

# MEETING OF THE CALIFORNIA STATE BOARD OF FOOD AND AGRICULTURE

(ALL MEETINGS OPEN TO THE GENERAL PUBLIC)

Location: Scout Island Education Center  
7695 Van Ness  
Fresno, CA 93711

Contact: Helen Lopez  
Office: (916) 675-3231

## MEETING MINUTES FOR FEBRUARY 28, 2007

Item  
No.

### (1) CALL TO ORDER

- (a) The meeting was called to order Wednesday, February 28, at approximately 9:00 a.m. Al Montna, President of the State Board of Food and Agriculture presiding.
- (b) Welcoming remarks provided by Al Montna.
- (c) Pledge of Allegiance.

### (2) ROLL CALL

Roll call taken by Helen Lopez, Executive Director. A quorum was present.

#### **Present:**

|                     |                |                |
|---------------------|----------------|----------------|
| Wayne Bidlack       | Drue Brown     | Bill Moncovich |
| Ann Bacchetti-Silva | Tom Deardorff  | Al Montna      |
| Ashley Boren        | Craig McNamara | Adan Ortega    |
| Don Bransford       | Marvin Meyers  | Karen Ross     |

#### **Absent:**

|                    |           |
|--------------------|-----------|
| Luawanna Hallstrom | Reg Gomes |
|--------------------|-----------|

### (3) APPROVAL OF MINUTES – January 16, 2007

**MOTION: Board Member Drue Brown moved to approve the minutes of the January 16, 2007 meeting. The motion was seconded by Board Member Adan Ortega and a unanimous vote carried the motion.**

### (4) OPENING REMARKS AND INTRODUCTION

President Al Montna expressed Secretary Kawamura's regrets for not attending due to hearings conducted in Los Angeles by the Agricultural Committee.

Board Member Marvin Meyers, on behalf of the Board, thanked everyone for coming and thanked the speakers for agreeing to speak before the Board on, “California, are we ready for the next drought?” He indicated that we cannot wait for a drought to take place. Many growers have experienced a drought and with the current concerns for flood control and levees, drought has been set aside. The speakers for today have great ideas on how they are dealing and will deal with drought. Mr. Meyers also thanked Dr. Gary Sells, Director of the Scout Island Education Center and the Fresno County School District for hosting the meeting.

Dr. Gary Sells welcomed the Board and distinguished guests to Scout Island Education Center that is owned and operated by the Fresno County Office of Education. Dr. Sells also thanked the members of the Board who participated in the tour. Dr. Sells introduced members of the Fresno County Office of Education: Superintendent, Larry L. Powell and Senior Director of Support Services, Jan Biggs. Dr. Sells thanked Jesse Bloodworth, Elizabeth Torres, Jim Goodwin, and Sharon Starcher for all their assistance in coordinating and facilitating the meeting. He recognized Marvin Meyers for his friendship and great support of Scout Island.

President Al Montna recognized and introduced Jean Barlow from Supervisor Phil Larson’s office and Vince Ru for Jim Costa’s office.

**(5) OTHER BUSINESS**

**Action item,** Helen Lopez to develop proclamations for Reg Gomes, Charlie Crabb, Niaz Mohamed, and Charlie Hoppin and board will make recommendations.

Ag Day is March 20<sup>th</sup>, board members to coordinate participation with Helen.

**(6) PRESENTATIONS BY GUEST SPEAKERS**

***Secretary Mike Chrisman, The Resources Agency, and also speaking for Lester Snow, CA Dept of Water Resources - State’s Perspective on the next Drought and Preparedness***

Secretary Chrisman thanked the Board for the invitation to present the work of the Resources Agency and the Department of Water Resources (DWR). The partnership with the California Department of Food & Agriculture (CDFA) runs deep. Secretary Chrisman and Secretary Kawamura serve together on many cabinet committees dealing with issues concerning the state’s natural resources and agriculture. Among these were a series of Farm Bill workshops and we will continue this effort as Congress looks at the new farm bill. Another issue, Secretary Chrisman and Secretary Kawamura are working with Nevada and Arizona to deal with the critical problem of invasive species.

Secretary Chrisman apologized for Lester Snow who was not able to attend due to flood hearings. Secretary Chrisman indicated that according to a recent DWR report, as of February 1<sup>st</sup>, statewide precipitation is at 55 percent and snow pack is at 40 percent of average. The bright spot is reservoir storage is at 180 percent of average. Obviously, the March 1 numbers will be higher. If we get an average amount of precipitation for the rest of the season, we should be at 80 percent of normal for the year. Another advantage is our above ground water banking supplies. Over the long term, we have completed an update of the California Water Plan. This plan looked at three essential scenarios in terms of expected supply to the year 2030. Two out of the three scenarios show that we

will use about the same amount of water as today. Population growth will be offset by the increases in efficiency and use patterns. The third scenario shows an increase of about 3 or 4 million acre feet annually. We also know our overdrafts are on a regular basis average around 2 million acre feet a year. Based on these scenarios, we will be facing a water shortage by the year 2030. What is needed is to work on a long term water supply liability. In the water plan, we identify two dozen water management strategies that can produce demand: i.e. increase supply, improved quality, and improved resource stewardship.

The Cal Fed program and various Bond measures have enabled local agencies to make substantial investments in many of the water plan strategies. For example, we have invested about \$245 million in ground water storage projects which has generated about 340 thousand acre feet per year of new water supply. Through voter approval of proposition 84, there will be \$1 billion to finance integrated regional management programs so that regions can put more water to use.

Any conservation regarding water, ultimately leads to a discussion of climate change. Of course, this is the wild card in terms of long term planning. Climate is changing, sea level records show that a fairly steady rise over the last hundred years jeopardizes the ability to transfer water across the delta. There are also changes occurring in our snow pack. DWR is seeing a shift to earlier Sierra/Nevada runoff as more precipitation comes in the form of rain and less in the form of snow. Estimations over time, we expect to lose the equivalent about 4 ½ to 6 million acres feet of storage as our winter snow pack diminishes due to climate change scenarios. We also expect more climate variability due to stronger storms and longer droughts. This will demand modifications of reservoir operations, to maintain greater flood control reservation space and to yield greater supply.

The Governor's strategic growth plan and another Bond measure to be laid out in January provide a lot of resources to manage our water supply. Already mentioned, a billion dollars from Proposition 84 combined with Proposition 180 will provide \$4.8 for flood management. The strategic growth plan is proposing an additional \$5.9 billion to address water supply and climate change effects. Included in the proposal is \$4 ½ billion for new surface storage, off stream locations in Sacramento Valley, and a new reservoir in San Joaquin. Also included are \$2 billion for water conservation and a \$1 billion for the Delta sustainability.

In September, the Governor issued an executive order that provided a vision for the Delta sustainability. In 2004, it became clear that CalFed was not meeting the needs hoped for. Some of the earlier expectations of \$8 billion never materialized and it became clear that the creation of CalFed Bay Delta Authority, although important, was recognized as essentially the authority without much authority. As a result, the Governor re-structured the CalFed Bay Delta Authority to be included as part of the Resources Agency with the direction to create a vision for the Delta. A task force has been appointed and will hold its first meeting on March 1. Also involved in the Bay Delta Conservation Planning process is Undersecretary Karen Scarborough.

***David Guy, Executive Director, Northern California Water Association, Drought planning in the Sacramento Valley***

David Guy thanked the Board for the invitation to be part of today's discussion on drought. It is a pleasure to be here and provide a perspective on the Sacramento Valley. Those of us in the Sacramento Valley take drought very seriously. To help prepare for the next drought, the Northern California Water Association (NCWA) Board of Directors

water resources managers, land owners, and various consultants throughout the region held a joint meeting in Yuba City on January 16, 2007 to discuss how the Sacramento Valley can better prepare for the next drought. This discussion led to utilizing the Sacramento Valley Integrated Regional Water Management Plan (IRWMP) as a tool to assist in preparing for the next drought and then provide a set of policy recommendations that will assist state and federal agencies in preparing for the next drought.

David Guy provided the Board with a hardcopy of his presentation that provides an historical perspective on drought in the Sacramento Valley followed by a general description of how the Sacramento Valley has responded to these droughts, the changes that have occurred in the Sacramento Valley since the last drought (1994), and the outside forces that will affect the Sacramento Valley.

Historically, the droughts correspond to critical years as defined by the Department of Water Resources in its "Sacramento Valley Water Year Hydrologic Classification." Since 1906, there have been twelve critical years in the Sacramento Valley, including 1976-77 and most of the years between 1988 and 1994. As a result of the 1988-1994 drought and 23 counties declaring drought emergencies, Governor Wilson in 1991 created the Drought Water Bank and the Department of Water Resources (DWR) purchased 821,045 acre-feet of water in the Sacramento Valley. Although the Drought Water Bank served its purpose and avoided a water crisis in California, it also created tremendous fear and acrimony and led to numerous protectionist measures that are deeply imbedded in Northern California culture.

In 2000, Governor Gray Davis convened a drought panel and appointed several representatives from Northern California to serve: NCWA Chair Don Bransford, Butte County Supervisor Jane Dolan, and Yuba County Supervisor Brent Hasty. The panel made several recommendations to the Governor on how to prepare for the next drought:

- Critical Water Storage Reduction Marketing Program
- Assistance to Small Water Systems and Homeowners in Rural Communities
- Local Agency Groundwater Programs
- Local Agency Integrated Water Management Plans
- Drought-Related Research and Public Outreach Activities
- Accelerate Funding Assistance to Local Agencies

Several of these measures have been implemented, while others have been shelved with the successive wet years.

During the previous two droughts, Sacramento Valley water supplies were affected in the following manner:

- Surface water supplies were significantly reduced for use in certain parts of the Sacramento Valley based on contract limitations, water rights priorities and the imposition of State Water Resources Control Board (SWRCB) term 91. This, of course, limits surface water use in these areas, which, in turn, also reduces percolation and recharge to groundwater aquifers during these times.
- Groundwater pumping is significantly increased for all areas.
- Existing surface storage provides an essential water supply and is critical to many areas meeting water supply demands during these dry years. Surface storage and the ability to use surface water in years prior to the drought also helped stabilize many groundwater basins in the region, which can then provide more reliable groundwater supplies during drought.

- Less water is available in the system so in-stream flows are reduced and associated habitat for fish and other aquatic species.
- Water districts, landowners and others have responded in the following manner to address the water supply shortages described above.
- Small water systems and individuals relying on marginal groundwater resources.
- Districts prepare and implement contingency plans that internally allocate water and help contain costs for landowners and water users during shortages.
- Districts and landowners pursue neighbor to neighbor water transfers or exchanges to help meet demands in certain areas.
- Districts and landowners pursue internal management opportunities to maximize their supplies by recapturing or recycling surface water leaving their property or facilities.
- Landowners (on a limited basis) shift to crops or other plantings that require less water or can avoid irrigation.

Since the last drought, the Sacramento Valley has seen several major changes that have led to additional water uses that could be significant in the next drought:

- The Sacramento Valley has added more than 675,000 people, most of which rely entirely on additional groundwater for their domestic water supplies.
- The Sacramento Valley has seen a significant increase in permanent plantings that require water in all years.
- Increasing challenges to improve air quality in the Central Valley, additional water is used during the fall for rice straw decomposition.
- Additional regulatory requirements have reduced the amount of water available for use within the Sacramento Valley and the State.

As California prepares for the next drought, the following provides a policy framework for state and federal agencies to partner and cooperate with Sacramento Valley interests:

- Honor water rights priority
- Promote sustainable local groundwater management and conjunctive management
- Invest in area of origin infrastructure
- Facilitate sound water transfers
- Implement cost-containment policies
- Complete additional surface storage
- Recognize energy issues related to drought

The Sacramento Valley Integrated Regional Water Management Plan (IRWMP) was adopted on December 12, 2006 and provides a new framework to help local agencies and individuals improve water supply reliability during drought. The IRWMP will encourage new and creative tools for Sacramento Valley water resources managers to internally manage water supplies and it will provide increased coordination among water resources managers in the region. This will result in an overall improvement in water resources management across the region. The IRWMP will provide a mechanism to help coordinate water supply and land use planning to assure reliable water supplies and to help avoid conflict during drought.

***Daniel G. Nelson, Executive Director, SanLuis & Delta-Mendota Water Authority – Overall drought planning CVP and Coping with drought in the South-of-Delta CVP Service Area***

Dan Nelson thanked the Board for initiating this dialog, the sense is a lot will be learned and probably a few surprises. The hope is that this is the beginning of the dialog and there will be ongoing discussions on drought preparedness for California.

The Central Valley Project (CVP), over the last fifteen years, has gone through an incredible transition. Primarily through the passing of legislation, the CVP has been charged with the implementation of the endangered species and clean water act. This has essentially changed the way that the CVP is operated. In retrospect, over the last fifteen years, certainly, agriculture has focused most of its function trying to carve out its niche within the CVP of how it was going to be sustainable with the significant reduced supply of water. An incredible amount of resources have been utilized trying to figure out how to be sustainable under the circumstances we are in. We have done a good job which is evident in normal years where there is a level of sustainability through conservation, land retirement, and maximizing the resources we have available to the region. Now, we are just in the position to re-focus our efforts to sort through how to get through the next drought.

There really isn't any overall drought planning for the CVP. The focus for today's discussion will be on agriculture within the CVP. There are three key points:

- The CVP is less prepared today than it was in 1987 just prior to the last drought.
- There is no flexibility left in the project operations to allow us to carry over, from one year to the next, resources that would help us make it through the next drought. The CVP, in normal years, is using all the water available to it.
- The implications and impacts, financially and otherwise, will be much more profound in the next drought.

There are three divisions within the CVP: Tehama/Colusa, Friant, and the south export area of the San Luis Delta-Mendota Water Authority. The San Luis Delta-Mendota Water Authority is a 32 member agencies and a very diverse group, all are CVP contractors who take water through the Federal Tracy Pumping Plant. The San Luis Delta-Mendota Water Authority serves the west side of the San Joaquin Valley from the city of Tracy to the north, Kettleman city to the south, and San Benito and Santa Clara counties. The key facilities are: the Tracy Pumping Plant, Delta-Mendota canal, San Luis Reservoir and the California aqueduct. Overall, there is about 1.1 million acres of very good agricultural land that represents a couple of different types of water rights. The exchange contractors have historical rights off the San Joaquin River. Water allocations under the CVP include approximately 1 million in population within the Santa Clara region and approximately 180 thousand acres of water fowl habitat under the Pacific flyway.

There are two key factors that determine the allocation within CVP and south-of-the delta.

1. The amount of available water in Shasta and Folsom.
2. The amount of water that can get through the Delta in any given year.

In 1977, we took Shasta down about several thousand acre feet to dead storage. As a result of PSA and temperature control for salmon we are now restricted to take it no lower than about 1.9 million acre feet. As part of the Central Valley Project

Improvement Act (CVPIA), there is the commitment to restore the Trinity River through flows and other mechanical means and this has significantly taken water that was historically used for Shasta even in dry years. Under CVPIA over 800 thousand acre feet was dedicated for fish and wildlife purposes and used for up-stream releases and for water quality control plan releases. In addition, Northern California is expanding its use in certain regions. The American River region is anticipating a build out of increased use; as well as, flood control operational flows that will occur in Folsom.

In the Delta region, the size of pumping plants is restrictive and there are regulatory constraints. There have been improvements since the last drought; good relationships between Sacramento Valley and South-of-the Delta have resulted in transfers. On the horizon, they are looking at additional storage. They are looking at a combination of pumping improvements and potential regulatory changes to ensure efficiencies in water quality and fishery issues. South of the Delta, there is a major change in water management through on farm investments of high-tech irrigation methods.

The significant occurrences over the last fifteen years include:

- Temperature control for salmon - the temperature control reduces south of delta agriculture allocation on average of about 5 percent during 15 percent of the driest years. This is estimated to increase the magnitude and frequency of the allocation impacts.
- The Trinity River Restoration – a tremendous amount of water that historically came from Shasta and the Sacramento River basin is now being rededicated to the Trinity River in extremely wet years of 815 thousand acre feet and in critically dry years, 369 thousand acre feet. This represents a significant reduction of water availability from the Shasta complex.

The allocation impact on the long term, over dryer years, represents a 10 percent hit of water supply that has already had significant impact. Factors affecting CVP allocations are:

- Storage, conjunctive use projects and surface storage projects
- Demand management, land retirement and water conservation

The prediction is there will be a lot more land retirement without better planning for drought. Mr. Nelson is looking forward to working with the Board to develop some resolutions to get us through the next drought.

***Joan Maher, Imported Water Unit Manager, Santa Clara Valley Water District –  
Drought Management Strategies for the Santa Clara Valley***

Santa Clara is located in the South Bay area and connected to the San Joaquin Valley by the Central Valley project. Santa Clara Valley Water District is the water management agency for the county and responsibilities include watershed management for 800 miles of creeks and also the wholesale water supplier for 1.7 million people and manage the groundwater basin. There are two distinct parts of the county, the northern part is very urban and the southern part is mainly agricultural with a good groundwater base through most of the Santa Clara Valley. The valley draws approximately 160 thousand commuters a day.

To understand the focus for drought planning is to look at the history of the district. As farming developed and population grew, groundwater level began to drop precipitately. The water district was formed by state law in 1929. About 10 percent of water supply is

for agriculture. The Santa Clara Water Board supports agriculture and heavily subsidized the water. As groundwater level dropped, the primary concerns were land services subsidence. San Jose used to be 14 feet higher than it is today. Obviously, if even a slight friction of that subsidence were to reoccur it would cause significant problems to the infrastructure now in place. When the district was first formed, local reservoirs were built, installed recharge programs, and water levels grew. After World War II, due to explosive growth, we couldn't prevent ground water overdraft and required additional state water project supplies through the South Bay aqueduct. In 1987, CVP contract supplies came on line. With these supplies the district has recovered its groundwater basin.

The district has 10 reservoirs that total approximately 169 thousand acre feet, the largest of those is 90 thousand acre feet and the smallest is 1 thousand acre feet. These reservoirs operate on close hydrology, so there is no snow pack and no year to year carry over. These reservoirs depend on climate variables and are used for groundwater recharge to protect the basin and two are tied into treatment plants. The federal contract is about 152 thousand acre feet and the State contract is 100 thousand acre feet. All in all, despite storages and other things that come with contract supplies, there is about 200 thousand acre feet that comes through imported water.

Before the last drought, the district was at approximately 400 thousand acre feet demand in the county. During the drought, through voluntary conservation, the district reduced demand by 25 percent. There are programs in place to bring conservation levels to approximately 100 thousand acre feet. Conservation is a key part of the districts drought planning. The district's semitropic water banking project allocation has 350 acre feet of storage. Other participants are the Metropolitan Water District, the Alameda County Water District, Zone 7 Water Agency, the Newhall Land & Farming Company, and the Vidler Water Company. Future banking allocations will depend on the Delta, especially in drought conditions.

The district's Integrated Water Resources Planning (IWRP) process includes: conservation, recycling, banking, recharge, transfers, desalination, reservoir storage, and re-operations. The IWRP recommendations are:

- Protect baseline imported and local supplies
- Continue existing planned and investments in conservation, recycled water, groundwater banking, and local recharge programs.
- In addition, will need approximately 31 thousand acre feet per year of new supply by 2020.
- Develop water shortage contingencies

Drought risks are compounded by other existing risks:

- Supply
  - Hydrology (Drought)
  - Regulations (environmental, water quality)
  - New project feasibility/cost
- Demand
  - Climate change
  - Development patterns
- Operations
  - Bay-Delta Conveyance
  - San Luis Reservoir Low Point
  - Infrastructure reliability

Compared to the drought of 1991, SCVWP current conditions and perspective is:

- Groundwater storage improvements
- Additional conservation/recycling
- Framework for resolving Delta problems
- More Delta problems (fish, levees)
- San Luis Reservoir low point risk
- Increasing water demand
- Feasibility/cost of project development

All of these represent the district's opportunity for partnerships in water management, project development, San Luis Reservoir low point improvement project, Bay Delta conservation plan, and the Delta vision process.

### ***Jacob Anderson & Austin Hubble, Central Unified School District – Educating Students for Drought***

The question of focus is “What do students know about drought?” The last drought was from 1987 to 1992 and this is a time when many current high school students were born. This leads to a lack of understanding about drought and its impacts on agriculture and sociality as a whole. To answer this question, we compiled and issued a water resource survey. This was distributed to several classes at the Central Unified School District to get a baseline understanding of what students know and how much they do or don't have an education on water resources. The survey was based on the following categories of knowledge:

- California's water supply
- Water projects
- Agriculture
- Drought awareness

The survey questionnaire and results were distributed to the Board and audience for review. What was discovered from the survey is that students do not understand:

- California geography and water resources
- California's water supply and distribution system
- The changing face of agriculture throughout the state
- Drought, and the need to be prepared for drought

The recommendations from the survey results are to include water resources and management in all areas of curriculum:

- History
- Science
- Geography
- Agriculture

Fields trips are a great way to prepare students for drought as they learn about water banking, California water supplies and distribution, agricultural water management, and agriculture and the environment.

A vision for the future education of students should include:

- Previous generations had a vision of reliable water supplies and protection against flooding and drought in California
- Their vision created the water projects and distribution systems that benefit Californians today
- California students need to embrace this vision and make wise decisions about our water resources.

- Only with wise stewardship of our water resources, will we be able to create a sustainable future for all Californians.

***Dave Orth, General Manager, Kings River Water Conservation District – Kings River Perspective on Drought***

Mr. Orth thanked the Board for initiating this meeting and thanked Marvin Meyers personally. He also emphasized the importance of getting the Governor involved in the drought planning process.

The Kings River Conservation District (KRCD) was created in 1951 by a special Act of the California State Legislature, the Kings River Conservation District is a multi-county special district public agency formed to manage the watershed on the lower Kings River, serving all the constituents within 1.2 million acres in portions of Fresno, Kings, and Tulare counties.

Three things to think about; I feel we are stuck in process and not making significant measurable progress towards addressing the problems that face us. We nibble around the edges, with small projects and say we are moving forward but the process is incredibly difficult. We are working on a very small margin and making small gains. It's been an observation that at the State and Federal level drought preparedness is not a priority, there are too many things going on that are contrary to necessary action for drought preparedness.

The Kings River Conservation District has developed a unique identity in different resource management area. It is the local flood control project sponsor, it is the leader of water quality coalition to maintain water quality within the system, it does groundwater management along side the water rights holders within the system, on the power generation side it owns two facilities, and is very active in developing regional strategies where the local cities and counties will acquire electricity directly from KRCD at discounted rates. On the environmental side, KRCD does a great deal of environmental stewardship on the Kings River in cooperation with the water rights holders and the California Department of Fish and Game. KRCD is often looked at as a model of cooperation in the environmental arena.

For drought preparedness resource management, day to day, KRCD goes about establishing balance between conflicting priorities. The KRCD is one of the fastest growing regions in California with incredible urban growth increasing not only supply demand, but also, groundwater tables and quality. KRCD environmental ethic creates demand on water supply and different flows, quality issues on the river, and maintaining fisheries management objectives. The nexus between flood control and drought planning and as a local project sponsor, we work very closely with the Army Corp of Engineers who operates the storage behind Pine Flat. This ensures decisions made by the Army Corp of Engineers gives KRCD flexibility to manage drought issues. In the water quality component, irrigate agriculture is increasing being held accountable, without justification, for water quality conditions within watersheds. KRCD has developed a watershed quality coalition that does an extensive amount of monitoring and dialoging with irrigators and regulators to bridge misinformation.

The Kings River Watershed boundaries are, to the north, the San Joaquin River system and the city of Fresno and south to the Tulare basin. The annual average runoff is 1.8 million acre feet. During the 1976/77 drought, the actual runoff in the system was 400 thousand acre feet. In 1977/78, the actual runoff was 4.5 million acre feet. In 1988-1992

it was 44 percent of the 1.8 million acre feet or slightly below 800 thousand acre feet. The region has 1 million acres of irrigated farm land and the water demand is more than 3 million acre feet annually. The surface water supply of the Kings River system is supplemented by the Fresno Irrigation District, the Friant (as a CVP contractor), and then the Tulare Lake basin. The KRCD surrounds 14 incorporated cities and continue to develop relationships to better coordinate plans for the region balanced by groundwater recharge.

The balance that KRCD is trying to achieve that will provide tools needed during times of drought include:

- Agricultural conservation program
- Groundwater management
- Upper Kings Basin Water Forum
- Fishery Management Program
- Local flood management
- Southern San Joaquin Valley Water Quality Coalition

Are we prepared? The answer is no. We don't have the storage, flexibility, certainty, and predictability necessary to be prepared to deal with drought of past magnitude. There are things that suggest "drought preparedness" is not a priority:

- Delays at Sacramento Water Resources Control Board (SWRCD) in processing applications.
- Inability to address storage and conveyance at large scale level
- SWRCD staff position on Groundwater recharge
- Water losses for environmental and water quality
- Increased focus on statewide groundwater policy
- Wild & Scenic Rivers Act

If drought preparedness is truly a priority, then policies and actions must change. Actions outside of our comfort zone are required.

- A commitment to improve our infrastructure and recognize storage, conveyance, and ways to move water around and get it recharged into the area in this basis would dramatically improve drought preparedness.
- The SWRCB staff response needs to change from "you can't" to "here's how you can".
- Clearer policies and processes for allocation of funding coming from Prop 50, Prop 84, and Prop 1E programs. There are ongoing concerns about those policies and procedures being changed as we go, making it very difficult for those in integrated regional water management planning to continue our commitment to develop plans and strategies that lead to construction of resources or projects.

In an area that supports the #1 and #2 agricultural producing counties in the Nation, it remains an area without statewide significance as was demonstrated by the denial of Prop 50 funding.

***Mario Santoyo, Assistant General Manager, Friant Water Users Authority – Friant CVP Service Area, Dealing with Drought***

Mario Santoyo thanked the Board for the opportunity to speak and sent the regrets of General Manager Ronald Jacobsma who was unable to attend due to commitments in Washington D.C to discuss the San Joaquin River restoration legislation. Legislation

sponsored by Senator Feinstein and Congressmen Radanovich and co-sponsored by Senator Boxer.

Even though, we have seen snow and rain, we are still not out of trouble. Friant will still face challenges if a drought occurs. Friant Division District covers the service areas representing the counties of: Merced, Madera, Fresno, Tulare, and Kern. The potential Friant Division District actions during drought will include:

- Reliance upon extraction of groundwater recharged during recent above-average water supply years (limited to Class 2 Friant contractor districts).
- The purchase of dry-year water supplies from willing sellers on the market if available and not prohibitively expensive.
- Receive inter-District groundwater banked during the previous water years by Friant Division Contractors (such as Class 2 District to Class 1 District).
- The purchase of water from water banking agencies such as North Kern Water Storage District.
- Seek to acquire State Aqueduct Water Supplies via Cross Valley Canal for exchanges with the Arvin-Edison Water Storage District or reverse flow along the Friant-Kern Canal.
- The purchase of local non-CVP water from farmers with the ability to pump non-project water into the Friant-Kern Canal, recognizing that Warren Act contracts may be required.
- Proactively seek additional recharge, conveyance, and surface storage facilities to increase banking capabilities when surplus water becomes available in the future.

Class 1 represents approximately 800 thousand acre feet of firm water supply. Class 2 represents 1.4 million acre feet of additional or supplemental water supply. During drought periods there is a cumulative groundwater storage change. Currently, the Friant District is not receiving Class 1 water supply forcing it to use groundwater. In 2006, the district received 100 percent of Class 1 water and this was followed by a release of 1.2 million acre feet for flood control purposes. This makes it very clear that the District is very dependent on its Class 2 water supply. If there is a high in-flow into the system there has to be a means to store the water and regulate it out through time in order to be able to optimize the opportunity to percolate it back in. Additional surface water storage has the potential to benefit: water supply, conjunctive use, operational flexibility, power production, flood control, water quality, river restoration, and recreation. If Friant could maintain water storage and temperature, they would be able to send cold water to the North for the spawning of fish and this would help the San Joaquin restoration project.

***Jim Beck, General Manager, Kern County Water Agency – Drought planning for Kern County***

Kern County has done a good job for drought planning. They have invested in the infrastructure to prepare them for drought. Kern County Water Agency's plans for drought uses three approaches:

- Increase on-farm conservation
  - Reduce overall demand (sprinklers, drip, etc.)
  - Often occurs during conversion to permanent crops
  - May harden demand resulting in less flexibility during drought
- Implement Urban Best Management Practices and education programs (schools and community groups)
- Develop regional groundwater banking programs

Groundwater Banking Programs include:

- City of Bakersfield
- Berrenda Mesa Banking
- Pioneer Banking
- Kern Water Bank
- Semitropic/MWD/et al Banking
- Arvin-Edison/MWD Banking
- ID4/KTRG Banking
- Buena Vista Banking
- Rosedale-Rio Bravo Banking
- Kern Delta/MWD Banking
- Cawelo/Dudley Redge Banking
- North Kern Banking (proposed)
- Wheeler Ridge-Maricopa (proposed)

Groundwater Basin Characteristics

- Storage Characteristics
- Estimated total storage capacity 50 million acre feet
- Estimated total water in storage 40 million acre feet
- Estimated dewatered storage 10 million acre feet
- Total acres overlying groundwater basin 1 million acre feet
- 1999 irrigated acres 835 thousand acre feet
- Median groundwater pumping for irrigation per year 1.2 million acre feet
- Dry/critical year groundwater pumping for irrigation per year 1.9 million acre feet

There are four factors within the control of local water districts that determine the ability of groundwater banking programs to meet drought year water demands.

Graphs were provided to the Board to show: managed storage capacity, maximum annual recharge capacity, maximum annual recovery, and costs to develop the banking programs.

Conservation and groundwater banking investments require solutions to the three types of drought.

- Hydrologic drought reduce supplies, in some years severely
- Regulatory drought reduces the “average” amount of water available from the Delta
- Catastrophic drought causes catastrophic water supply and water quality impacts.

Local investments depend on the Delta; and, a Delta solution should address all three types of droughts.

- The state’s water supply flows through the Delta’s levee system:
- Earthquakes, wind and flooding could cause a Katrina-like levee collapse flooding much of the Delta
- 6.5 quake estimated to cause collapse of 30 levees
- New studies predict a 66 percent chance of a 6.5 quake in next 50 years
- Salt water would rush in from the bay to fill collapsed islands
- Delta water supply becomes unusable within hours, potentially for years.

A better approach is needed to protect our Delta water supply. Building a canal around the Delta will reduce risk:

- Levee failure no longer threatens water supplies
- Improves water quality
- Better protects Delta fish
- Flexibility to address climate change
- Protects local investments

Urban compatibility concerns include:

- Urban encroachment can prohibit banking project expansion by increasing land costs and reducing potential recharge areas
- Population centers adjacent to groundwater banking facilities can create conflicts such as West Nile Virus, safety, and trespass issues.

***Tim Quinn, Deputy General Manager, State Water Project Resources-Metropolitan Water District – Drought Management Strategies for Southern California***

The Metropolitan Water District is a wholesaler with 26 customers. They were not ready for the last drought. They were relying on the state and this was not a good decision. Today, they are investing in local resources, developing surface and groundwater storage, negotiating a dry-year transfer program, and filling the Colorado River Aqueduct. The future will incorporate an integrated water resources plan.

The most important future risk factor is the Delta, the gridlock is putting the California business economy at risk and the key is earthquake risks. Storage is the most important water investment that they are making and increasing storage capacity by 3 million acre feet. There is a 100 percent chance that an endangered species will create a water drought. All of this is driven by the physical characteristic of the Delta. We use the Delta as a piece of infrastructure which prohibits managing it as a natural environment. We depend upon it for base supplies, storage replenishments, and to convey water transfers.

The solutions and addressing the risk factors in the Delta will require a multi billion dollar investment in infrastructure, changes in land use, and altered water quality management. There are answers out there and they are implemental in a time frame that will help. We are counting on the Governor to be the action governor. Basically, CalFed didn't work and it is fortunate that the Governor has embraced the policy problem and issues of what we are doing right and what we are doing wrong. This new administration has a strategy for the Delta that includes a long-term vision process, Bay-Delta conservation plan, and Delta risk management study. The Delta is something that the State and private industry must work together to resolve and drought water banking is absolutely essential to our future economy.

***Michael Jackson P.E., Area Manager, Bureau of Reclamation – Banking and Water Transfers***

Mr. Jackson thanked the Board for the opportunity to talk about the Bureau of Reclamation's role in drought preparation. Mr. Jackson is the area manager for the South Central California area office for the Bureau of Reclamation. The area runs from the Bay-Delta area in the north to the Ventura/Santa Barbara counties to the south and Sierra Foothills to the east. The Bureau of Reclamation's mission over time has changed. In 1902, the reclamation serviced big time construction, facility and reclaiming the area west for national security and economic reasons. Since, the mid-1950/60's the bureau has transitioned into a resource management agency and our current mission is to manage

water and its related resources in an environmentally and economically sound manner. The bureau received national recognition following Katrina and Rita where they used some demonstration facilities for desalination and provided water to people in each hurricane's aftermath.

Over the past few years, the focus has been on the Delta. Could it fail? And, what can the bureau do? There are groundwater wells that can be infused into the Delta-Mendota Canal that provided support in the interim while the upper Jones track event was being addressed. This was interim because of water quality issues associated with groundwater pumping.

The bureau does not have a drought plan. The plan, in large part, is through contracts. These contracts have various clauses to deal with times of shortage and how water is re-distributed. There are also policies in place for M&I supplies, basically, the Bureau tries not to get in the way of progress. There are two monumental things: (1) The San Joaquin River Settlement Act that is now in its legislative phase. (2) The Friant Intervene and the National Resource Conservation District which has begun settlement negotiations. Two elements that are paramount are the restoration goal and the water management goal. As we move forward on water issues we can't get too far ahead of these two goals. Whatever various interests the Board can do to assist this will be greatly appreciated. The other major element that has recently been broadly disclosed is dealing with drainage issue on the west side of the San Joaquin Valley. The concept being discussed is transferring title of that facility to the west side interests. This is a vexing issue not only with federal but state constraints. The low side of the equation is around 700 million dollars.

It is prudent not to look to the Bureau to solve the drought problem. They will promise not to get in the way and will provide consultation with customers and stakeholders. One good example of this is the Meyers Ground Banking Reserve. This is an example of being pro-active where public funds were refused because of the restrictions public funds bring. There is also a big environmental component to this project. Another is the education component for the community.

Mr. Jackson encouraged the Board to provide the Bureau with a plan and they would do what is possible to help facilitate it.

***Brian Hauss, Partner, Water Agency Inc. – Water procurement perspective on drought preparation – potential challenges and opportunities for water transfers and water banking during critically dry years.***

Mr. Hauss expressed appreciation to the Board, President Montna and Marvin Meyers for the opportunity to address the Board. The Water Agency provides a unique perspective in the sense of conveyance and transfer and without trust we can't do our business. Our business is built entirely on relationships because we broker water.

The Water Agency was formed in January of 2000 to provide market-based solutions to regulatory water shortages imposed on agriculture. The Water Agency mission is to provide service to water-used based operations by providing economic water supplies via banking, transfers or exchange. The Water Agency handles transfers and consulting for over 400 clients and transfers within federal, state and local water supply projects. Our primary focus is on the west side; but we also work with the Friant system and in Bakersfield with some of the state water project farmers. The plumbing is in place to move water around and we just need to figure out how to trust one another. In this

regard, the Water Agency looks at it as a willing buyer and a willing seller and without complicating it bring the two together.

The Water Agency brokerage and consulting activities include:

- Transfers, exchanges, and banking
  - Negotiate terms
  - Seek local, regional, and project (federal or state) approvals
  - Coordinate conveyance
  - Confirm deliveries
  - Collect and disperse funds

In 1991, there were approximately 500 thousand acre feet of indicated demand but only about 400 thousand acre feet was actually delivered. At that time, the market price was approximately \$175 per acre foot in comparison to the previous year when the market price was approximately \$80. With consideration of other charges such as carriage loss, energy and demand charges, conveyance charges, wheeling loss charge, and district administrative charges the actual delivered “out-of-meter” cost was \$255 per acre foot. There was decreased carryover as a result of performing transfers of water acquired. There were downstream temperature increases because of releases and groundwater pumping. There was a loss of tail water for the wetlands because water was transferred out of the northern area. Additionally, fish were lost because of water being exported out of the Delta. As a result of groundwater substitution there was overdraft, subsidence, impacts on other groundwater pumps (especially in Butte County), degradation of water quality, and impacts on surface water flows. Land fallowing also occurred resulting in soil salinity increase, loss of forage for wildlife, and the loss of sensitive plants without pasture. We have learned a lot from these events and probably won’t experience them again in the next drought.

As we look forward to what condition will be like in the next drought. There are negotiations in northern California where there is sharing of water supplies to create available supplies through the Phase 8 settlement and the Yuba Accord; as well as Sacramento’s integrated plan. These provide a positive supply side that was not available in the early 1990s. On the negative side, in the early 1990s the average project allocation was 30 percent, under the same conditions today, the allocation would be 10 percent. This translates to an additional demand of nearly 200 thousand acre feet and will effectively increase supplemental water demand. The San Joaquin River restoration project creates a new demand of 175 thousand acre feet on average in dry years. Cost of supplemental water varies with available supply with a spot market high of \$300 acre foot and a spot market low of \$55 acre foot. Transfer costs could possibly increase to \$375 per acre foot delivered “out-the-meter.” Some general conclusions:

- Some proactive northern transfer that provide dry-year supply at economic rates
- Water supply allocation (CVP) will be reduced on average to create additional demand pressure.
- Crop change (permanent plantings) has also hardened demand
- Will there be enough water for agriculture, and at what price?

Potential drought tools include:

On the short run

- Fast-track environmental compliance (3-4 month process)
- Water bank extractions (3-4 month process)
- Delta transfers – streamlined and reviewed (4-5 month process)

- Water exchange (4-6 month process)
- Permitting issues (SWRCB place of use 3-5 month process)

On the long run

- Surface storage (joint operations to maximize storage benefits upstream and SLR; enlarge Shasta; build sites, Temperance Flat)
- Improvements to Conveyance (Intertie Project)
- Groundwater banking investments

Banking opportunities:

- Provides an opportunity to acquire new storage (underground).
- Converts relatively inexpensive wet-year water into valuable, relatively reliable dry-year supplies.
- Provides emergency water south of delta.
- Provides identifiable security for financing and development.
- Helps to stabilize local groundwater aquifer.
- Increases general water asset management flexibility.

**(7) COMMENTS FROM THE PUBLIC**

**(8) CLOSING COMMENTS AND ADJOURNMENT**

With no further business before the Board, the meeting was adjourned at approximately 4:00 p.m.