

California Bay-Delta Program

Environmental Water Account Multi-Year Program Plan (Years 4-7)

Implementing Agencies:

Department of Water Resources

Department of Fish and Game

United States Bureau of Reclamation

United States Fish and Wildlife Service

United States National Marine Fisheries Service

August, 2003



Goals and Objectives

Goals of the Program and CALFED Record of Decision Commitments

The Environmental Water Account (EWA) has been established to provide water for the protection and recovery of at-risk fish species beyond water available through existing regulatory actions related to the operations of the State Water Project (SWP) and the Central Valley Project (CVP). EWA's purpose is to provide protection to the at-risk fish species of the Bay-Delta estuary through environmentally beneficial changes in SWP/CVP operations at no uncompensated water cost to the projects' water users. This approach to fish protection requires the acquisition of alternative sources of project water supply, called the "EWA assets," that are to be used to augment streamflows, Delta outflows, to modify exports, to provide fishery benefits, and to replace the regular project water supply interrupted by the changes to project operations.

The CALFED Record of Decision (ROD) provided a commitment, subject to specified conditions and legal requirements, that for the first four years of Stage 1, there will be no reductions, beyond existing regulatory levels, in CVP or SWP Delta exports resulting from measures to protect fish under Federal or State endangered species acts. This commitment is based on the availability of three tiers of assets:

- Tier 1 is baseline water. The regulatory baseline consists of the biological opinions on winter-run salmon and delta smelt, 1995 Delta Water Quality Control Plan, and 800 TAF of CVP Yield pursuant to CVPIA Section 3406(b)(2).
- Tier 2 consists of the assets in the EWA combined with the benefits of the ERP and is an insurance mechanism that will allow water to be provided for fish protection and recovery when needed, without reducing deliveries to water users.
- Tier 3 is based upon the commitment and ability of the State and Federal Agencies to make additional water available should it be needed. In March 2002, the State and Federal Agencies prepared an implementation strategy for Tier 3, establishing a timely scientific panel process and identifying tools and funding should implementation of Tier 3 prove needed.

Accomplishments

In the first two years and part of the third year, the concept of the EWA as presented in the CALFED ROD has become a reality in providing additional protection to sensitive Bay/Delta fish species and obtaining the ESA commitments to stabilize the water supplies of the SWP and CVP.

Although 2002 was a dry year, both SWP and CVP allocations to their users south and west of the Delta were at least 70 percent of contractor requests by late summer. Despite various challenges EWA has faced through the past two and a half years, its accomplishments have been significant. For example, EWA provides the Project and Management Agencies the ability to plan in advance for operations changes taken to protect fish. This “proactive” (as opposed to reactive) approach to resource protection not only reduces conflict and uncertainty, it permits more timely responses and helps to avoid crisis management. With EWA, time is not lost negotiating the scale, duration, or timing of an operations response, or in weighing of possible project impacts (since EWA compensates for them).

The specific, year-by-year accomplishments of the EWA program are summarized below.

Year 2001

- The Environmental Water Account obtained water through purchases and operational arrangements and used it to replace project supplies lost during pumping curtailments for fish, thus preserving water supply reliability.
- Stream habitat was improved when release of EWA water from an upstream reservoir coincided with a habitat need.
- Water was released from river level outlets, bypassing the powerhouse at Folsom Dam to improve salmon spawning conditions and provide suitable water temperature for over-summering juvenile steelhead in the lower American River; EWA compensated for the lost generation.
- ESA-related commitments for continued operation of the CVP and SWP were provided based on a functional EWA and \$150 million in Ecosystem Restoration Program funding.

Year 2002

- The Environmental Water Account obtained water through purchases and operational arrangements and used it to replace project supplies lost during pumping curtailments for fish, thus preserving water supply reliability.
- Stream habitat was improved when release of EWA water from an upstream reservoir coincided with a habitat need.
- Water was released from river level outlets, bypassing the powerhouse at Folsom Dam to improve salmon spawning conditions and provide suitable water temperature for over-summering juvenile steelhead; EWA compensated for the lost generation.
- Partnered with the State Water Project contractors in a 2:1 Exchange Agreement to protect some EWA assets in San Luis Reservoir that would have been lost due to the reservoir filling. The contractors received water to augment their supplies in March and returned half of this amount to the EWA after the high point in San Luis Reservoir storage in April, thus preserving the returned EWA water for fish protection actions.
- Facilitated an increase in the allocation to south-of-Delta agricultural CVP contractors through coordinated management of EWA and (B)(2) water that ultimately resulted in a 70 percent allocation.

- Continued coordination between the Management Agencies and Project Agencies to maximize opportunities to obtain and use EWA assets for fishery benefits.
- ESA-related commitments for continued operation of the CVP and SWP were provided based on a functional EWA and \$150 million in Ecosystem Restoration Program funding.

Year 2003

- The Environmental Water Account obtained water through purchases and operational arrangements and used it to replace project supplies lost during pumping curtailments for fish, thus preserving water supply reliability.
- ESA-related commitments for continued operation of the CVP and SWP were provided based on a functional EWA and \$150 million in Ecosystem Restoration Program funding.

The following table summarizes the level of EWA purchases and variable assets that were obtained in 2001, 2002, and 2003 respectively. In the first two years, the EWA has achieved over 530 TAF of actions to better protect fish and improve habitat and purchased over 550 TAF of water to replace the water used to implement these actions.

EWA ASSETS ACQUIRED IN 2001, 2002 AND 2003

Assets Acquired	2001 (Dry Year) (TAF)	2002 (Dry Year) (TAF)	2003* (Above Normal Year) (TAF)
Purchases Upstream Of Delta			
State	+105	+135	+ 70
Federal	0	+ 7	0
Conveyance and Carriage Costs	- 17	- 31	- 14
Purchases South Of Delta			
State	+159	+ 37	+145
Federal (in kind in 2001)	+ 72	+ 60	0
Subtotal	=319	=208	=201
Operational	+ 55	+19 (Net)	+ 54 (Net)
Total	=374	=227	=255
Fish Actions	- <u>290</u>	- <u>280</u>	- <u>315</u>
	<u>(290 State/ 0 Fed)</u>	<u>(208 State/ 72 Fed)</u>	<u>(290 State/ 25Fed)</u>
Carryover to 2002	= 84	+84	
Carryover to 2003		=31	+ 31
Carryover to 2004			= -29
Source Shift Activation	50 of 100	0 of 100	0 of 100

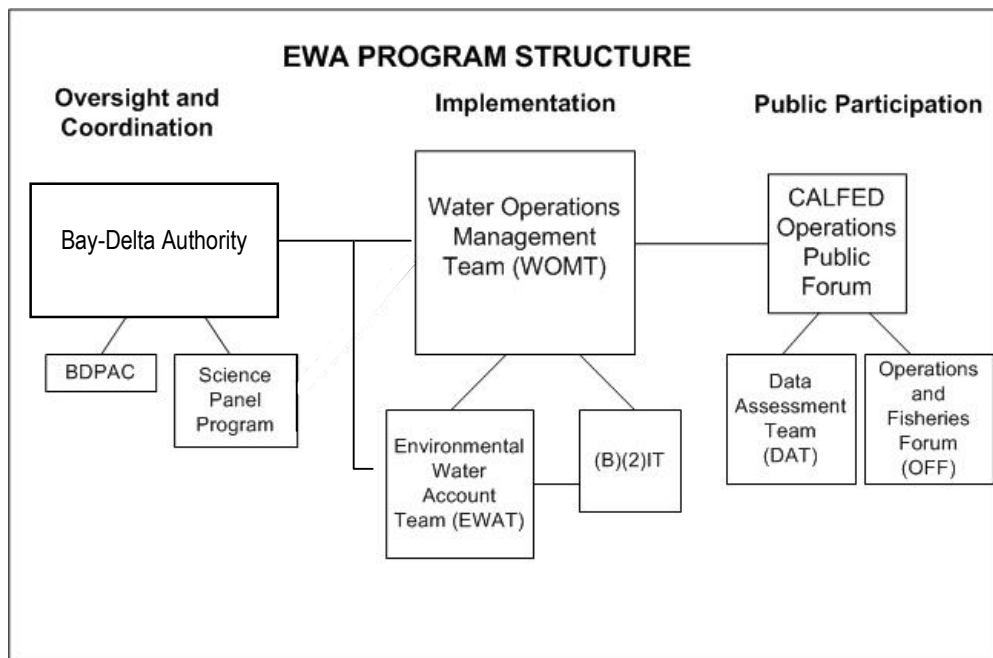
* Estimated quantities since 2003 is only about half over.

Program Structure

EWA is cooperatively implemented by three management agencies and two project agencies. The management agencies are the U.S. Fish and Wildlife Service (USF&W), the National Marine Fisheries Service (NMFS) and the California Department of Fish and Game (CDF&G), and the project agencies are the United States Bureau of Reclamation (USBR) and the California Department Water Resources (DWR). The management agencies are responsible for managing EWA assets and recommending SWP/CVP operational changes beneficial to the Bay-Delta ecosystem and/or the long-term survival of fish species, while the project agencies cooperate with the management agencies in administering the EWA and implement operational changes proposed by the management agencies, as appropriate.

The five participating agencies meet twice weekly, once at staff level through a team called the Environmental Water Account Team (EWAT) and once at management level as a group called the Water Operations Management Team (WOMT), to discuss the program and decide on program actions. Both of these teams comprise members from the five participating agencies. EWA activities are coordinated with the CVPIA B(2) Interagency Team and the WOMT, and are an integral part of the annual operating plan for the CVP and SWP. A multi-year EWA water acquisition strategy is developed as part of the annual operating plan.

In addition to the above, various other entities work together with the participating agencies in the EWA program, through activities like coordination and oversight, review, providing information, and organizing public participation. The chart and table provided on the following page illustrate the role played by the various entities.



Agency	Roles and Responsibilities
California Bay-Delta Authority	<ul style="list-style-type: none"> • Oversight and coordination
Department of Water Resources	<ul style="list-style-type: none"> • Acquisition of water • Accounting of EWA assets • Approval of use of SWP facilities • Implementation of EWA actions • Approval of transfers by SWP contractors and other non-SWP entities
U. S. Bureau of Reclamation	<ul style="list-style-type: none"> • Acquisition of water • Approval of use of CVP Facilities • Implementation of EWA actions • Approval of federal contractor and settlement Agreement holder transfers
Department of Fish and Game	<ul style="list-style-type: none"> • Manage EWA assets • Coordinate EWA with CVPIA 3406 (B)(2) assets • Recommend Fish Actions
U. S. Fish and Wildlife Service	<ul style="list-style-type: none"> • Manage EWA assets • Coordinate EWA with CVPIA 3406 (B)(2) assets • Recommend Fish Actions
National Marine Fisheries Service	<ul style="list-style-type: none"> • Manage EWA assets • Coordinate EWA with CVPIA 3406 (B)(2) assets • Recommend Fish Actions

Major Activities

Water and Power Acquisitions

- **Continue to Provide Protection to the Fish of the Delta Through Changes in SWP/CVP Operations –** The EWA will continue its primary objective—fish protection in the Delta through changes in SWP/CVP operations and providing water supply reliability.

Schedule: Ongoing

- **Short-Term Purchases from Established and New Water Sources –** The EWA's strategy will continue to include short-term purchases from existing and new providers throughout the four-year period, although the volume of water acquired in this manner will provide a declining proportion of total resources.

Schedule: Ongoing

- **Multi-Year Purchases from Established and New Water Sources –**Multi-year purchases provide some important advantages to the EWA, including increased certainty of the availability of assets and their pricing. Multi-year agreements are expected to be a core part of acquisition strategy over the next four years.

Schedule: To be initiated in Winter 2003-2004

- **Assess SWP/CVP Demand Buy Down –** Explore ways for the EWA to pay SWP/CVP contractors to forego a portion of their requested project water in return for compensation from EWA. This option would allow the EWA to receive credit toward SWP/CVP water debt by this compensated reduction in use by some SWP water contractors.

Schedule: To be initiated in Winter 2003-2004

- **Evaluate the Potential for Land Retirement and Drainage Mitigation for EWA Assets –** Conduct discussions with parties in the San Joaquin Valley outside the Westlands Water District that desire to retire drainage-impacted lands, thereby potentially making the water supply available to the EWA. The EWA Team plans to review this option to address an increasing depletion of banked groundwater in the San Joaquin Valley that will affect asset availability to the EWA in future years.

Schedule: To be initiated in Winter 2003-2004

- **Explore Coordination of New Bullards Bar and Oroville Reservoir Operations –** Explore operational coordination of existing non-SWP/CVP reservoirs with the SWP/CVP flood control and water supply systems to develop contractual agreements for additional long-term EWA water supply benefits.

Schedule: To be initiated in Winter 2003-2004

- **Investigate Groundwater Banking Capability –** Initiate consideration of storage south of the Delta to provide in-ground storage for EWA assets.

Schedule: To be initiated in Winter 2003-2004

Environmental Documentation

- **Complete the EWA EIR/EIS –** DWR and USBR share the lead as acquisition resources become available to the agencies. USBR is the lead for the completion of the EWA EIR/EIS contract; DWR is the CEQA lead agency and USBR is the NEPA lead agency. DFG, USFWS and NOAA Fisheries (NMFS) are cooperating agencies. This EIR/EIS covers EWA operations, using existing facilities. Acquisition from new sources may require supplemental CEQA and/or NEPA coverage.

Schedule: To be completed by February 2004

Tier 3 Reserve

- **Ensure Availability of Assets for Tier 3 if needed**—While negotiating contracts for acquisition of Tier 2 assets, ensure that the assets acquired would be sufficient to cover Tier 3 as well, if needed.

Schedule: Ongoing

Oversight and Coordination

- **Make a decision on continuation of EWA beyond September 30, 2004** – The ROD specifies that the EWA and the program-level commitments expire September 30, 2004, unless extended by written agreement among the five EWA agencies.

Schedule: To be completed by September 2004

- **Continue Participation in the Planning of California Bay-Delta Program Storage and Conveyance Programs** – An important way the EWA can obtain sufficient long-term water assets to assure fishery protection and water supply reliability is obtaining conveyance capacity and storage rights in new or expanded reservoirs, as envisioned in the ROD. Several projects have been proposed, including the expanding the existing Los Vaqueros Reservoir, the Delta Wetlands Project, the Sites Reservoir, the Westlake Farms Multi-Benefit Reservoir, and expanding the existing Shasta Reservoir.

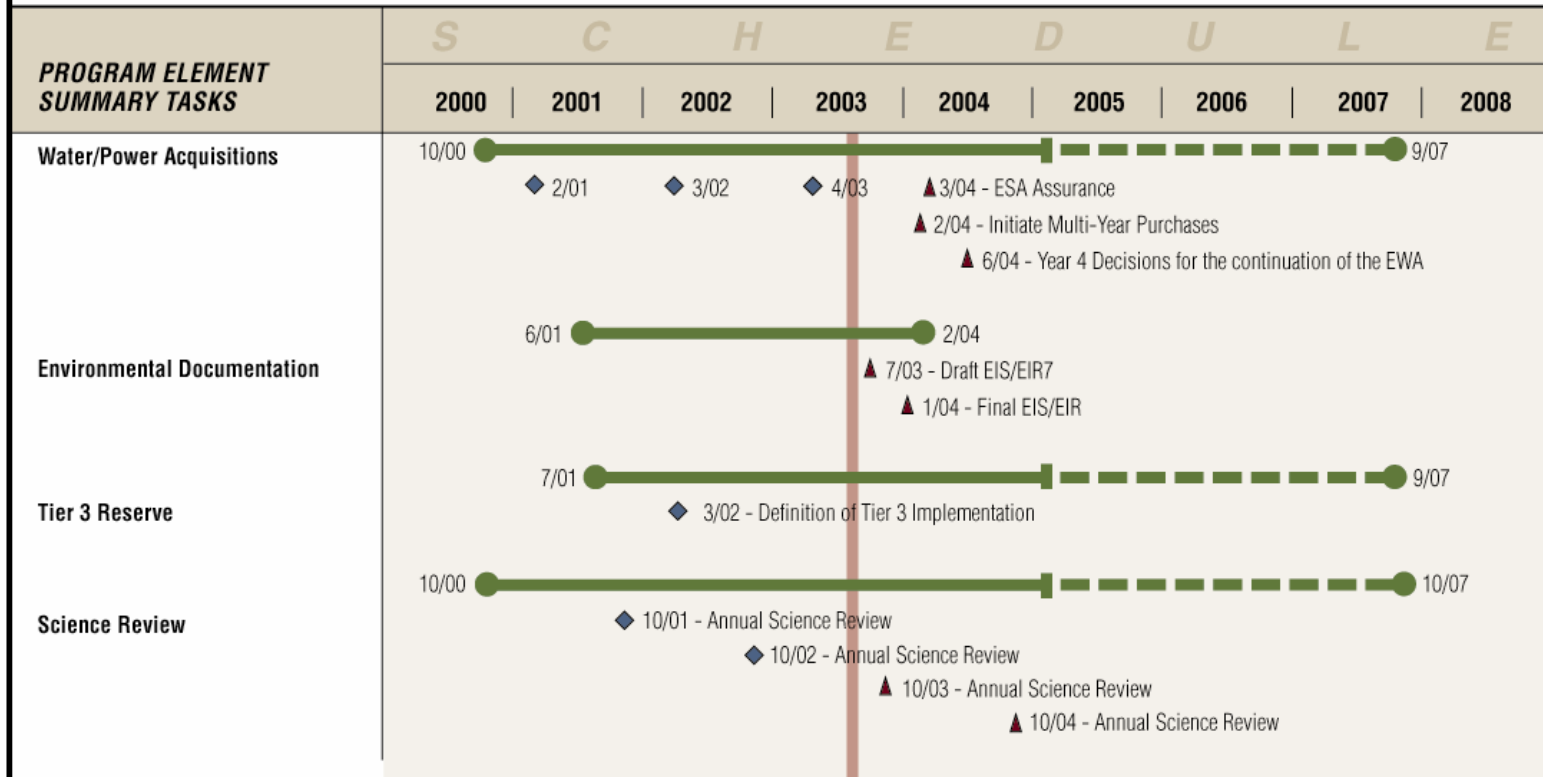
Schedule: Ongoing

Schedule

ENVIRONMENTAL WATER ACCOUNT

Fish protection and water supply reliability benefits were achieved in 2002, despite a second consecutive dry year. An environmental review process for the EWA has been initiated, with completion expected in May 2003. The second annual science review was held in 2002, and CALFED agencies are working to integrate EWA activities into the 2002-'03 water operations plan. Tier 3 water assets are expected to be operational in 2003.

- ◆ Completed Milestone
- ▲ Remaining Milestone
- Present Schedule
- Date Reporting Period Ends



Year 4 Activities

Water and Power Acquisitions

- **Continue to Provide Protection to the Fish of the Delta through Changes in SWP/CVP Operations –** The EWA will continue its primary objective—fish protection in the Delta through changes in SWP/CVP operations and providing water supply reliability.

Schedule: Ongoing

- **Short-Term Purchases from Established and New Water Sources –** The EWA's strategy will continue to include short-term purchases from existing and new providers throughout the four-year period, although the volume of water acquired in this manner will provide a declining proportion of total resources.

Schedule: Ongoing

- **Initiate Multi-Year Purchases from Established and New Water Sources –** Multi-year purchases provide some important advantages to the EWA, including increased certainty of the availability of assets and their pricing. Multi-year agreements are expected to be a core part of acquisition strategy over the next four years.

Schedule: To be initiated in Winter 2003-2004

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Schedule: To be initiated in Winter 2003-2004

- **Investigate Groundwater Banking Capability –** Initiate consideration of storage south of the Delta to provide in-ground storage for EWA assets.

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Schedule: Ongoing

- **Science Review** - The Science Review Panel will evaluate EWA program performance.

Schedule: Ongoing

Integration with the Science Program

The EWA program operates on a calendar year basis. During the fall of each year, the year's activities are reviewed by a science panel which looks at the overall concept of EWA and the plans; EWA actions, i.e., uses of water and actions to protect fish, and justifications for actions that took place during the year.

The EWA program was initiated in August 2000, and the first science panel review was conducted in October 2001. The panel recommended that State and Federal agencies provide sufficient agency staff time to support the development of the EWA. The panel also provided various recommendations aimed at increasing scientific credibility by enhancing the data reliability and improving flexibility in EWA management by considering a wider set of management objectives. To accommodate these recommendations, EWA prepared Budget Change Proposals to request five more positions for Year 4.

The second EWA science panel review, conducted in October 2002, recommended flexibility to carryover program funds from one year to the next. EWA's \$10 million of Proposition 204 funds were carried over from 2002 to 2003, which allowed the program to continue even though Federal funds were less than needed. The panel will review the EWA Year 3 program in the fall of 2003. The science panel review of EWA will be coordinated with the science work plan.

The science review of EWA is a critical aspect in improving the management and operation of the EWA, to fulfill its goals. Knowledge from science is continually being gained and is implemented during regular meetings, such as the EWAT and the DAT meetings, to make better decisions on fishery actions and EWA assets management. As, over time, more reliable information is obtained on the effects of exports at key times of fish, the operation and management of EWA are adjusted to optimize the effectiveness on EWA actions.

Cross-Program Relationships

South Delta Improvement Program – The parties are discussing an increase in the average permitted Clifton Court intake rate from 6,680 cfs to 8,500 cfs. The proposal has generated discussions over the impact on the EWA, and the impact of current EWA rules on the benefits that SWP contractors would receive from the increase to 8,500 cfs. The issue focuses on whether the EWA would be responsible for the increased quantity of replacement water required when operational curtailments are measured against the 6,680 cfs benchmark (current conditions) or the 8,500 cfs benchmark (proposed).

Storage Program – The proposed storage projects - expansion of the Shasta and Los Vaqueros Reservoirs and construction of new storage facilities such as Delta Wetlands, Sites Reservoir and Westlake Farms Multi-Benefit Reservoir offer potentially significant yield and storage benefits to the EWA, should these projects be able to attract the necessary participation and funding.

Environmental Restoration Program – The parties are discussing the potential to purchase water jointly to provide instream flows needed for ERP, including the Environmental Water Program (EWP), and EWA assets once the water reaches the Delta. The potential exists to reduce costs and provide more environmental benefits with the water purchased for both programs.

Water Transfer Program – The parties are discussing coordination of water acquisitions and establishment of water transfer principles.

Stage 1 Funding

Environmental Water Account Funding (\$ in millions)	Program Year							Total
	1	2	3	4	5	6	7	
State	\$58.83	\$19.15	\$45.25	\$35.86	\$32.53	\$0.06	\$0.06	\$191.74
Federal	\$0.07	\$12.99	\$6.15	\$8.15				\$27.36
Local/Water User	\$0.00	\$0.00	\$0.00	\$0.00				\$0.00
Revised Stage 1 (Actual & Expected Funding) ¹	\$58.90	\$32.14	\$51.40	\$44.01	\$32.53	\$0.06	\$0.06	\$219.10
Original ROD (Aug, 2000) ²	\$50.0	\$50.0	\$50.0	\$50.0				\$200.0
Revised ROD (Dec, 2002) ³	\$59.1	\$41.7	\$51.4	\$65.7				\$217.9

¹ Funding for Years 1-2 reflects actual State encumbrances & expenditures and federal obligations. Funding for Year 3 reflects final State and Federal budgets. Funding for Year 4 reflects proposed Governor's and President's budgets. Expected funding in Years 5-7 includes remaining state bond funds until spent and ongoing State base funding, plus estimates for local matching to grants for years where bond funding is available. Federal appropriations for Years 5-7 are unknown; therefore, federal funding is not included beyond Year 4. Note: Funding for Years 5-7 is dependent on a decision to continue the EWA beyond Year 4.

² Original Stage 1 funding estimates from the Record of Decision.

³ Revised ROD estimates are revised estimates of funding needs as of December 2002. These were included in the January 2003 program tracking report. Funding estimates do not go beyond Year 4 because a decision to continue the EWA beyond Year 4 is still under review.

Stage 1 Funding by Task

Environmental Water Account Funding (\$ in millions)	Program Year							Total
	1	2	3	4	5	6	7	
Water & Power Acquisitions	\$57.15	\$31.48	\$44.54	\$40.40	\$32.27			\$205.84
Tier 3 Water			\$6.25	\$3.20				\$9.45
Environmental Documentation	\$1.39	\$0.20	\$0.25	\$0.20	\$0.20			\$2.24
Oversight and Coordination	\$0.36	\$0.46	\$0.36	\$0.21	\$0.06	\$0.06	\$0.06	\$1.57
Revised Stage 1 (Actual & Expected Funding) ¹	\$58.90	\$32.14	\$51.40	\$44.01	\$32.53	\$0.06	\$0.06	\$219.10
Original ROD (Aug, 2000) ²	\$50.0	\$50.0	\$50.0	\$50.0				\$200.0
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