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The Delta Vision Foundation was established by former members of the Delta Vision Blue Ribbon Task Force, the independent body convened under Governor's Executive Order S-17-06. The mission of the Delta Vision Foundation is to encourage implementation and progress by the State of California toward achieving the Two Co-Equal Goals as defined in the *Delta Vision Strategic Plan*:

Restore the Delta Ecosystem  
Ensure Water Supply Reliability

The Delta Vision Foundation monitors, evaluates, and provides information to government officials, policymakers, and the public about implementing the *Delta Vision Strategic Plan* recommendations as a set of integrated and linked actions.

March 23, 2012

Mr. Phillip Isenberg  
Chairman, Delta Stewardship Council  
980 Ninth Street, Suite 1500  
Sacramento, California 95814

Dear Chairman Isenberg:

On March 1, 2012, the Delta Vision Foundation (DVF) convened a roundtable regarding Delta levees. A diverse group of agency managers and stakeholders discussed Delta risks, emergency management, and levee improvement priorities. The discussion revealed a surprising level of agreement and consensus on current conditions, the urgency for action, and immediate and near-term steps to reduce risks and improve preparedness. The attached letter to Secretary Laird summarizes the roundtable conclusions and DVF recommendations.

The Delta Vision Foundation recommends immediate attention by the Delta Stewardship Council (DSC) to capitalize on the emerging consensus, engage stakeholders, and take action. Only through your continued leadership will the State be able to demonstrate meaningful progress in achieving the Two Co-Equal Goals.

On March 15, 2012 you asked the DVF for input on the levee investment strategy to be included in the Delta Plan. The following are specific recommendations to include in the Sixth Staff Draft Delta Plan.

**Immediate Investment Priorities**

The risks to critical infrastructure (water supply, transportation, and energy transmission and storage) and the Delta ecosystem remain unacceptably high. The risks of levee failure from seismic events have gone largely unaddressed. Immediate action is needed to set priorities and begin implementation to protect through-Delta water conveyance and other high value infrastructure assets. Regardless of plans and proposals developed through the Bay Delta Conservation Plan process, the State and others must take action now to protect critical infrastructure for the next 10 to 20+ years.

The Delta Plan should include specific levee investment priorities to be implemented during the first five years of the Delta Plan. The flood and earthquake risks in the Delta are too great for the State to wait another two years to determine investment priorities. Specific priorities to include now in the Delta Plan include the following:

- Strategic Levee System and Through Delta Conveyance Improvements – Implementation of priority water supply security improvements as proposed by the urban water agencies.
- Local Levee Improvements to Ensure Federal Eligibility for Federal Disaster Assistance – Continued DWR grants to local reclamation districts for islands that do not meet minimum HMP design standards; improve these islands to meet the PL 84-99 design standard within three years.

These priorities can be implemented with existing Proposition 1E funding. The DSC should recommend that the Governor propose and the Legislature appropriate \$300 to \$400 million this year for these purposes as part of the State's capital budget. Local matching funds are available from willing local participants (reclamation districts and water agencies). Waterside ecosystem improvements can be linked to levee improvements for simultaneous implementation. The DSC should take a leadership role in addressing current constraints on levee vegetation while implementing ecosystem restoration actions on non-project levees, which comprise two-thirds of Delta levees. In this way, the levee investment priorities for the next five years will support the Two Co-Equal Goals while protecting the Delta as an evolving place.

### **Delta Levees Prioritization Process**

The DSC staff has indicated that the Sixth Staff Draft Delta Plan will include a levees prioritization process. This is encouraging progress in fulfilling the requirements of the Delta Reform Act. We urge the DSC to direct staff to implement a simplified prioritization process immediately to describe the State's priorities beyond the investments listed above in the Delta Plan now. This simplified analysis should be based on existing information and priorities, benefits, and costs solicited from infrastructure specialists and levee engineers. The DVF Roundtable participants demonstrated a willingness to engage now in efforts to establish priorities based on risks and benefits.

### **Emergency Preparedness**

The people, land, and infrastructure of the Delta remain at high risk of catastrophic losses from earthquakes, floods, and levee failures. Efforts to improve emergency planning and preparedness for the Delta have been valuable and productive. Additional work is needed now to increase preparedness. The DVF supports the draft Delta Plan policies and recommendations related to emergency preparedness and response. Further, the DSC should support and recommend urgently needed grant assistance from the Department of Water Resources (DWR) to the Delta Protection Commission (DPC) and others to develop a regional emergency response coordination system and catastrophic flood response plan. In addition to improving Delta preparedness, this plan would further demonstrate the value of critical infrastructure for communication, evacuation, response, and recovery.

### **Secure Funding for Immediate and Near-term Actions**

Existing bond funding through Propositions 84 and 1E is a critical resource for addressing Delta risks. However, a long-term, stable source of funding is needed for emergency management and levee improvements. As noted above, we urge the DSC to recommend to the Governor to include in the May Revision of the State Budget the essential expenditure authority to use Proposition 1E bond funding for capital projects to begin construction of a Strategic Levee System and Improved Through-Delta Conveyance. We also urge the DSC to modify its draft recommendations for the Delta Flood Risk Management Assessment District to ensure that it will address all risks to Delta levees, including seismic risk, and fund levee construction to protect all critical infrastructure (seismic risk for water supply infrastructure is apparently excluded).

Urgent action is needed to protect and secure the State's water system, other critical infrastructure, and Delta resources. The DVF Levees Roundtable highlighted that agencies and stakeholders are ready and willing to work together to develop and implement priority projects to achieve the Two Co-Equal Goals, while preserving and protecting the unique values of the Delta as an evolving place. Leadership, action, and implementation now will set the State and stakeholders on a path to success.

Please contact Charles Gardiner if you have any questions about these issues and call upon the Delta Vision Foundation if we can be of any assistance to you and the Council. We appreciate your consideration of these recommendations.

Sincerely,



Sunne Wright McPeak  
President, Delta Vision Foundation  
Former Secretary, California Business, Transportation,  
and Housing Agency



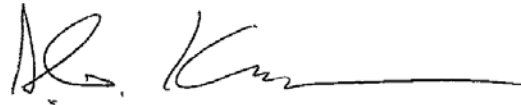
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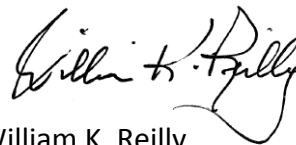
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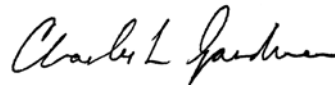
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Former Administrator, U.S. Environmental Protection  
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Raymond Seed  
Professor of Professor of Civil and Environmental  
Engineering, University of California, Berkeley



Charles L. Gardiner  
Executive Director

#### Attachments

- Delta Levees Roundtable Presentations
- Delta Levees Roundtable Discussion Comments
- Delta Levees Roundtable Participants

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*Delta Vision Foundation*  
(415) 419-5133  
[www.deltavisionfoundation.org](http://www.deltavisionfoundation.org)

**DELTA VISION**  
FOUNDATION

March 23, 2012

Secretary John Laird  
California Natural Resources Agency  
1416 Ninth Street, Suite 1311  
Sacramento, California 95814

Dear Secretary Laird:

On March 1, 2012, the Delta Vision Foundation (DVF) convened a roundtable regarding Delta levees. A diverse group of agency managers and stakeholders discussed Delta risks, emergency management, and levee improvement priorities. The discussion revealed a surprising level of agreement and consensus on current conditions, the urgency for action, and immediate and near-term steps to reduce risks and improve preparedness (see attached summary).

The Delta Vision Foundation recommends immediate attention by the Natural Resources Agency (Resources), Delta Stewardship Council (DSC), Emergency Management Agency (CalEMA), and the Legislature to capitalize on the emerging consensus, engage stakeholders, and take action. Only through your continued leadership will the State be able to demonstrate meaningful progress in achieving the Two Co-Equal Goals. The following are the areas of general agreement and the DVF recommendations for action.

### **Delta Emergency Management Planning Has Improved, Regional Coordination System Needed**

Efforts to improve emergency planning and preparedness for the Delta have been valuable and productive. The Emergency Management Task Force convened by CalEMA as directed by SB27 has been particularly valuable in improving coordination and developing recommendations. However, the people, land, and infrastructure of the Delta remain at high risk of catastrophic losses from earthquakes, floods, and levee failures. Additional work is needed now to increase preparedness.

DVF Recommendations: Take immediate action to review and implement the recommendations in the Sacramento-San Joaquin Delta Task Force Report. Provide urgently needed grant assistance to the Delta Protection Commission (DPC) and others to develop a regional emergency response coordination system and catastrophic flood response plan.

### **The Condition of Delta Levees Has Improved, Continued Funding Needed**

Local reclamation districts, with funding support from the State, have improved the condition of levees in the Delta. According to the Department of Water Resources (DWR), the next round of funding (\$50 million) will be dedicated to achieving the minimum HMP design standard on approximately half of the 53 islands that do not currently meet this standard. These improvements reduce the risk of levee failure and ensure eligibility for federal disaster assistance. At minimal incremental cost, these islands can achieve the more effective PL 84-99 design standard. Additional near-term funding is needed to address the other islands that are not eligible for federal disaster assistance. Long-term funding can support a higher levee design standard, such as PL 84-99, for other priority Delta islands.

DVF Recommendation: Continue existing efforts to improve levees that do not meet the HMP levee design standard; improve these levees to the PL 84-99 standard within the next three years.

### **Protect Critical Infrastructure**

The risks to critical infrastructure (water supply, transportation, and energy transmission and storage) and the Delta ecosystem remain unacceptably high. The risks of levee failure from seismic events have gone largely unaddressed. Immediate action is needed to set priorities and begin implementation to protect through-Delta water conveyance and other high value infrastructure assets. Regardless of plans and proposals developed through the Bay Delta Conservation Plan process, the State and others must take action now to protect critical infrastructure for the next 10 to 20+ years. Recently, several water districts sent a proposal to you for specific projects to protect Delta water supplies. The DPC's Economic Sustainability Plan began identifying investment priorities. These projects can incorporate important near-term ecosystem restoration actions. The DVF Roundtable participants demonstrated willingness to engage now in efforts to establish priorities based on risks and benefits.

DVF Recommendations: Accelerate efforts to work with Delta interests, water agencies, and infrastructure owners to implement immediate levee improvement priorities to protect through-Delta conveyance and other infrastructure. Develop a simple, objective risk and benefit analysis.

### **Delta Islands are Critical for Ecosystem Restoration**

The Delta islands and levees play an important role in maintaining habitat in the Delta. The eight western Delta islands are an important part of efforts to maintain appropriate salinity levels for aquatic habitat (X2). Flooded islands, such as Liberty Island and Holland Tract, demonstrate the potential for improved shallow water habitat to increase food abundance and populations of important Delta species, such as delta smelt.

DVF Recommendations: Immediately convene Delta restoration planners, levee improvement managers, and stakeholders to identify islands where priority ecosystem protection and restoration actions can be coupled with priority levee improvement actions.

### **Secure Funding for Immediate and Near-term Actions**

Existing bond funding through Propositions 84 and 1E is a critical resource for addressing Delta risks. However, a long-term, stable source of funding is needed for emergency management and levee improvements.

DVF Recommendations: Continue funding for local reclamation districts to implement immediate levee improvements using bond funds and local matching funds to achieve the minimum HMP levee design standard. Prioritize projects that incorporate ecosystem restoration actions and include funds from other beneficiaries. We urge you and the Governor to include in the May Revision of the State Budget the

essential expenditure authority to use Proposition 1E bond funding for capital projects to begin construction of a Strategic Levee System and Improved Through-Delta Conveyance. We also urge you and the Governor to work with the Legislature to establish an institutional structure, such as a regional emergency management authority, with the power to assess fees on all levee beneficiaries to fund emergency management and levee improvement actions.

Urgent action is needed to protect and secure the State's water system, other critical infrastructure, and Delta resources. The DVF Levees Roundtable highlighted that agencies and stakeholders are ready and willing to work together to develop and implement priority projects to achieve the Two Co-Equal Goals, while preserving and protecting the unique values of the Delta as an evolving place. Leadership, action, and implementation now will set the State and stakeholders on a path to success.

Please contact Charles Gardiner if you have any questions about these issues and call upon the Delta Vision Foundation if we can be of any assistance to you and the Administration. We appreciate your consideration of these recommendations.

Sincerely,



Sunne Wright McPeak  
President, Delta Vision Foundation  
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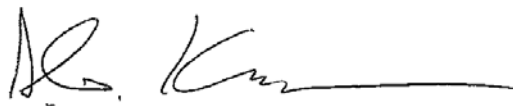
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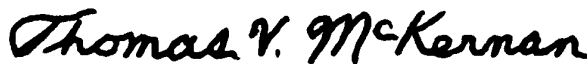
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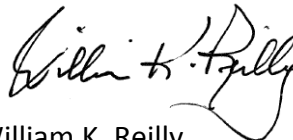
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## Attachment A

### Delta Vision Foundation Levees Roundtable: Presentations on Delta Levees

#### Session 1: Risks and Consequences

##### Ray Seed, UC Berkeley and Delta Vision Foundation Board of Directors

The focus of today's discussion is four intersecting elements of Delta levee risks: seismic levee fragility, non-seismic levee fragility, landside risks, and water side risks. Levees can fail from overtopping, seepage and piping, erosion and wind damage, or sudden, unexpected failures. Of particular concern is the risk of seismic failure, which can be sudden and widespread. There is a 62 percent probability of an earthquake greater than 6.7 in magnitude in the next 30 years.

##### Mike Mierzwa, Department of Water Resources (DWR)

Complete and thorough consideration of risks in the Delta considers hazard, exposure, performance, and consequences. Hazards include the frequency and magnitude of flood events. Exposure considers what resources and facilities could be affected, such as land uses and infrastructure. Performance considers how the levee system operates in an emergency, which is often based on past experience. The consequences evaluation considers the impacts on resources and facilities in different scenarios.

##### Bob Pyke, Consultant to Delta Protection Commission (DPC)

For the Delta Protection Commission Economic Sustainability Plan, the engineering team evaluated the levee system and considered two popular perceptions: (1) the levee system has been improved substantially through local effort and conditions are not as bad as everyone believes and (2) there would be substantial economic disruption in the event of major levee failures. The team found that there is truth in both statements. Since the Delta Risk Management Study, there have been improvements to the levees such that nearly all meet the HMP interim standard; 514 of the 840 miles of levees meet the PL 84-99 standard. At the same time, there are substantial risks for Delta infrastructure that warrant further investment in levees. Improvements to approximately 300 miles of levee to meet the PL 84-99 standard is achievable. The current work to construct "fat levees" is demonstrating how levees can be improved beyond the PL 84-99 standard and incorporate habitat improvements.

##### Greg Gartrell, Contra Costa Water District

A seismic event could disrupt urban water supplies. The water agencies would be focused primarily on facility damage and mitigate Delta supply disruption with local supplies and interties. Levee failures from floods could damage water delivery facilities or affect water quality. Water transport facilities can be designed to withstand flooding and water quality impacts can be mitigated by treatment. Recovery of water supplies from a seismic event can be rapid. Flooded islands do not mean that the Delta cannot supply water. Sea-level rise will not end the Delta as a water supply. The BDCP studies show that if there is widespread seismic levee failure, seawater can be flushed out of the Delta with winter rains, even in a dry year. However, each of these three problems will be worse if planning and improvements are not undertaken now. Emergency response planning should include a multi-island failure in dry conditions. Levee improvements are needed now to protect the water supply system and Delta infrastructure for the next 20 to 50 years. If islands are not restored following levee failures, flooded islands and habitat restoration would reduce salinity levels for urban supplies.



### **Jay Lund, UC Davis**

The State has recognized the risk of Delta island failures since the 1930s. The Delta levees risk is the sum of the consequences times the likelihood of occurrence. Based on a decision tree risk analysis, the UC Davis team found that 10 to 19 islands would not be worth recovering after failure and that major upgrades are not economical for any of the 34 subsidized Delta islands. The current island configuration and levees designs are not ideal for the ecosystem. Faced with declining state and federal resources for the levees, the immediate needs are for a disinterested analysis of the needs for the future to prioritize efforts.

## **Session 2: Protecting Lives, Property, and Critical Infrastructure**

### **Bill Croyle, DWR**

Flood operations is a joint effort of the state and federal agencies drawing on weather and stream flow information from multiple sources. DWR's efforts to improve emergency response include three elements: (1) the Delta Flood Emergency Preparedness, Response, and Recovery Plan, (2) coordination with other agencies' plans, and (3) efforts to prepare facilities to respond (e.g., materials and transfer facilities). In the event of Delta levee failures, the response actions have to consider which islands, current conditions (hydrology, tides, reservoirs, etc.), communications needs, response and/or recovery actions, and priorities. Further, the response would consider implementing drought restrictions across the state if water supply were substantially affected. The major challenges in response planning and preparation are coordination at all levels, sustainable funding sources, real-time operations and monitoring, contracting for stand-by services, and conducting exercises to practice the plan.

### **Jim Brown, California Emergency Management Agency (CalEMA)**

The four stages of emergency management apply for all Delta planning: preparedness, response, recovery, and mitigation. CalEMA's responsibilities in a Delta event include coordination of resources beyond the direct flood fight, including communications, evacuation, law enforcement, and security. These efforts are coordinated through each county's emergency operations centers. Needs and resources are escalated from the incident to include local, operation area, regional, state, and federal resources as needed. An emergency task force comprised of CalEMA, DWR, DPC, and the five Delta counties has prepared an emergency management plan, consistent with SB27. The report recommended improved regional coordination, preparation of a Delta catastrophic flood incident plan, improving communications capabilities, developing mapping and GIS capability for evacuation planning, and creating a Delta emergency response fund.

### **Paige Caldwell, U.S. Army Corps of Engineers (USACE)**

There is a strong federal interest in protecting the people, environment, and economy of the Delta. Emergency response is primarily a state and local function, however USACE provides a critical support role in certain functions, including levee design standards and public works and engineering. USACE provides both technical assistance and direct support during an incident. In September 2011, USACE completed a comprehensive map book and GIS database to compile existing data for the Delta region. Ongoing activities include pre-season coordination briefings, exercises and training, reviewing state and local plans, emergency manuals and brochures, and public outreach.

### **Ron Baldwin, San Joaquin County (retired) and Consultant to DPC**

It is critically important that emergency management efforts honestly face the future risks. The planning and preparedness process must be continuously critical so no gets complacent or believes that the region and the State are fully prepared. The event that occurs is likely to be different from what anyone expects or plans for. There is a human element to all responses so emergency preparedness leaders should prepare



continuously and use common sense. Planners and decision-makers should not be complacent that just because SEMS is in place, everyone is prepared. Continued critical review is needed to develop SEMS 2. The Delta region should be the basis for integrated response planning. More complete information about Delta resources and infrastructure should be assembled and made accessible. Additional supplies and materials are needed to respond and improved protocols for emergency funding should be established. The proposed Sacramento-San Joaquin Regional Flood Response Project is the vehicle for moving these issues forward.

#### **Don Boland, California Utilities Emergency Association**

The California Emergency Utilities Association represents public and private infrastructure owners. The CUEA works closely with CalEMA and other agencies to prepare for and respond to emergencies. The organization helps coordinate the emergency management among eight critical infrastructures: banking and finance, government, emergency response, transportation, oil and natural gas, water and wastewater, electricity, and telecommunications. Virtually all of these types of infrastructure are located in the Delta.

### **Session 3: Strategic Levee System – Advancing Near-term Levee Actions**

#### **Randall Neudeck, MWD of Southern California**

Several studies have shown significant consequences for water supplies from seismic events affecting the Delta. A 2002 study showed that a 6.5 magnitude earthquake could result in flooding of 20 islands. Several urban water agencies have recently proposed to Secretary Laird and the Legislature that the State make priority funding available to reinforce levees on several islands in the south Delta to reduce the risks to urban water supplies in the Delta, Bay Area, and Southern California. These levees can be improved by widening the landside of the levee, as is underway on several islands that protect East Bay MUD's Mokelumne Aqueduct.

#### **Jeff Michael, University of the Pacific and Consultant to DPC**

The DPC Economic Sustainability Plan evaluated whether all levee upgrades are economically justified. The analysis used a comprehensive assessment of levee values, including the full economic value of crops and value of other benefits (protecting infrastructure, water supply, etc.). The analysis showed that only four islands would not justify improvement to PL 84-99 standards. These islands are small (only 6 miles of levees to upgrade) so the cost savings of not improving them is also small. In looking at the consequences of levee failures, economic losses from water supply disruption in a major seismic event are only 20% of the losses and only 2% for smaller, more typical levee failures. Highway transportation losses are equal to or greater than water export interruptions. Initial recommendations for priority investments are: (1) in the near-term, bring all levees up to the PL 84-99 standard while planning for seismic upgrades with habitat improvements for certain islands, (2) in the mid-term, implement seismic upgrades with habitat improvements on western islands and Highway 4 and Highway 12 corridors, and (3) create an assessment authority that can levy fees on all entities that benefit from levee protection.

#### **John Cain, American Rivers**

There are two categories of levees to consider for priorities: dry levees and wet levees. Dry levees prevent flooding during high flow events for areas that are above sea level. Wet levees protect subsided land from flooding at all times during all conditions. For dry levee areas, the priority is to expand or create flood bypasses in the north and south Delta: Yolo Bypass, a new Ship Channel bypass, and a south Delta flood bypass. The wet levee priorities are the western Delta islands, which protect both Delta habitat and water supplies by maintaining X2. These islands could be improved as part of a major public works project, such as the western tunnel alternative for BDCP. While there are disagreements about whether islands should be

recovered after flooding, actions taken now to strengthen levees on the landside can provide important structure and stability for ecosystem functions of the levees if an island is not rehabilitated.

**Dave Zezulak, Department of Fish and Game**

For ecosystem restoration, Liberty and the Cache Slough complex offer examples of successful development of shallow water habitat. Flooding at Liberty Island and Holland Tract was unplanned. The shallow areas of these two islands have rapidly developed shallow water habitat naturally over the past 10 years. The areas are productive habitat for delta smelt. These areas provide solid, practical information on how to restore habitats in designated areas.

**Gilbert Cosio, MBK Engineers and Consultant to Delta Reclamation Districts**

There are numerous simple, practical lessons that can be learned from work by the Delta reclamation districts over the last 20 years. Substantial improvements have been made. The Delta levee system is not in imminent risk of collapse. Importantly, virtually all of the Delta islands protect some piece of infrastructure, in addition to the agricultural or urban land uses on the island. In areas where improvements are needed to achieve the HMP or PL 84-99 standards, these improvements are often relatively small and simple to implement by raising the levee height and/or expanding the landside to of the levee. Habitat improvements have been successfully incorporated into many levee projects.

**Campbell Ingram, Sacramento-San Joaquin Delta Conservancy**

The Delta Conservancy's mandate includes several elements related to Delta levees, including increasing the resilience of Delta, protecting agricultural activities in the Delta, and identifying priority projects where funding is needed. The Delta Conservancy is working with a broad array of Delta interests to develop a Delta Finance Plan, which will describe near-term Delta needs (five to ten years) for restoration, economic development, and levee priorities. The Delta Conservancy is also bringing people together in the Delta to identify the impediments and elevate potential solutions for priority Delta projects. On implementation, the Delta Conservancy will play a supporting role in the large Delta restoration efforts that may come from BDCP and the Ecosystem Restoration Plan and a coordinating/implementing role on smaller restoration, response, and recovery actions.

**Gail Newton, DWR**

DWR coordinates with USACE on the project levees and manages several programs for the non-project levees. For non-project levees, DWR provides guidelines and funds for improvements and integrates non-project levees into other planning efforts (e.g. Central Valley Plan of Flood Protection). DWR grants funds from Propositions 85 and 1E through competitive grant processes considering the highest benefit projects, integration with other planning projects, and habitat enhancement. Grants require local cost sharing, which is difficult for some reclamation districts. DWR encourages a beneficiary pays approach, similar to the recent East Bay MUD projects. For the ecosystem, DWR incorporates mitigation into levee projects for net habitat enhancement. DWR also has programs supporting subsidence reversal and carbon sequestration.

## Attachment B

### Delta Vision Foundation Levees Roundtable: Comments and Discussion on Delta Levees

#### Risks, Consequences, and Emergency Preparedness

Bob Whitley: It is good to get more attention on levee issues. There should be more attention on the value and vulnerability of public infrastructure protected by Delta levees, such as Stockton's wastewater treatment plant.

Jim Brown: Can Ron Baldwin explain more about what SEMS 2 might look like?

Ron Baldwin: The SEMS process could be taken to another level of response efficiency. The idea is to develop the ability to respond regionally, not solely in the county-by-county methods of SEMS. Regional coordination models and methods should be explored.

Ray Seed: I agree that continuous improvement is needed. There is often false learning through tradition.

Ron Baldwin: The SB27 Report begins to get at this important issue of regional coordination.

Sunne McPeak: Mike Machado and Don Nottoli, what would be good recommendations for the Department of Water Resources (DWR) and the Delta Stewardship Council (DSC), respectively?

Mike Machado: The legislature required DWR to develop recommendations. Regional coordination is needed. The Delta Protection Commission (DPC) is applying for a DWR grant to develop regional coordination procedures and an integrated response that everyone contributes to. An effective recommendation would be to support a regional program to develop regional response procedures.

Don Nottoli: The State and Delta counties have made improvements, but there are always limitations. Good progress is being made. For the DSC, risk reduction, preparedness and response, and creating the institutional response structure is critical for the Delta Plan.

Ray Seed: There is a big transformation in the last six or seven years. There is better coordination and barriers are breaking down. However, it is not yet sufficient. The state-federal barrier must be broken down – the U.S. Army Corps of Engineers (USACE), Federal Emergency Management Agency (FEMA), Department of Homeland Security (DHS), and U.S. Bureau of Reclamation (USBR) all have to be closer partners with the State.

Ron Baldwin: Sometimes emergency responses are personalized (e.g., the Louisiana governor and New Orleans mayor during Katrina). Coordination and response has to be institutionalized so personality has less influence.

Mike Mierzwa: Risk planners and policy makers should check continuously that everyone is asking the right questions to get at the right kind of planning.

Ron Baldwin: No one should think the State and region are fully prepared. Continuous improvement is needed.

Doug Haaland: I am concerned that we have not gotten to the point of integration after significant expenditures. There is about \$750 billion left in Proposition 1E that should be applied to fix this problem. Regional coordination needs to continue to improve.

Dave Mraz: DWR has invested significant effort and money (\$100 million) into emergency response planning, emergency preparedness, and levee improvements. DWR is about to award \$50 million for levee

improvements to improve Delta levees to the HMP standard. An additional \$100 million is planned for levee improvements.

Ray Seed: There has also been investment in upstream improvements.

Sunne McPeak: So, additional investment and institutionalization of regional coordination are needed.

### Strategic Levee Improvements

Sunne McPeak: There is an urgency for implementation of joint benefit projects.

Doug Wallace: Delta levees projects should be implemented with a thorough beneficiary pays approach so that all entities that benefit from Delta levees pay their fair share.

Gilbert Cosio: The Reclamation Districts have reviewed the proposal from the urban water agencies. There are several areas where further discussion is needed: (1) for some islands, it appears that the proposal would only address a portion of the levees; the backside levees should be addressed too; and (2) the western Delta islands need attention too, although many have been improved significantly.

Tom Zuckerman: There has been significant progress so far in improving levees. This is actually a success area of the CALFED Program. The DPC Economic Sustainability Plan presents accurate information about current conditions. Efforts now should focus on preventing problems, preparing to respond, and getting the urban water agencies ready with alternatives and mitigation if the Delta supply goes down.

Anson Moran: The conversation here is more complete and nuanced than other previous discussions. The DRMS study has not been the sole source of levee information. It is important to convey a sense of this discussion to people working on the Delta Plan.

Bob Pyke: Where has the \$110 million gone?

Gail Newton: Most of the money has gone to the Flood Management and Environmental Stewardship Program. Thirty-five million has gone to the East Bay MUD levee projects, by legislative directive. The remainder has gone to emergency response and the subventions program. Future efforts could be funded by capital funding from the Legislature (Proposition 1E), but money will also have to come from the Reclamation Districts, who need help from other beneficiaries.

John Cain: The urban agencies' priorities are a little surprising. It appears that they are willing to abandon the western Delta islands, which are so critical for protecting water quality and maintaining Delta habitat (X2). The urban agencies acknowledge the importance of protecting life and urban areas. To achieve this, the State and others should expand flood capacity with new or expanded bypasses on the Sacramento and San Joaquin.

Bob Whitley: The Contra Costa Council is writing a letter of support for the urban water agencies' proposal. The Council is very supportive of regional coordination. The State should move forward on levees and emergency preparation.

Mike Mierzwa: A key question is what standards to build levees to. However, setting uniform design standards may lead to a sense of complacency. Efforts should focus on reducing risks and increasing benefits.

Greg Gartrell: The urban agencies don't ignore the western Delta islands; the agencies are trying to focus priorities. One study found that salinity problems resulting from failures of the western Delta islands could be flushed quickly with Sacramento River water. Of greater risk and harder to flush, would be failures in the south Delta.

Ron Baldwin: The SB27 Report has been distributed, which is a significant step forward.

Linda Adams: This discussion has been very educational. It appears that response planning is going well and now needs improved regional coordination. One of the key challenges is that funding starts and stops, so a finance plan for Delta actions and implementation of the beneficiaries pay concept are both important. The Delta will look very different in the future, so the State and region need to plan and adapt. For example, carbon sequestration will become increasingly important and the Delta can play a significant role.

Mike Chrisman: It is encouraging to hear that there is good work getting done. This has been a very informed discussion of some difficult issues. The Delta Vision Foundation can help frame these issues for further action and implementation.

Ray Seed: The degree of commonality on terminology and goals is impressive. This represents significant progress in the last six or seven years. There are urgent issues to address: flood risk and seismic risk. BDCP documents have just been released, but regardless of how that program proceeds, risks must be addressed for the next 10 to 20 years.

Sunne McPeak: This has been a very good discussion. The DVF will summarize the conversation and make it available. The DVF directors and staff want to consider implementation steps and help convene people to advance solutions.

## Attachment C

### Delta Vision Foundation Levees Roundtable: Participants

#### Delta Vision Foundation Board and Staff

Linda Adams  
 Mike Chrisman  
 Sunne McPeak  
 Ray Seed  
 Charles Gardiner  
 Rita Holder  
 Julie Dixon

#### Roundtable Participants

| <b>Name</b>           | <b>Organization</b>   |
|-----------------------|---|
| Kurt Arends           | Zone 7 Water Agency   |
| Ron Baldwin           | Peterson Brustad (Consultant to DPC)  |
| Linda Best            | Contra Costa Council  |
| Don Boland            | CA Utilities Emergency Association  |
| Douglas K. Brown      | Delta Counties Coalition  |
| Jim Brown             | California Emergency Management Agency  |
| Bob Butchart          | California Emergency Management Agency  |
| John Cain             | American Rivers   |
| Paige Caldwell        | U.S. Army Corps of Engineers  |
| Jim Chapman           | U.S. Department of Agriculture, Natural Resources Conservation Service        |
| Patricia Clark        | CA Department of Water Resources, Division of Flood Management                |
| Gilbert Cosio         | MBK Engineers (consultant to Delta reclamation districts)                     |
| Bill Croyle           | CA Department of Water Resources, Flood Operations Center                     |
| Kristal Davis-Fadtke  | Sacramento-San Joaquin Delta Conservancy                                      |
| Terry Erlewine        | State Water Contractors   |
| Anton Favorini-Csorba | California Legislative Analyst's Office                                       |
| Josh Franco           | Office of Congressman John Garamendi  |
| Greg Gartrell         | Contra Costa Water District   |
| John Greitzer         | Contra Costa County, Dept. of Conservation & Development                      |
| Sergio B. Guillen     | Atkins  |
| Doug Haaland          | CA State Assembly, Republican Caucus  |
| Mike Hardesty         | CA Central Valley Flood Control Association and Reclamation District No. 2068 |
| Bill Hinsley          | Atkins  |
| Campbell Ingram       | Sacramento-San Joaquin Delta Conservancy                                      |
| Cindy Kao             | Santa Clara Valley Water District   |
| Al Lehenbauer         | California Emergency Management Agency  |
| Bill Llewellyn        | California Emergency Management Agency  |
| Jay R. Lund           | University of California at Davis, Center for Watershed Sciences              |
| Mike Machado          | Delta Protection Commission   |
| Lonn Maier            | Pacific Gas and Electric Company  |
| Sue McClurg           | Water Education Foundation  |
| Jeffrey Michael       | University of the Pacific, Eberhardt School of Business                       |
| Mike Mierzwa          | CA Department of Water Resources  |
| Anson Moran           | Delta Wetlands Project  |
| David Mraz            | CA Department of Water Resources, Delta Levees Program                        |

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|--------------------|--|
| James Nachbauer    | California Legislative Analyst's Office                      |
| Randall Neudeck    | Metropolitan Water District of Southern California           |
| Gail Newton        | CA Department of Water Resources                             |
| Don Nottoli        | Sacramento County  |
| Sara Pietrowski    | CA State Assembly, Republican Caucus, Legislative Intern     |
| Robert Pyke        | Robert Pyke Consulting Engineer (consultant to DPC)          |
| Emery Roe          | University of California Berkeley                            |
| Susanna Schlendorf | Office of Assembly Member Joan Buchanan (AD 15)              |
| Curt Schmutte      | State and Federal Water Contractors Agency                   |
| Jeremy Smith       | State Building and Construction Trades Council of California |
| Melinda Terry      | North Delta Water Agency                                     |
| Doug Wallace       | East Bay Municipal Utility District                          |
| Robert D. Whitley  | Whitley Burchett & Associates/Contra Costa Council           |
| David S. Zezulak   | CA Department of Fish and Game, Water Branch                 |
| Tom Zuckerman      | Central Delta Water Agency                                   |