- **Board of Directors**
  Water Planning and Stewardship Committee

May 8, 2007 Board Meeting

9-6

Subject

Proposed Framework for Metropolitan's Delta Action Plan

Summary

Overview. At the Metropolitan Board of Directors Retreat on April 13–14, 2007, the Board held a policy discussion focused on the following key Bay-Delta issues:

- What are Metropolitan's key interests in the Delta?
- What is the plan for meeting future regional needs?
- What are the components of a Delta fix?
- What are the timelines, drivers and strategies for moving forward?

The core of the Board discussion was a proposed framework for directing Metropolitan's staff actions on Delta-related issues. This framework is comprised of the following three components:

- Short-Term Action Plan. Actions over next 18 months to secure short-term permits for operating the State Water Project Bank's pumping plant and avoiding incidental take of threatened or endangered species; implementing/funding a Delta Levee Emergency Preparedness and Response Plan; and selection and approval of key elements of the Bay-Delta Conservation Plan and long-term Delta Vision.
- Mid-Term Action Plan. Actions prior to a long-term Delta solution to secure long-term operating permits for the State Water Project under the Bay-Delta Conservation Plan; develop an implementation plan and environmental documentation for the preferred long-term Delta Vision; and implementation of early start "no regrets" ecosystem restoration projects.
- Long-Term Action Plan. Actions to fully implement, govern and finance the elements of a long-term Delta Vision. These elements include water quality/supply infrastructure, Delta habitat protection and restoration, flood control and levees, and others.

Components of a Delta Fix. The Governor has identified statewide water policy as a high priority by establishing the Delta Vision Process and the Bay-Delta Conservation Plan. Similarly, the legislative leadership in the California Senate indicates through Senate Bill 27 its intent to make a decision about the Delta using the recent Public Policy Institute of California (PPIC) report as a framework for decision-making. The PPIC report identifies two categories of alternatives for securing long-term environmental and water supply solutions in the Delta: (1) Fluctuating Delta Alternatives with a fluctuating-salinity Delta and an isolated conveyance fresh-water facility; and (2) Reduced-Export Alternatives that accomplish desired flows and salinity for the aquatic environment through reduced-exports. A full analysis of these alternatives is being completed through the Bay-Delta Conservation Plan and Delta Vision process.

Preliminary staff analysis of the alternatives indicate that the Fluctuating Delta Alternatives have promising environmental and water supply reliability performance but would require major capital investments in the Delta and would require the support of a statewide coalition of urban, agricultural, environmental, and business

interests. The Reduced-Export Alternatives would require lower capital investments in the Delta but would cause a substantial water loss to the State Water Project and Central Valley Project contractors.

Timeline/Milestone. Staff is planning monthly updates to the Board on Delta-related processes and will seek board action on key issues including:

- Bay-Delta Legislation – funding for emergency preparedness and response actions; funding and governance for new Delta facilities; and continued funding for Delta ecosystem restoration actions.
- Administrative Decision Processes – selection of a long-term Delta Vision Alternative, approval and implementation of the Bay-Delta Conservation Plan, and implementation of the Delta Levee Emergency Preparedness and Response Plan.
- Legal and Regulatory Decisions – potential action on the decisions involving the California and Federal Endangered Species Act litigation; approval of biological opinions for the Central Valley Project/State Water Project Delta pumping plants operations, and long-term assurances.

Attachment 1 provides an executive summary of the proposed framework for a Delta Action Plan. A more detailed description of the key issues that are scheduled to come before the Board, and of Metropolitan's proposed Delta Action Plan, are included in **Attachment 2** entitled Report on Metropolitan's Delta Action Plan.

Policy

By Minute Item 46637, dated April 11, 2006, and Minute Item 45753, dated May 11, 2004, the Board adopted a set of Delta policy principles to ensure a solid foundation for development of future Metropolitan positions and to provide guidance to Metropolitan staff. This board letter follows those policy principles in guiding development of Metropolitan's Delta Action Plan.

Stephen N. Arakawa 5/3/2007
Stephen N. Arakawa *Date*
Manager, Water Resource Management

5/4/2007
Jeffrey Kightlinger *Date*
General Manager

Attachment 1 – Metropolitan Water District Delta Action Plan

Attachment 2 – Report on Metropolitan's Delta Action Plan

BLA #5430

METROPOLITAN WATER DISTRICT
DELTA ACTION PLAN

I. Overview

The Delta is the hub of California's water supply and is critically important to the entire State. The Delta is in a state of ecological crisis and is not sustainable unless action is taken. Building a sustainable Delta will require significant investment and will take decades. The Delta Action Plan must prioritize immediate short-term actions to stabilize the Delta while an ultimate solution is selected, and mid-term steps to maintain the Delta while the long-term solution is implemented. By 2020, California should have a long-term solution for the Delta in place that can be adjusted and adaptively managed to deal with the coming changes from climate change and California's continued population growth.

II. Short-Term Action Plan

The Governor's Delta Vision Process calls for a recommendation from the Delta Vision Blue Ribbon Task Force to be made by January 2008. SB 27 (Simitian, et al.) urges the Task Force to make its recommendation based on the findings of the Public Policy Institute of California Delta Report for legislation to be enacted in 2008. While 2008 will be the year for selecting a course of action on the Delta, actions must be taken over the next 18 months to stabilize the current situation. These actions include the following: securing state and federal Endangered Species Acts take authorization; emergency preparedness steps to prepare for possibility of catastrophic failure in the event of earthquake or flood; actions to enhance habitat for Delta smelt and other pelagic species; completion of the Bay-Delta Conservation Plan (BDCP); and actions to begin work on ecosystem restoration projects that will help species regardless of which ultimate solution is selected (e.g., marsh restoration, island rebuilding.)

III. Mid-Term Action Plan

Upon selection and enactment of an ultimate Delta solution, it will likely take ten years or more to complete environmental documentation and construct new facilities. During this period, it will be necessary to maintain the stabilization process of the Delta through the following actions: continue implementation of the BDCP projects; continue with selected habitat and fishery improvements to improve Delta native species; begin implementing flood control protections, including bypasses and levee improvements; finalize site selection and environmental documentation for new storage projects; implement new governance structures for managing the Delta; and undertake implementation of the long-term Delta solution.

IV. Long-Term Action Plan

The Long-Term Action Plan must take a global, comprehensive approach to the fundamental issues and conflicts in the Delta to result in a truly sustainable Delta. A piecemeal approach cannot satisfy the many stakeholders that have an interest in the Delta and will fail; there must be a holistic approach that deals with all issues simultaneously. In dealing with the basic issues of the Delta, solutions must address the physical changes required, as well as the financing and governance. There are three basic elements that must be addressed: Delta ecosystem restoration; water supply conveyance; and flood control protection and storage development.

A. Delta Ecosystem Restoration – A complete Delta restoration plan must address land use, growth, agriculture, water usage and conveyance, and the aquatic and land habitat of the Delta through the following elements:

- **Bay-Delta Conservation Plan –** The BDCP is a subset of Delta restoration primarily focused on the aquatic environment of the Delta and will address fishery issues.

- **Habitat Land Acquisition and Restoration –** A portion of the Delta will need to be restored to native marsh habitat for protection of aquatic and terrestrial species.
- **Sustainable Agriculture –** Programs will be needed to maintain sustainable agriculture within the Delta in ways that limit oxidization of soils, rebuild Delta islands, limit carbon production, improve water quality and provide habitat opportunities.
- **Governance –** Management of Delta restoration will require a governance structure such as a conservancy or special district that has financing and land use powers and can manage a program within multiple counties.
- **Financing –** Costs of restoration must be shared by multiple parties with water exporters and other utilities helping finance the BDCP, the state paying for broad public benefits, developers within the Delta area paying for development rights, etc.

B. **Water Supply Infrastructure –** The current practice of using Delta channels and levees for water conveyance is not sustainable. Delta species require fluctuating salinity levels that will be harmful to drinking water quality. The levees are unstable and pose a constant threat of collapse. In addition, global warming threatens water supply with rising sea levels and increased flooding. Either new Delta conveyance infrastructure must be constructed or there will be significant reductions in Delta exports requiring new water facility development elsewhere to replace lost water supplies. Important elements of this needed infrastructure include:

- **Isolated Facility –** If water supply is to be maintained, that water must be separated from Delta water supplies through construction of an isolated facility either in or around the Delta. The three isolated facility alternatives in the PPIC Report must be analyzed to determine which performs best for water supply reliability, is cost-effective, protects against earthquakes and floods, provides water quality, deals with rising sea levels and allows for Delta salinity fluctuation for native species protection.
- **Eco-Delta/Reduced Exports –** If an isolated facility is not constructed, the PPIC Report recommends that a fluctuating salinity Delta be achieved primarily through a reduction in water exports. This approach must be thoroughly analyzed to determine the economic consequences of loss in water supply, whether reduced exports will actually protect species, and identify additional water supply facilities that would be required.
- **Governance –** Management of the State Water Project should be given to a separate agency tasked with the single mission of managing and operating the Project. This would separate the utility function from the Department of Water Resources thereby removing conflicts within DWR in its role of operating a utility for certain contractors while providing state-wide water planning. Appropriate forms of such an independent agency include a special district or a joint powers authority. This new entity would continue to be regulated by state and federal agencies and all applicable laws.
- **Financing –** State and federal water contractors should pay for the operation and management of the water supply projects, including construction of new water infrastructure such as an isolated facility. A state decision to reduce exports should be financed by the state including payment for lost agriculture lands and financing for replacement of water supplies.

Report on Metropolitan's Delta Action Plan

I. Overview

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- What is the plan for meeting future regional needs?
- What are the components of a Delta fix?
- What are the timelines, drivers and strategies for moving forward?

The core of the Board discussion was a proposed framework for directing Metropolitan's staff actions on Delta-related issues. This framework is comprised of the following three components:

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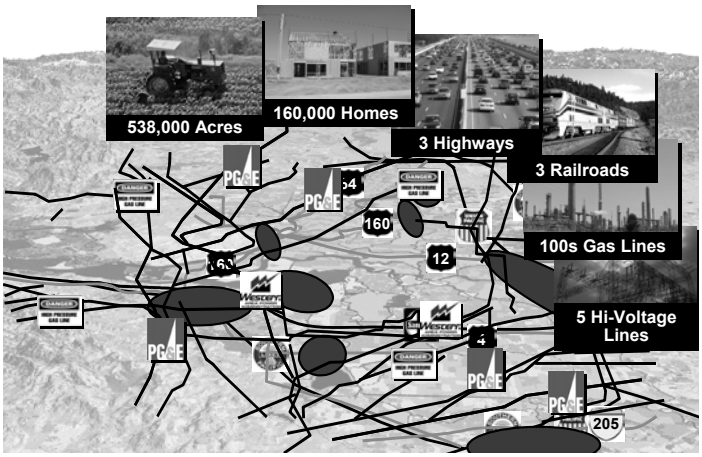
The Governor has identified statewide water policy as a high priority by establishing the Delta Vision Process and the Bay-Delta Conservation Plan. Similarly, the legislative leadership in the California Senate indicates through SB 27 its intent to make a decision about the Delta using the recent Public Policy Institute of California (PPIC) report as a framework for decision-making. The PPIC report identifies two types of alternatives for securing a long-term environmental and water supply solutions in the Delta: (1) Fluctuating Delta Alternatives with an isolated conveyance fresh-water facility; and (2) Reduced-Exports Alternatives that accomplish desired flows and salinity for the aquatic environment through reduced exports. A full analysis of these alternatives is being completed through the Bay-Delta Conservation Plan and Delta Vision process.

Preliminary staff analysis of the alternatives indicate that the Fluctuating Delta Alternative has promising environmental and water supply reliability performance but would require major capital investments in the Delta and would require the support of a statewide coalition of urban, agricultural, environmental, and business interests. The Reduced-Export Alternative would require relatively low capital investments in the Delta but would result in a substantial water loss to the State Water Project and Central Valley Project contractors.

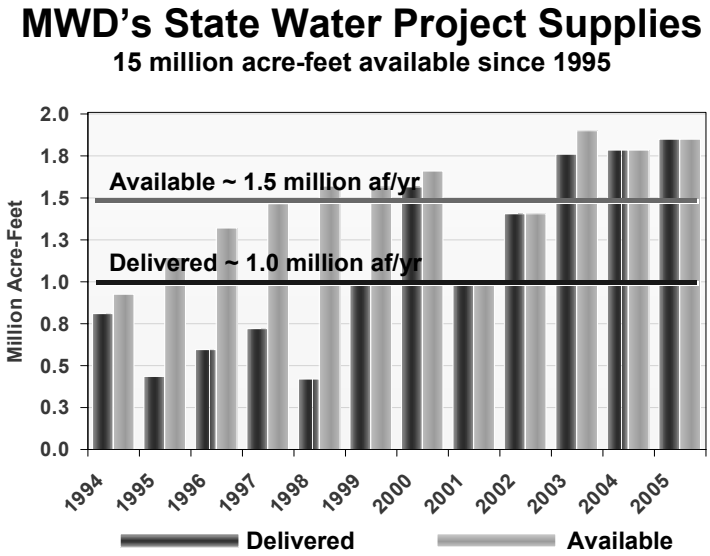
The attached report provides a more detailed description of Metropolitan's proposed Delta Action Plan.

II. Metropolitan's Interests in the Delta

The Bay-Delta has been referred to as the hub of California's water system. It provides water supply to two-thirds of California's population (22 million residents), including urban population centers in the Bay Area, Central Coast, and Southern California. It also provides water supplies to agricultural lands that irrigate 45% of the fruits and vegetables produced in the United States. From an ecosystem standpoint it is the largest estuary on the west coast of North and South America. Its waters are home to over 500 species, including 5 fish species listed on the Endangered Species Act. In addition to its water-related importance, its transportation and utility infrastructure is critical for maintaining reliable goods movement and energy throughout the Pacific power grid system.

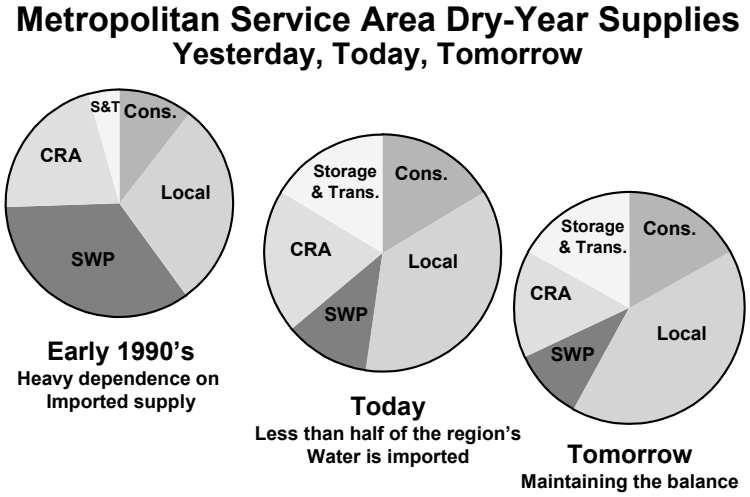


In 1960, Metropolitan signed a contract with the state of California to supply up to 2.011 million acre-feet of water per year to Southern California. Over the last decade, the State Water Project has made available approximately 15 million acre-feet to Metropolitan, with Metropolitan taking approximately 10 million acre-feet. Many of Metropolitan's local infrastructure investments heavily rely on Delta water supplies including groundwater and surface storage programs (e.g. Chino Basin, Arvin Edison, Diamond Valley Lake), and local conveyance (Rialto Pipeline, Inland Feeder Pipeline). The total cost of this supply, including power, is currently approximately $250 per acre-foot. Metropolitan's repayment of revenue bonds for the State Water Project runs through 2035. Payments for SWP capital facilities are made on a "take-or-pay" basis (i.e., these charges must be paid regardless of the amount of water delivered.) Past payments (through 2006) amount to nearly $8 billion and Metropolitan will be required to pay another $15 billion through 2035 under its State Water Contract.

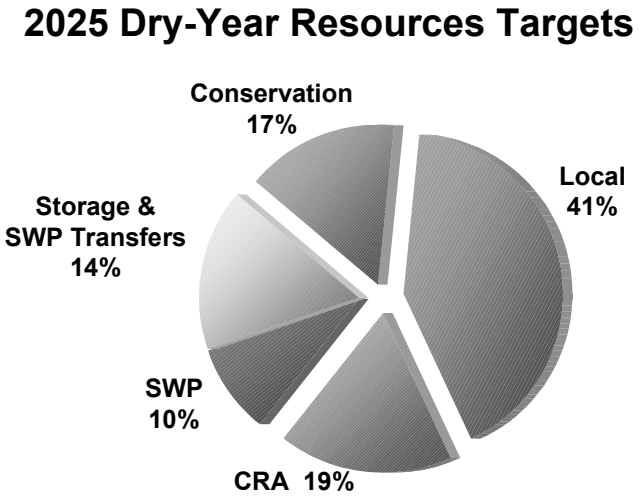


III. Meeting Future Regional Needs

Metropolitan's plan for meeting its service area supply needs has changed significantly over the last two decades. In the early 1990s, Metropolitan's long-term plans called for a heavy dependence on imported supplies from the Colorado River and Bay-Delta during dry periods. Today, under the Integrated Resources Plan adopted by the Board in 1995, less than half of the region's water is imported during those dry periods, with only about 10 percent of dry-year water delivered directly from the Delta. Through recent investments in local groundwater and surface storage, Metropolitan and its member agencies have been better able to capture and store wet-year flows from the SWP, thereby reducing environment pressures on Delta fisheries during dry periods.



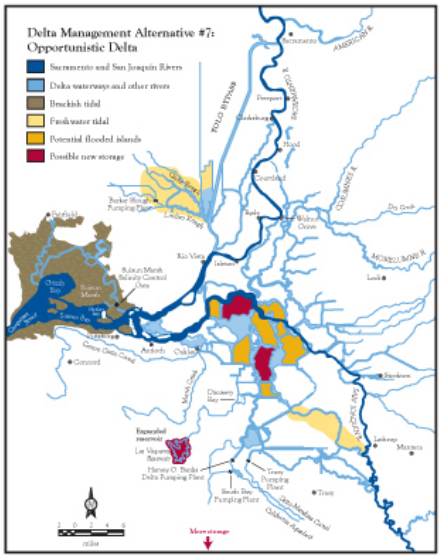
Metropolitan's Integrated Resources Plan commits to meeting future growth in Southern California's water demands substantially through increased water use efficiency, local and regional supply development, and voluntary transfers of conserved water from willing sellers. Unlike the policy debates surrounding the Delta in the past that were focused on getting more water out of the Delta, the primary supply objective of Metropolitan is to protect the existing reliability of SWP supplies to meet base water demands and replenish storage.



IV. Components of a Fix

In February 2007, the Public Policy Institute of California published a report entitled "Envisioning Futures for the Sacramento-San Joaquin Delta". The report analyses nine alternatives that are summarized into three categories–maintaining the Delta as a fresh water body, restoring natural fluctuating tidal and salinity patterns in the Delta, and reducing water supplies from the Delta to improve fish hydrology. Out of the nine alternatives, four were eliminated due to poor environmental performance and high water costs. The remaining five alternatives can be achieved through one of two methodologies: (1) Fluctuating Delta Alternatives; and (2) Reduced-Exports Alternatives.

A. <u>Fluctuating Delta Alternatives</u>. These alternatives include construction of an isolated open water channel to convey fresh water to the export facilities in the South Delta; investments in aquatic and riparian habitat in the Suisun Marsh, Cache Slough, and Yolo Bypass areas; and restoring natural tidal and salinity patterns in the Delta. The advantages of these alternatives include:



- Promising environmental performance
- Maintenance of existing water export reliability
- Significant improvements in source water quality
- Reducing water supply risks due to earthquake or flood over topping of levees
- Continued water transfer and local surface and groundwater storage programs

The disadvantages of this alternative include:

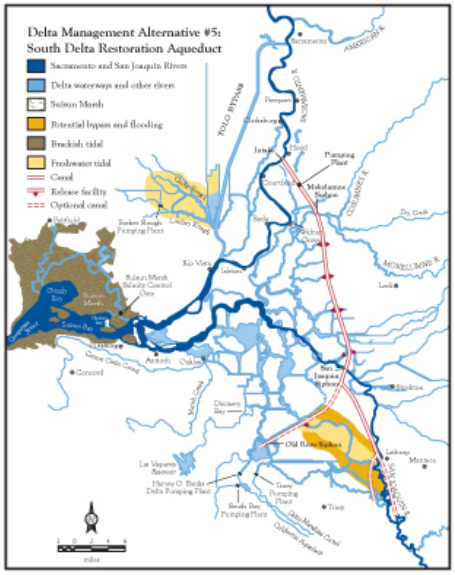
- Major capital investments in the Delta. Early estimates of an isolated, open water conveyance channel could cost up to $4 billion. MWD would be required to pay its share of these costs and additional costs for environmental enhancements.
- Challenging political differences

B. <u>Reduced-Export Alternatives</u>. These alternatives maintain reliance on through-Delta fresh water conveyance, improve fish hydrology through export reduction, and attempts to restore natural tidal salinity fluctuations in the western Delta. The advantages of this alternative are:

- Relatively low capital investment in the Delta
- Fluctuating salinity in the western Delta

The disadvantages of this alternative include:

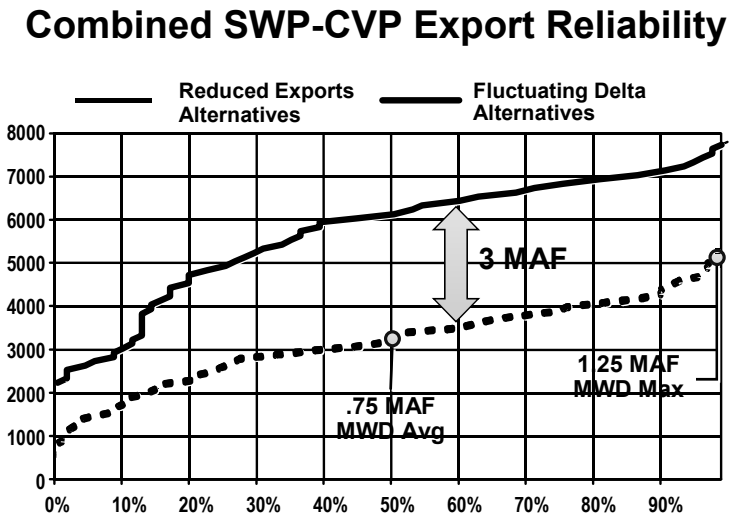
- Environmental effectiveness unclear, according to the PPIC report
- Substantial water loss to SWP and CVP contractors (Metropolitan's loss is estimated to be as much as 750,000 acre-feet per year on average)



- Substantial increase in local resource investments to meet future growth and replace lost supply
- Stranded infrastructure investments (Metropolitan, member agencies, others)

C. <u>Water Loss Analysis of Reduced-Export Alternatives</u>. The water loss estimate of the Reduced-Export Alternative is based on a computer modeled, operations simulation analysis of a proposal by Dr. Peter Moyle (Biology Professor, UC Davis) and Dr. Tina Swanson (senior scientist, The Bay Institute) entitled "Recommendations for Actions to Protect Delta Smelt" dated March 13, 2007. The analysis shows how long-term SWP-CVP export reliability would be reduced if the proposal were implemented. In summary, the computer modeling shows that export reductions would vary by water year type (3.1 million acre-feet in above normal to below normal years, and 1.2 million acre-feet in critical years). However, percent export reduction would be similar regardless of water year type (48% in above and below normal water years, and 39% in wet years).

On average, Metropolitan would receive 750,000 acre-feet less (a 50% reduction) than the 1.5 million acre-feet it currently receives from the SWP on average. Metropolitan's maximum supply during wet years would be reduced from approximately 1.9 million acre-feet to 1.25 million acre-feet. The reduction in wet year supplies would affect Metropolitan and its member agencies ability to refill local groundwater and surface storage accounts. Continued detailed analysis of the types of solutions that would be used in the reduced export approach



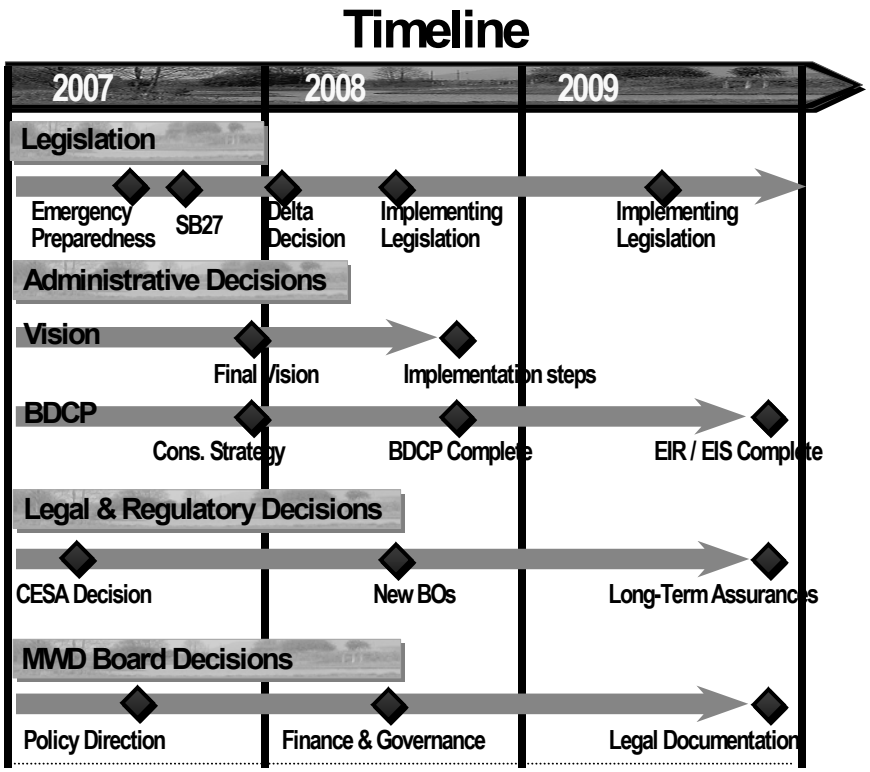
will be conducted to determine the variability in potential losses under different scenarios.

Staff is conducting a more detailed inventory of potential local resources projects and water use efficiency measures that could be implemented to mitigate delta supply losses. It is anticipated that this analysis will provide more specific information on the types of projects, implementation schedules, and costs. This replacement water analysis on feasibility and costs will be developed and brought to the board.

V. Timeline

Over the next three years, a number of key decisions will be made on the future of the Bay-Delta. These decisions include:

- Bay-Delta Legislation – funding for emergency preparedness and response actions; funding and governance for new Delta facilities; and continued funding for Delta ecosystem restoration actions.
- Administrative Decision Processes – selection of a long-term Delta Vision Alternative, approval and implementation of the Bay-Delta Conservation Plan, and approval and implementation of the Delta Levee Emergency Preparedness and Response Plan.
- Legal and Regulatory Decisions – potential action on the decisions involving the California and Federal Endangered Species Act (CESA) litigation; approval of biological opinions for the Central Valley Project/State Water Project Delta pumping plants operations, and long-term assurances



A. Board Decisions. The following timeline outlines decision points that will be brought before the Metropolitan Board through 2009:

- June 2007 – Board information/action on key Delta funding elements under the Governor's May Revise Budget, including support for key emergency preparedness funding.
- June 2007 – Board information/action to support implementation of a funding the Delta Levee Emergency Preparedness and Response Plan

- June - August 2007 – Board information/action on key Delta funding elements adopted as part of fiscal year 2007-08 state budget package, including support for key emergency preparedness funding.
- July 2007 – Board workshop on Bay-Delta and State Water Project related issues.
- September 2007 – Board information/action on long-term Delta Vision Alternatives being discussed by the Governor's Delta Vision Stakeholders Coordination Group and the Bay-Delta Conservation Plan Steering Committee.
- September 2007 – Board information/action on end-of-session legislative actions regarding the Delta.
- October - November 2007 – Board information/action on potential new legislative or state budget proposals for funding key Delta elements.
- October 2007 – Board action on recommended conservation strategy for development in the Bay-Delta Conservation Plan
- Mid-2007-08 – Board information/action on possible decisions involving the California and federal Endangered Species Acts and related litigation.
- Mid-2008 – Board information/action on possible new governance and funding strategies regarding the long-term Delta Vision Alternatives and related facilities.
- February 2009 – Board information/action on estimated funding requirements for implementation of the Bay-Delta Conservation Plan
- March 2009 – Board information/action on key elements of Bay-Delta Conservation Plan Implementing Agreement
- October 2009 – Board action of final Bay-Delta Conservation Plan Implementing Agreement and funding commitment

VI. Short-Term Action Plan

A short-term action plan is intended to implement immediate actions while the Delta Vision Process develops a long-term solution. The focus of the short-term action plan over the next 18 months is to: (1) reduce risks in the Delta due to potential levee collapse from an earthquake or flood, or to pump shutdown due to permit challenge or fishery species management issue; and (2) move forward with short-term actions to reduce incidental take and secure ESA permits; and (3) selection and approval of key elements of the long-term Bay-Delta Conservation Plan and Delta Vision.

A. Actions To Secure Endangered Species Act Permits

A1. Acquire authorization for Incidental Take for the SWP under the California Endangered Species Act (CESA). Authorization for incidental take under the state and federal Endangered Species Acts are in litigation in both state and federal courts. In a recent decision, on March 22, 2007, Judge Roesch of the Alameda Superior Court in Watershed Enforcers v. California Department of Water Resources (DWR) found that DWR does not have authorization for incidental take under the CESA and ordered all pumping to cease within 60 days unless DWR acquires incidental take authorization. Fish and Game Code Section 2080.1 authorizes the State Department of Fish and Game (DFG) to provide incidental take authorization based on a determination that a proposed action is covered by a federal biological opinion (BO) that is consistent with the requirements of the California Endangered Species Act (CESA). On April 9, 2007, DWR requested DFG's determination

that the federal BOs covering joint operation of the State Water Project (SWP) and Central Valley Project are consistent with CESA. Under the statute, DFG is required to respond within 30 days, or by May 9, 2007. Since 1998, DFG has authorized incidental take 178 times through consistency determinations. If DFG does issue a consistency determination, the determination could be challenged directly in state court, or it could essentially lapse if the underlying federal BOs are invalidated in pending federal court litigation.

A2. Obtain Federal Biological Opinions through Reconsultation for the Joint Operations of the SWP and CVP (aka OCAP – Operations Criteria and Plan). DWR's operation of the SWP also is subject to the Federal Endangered Species Act (FESA) take prohibition, but can receive incidental take authorization through a Section 7 consultation and biological opinion. DWR currently has incidental take authorization for SWP operations through federal BOs covering joint SWP-CVP operations. These BOs are the basis for DWR's request for consistency determination described above. However, both BOs are being challenged in federal court, and decisions impacting one or both of these BOs could be issued in the next few months. In addition, due to new listings and changed conditions, both BOs are the subject of new consultations and will be revised regardless of the legal challenges. DWR has applied to be an applicant in those consultations, providing it with formal standing to participate and enabling closer participation by DFG. The current timeline for completing the BOs is mid-2008. When finalized, the BOs will provide DWR incidental take authorization under FESA, as well as the basis for a revised consistency determination under CESA.

B. Actions To Reduce Incidental Take of Delta Smelt. DWR has been discussing implementation of the Environmental Water Account (EWA) for 2008 to assure that EWA is fully functional to assist in avoiding take of Delta Smelt. EWA implementation will include:

B1. Environmental Water Account (EWA) Assets. EWA procedures call for purchasing between 210,000 and 250,000 acre-feet of water per year in the water markets. To assure that EWA has assets consistent with the 2004 Biological Opinions, the State Water Project could purchase water for EWA to meet its purchase target if EWA is unable to procure the water in the market and needs the water for Delta Smelt protection.

B2. Increased Monitoring and Real-Time Operations. DWR will revise real-time monitoring in the Delta, particularly with the installation of additional turbidity monitors. Based on recent analysis by Metropolitan staff, this could result in significant improvements in the effectiveness of EWA operations, allowing operators to react earlier and more efficiently to conditions that threaten Delta smelt and avoiding water losses when pumping reductions would not likely have biological benefits.

B3. EWA Ability to Pay Back Water with Surplus Pumping. EWA rules specify that the EWA cannot pay down water debt to the SWP in San Luis Reservoir by pumping surplus Delta water at Banks until all SWP contractors' demands are satisfied, including demand for Article 21 water. This rule has constrained EWA ability to repay debt. The biological opinion covering the EWA provides that water available above specified amounts of Article 21 deliveries may be shared with EWA to allow repayment of debt. DWR will apply the rule consistent with the biological opinion. This would effectively protect average EWA assets while moderately reducing SWP Article 21 supplies.

C. Actions to Reduce Risks Due to Levee Collapse from an Earthquake or Flood

C1. Secure State Approval and Funding for a Delta Levees Emergency Preparedness and Response Plan. In February 2006, the Board directed staff to work with the State Water Contractors and DWR to develop a Delta emergency preparedness and response plan to reduce water supply impacts with the most cost-effective means of prevention and response. In April 2007, the Board directed staff to work toward implementation of a "Post-Event Strategy" in which materials would be pre-positioned to allow for a quick response to an earthquake or other disaster, bringing the SWP back online within six months.

DWR is working with Metropolitan and the State Water Contractors to integrate these water supply protections into an interim report to the Emergency Operations Plan for the Delta with a goal of securing initial funding this year. This will more fully define the pre-positioning of stockpiles, improved emergency contracting capabilities and response mechanisms for a severe levee failure emergency.

State Propositions 1E and 84 both contain funds that could be used for this emergency response plan. Some costs may not be covered by Propositions 1E and 84 funds and may be attributed to the State Water Project. In that event, Metropolitan would be responsible for its share of those costs.

D. Actions to Select and Finance Early Start "No Regrets" Ecosystem Restoration Projects. The following is a list of ecosystem restoration projects that are being analyzed as part of an early implementation of the Bay-Delta Conservation Plan. It is anticipated that these projects could be funded through existing bond funds (Proposition 1E and 84) and possibly with additional funds provided by SWP contractors and others.

D1. Restore Tidal Marsh at Meins Landing in the Suisun Marsh. The Suisun Marsh has largely been managed as non-tidal seasonal wetlands for waterfowl and other birds. Restoration of brackish tidal marsh would improve habitat for native fish in an area where they are less vulnerable to the Delta pumps. In 2006, the Department of Water Resources purchased 600 acres of land at Meins Landing. The cost of restoring this land to tidal marsh is estimated at $1 to10 million depending upon restoration land sculpting.

D2. Expedite Implementation of the Dutch Slough Tidal Marsh Restoration Project. The 1,200-acre Dutch Slough site is owned by DWR and has approved restoration plans and a draft EIR that makes it ready for implementation. The estimated restoration cost to restore the and to tidal marsh is $10 to $30 million depending upon final restoration plans.

D3. Acquire and Begin Restoration of Decker Island. Decker Island, adjacent to the Sacramento River, is currently for sale. In the 1920's, the island was a wetland that was covered by over 20 feet of dredged spoils from the dredging of the Sacramento River. Removal of the over burden materials could result in approximately 400 acres of restored tidal marsh along the main migration corridor and habitat area for native species. Experts believe Decker Island could be significant regional food source in a prime location. As an added benefit, this project could contribute significant material to address Delta stability issues and create new habitat. The estimated cost is $8 million for land acquisition and up to $50 million for removal of dredged fill material.

D4. Acquire and Begin Restoration of Tidal Wetlands in the Cache Slough Region. There are over 3,000 acres of farmland that lie within the inter-tidal elevation in the Cache Slough Region. These lands could be converted to tidal wetlands that would significantly contribute to the food web. The estimated cost is $1 to10 million depending upon land acquisition costs.

D5. <u>Modify Fremont Weir to Allow Pulse Flows into Yolo Bypass for Improved Fish Passage</u>. This project would construct a fish passage and flow control facility at the Fremont Weir capable of passing short flow pulses for periodic inundation of the Yolo Bypass. Periodic inundation provides excellent rearing habitat for juvenile salmon and splittail and critical spawning habitat for the splittail. Modification of the Fremont Weir could also allow improved fish migration through the bypass, permitting juvenile salmon to bypass the Delta Cross Channel and other hazards associated with migrating through the Delta.

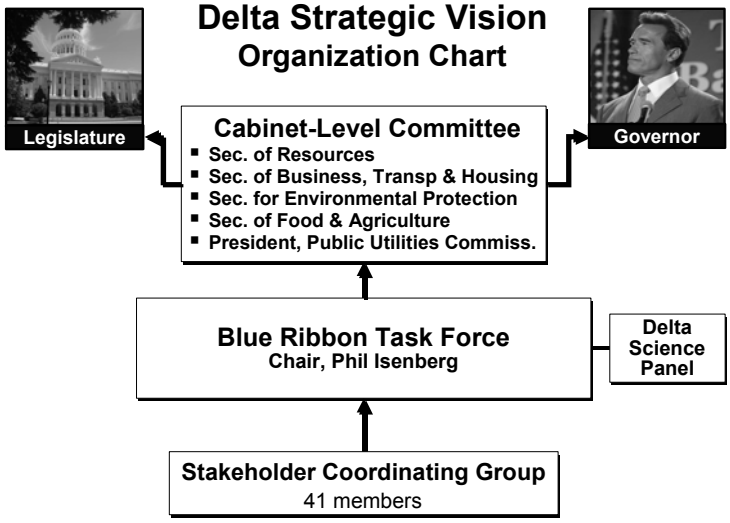
D6. <u>Expedite Implementation of the McCormick-Williamson Tract Tidal Marsh Restoration Project</u>. The Nature Conservancy (TNC) owns the 1,500-acre site and has developed restoration plans and a draft Environmental Impact Report that make it ready for implementation. TNC purchased McCormack-Williamson Tract and Staten Island with funding from the CALFED Bay-Delta Program totaling roughly $34 million. McCormack-Williamson, in particular, has ideal topography for a mosaic of habitats. The estimated cost is $1 to 10 million depending upon restoration plans.

E. <u>Select a Preferred Water Supply/Quality Alternative Under the Long-Term Delta Vision Process</u>. In September 2006, Governor Schwarzenegger established by Executive Order the Delta Vision Process. The purpose of this effort was to provide a sustainable management program for the Sacramento-San Joaquin Bay Delta.

In February 2007, the Governor appointed a 7 member Blue Ribbon Task Force to recommend a long-term vision for the Delta to a 5 member cabinet-level committee, which will ultimately make a recommendation to the Governor. The Governor also appointed 41 stakeholders, including General Manager Jeff Kightlinger, to the Stakeholder Coordination Group, which will provide advice to the Blue Ribbon Task Force.

The schedule for recommendations to the Governor by this Blue Ribbon Task Force and Stakeholder Panel are:

- Jan 2008 – Findings & recommendations report on a preferred long-term Delta Vision
- Oct 2008 – Release of a Strategic Implementation Plan for funding and implementation of a preferred long-term Delta Vision



The Delta Vision Process will review a number of elements in developing their findings and recommendations. These elements will include: ecosystem restoration, water supply reliability, water quality enhancement, flood control and levee stability, water storage, governance, financing, and others.

F. Select a Governance Strategy to Implement and Operate New Delta Facilities and Ecosystem Restoration Elements in the Delta Vision and Bay-Delta Conservation Plan. Selection of a long-term Delta Vision will likely include a recommended strategy to govern possible new water supply conveyance infrastructure and implementation of ecosystem restoration projects. Staff is currently analyzing multiple models and options for improved governance. One promising alternative being discussed is creation of two new entities:

- Bay-Delta Conservancy – this entity would implement and operate ecosystem restoration projects in the Bay-Delta region. It would set ecosystem restoration goals, and coordinate with operating entities. It would also have the ability to accept private and public funding.
- Joint SWP & Delta Conveyance Infrastructure Entity – this entity would combine the operations and management of the State Water Project and new Delta conveyance infrastructure.

The objective of these two new entities is to provide public confidence in operations, management, and governance to the public, to assist in ensuring environmental restoration, water quality and supply reliability goals are met, and to combine management functions of new and existing water supply infrastructure. Existing models for this type of governance structure currently exist in the western United States.

G. Select a Financing Strategy to Implement & Operate New Delta Facilities and Ecosystem Restoration Elements in The Delta Vision and Bay-Delta Conservation Plan. Selection of a long-term Delta Vision will likely include a recommended strategy for funding the infrastructure elements and ecosystem restoration program elements.

In April 2006, the Metropolitan Board approved a set of policy principles regarding long-term actions for the Sacramento-San Joaquin River Delta. This included the following policies related to financing:

- Long-Term Solutions Must be Cost Effective and Fairly Apportion Costs to All Beneficiaries: Long-term Delta solutions must seek to minimize the combined costs of in-Delta and outside-the-Delta actions, including actions identified in regional integrated resource management plans. Cost-sharing agreements must reflect an equitable allocation of costs among the multiple beneficiaries of the Bay-Delta. All entities that contribute to adverse environmental impacts or benefit from Delta improvements should pay their fair share of costs. Long-term investments in the Delta must be consistent with a sound long-term vision for the Delta's physical structure to avoid the possibility of significant stranded costs.
- Implement Least-Cost Strategies: Because solutions to this policy challenge will be expensive to taxpayers, utility ratepayers and consumers, it is imperative the long-term Delta policy leads to the implementation of reliable, sustainable least-cost strategies. These least-cost strategies should be consistent with regional integrated water management plans, including water use efficiency actions.
- All Beneficiaries Must Pay Their Fair Share: All entities that benefit from Delta improvements or contribute to adverse environmental impacts should pay their fair share

of costs. Cost-sharing agreements must reflect an equitable allocation of costs among the multiple beneficiaries.

- Secure State & Federal Funding Contributions for Broad Public Benefits: The broad public benefits of actions to sustain the Delta should be funded with continued contributions from the State General Fund, general obligation bonds, and federal appropriations for the implementation of Delta-related policies.
- Encourage Continued Regional Investments: State policy should encourage continued statewide implementation of conservation and local and regional investments, consistent with the policies of local and regional water supply agencies.

The Board policies will be used to guide Metropolitan staff during cost-sharing discussions to fund implementation of a long-term Delta vision and other Delta actions.

VII. Mid-Term Action Plan

The focus of the mid-term action plan is maintaining and managing the current Delta system while a long-term solution is being implemented. These include: (1) funding and implementation of early start "no regrets" ecosystem restoration projects; (2) securing long-term operating permits for the State Water Project under the Bay-Delta Conservation Plan; and (3) developing an implementation plan and environmental documentation for the preferred long-term Delta Vision. Specific elements in the Mid-Term Plan include:

A. Develop Legislation for the Recommended Delta Vision Alternative. Authorization of new state facilities and funding of the public share of the recommended Delta Vision projects will likely require legislation. Metropolitan should pursue legislation that addresses all Delta issues in a comprehensive package.

B. Develop an Implementation Plan and Environmental Documentation for the Recommended Delta Vision Alternative. On January 2008, the Governor is scheduled to release his recommendation on a long-term Delta Vision. Following that release, the Department of Water Resources and CALFED, in coordination with Delta stakeholders, will begin preparation of environmental documentation and modeling analysis as needed. The scheduled completion date for this effort is mid-2009.

C. Secure Potential Changes to State Water Resources Control Board Standards based on Recommendations from the Delta Vision Process. The recommendations from the Delta Vision process and the Bay-Delta Conservation Plan may trigger actions at the SWRCB to revise permits of the export projects. Permit changes would be due to likely changes in operations and reservoir release patterns.

D. Continue Habitat and Fishery Improvements to Reduce Conflict with Water Supply Operations. In addition to the habitat and fishery improvements being implemented under the Bay-Delta Conservation Plan, continue to support implementation of other ecosystem improvements to reduce conflicts with water diversions, such as:

> **D1. Franks Tract – False River Operable Test Gate**. This project is being analyzed to examine its ability to reduce entrainment of Delta Smelt that are present in the central Delta and lower San Joaquin River. The estimated cost is approximately $30 to 50 million depending upon mitigation.

E. Complete Bay-Delta Conservation Plan & Acquire Permit Assurances for Long-Term Operations. The Bay-Delta Conservation Plan (BDCP) is a comprehensive plan to address the ecosystem needs of the delta and associated sensitive aquatic species and to provide a mechanism for the issuance of incidental take permits pursuant to the Federal Endangered Species Act

(FESA) and the State Endangered Species Act (CESA) for SWP and CVP operations within the legal Delta. The BDCP is being prepared to provide ESA coverage under the Federal law pursuant to Section 10 for the SWP contractors through the development of a Habitat Conservation Plan (HCP). The BDCP will also be used for the issuance of a Biological Opinion pursuant to Section 7 of FESA to the Bureau of Reclamation and the CVP contractors. For SWP compliance with CESA, the BDCP is being prepared to meet the substantive requirements of a Natural Community Conservation Plan (NCCP) that would provide long-term assurances under CESA. However, the DWR and the SWP contractors may seek State take authorization under section 2081 of CESA rather than through an NCCP. In this event, the BDCP will serve as the foundation for a 2081 permit applications and associated mitigation program.

The development of the BDCP and associated Environmental Impact Statement/Impact Report is scheduled to be completed during the third quarter of 2009.

VIII. Long-Term Action Plan

The focus of the long-term action plan is to ensure that the Delta Vision addresses long-standing fundamental issues/conflicts in the Delta and adopts a comprehensive, global approach to a Delta solution that results in a truly sustainable Delta. The elements of a Delta plan include:

A. Delta Restoration and Habitat Protection. The entire Bay-Delta ecosystem needs restoration that is broader than the Bay-Delta Conservation Plan which is focused on issues related to water supply. Components of this restoration package are as follows:

- **Bay-Delta Conservation Plan** – fishery focused projects providing habitat planning and assurances for the water projects and other infrastructure.
- **Habitat Land Restoration** – part of Delta restoration will be a focus on acquiring and restoring land for environmental benefits.
- **Sustainable Agriculture** – a program to maintain agriculture within the Delta in ways that limit oxidation of peat soils, rebuilds islands, and limits carbon production.
- **Governance** – an authority or conservancy with land use authority within the Delta should be established to manage the restoration.
- **Financing** – restoration should be cost-shared by multiple parties that include water users, owners of other in-Delta infrastructure, a state share for broad-based public benefits, and developer fees from in-Delta development, among others.

B. Water Supply Infrastructure - As part of the comprehensive approach to Delta issues, conveyance of water through or around the Delta must be addressed.

1. **Infrastructure –** The Delta Vision process should thoroughly analyze the approaches recommended in the PPIC Report that call for either an isolated facility or reduced exports.

    a. **Isolated Facility -** If an isolated facility approach is recommended, it should be located and sized to address seismic safety issues and issues associated with Global Warming such as higher run off rates and a rising sea level.

    b. **Eco-Delta/Reduced Exports** – A recommendation for this approach must address the economic consequences of developing adequate replacement water as well as deal with permitting of alternative projects such as ocean desalination.

2. **Governance** – A separate agency should be created to govern and operate the State Water Project including any new Delta water supply infrasture. This agency would be created under state law and be subject to all requirements of law, regulated by the state

resource agencies and State Water Resources Control Board. This would allow DWR to focus on its mission as the state's water planning agency and eliminate the confusion created by the state regulating its own activities.

3. **Financing** – The beneficiaries should pay for any new infrastructure so the state and federal contractors would contract to pay for an isolated facility. A reduced exports approach should be state funded with funding for replacement water.

C. Flood Control and Storage – The third component of a comprehensive approach would be construction of flood control and storage facilities. These actions would include levee hardening in critical areas, construction of bypasses to deal with increased runoff associated with climate change and construction of more storage, either surface water or ground water storage.

1. **Governance –** No new governance structure is recommended for this component. Existing agencies such as the Army Corps of Engineers, the Bureau of Reclamation, and DWR should manage the flood control projects. New storage facilities should be managed by the agencies that construct them.

2. **Financing** – The state and federal governments should be responsible for the costs of flood control facilities. New storage facilities should be financed by the beneficiaries of those projects with state financing for the broad public benefits associated with those projects.