

Special Town Council Meeting

November 2, 2016

Wastewater Treatment Plant & Collection System Project



Background

- The Town's Wastewater Treatment Plant (West Plant) and pretreatment and pumping facility (East Plant) were put into operation in 1987, nearly 30 years ago. The population of Brownsburg at that time was about 8,000. The West Plant was expanded in 2000 to a capacity of 3.5 million gallons per day (mgd). Most recently, the 1 million gallon combined sewer overflow tank was constructed in 2010.
- A master plan, updated in 2012, reviewed and evaluated the system's conditions, capacity, and future needs. The master plan recommends expanding the treatment plant capacity to 6.9 mgd to continue to treat flows to meet the newly regulated National Pollutant Discharge Elimination System (NPDES) while accommodating a projected population growth to approximately 41,050 residents by 2036. The plant is currently at about 85% capacity.

Background

- The Town is pursuing a \$21 million expansion of the Town's Wastewater Treatment Plant and Sewer Collection System. The project addresses the most critical capacity and operational needs first. This includes IDEM's new phosphorous removal requirement. Less urgent modifications such as bio-solid process and main pumping station improvements (East plant) are being deferred to later project phases. The list of immediate, short-term needs includes:
 - West Plant screen building
 - Phosphorus removal facilities (IDEM requirement)
 - Ultraviolet (UV) disinfection
 - Effluent filters to replace polishing ponds
 - Screening for West Lift Station flows
 - Water Reuse System upgrade
 - Effluent pipe size increase
 - Additional cascade aerators
 - Expand administration building originally designed for 4 employees
 - Secondary treatment upgrades

Background

- At a Mar 4, 2015 special Town Council meeting, staff received guidance to proceed with the design of Plant Phase 1A, Plant Phase 1B and Sewer Collection Phase 1A (P1A, P1B, and S1A respectively).
- At their Jun 11, 2015 regular meeting, Town Council awarded the contract to Arcadis for design of P1A, P1B, and S1A at a not to exceed cost of \$2.27 million. At that time, estimates were that design would take around a year to complete, decisions on rates would materialize in the spring of 2016 once we neared 60% completion of design, bidding in the fall of 2016, and construction would start in 2017.
- Although adding additional time to the design, in late 2015, a \$30 thousand contract for value engineering (VE) was awarded to Wessler. VE identified \$1.1 million in savings.

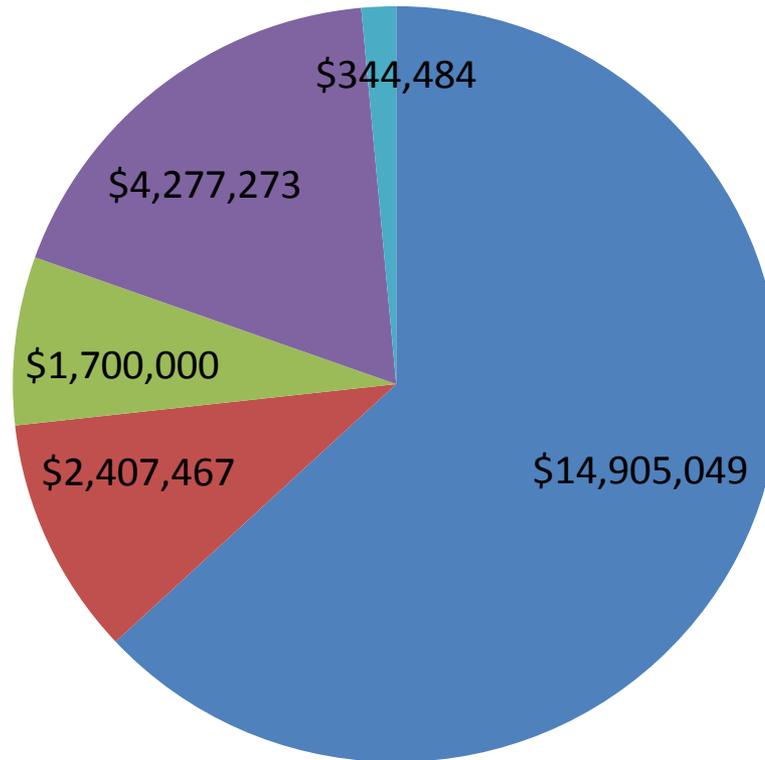
Background

- At a May 25, 2016 special Town Council meeting, Arcadis provided an update of their design (60% in May 2016, 90% by Jul 2016); Umbaugh provided a summary of project financing, including impact on rates, for a scenario that included the entire project and then a scenario without any of the bid alternatives.
- During the Aug 31, 2016 special Town Council meeting on the FY2017 budget, staff received direction from the Council to proceed with bidding the project.
- At the Oct 4, 2016 meeting, the summary of project financing was fine tuned based on potential cash contribution scenarios, the potential of a general obligation bond issuance, and project scenarios where all or some bid alternates were accepted. Staff received direction to fine tune the numbers once more once actual bids were received.
- On Oct 27, 2016, bids were opened. The lowest bid including base bid, all alternatives, contingency and inspection was at \$21M—approximately \$6M less than the engineer’s estimate.
 - Bids included the plant base bid (generally P1A & P1B combined to achieve capacity increase), plant alternatives (P1 funding flexibilities), and sanitary base bid (generally S1A) plus alternatives (2nd force main—cost advantage installing at same time as rest of S1A)

Summary of Cost Saving Measures

- Utilizing \$3 million in cash to limit the financing
- Utilizing GO Bond in amount of \$2 million (1st Reading has been approved by the Council on October 27th) to apply towards project cost
- Utilized \$2.3 million in cash to pay for the project design (not being requested in bond issue)
- Paying off 1998 Bonds using \$1.619 million in cash
- Took advantage of the construction of West Northfield Drive in 2014 to install a large diameter sewer line under the new road. This removed at least \$850,000 from the collection system upgrades at a cost of only \$650,000
- Achieving a low 2.25% interest rate from the State Revolving Fund (SRF) for financing up to \$25 million
- Pursued \$30,000 value engineering contract; identified \$1.1 million in project savings
- Pursuing with SRF the phasing of rate increase over a 5-year period; also researched a 6 or 7 year phase in option (not desirable due to \$120-220 thousand in additional interest costs)
- Investigating option of providing emergency utility assistance program
- Bid project with various alternates to provide flexibility in structuring the project based on bid results
- Contacted 12 different major companies to discuss the project prior to bid letting resulting in high participation and competition
- Achieved competitive bids: Low bid came in at \$17.3 million plus \$1.7 million contingency plus \$2 million inspection for cost of \$21 million--\$6 million below engineer's estimate (\$23.6 million including design and issuance costs)
- Considering ordinance language requiring annual rate review looking at growth to determine need for planned rate increase for that year

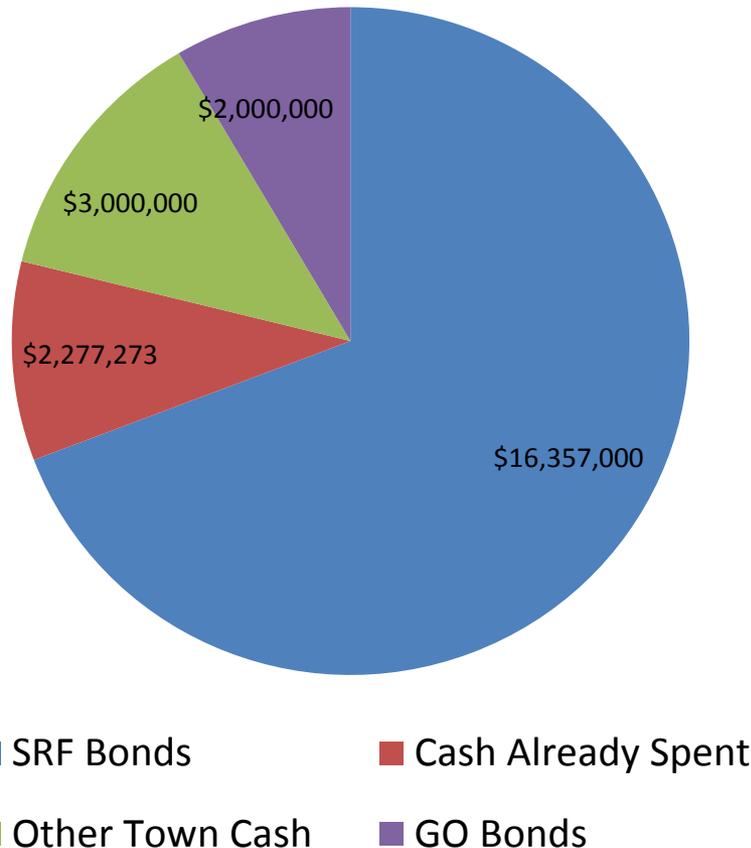
Estimated Project Costs (Based on Bids Received)



Total = \$23,634,273

■ Treatment Plant ■ Collection System ■ Contingency ■ Engineering ■ Issuance Costs

Estimated Project Funding



- Other Town cash assumes the following
 - Wastewater (606)
\$2,000,000
 - LOIT Special Dist. (257)
\$750,000
 - Stormwater (605)
\$250,000
- An additional \$1.619M of Sewer cash will be used to retire 1998 Bonds (606)

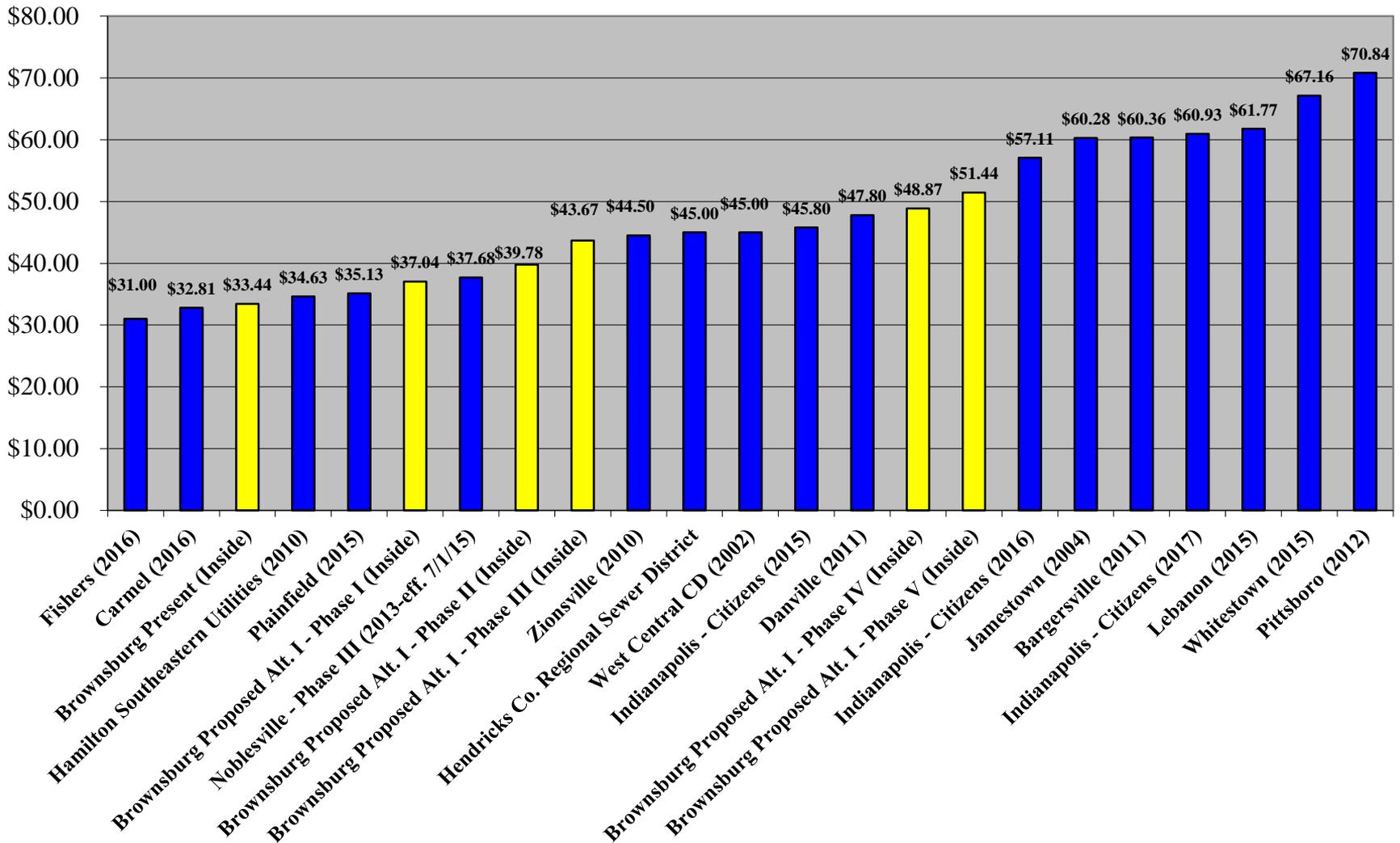
- Updated rate impact summary based on three consumption scenarios—2,500 gallons, 4,500 gallons, and 6,000 gallons. Only the sewer rate is impacted (which is based on water consumption); the water, stormwater, and fire protection rates are NOT changing. The sewer rate impact is summarized as follows:

Comparison of Monthly Bills (Sewer Only)							
	Current	Phase I	Phase II	Phase III	Phase IV	Phase V	Total Impact After All Phases
2,500 Gallons	\$18.78	\$20.80	\$22.35	\$24.53	\$27.45	\$28.90	
\$ Increase		\$2.02	\$1.55	\$2.18	\$2.92	\$1.45	\$10.12
% Change		10.8%	7.5%	9.8%	11.9%	5.3%	53.9%
4,500 Gallons	\$27.16	\$30.08	\$32.31	\$35.47	\$39.69	\$41.78	
\$ Increase		\$2.92	\$2.23	\$3.16	\$4.22	\$2.09	\$14.62
% Change		10.8%	7.4%	9.8%	11.9%	5.3%	53.8%
6,000 Gallons	\$33.44	\$37.04	\$39.78	\$43.67	\$48.87	\$51.44	
\$ Increase		\$3.60	\$2.74	\$3.89	\$5.20	\$2.57	\$18.00
% Change		10.8%	7.4%	9.8%	11.9%	5.3%	53.8%

BROWNSBURG (INDIANA) MUNICIPAL SEWAGE WORKS

COMPARISON OF MONTHLY BILLINGS FOR LOCAL INDIANA COMMUNITIES

(Based on Usage of 6,000 Gallons or 800 Cubic Feet)



Questions?

