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Implementation of the Westside Regional Drainage Plan
as a Way to Improve San Joaquin River Quality
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Mr. Chairman and members of the Subcommittee, my name is Thomas Birmingham, and I am General Manager/General Counsel of the Westlands Water District. I appreciate the opportunity to testify today on "*Implementation of the Westside Regional Drainage Plan as a Way to Improve San Joaquin Water Quality.*"

1. Westlands Water District and the *Westside Regional Drainage Plan*

Westlands Water District (Westlands) is a public agency of the State of California, which was formed by an act of the State Legislature for the purpose of supplying irrigation water to land on the westside of the San Joaquin Valley. The District's principal office is in Fresno, California, and within its boundaries are more than 600,000 acres of land in Fresno and Kings counties. The lands within Westlands are among the most productive agricultural lands in the world. Fruits and vegetables produced in Westlands grace dining tables across the United States. That tremendous productivity occurs though a combination of the area's climate and soil, the skill and diligence of area farmers, and water. Westlands provides most of the water used to irrigate these lands, water it receives under a contract with the federal Bureau of Reclamation (Reclamation). Because of its role in providing essential irrigation water, Reclamation rightly deserves credit for helping to create what is now a highly valuable agricultural resource. In this respect, federal reclamation policy has been a notable success.

For some lands within Westlands, as with lands elsewhere in the San Joaquin Valley, and across the United States, something more is required to keep the lands productive over the long term. Some lands require drainage. In the United States alone, 11 million of 44 million irrigated acres require drainage to remain productive. But disposing of drainage water can create its own set of concerns and issues, such as impacts to water quality, as the topic of this hearing suggests. As a result of such concerns today there is no drainage of lands in Westlands, with the result that some lands in Westlands can no longer support irrigated crops. Without a solution, still more lands will be rendered infertile. With respect to drainage for these lands, federal reclamation policy has been a notable failure.

Westlands is one of the proponents of the *Westside Regional Drainage Plan* ("Plan"). The Plan is an effort by several local agencies to jumpstart drainage service for those areas north of Westlands that require it, by building upon existing drainage management projects and proven technologies that can be implemented within a short time frame. A goal of that program is to eliminate drainage discharges to the San Joaquin River by 2009. Westlands' perspective of the Plan will be discussed later in my testimony.

Reclamation recently released a draft environmental impact statement outlining alternatives for providing federal drainage service. One of those alternatives, the so-called "In-Valley/Water Needs Land Retirement Alternative," adopts elements of the Plan, albeit with federal implementation. In my testimony, I would like to provide the Subcommittee with Westlands' perspective on federal implementation of drainage service.

2. The Unfortunate History of Federal Drainage Service for the San Luis Unit

To understand the drainage issue today requires an understanding of the events that have brought us to this point. I am confident that the members of Congress who approved the construction of the San Luis Unit of the Central Valley Project in 1960 would have been very surprised to learn that this Subcommittee was hearing testimony forty-five years later on proposals to provide drainage to the San Luis Unit. The 1960 legislation was supposed to have taken care of drainage.

It was always understood that drainage would be needed. Studies underlying the proposed project confirmed the need for drainage. Lands in areas adjacent to the San Luis Unit were already experiencing drainage problems in the 1950s, and those landowners expressed concerns that providing irrigation water to the San Luis Unit lands without drainage could exacerbate their drainage problem. Indeed, California's earliest water plans recognized that if water were exported from the Delta and used in the Central Valley a master drain would be needed. Accordingly, in section 1(a) on the San Luis Act, Congress required the Secretary of the Interior to provide for a drain to the Delta in the event that the State of California did not provide a drainage system. (Act of June 3, 1960, Public Law 86-488, 74 Stat. 156.) In 1961, California informed the Secretary that it would not provide a master drain. On January 9, 1962, the Secretary advised the Congress that he would make provision for the drain called for by the San Luis Act. Later, Reclamation entered contracts with Westlands (and other San Luis Unit Contractors) under which it promised to provide drainage to lands within Westlands.

There is a long trail of litigation over the Secretary's performance of that statutory and contractual duty.

That trail begins in 1963, when a group of districts known as the Exchange Contractors, which serve irrigation water to lands adjacent to the San Luis Unit, filed suit to compel the Secretary to provide for the drain before commencing construction of the San Luis Unit. The district court denied an injunction, and dismissed the action, based on assurances by the United States that it would provide drainage to the San Luis Unit.

Construction of the drain began in 1968, but in 1975 the Secretary halted construction with only 40% of the drain completed, based on concerns expressed by various groups about the effects of discharge. Without a terminus in the Delta, drainage water generated from the limited area then being drained was stored on an interim basis at Kesterson Reservoir. The drainage water contained a naturally occurring mineral, selenium, that was leached from soils. Selenium is an essential part of the human and animal diet, but can cause adverse effects to human health, animal life and crops at sufficiently high concentrations. Selenium was identified as the cause of deformities and mortality in waterfowl embryos at Kesterson Reservoir, and in 1985 the Secretary announced that Kesterson and the drain would be closed. But the Secretary had no alternative plan for providing drainage.

In 1988 and 1991, various landowners and water districts, including the Exchange Contactors, brought multiple actions against the Secretary to compel the Secretary to provide the drainage service called for by the San Luis Act. (*See Sumner Peck Ranch, Inc. v. Bureau of Reclamation*, 823 F.Supp. 715 (E.D. Cal. 1993).) After the district court ruled that the San Luis Act imposed a mandatory duty to provide drainage, the government argued that changes in law since the adoption of the San Luis Act, and in environmental knowledge, had made compliance impossible. After a three-week trial, the district court rejected the government's contentions. The government then appealed to the Ninth Circuit of Appeals. In the meantime, nothing was being done to provide federal drainage service to Westlands.

In 2000, forty years after passage of the San Luis Act, and fifteen years after the Secretary essentially quit on drainage, the Ninth Circuit weighed in on the drainage issue. (*Firebaugh Canal Co. v. United States*, 203 F.3d 568 (9th Cir. 2000).) The Ninth Circuit held that the Secretary has a mandatory duty to provide drainage service to the lands of the San Luis Unit, although the Secretary has discretion whether to provide drainage service by a drain to the Delta or by some other means. The Ninth Circuit said:

We agree with the district court that the Department of Interior must act to provide drainage service. The Bureau of Reclamation has studied the problem for over two decades. In the interim, lands within Westlands are subject to irreparable injury caused by agency action unlawfully withheld. Now the time has come for the Department of Interior and the Bureau of Reclamation to bring the past two decades of studies, and the 50 million dollars expended pursuing an "in valley" drainage solution, to bear in meeting its duty to provide drainage under the San Luis Act.

203 F.3d at 578.

In the five years since the Ninth Circuit's decision, Reclamation has been reviewing various options for providing drainage service, culminating most recently in the San Luis Unit Drainage Feature Re-evaluation Draft Environmental Impact Statement (DEIS) now available for public comment. Under the schedule outlined in that document, Reclamation will make a decision concerning how to provide drainage in July of 2006, and assuming no litigation is brought on that solution, under the favored alternatives construction could commence sometime in 2008, with service available in approximately 2012. In the meantime, the United States has settled litigation brought by individual landowners regarding some 37,000 acres within Westlands damaged by a lack of drainage. However, the claims of landowners and Westlands with respect to other lands damaged by the lack of drainage remain unresolved, and no drainage service is yet being provided.

I do not recount this history for the purpose of criticizing Reclamation. What is in the past cannot now be undone. We will solve the drainage problem by looking forward, to

what solutions are possible now. But we all would be remiss if in deciding upon the best course of action now we were to forget that to date Reclamation has had great difficulty in fulfilling its drainage obligation.

3. Westlands' Concerns Regarding Federal Drainage Service as Outlined in the Draft EIS

The Bureau of Reclamation's current thinking concerning approaches to federal drainage service is described in the DEIS now being circulated for public comment. Westlands has been actively engaged in providing information to Reclamation for the DEIS and has participated in Reclamation workshops, public meetings, plan and document review, and interaction with staff. To this end, Westlands is committed to insuring that as a drainage alternative is selected it will be a solution that can be implemented, is permanent, is cost effective, and is environmentally sound. Absent these conditions being met, drainage service will not be viable.

That being said, Westlands still has concerns with these proposals, which are informed by the history of the drainage issue I have just related. These concerns fall into three categories: (a) the length of time before drainage service will be provided; (b) the substantial projected costs of providing drainage service; and (c) the uncertainty of the technology relied upon to remove selenium from discharge water.

(a) Timing

We are very concerned about when the federal government would be able to provide drainage service. Under the timeframes outlined in the draft EIS, the earliest date for providing drainage service would be 2009. Alternatives that do not involve land retirement have longer projected timelines, extending to 2014. Note too that this would not be completion of drainage service for all lands needing drainage; rather, these are dates for providing approximately half the needed drainage service. Given the history of the drainage issue, we expect that these estimates are likely optimistic. Given the track record here, and the issues surrounding drainage, we have serious doubts whether the federal government is capable of providing drainage within the timeframes desperately needed. Additionally, it is possible that some interests may attempt to obstruct this process legally which will only result in the process being delayed further.

(b) Costs

Table ES-9 of the DEIS provides a summary of the federal costs of the various alternatives identified to date [Note that the costs in the Table exclude the local costs being contributed through improved irrigation efficiencies and drain water recycling]. The range of alternatives is \$562 Million for In-Valley treatment to \$857 Million for the In-Valley/Drainage Impaired Area. The alternative which makes the most sense from an engineering, scientific, environmental, and cost perspective is the ocean disposal alternative, however, there are substantial questions surrounding that the political viability of this alternative.

As I will discuss later, the DEIS alternative that is closest to the Westside Regional Drainage Plan is the In-Valley/Water Needs at a cost of \$773 Million, \$46.5 Million annually. This cost exceeds Reclamation's current spending authority, and Congressional action and funding would be needed to fund federal implementation of this alternative.

(c) Uncertainty

An important feature of each of the In-Valley and Delta discharge alternatives analyzed by Reclamation is the use of selenium biotreatment in order to minimize the discharge of selenium to evaporation ponds or the Delta. The ocean disposal alternative does not include selenium biotreatment. To date, Reclamation has contracted with Applied Biosciences, Inc. to install and test small scale pilot treatment facilities both in Westlands and Panoche Water Districts. While this process may work on wastewater from mines and/or at low flow rates, the treatment flow is insignificant and it is questionable if the process can be "scaled up" to meet the flow and volume treatment levels required for drain water. Additionally, since this is a patent system, the cost could fluctuate significantly based on how Applied Biosciences chooses to market the treatment. In the DEIS, Reclamation fails to identify contingencies that will be needed if the treatment process does not work as anticipated and how the cost of treatment will be affected. Since most of the alternatives utilize selenium biotreatment, it is possible that the costs could increase significantly and the time needed to complete drainage service could be extended if the system does not function as expected.

4. Local Alternatives and Complements to Federal Drainage Service

Westlands endorses the Westside Regional Drainage Plan (Plan), developed jointly by the San Joaquin River Exchange Contractors Water Authority and San Luis Unit Contractors, including Westlands. The purpose of the Plan is to identify scientifically sound projects proven to be effective, develop an aggressive implementation plan utilizing projects that are environmentally sound, and curtail discharges to the San Joaquin River in accordance with impending regulatory constraints. The Plan incorporates proven technologies and drainage strategies that have been developed over time and that can be implemented in the near future.

The Plan includes some of the same drainage components found in the DEIS alternatives, such as drainage reduction through the use of highly efficient irrigation systems, drainage collection, and drainage reuse which ultimately reduces the volume of drain water requiring treatment. However, the Plan varies from the DEIS in that it provides for different drainage solutions by sub-region. Let me explain further. Currently, the DEIS has developed alternatives that apply to all drainage sub-areas and has not developed alternatives that apply to each sub-region. However, local districts and entities within each sub-area have specific needs and resources. Each sub-area must allow for implementation of the most efficient and effective specific drainage management while integrating these practices into one comprehensive program. Drainage cannot be effectively managed without equitably addressing each sub-area.

As an example, the DEIS has identified In-Valley, Delta, and ocean disposal alternatives that would provide the same type and level of drainage service to lands across the drainage service area. However, the DEIS does not address the specific needs of drainage service by sub-areas which may have different drainage needs and requirement based on soil type, drain water quality, topography, etc. which may result in the level of drainage service being over or underestimated. Reclamation has attempted to identify the differing level of drainage need by sub-area; however, until the project is actually designed and engineered, it is difficult to determine if the level of drainage service being identified will be sufficient.

The DEIS does include an In-Valley/Water Needs drainage alternative, which is similar to the Plan in that it is bifurcated by sub-region. Under both proposals, drainage service for the Northerly Area consists of “In-Valley” treatment, and drainage service within Westlands sub-regions consists of Land Retirement (up to 194,000 acres) with residual In-Valley treatment for remaining lands not retired. A key difference is that the In-Valley/Water Needs alternative relies upon selenium biotreatment to remove/digest selenium, so that the treated water can then be discharged to evaporation ponds. While this process has worked in the laboratory environment and on very small pilot projects, some questions remain if the process and treatment can be scaled up to meet the needs of the Northerly Area and the non-retired sub-regions within Westlands.

The San Joaquin River Exchange Contractors Water Authority and the San Luis Unit Contractors have developed this Plan which includes adaptive management and drainage projects that can be implemented immediately. Each sub area will implement a different suite of management practices that will be coordinated to alleviate drainage impacts throughout the region. By implementing management practices in the most effective areas, past, present and future drainage impacts will be mitigated. As this coordinated drainage program is implemented, stakeholders will evaluate the long-term sustainability of the complete solution.

5. Implementation of the Plan as a Way of Improving San Joaquin River Water Quality

The Bay-Delta is located where California’s two major river systems, the Sacramento and San Joaquin rivers, converge to flow westward through San Francisco Bay. The watersheds of these rivers are the source of water supplies for much of the state. The water is used for municipal, industrial, agricultural, and environmental purposes. Indeed, water diverted from the Delta by the Central Valley Project and the State Water Project is used to irrigate nearly two million acres of farm land and to meet the needs of more than 23 million people from the San Francisco Bay area to southern California. The water ways of the Delta and its tributaries are also used by fish and wildlife and have other public trust values, including recreation. Some of the fish that reside in the Delta or migrate through it are protected by the Endangered Species Act. Additionally, migratory birds and other animals use the estuary for food and habitat.

A major environmental issue now confronting the State of California is water quality in the Bay-Delta and the San Joaquin River. Water quality in the River is degraded as a

result of municipal, industrial, and agricultural discharges into the River, including drainage discharges from a portion of the San Luis Unit and the Exchange Contractors. In addition, diversions from the River and each of its major tributaries have significantly depleted flow that otherwise would dilute concentrations of pollutants in the River. Poor quality water from the San Joaquin River flows into the Delta, and may impair nearly every beneficial use of Delta water, including municipal, industrial, agricultural, and fish and wildlife uses.

To protect beneficial uses of Delta water the California State Water Resources Control Board (“SWRCB”) established water quality and flow objectives that are measured at various points in the Delta. Among these is a salinity objective measured at Vernalis, a small community along the San Joaquin River at a point near where it enters the Delta. Responsibility for meeting this objective has been placed by the SWRCB on Reclamation, which has historically released water from New Melones Reservoir, a Central Valley Project reservoir on the Stanislaus River, to meet the standard. However, because of limited water availability and competing needs for water for fish and wildlife uses in the Stanislaus River, Reclamation has not always been able to meet the Vernalis objective. As a result of Reclamation’s inability to meet the Vernalis salinity objective and other objectives for which Reclamation has responsibility, on May 3, 2005 the SWRCB issued a cease and desist order which requires that Reclamation develop a plan and implement actions to ensure compliance by January 1, 2009.

The San Joaquin River Water Quality Group is a technical working group comprised of representatives from Reclamation, the California Department of Water Resources, the California Regional Water Quality Control Board Central Valley Region, Central Valley Project contractors, State Water Project contractors, agencies that operate water projects on tributaries to the San Joaquin River, and in-Delta water users. The Group has been exploring mechanisms to achieve water quality objectives established by the SWRCB, including the Vernalis salinity objective. Modeling analyses conducted by the Group demonstrates that the elimination of drainage discharges from the area served by the Westside Regional Drainage Plan will, without any other action, result in compliance with the salinity objective at Vernalis. Indeed, implementation of Plan elements, which was initiated in 1994, has reduced discharges of selenium and other salts by more than 50% and has dramatically enhanced Reclamation’s ability to meet the Vernalis salinity objective.

Achieving compliance with the Vernalis salinity objective through implementation of the Westside Regional Drainage Plan will have broad ranging benefits. It will eliminate the need for Reclamation to release water from storage in New Melones Reservoir to meet the standard. Water so conserved will be available for other beneficial uses, including meeting the needs of New Melones water service contractors or meeting flow objectives for fish and wildlife enhancement. In-Delta agricultural water users will benefit from improved water quality, and municipal agencies that rely on the Delta as a source for drinking water will have greater supply reliability and will benefit through reduced treatment costs. Because the Delta is the source of drinking water for regions of the state from the San Francisco Bay area to southern California, implementation of the Westside

Regional Drainage Plan will have statewide benefits, and for this reason agencies like the Metropolitan Water District of Southern California are supporters of the Plan.

Like Metropolitan, Westlands Water District enthusiastically support implementation of the Westside Regional Drainage Plan as the appropriate tool to provide drainage service to that area that currently drains to the San Joaquin River and as an immediate tool to improve water quality in the San Joaquin River, with concomitant regional and statewide benefits.

I would be happy to answer any questions the Members have.