BOARD OF DIRECTORS
METROPOLITAN DOMESTIC WATER IMPROVEMENT DISTRICT
PIMA COUNTY, ARIZONA

February 12, 2003

**** Board Room ****
Metropolitan Domestic Water Improvement District
6265 N. La Cañada Drive
Tucson, AZ 85704

MINUTES

Board Members Present:	Dennis Polley, Chair Dan M. Offret, Vice-Chair Jim Doyle, Member James Tripp, Member Suzanne Downing, Member
District Staff:	Mark Stratton, General Manager Warren Tenney, Clerk of the Board

Special Meeting

I. Call to Order and Roll Call

Dennis Polley, Chair of the Board of Directors of the Metropolitan Domestic Water Improvement District (District), called the Board meeting to order at 8:12 a.m. Dennis Polley, Dan M. Offret, James Tripp, and Suzanne Downing were present. Jim Doyle arrived at 8:20 a.m.

II. Comments from the General Public

There were no comments from the general public.

III. State of the District and Future – Items for discussion and Possible Direction

A. Overview of the District.

Mr. Stratton presented an overview of the District, noting how the District was founded in 1992. He explained that currently the District has 16,750 customers, with a population of 45,000. Mr. Stratton said that 90% of the customers are residential. The District has 8,858 acre feet annual allocation of Central Arizona Project (CAP) water, which will be increased by another 4,601 acre feet contingent upon CAP, Bureau of Reclamation, and Indian settlements. The District has 50 full time employees plus 2 vacant positions.

Jim Doyle arrived at 8:20 a.m.

Mr. Stratton explained that the Metro Main Service Area encompasses 23 square miles with 15,150 service connections, 28 active wells, and 10.5 million gallons of storage. During 2002, approximately 9,100 acre feet of water was used by customers in the District. This amount was more than the District's current CAP allocation. Mr. Stratton said the current drought has aggravated the increased water usage. It is hoped that the managed recharge project, which will provide the District the opportunity to obtain credits for some of its effluent, will help make up the difference.

Mr. Stratton described the Hub Service Area that Metro Water District serves, noting that it is built out. He explained that the Hub Service Area has 1,600 service connections and 5 active wells. Arsenic issues will need to be addressed at two of these wells. The Hub Service Area does not have an assured water supply designation because it is built out and a hydrological analysis had just been completed last year. Without more renewable water supplies available, a designation is not warranted at this time. With the completion of the new storage tank, the Hub Service Area has 446,000 gallons of storage.

B. Water Resources.

Mr. Stratton explained that the District has a number of water resources that can be combined to assist the District with its future water needs. Staff has pursued establishing a number of water resource options rather than relying on one source. At present, the District relies solely on ground water. Mr. Stratton noted that there has been a decline in the average groundwater levels at various wells, some of which have been significant. The declines have increased the need to bring in renewable water supplies. However, in order to recover CAP water the District cannot use a well as a recovery well if it has exceeded a four foot or more decline during a five year period. This makes it difficult for the District to recover some of its credits. Due to this issue, during the past several years the District has been forced to utilize the Central Arizona Groundwater Replenishment District (CAGRD) to make up the difference which has been costly.

Mr. Stratton noted that the decline in the groundwater levels is representative of the region. Oro Valley has experienced 8 to 12 feet of annual water level declines at a number of its wells, and is also experiencing a significant amount of growth. With the growth in Oro Valley upstream from the District and compounded by the drought it is more difficult for water to naturally recharge and make its way down the Canada Del Oro Basin. Mr. Stratton emphasized that this does not imply that the District does not have groundwater for the future; however, it will have to consider reaching further depths for wells. Drilling deeper into the ground is more costly due to additional pumping costs and addressing water quality issues. Mr. Stratton explained that in the future, the District will be paying more for capital expenditures related to water resources.

Mr. Stratton said utilizing the CAP allocation is critical. The District has been working with the Bureau of Reclamation through the SWARMS study to look at how to bring CAP water into the Canada Del Oro Basin. At present, all of the District's CAP recharge activities are occurring at

the Lower Santa Cruz Recharge Project, the Avra Valley Recharge Project, and at groundwater savings projects located in the Marana area. The basic concept is to bring CAP water along Moore Road or Tangerine Road to the Big Wash and Oasis recharge sites so that recharge occurs in the CDO Basin. The Town of Oro Valley and the Town of Marana have worked with the District in pursuing jointly this project.

Mr. Stratton said the District has also looked at another alternative, the Linda Vista transmission line, which would allow the District independence or to work jointly with others. Specifically, the District would work with Marana and CMID to utilize a CMID well to recover CAP water. The water would be recovered and transmitted along Linda Vista Road to the Herb Johnson Reservoir. The Board authorized the design of this transmission line last year. The District is working with Marana to establish an agreement for such a project as well as discussed with Marana and CMID on whether to utilize an existing well or drill a new well. The advantage of the Linda Vista transmission line is that it can be utilized whether the District is working to bring CAP water on its own or whether working for the larger Canada Del Oro storage and recovery project. The Linda Vista transmission line would buy the District time by bringing the recovered CAP water directly to the Herb Johnson Reservoir. It would allow the District's groundwater wells the opportunity to recover.

Mr. Stratton said the Bureau of Reclamation has also been working with the District, Oro Valley, and Marana in looking at treatment scenarios. The treatment plant would be considered with bringing CAP water into the area. Studies have been done looking at slow sand filtration as well as RO treatment and the results have been positive. It is difficult at this time to know exactly what Marana and Oro Valley's needs will be in the future and therefore, the District is looking at all options at this time so that the District can proceed as it best determines.

Mr. Offret asked if the proposed legislation for multi-jurisdictional water facility districts would be useful for the CDO storage and recovery project. Mr. Stratton said that it is and could be a useful tool, especially if the financing ability of such a district is further developed. He emphasized that the utilization of CAP water involves a number of phases from the transmission line to the treatment plant concepts. The large scenario that includes all the transmission lines and the treatment plant are showing $80 million for the transmission lines and $40 million for the treatment plant with the District's share being about half that amount.

Mr. Doyle said this appears to be critical and that it needs to be done now. Mr. Stratton pointed out that the design work for the Linda Vista transmission line is a two year project due to the pigmy owl survey. He noted that if the Linda Vista transmission line is built within the next 5 to 8 years then the other scenario's are not as high a priority and give the District some time. The Linda Vista transmission line would allow for the recovery of effluent and CAP water. Technically, it would be neither but the District would be able to recover the effluent and CAP credits.

Mr. Stratton pointed out that the District does have the effluent and has been working with Tucson National to look at having the golf courses irrigated with effluent rather than

groundwater. Pima County has emphasized that if Tucson National wants to build nine more holes that all of its golf courses, in time, need to be irrigated by effluent. Mr. Stratton said that Pima County is also interested in looking at possibly an effluent line that would come from the Ina Road treatment plant to the Arthur Pack Park as well as onto the Tucson National. Oro Valley is looking at Tucson Water to use its reclaim system for its golf courses irrigation. Mr. Stratton noted that the District has always viewed conservation as an important tool and encouraging the wise use of its water resources. The District was a founding member of Water Conservation Alliance of Southern Arizona (Water CASA) and has been able to handle ADWR conservation requirements.

C. Water Quality.

Mr. Hill reviewed the water quality issues that the District is required to address. He noted that the District must meet the standards set by the Safe Drinking Water Act. The Environmental Protection Agency (EPA) is constantly looking at constituents that it wants tested by water providers because technology has become so precise that it has caused EPA in some instances to take tough positions regarding standards. For example, the recent new arsenic requirement that changed from having 50 ppb to 10 ppb. This was based on a study done in Taiwan in 1978. EPA took that information and decided to have the maximum contaminant level be at 10 ppb. While there is rationale on the health effects of arsenic, water providers question whether it has gone to an extreme.

The District constantly has to look at its water quality issues because every six years contaminants are reviewed as to their standards that are set. As evidenced by recent surveys, public opinion is moving in the direction that people do not just want us to deliver potable water but they want pristine water with absolutely nothing in it. Mr. Hill said the District conducted its own survey that showed that approximately one out of every three people want to buy bottled water rather than drink tap water, despite the fact that bottled water is not regulated as astringently as the water provided by the water utilities. Mr. Hill pointed out that the District is regulated for 85 constituents but actually tests for approximately 125 constituents. The District tests for unregulated contaminants to have information for itself as well as to pass on baseline information to the Department of Environmental Quality (DEQ) and EPA. Mr. Hill said that on average the District has spent $71,000 annually on lab results, excluding staff time. This year the cost has risen to $96,000.

Mr. Doyle, Mr. Offret, and Ms. Downing agreed that it would be advantageous for the District to look at the possibility for a collective effort for a regional lab. Mr. Hill said that he would look into the possibilities. He pointed out that pharmaceuticals will become a larger issue in the future. He noted that as operator in charge he has been assigned responsibility over water quality and hydrology issues to ensure that water quality requirements for the District are met and that the District remains proactive.

Ms. Downing suggested that the District try to convey to its customers the cost and effort required for testing of water. She did not believe that the average customer understands that part

of their water bill goes towards the $96,000 for lab testing. Mr. Hill pointed out that annually the District produces the Consumer Confidence Report (CCR) that outlines the District's water quality findings.

Mr. Polley left the meeting at 9:42 a.m.

D. Water System Maintenance.

Mr. Dean presented an overview of the various components of the District's water system maintenance efforts. He noted that there are 24 employees in the Utility Division. Mr. Dean explained that well maintenance is a major effort of the District. The District has attempted to have a five year rotation for preventative maintenance. In part, it is more cost effective to regularly maintain the wells. Mr. Dean noted that it costs between $16,000 and $30,000 per well for regular maintenance; however, to deal with an emergency repair or maintenance costs between $25,000 and $50,000 per well.

Mr. Offret inquired about the District de-commissioning six wells since 1992. Mr. Stratton said that those were relatively small wells and that one new well would combine in capacity to those six wells.

Mr. Dean said that a number of the District's wells are older than what has been shown to be the average life of the well in the Southwest. He reviewed the well maintenance budget and the monies allocated, again emphasizing that as water levels drop pumps settings and depths need to be lowered. With the age of the wells there is always the need for additional monies to be allocated. Mr. Dean gave a number of examples dealing with current wells and how their status is and how well maintenance is representative of various well maintenance issues.

Mr. Polley returned to the meeting at 9:58 a.m.

Mr. Doyle said it is important that people realize that wells are being impacted by both the drought and growth issues to the north of the District.

Mr. Dean pointed out maintenance efforts involving storage tanks and pressure tanks. These are done on a rotation basis and can cost between $20,000 and $30,000. He noted that the Black Well Reservoir has not been checked for maintenance since it is the sole storage system for a portion of the eastern portion of the District's water service area. Mr. Dean provided explanation regarding the pressure tanks.

Ms. Downing questioned if the District's service area was protected from future annexation. Mr. Stratton noted that this had been an issue the Board has been following. He said that bond counsel and legal counsel both felt that the District's boundaries were secure, and that it was best not to pursue legislation regarding the matter but that the District was better protected by the courts.

Mr. Offret asked about the status of the Hub annexation efforts. Mr. Stratton said that because that annexation was within six miles of Tucson, the City of Tucson would need to officially take a position on whether it would grant approval of the annexation. Mr. Stratton said that he doubted that the City of Tucson would grant the approval at this point.

Mr. Dean reviewed the pump and motor maintenance efforts of the District, much of which is done in-house. He noted that there is an effort to standardize the District's sites in regards to pumps and motors. Mr. Dean said that maintenance efforts include chlorine, equipment, valves, regulators, air compressors, electrical components, piping and telemetry. Mr. Dean also described maintenance efforts for the District's distribution system. He pointed out that the District has had one person dedicated to the valve exercising and maintenance program since January 2003. The District has approximately 4,000 valves. Mr. Dean explained that the District has an in-house mainline replacement effort which has been augmented by the mainline replacement projects of the CIP.

Mr. Dean said he has appreciated the fact that staff has always had the proper tools and equipment to do their job. He reviewed the various categories of maintenance, the cost involved, and his efforts to ensure that cost are kept within budgeted amounts. Mr. Dean provided information on the equipment, vehicle, and water quality maintenance efforts of the District. Mr. Dean also reviewed the operating and maintenance portion of the budget. He noted that a large portion of the Utility's budget is for salaries and power costs and all the different maintenance projects which the District needs to remain cognizant of. Mr. Dean said the storage capacity has increased, as well as the demand has increased, but well capacity has decreased. He noted that the concern with peak demand and well capacity levels are getting closer.

The Board took a break at 10:48 a.m. and returned at 11:05 a.m.

Mr. Hill provided an overview regarding the District's auxiliary power efforts. He noted that because the District has utilized auxiliary power at key sites it has been able to keep customers in water during electrical power outages. The advantage of auxiliary power is that it is an alternative to a fixed single source power which ensures the most coverage at the highest demand for water but the District has to address potential noise problems and more equipment inventory and required maintenance and commodity costs could be variables. Mr. Hill reviewed electrical unit costs and showed the cost the District would be spending on power and what the District has spent on power in relationship to its water usage. It shows that we are becoming more efficient despite increased water usage.

Mr. Hill said that after a lengthy negotiating period with Tucson Electric and Power (TEP) the District was able to get an agreement for an interruptible rate which has saved the District nearly $100,000. He explained how auxiliary power works for Herb Johnson Reservoir as a case study and noted the importance also of telemetry at the sites to allow the District to know what is occurring at the sites.

Mr. Doyle asked if the District has an air quality permit from ADEQ for the auxiliary power. Mr. Dean and Mr. Hill said that the District does have the permit. Mr. Hill pointed out that the interruptible rate agreement does have astringent requirements but the District does feel comfortable in meeting them. The District would like to do 15 more units to be fully on auxiliary power to totally utilize the interruptible rate. To equip the sites would cost $90,000 each, a total of $1.34 million and it would have a savings of $250,000 over a five year period. While it involves a lot of money, Mr. Hill felt that this is an important component that needs to be looked at in regards to security and reliability issues, as well as ancillary benefits.

Mr. Hill provided an overview of the District's security efforts. He noted that prior to September 11, 2001, water utilities were cautious but generally complacent regarding security issues. Since that time, all utilities have been much more aggressive in their security issues. Based on federal mandate, the District must prepare a vulnerability assessment of all of its sites by June 2004. The vulnerability assessments must include planning, threat assessments, facilities characterization system effectiveness and risk management. Immediately following September 11, 2001 the Board committed $130,000 in contingency fund for security measures and it is anticipated that $100,000 will be recommended for the upcoming budget.

E. Capital Improvement Program.

Mr. Maish provided an overview of the CIP. He noted that the District showed foresight at its formation to hire a consultant to look at the overall system to determine necessary improvements. Based on that study, $40 million worth of improvements were identified. In 1996, the Board developed a CIP that would accomplish slightly half of those requirements and to finance the improvements. In March 1997, the voters approved the bond proposal. Once litigation issues with Tucson Water were resolved in 1999, the CIP was financed through the approved revenue bonds. At that time, the District did not own the Hub Service Area, but owned Oro Valley Improvement District No. 1.

Mr. Maish reviewed the breakdown of the $23 million bond proposal that designated $11 million for transmission mains, $5.5 million for mainline replacement and fire hydrant program, $2.1 million for new wells, $1.4 million for storage facilities and telemetry, and $2.56 million for fund reserve and contingency fund. Unfortunately, estimates were under what actual costs have been. Mr. Maish said the District has been able to make significant improvements. One of the primary components was the transmission mains that would create a spine system to tie in to future storage facilities and link efficiently all portions of the Metro Service Area.

Mr. Maish said the CIP provided monies for the northeast reservoir to be designed but did not include money for building the storage facility. For example, in the A and Z zone an additional 9 million more gallons is needed. The central area reservoir would need 5 to 10 acres of land which is becoming more and more difficult to find in an appropriate area. The District does own property that could be used for the northeast reservoir but it is looking at trying to utilize property at the Immaculate Heart School area to allow for better distribution of the water.

Mr. Maish showed various examples of different aspects of the CIP including the difficulties the District has had in dealing with traffic issues to complete construction as well as native plant salvaging requirements. Regarding native plant salvaging, an additional $800,000 has had to be added to the most recent CIP projects.

Mr. Maish also reviewed the mainline replacement projects under the CIP. He noted that many undersized and aged pipes needed to be replaced, which required moving them into the street rather than on private property. This also meant that when the travel lane was disturbed, the whole road had to be repaved per Pima County ordinances.

Mr. Maish reviewed the auxiliary power portions of the CIP that allowed four critical sites to have auxiliary power installed prior to Y2K.

Mr. Tripp left the meeting at 12:13 p.m.

Mr. Maish addressed the well drilling and modification efforts as well as efforts under the CIP. He then outlined the various costs of the CIP to provide the Board with information about what the projects original estimate was and what the actual cost had been.

Mr. Polley left the meeting at 12:16 p.m.

Mr. Maish noted that auxiliary power would probably not be needed if all of the necessary reservoirs and transmission systems were in place since they would provide complete gravity or 24 hour demand and storage. Unfortunately because that is not the case, auxiliary power needs to be pursued because the construction of storage facilities is still a few years away. Mr. Maish said that based on inflation the original $40 million identified needs for the District would now cost $62 million.

He noted that the difficulty under the CIP has been trying to factor in unforeseen water line relocations. These water line relocations are due to road improvements by the County and are directly related to CIP; however, within two years, the District has had to pay $350,000 for making the modifications. There will be another $350,000 that is required.

Based on time constraints the Board of Directors decided to continue the remaining items for the February 24, 2003 study session. The Board adjourned the meeting at 12:28 p.m. Mr. Stratton noted that the District would look at future capital needs and how to finance them.

F. Finances.
G. Growth Issues.

The Board decided to discuss these items at a future meeting.

IV. General Manager's Report

Mr. Stratton had nothing to report.

V. Adjournment

The meeting adjourned at 12:28 p.m.

Dennis Polley, Chair of the Board

Clerk of the Board