



Department of Public Works

Report of Budget Advisory Work Group
June 2012

2012 DPW Budget

Fund	General (DPW admin)	Water	Sewer
Revenues	\$51,275	\$8,988,924	\$4,244,018
Expenditures	\$574,382	\$9,333,090	\$4,507,774
Use of fund balance	na	\$344,166	\$263,756
Debt/Capital Reserve (will vary from budget due to Hurricane Irene recovery)		\$2,200,000	\$1,530,000
Remaining fund balance: \$		\$2,344,622	\$683,551
Remaining fund balance: %		25.12%	15.16%



Department of Public Works

- Commissioner (Erik Deyoe)
- 5 Divisions: Administrative Services, Engineering, Water Treatment, Wastewater Treatment, Field Operations
- Total Staffing: 59 FTE, 6 vacancies
- Facilities and infrastructure
 - 2 Water treatment plants
 - Wastewater treatment plant
 - Field operations headquarters
 - Plus 190+miles of water system pipeline, 160+ miles of sewer collection pipeline, garage, storage area, 38 sewer pumping stations, 8 water tanks, 7 water stations, 14 wells, 3 dams, reservoir, 2 interconnections with Albany water system, 3,200+ fire hydrants, 2,800+ manholes
- South Albany Water and Sewer District



Performance Measures - Water

compared against 2007 AWWA Annual Survey – Northeast Region

- Breaks per 100 miles
 - 2007 median: 36.7
 - 2007-2011 Bethlehem: 10.5 – 25.8
- Water loss
 - 2007 median: 10%
 - 2007-2011 Bethlehem: 5.7% - 10.7 %
- Residential monthly cost
 - 2007 median: \$23.19
 - 2007-2011 Bethlehem: \$29.48 - \$34.80



Performance Measures - Sewer

compared against 2007 AWWA Annual Survey – Northeast Region

- Breaks per 100 miles
 - 2007 median: 10.3
 - 2007-2011 Bethlehem: 1.3 – 5.6
- Sanitary sewer overflows per 100 miles
 - 2007 median: 5.2
 - 2007-2011 Bethlehem: 0 – 2.5
- Residential monthly cost
 - 2007 median: \$31.12
 - 2007-2011 Bethlehem: \$21.05 - \$24.29
- Direct cost per million gallons of wastewater treated
 - 2007 median: \$1481
 - 2009-2011 Bethlehem: \$559 - \$811

Water Supply and Demand

(MGD: million gallons per day)

- **Current supply: Approx. 11 MGD**
 - 1.0 MGD from Albany water contract
 - 3.0 MGD from New Salem WTP
 - 6.0 MGD from Clapper Road WTP
 - 0.85 MGD from New Salem wells
- **Current demand: 5.4 MGD (2011 average)**
 - 10-Year Average – 5.7 MGD
 - 10-Year Peak Month – 8.3 MGD
- **Possible future demand (2040)**
 - 9.0 MGD average



Factors Affecting Costs ...

- Water

- Availability and location of water source
- Surface or ground water source
- Raw water quality
- Terrain and degree of pumping required
- Distribution system configuration
- Contractual obligations
- To some extent, the amount of water produced

- Sewer

- River or stream discharge
- Terrain and degree of pumping required
- To some extent, the amount of wastewater treated

Expenditures: Fixed vs. Variable Costs

It doesn't cost more to produce or process more...

- Variable costs: 7% water / 15% sewer
 - A function of the number of gallons of water produced or wastewater treated
 - Example: chemicals
- Fixed costs: 93% water / 85% sewer
 - Not a direct function of the number of gallons of water produced or wastewater treated
 - Examples: salaries, plant maintenance

Water Fund Expenditure Breakdown

3-year average

		% of total expenditures
Total expenditures	\$8,377,099	100%
Variable	\$568,038	7%
Fixed costs		
Personnel	\$2,564,486	31%
Water purchases	\$1,305,898	16%
Debt service	\$1,239,257	15%
Materials & supplies	\$562,882	7%
Equipment	\$368,333	4%
Vehicle maint./repair	\$360,605	4%
Contractors	\$360,561	4%
Property taxes	\$358,261	4%
Property maint./repair	\$234,194	3%
Prof. services	\$178,209	2%
Other 6 categories	\$206,190	3%

Sewer Fund Expenditure Breakdown

3-year average

		% of total expenditures
Total expenditures	\$ 3,922,338	100%
Variable	\$598,296	15%
Fixed costs		
Personnel	\$1,724,746	44%
Debt service	\$493,462	13%
Contractors	\$236,714	6%
Equipment	\$224,487	6%
Materials & supplies	\$190,734	5%
Vehicle maint./repair	\$187,872	5%
Property maint./repair	\$73,130	2%
Other 6 categories	\$135,054	4%



Under Way...

- SCADA system (Allows for remote monitoring of water and sewer facilities)
- GIS system
- Hurricane Irene recovery (FEMA reimbursement grant)
- North Bethlehem Sewer Forcemain improvements
- Water system improvements to address water quality
- Sewer pump station rehabilitation
- Repairs and replacement of aging infrastructure and equipment

Water and Sewer Rates

- Need rate increases to meet costs
- Planned, gradual increases in the future avoid “rate shock”
- Water rates
 - 1% rate increase = \$64,000 / 1% tax rate increase = \$19,000
 - Need over 19% rate increase over next 3 years to meet increased costs
- Sewer rates
 - Billed based on water consumption
 - 1% rate increase = \$23,000 / 1% tax rate increase = \$15,000
 - Need approx. 10% rate increase to meet future increased costs



Albany Water Contract

- Surplus water
- Long-term contract until 2023
 - Annual rate increases – not predictable
 - Take-or-pay volume increases in 2014 and 2019
- Current cost: \$1.4 million per year, 2014 volume increase: \$450,000
- Options
 - Examine contract, explore buyout
 - Sell water to other municipalities, possibly below cost
 - Use as an economic development tool, pursue water-intensive industries



Other Options

- Reduce cash capital expenditures
- Continue not to fill vacant positions
- Pursue energy projects with short paybacks
- Pursue creative partnerships
- Pursue grant money
- Consider continued advances in technology
- Prioritize projects based on level of risk