

PUBLIC WORKS AND TRANSPORTATION COMMITTEE MINUTES May 29, 2018

Call to Order

Council Chairman Ken Smith called the meeting to order at 3:07 p.m. in the Council Assembly Room. A quorum was present, including Vice-Chairman Erskine Oglesby and Council members Carol Berz, Anthony Byrd, Demetrus Coonrod, Russell Gilbert, Chip Henderson and Darrin Ledford. City Attorney Wade Hinton and Council Support Specialist Keren Campbell were also present. Councilman Jerry Mitchell was not present this meeting.

Others in Attendance

Transportation: Blythe Bailey, Administrator; ECD: Donna Williams, Administrator; YFD: Jason McKinney, Deputy Administrator of Education; OCA: Keith Reisman, Assistant City Attorney, Public Works: Justin Holland, Administrator - Mounir Minkara, Manager Water Quality - Bill Payne, City Engineer; Green Tambourine: Chelsey, Owner.

Approval of Minutes

On motion of Councilwoman Berz and seconded by Vice-Chairman Oglesby, the minutes of the last meeting (May 15, 2018) were approved as published.

Resolutions - Agenda Item 7B & 7C

These items had been discussed at previous open meetings. Upon no questions or comments, the issues were closed.

Next Week's Agenda: June 5, 2018

Resolutions - Agenda Item 7K

This item had been discussed at previous open meetings. Upon no questions or comments, the issue was closed.

Presentation: Mobile Food Units

Mr. Bailey made a presentation Mobile Food Units that included the following:

- Minor Changes and those included in previous draft
- Food Truck Zone
- Feedback and newer changes

A discussion ensued, with Mr. Bailey, Mr. McKinney, Mr. Reisman and Ms. Williams responding to questions on the following topics:

- Feedback received from community (Councilman Henderson)
- Regulations for Parks & YFD Centers (Councilman Henderson)
- Downtown Zones (Councilman Henderson)
- Regulations for Property owners vs. Tenants (Councilman Henderson)
- Time limit on zones (Councilman Henderson)
- Regulations for those operating without licenses (Councilman Gilbert)
- Designated areas without on street parking
- Mechanism to stop unauthorized vendors (Councilman Gilbert)
- Small, pocket parks (Councilwoman Berz)
- Verbiage pertaining to use on neighborhood parks (Councilwoman Berz)
- Procedures for private properties (Councilman Byrd)
- Fees (Councilman Byrd)
- Procure to address enforcement of regulations (Councilman Byrd)
- YFD Fees (Councilwoman Coonrod)
- Allocations of funds (Councilwoman Coonrod)
- Private Property Verbiage (Councilman Ledford)
- Heritage Park (Councilman Ledford)
- Mayor's Designee (Councilman Ledford)
- Procedures to follow with changes to this process (Councilman Ledford)
- Concerns for the Organizations/Vendors already contracted (Chairman Smith)

Chelsey, the owner of Green Tambourine, informed the Council about the services already being provided by her food truck in Chattanooga. Upon no further questions or comments, the issue was closed.

Water Quality Program Rate Study

Mr. Minkara and Mr. Payne gave a presentation that covered the following:

- | | |
|---|--|
| • Last Rate Study | • Spill response |
| • Business Plan | • 311 response |
| • April 2016 to Present | • Operations and maintenance crew |
| • Audit of current LOS | • Ditch Maintenance crew |
| • Plan of required elements | • Inspection vacuum and cleaning inspection |
| • Major Program elements | • Drainage and Capital |
| • Pollution Prevention Activities | • Engineering Design |
| • Illicit discharge detection and elimination | • Construction Management and inspection |
| • Industrial inspections | • Green Infrastructure |
| • Pollution Prevention/Good Housekeeping | • Capital Projects |
| • Public education/Involvement | • Fiscal sustainability |
| • LDO Construction site oversight | • Historical Water quality Revenues and expenses |
| • Post construction Run-off control | • How will we invest |
| • Biological Sampling and monitoring | |

- SFR Detention Pond maintenance program
- Drainage Infrastructure Improvements
- Non-TMDL Capital Projects
- Recommended operation expense and Capital Projects
- Recommended total gross revenue
- Recommended land disturbance permit fees
- Recommended annual ERU's
- Water quality fee revenues
- How do we compare to other cities
- Quality of life
- TN Phase 1 programs
- Final thoughts






A discussion ensued in which Mr. Payne responded to questions on the following topics:

- Pipe cleaning
- Growth in ditches
- Projects specifically in District 5 (Councilman Gilbert)
- Increase recommended to maintain plan (Councilman Ledford)
- Difference in prior request (Councilman Ledford)
- Properties services (Councilman Henderson)
- Determinations made final (Councilman Henderson)
- Yearly evaluations (Councilman Henderson)
- Exemptions (Councilman Henderson)
- Informing the public (Councilman Henderson)
- Zoning request (Councilwoman Berz)
- Process for voting on item (Councilwoman Berz)
- Raising rates and impact (Councilwoman Berz)
- Need for ordinance (Councilwoman Berz)
- Public hearing (Councilwoman Berz)

Upon no further questions or comments, the issue was closed.


Adjournment

There being no further business, Chairman Smith adjourned the meeting at 4:50 p.m.



Water Quality Program Rate Study

City of Chattanooga
Public Works Committee Meeting



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Purpose & Topics

Purpose - Present Recommended Rate Structure

Topics:

- Existing Programs
 - MS4 Permit Program Components
 - Drainage & Capital Programs
- Fiscal Sustainability
 - Recommended Rate Study
 - TN Program Comparison
 - Q & A

Water Quality Program Rate Study

- Last Rate Study 2008
- Business Plan based Level and Cost of Service Rate Study
 - LOS/COS
- April 2016 to Present
- Audit of Current LOS
- Planning of Required Level of Service
 - FY-19 thru FY-23
- Projection of Future Costs & Rates



Major Program Elements

- Public Education and Outreach
- Public Participation/Involvement
- Illicit Discharge Detection and Elimination
- Construction Site Runoff Control
- Post-Construction Runoff Control
- Pollution Prevention/Good Housekeeping
- Drainage System Maintenance



Existing Programs / Required Responsibilities

Pollution Prevention Activities

Illicit Discharge Detection and Elimination (IDDE)

IDDE is a complex and broad reaching program element.

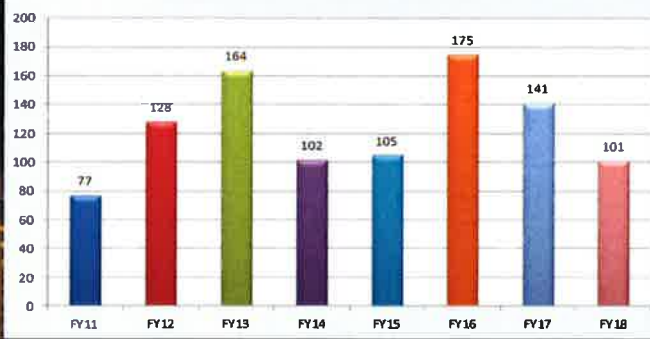
Purpose: Eliminate "non-stormwater" discharges to the MS4 or "Waters of the State".

Key components of the City's IDDE program include education, investigations, inspections, and enforcement.

- Approximately 125 anomalies corrected yearly
- Multiple inspections required per anomaly

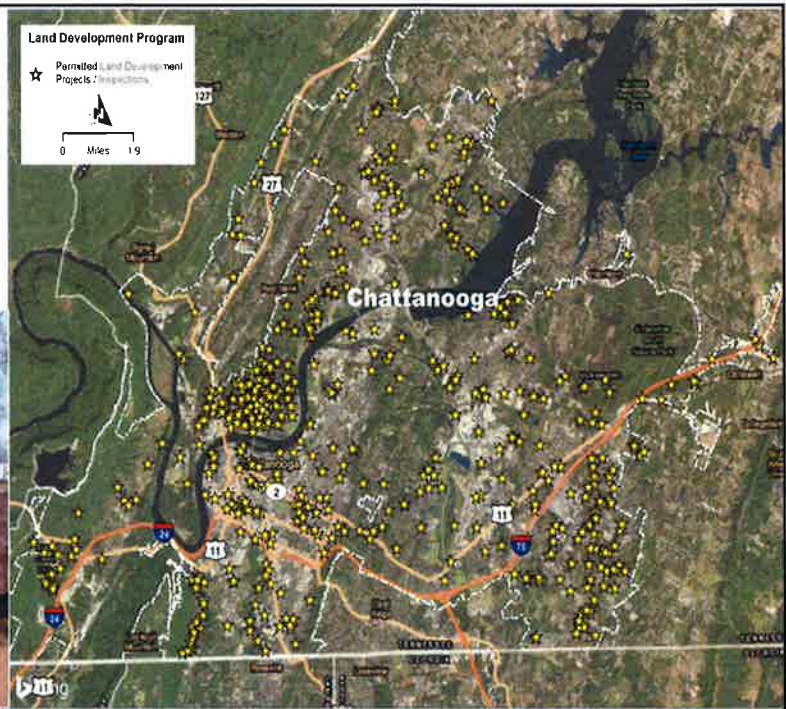


Illicit Discharge Enforcements by Permit Year

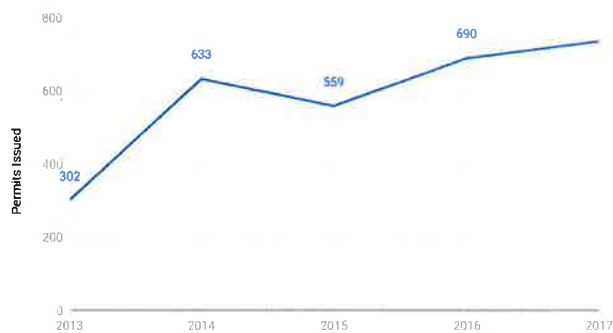


Construction Site Runoff Control - TMDL

- Performed by ECD/LDO
- Via plans review & inspections
- E&SC significantly protects the environment
- 665 permitted sites in 2017

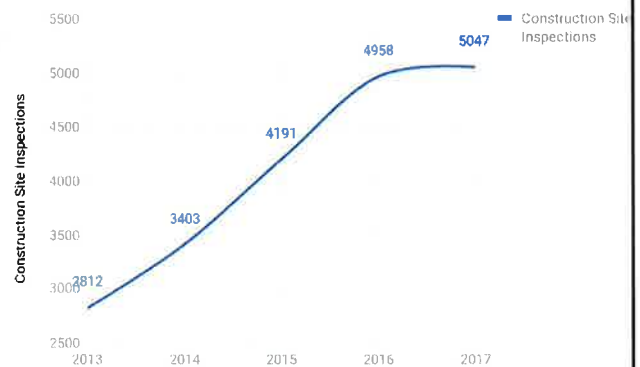


Permits Issued



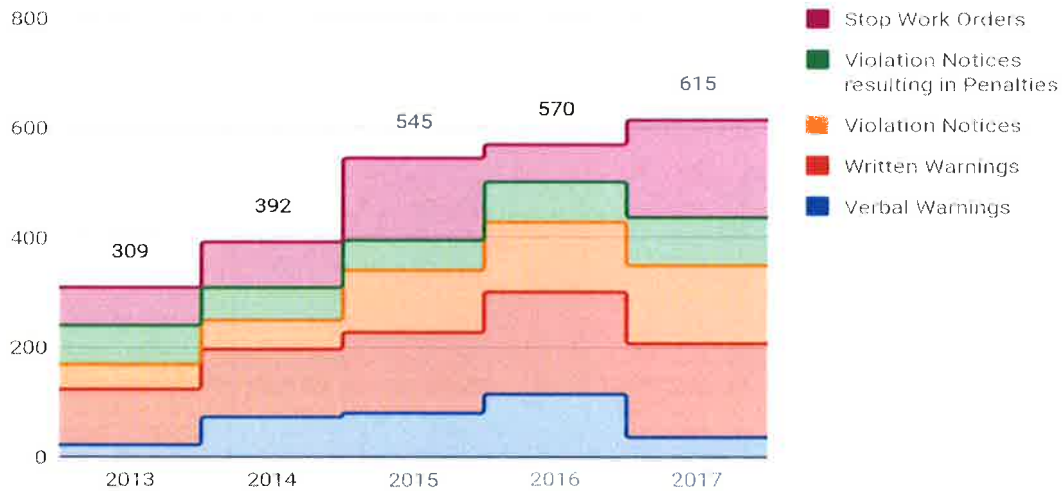
LDO Construction Site Oversight

Construction Site Inspections



LDO Construction Site Oversight

Land Disturbing Enforcement



Post-Construction Runoff Control - TMDL

- Performed by DPW
- Managing conveyance, flood control & pollutants
- ~400 sites inspected annually
 - +/- 1,000 BMP's (Best Management Practices)
 - Oil Skimmers
 - Bioswales
 - Rain Gardens / Vegetation
 - Green Roofs
 - Pervious Pavements
 - Retention / Detention Ponds



Industrial Inspections

230 sites w/NPDES permit

- 100 high risk (chemical facility)
 - 3-year cycle

Commercial sites “near” industrial distinction

- distribution site (not manufacturer)

2,000 annual hrs staff time managing

- 33 high risk + 15 other = 48 annual

Industrial Pollutants:

- nitrates/phosphates from fertilizer
- petroleum
- heavy metals
- temperatures



Pollution Prevention / Good Housekeeping

- What's good for the goose...
- Goals: Inspection procedures, reducing pollutants from roadways and city owned facilities
- 12 Municipal sites inspected quarterly
- Employee training mandates: Maintenance of parks, open space, fleet, buildings, new construction, land disturb, sw systems



Public Education / Involvement

- Examples - stream cleanups, volunteer days, demonstration projects
- Thousands of staff hours per year

- Public Education
- Storm Drain Stenciling
- Community Meetings
- On-line Watershed Academy

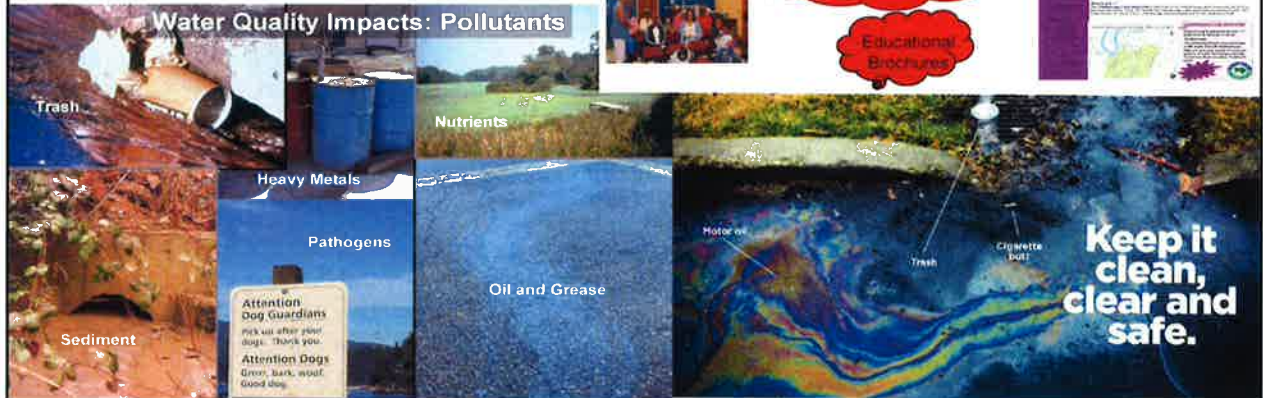


Watershed Flyers

Door Hangers
Meta Mailings

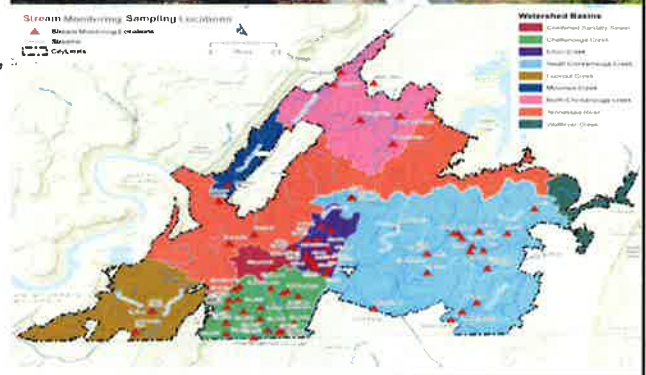
Schools/Neighborhoods
Meetings

Educational
Brochures



Biological Sampling & Monitoring

- Wet-Weather Sampling:
 - 5 Homogeneous Land use – 3 times/yr
 - 4 Industrial Sites – 1 time/yr
 - COD, pH, BOD5, TSS, TP, TOC, N, Temp
 - 5 Municipal Sites – 1 time/yr
 - muni. WM facilities, CWS, Summit LF, Moccasin Bend LF, 36th St.
 - Metals, chromium, copper, lead, nickel, zinc, .. nutrients.....
- Watershed Characterizations (7 Total):
 - Sampled monthly, quarterly, semiannually
- Biological Monitoring: 3 sites semiannually
- TMDL Monitoring: 28 locations
- Staffing Levels:
 - 6 employees + 1 supervisor



Spill Response

Spill can be of caustic and toxic chemicals requiring quick response.

- ~22 responses per year
- Responsible to develop Enforcement Response Plan
- Address Repeat Violations
- Document:
 - event,
 - environmental impact,
 - response,
 - remediation,
 - subsequent measures,
 - and follow-up training for prevention



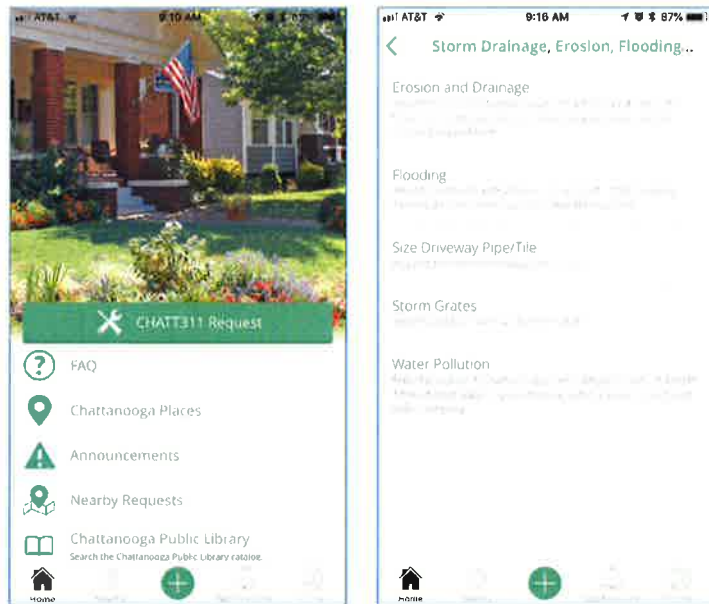
Drainage System Maintenance

CHATT₃₁₁

Operation & Maintenance Crews

311 Response

- CHATT311 App
- Over 2,000 Annual Water Quality Inquiries and Requests for Investigation
- 6 FTE's to manage investigations, citizens, documentation and design.



Operations & Maintenance Crews

- CCTV Rodding / Camera Crews
- Rodding and Vacuum Crews
- Floodplain Preservation Program Crew
- Beaver Control Crew
- Street Superintendent
- Street Foreman
- General Stormwater Maintenance Crews
- Flood Events Crews



Construction Crews

- Culvert Crews
 - 2 Operator's with backhoe
 - 2 Drivers / Laborers with various trucks
- Pipe Crews
 - 2 Operator's with backhoe
 - 2 Drivers / Laborers with various trucks
- Masonry Crews

◦ 1 Operator	◦ 1 Driver
◦ 1 Tech	◦ 1 Laborer



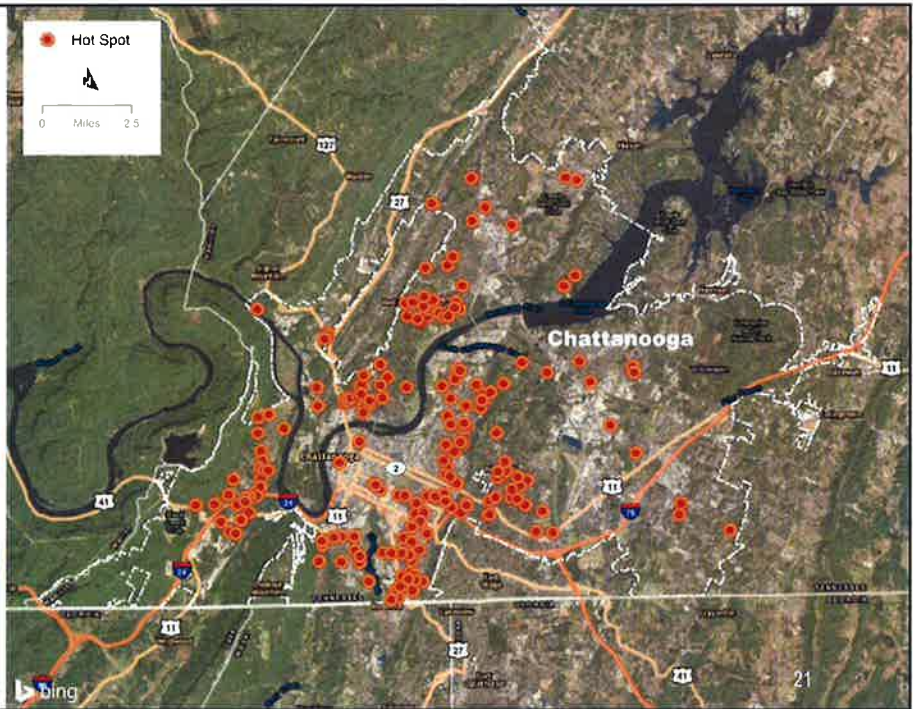
Ditch Maintenance Crews

- Ditch Maintenance Crews
 - 2 Operators
 - 2 Drivers
 - 2 Techs
 - 2 Laborers



Inspection & Vacuum Cleaning Crews

- 230 Hotspots checked before/during/after major rain events
- 630 miles of pipe
- 1,350 miles of open channel

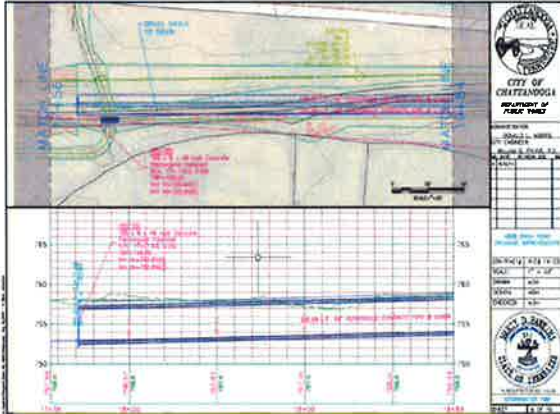


Drainage & Capital

Engineering Design
Construction Management
Capital Projects

Engineering Design

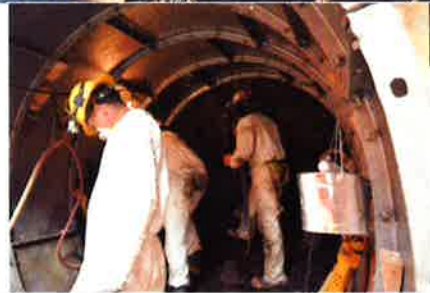
- 8 Design and Engineering staff members
- ~16,000 hours annually
- 265+ hours on typical drainage project: Swan Rd. modeling & design



Construction Management & Inspection

North St. Elmo (Big Dig) Drainage Improvements Project

- To Optimize & Avoid
- 1 Inspector
- 1 Engineering Coordinator
- Staff hours to manage = 3,000+ hrs



Capital Projects

Anderson Ave. Green Infrastructure

- GI neighborhood retrofit
- Located in ROW of the 900 block of South Holly Street, and the 1600-1700 blocks of Anderson Avenue
- Improving drainage and water quality to Dobbs Branch
- Planning & in-house design started in 2013
- GI mitigates the effects of urbanization on the water quality - sustainable systems
- Storm conveyance reduces incidents in localized flooding.
- *Construction (Complete): June 26, 2017 – March 2018*
- *Total Cost: \$1,760,715.53*



Anderson Ave. Green Infrastructure



Before



Anderson Ave. Green Infrastructure



Capital Projects

Valleybrook Subdivision

- Two major road crossings
- Upland watershed delivers more
- Roadway and private property flooding
- Crossing #1 - City crews worked from 4/17 to 10/17
- Crossing #2 - located at the tributary to Rogers Branch & Valleybrook Road; beginning this summer
- Increase conveyance from 2-yr to 25-yr storm
- Total Cost \$304,000
- In-house Design & Construction





Capital Projects

Swan Road

- Current infrastructure replacement project
- Hwy 58 area. Existing, 18" pipe being replaced with ~1,200-feet of 48" pipe.
- Property flooding issues, High flow depths across Swan Road and the parking lot at the Lakeside Youth Sports Complex.
- Alleviate localized flooding and mitigate parking lot and ditch heavy scour issues.
- Construction Costs to date = \$213,000
- In-house Design & Construction
- Work began Oct. 2017 & is estimated to be complete Oct. 2018





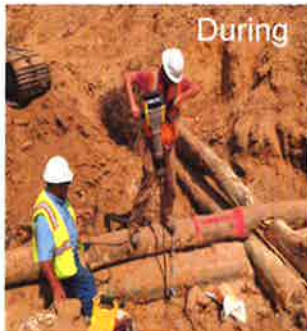
Capital Projects

Agawela Dr. Stream Restoration

- 1500 LF of Stream Stabilization to address Sediment Erosion into South Chick Creek
- Contract Value: \$900,000
- Designer: HDR
- Construction Completed: 2017
- Reestablish:
 - Pools, riffles, velocity dissipation, stabilization and groundwater reconnect



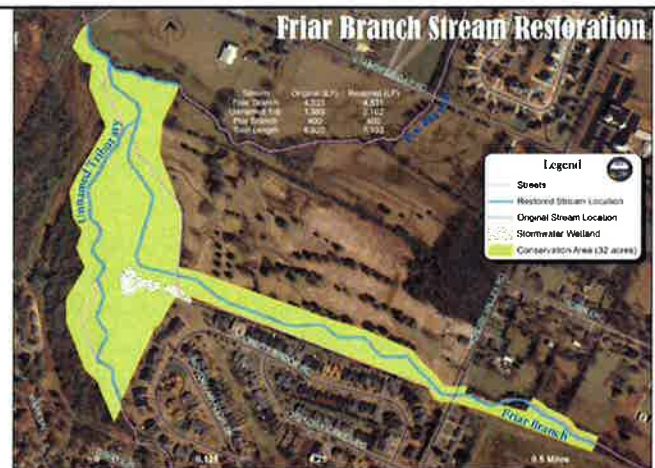
Agawela Dr. Stream Restoration



Capital Projects

Hickory Valley Stream Restoration

- 7,333' of restored stream in the Friar Branch watershed.
- Increased channel sinuosity created over 400 feet of additional stream habitat
- Stormwater wetland was installed to treat polluted runoff. Contract Value: \$1,500,000
- Construction Completed: July-Dec. 2010 with plantings in Feb. 2011



Capital Projects

North St. Elmo Ave. Improvements "Big Dig"

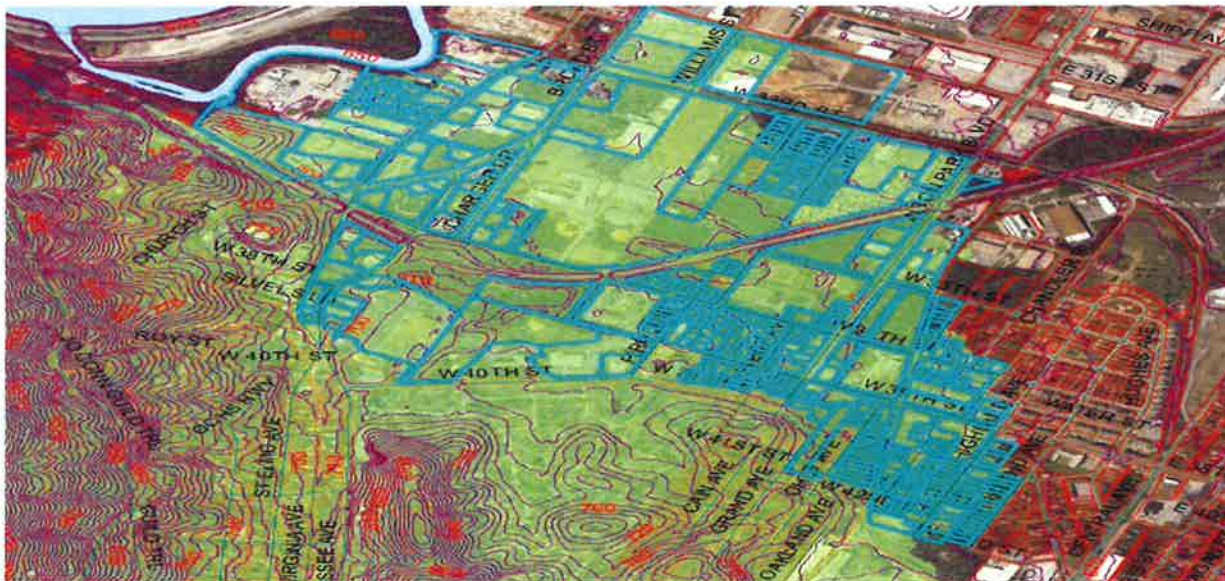
- Collapsed CMP under former Wheland Foundry Landfill up to 75' deep
- Aware ~2000 (negotiations), 2008 - 8 years of planning, permitting, funding, design
- New 1,400 LF of 10' x 10' box culvert, 30' deep
- 4 connections installed via Tunnel Bore Machine
- Cost: \$17,000,000



North St. Elmo Ave. - "Big Dig"



North St. Elmo Ave. "Big Dig"



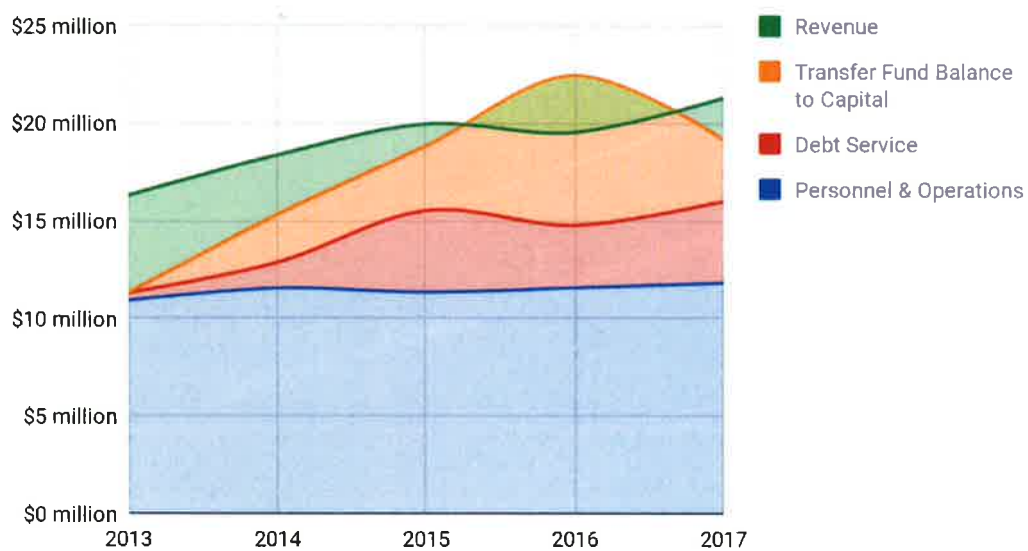
North St. Elmo “Big Dig”



Fiscal Sustainability

Revenue & Expense Overview
Recommended Rate Study
TN Program Comparison
Q & A

Historical Water Quality Revenue & Expenses



How will we invest?

Recommended Level of Service

Current Programs

New Programs

Additional Capital Projects To Address TMDL's

Stream Bank Stabilization

- Avg. \$2M per year for new TMDL Operations & CIP
 - ~20% of proposed increase



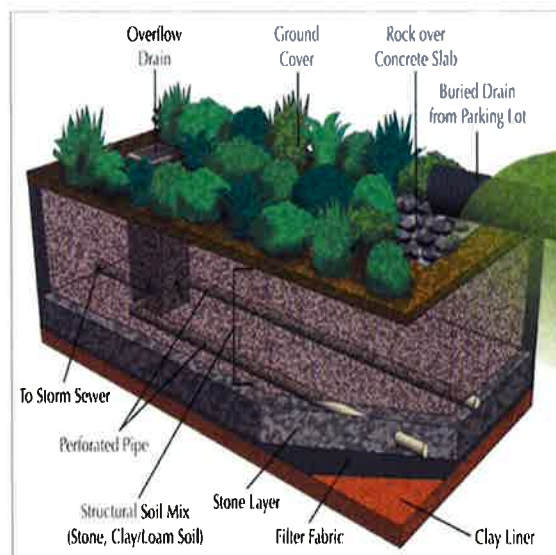
SFR Detention Pond Maintenance Program

- ~30 Ponds annually
- Requires heavy & light equipment, crews, structures, installed & expended materials, erosion controls, seed, spoils hauling
- Annual Cost: \$500,000



Green Infrastructure Installations and Maintenance

- ~21 City Owned properties with BMP's
- More coming each year
- \$400,000 per year
- Installation, maintenance, repair, replacement of:
 - plants
 - underdrains
 - stone
 - filter-fabric
 - monitoring stations
 - inlet and outlet structures



Drainage Infrastructure Improvements

Reduce Backlog of Drainage Projects

- \$1.0 Million Per Year
- Plus Major Capital Projects
- Upland watersheds contributing "more".
- Work in the ROW
- Addressing the following:
 - citizen requests
 - aging infrastructure
 - backlog of projects



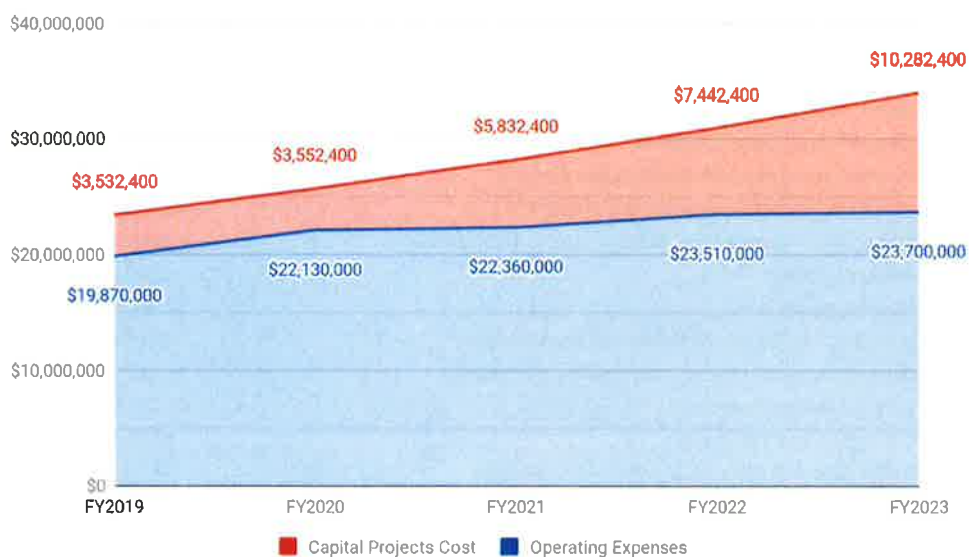
Non-TMDL Capital Projects

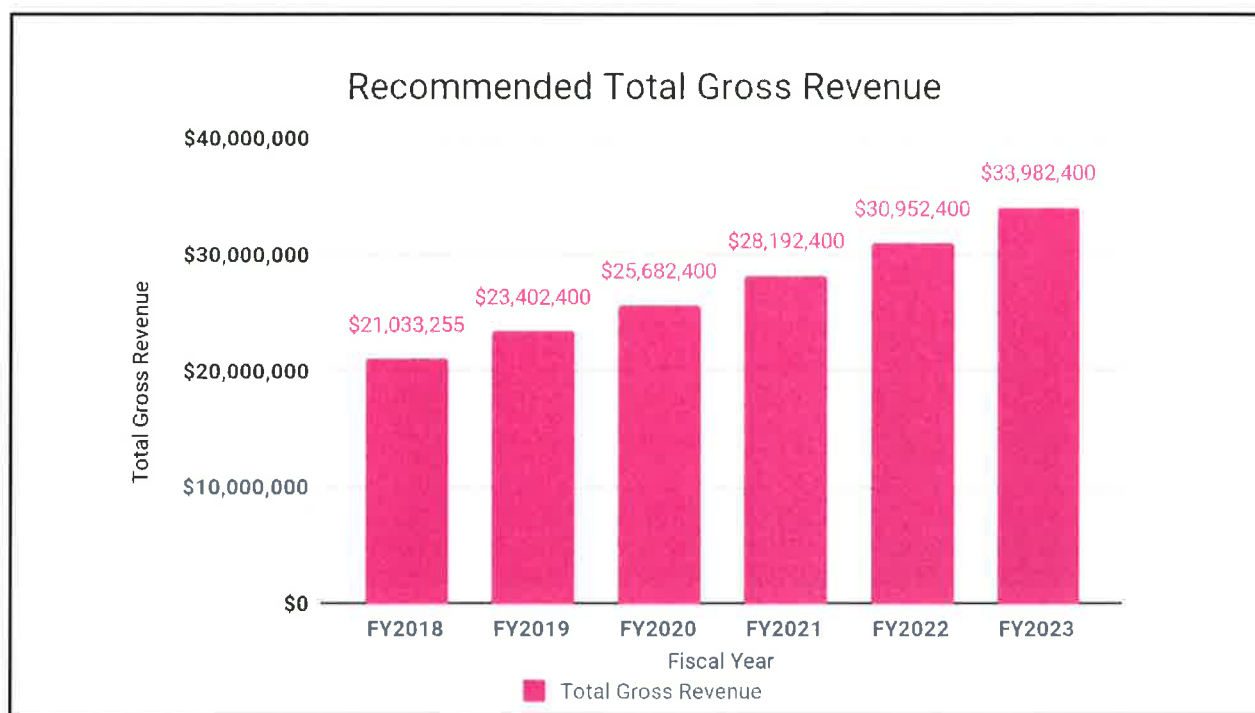
Non-TMDL Capital Projects	Total 5 Year Request
Culvert Upgrades - Citico Creek	\$1,120,000
USACE/FEMA Floodplain Culvert Replacements Projects	\$450,000
Green Infrastructure of the Avondale YFD Center	\$800,000
Automated flood warning system	\$450,000
Combined sewer separation/attenuation Projects	\$12,269,000
Storm sewer collection system improvements	\$2,440,000
Water quality improvements, Stay On Volume Coupon Bank	\$750,000
Landscape Design	\$300,000
Home buyout program	\$1,050,000
Conveyance and water quality wetland improvements	\$250,000
Conveyance, detention and water quality improvements	\$2,850,000
Heavy Equipment Purchases	\$1,370,000
On-Call Floodplain Modeling	\$600,000
WQ Operations Building at City Wide Services Yard	\$450,000
Pump Station Repairs	\$2,500,000
WQ Lab/Storage	\$150,000
Total	\$28,149,000

TMDL Capital Projects

TMDL Capital Projects	Total 5 Year Request
Prioritizing GI Projects to address TMDLs	\$100,000
Various stream restoration projects	\$750,000
Stream Restoration - Citico Creek	\$2,290,000
Stream Restoration - Lynnbrook WPA Ditch	\$200,000
East Lake Water Quality Restoration	\$400,000
Various areas of stream buffer purchased into conservation to protect streams.	\$450,000
Green Infrastructure of City Alleyways	\$750,000
Total	\$4,940,000

Recommended Operating Expenses and Capital Projects

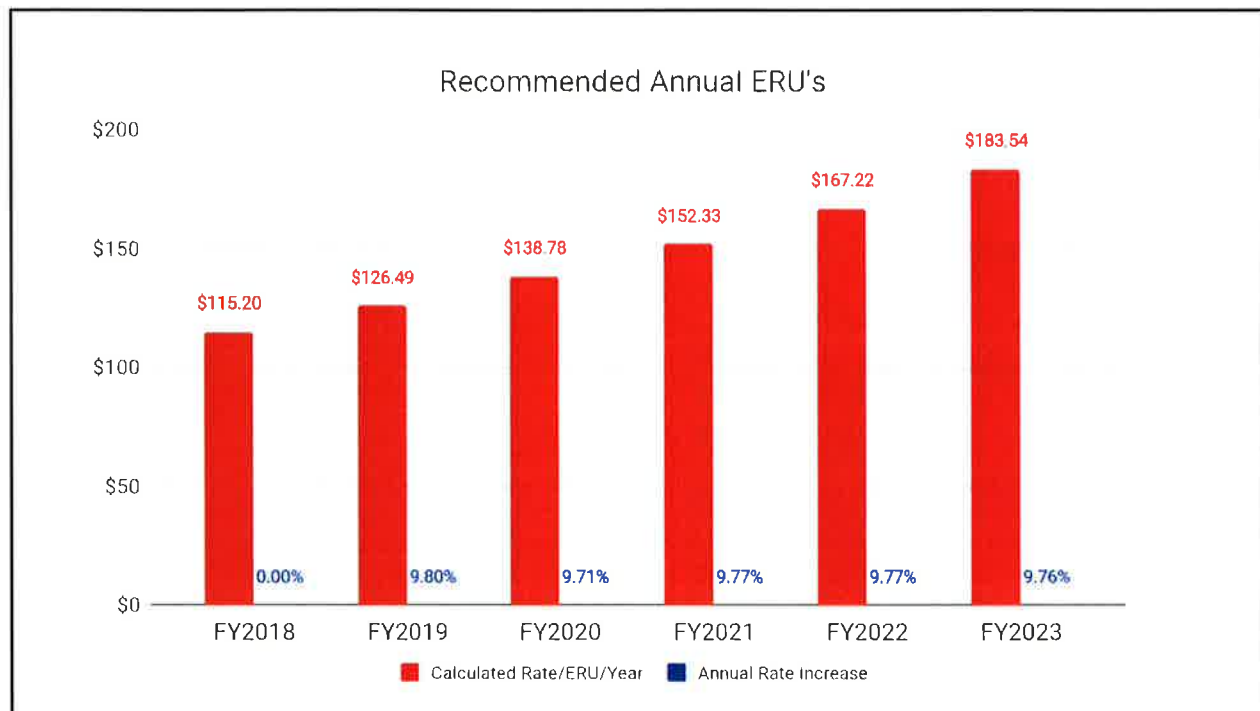




Recommended Land Disturbance Permit Fees



Description	Itemized Fee
Simple Residential - \$ 250 min. (up to 1 acre disturbed area)	\$250
Complex - \$ 250 per acre	\$250
Revision after second review (each)	\$1,000
Post-issued revision (each)	\$1,000
Variance or Infeasibility Request	\$1,375
Bonds/Letter of Credit (each)	\$675
Driveway Tile/Culvert Sized By City (each)	\$500
As-Built Survey/Certification Review (each)	\$675
Grading Only - per acre	\$250
Timber Removal Permit - per acre	\$250
Tree Ordinance (each)	\$500



Recommended Level of Service

Average 9.75% increase per year for five years



How do we compare?

Quality of Life

- **Factors**
 - Environment
 - Drainage
 - Flood Control
- **Funding**
 - Property Tax
 - Water Quality Fee

Program Funding Comparison Tennessee Phase 1 Programs

City	Property Tax/\$100 Assessed Value	ERU sq ft	\$ ERU/Yr	Program Budget	Funding Sources					
					General Revenue			WQ User Fee		
					MS4	ROW	Flood Ctrl	MS4	ROW	Flood Ctrl
Memphis, TN	\$3.271481	Tiered	7 Tiers	\$30,110,000				x	x	x
Nashville/Davidson County, TN	\$3.1255	Tiered	15 Tiers	\$34,275,000				x	x	x
Knoxville, TN	\$2.4638	N/A	N/A	\$14,985,000	x	x	x			
Chattanooga, TN	\$2.2770	3,200	\$115.20	\$19,500,000				x	x	x

Final Thoughts

- Required Permit Programs
- Expected Quality of Life - Constituent Expectations
- Balanced Funding
- Funding Efficiency
- Program Transparency & Accountability



