MSD Board Retreat

February, 2008
1. MSD Organization
MSD HISTORY

• MSD was formed in 1962 by State Statute as a special District with the sole purpose to collect and treat wastewater and to eliminate the direct discharges to the surrounding rivers and streams.

• In 1968 the Treatment Plant was completed and we began treating the wastewater from the various local governments in the region.

• In 1990 all the local governments and special districts gave all of their collection lines to MSD for ownership and maintenance in agreements we call “Sewer Consolidation.”
MSD Governed by Independent Board

- Governed by a twelve-member Board appointed by the following entities:
  - City of Asheville (3)
  - Buncombe County (3)
  - Biltmore Forest
  - Black Mountain
  - Montreat
  - Weaverville
  - Woodfin Sanitary Water and Sewer District
  - Town of Woodfin

- Board responsible for setting rates without approval from any member agency.

- Chairman, Vice-chairman and Secretary-Treasurer are elected annually by the Board.

- Members serve staggered three-year terms and may be re-appointed.

- Active subcommittees:
  - Capital Improvement Program
  - Construction
  - Finance
  - Personnel
  - Planning
  - Right of Way

- The Board employs a General Manager, P.E., who is responsible for daily operations.
2003 AMSA Excellence in Management Award

Signifies MSD’s commitment to both its customers and its employees through efficient operations, teamwork, long term planning, and effective management.
2. MSD Operations
MSD: ISO 14001 Registered

- ISO 14001 Implementation Team
- Entire Organization ISO 14001 Registered encompassing Treatment Plant, Collection System, Engineering and Administration
- Largest Public Utility in NC to be registered
MSD Treatment Plant
Metropolitan Sewerage District of Buncombe County (North Carolina)
March, 2008

Treatment Plant

• 1995 Plant expansion to 40 MGD completed (65 MGD Peak)
• Current Average Daily Flow 16.7 MGD
• 152 Rotating Biological Contactors (RBC)—largest in world
• 2880 KW Hydroelectric Generation Facility
• 2 MW Diesel Generator Back-up
• 900 KW Gas Generators
• Land-fill Gas supply from closed county Landfill
Hydroelectric Generation Facility

- 1986 Reconstructed Craggy Dam Hydro Plant (Originally Built 1903)
- Can generate 2,880 KW
- FY 2006 Avoided Power Cost of $ 470,496
High Training Level for Wastewater Treatment Plant Operators

<table>
<thead>
<tr>
<th>Treatment Plant Operators</th>
<th>Total at 1/01/2008</th>
</tr>
</thead>
<tbody>
<tr>
<td>Grade II (Minimum required)</td>
<td>1 8.3%</td>
</tr>
<tr>
<td>Grade III</td>
<td>0</td>
</tr>
<tr>
<td>Grade IV (Maximum)</td>
<td>11 91.7%</td>
</tr>
<tr>
<td>Total</td>
<td>12 100.0%</td>
</tr>
</tbody>
</table>
Regulatory Compliance at the Treatment Plant

WRF Performance
FY 06-07

Concentration (mg/l)

July  August  September  October  November  December  January  February  March  April  May  June

EFF CBOD
CBOD LIMIT
EFF TSS
TSS LIMIT
Metropolitan Sewerage District of Buncombe County (North Carolina)
March, 2008

Treatment Plant Receives AMSA Platinum 7 Award

- **Platinum Peak Performance**
  - Seven consecutive years for excellence in wastewater treatment

[Image of treatment plant]
Collection System

- Over 900 miles of sewer mains
- 30 pump stations
- Over 29,000 manholes
- 180 square mile service area (Over 80% of the Population of Buncombe County)
- Replaced over 670,000 feet of sewer mains since 1990 (over 14% of Entire System)
- Preventative maintenance cleaning and CCTV 15% - 20% of system per year
- Rehabilitation/replacement of approximately 250,000 feet of sewers in the next five years
- New Collection System Permit October 2007
### Emphasis on Training in Systems Services Division

#### Wastewater Collection Systems

<table>
<thead>
<tr>
<th>Certification Level</th>
<th>Count</th>
<th>Percentage</th>
</tr>
</thead>
<tbody>
<tr>
<td>No Certification</td>
<td>14</td>
<td>26.4%</td>
</tr>
<tr>
<td>Grade I</td>
<td>7</td>
<td>13.3%</td>
</tr>
<tr>
<td>Grade II</td>
<td>6</td>
<td>11.3%</td>
</tr>
<tr>
<td>Grade III</td>
<td>4</td>
<td>7.5%</td>
</tr>
<tr>
<td>Grade IV</td>
<td>22</td>
<td>41.5%</td>
</tr>
<tr>
<td><strong>Total</strong></td>
<td>53</td>
<td><strong>100.0%</strong></td>
</tr>
</tbody>
</table>

Note: Certification NOT required for State permit (and does not include office workers)
Customer Service

• District has a 180 square mile service area.

• Average Customer Response time during daytime is 34 minutes and at night 40 minutes.

• Frequently receive letters of appreciation regarding promptness and going extra mile.
Major Causes of SSO’s

Major Defects

Roots & Grease
Infiltration & Inflow
Marked Improvement in Collection System
Environmental Compliance Issues

Sanitary Sewer Overflows

Fiscal year

3. Financial Overview of the District
FY 08 Budgeted Revenues
$36,400,166

- Domestic User and Billing Fees $22,319,093 62%
- Industrial User Fees $1,496,051 4%
- Available Funds $8,389,772 23%
- Investment Interest & Misc. $1,995,250 5%
- Facility & Tap Fees $2,200,000 6%
FY 08 Budgeted Expenditures
$36,400,166

- Debt Service, $8,192,946, 23%
- Capital Equipment, $721,900, 2%
- Construction Projects, $14,769,120, 40%
- Operations and Maintenance, $12,716,200, 35%

**Current Reserve Funds**

(6/30/07)

- Fleet Replacement Fund $1,143,291
- Plant Equipment Replacement Fund $661,852
- Capital Reserve Fund (6% O&M) $758,719
- Debt Service Reserve Fund $5,187,554
- Insurance Fund – Medical, Worker Comp., Property & Liability $745,587
Average Monthly Domestic Bill

Average 5 CCF

<table>
<thead>
<tr>
<th>Year</th>
<th>Bill</th>
</tr>
</thead>
<tbody>
<tr>
<td>1997</td>
<td>$17.45</td>
</tr>
<tr>
<td>1998</td>
<td>$17.45</td>
</tr>
<tr>
<td>1999</td>
<td>$17.58</td>
</tr>
<tr>
<td>2000</td>
<td>$18.08</td>
</tr>
<tr>
<td>2001</td>
<td>$18.78</td>
</tr>
<tr>
<td>2002</td>
<td>$19.48</td>
</tr>
<tr>
<td>2003</td>
<td>$20.14</td>
</tr>
<tr>
<td>2004</td>
<td>$20.43</td>
</tr>
<tr>
<td>2005</td>
<td>$20.83</td>
</tr>
<tr>
<td>2006</td>
<td>$21.45</td>
</tr>
<tr>
<td>2007</td>
<td>$22.41</td>
</tr>
<tr>
<td>2008</td>
<td>$23.28</td>
</tr>
</tbody>
</table>
Note: Average monthly consumption within MSD is 5 CCF as compared to the national average of 9.9 CCF
Comparison of Industrial Rates
2005 Revenues For MSD Industries

- Greenville SC
- Statesville
- Salisbury
- Hendersonville
- Greensboro
- Charlotte
- NACWA Region IV
- NC Average
- MSD

Revenue Levels:
- $0
- $500,000
- $1,000,000
- $1,500,000
- $2,000,000
- $2,500,000
- $3,000,000
- $3,500,000
- $4,000,000
- $4,500,000
- $5,000,000

Metropolitan Sewerage District of Buncombe County (North Carolina)
March, 2008
Expanding Customer Base

- 2003: 40,000
- 2004: 41,000
- 2005: 42,000
- 2006: 43,000
- 2007: 44,000
Financial Reporting Awards

- GFOA Distinguished Budget Presentation Award FY 1999-2008
4. Capital Improvement Program
Master Planning Efforts
Form Capital Improvement Program

- **2001 Master Plan** – Camp, Dresser & Mckee (CDM): Collection, Treatment, and Operations.
  - Management, Operations and Maintenance
  - Sewer Rehabilitation Program
  - Capacity Improvements for wet and dry flows

- **2007 Facilities Plan** – CDM: Detailed look at the Treatment Plant
  - Grit and Grease upgrade
  - Intermediate Pump Replacements
  - Secondary Microscreen Replacements

- **2008 Collection System Master Plan** – McGill & Assoc.:
  - Incorporated new Buncombe County Land Use Plan and Zoning Ordinance
  - Incorporated all member agency planning/zoning efforts
  - Plan for orderly growth of sewer system
  - Replacement of existing sewers sized for future growth
Capital Improvement Plan
FY08 through FY17 (10 years)

Interceptors/Wet Weather Rehab. $ 26.0 Million (18.5%)
Collection Rehabilitation $ 98.7 Million (70.2%)
Reimbursements $ 2.5 Million (1.7%)
Treatment Plant / P.S. $ 13.5 Million (9.6%)

Total $ 140.7 Million

* 1990-2007 Total Construction of $ 166 million
Pipe Rating Program

- Proactive program to focus rehabilitation dollars where most needed
- Featured in February 2004 issue of “Water Environment & Technology” magazine
AMSA Award for Pipe Rating Project

- In May of 2003, MSD received an AMSA National Environmental Achievement Award for the Pipe Rating Program
- Developed by interdepartmental team using off-the-shelf software
- MSD and Los Angeles only two US utilities to receive this award
Trenchless Technologies
Pipe Lining
Trenchless Technologies
Pipe Bursting
In-House IRS Repair/Rehab
“BEFORE”
In-House IRS Repair/Rehab
“During”
In-House IRS Repair/Rehab
“AFTER”
Capital Improvements and Sources of Funding
FY 2000 to FY 2012
$191 Million

- Pay As You Go: $93.3 Million (49%)
- Bond Money: $97.7 Million (51%)
5. Existing Debt Service
Current Debt Service Structure

- Enka-Candler
- Series 1992A
- Series 1992B
- Series 1999
- Series 2001
- Series 2003
- Series 2004
- Series 2005
Metropolitan Sewerage District of Buncombe County (North Carolina)  
March, 2008

Aggregate Debt Composition

- Traditional Fixed: $23,370,000 (23%)
- Synthetic Fixed VRDB % LIBOR: $33,755,000 (33%)
- Unhedged VRDB: $44,920,000 (44%)

Legend:
- Red: Traditional Fixed
- Yellow: Synthetic Fixed VRDB % LIBOR
- Blue: Unhedged VRDB
Strong financial position

- Coverage is projected to be no lower than 1.5x through the year 2013
- Does NOT include Facility Fees

Debt Service Coverage (Net Revenue)
Strong financial position

- Debt service coverage is projected to be no lower than 1.8x through the year 2013.
- Includes Tap and Facility Fees

Debt Service Coverage
(Gross Revenue)
Comprehensive Long Term Planning

- Collection System Master Plan and Treatment Plant Facilities Plan guide MSD in developing its 10 year Capital Improvement Plan (CIP).

- In-house engineering staff continuously update pipe rating and other programs to improve efficiency of rehabilitation planning.

- The 10 year Financial Forecast serves as a business plan to provide funding for operations, debt and for the aggressive 10 year CIP.
System Size, Demand, and Capacity

- Currently using about 16.7 MGD of 40 MGD capacity at the Treatment Plant.

- Rehabilitation and replacement of existing lines include upgrades necessary for future growth.

- MSD provides incentives for the orderly growth of the sewer system into new areas as identified by Member Agencies and the Collection System Master Plan.
Local Economy

- Diverse, growing regional economy
- Low unemployment as compared to NC, US

Source: Asheville Metro Business Research Center
Expanding Customer Base

- Buncombe County has continued residential and commercial growth
- Varied industrial customers, none greater than 2% of revenues

**New Building Permits**

Source: Asheville Metro Business Research Center
Governance and Management

• Engaged and independent Board
• Proactive, innovative management
• Highly skilled, trained, and professionally-certified employees
• Collaborative, team-centered workplace
• Operational statistics meet or exceed comparable utilities
Strategic Focus on Assets & Maintenance

- Ten-year CIP and funding projections
- Support from in-house and consulting engineers in planning for and performing maintenance and upgrades
- Proactive cleaning of over 15% of lines annually
- Adequate reserves for fleet and treatment plant equipment renovation and replacement
Regulatory Compliance

• Excellent track record with all regulatory permits. Recognized as a leader in the industry by NCDENR.

• Decreasing spills due to focused CIP and preventative maintenance.

• Effluent from treatment plant consistently below permit limits.

• Comprehensive Water Quality monitoring in cooperation with local environmental organizations.

• Reclassification of the French Broad River from Class C to Class B – recreation.
Rates and Rate Structure

- Independent Board
- Affordable domestic and industrial rates
- Rates cover full cost of service
- Rates provide adequate reserves
- Rate structure considers both fixed and variable costs
- Moderate and consistent rate increases
Liquidity

- Debt service coverage ratios well in excess of legal minimums using recurring revenues
- Roughly equal contributions of cash and debt to CIP program
- Steadily increasing recurring revenues
- Moderate expenditure increases
- Track record of GFOA financial and budget awards
- Prudent bond-holder covenants
Our End Product