased and the State has ceased to be a party bound to actually produce cash or restore the Sea. Air quality mitigation costs could be much higher in light of federal regulation. The IID and SDCWA have petitioned to change the use of Sea restoration protection water which would alter revenue streams if permitted. Furthermore, the IID and SDCWA have amended the terms of their agreement several times (the current version is the 5th Amended and Restated Agreement).

"A looming question for the IID is how accurate the cost projections are and how reasonable the assumptions that drove those projections are."

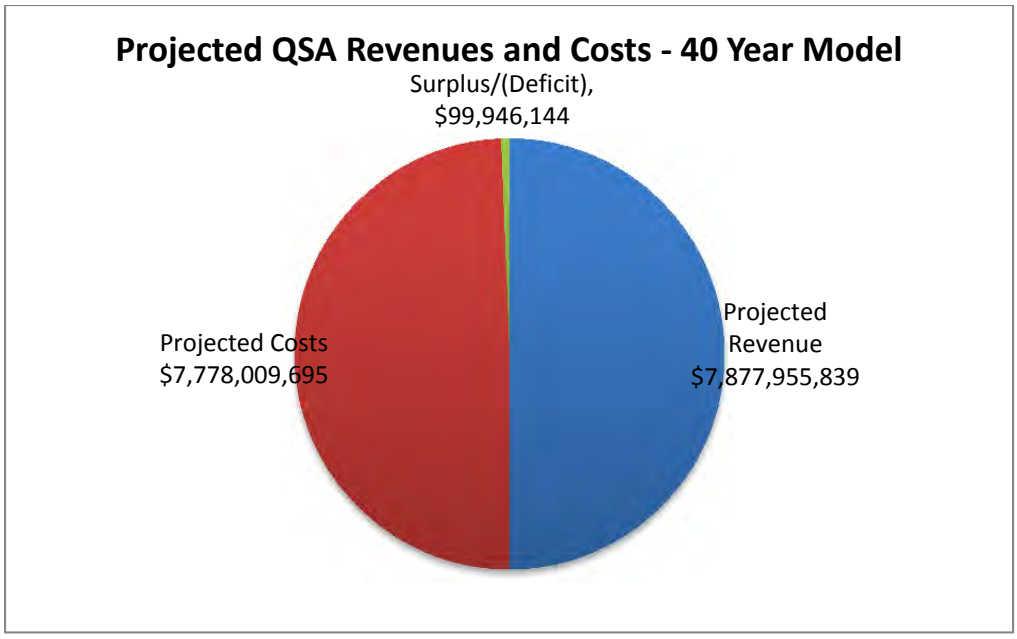
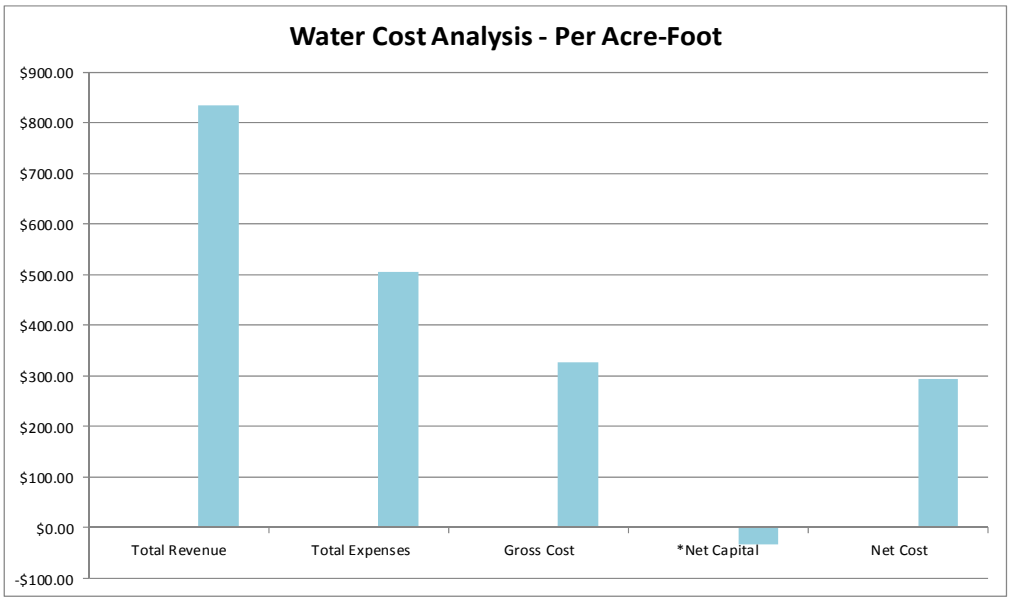


Chart 3

Finding 4: While there are multiple reasons for perhaps doing so, when the total costs are aggregated over the term of the amounts reflected in the 40-Year Model's time horizon prepared by the IID, the IID appears to be selling water to CVWD and sending mitigation water to the Salton Sea below its cost, for a net loss of $976 million over that time frame. During that time, the IID will deliver 10,321,000 acre-feet of water either to CVWD, SDCWA or the Salton Sea. The total projected water-transfer expenses and related capital expenses for that time period are $4.9 billion, making a per unit cost for the delivery of conserved water of $472 per acre-foot. Over the same period, the IID is selling conserved water to SDCWA for an average price of $907 per acre-foot, to CVWD for an average price of $228 per acre-foot,

and to the JPA Entity for the Salton Sea for an average price of $122 per acre-foot.



** Net capital = cost less loans and grants*

Chart 4

Finding 5: The IID 40-Year Financial Model indicates that the IID will issue $39,270,100 in debt over the term of the model. Debt financing of capital projects is entirely appropriate, but with the issuance of debt, the IID assumes additional risks beyond those contained in the QSA agreements. This becomes particularly significant when one considers that the General Counsel for the IID indicated in an open meeting that, although he considered that the State would uphold its payments for excess mitigation costs, in his view the State of California could not exercise a "veto" over mitigation choices by not signing on to mitigation proposals. He based his argument on the fact that, in

"With the issuance of debt, the IID assumes additional risks beyond those contained in the QSA agreements."

the agreements related to funding, the State had the obligation in good faith to approve such proposals and it would be strange if the State Department of Game and Fish recommended mitigation measures and the State then refused to recommend them. On the issue of non-payment and the inability of the parties to pay without the assistance of the State, he asserted the view that if revenues were not forthcoming, mitigation could stop; were mitigation to stop, the SWRCB would not allow the transfers to take place. Without transfers, the revenue stream from those transfers would also stop. The question, of course, arises, what about the commitments to the federal agencies to engage in mitigation and the obligation to pay for the bonds executed to ensure mitigation, based on the anticipated revenue stream?

Finding 6: As Chart 5 illustrates, with just a few reasonably-anticipated changes in the assumptions contained in the 40-Year Financial Model, the projected 1% surplus can easily become a deficit. For the following, we assumed: (1) that the State's promised Salton Sea mitigation backstop would not materialize, (2) that, as the IID/SDCWA Petition to the SWRCB indicated, the State would not undertake the promised restoration of the Salton Sea, but that some form of restoration would have to be performed, (3) that the IID would continue to subsidize the Water Department as has occurred and is projected in the 40-Year Financial Model, (4) a 5% cost overrun on the water conservation programs, and (5) a 10% cost overrun on the mitigation expenses.

"With just a few reasonably-anticipated changes in the assumptions contained in the 40-Year Financial Model, the projected 1% surplus can easily become a deficit."

IID Water & QSA Analysis of 40 Year Plan Deficit

Revenue	Cost
QSA Revenue	8,737,822,819
Loans and Grants	290,538,720
Mitigation Revenue Above JPA Cap (not received from state)	(1,150,405,700)
Revenue Adjusted	**7,877,955,839**
Costs	
Subsidies for Other IID Programs (IID Water deficit and replacement cost in QSA capital expenditures)	1,732,883,061
Water Conservation Costs Projected (anticipated 5% over 40 year plan)	3,554,165,723
Environmental Costs (anticipated 10% over 40 year plan)	1,938,742,966
Salton Sea Remediation Costs (5% of Preferred Alternative)	450,000,000
Other QSA Costs (from 40 year plan)	1,245,542,464
Total Costs	**8,921,334,213**
Surplus (Deficit)	**(1,043,378,374)**

Chart 5

RECOMMENDATION: The IID should immediately and rigorously segregate QSA funds from Water Department funds, and, at least initially, carefully document the overall benefits of the improvements made to the entire conservation program anticipated in the QSA. This is not to suggest that use of funds that could be replaced by bonding or other sources is not necessarily a bad outcome. Rather, it is one policy view. But the

"The IID should immediately and rigorously segregated QSA funds from Water Department funds, and—at least initially—not allow the QSA funds to subsidize the Water Department."

long-term consequences of this practice need to be fully evaluated for multiple reasons. First, until the IID has more experience with the costs associated with the increasing levels of conserved water to comply with the QSA, the IID must ensure that the revenue streams and conservation measures reach an optimal and reliable balance. It is important to understand that the IID operates as one cohesive and integrated unit. As expenditures are made on the system as a whole, these inure to the benefit of the conservation program and ultimately the recipients of conserved water. This needs to be thoroughly and carefully documented.

CONCLUSIONS AND RECOMMENDATIONS

The collection of agreements referred to as the Quantification Settlement Agreement ("QSA") involves what has been described as the largest agriculture-to-urban water transfer in United States history. The documents creating the transfer are voluminous, and the endeavor has been complicated by multiple policy twists and turns as well as decades of litigation. The complexity of the transfer is due in part to its unique nature; in traditional water rights transfers, the agricultural use of water is terminated to allow urban users to make use of the water right. The purchase price paid on behalf of urban users covers not only the water, but also the lost opportunity of continued farming by agricultural users.

The QSA has as its core the laudable goal of preserving the benefits of agriculture while at the same time allowing new urban uses. It purports to achieve this result through conservation and full coverage of the environmental externality costs by the State of California. Two critical ingredients to this plan are self-evident: (1) that the proposed conservation actually works to produce a win/win; and (2) that the State pays for the externality costs. The need for the parties to hypothesize a conservation and environmental win/win scenario is largely a product of history. This Report could not conceivably document all of this complex

history, but hopefully it provides a flavor of the process that brought us to this point.

California has long over-relied upon the Colorado River, with the result that its use exceeds its lawful entitlement. The IID's entitlements, however, are senior enough to be nearly coextensive with California's entitlement. California's problem of overuse of the Colorado River is not the IID's problem, but as the senior user on an over-appropriated river, the IID has no choice but to deal with the consequences of this overuse. This is not to say that the State of California's overuse entitles it to turn to the IID to solve the water crisis. Rather, the law of supply and demand and the political penchant for governments to seek to redefine rights in resources so that they can wield them for political gain have put the IID in the political crosshairs.

The IID has been under constant attack since the State Water Resources Control Board's Decision 1600 was issued. There, the SWRCB determined that the IID's use of water, although beneficial, was unreasonable because the excess irrigation runoff going into the Salton Sea was "waste." The United States Bureau of Reclamation likewise put pressure on the IID through its abortive Part 417 proceeding. Both of these proceedings led to the IID engaging in conserved water transfers. By forcing such

transfers on the IID, California attempted to have its cake and eat it too. Rather than reducing aggregate consumption by enforcing priorities or engaging in the transfer of water rights from senior agricultural uses to junior municipal ones, the QSA is an attempt to maintain both uses, generating water for municipal uses through conservation, spurred by the additional incentive of the State picking up all of the environmental costs that exceed $133,000,000.

At every step of the way, these choices have resulted in litigation. This Report does not address the wisdom of the ongoing litigation or defenses to it. Instead, it provides recommendations that the IID could implement, which would, in the view of the authors, represent the first step on a critical path towards the ultimate preservation of a sustainable water supply for the Imperial Valley. Critical to this calculus is that the IID must reject in every forum, both publicly and privately, the concept that by preserving the Salton Sea, the IID is a wasteful entity which does not deserve the water delivered to it under its early priority date. To the contrary, the IID and its predecessors-in-interest created the bulk of the water rights in the State of California under the doctrine of prior appropriation, and holds those rights in trust for future generations of irrigators and residents of the Valley who receive direct and indirect benefits as a result. In so doing, the IID

has been, and will continue to be, a responsible partner in the coalition of water users utilizing the Colorado River.

This Report makes several findings and recommendations as it relates to the QSA transfers in the following categories: (1) Institutional/Legal, (2) Conservation, (3) Environmental, and (4) Financial. The Findings and Recommendations are not segregated insofar as they dependent upon one another. Those Findings and Recommendations are:

A. Institutional/Legal:

- Preservation of the air quality and other environmental interests of the Imperial Valley are values which have been publicly embraced by the IID. Avoiding liability for shouldering a share of this responsibility should not be considered an end goal, unlike avoiding liability for an automobile accident, or discharging an obligation in a bankruptcy proceeding, for example.

- The IID has provided extensive support for the fisheries, bird estuaries and other environmental amenities brought to the region by the Salton Sea. Even though the IID could not conceivably pay all the costs of restoration, the IID should not consider itself a disinterested spectator of the death of the Salton Sea.

- The Definite Plan Report expended millions of planning dollars to involve individual irrigators in the on-farm conservation program. The IID is exercising its best efforts to make this on-farm conservation plan work as it evolves. The IID should never accept the argument in any forum that it was the intent of the Board to guarantee water to any third party if good faith conservation efforts fail.

- Decisions in legal cases can only preserve the status quo; they cannot order solutions which would preserve the water rights in the Valley, protect the environment of the Valley or provide leadership by the IID Board. Accordingly, while the IID should vigorously defend its position in litigation, these defenses will not be sufficient to protect the needs of present and future generations of residents in the Valley.

- Because efforts in conservation can lead to short term dollar benefits to the IID as a political institution, and because development of infrastructure and reduced fees for water users are both laudable goals, it is understandable that bottom line outcomes and reduced fee burdens may dominate Board activity. However, the IID is not a private corporation with the bottom line as the sole goal of its stockholders. It is a political subdivision that cannot constitutionally go out of business. It

cannot accept unconscionable risk with the remedy of someday going into bankruptcy. Rather, the IID is the main economic and environmental engine for a community. It cannot lose sight of this fact.

- When parties are in litigation, the inevitable result is that the opposing party is presumed to be the enemy. That is not true among the parties in the Imperial Valley. The environment of the Imperial Valley, the Salton Sea and the local institutions that protect it are not the enemies of the IID. While litigation over water rights is as old as the western United States, irrigators who are being asked to engage in conservation within the Imperial Valley are not the enemies of the IID. It is vital that the litigation mindset not be allowed to bleed over into the policy goals of the IID, and that the institutions themselves solve their problems rather than allow the Courts to keep them apart.

- The IID must resist in every forum the citation of SWRCB Decision 1600 for the principle that the actions of the IID, in providing irrigation runoff to the Salton Sea, were or are wasteful. While the flooding of lands in 1984 was not a reasonable use, that principle has no application today. At every opportunity, whether in the Court of public opinion,

before the SWRCB, or before any federal agency, that principle must be rejected.

- The IID must continue expanding its emerging principles of transparency, and explaining the benefits of its efforts in creating an early priority Colorado river water right for California; namely, how this enables sustainable production of food products at a time when the California economy has shifted radically, and how the IID is a steward for the environment of the Valley and the region.

B. Conservation:

- The type of water transfer utilized by the QSA—a conserved water transfer—differs from most water rights transfers in the western United States. Rather than transferring the right to use water from one location to the next, it seeks to maintain both agricultural and municipal uses by generating conserved water savings. Unlike a more typical water rights transfer, where the transferor need only cease irrigation to make the water available at another location, there is a risk here that the IID will not be able to produce the water necessary for the QSA through system and on-farm conservation measures. We recommend the following

practical considerations related to the implementation of the on-farm program:

- The most important initial step for the Board to take is to determine the proper baseline against which on-farm conservation will be measured. We recommend that the IID keep it simple by defining the baseline by determining, for each soil type, crop and season, a "reasonable" (not actual) use of water for a field undertaking defined ordinary irrigation measures. That number should then be compared to the actual water use on the field since 2003 (the year of the execution of the QSA) and, provided the disparity is not outside an accepted tolerance, it should be used as the baseline.

- Given the high participation rates required to make the program a success (79%-80% of farmable acreage), the IID must balance administrative ease of enrollment in the program against the attractiveness of the program to each landowner. We recommend that the IID simplify the enrollment process, target larger farm units first, and require that on-farm

efficiency contracts, in most cases, be at least four years in order to make the program manageable.

- Because the QSA will ultimately result in 10% of the IID's annual allotment being conserved—changing the mission of the IID from delivery of water to delivery and conservation of water—it is important to develop the institutional expertise for this changed mission. We recommend that the IID re-evaluate its reliance upon outside contractors for work that will become a long-term or permanent function for the District, and to the greatest degree possible, bring that work "in house" and continue to build the in-house capacity to perform that work.

- The IID should rely upon the expertise of the Water Conservation Advisory Board to adaptively manage the on-farm efficiency program. The program will necessarily evolve over time and the IID should continue to communicate with, and rely upon, the considerable technical information and farming talent in the Imperial Valley.

- At the same time, the IID's delivery of water is not, nor should it be, considered waste, even if conservation efforts funded by others use less water. Because a conserved water transfer attempts to maintain both the agricultural and municipal uses of water through conservation rather than the transfer of water rights, any agreement to transfer conserved water must recognize the potential limitation on the transferor to produce the conserved water. Any voluntary program to induce on-farm conservation, even if perfectly executed, may not produce the amount of water sought due to external factors such as economics. The point below which incentives fail to produce the conserved water should be viewed as the point beyond which any conserved water transfer cannot go. To the extent that the QSA agreements impose an absolute obligation to produce conserved water, without regard to whether such conservation is possible, they need modification.

- The principle focus of the Definite Plan is to involve on-farm conservation to the greatest degree possible and to reward irrigators who shoulder the burden of these efforts. However, only if on-farm efforts were to prove insufficient and only if there were sufficient revenues available to pay for

infrastructure and environmental mitigation costs, then the IID would be remiss not to at least consider a more dramatic, but considerably more expensive, program to completely modernize the delivery system, even if such a program requires more expense than provided by the QSA and produces more conserved water than necessary to meet requirements under the QSA. That additional conserved water might readily be used to place more lands under irrigation. For example, while it has likely been reviewed in the past, the IID might evaluate and consider a project that replaces a lateral with a pressurized piping system and, if it proves successful, implement such a project on a wider scale. If this were to prove cost-effective, it could result in a system-level improvement that would present great potential for improving on-farm savings through reduction in tail water and precise irrigation control. While such an "all-in" approach can be implemented on a lateral-by lateral basis, if it were to be successful, its wide deployment would have the potential to save more water than required by the QSA. The environmental consequences of implementing such a system would, of course, have to be thoroughly studied. However, as noted above, should this occur and were there to be a greater

savings in overall conserved water, IID should be prepared to put the excess conserved water to beneficial use through 1) increased deliveries to existing farms, resulting in increased production; or 2) developing new irrigated acreage.

C. Environmental:

- The QSA water transfers as currently designed and implemented impose a serious and multifaceted environmental risk on the IID, the County of Imperial, the Imperial Valley and the Salton Sea ecosystem: the State of California administrative and financial leadership will not be forthcoming to prevent potential environmental injury and costs from exceeding those allocated by agreement to the QSA partners.

- Any suggestion that the IID is insulated from the fallout of State inability or unwillingness to fulfill its environmental obligations ignores the fact that the IID does not operate in isolation from the health of the regional economy, regulatory compliance and ecosystems.

- The potential environmental injury and costs are already becoming realized, while the necessary State leadership, despite some recent accomplishments, still appears less than forthcoming.

- A proactive posture on the part of the IID is needed to readjust the burden of this set of uncertainties, and prompt a more adequate and accelerated approach to Salton Sea

mitigation and restoration, in order to make the QSA water transfers sustainable over the long term.

Accordingly, this Report offers the following recommendations:

- The QSA water transfers can only remain sustainable if the accelerating pace and costs of necessary mitigation and eventual restoration are incorporated into the operational parameters of the QSA as a comprehensive affirmative program for a sustainable ecosystem, economy and regulatory climate, rather than being conceived as a potential "liability" to be minimized and avoided. The IID should work with State and Federal natural resource agencies, the Salton Sea Authority and environmental experts to develop short term and far-sighted proposals for undertaking combined habitat creation and air quality mitigation at an accelerated pace. The Board should also indicate to its JPA partners that the anticipated costs for mitigation in excess of the cap on QSA party expenditures should be allocated among the beneficiaries of the transfer.

- Ongoing litigation and negotiations between the Imperial County Air Pollution Control District and the U.S. Environmental Protection Agency regarding Clean Air Act Fugitive Dust rules will to a large extent determine the regulatory environment in which agricultural and construction activities can be commenced and maintained, including funding and permitting constraints as a result of EPA sanctions. Although the IID is formally in an adversarial relationship with the County and APCD regarding QSA litigation, the IID should work affirmatively with the County and APCD to oppose EPA sanctions that could impose unnecessary costs on IID and the community. At a minimum, the IID Board should request regular updates from APCD officials on the progress of EPA negotiations and litigation, and how these may impact the IID and regional agricultural and economic operations.

- Underlying the environmental risks imposed on the IID was the principle sometimes cited from SWRCB Decision 1600 that agricultural runoff sustaining the Sea could be characterized as an unreasonable and wasteful use of water, along with federal pressure to transfer the water

proceeds of feasible IID conservation away from the Sea to the urban coastal water districts. Should the principle suggested by Decision 1600 be implicated in the context of future negotiations, administrative proceedings or litigation, the IID must clearly and formally reject this principle in public forums and before the State Water Resources Control Board.

D. Financial:

- A review of the past financial statements as well as the forty-year financial model reveals that QSA revenues have been, and may continue to be, used to cover the Water Department's depreciation and replacement costs, even for non-QSA related infrastructure. The practical and long term effects of this practice must be carefully evaluated, and a conclusion reached as to how and whether this practice should continue in the way it has to this point.

- The margin to hedge against risk produced by the IID's forty-year, $7.87 billion investment in the QSA is only about 1%. For projects of this magnitude and changes over time, this margin may well prove to be insufficient to justify the risk absorbed. Already, only one decade into the program, the

IID and SDCWA have petitioned the SWRCB to make a significant change to the original plan.

- Part of the cause of this small margin is the low price of the water being made available to the Salton Sea through the JPA entity and of the water made available to the CVWD when compared to the actual potential for costs over the life of the project.

- The IID will issue $39,270,100 in debt over the term of the model. Because debt is based upon anticipated revenues, debt financing requires accepting additional risk because it is based upon the assumption of the revenue stream continuing uninterrupted by political, legal, economic, climate-related and other changes.

- A few not unreasonable changes in the assumptions underlying the forty-year plan would produce a significant shortfall of $1,043,378,374. The IID should immediately and rigorously continue, as it is beginning to do, to account for and segregate QSA funds from Water Department funds.

- The IID should conduct a complete analysis of how the QSA funds should be utilized in the future, based on the estimates of future risk due to political, legal economic, climate-related

and other changes. Under no circumstances should the IID allow a practice to continue if it has not fully analyzed the degree of risk associated with it. To act only after a crisis occurs could prove devastating to the IID.

PROPOSED TIMELINE FOR ACTIONS

Circulate Report for Comments

30 Days

Deadline for Receipt of Comments

30 Days

Finalize Report

30 Days

At the time of submission of the final report, LRPA will provide formal Resolutions for the Board appointing the General Manager, qualified staff person, representative from LRPA, Board members and persons from the community to serve on five committees charged with developing the critical path for addressing issues raised in the Report.

- Community Outreach Committee - developing systems for improving communication and linkages with the community and formulation of extensive public relations campaign to demonstrate benefits of the Imperial Valley Irrigation, the Salton Sea, and the historical and legal equity held by IID in its water rights.
- Financial Committee - develop standards for the accounting and periodic reporting of QSA revenues and expenses, and determine the appropriate mechanism for the segregation of QSA funds from the general IID Water Department funds.
- Conservation Committee - working with the Water Conservation Advisory Board, develop an adaptive management strategy for the on-farm conservation measures. Make recommendations to the Board on: (1) the proper baseline against which on-farm conservation will be measured, (2) the appropriate length of on-farm conservation contracts, and (3) the solicitation process for signing farms up to the program. Investigate the feasibility of the "all-in" approach developed by Dr. Phil King.
- Environmental Committee - will analyze the realistic scope and costs of environmental mitigation related not only to species but also to air quality. It will review the extent to which choices will be driven by federal law relating to air quality as well as the probability that state funding will be forthcoming. It will establish timelines for completion of mitigation work as well as identify funding commitments required and, to the greatest degree practicable based upon reasonable and actual funding sources, when funding may not be sufficient to cover costs.
- QSA Readiness Committee - given the probability of drought on the Colorado, the emerging role of Mexico and the IBWC, the evidence indicating that at any time the mitigation funds would be insufficient, resulting in a refusal of the SCWRB to allow further transfers, that the federal agencies may erroneously attempt to step in and reassert dominance under 417, this committee needs to evaluate and provide a succinct report on the consequences of an immediate financial shortfall should revenues and the capacity of the IID to respond to this shortfall decrease, and develop plans to ensure that the failure to plan does not cause injury to the IID.

60 Days

Draft Committee Reports Due

ENDNOTES

[i] "Water uses are measured in two ways, by amount withdrawn and by amount consumed. Water withdrawn is water diverted from its natural course for use, and may be returned later for future use. Water consumed is water that is incorporated into a product or lost to the atmosphere through evaporation and transpiration and cannot be reused. Water consumption is the most important indicator, since some part of withdrawn water can usually be reused." (National Water Commission, *Water Policies for the Future* 6 (1973).)

[ii] (*See also* Pacific Institute, Hazard: The Future of the Salton Sea With No Restoration Project (2006) at 1.)

[iii] In response to arguments that putting return flows into the Salton Sea is a reasonable use, the Court observed: "IID is also in error in contending that all 'beneficial' uses are 'reasonable' …The fact that a diversion of water may be for a purpose 'beneficial' in some respects (as for desalination of lakes or generation of electric power) does not make such use 'reasonable' when compared with demands or even future demands, for more important uses." (*Imperial Irrigation District v. State Water Resources Control Board*, 225 Cal. App. 3d 548, 275 Cal. Rptr. 250, 265-66 (1986).)

[iv] For a general description of adaptive management, *see* J.B. Ruhl & Robert L. Fischman, *Adaptive Management in the Courts*, 95 Minn. L. Rev. 424 (2010).

[v] Each irrigation district has its own unique hydrology, and the constituent farmers and district staff adapt their management to fit. It is very easy to take operational loss numbers out of context, but two facts should be kept in mind. First, irrigation takes a lot of water. It uses more water than all other diversions of water by mankind. The numbers associated with irrigation hydrologic budgets tend to be large. Second, a loss is not always a loss. For example, Elephant Butte Irrigation District ("EBID") in southern New Mexico is nationally regarded as a progressive, innovative district. The conveyance system that EBID uses to convey water from its diversion points on the Rio Grande to constituent farmers' headgates is earth lined, and approximately 40 percent of the diverted water seeps into the canal beds before making it to the headgate. While this might seem wasteful, it is anything but. Canal seepage is the largest source of recharge to the local aquifer system. Storage of water in Elephant Butte Reservoir incurs large evaporation losses, and the capacity is comparatively limited. By recharging the groundwater system in times of plentiful surface water supply, the farmers of EBID have a drought reserve that has kept them viable for the past two years.

[vi] As noted by IID attorney David Osias, "As a terminal lake with farm runoff as the primary source of inflow, the Salton Sea exists today only because of irrigated agriculture in the Imperial and Coachella Valleys. … Any reduction in IID water deliveries, or any increase in irrigation efficiency that reduces IID irrigation drainage, causes a reduction of inflow to the Salton Sea and a corresponding negative environmental impact on the species which nest and feed there." David Osias & Thomas Hicks, *43 C.F.R. Part 417 Does Not Authorize Federal Agency Adjudication of IID Beneficial Use of Colorado River Water*, 14 W.-Nw. J. of Envtl. L. & Pol'y 1499, 1508 (2008).

[vii] *See* Revised Order WRO 2002-0013 at 3 ("This requirement mitigates project impacts to the Salton Sea for a long enough period to provide time to study the feasibility of long-term restoration actions and begin implementation of any feasible restoration projects.").

[viii] QSA JPA Agreement, Section 9.2.

[ix] SB 654 (2003).

[x] Petition for Change at 1-4. *See also* Revised WRO 2002-0013, at 3.

[xi] The Constitution's "appropriation requirement" at Article XVI, sec. 7. *See* Court of Appeal slip op. at 7.
[xii] Court of Appeal slip op. at 47.
[xiii] *Id.* at 47-48.
[xiv] California Natural Resources Agency, Notice of Completion & Environmental Document Transmittal (Aug. 10, 2011) Retrieved February 28, 2012 from http://www.water.ca.gov/saltonsea/docs/eir2011/NoticeOfCompletion_081111.pdf
[xv] Finding of Failure To Attain and Reclassification to Serious Nonattainment; Imperial Valley Planning Area; California; Particulate Matter of 10 Microns or Less, 69 Federal Register 48792 (Aug. 11, 2004).
[xvi] Rules 800-806, available at http://www.co.imperial.ca.us/AirPollution/Web%20Pages/RULES%20AND%20REGULATIONS.htm
[xvii] Final Rule: Revisions to the California State Implementation Plan, Imperial County Air Pollution Control District**,** 75 Federal Register 39366 (July 8, 2010).
[xviii] Clean Air Act Sections 110(m) & 179(a).
[xix] Krystal Chang, "Los Angeles' Water Wars: Revisiting Owens Lake", Metropolis Magazine (June 13, 2004)., available at http://www.metropolismag.com/story/20040613/los-angeless-water-wars-revisiting-owens-lake.

APPENDICES

APPENDIX A

FINANCIAL DATA

The review consists of the evaluation of IID audited financials from 2003 through 2010, QSA Annual Statements, 40-year financial plan, and numerous QSA agreements and documents created for IID in implementing the QSA.

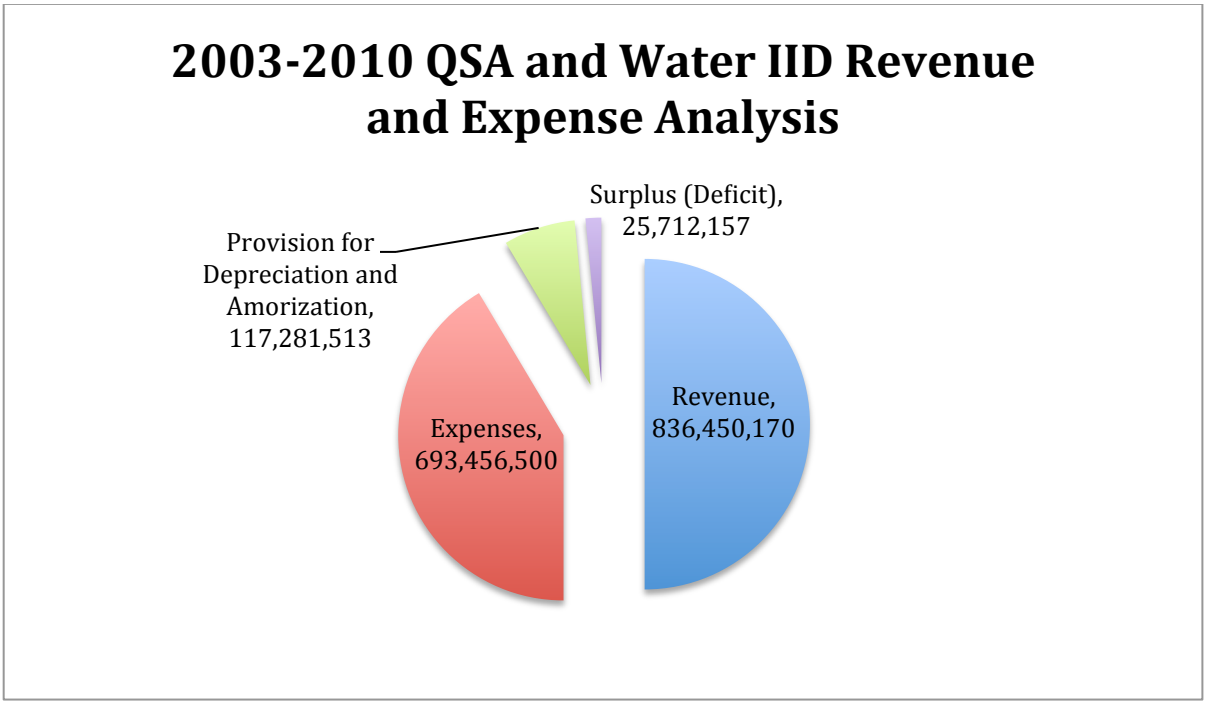
The first section is the financials from 2003 through 2010 was done to understand the financial independence of the QSA. The financials through the years have evolved with changes in revenue with the QSA revenue being line items in the financials, but the expenses are very comingled with the IID water accounts. The QSA according to the QSA Annual Reports consists of four (4) separate entities dash Water Transfer, Local Entity, HCP-NCCP, and Western Lands. The remaining two (2) groups of IID Water accounts are Water Sales and MWD.

The Water Transfer chart provides the detail accounting regarding the QSA to the transfers for San Diego, CVWD, Salton Sea with costs for the JPA entities. The two (2) JPA entities are the Local Entity created for fallowing per the agreement through 2018 and HCP-NCCP on the environmental work. The Local Entity and HCP-NCCP have their separate accounts, where the contribution and reimbursements of these entities are recorded. The Western Land was formed to purchase the surplus land with the ability to use it for environmental mitigation and fallowing.

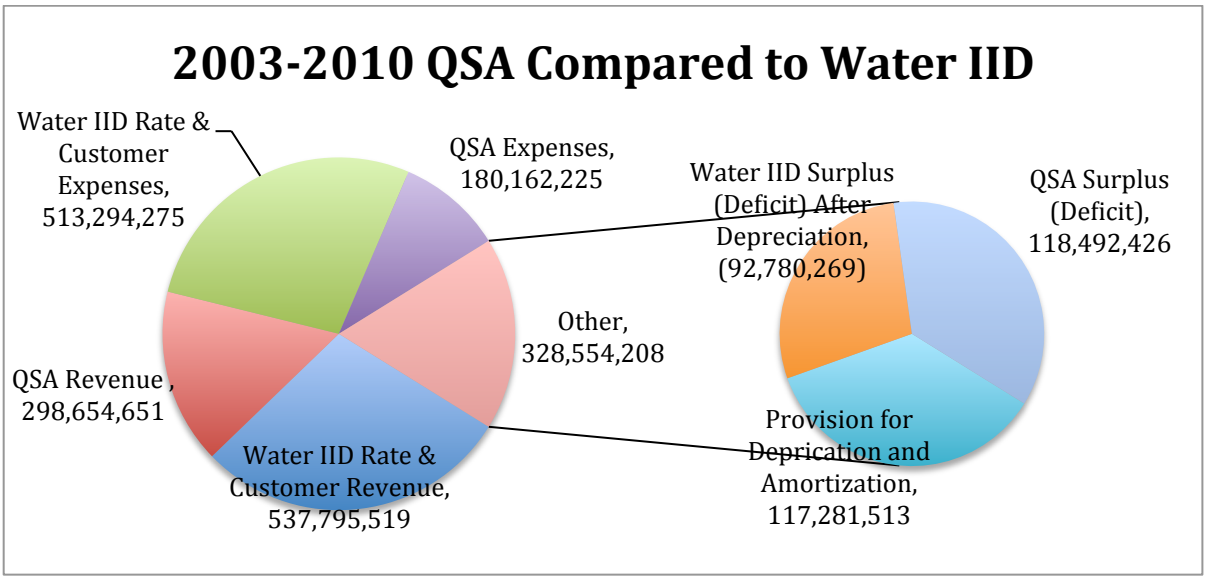
The financials from 2003 through 2010 were derived through coordination with IID financial staff which reviewed the 2009 and 2010 trial balance to create a relationship of the revenue and expenses as they tie to four (4) QSA entities as discussed above. This information was used in separating the QSA from IID Water Financials. An example of this process is shown for 2009 and 2010 exhibits 1 and 2. This separated the QSA four (4) entities on the columns, and it created a total cost for QSA, the remaining revenue or expenses were for IID Water and MWD. The cash balances from the IID Annual Report were used to make sure that the relationships of costs to cash balance stayed accurate throughout this process. The ties that were created between the IID Financial Audit and water accounts, and were used to create the same relationships between 2003 through 2008.

We created two (2) spreadsheets showing the IID Water Sales with MWD revenue and expenses and QSA revenues and expenses from 2003 through 2010. This is shown as exhibits 3 and 4. The depreciation and amortization costs are only being taken from IID Water and MWD at IID financial staff request. The majority of the depreciation is IID Water and MWD. During this time period the QSA has minimal depreciation and in the future the QSA will not have major assets with its planned structure.

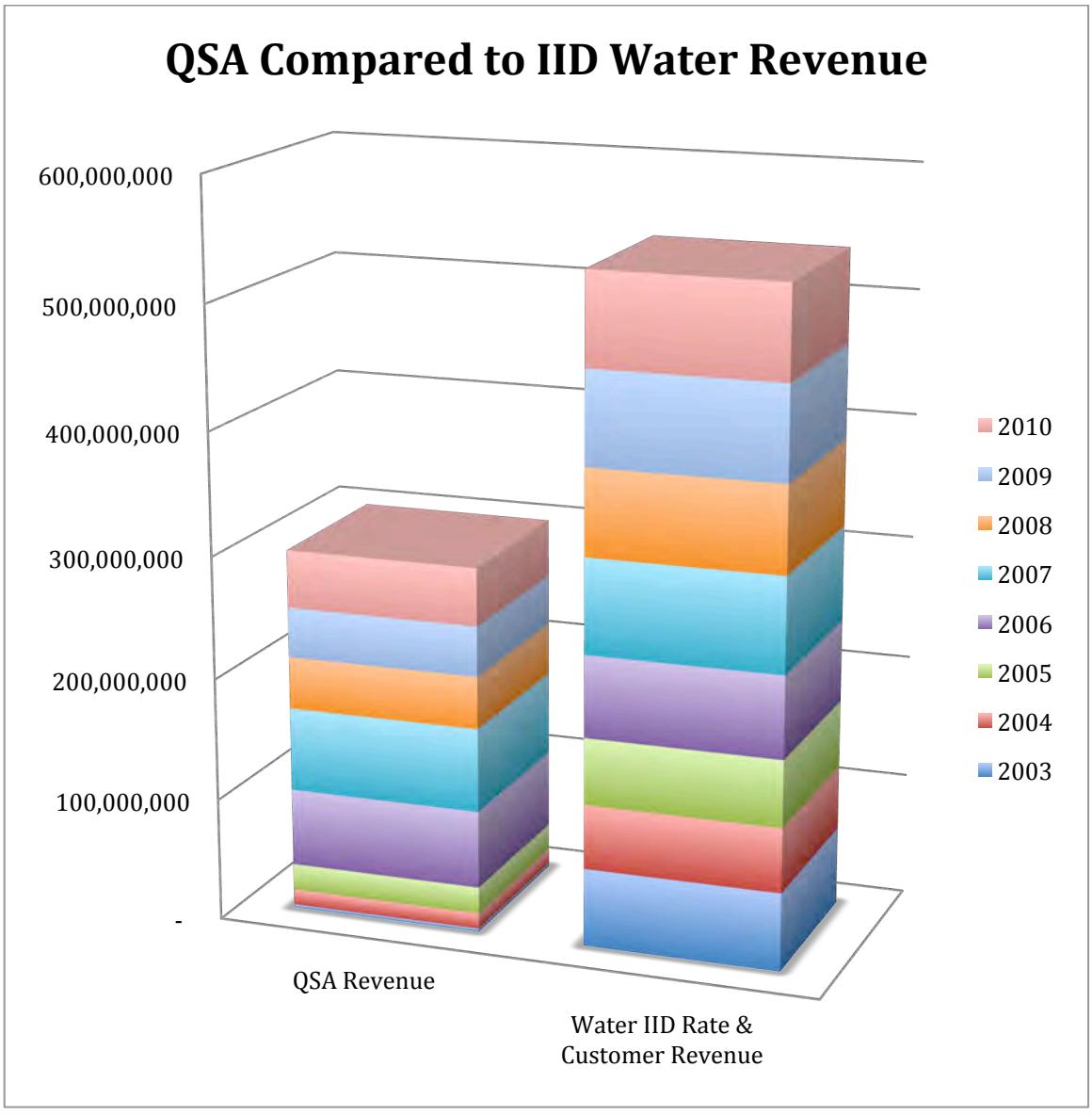
In review of this analysis with the combined revenue of QSA and IID Water Sales with MWD shows in the following chart a surplus of $25 million from 2003 through 2010. This includes $836 million revenue less $693 million expenses, and $117 million of depreciation.



This data below displays the QSA compared to the Water IID from years 2003 to 2010. IID Water Sales with MWD had revenue of $537 million, expenses of $513 million, provision of deprecation and amortization of $117 million and a deficit of ($92) million. QSA had revenue of $298 million and expenses of $180 million with a surplus of $118 million. This ties to the chart above showing that the total surplus was $25 million.

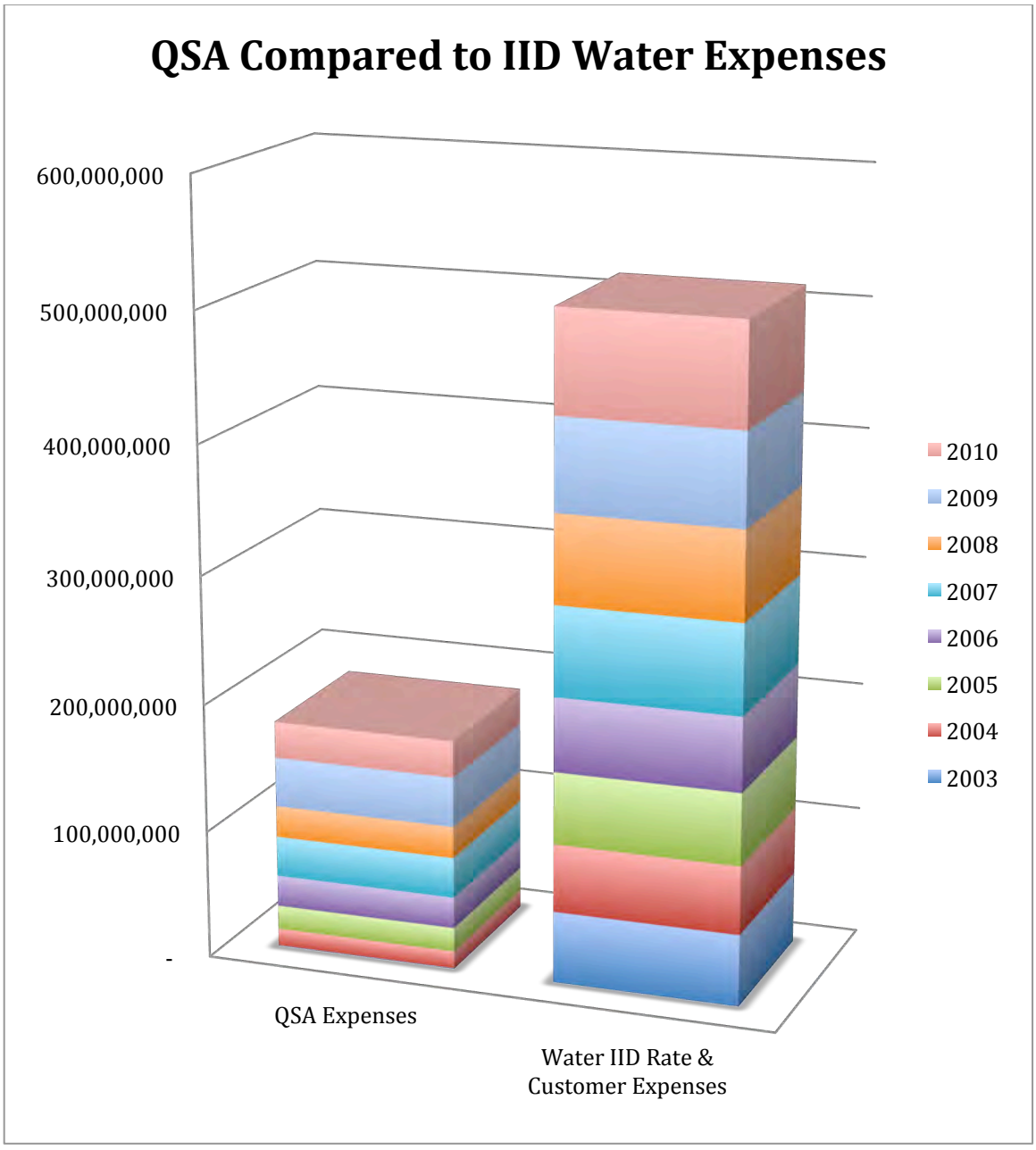


The next few graphs review the revenue, expenses, and surplus or deficit between IID Water Sales with MWD and QSA. The revenue of QSA compared to Water IID with MWD shows how the QSA revenue starts very slowly with its first significant increase was in 2006 and 2007; primarily the lands sales with Western Farm. In 2009 and 2010, the San Diego water transfer started growing with increase quantities and the agreement number 5 changes the rate structure. The growth is shown in the water sales on an annual basis throughout this time period.

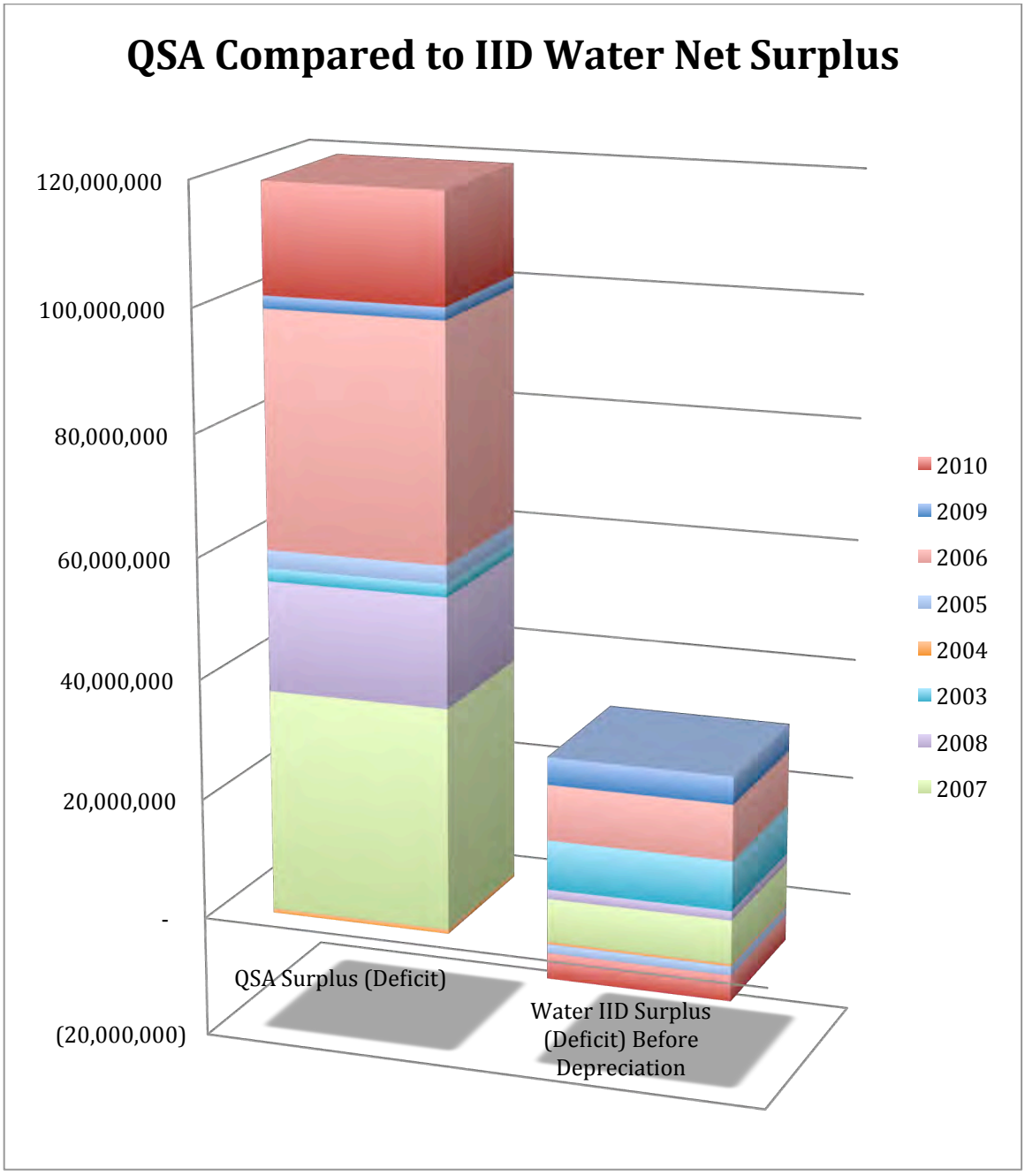


The expenses of QSA from 2003 through 2010 are 61% with the water transfer operation, and 25% for the debt with the Western Farm Land purchase. The Water Sales major expense category is O&M of Irrigation and Dams and O&M of the All

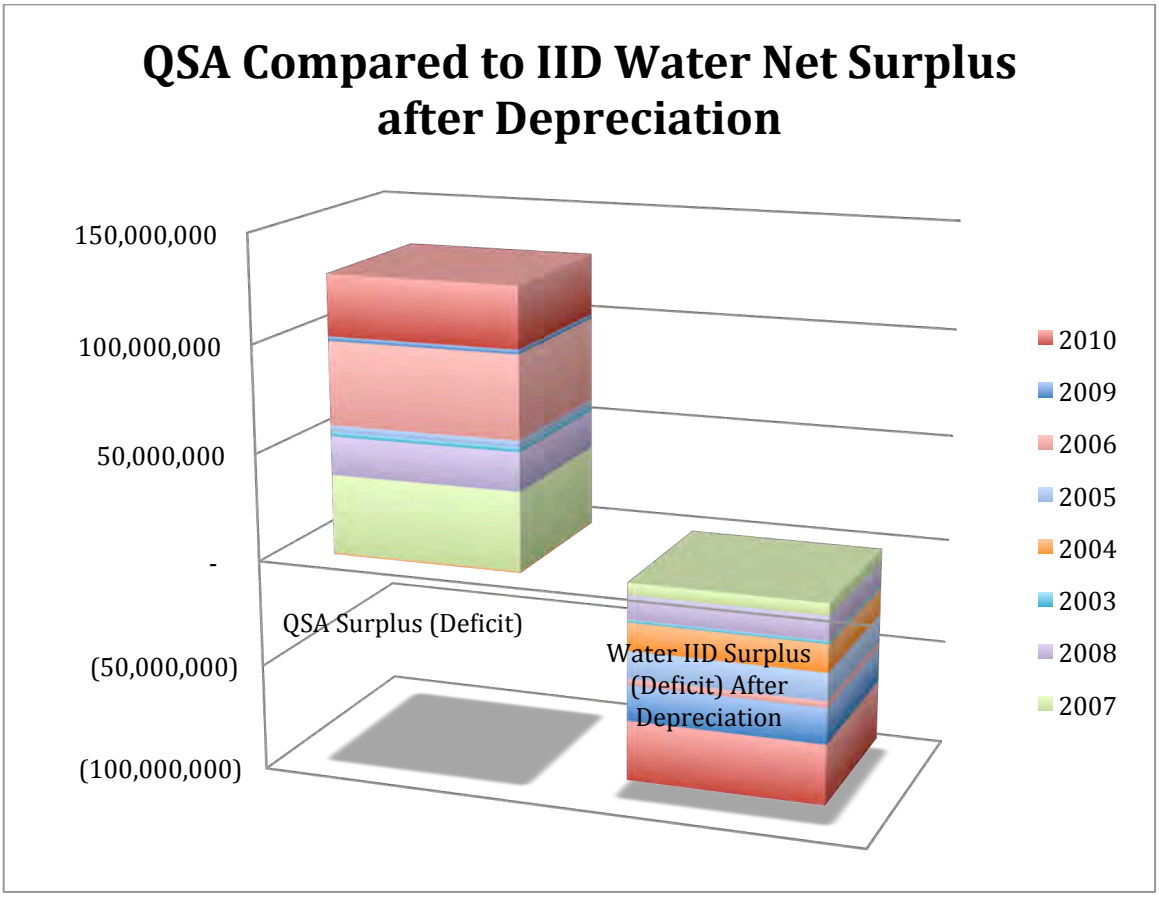
American Canal. The expenses for both QSA and Water Sales expenses are growing on an annual basis as shown in the graph below.



The surplus/deficit for QSA as shown on the next page is a combination of Western Farm Sales in the mid years within 2010 was the water transfer. The surplus for Water Sales with MWD is 5% over revenue before depreciation and amortization.

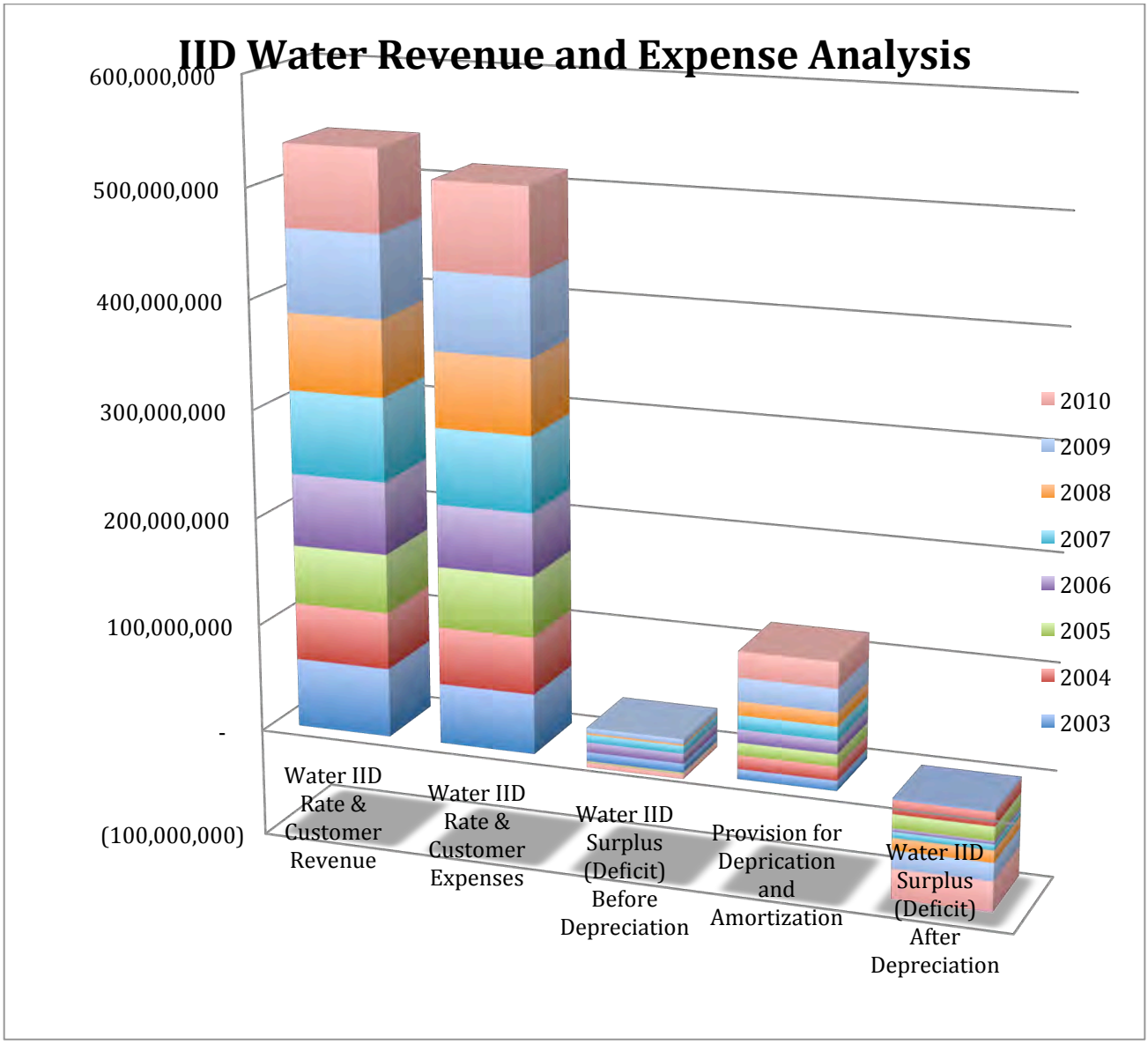


The surplus/deficit after depreciation and amortization is ($92) million. The depreciation doubled in 2009 and 2010 with the completion of the All American Canal, which was a major contribution to the deficit to the Water Sales with MWD as shown in the graph on the next page.

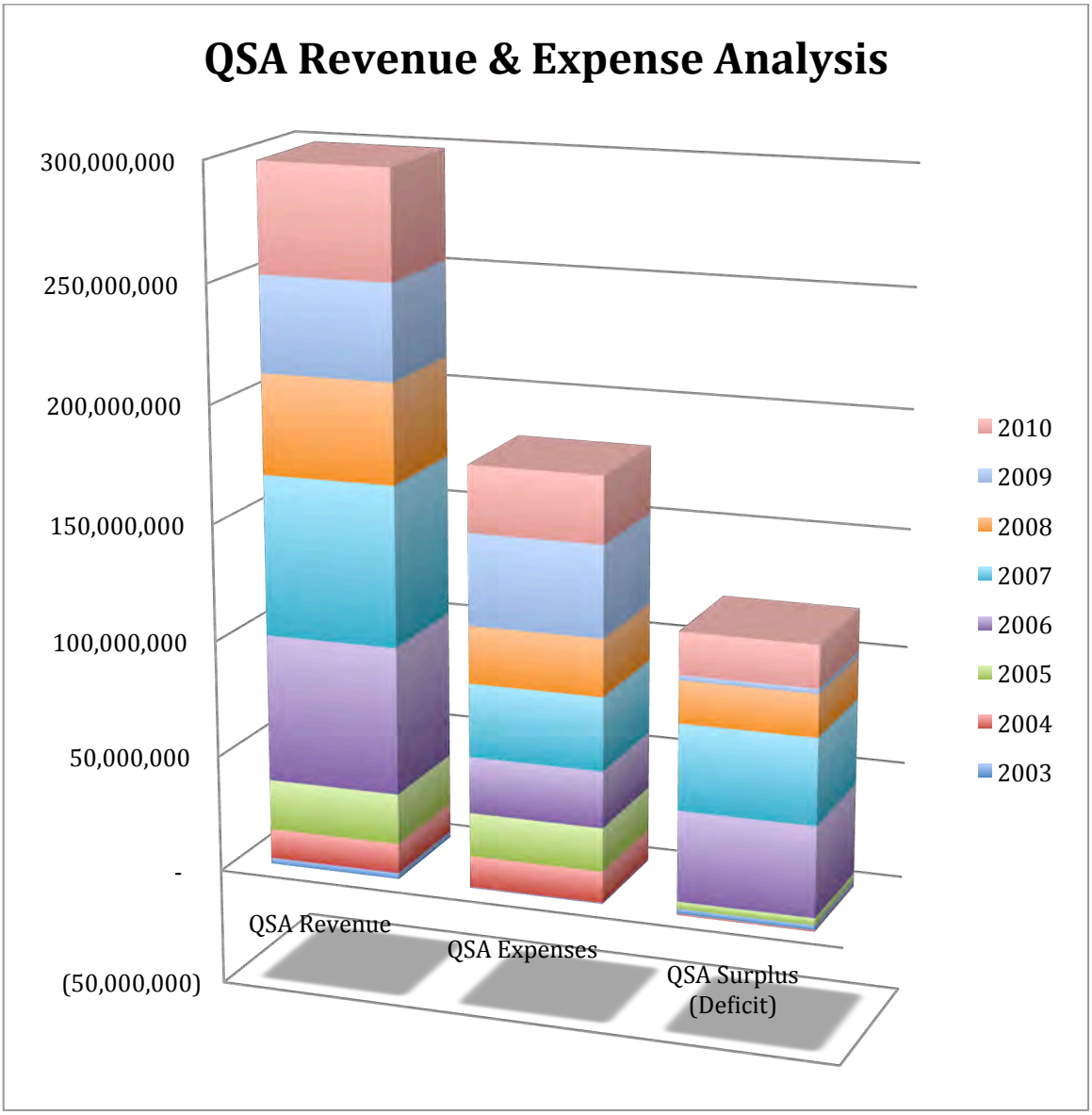


The next two graphs show the Water Sales with MWD and QSA and are displayed as separate graphs from 2003 through 2010 in order to see all the relationships of revenue, expenses, depreciation, and surplus/deficit as it relates to both groups.

The Water Sales with MWD in the graphs show the slight margin between revenue and expenses, which does not include required surplus for its depreciation or future replacement cost. This depreciation began doubling in 2009 with the All American Canal completion.



The QSA revenue and expenses show the surplus created in this period. As shown in the surplus bar, there are four (4) years in which the QSA accumulated the majority of its $118 million surplus. This was in 2006 and 2007 in lands sales with Western Farms. The 2008 and 2010 surplus was generated with the water transfer comprising the majority.

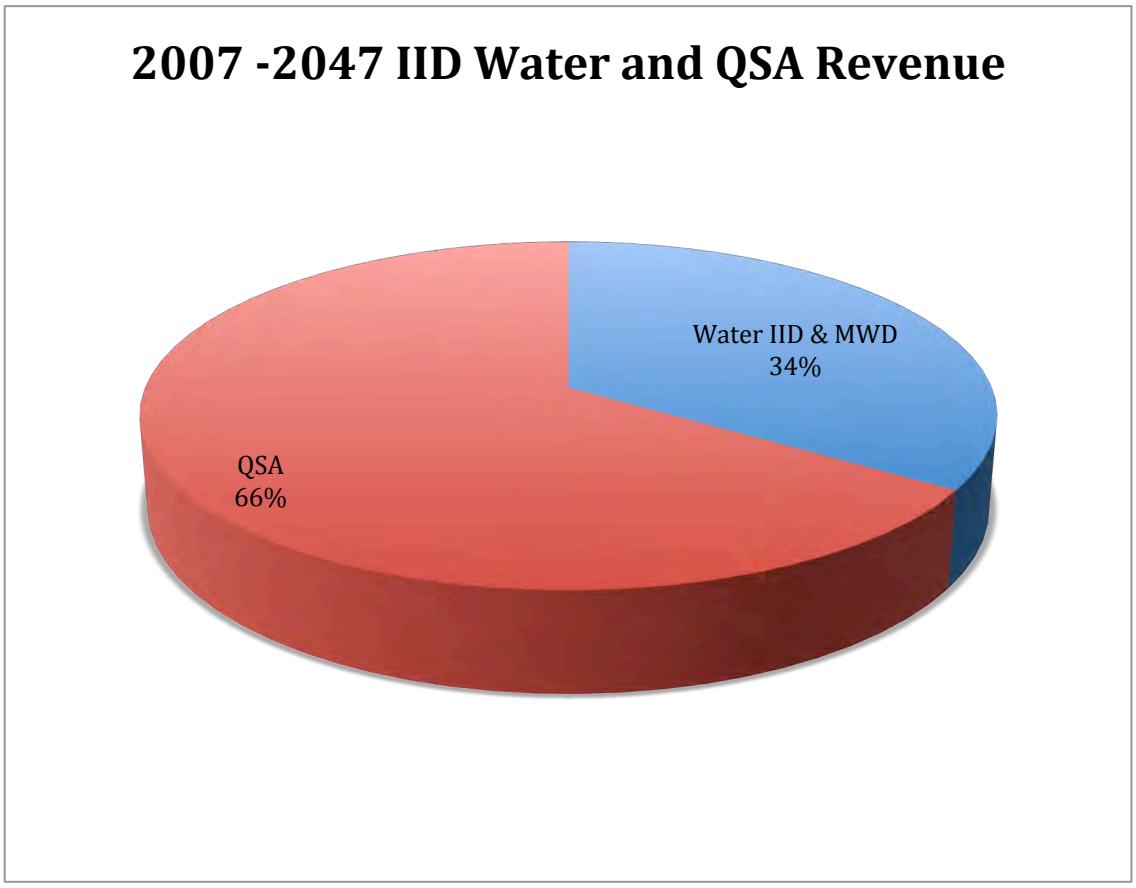


The QSA and Water Sales with MWD on a cash basis throughout this period are showing a surplus for both groups. However a driver that results in a deficit of ($92) million is the depreciation and amortization cost creating a fund for future replacement costs, which is a normally accounted for any utility trying to maintain their assets operating at full production with minimal down time for its customers.

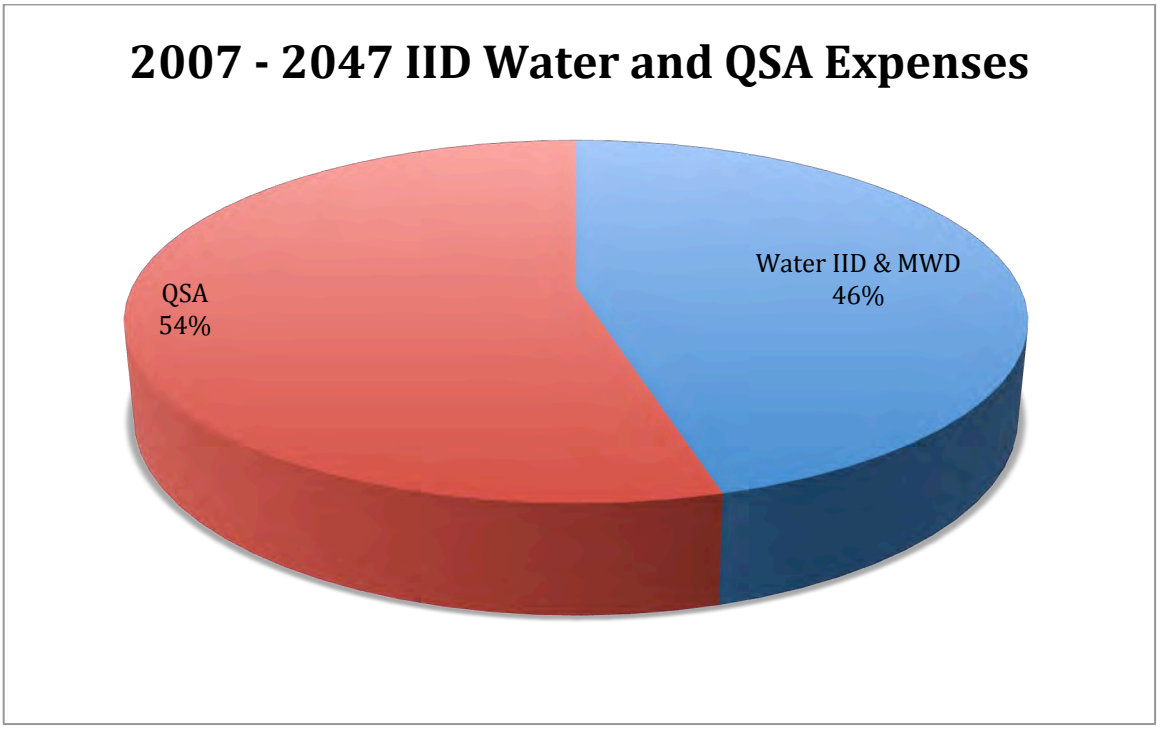
As we conclude the review of the 2003 through 2010 period, we analyzed the 40-year plan of the IID Water excepting the assumptions of the model provided by the IID financial and water group. These assumptions come from review of all the documents and parameters required to implement the QSA and Water Sales from 2007 through 2047.

The 40-year model created by IID financial staff with input from the water group is shows a cash basis surplus of $902 million. This is shown on a spreadsheet as exhibit number 5 with revenue of $13.3 billion and expenses of $10.5 billion and a surplus of $2.7 billion. IID has planned $804 million of loans and grants with capital expenditures of $2.6 billion with a net capital funding expenditure of ($1.8) billion. The planned surplus over the 40-year period is $902 million.

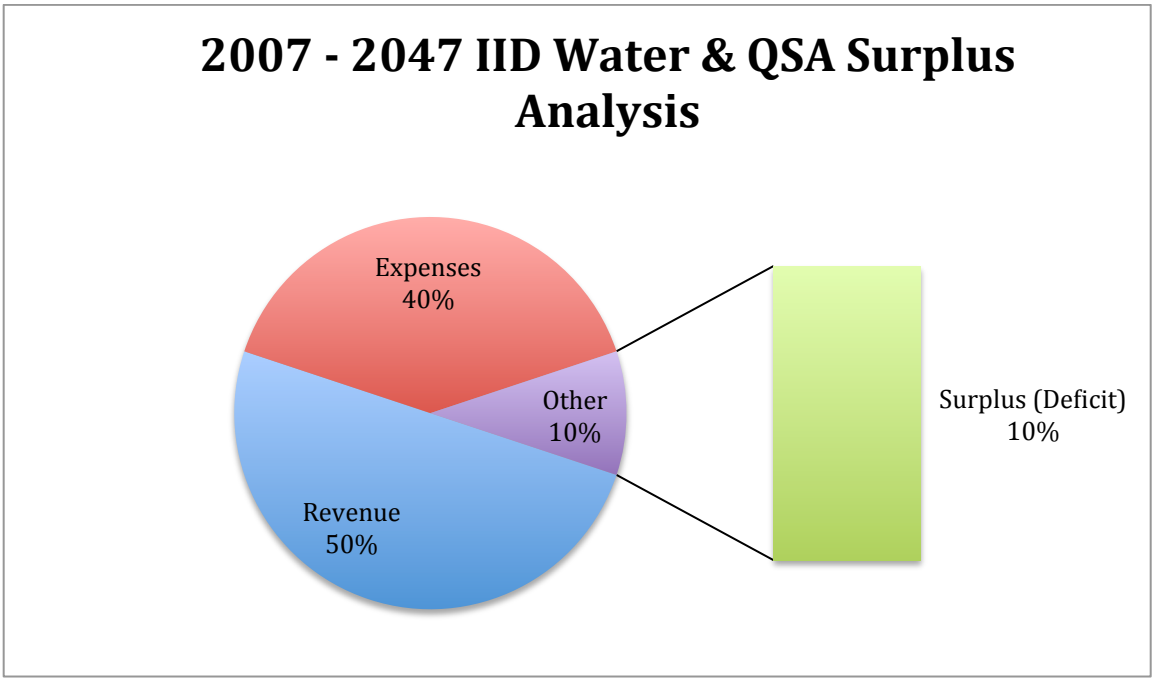
The revenue planned is shown by two (2) groups of Water Sales with MWD and QSA. The revenue for Water Sales with MWD is 34% of the $13.3 billion or $4.4 billion for the 40-year period. QSA is making up 66% of the planned revenue stream or projected $8.7 billion. As discussed earlier, the QSA is made up of the Water Transfer, Local Entity, NCP-HCCP, and Western Farm Land. This revenue ratio for the 40-year plan is shown in the graph below.



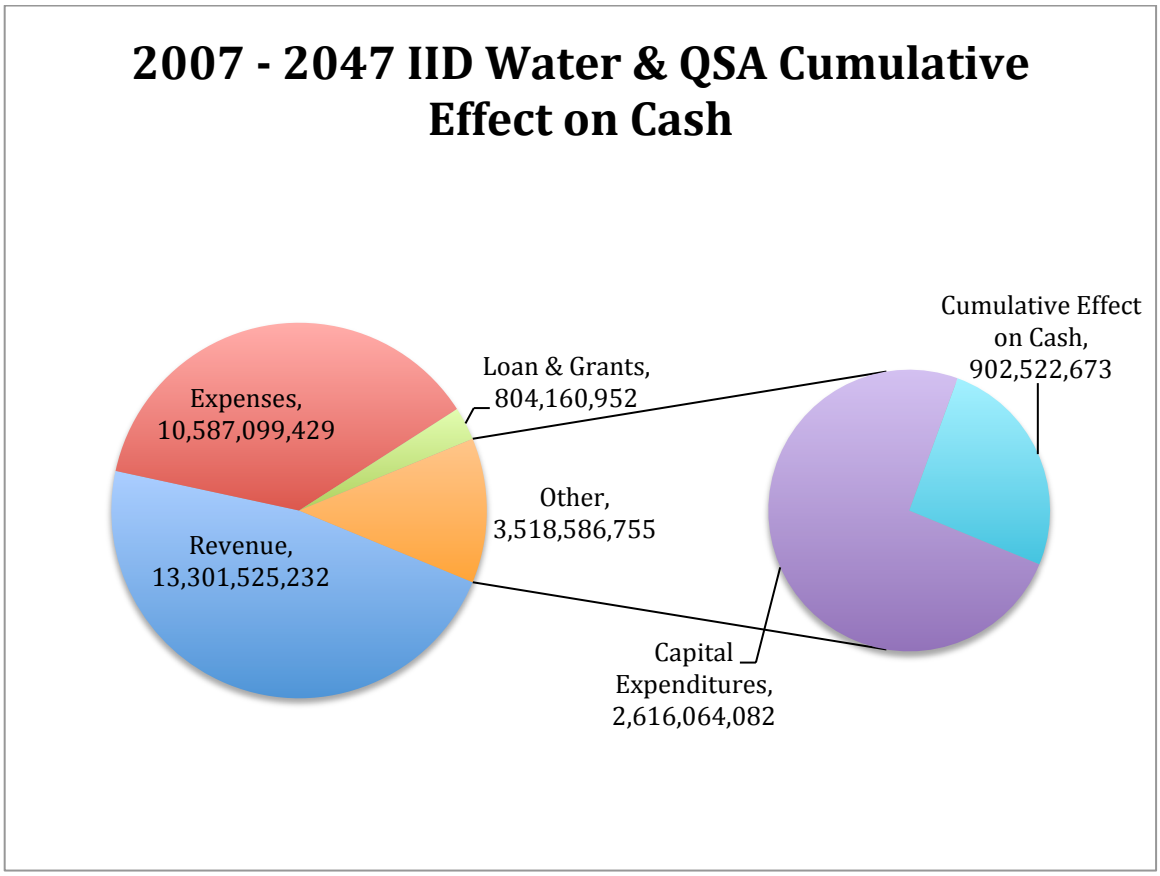
The planned expenses for the 40-year period from 2007 to 2047 is $10.5 billion with 46% for Water Sales with MWD or $4.8 billion. The QSA is 54% of the total expenses or $5.7 billion. This ratio is very high for Water Sales with MWD on the expense side with only $4.4 billion of revenue throughout this same time period. The relationship is shown in the graph on the following page.



The surplus analysis shows the revenue of $13.1 billion is 50% in this 40-year period. The expenses of $10.6 billion are projected at 40%, which remains a 10% surplus at $2.7 billion. The relationship is shown in the pie chart graph below. We will be reviewing later the viability of the planned surplus between the two (2) groups.



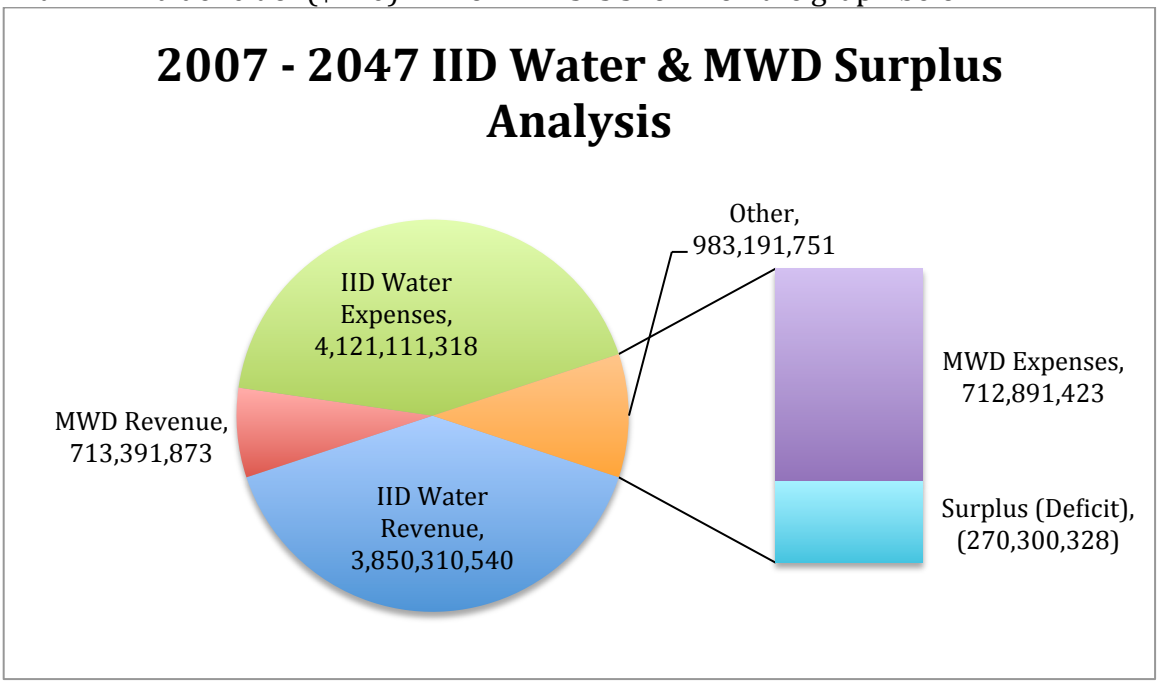
The cumulative effect on cash is shown on the graph below. This projected effect on cash on the 40-year plan is a surplus of $902 million. This is based on the last graph showing a surplus of $2.7 billion, loan and grants of $804 million and capital expenditures of $2.6 billion. This brings net capital funding expenditure of ($1.8) billion, which brings a cumulative surplus effect on cash of $902 million.



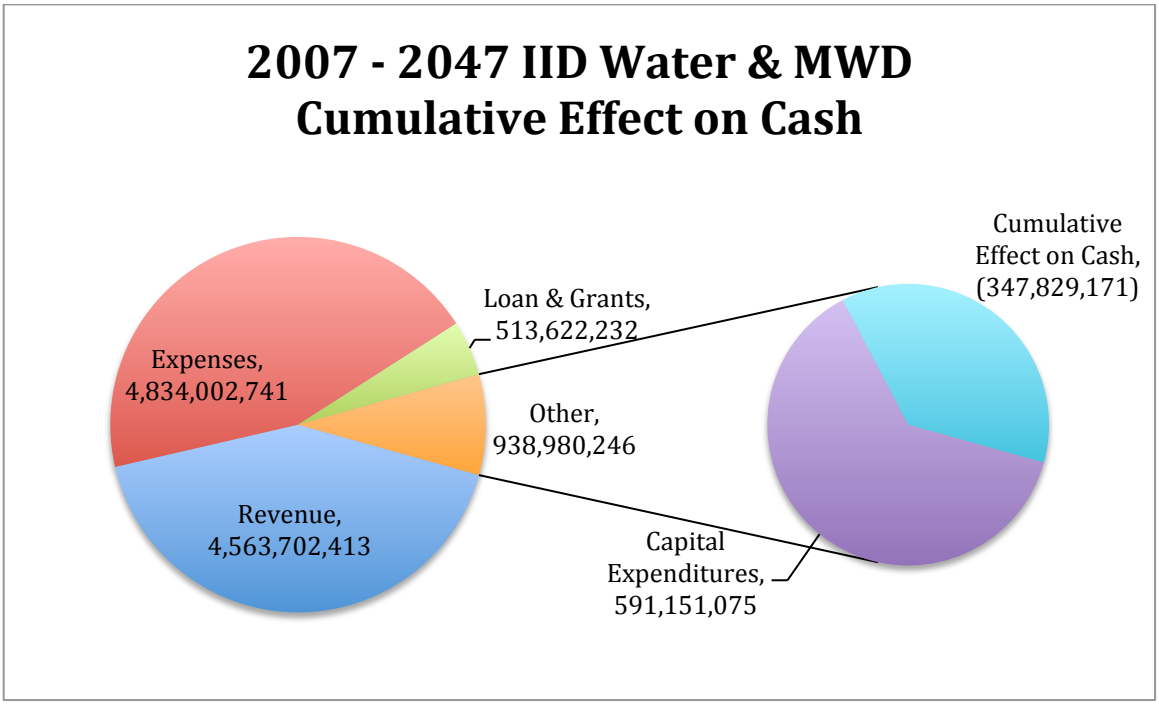
The Water Sales with MWD have projected revenue of $4.5 billion, expenses of $4.8 billion with a surplus/deficit of $(270) million. It should be noted MWD has projected $713 million of revenue and $712 million of expenses, which has no effect on the surplus/deficit. It is planned loan and grants of $513 million with capital expenditures of $591 million with a net capital funding/expenditure of $(77) million. The spreadsheet is exhibit 6 showing the 40-year plan actuals and projected costs with a cumulative deficit effect on cash of ($347) million.

The surplus analysis of Water Sales with MWD on the 40-year plan is a ($270) million deficit. This is water sales with $3.8 billion revenue, $4.1 million of expenses, MWD with $713.4 million revenue, and $712.8 million of expenses. This

shows MWD with a $500 thousand surplus and the total surplus with Water Sales with MWD a deficit of ($270) million. This is shown on the graph below.

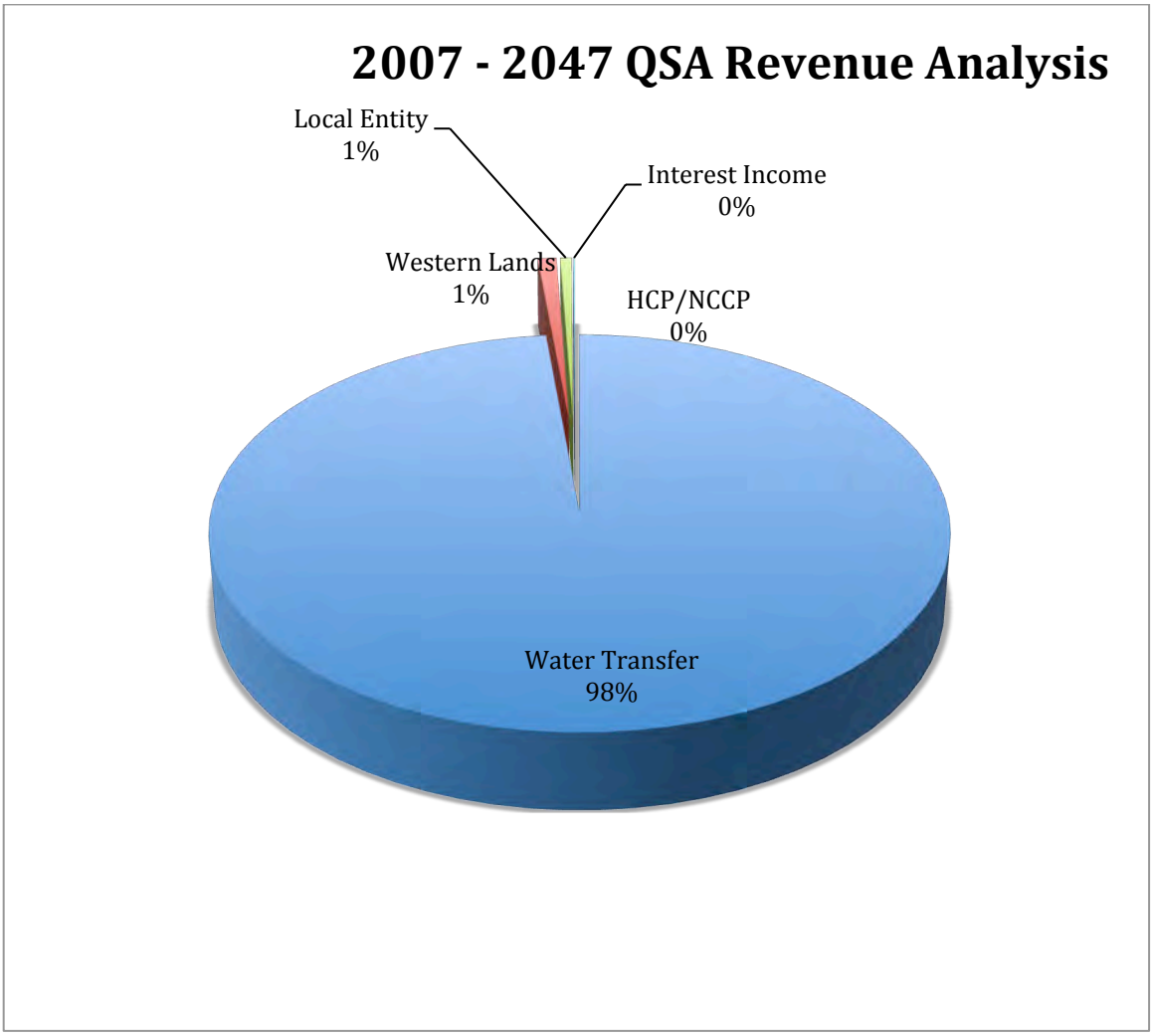


The cumulative effect of cash for Water Sales with MWD is a deficit of ($347) million. The deficit is based on the graph above reflecting ($270) million with the additional cost with loans and grants of $513 million and capital expenditures of $591 million. This has a net capital funding/expenditure of ($77) million with a cumulative deficit effect on cash of ($347) million. This is shown on the graph below.

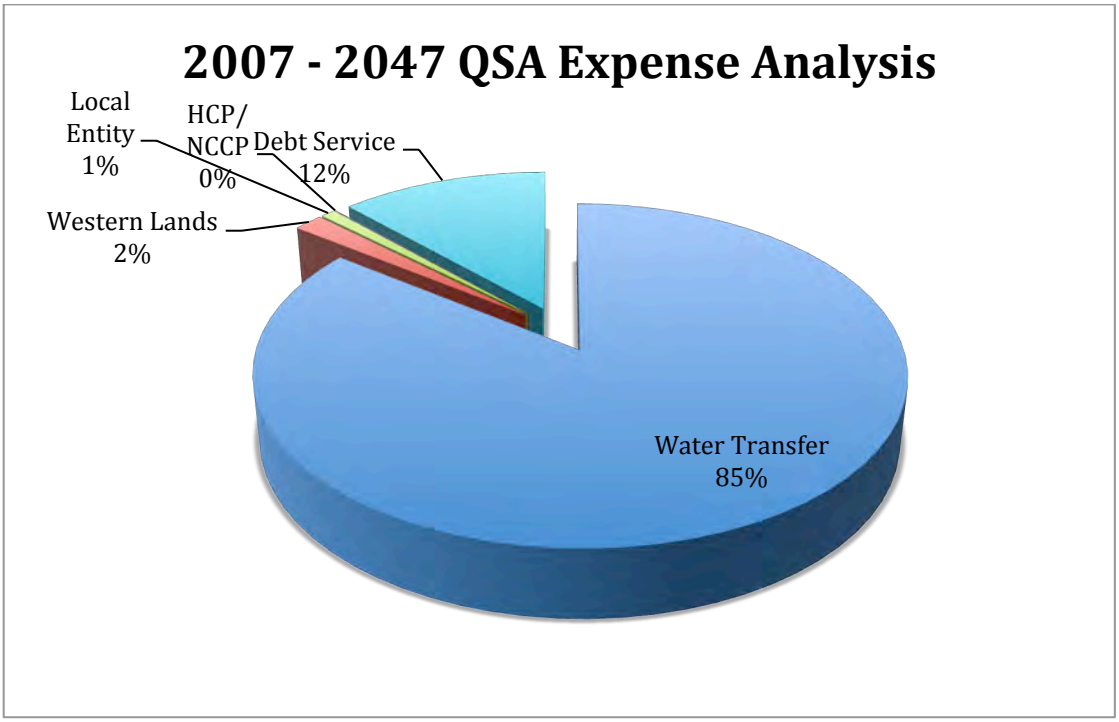


The QSA consists of Water Transfer, Western Lands, Local Entity and HCP-NCCP, which makes up the revenue and expenses. The revenue of the QSA projected by the 40-year plan is $8.7 billion with expenses of $5.7 billion, which creates a surplus of $2.9 billion. The QSA has planned loans and grants of $290 million with capital expenditures of $639 million with a net capital funding expenditure of ($349) million. This brings a cumulative surplus effect on cash of $2.6 billion. The IID Water Replacement Cost is in the QSA as a capital expenditure, which has no financial benefit to QSA. The only benefit is to IID water users with a cost of $1.38 billion with a net cumulative surplus effect on cash of $1.89 billion. This is shown in spreadsheet as exhibit 7.

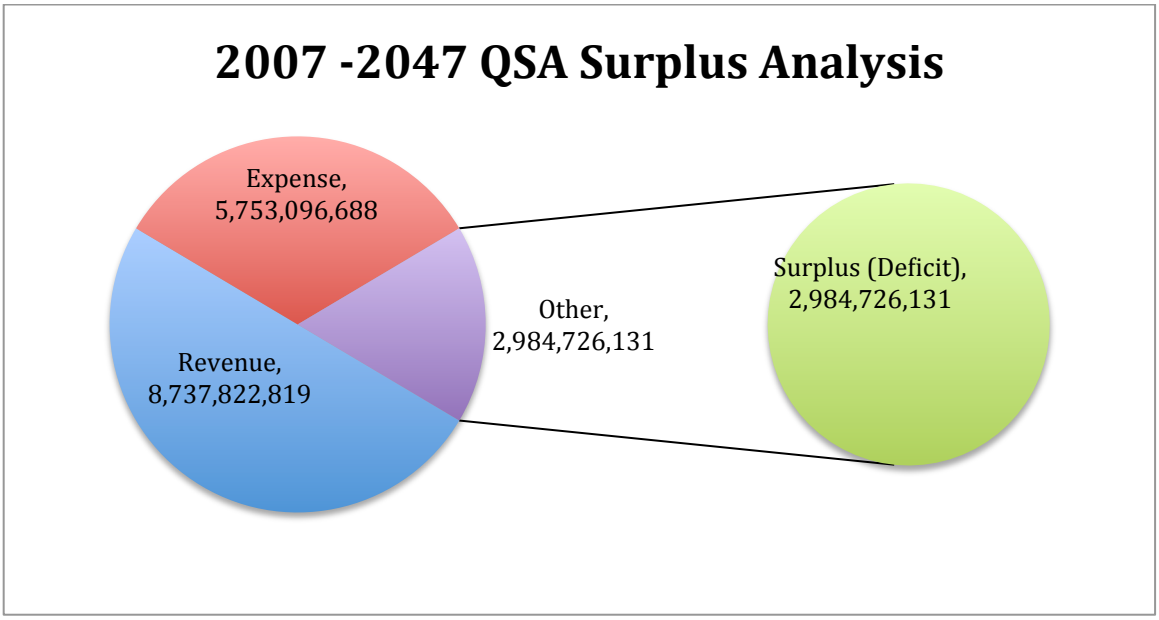
The revenue of QSA as stated before effect is based on four (4) groups, in which the water transfer is 98% of the total QSA. The other three (3) entities comprise 2% of the QSA revenue. The water transfer projected revenue is $8.6 billion of the total $8.7 billion revenue of QSA. The total of the projected of the other three (3) groups is $138.6 million. This is shown in percentages in a graph below.



The QSA expenses are 85% or $4.9 billion with the Water Transfer. The remaining QSA expense is for debt service comprising 12% or $700 million and 3% or $149 million for the other entities. This is shown in the graph below.

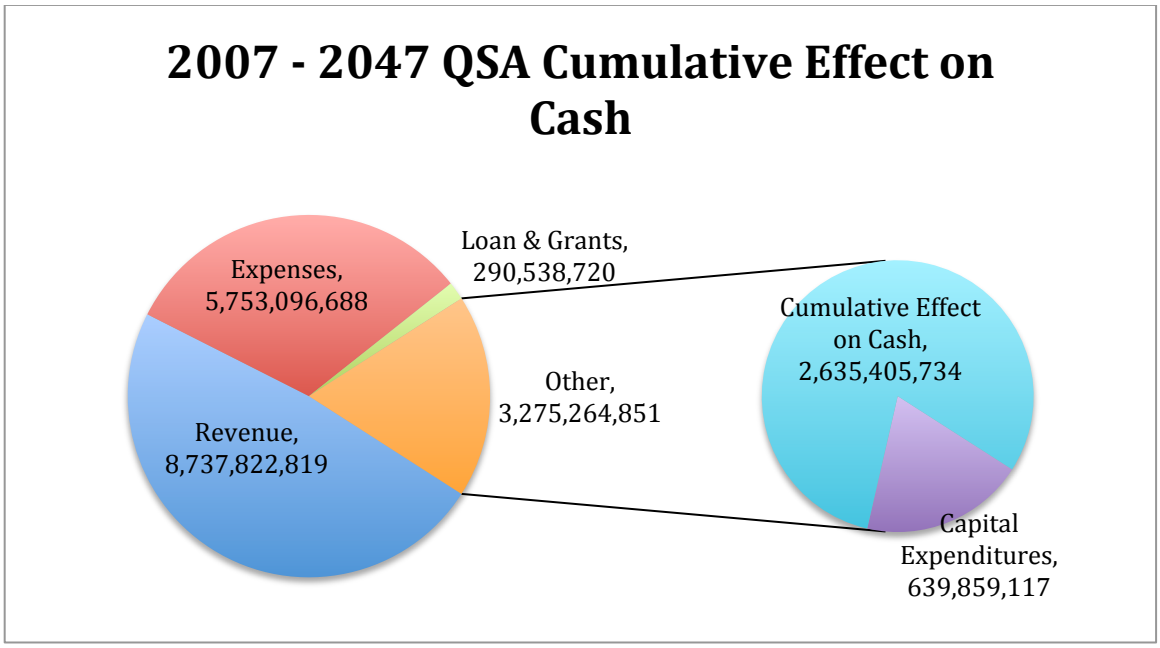


The QSA surplus is $2.9 billion, which is based on $8.7 billion of revenue and $5.7 billion of expenses. The water transfer in this 40-year period is the major component of the QSA with 98% of the revenue and 85% of the expenses. This is shown in the graph below.

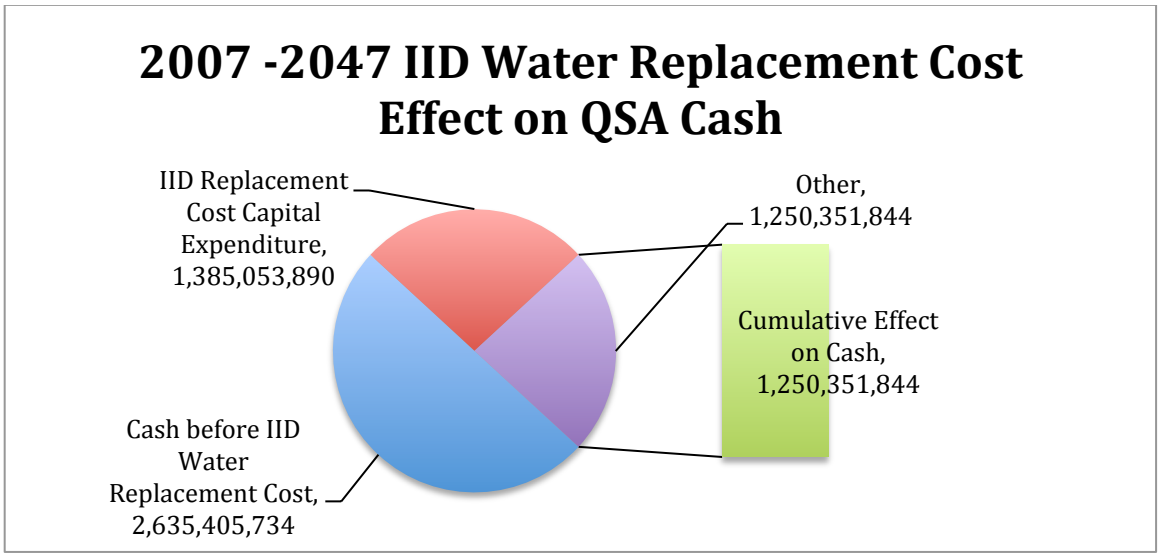


In summary, the QSA cumulative effect on cash is $2.6 billion. This is based on the surplus of $298 billion in the graph above with additional costs for loans and grants of $290 million and capital expenditures of $639 million. This provides a net capital funding expenditure of ($349) million with a cumulative effect on cash of $2.6

billion. This is shown in the graph below. It should be recalled the expenses related to the $2.6 billion have not been analyzed.



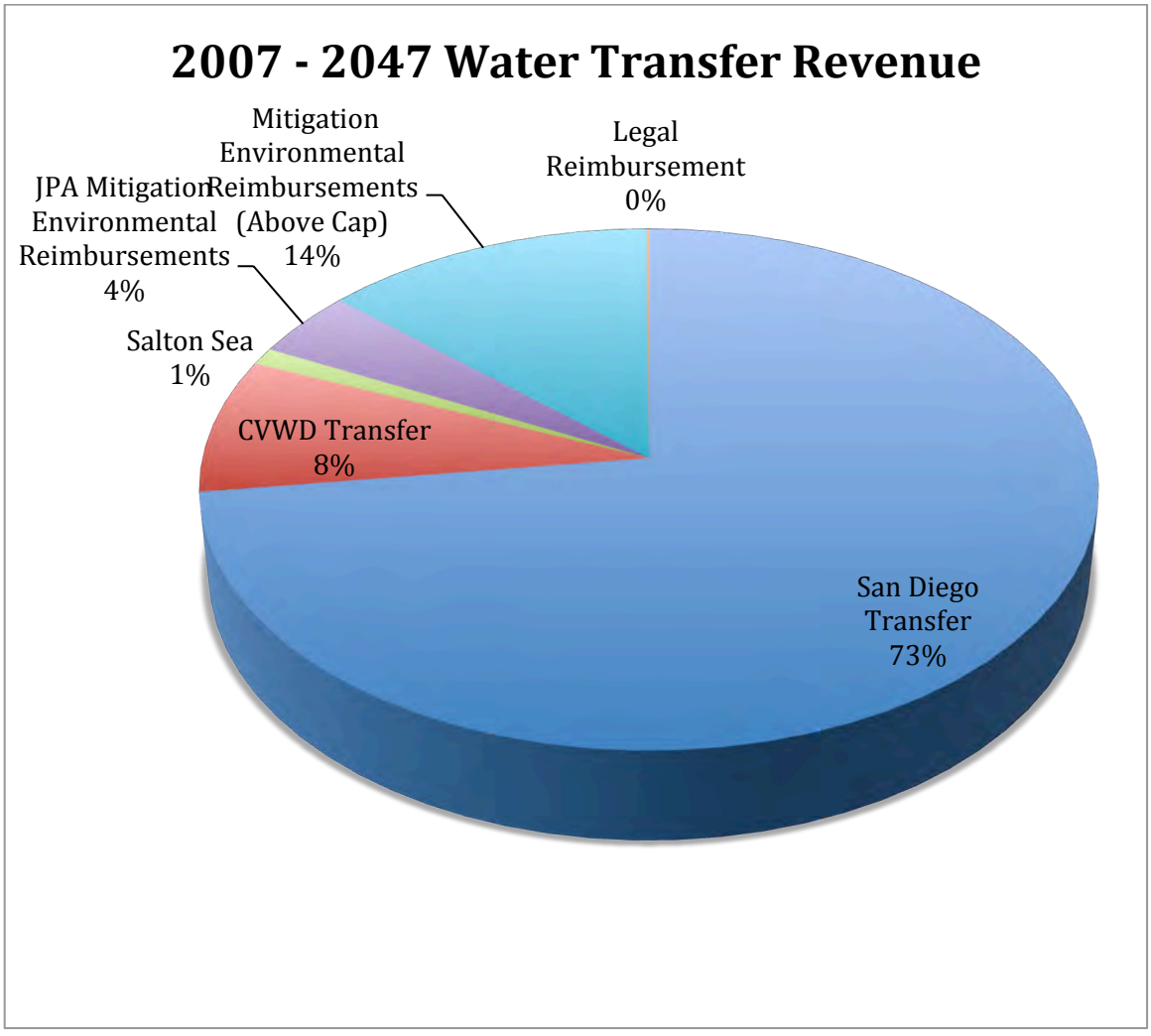
The QSA has additional IID Water Replacement Costs that are reflected in the capital expenditures, which is benefiting the IID water customers. This replacement has no benefit for the QSA operation. The cash impact is a cost of $1.4 billion and the cumulative effect on cash is a surplus of $1.25 billion. This is shown in graph below.



The Water Transfer is the main component of the revenue from the QSA groups, and are analyzed to determine the major components of revenue and expenses. The revenue is a total of $8.6 billion with San Diego Transfer making up $6.2 billion and

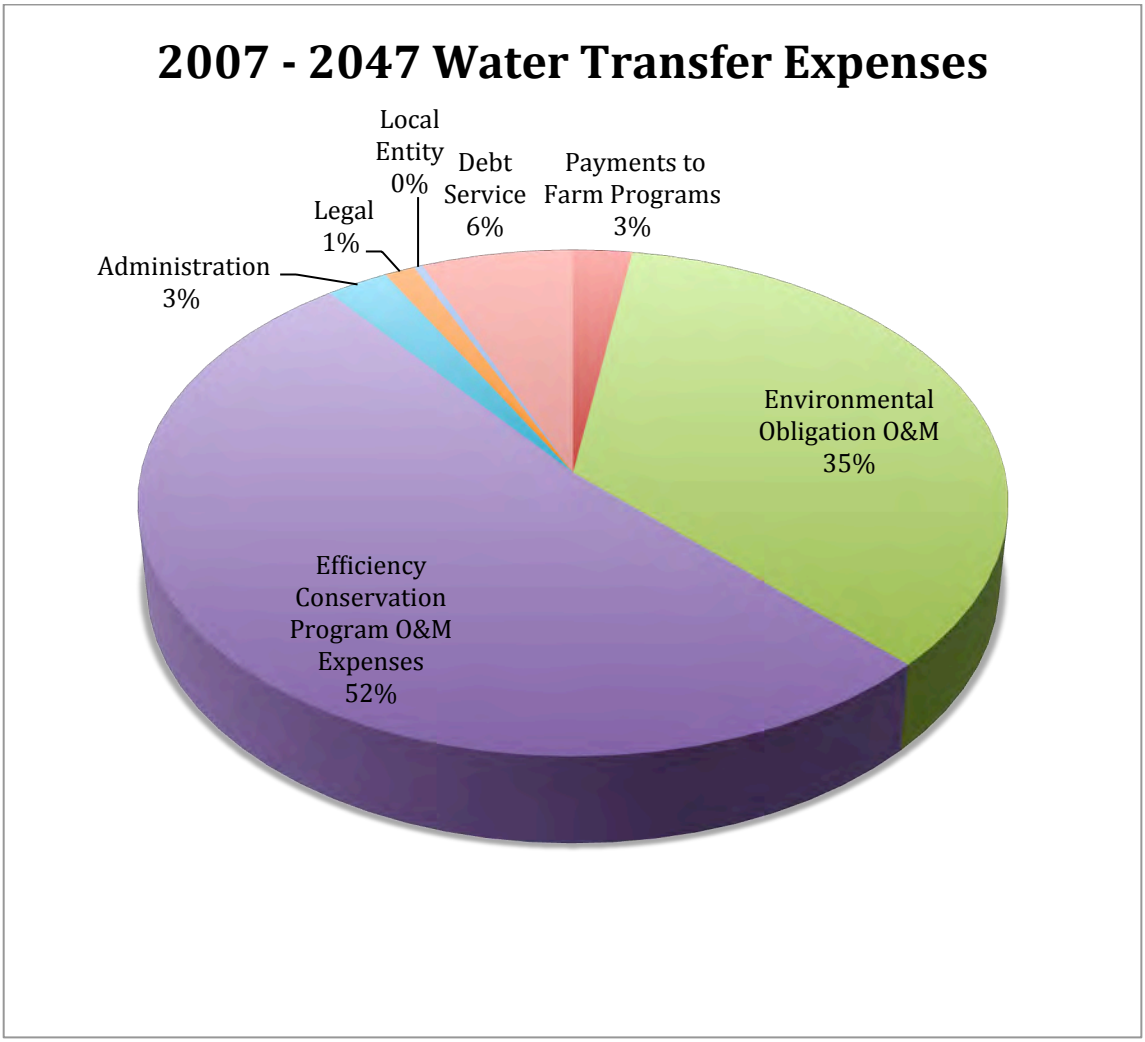
the JPA Mitigation Reimbursement making up $1.5 billion. The expense total is $5.2 million with the Environmental Obligation O&M making up $1.7 billion and Efficiency Conservation Program making up $2.6 billion. The water transfer has a surplus of $3.3 billion after revenue and expenses. The loan and grants of $290 million and capital expenditures of $639 million, this has a net capital funding/expenditure of ($349) million. The cumulative effect on cash is $3 billion. There is an additional cost for the IID water users for capital replacement on their system funded by QSA at a cost of $1.4 billion. This cost has a cumulative surplus effect on cash of $1.6 billion. The spreadsheet showing this data is in exhibit 8.

Strikingly the revenue for the Water Transfer is 73% or $6.2 billion for San Diego Transfer, and only 8% or $718 million for CVWD, and 15% for Salton Sea and JPA Mitigation Reimbursements making up $1.6 billion. This is shown in graph below.

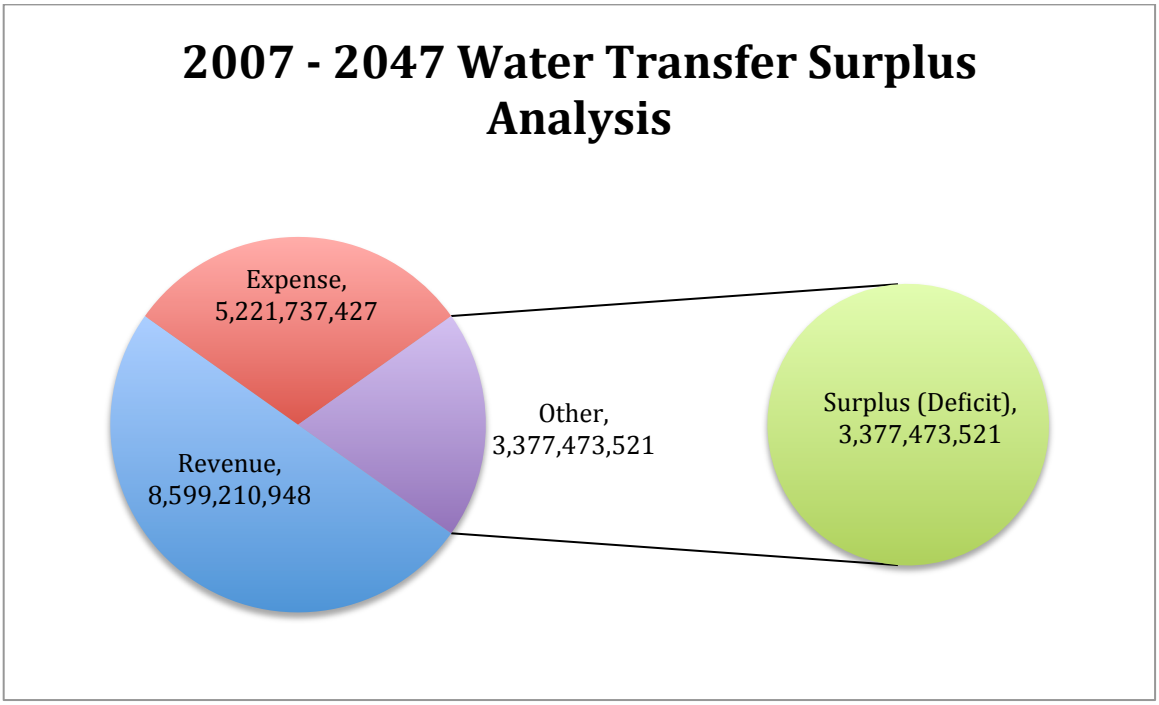


The expenses for Water Transfer is a total of $5.2 billion with 52% of the cost or $$2.6 billion for the Efficiency Conservation Program O&M expense, which included the On-Farm Conservation. The next major expense is the Environmental Obligation

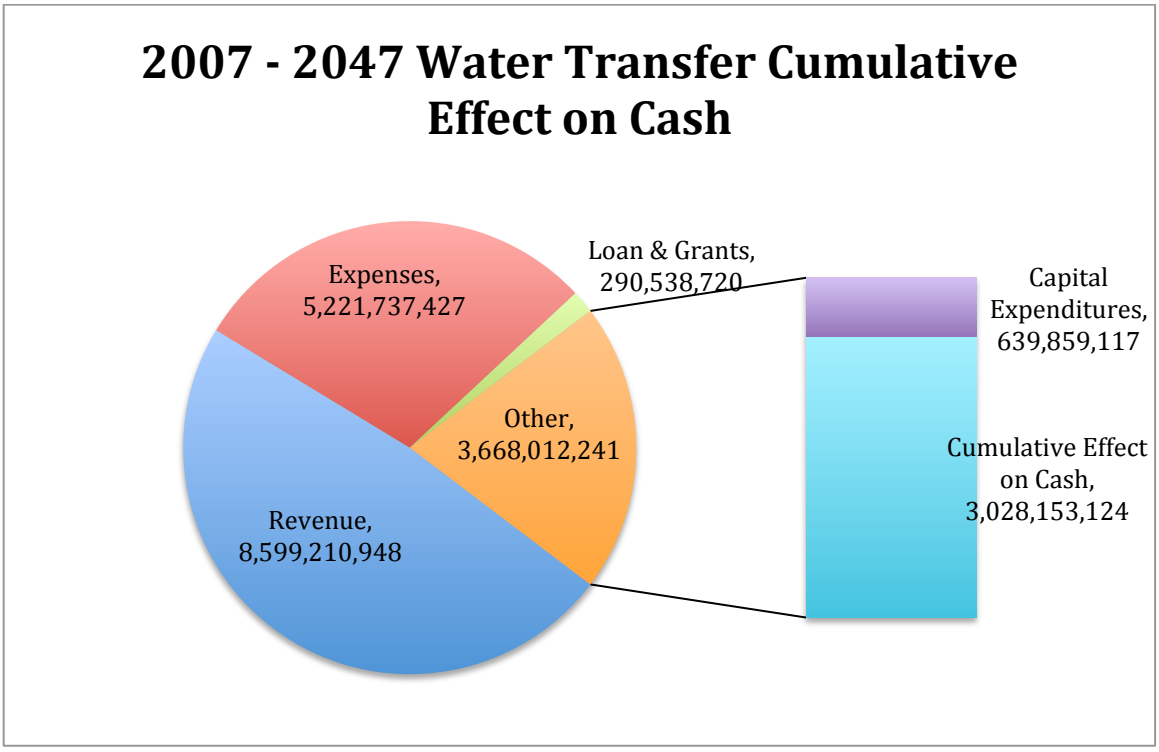
for Operation and Maintenance comprising 35% or $1.7 billion. The remaining 13% or $838 million is the administration, fallowing, internal transfers, and debt service. This is shown in the graph below.



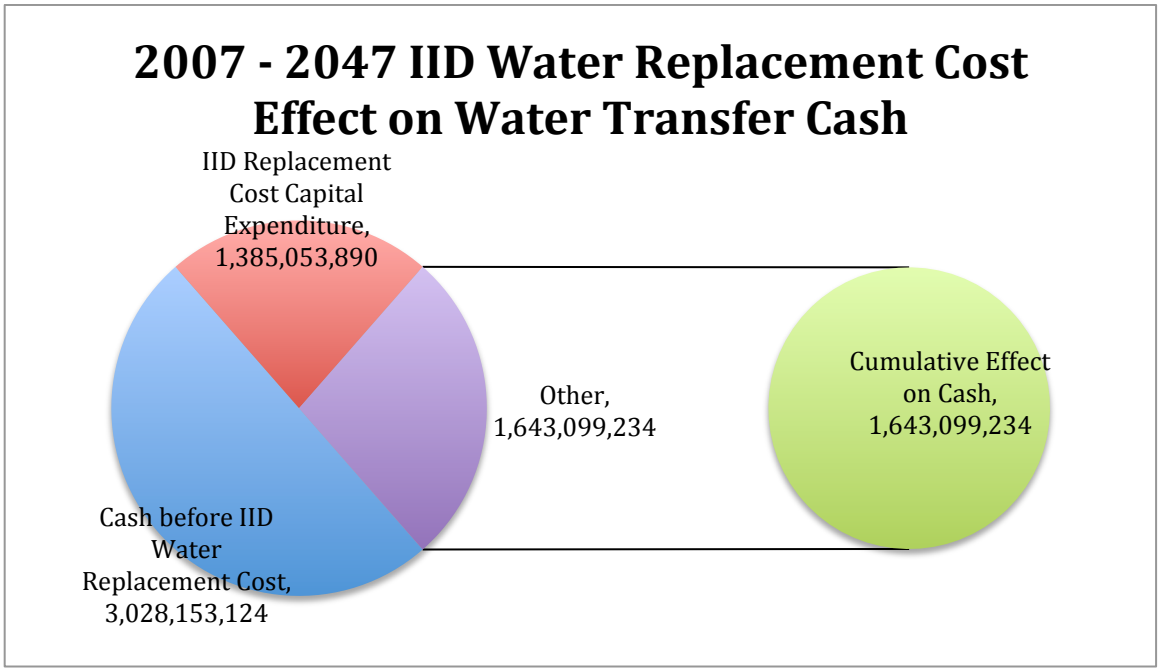
The Water Transfer surplus is therefore $3.4 billion based on revenue of $8.6 billion and expenses of $5.2 billion. The major component of the revenue is the San Diego Transfer as shown in the revenue information above. The CVWD is significantly smaller although the quantity is near to 50% received by San Diego. This is shown in graph on the next page.



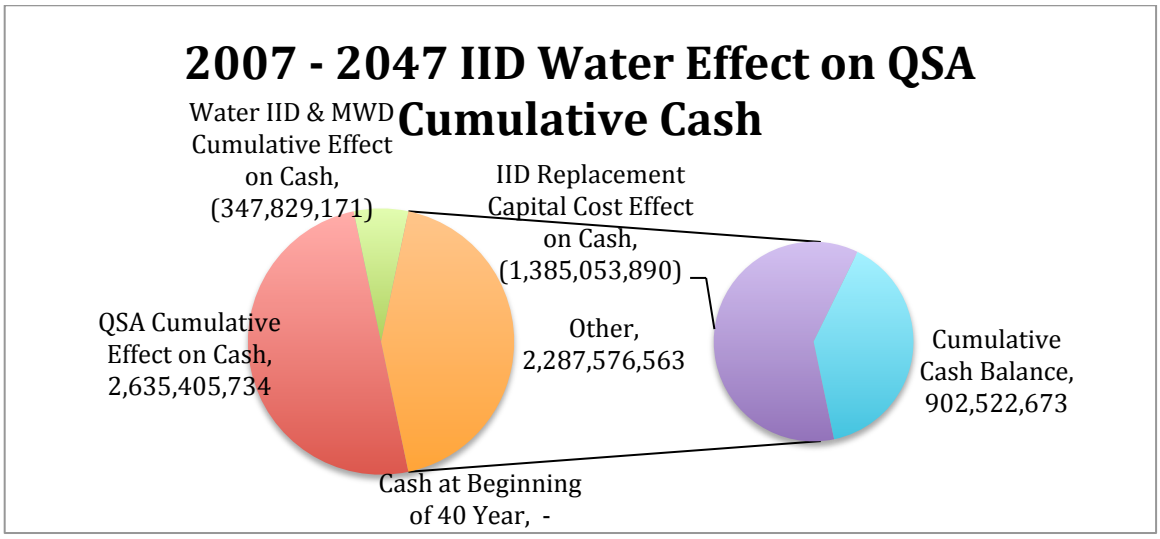
The cumulative effect on cash is $3 billion based from graph above with $3.3 billion surplus from revenue and expenses. The additional source of revenue is the loans and grants of $290 million and capital expenditures of $639 million. This results in a net capital funding/expenditure of ($349) million. This is shown in graph below.



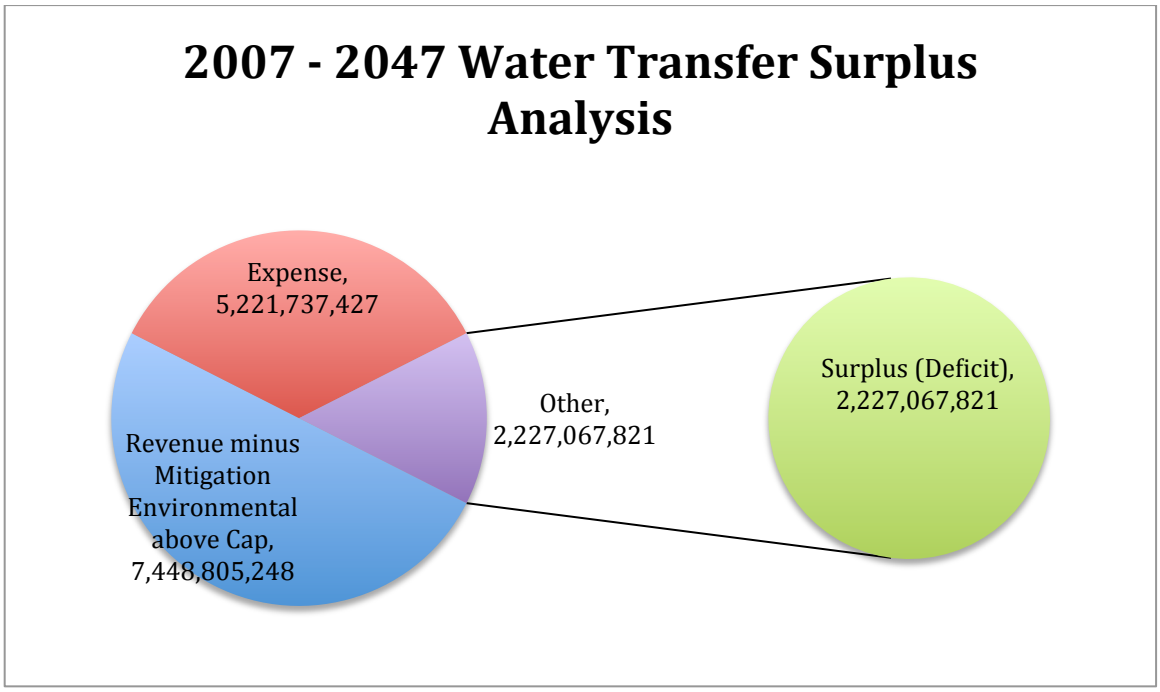
An additional Water Transfer Cost is for IID Water Replacement Cost of $1.4 billion; these are the QSA capital expenditures for the IID Water system. This cost brings the cumulative surplus effect on cash down to $1.64 billion for any unforeseen changes required. This is shown in graph below.



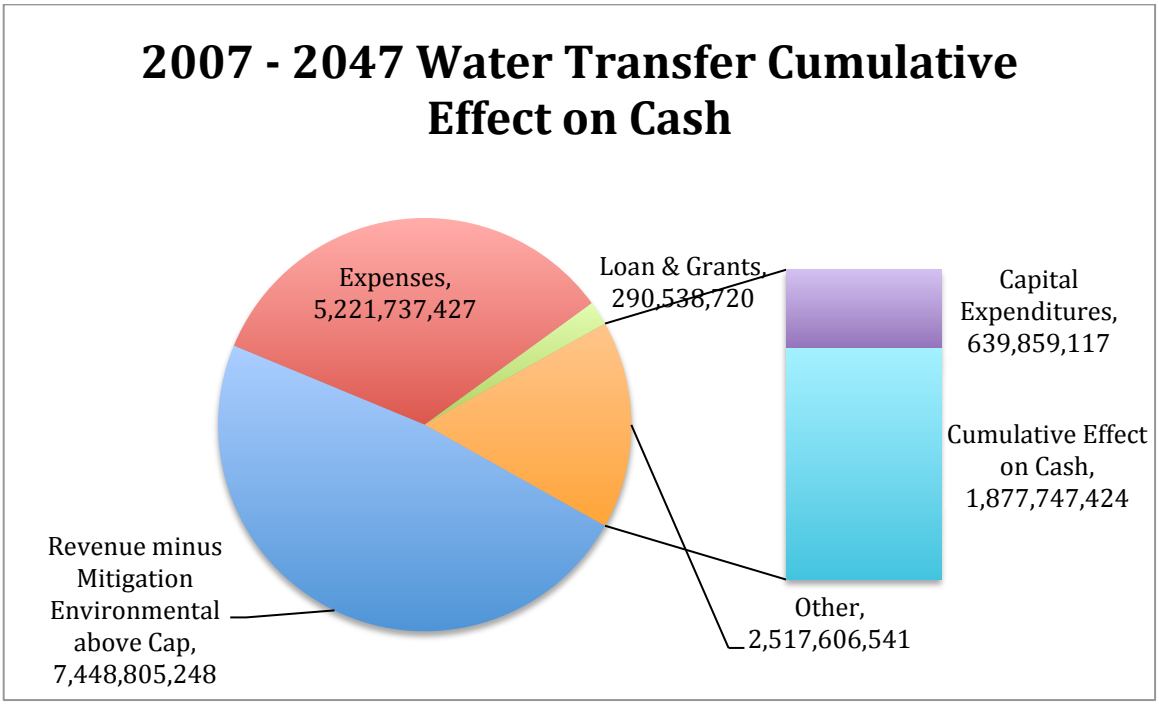
A snapshot of the QSA and IID Water Sales with MWD shows the drain of QSA cash to support IID Water Operations. The 40-year plan for IID Water with MWD cash is a deficit of ($347) million. The QSA capital expense for replacement cost for IID water system is $1.4 billion, which creates a $1.7 billion reduction of cash from QSA. The cumulative cash effect is a surplus of $902 million. This is shown in the graph below.



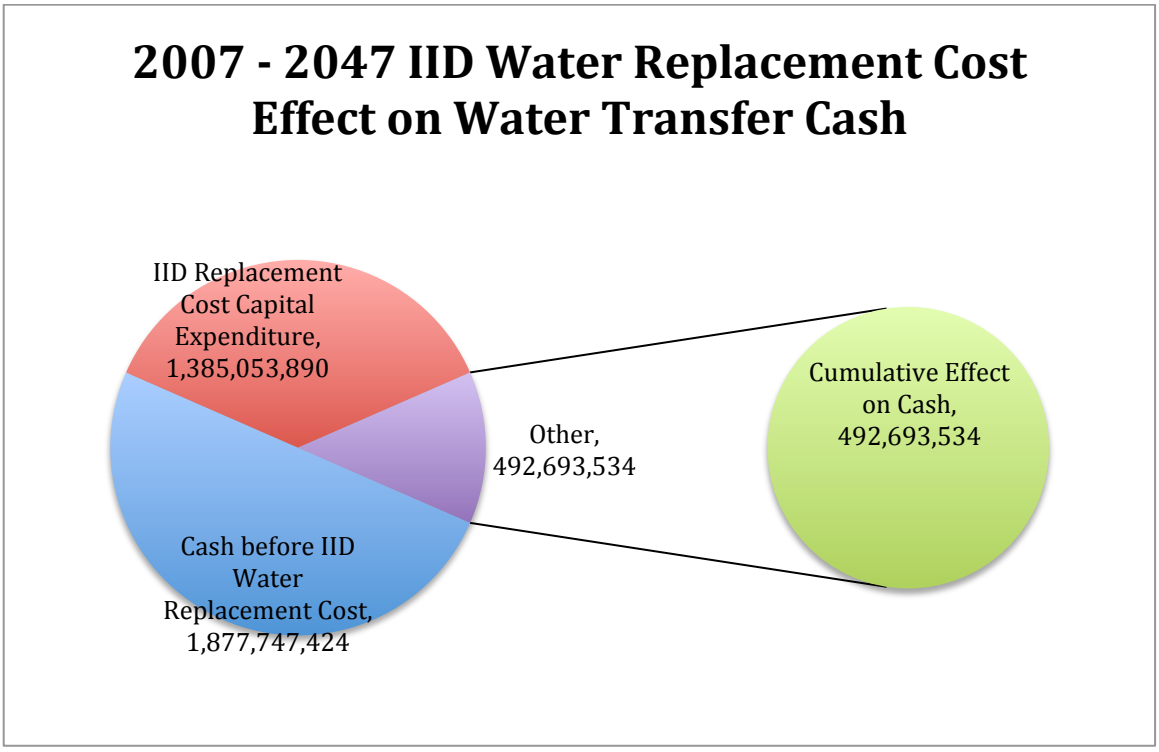
Another impact to the Water Transfer revenue stream is the JPA Environmental Reimbursement Cap. The three (3) partners have a present value cap of $374 million per their funding agreement. The QSA planned on the State of California to be the backstop for any additional funding required on this project,. The legal decision of the QSA case has raised serious questions as the extent of the State of California doing any backstopping. In the absent of this support this creates a $1.15 billion shortfall. The planned JPA Environmental Reimbursement plan projected a $1.5 billion revenue might well not be forthcoming. In making this adjustment, the Water Transfer revenue is $7.4 billion with expenses of $5.2 billion, which reduced the surplus created to $2.2 billion. This is shown in the graph below.



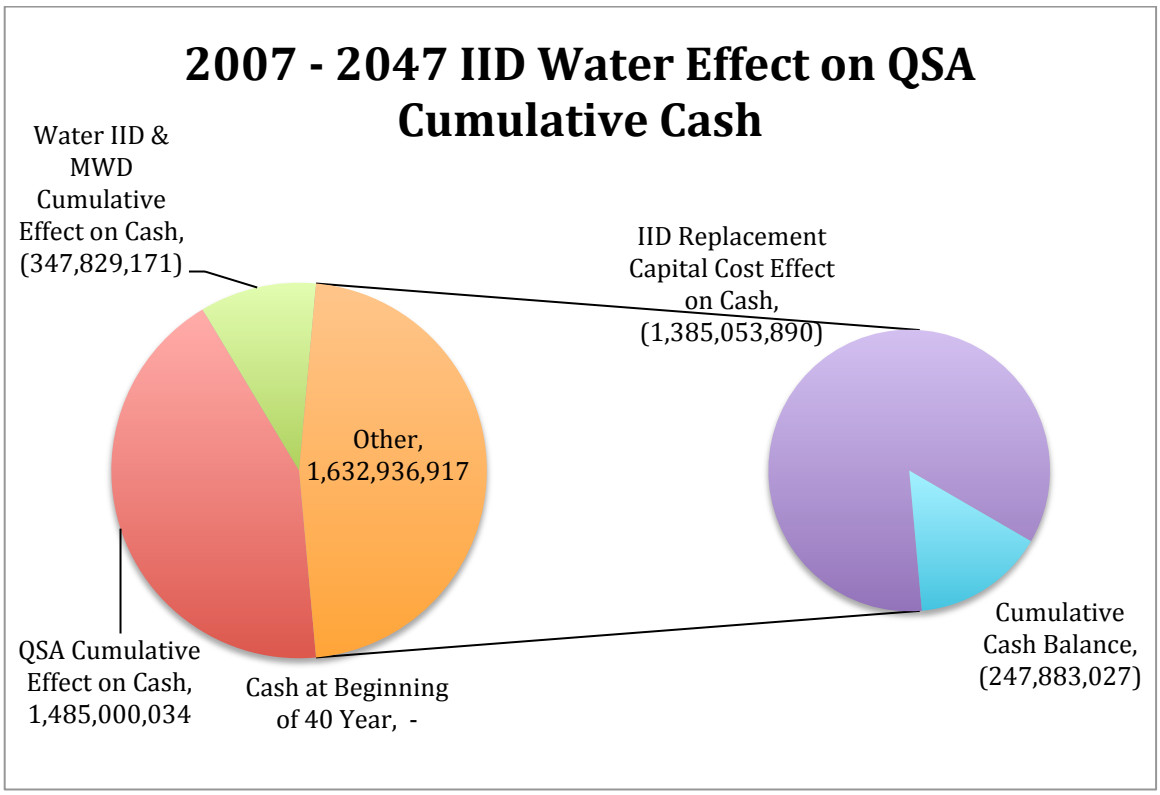
The cumulative effect on cash is $1.8 billion based on the graph above with a surplus of $2.2 billion after revenue and expenses. The additional costs are loans and grants of $290 million and capital expenditures of $639 million. This is shown in the graph on the next page.



The additional IID Water replacement cost is $1.4 billion as reflected in the QSA capital expenses. This brings the cumulative surplus effect on cash to $493 million. This reduction for the Water Transfer surplus is based on the JPA Cap revenue adjustment. This is shown in the table below.



The snapshot of the QSA and IID Water Sales with MWD with the JPA Environmental Reimbursement Cap adjustment converts a surplus cumulative cash effect to a deficit. Absent of other effect QSA would generate a cumulative surplus of $1.5 billion and IID Water Sales with MWD would suffer a deficit of ($347) million. However one must consider the IID Water Replacement Cost of $1.4 billion, which generates a cumulative deficit cash balance of ($247) million. This is shown in graph below.



This snapshot above shows the impacts of any major funding requirements which normally would be expected in a project of this magnitude and complexity. It is clear these can substantial effect the cost ratios of the project. We realize that most projects have minor changes during the execution of the project. The QSA is not a normal project. This table that shows the QSA revenue as $8.7 billion, loans and grants of $290 million. However we conservatively adjusted down the revenue in anticipation of paying the excess over the JPA Environmental Cap. This excess is $1.15 billion. On the cost side it we also show the IID Water Sales with MWD reflecting a deficit based on the IID Replacement Cost in the QSA of $1.7 billion. The water conservation cost accepts the definite plan projections and add 5%, which is very conservative given all the requirements of the conservation goals of this project. The environmental costs include an additional 10% over the planned costs. This part of the project is very complex and costly to perform, once again we

conserative. The final adjustment was the Salton Sea Remediation, which has no cost in the projected budget. However given the proximity to the Salton Sea we assume the IID would make some kind of contribution to this effort. This is only showing 5% of the preferred alternative. This snapshot is reflected in the table with a deficit of ($1.043) billion over the 40-year plan.

IID Water & QSA Analysis of 40 Year Plan Deficit

Revenue	**Cost**
QSA Revenue	8,737,822,819
Loans and Grants	290,538,720
Mitigation Revenue Above JPA Cap (not received from state)	(1,150,405,700)
Revenue Adjusted	**7,877,955,839**
Costs	
Subsidies for Other IID Programs (IID Water deficit and replacement cost in QSA capital expenditures)	1,732,883,061
Water Conservation Costs Projected (anticipated 5% over 40 year plan)	3,554,165,723
Environmental Costs (anticipated 10% over 40 year plan)	1,938,742,966
Salton Sea Remediation Costs (5% of Preferred Alternative)	450,000,000
Other QSA Costs (from 40 year plan)	1,245,542,464
Total Costs	**8,921,334,213**
Surplus (Deficit)	**(1,043,378,374)**

As we conclude this analysis of the QSA financials independence of the IID Water financials, there are items that can be reviewed in the implementation of this project. A 40-year plan is an analysis with assumptions. We have pointed some key items that need to be reviewed to create a financially successful transfer program that works for both the JPA Partners and IID Water. The environmental reimbursement backstop needs to be clarified and understood to make sure the QSA is not in jeopardy at the point the funds run out or unforeseen occurrences take place. There are no specific agreements or methodologies to ensure the revenue required for the environmental mitigation. The second item reviewed is the IID replacement cost generated by the QSA, which only benefits the IID water users. The last item reviewed is the IID Water Sales 40-year plan on a cash basis. Given expenses it may not break even, this is significant because the accounting does not show any impact based on depreciation and amortization costs of operating a utility.

APPENDIX B

SUMMARY OF COMMENTS

I. Overview

The IID solicited comments from members of the public in connection with the release of the Draft Report. Comments were received from five individuals or organizations and were generally supportive of the conclusions and recommendations contained in the Report. While the comments are too voluminous to include in full, a brief summary is set forth below. A full copy of the comments is available for inspection at the IID office.

II. Institutional/Legal

- Comments were received agreeing with the Draft Report that the IID should segregate normal operations costs from QSA transfer-related costs. The comments noted that the IID must be able to live within its revenues from water sales to users to allow it to survive should an unforeseen circumstance arise, such as a failure by the State of California to fund Salton Sea restoration and San Diego's failure to pick up the difference. One comment noted that constructing expensive infrastructure could impair the IID's ability to negotiate with other QSA parties.

- Comment was received from the IID Chief Financial Officer noting that IID accounting forecasts differ from those of the Report and categorizing the differences. The first category comprised non-QSA costs, in particular the $1.7 billion in Water Department subsidies, as the Report acknowledged the accepted practice of IID to subsidize the Water Department with water transfer revenues. Having received no explanation of how the Water Department would otherwise cover these costs--i.e., with a substantial rate increase or otherwise, not addressed in the comment--the Report continued to include these in its analysis. Second, the Report considered $450 million in Salton Sea remediation expenses and $1.150 billion in environmental expenses. The comment indicated that the environmental expenses should not be included because the IID has no legal duty to pay for mitigation. The Report points out that the IID argued in the California Court of Appeals that the cap of $133 million on mitigation expenses was firm and the JPA partners are obligated to pay no further amounts than required by the QSA. Because all the evidence mustered by IID in the Definite Plan Report and other documents reflect that the mitigation expenses could far exceed the cap, and because failure to mitigate as required by state law permits would breach the QSA, and cause injury to the Imperial Valley, the $1.150 billion for mitigation was included. There is no reliable explanation as to how these costs would otherwise get paid. It is true, as argued by the IID that the obligation to mitigate effects on the Salton Sea was one that was anticipated

being shared by the State; however, the simple fact, as stated by IID legal counsel, is that there is essentially no prospect for the State to commit significant funding to the Sea. Rather than presume the IID would refuse to support the Salton Sea, no matter how extensive the environmental consequences to the Imperial Valley, this projection of overall mitigation and remediation costs related to the Sea was assigned to the IID. Finally, the Report and the IID Chief Financial Officer differ in their views as to the potential escalation in costs in relation to the inflationary increase for revenues under the QSA.

- Other commentators suggested that a fundamental flaw in the QSA is that it is a political attempt to leverage the value of a commodity—water. The flaw stems from the fact that the market prices scarce commodities, and when the political forces undervalue a commodity the result is a market swing in the other direction, at which point the discrepancy between the actual value and the forced value diverge to a breaking point. Accordingly, the comment suggests a renegotiation at a new price that would reflect a rational business judgment considering actual potential liabilities to IID, future values of water from alternative sources and a solution fair to both parties.

III. Conservation

- A comment was received incorrectly suggesting that the Draft Report was based in large part on the Definite Plan, and stating that the Draft Report would have been improved had it analyzed previous outside consultant reports in detail. This comment also suggested that the Draft Report should have included a detailed discussion about the IID senior manager's concerns over the expenses incurred in implementing recommendation made in the Definite Report.

- A comment was received observing that although the IID may not be able to bankrupt, it can become insolvent and placed under the control of a receiver as has occurred in other California political subdivisions and noting that scenarios can be envisaged where this could occur.

- Comments were received agreeing with the Draft Report's recommendation that the water conservation should be as simple as possible and with the Draft Report's discussion of the importance of developing in-house expertise and involving the farming community in crafting the On-Farm Conservation Program. Some comments stressed that the WCAB is the best place to work out the details of the program, and that the IID Board must be willing to listen to and consider WCAB recommendations.

- One comment stated that the Draft Report should have examined in detail proposals submitted by residents of the Imperial Valley to deal with water management issues. This comment also claims that the Draft Report "suggests IID should interfere with the individual farmer's creative conservation activities. This is wrong."

- One comment observed that determining a baseline may not be as simple as looking at soil type, crop and season and then comparing it to the water history for a field since 2003, since water usage even on the same soil types can very drastically depending on the amount of tile drainage lines installed in a field and how efficiently detrimental salts have been handled. It was suggested that a more beneficial baseline would be to compare fields of the same soil series and tile systems or with similar electrical conductivities.

- A comment was received that the length of the contract between water users and the IID should be given consideration to make sure water users have enough time to pay for infrastructure with an assured flow of income, and to continue producing water for transfer under the QSA.

- Comments were received noting that farmers practicing silt TMDL best management practices to reduce the amount of silt leaving their fields have inadvertently reduced the amount of drain water leaving their fields, resulting in less water flowing to the Salton Sea. A comment also noted that the recent sewer treatment plant in Mexicali has reduced New River water crossing the border, possibly contributing to reductions in the Sea.

- Comments were received noting that no contracts with users for conservation yet exist, leaving the QSA without underpinnings, and noting that limitations on water diversions will only apply to water users who choose to participate. It was commented that the Definite Plan and System Conservation Plan need to be reopened with the help of IID staff and the WCAB.

- Some comments focused on the infrastructure of the IID, noting that an important part of any conservation program will be measurement of delivery, system spills, and tail water through the delivery cycle, and citing a number of causes which contribute to turbidity in the IID drains and drastic fluctuations in IID canals.

- One comment received questions whether the rate for conserved water transferred to Coachella Valley Water District can be renegotiated.

IV. Environmental

- Comments were received supporting the Draft Report's finding that the QSA as currently designed imposes an underappreciated environmental risk on the IID, the County of Imperial, Imperial Valley and the Salton Sea ecosystem, and further supporting the Report's conclusion that the IID needs to take a proactive posture to readjust the burden of uncertainties in order to make the QSA water transfers sustainable over the long term. A comment suggested that liability must be borne by the beneficiaries of IID's conserved water.

- A comment was received noting that the Draft Report includes or assumes environmental costs that the IID has no contractual obligation to pay, such as $1.15 billion in environmental expenses and $450 million in Salton Sea remediation expenses. It was suggested that the inclusion of these potential costs, as well as Water Department replacement expenses, is responsible for the difference between the IID and the Report's financial forecasts.

- Comments were received supporting the Draft Report's conclusion and recommendation that the IID should acknowledge interests shared with the County of Imperial and the Imperial County Air Pollution Control District (ICAPCD) in addressing the environmental problems affecting the region. It was commented that, without taking specific positions on existing litigation, the Report should recommend that the IID work with the County to arrive at a common position that advocates mitigation responsibilities being met by the water transfer's collective beneficiaries: the United States, California, and especially MWD and SDCWA.

- Comments were received approving the perspective articulated in the Draft Report's Institutional/Legal recommendations that the IID must resist attempts to cite SWRCB Decision 1600 to argue that sustaining the Salton Sea with IID outflows is "wasteful", i.e. neither a reasonable nor a beneficial use of water. It was commented that the IID should support the position that the maintenance of inflow to a terminal saline lake to protect property, environmental and scenic values represents a beneficial use of water. It was suggested that the Draft Report's discussion of Decision 1600 be reviewed to achieve consistent precision in expressing this perspective.

- A comment was received suggesting deletion or qualification of the Draft Report's recommendation that the IID should vigorously defend its position in litigation, insofar as this recommendation seemed qualified by the Report's substantive recommendation to re-examine the IID's litigation position defending the propriety of existing environmental assessments and their failure to assign full mitigation responsibility to MWD and SDCWA.

- A comment was received suggesting that some consultant research not utilized in the preparation of the Draft Report indicated that Salton Sea

restoration costs could be significantly lower than current State pricing would indicate. This comment suggested that the Report should examine in detail proposals submitted by Imperial Valley residents to deal with Salton Sea restoration issues.

- A comment was received that the Draft Report was "mostly reasonable" on environmental issues, but suggesting that it took insufficient notice of the Statewide nature of the environmental benefits sustained by the water being made available for transfer, and thus neglected a stronger rationale for State contributions to cover potential environmental costs.

- A comment suggested that the Draft Report should provide more detail on how the IID should proceed if the State of California fails to provide funds for Salton Sea mitigation, and specifically inquiring about continued IID financial support for pilot mitigation projects in the context of this possibility.

- A comment was received providing additional information on the New River playa flooding project discussed on pages 77-78 of the Draft Report, and pointing to flaws in current environmental reviews of the Species Conservation Habitat (SCH) project's cost projections, power and water requirements, and Salton Sea Authority restoration plans.