



Massachusetts Water
Resources Authority
Annual Report 2006

Waterworks Revival



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Executive Director's Letter

With its start-up in July 2005, the John J. Carroll Water Treatment Plant has taken its place among the great water facilities that have served the metropolitan waterworks system for over 100 years.

With a peak capacity of 405 million gallons per day, the Carroll Plant is one of the largest facilities in the country using ozone to disinfect drinking water. The plant's performance over the first year of operation has been excellent. The plant has proven reliable and improvements to water quality have been dramatic. Using ozone means using less chlorine, thereby reducing the amount of potentially harmful chlorine by-products. It also makes the water taste better.

The state-of-the-art facility is the last major construction project in the MWRA's ten-year program to modernize the water system that serves 2.3 million people in eastern and central Massachusetts.

And as distribution and treatment have been improved, water consumption has gone down. The success of our water conservation efforts has allowed for the addition of new communities to the water system with no negative impacts to the source reservoirs or watersheds. Over the course of the year, MWRA welcomed Dedham, Westwood and Reading as members of the water system, bringing the number of communities served to 50.

On the wastewater side, the approval of a comprehensive agreement on MWRA's long-term plan to reduce combined sewer overflows (CSOs) to Boston Harbor and its tributaries was a landmark event.

In his comments on the new agreement, Federal

District Court Judge Richard G. Stearns described the clean-up of Boston Harbor "one of the most successful modern public works projects ever undertaken." The continued success of the secondary treatment facilities at Deer Island have already improved the health of the Harbor and brought people back to Boston's waterfront. When the CSO program is completed, residents will enjoy some of the cleanest urban beaches in the nation.

MWRA has also continued to make progress on capital construction projects around the service area over the past year and has established aggressive maintenance programs to make sure the new facilities we are building never fall back into a cycle of disrepair. Our successes have been made possible by the dedicated and professional men and women who work at MWRA and by the strong leadership of our Board of Directors.

As we continue to make progress in meeting our mission, we must also continue to be responsible to our ratepayers. Working together, MWRA, its Advisory Board and local officials launched a successful effort over the past year to have the Commonwealth's rate relief fund reinstated at \$25 million for FY2007. While we still have a long way to go to keep water and sewer rates affordable, we will only get there by working together.

Sincerely,



Frederick A. Laskey
Executive Director



WATER SYSTEM

Carroll Water Treatment Plant

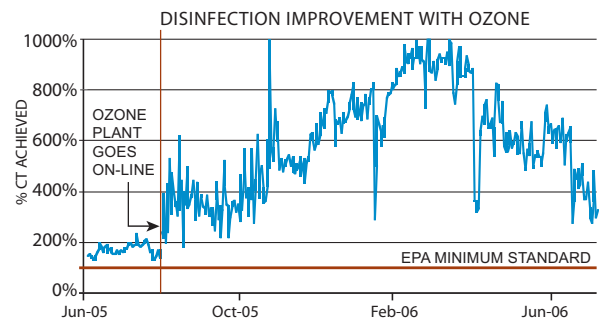
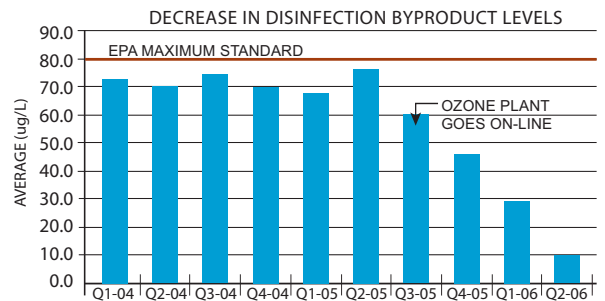


With the completion of the John J. Carroll Water Treatment Plant in July 2005, MWRA has now completed the last major project under its 10-year, \$1.7 billion Integrated Water Supply Improvement Program.

The Carroll Plant provides state-of-the-art treatment using ozone gas - a powerful disinfectant - to treat an average of 220 million gallons of water each day (and up to 405 million

gallons on a peak day). Ozone provides better disinfection without the by-products of chlorine. The new treatment plant ensures:

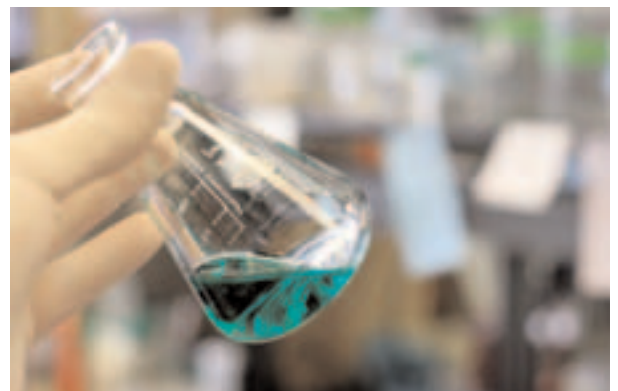
- Compliance with state and federal regulations
- Improved clarity and taste and odor controls
- Strong protection against microbes and viruses
- Large reduction of disinfection by-products.



Water Quality

In FY2006, MWRA successfully completed the last milestone on the Wachusett Reservoir Consent Order. Source waters at the Quabbin and Wachusett Reservoirs continue to be well protected. In addition, the start-up of the new ozone water treatment plant has further improved water quality.

Disinfection by-products have declined by over 80% since the start-up of the Carroll Water Treatment Plant. In addition, at least 100% of the required 3-log (99.9%) disinfection of *Giardia* was achieved on every day of the year.



For FY2006, MWRA met the Lead and Copper Rule system-wide. The results of two rounds of sampling were below the Lead Action Level of 15 parts per billion.

In June, the 2005 Annual Report on Water Quality was mailed to every household in the water service area, including separate inserts from each community. Only nine contaminants of the over 120 tested were detected, and all were below EPA's allowable limits.



SEWER SYSTEM

CSO Program

On April 27, 2006, Federal District Court Judge Richard G. Stearns allowed the joint motion and approved a long-term Combined Sewer Overflow plan for Boston Harbor and its tributaries. For the first time in the 20-year history of the CSO program, MWRA has certainty in the component parts of the plan. The 15-year plan includes specific projects for the Harbor, the Charles River, the Alewife and Mystic Rivers, East Boston and North Dorchester and includes five, three-year variances, as well as a three-year assessment at the end of construction. The settlement struck a responsible balance between increased environmental cleanup and responsible levels of spending.

- In October 2005, MWRA awarded the Construction Management Services contract for the North Dorchester Bay CSO project. The Storage Tunnel project was advertised in April and the construction contract was awarded in July 2006.
- Construction of the Pleasure Bay Storm Drain Improvement project began in September 2005 and was completed in May 2006.
- Construction of the Union Park Detention/Treatment Facility continued and the project was 90% complete as of June 2006.

Braintree-Weymouth Relief Facilities

The Braintree-Weymouth Relief Facilities Project will expand and improve the network of sewer pump stations, interceptors and siphons that serves Braintree, Hingham, Holbrook, Randolph, Weymouth and parts of Quincy. The project, being constructed under an Administrative Consent Order, will transform the way that wastewater generated by six South Shore communities is conveyed to sewer treatment and processing facilities. Five of the six construction contracts are complete. The last construction contract, the Braintree-Weymouth Replacement Pump Station, was 26% complete as of June 2006.

Cummingsville Replacement Sewer

The Cummingsville Replacement Sewer will provide additional capacity to ensure adequate and reliable wastewater collection from communities upstream of Winchester and reduce overflows. The project was completed in May 2006.





Upper Neponset Valley Replacement Sewer

The Upper Neponset Valley Replacement Sewer will increase the hydraulic capacity in the 100-year old Upper Neponset Valley Sewer and eliminate surcharging and overflows in a one-year storm. As of June 2006, 22% of the replacement sewer has been installed.

Deer Island Treatment Plant Performance

September 2006 marked the fifth full year of operation under the new NPDES Permit and the Deer Island Treatment Plant and outfall tunnel continue to perform as designed. Overall monitoring has found that the treatment plant discharges have not had any adverse impacts on the ecology in the area of the outfall tunnel. In fact, long-term results indicate an abundance and diversity of marine near the outfall.



NEW ENGLAND AQUARIUM



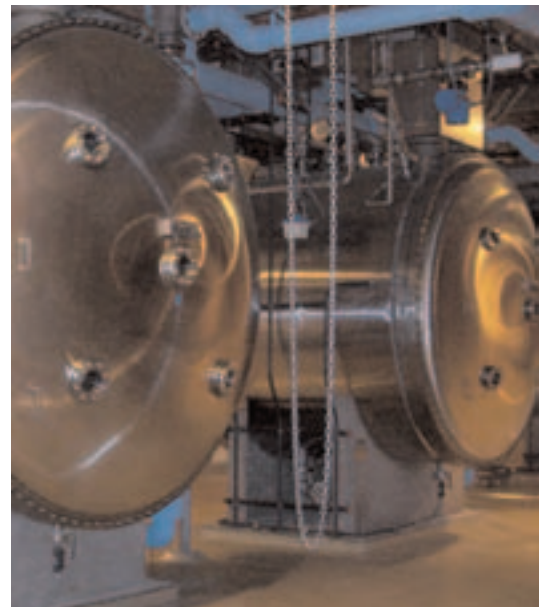
ISO New England "Demand Response Achievement Award" - Deer Island Energy Program

National Association of Clean Water Agencies "National Environmental Achievement Award" - Deer Island Energy Cost Recovery Program

National Association of Clean Water Agencies "Silver Award" - Deer Island NPDES Compliance

American Consulting Engineering Council "Platinum Award" - Braintree-Weymouth Fore River Siphons Project

Construction Management Association of America, New England Chapter "Project of the Year-Public Project" - Norumbega Covered Storage Facility



New England Water Works Association "Utility of the Year Award" - John J. Carroll Water Treatment Plant Improvements to Public Health

Academy of Environmental Engineering "Grand Prize" - Evaluation of Ozone and Ultra Violet Light Disinfection

American Consulting Engineering Council "Grand Prize" - Evaluation of Ozone and Ultra Violet Light Disinfection

Association of Government Accountants "Boston Chapter Service Award" - MWRA Internal Audit Department



FINANCIAL MANAGEMENT

Financing

In March 2006, MWRA sold a total of \$486,320,000 in new money and refunding bonds at an all-in cost of funds of 4.61%. As part of the transaction, the MWRA took advantage of a strong municipal market and historically low interest rates to refund a portion of its high coupon debt. This component of the transaction generated a total of \$5.43 million in present value savings.

All three credit agencies affirmed MWRA's ratings in connection with the sale. The current ratings are: Fitch Ratings "AA," Standard and Poor's "AA," and Moody's Investors Service "Aa2." Moody's also upgraded the subordinate debt rating to "Aa3" from "A1." All three firms rated MWRA's outlook as Stable.

Debt Service Assistance

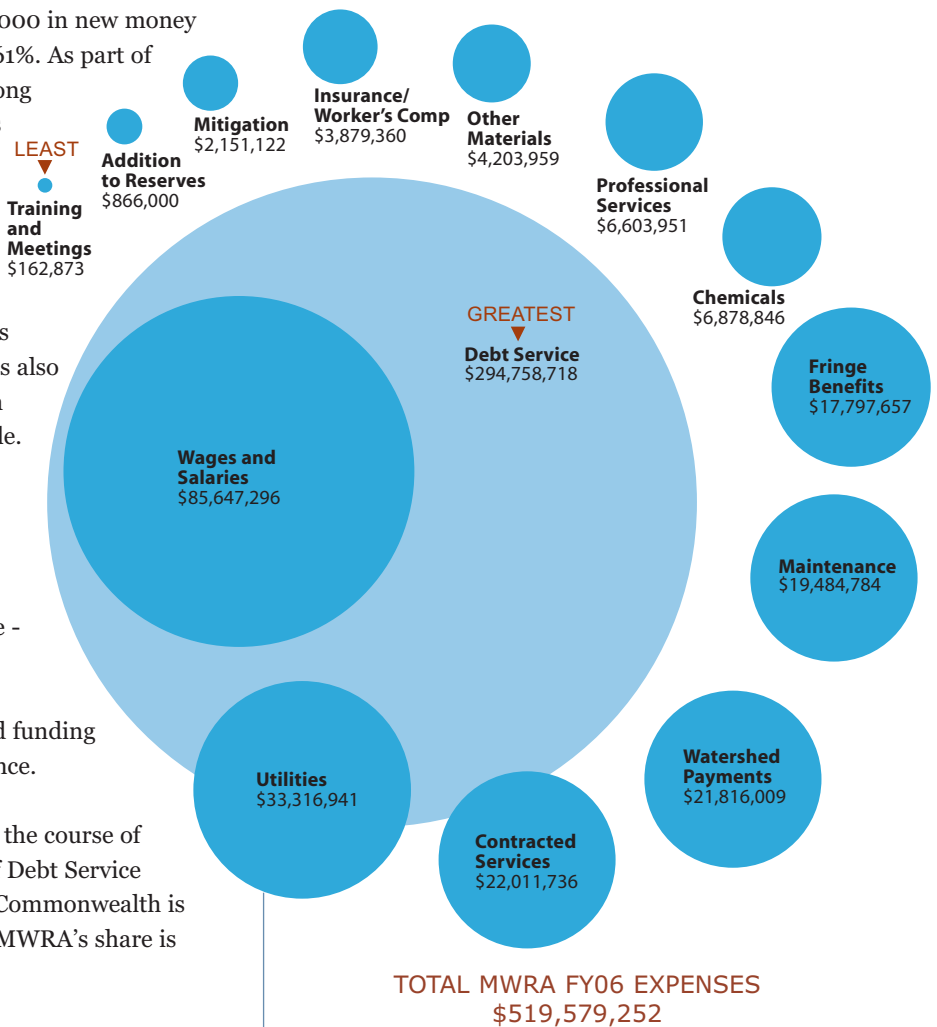
MWRA's debt service burden (the share of its budget that is devoted to principal and interest payments on its bonds) accounted for 57% of the budget in FY2006. Debt service will continue to rise - to nearly 62% by the end of the ten-year planning horizon in FY2016.

In FY2006, the Commonwealth's budget included funding of \$12.5 million for state-wide Debt Service Assistance. MWRA's share was \$9.6 million.

MWRA and its Advisory Board worked hard over the course of FY2006 to alert key legislators to the importance of Debt Service Assistance to MWRA ratepayers. For FY2007, the Commonwealth is providing \$25 million for this state-wide program. MWRA's share is \$18.75 million.

FY2006 Budget

MWRA has continued to focus on aggressively managing its operating expenses to ensure continuing public support for infrastructure investments. When adjusted for inflation, MWRA's direct operating costs for FY2006 were lower than actual expenses in FY2000.



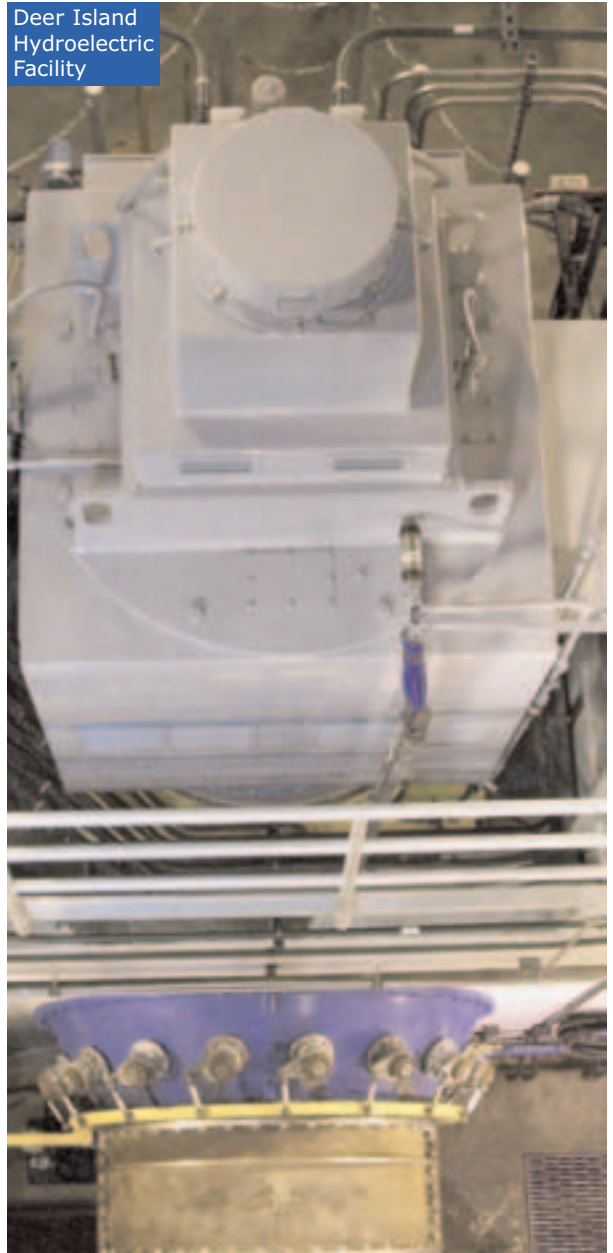
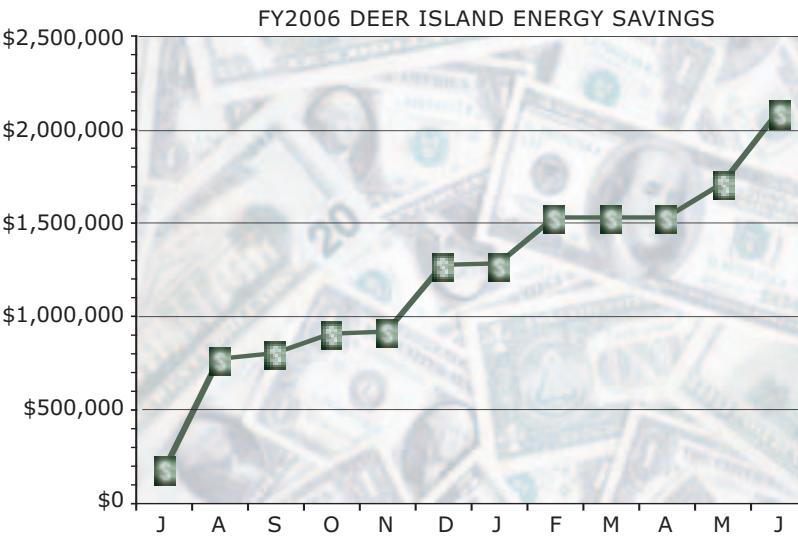
Continued Cost Saving Measures

MWRA continues to look for ways to increase efficiencies and reduce costs.

Staffing levels have decreased nearly 30% since FY1997. The agency is now at a staffing level appropriate to its transition from an agency originally structured to both build and operate major capital investments to one that is primarily focused on operations, maintenance, and system reinvestment.

The cost of energy, utilities and chemicals combined contribute nearly \$40 million to MWRA's budget. The massive Deer Island Wastewater Treatment Plant accounts for most of this cost, so aggressive management at this facility is critical. Components of the Deer Island strategy include:

- MWRA competitively purchases electricity
- To reduce purchased power, the plant self-generates up to 25% of its electricity
- MWRA participates in two programs that raise revenues from energy generation
- Digester gas is recycled for heating in lieu of diesel fuel.





OTHER AGENCY MANAGEMENT

Master Planning

During FY2006, MWRA continued development of a Master Plan for the rehabilitation, replacement, and additional construction of its infrastructure. Because the majority of court-mandated projects are complete, the Master Plan is intended to assess agency-wide needs, identify and prioritize projects to address the needs, and establish timeframes for rehabilitation and replacement of existing facilities and infrastructure and construction of new projects as needed.

Emergency Preparedness

During FY2006, a great deal of focus was placed on planning for specific emergencies, in light of Hurricanes Katrina and Rita, and the emerging threat of an avian flu pandemic.

An Office of Emergency Preparedness reporting directly to the Executive Director was created to provide a more streamlined organizational structure with the ability to act quickly and decisively across departments in the event of an emergency.

Real Property

In September 2006, a new lease agreement was reached for the Charlestown Navy Yard Headquarters. A number of staff were relocated to the MWRA's Deer Island and Chelsea facilities, reducing space needs by one and a half floors in the Navy Yard, which resulted in savings for FY2006 of \$499,397, and an annual savings going forward of \$1.3 million.

Efforts continued throughout the year to dispose of as much surplus property as possible.

Affirmative Action

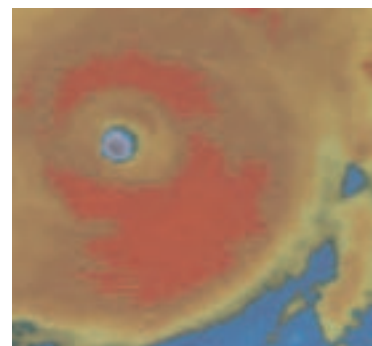
For FY2006 minority workforce representation was 18.4% for minorities, or .8% above the 2006 calendar year goal of 17.6%. Female representation at the end of FY2006 was 23.1%, on target with goal of 23.1%.

Community Financial Assistance Programs

During FY2006, 20 sewer communities participated in the Infiltration/Inflow Financial Assistance Grant/Loan Program, utilizing \$18 million to fund 28 projects. Also, 14 water communities participated in the Local Pipeline Assistance Loan Program, utilizing \$17 million to fund 17 projects.

5-Year Progress Report

The MWRA's fourth "5-Year Progress Report" was completed and distributed to the Governor and the Legislature in December 2005.



MWRA
EMPLOYEES raised
over \$21,000 for
the Red Cross
Disaster Relief
Fund to aid the
victims of
Hurricane Katrina.



31-50 Years of Service

Romeo Rovinelli	Paul Teneriello
Joseph Monestere	Philip Carbone
William Magnell	Richard Barbarisi
Lawrence Minincleri	Edward Carpman
Anthony Errichetti	Kenneth Witkowski
Thomas Harrow	Glenn Merlini
Joseph Del Greco	James Waterman
George Morano	John Powers
Robert Gorham	Robert Moses
Guy Foss	J. James Burns
David Dibona	John Balfour
Paul Kelley	James Padova
Brian Littlefield	Peter Gogan
Lettie Genovitch	Charles Olsen
Brian Cashman	

26-30 Years of Service

Paul Polito	Flora Sanders
Albert Parker	Lafleur Etienne
Dennis Linehan	James Collins
William Sheehan	Joseph Jamilowski
Richard Staples	John Vetere
Charles Ronayne	John Riccio
Salvatore Pinto	Frank Cascarano
John McDonough	Gregory Alessandro
Alan Hanscombe	Gino Rizzo
John Farino	James Andon
Richard Krumpus	William Young
James McMahan	William Lane
Marcis Kempe	Michael DelPrete
Viviane Edward	David Rota
Peter Green	Kenneth Perry
Thomas Fulkerson	William Graham
Thomas Rosado	Carol Swirbalus
Nancy Aftosmes	George Riley
Robert Johnson	Stephen Dwyer
Vincent Thompson	William Slattery

21-25 Years of Service

James MacPherson	Robert DeChellis
Edward Luongo	Julian Rainey
Joseph Bussone	James Carey
Richard Burns	Gordon Yu
Robert Holthaus	Terry Bickford
Richard Tobin	Russell Smith
Scott Tamagna	William Austin
Deborah Palmer	Michelle Potts
Steve Rocke	John Shdeed
James Mele	David Lombard
Carmine Sorrentino	Mark Sullivan
Gary Garrity	William Coughlin
Mark Forti	Gerard Kelly
Thomas Derosier	Paul Flaherty
Corrine Barrett	Lee Jensen
Rocco Giovanniello	Ronald Maxwell
Richard Cipriano	Andrea Murphy
David Hale	Stephen Abner
James King	William Smith
Randolph Lahey	Dennis Capraro
William Mueller	Keith Portell
Michael Ferro	Joseph O'Donnell
Alfred Renrick	Edward Gallagher
Timothy Barry	Funmei Chang
Robert McGee	Joseph McCarty
James Polk	Robert Billotte
Eric Renda	George Goros
M. Altaf Bhatti	Patrick Moynihan
David Codair	Matthew Condon
Michael Walsh	Vivienne Wright
Nancy McSweeney	Brian Callely
Lisa Jenkins	Kevin Feeley
Daniel Cushing	John Norton
Sean McGillicuddy	Daniel Leary
Edward Arcese	Frank Kay
Patrick Barrett	Walter Schultz
David Harnett	Richard Trubiano
Richard Desmond	Kevin O'Brien
William Lewey	David Ciano
William Burns	Richard Mandell
Christine Lane	Grace Bigornia-Vitale
Paul Addivinola	Timothy D'Ortona

20 Years of Service

Edward Regan	James Hession
Francis Coleman	Michael McCarthy
Bryan Garrity	David Graveline
Anthony Balzano	William Meloni
Raymond Brown	John Yeaton
Michael Ralph	Patricia Kelley
Bonnie Hale	Angelo Salamone
Cornelius Spillane	Meredith Norton
Donald Smokler	William Allen
Russell Armstrong	Robert Bradshaw
Paul Duffin	Lori Paradice
James Szczur	Kevin McGee
William Abbott	Michael Caples

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This report can be made available in large-print.

