



## Three Mile Creek Watershed Restoration Status of Activities

February 2020



Three Mile Creek and its surrounding watershed present an extraordinary opportunity for the cities of Mobile and Prichard to turn what is now a community liability, due to its degraded condition, into a community amenity and a waterway destination. With the publication of the Three Mile Creek Watershed Management Plan in 2014, and a resolution of plan support passed by the Mobile City Council in 2016, lead stakeholders within this watershed are actively pursuing this transformation.

## Agenda

- 1. Introductions
- 2. Overview of Goals and Objectives of TMC Environmental Restoration
- 3. Upper Watershed Projects Status
- 4. Middle Watershed Projects Status
- 5. Lower Watershed Projects Status
- 6. Meeting Frequency for 2020
- 7. Other
- 8. Adjourn

The meeting agenda began with self introductions and an overview of the Three Mile Creek Watershed Management Plan Goals and Objectives before discussing the implementation of activities recommended in that Plan.

## The Goals of the Watershed Plan

1. Improve **water quality**
2. Protect and improve the **health of fish and wildlife**
3. Provide **access** to resources
4. Restore heritage and **cultural connection** between the watershed and community
5. Plan and prepare for climate **resilience**



In implementing this plan, lead stakeholders are steadfast in their commitment to engage the community, create relationships, and create a culture of ownership and pride among residents, churches, and businesses to ensure this revitalization will be supported and sustained into the future. These Watershed Management Plan Goals keep its implementation centered...

## The Objectives

1. Develop **10 miles of continuous greenway** and restore natural channels and riparian buffer where feasible
2. Develop a strategy for implementing **Total Maximum Daily Loads (TMDLs)**
3. Achieve State water quality standards for **warm water fisheries**
4. Eliminate all known **illicit connections/sanitary inputs**
5. **Reduce amount of trash** in waterways by 75%
6. Maintain design level of service for **flood protection** from USACE dams
7. Install environmental **education signage** in six existing or proposed parks



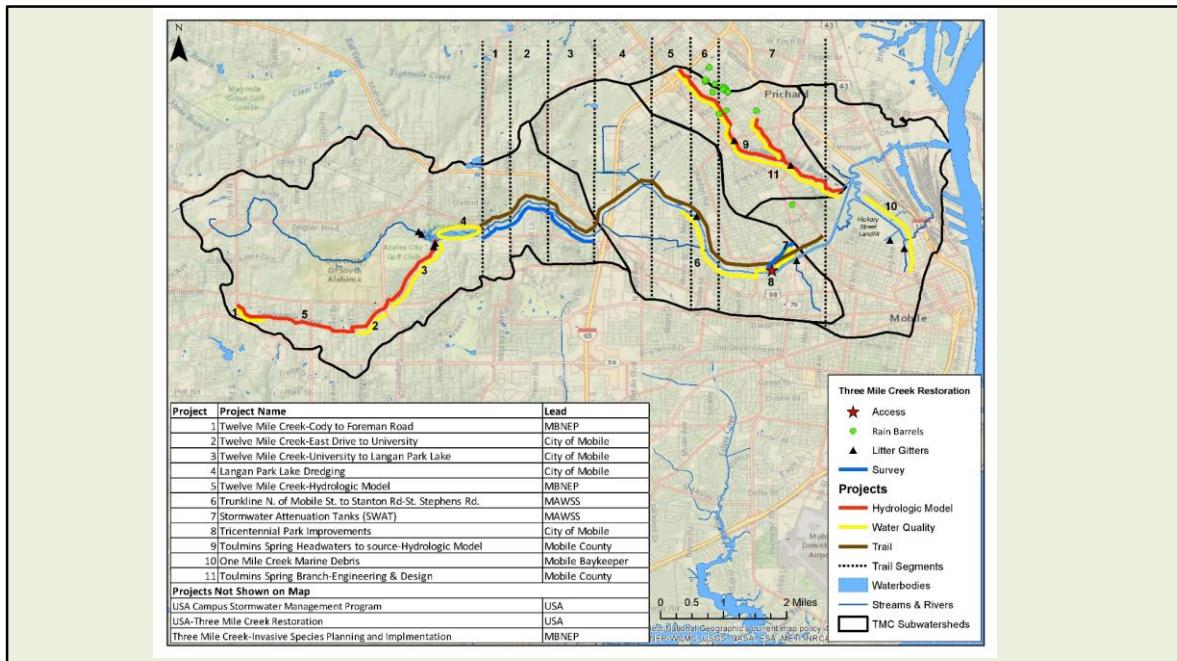
Achieving those Goals will be pursued through objectives, including the creation of 10 miles of continuous trail, improving water quality, reducing trash, ensuring flood protection. A key component of plan implementation is the control and eradication, where possible, of invasive flora and fauna.

## **Key Areas of Focus**

- Environmental
- Access
- Community Engagement



The implementation of the Three Mile Creek watershed management plan can be divided into three different overarching programs- Environmental restoration; expanding access to the water and open spaces along the creek, in part, through the creation of 10 miles of trail; and a comprehensive program of community engagement to ensure each program learns from and listens to affected residents, businesses, churches, schools and other entities to the greatest extent feasible to ensure projects undertaken meet the needs of the communities who live closest to the creek and its tributaries. This Watershed spans every demographic and income level.



MBNEP Director, Roberta Swann, introduced this map to introduce Three Mile Creek activities. There are a variety of activities currently in progress throughout the Watershed. As you can see from this map, many of the on-going efforts overlap in area, demonstrating the need for close coordination among the various entities putting “shovels-in-the-ground.” From hydrologic restoration and stormwater management in Twelve Mile Creek to sewer improvements through installation of larger pipe and stormwater attenuation tanks to reduce the number of sanitary sewer overflows, to trash abatement, installation of rain barrels, dredging of Langan Park Lake, and management of invasive species, much is being done to improve environmental conditions.

The City of Mobile has made the creation of 10 miles of trail a priority and has hired a landscape architecture firm to take the Three Mile Creek Greenway to construction following the installation of the first leg of trail and continued improvements at Tricentennial Park.

# Invasive Species Control Plan

- ▶ RESTORE Bucket 2 funding – March 2020
- ▶ Surveyed entire 3MC watershed
- ▶ Invasive plants and animals
- ▶ Catalogued native plants
- ▶ Identifies primary and secondary options
- ▶ Provided a calendar for scheduling management activities
- ▶ Identified equipment and personnel needed
- ▶ Included a cost calculator for implementation
- ▶ Transferable across the state



THREE MILE CREEK WATERSHED

Invasive Species Control Plan



Project No.: 10001  
Date: 4/1/2019

Prepared by: VOLKERT

Project No.: 10001  
Date: 4/1/2019

Prepared by: EnviroScience

Project No.: 10001  
Date: 4/1/2019

Prepared by: Van Dyke Environment

Project No.: 10001  
Date: 4/1/2019

Prepared by: aetna

Project No.: 10001  
Date: 4/1/2019

Prepared by: Vicksburg Environmental



MBNEP Restoration Project Manager, Katie Dylewski, began by introducing the Invasive Species Control Plan. Wrapped into the RESTORE Bucket 2 funding for stabilization and restoration of Twelve Mile Creek is the development and implementation of a Three Mile Creek Invasive Species Control Plan. Delivered in April 2019, this Plan includes extensive sampling of both invasive and native plants in 368 sampling plots across the Watershed, providing a robust baseline data set. With prescriptive recommendations for primary and secondary treatment options, a calendar for scheduling management measures, identification of necessary equipment and personnel, and even a cost calculator, this Plan for the TMC Watershed is transferable to other Alabama watersheds.

Scientific Name	Common Name	Preferred Treatment*	Secondary treatment*	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sept	Oct	Nov	Dec
<i>Panicum repens</i>	torpedograss	Glyphosate + Clipper	Diquat					F	F	F	F	F			
<i>Paspalum urvillei</i>	Vasey's grass	Glyphosate	Glyphosate + Imazapyr					F	F	F	F				
<i>Pueraria montana</i>	kudzu	Milestone VM	Garlon 4					F	F	F	F				
		Milestone VM		CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS	CS
		Garlon 4		BT	BT	BT	BT								
<i>Raphanus raphanistrum</i>	wild radish	Glyphosate	Mechanical	MR	MR	MR	MR	MR	MR	MR	MR	MR	MR	MR	MR
				F	F	F	F	F	F	F	F	F	F	F	F
<i>Rhynchospora</i> sp.	unidentified invasive beaksedge	Glyphosate	Mechanical	MR	MR	MR	MR	MR	MR	MR	MR	MR	MR	MR	MR
			Imazapyr					F	F	F	F	F	F	F	F
<i>Rosa spp.</i>	rose	Glyphosate						F	F	F	F	F	F	F	F
		Garlon 4	Pathfinder II	BT	BT			BT	BT	BT	BT	BT	BT	BT	BT
<i>Salvinia minima</i>	common salvinia	Biological		B	B	B	B	B	B	B	B	B	B	B	B
			Clipper		AH	AH	AH	AH							
<i>Sesbania punicea</i>	rattlebox	Mechanical		MR	MR			MR	MR	MR	MR	MR	MR	MR	MR
			B	B				B	B	B	B	B	B	B	B
<i>Sorghum halepense</i>	Johnson grass	Outrider	Glyphosate					F	F	F	F	F	F	F	F
<i>Thelypteris dentata</i>	downy maidenhair fern	Glyphosate				F	F	F							
<i>Triadica sebifera</i>	Chinese tallow tree	Arsenal AC	Clearcast	SI	SI			SI	SI	SI	SI	SI	SI	SI	SI
			Garlon 4	CS	CS			CS	CS	CS	CS	CS	CS	CS	CS
			Clearcast	Garlon 4				F	F	F	F	F	F	F	F
<i>Ulmus parvifolia</i>	Chinese elm	Mechanical		MR	MR	MR	MR	MR	MR	MR					
			Glyphosate					BT	BT	BT	BT	BT	BT	BT	BT
		Garlon 4	Pathfinder II												
<i>Verbena brasiliensis</i>	Brazilian vervain	Mechanical		MR	MR	MR	MR	MR	MR	MR	MR	MR	MR	MR	MR
			Triclopyr		F	F	F	F	F	F	F	F	F	F	F
<i>Wisteria sinensis</i>	Chinese wisteria	Garlon 4	Glyphosate					BT	BT	BT	BT	BT	BT	BT	BT
		Garlon 4	Pathfinder II	BT	BT										

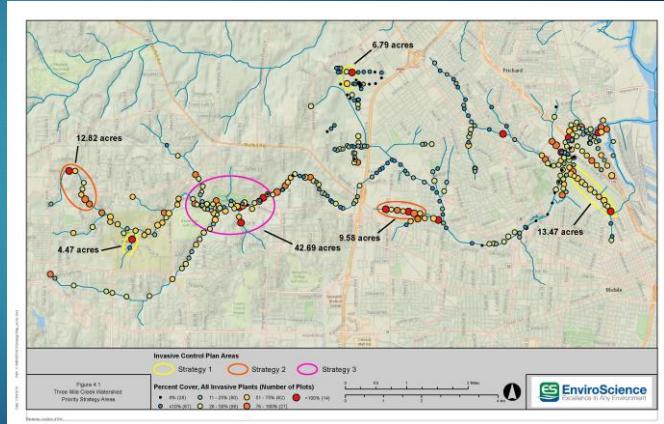
AH = Aquatic Herbicide, BT = Basal Treatment, B = Biological, CT = Chemical Treatment, CS = Cut Stump, D = Dewater, F = Foliar, MR = Manual Removal, SI = Stem Injection

\* This is a summary of treatments and the individual prescriptions should be reviewed for full recommendations.

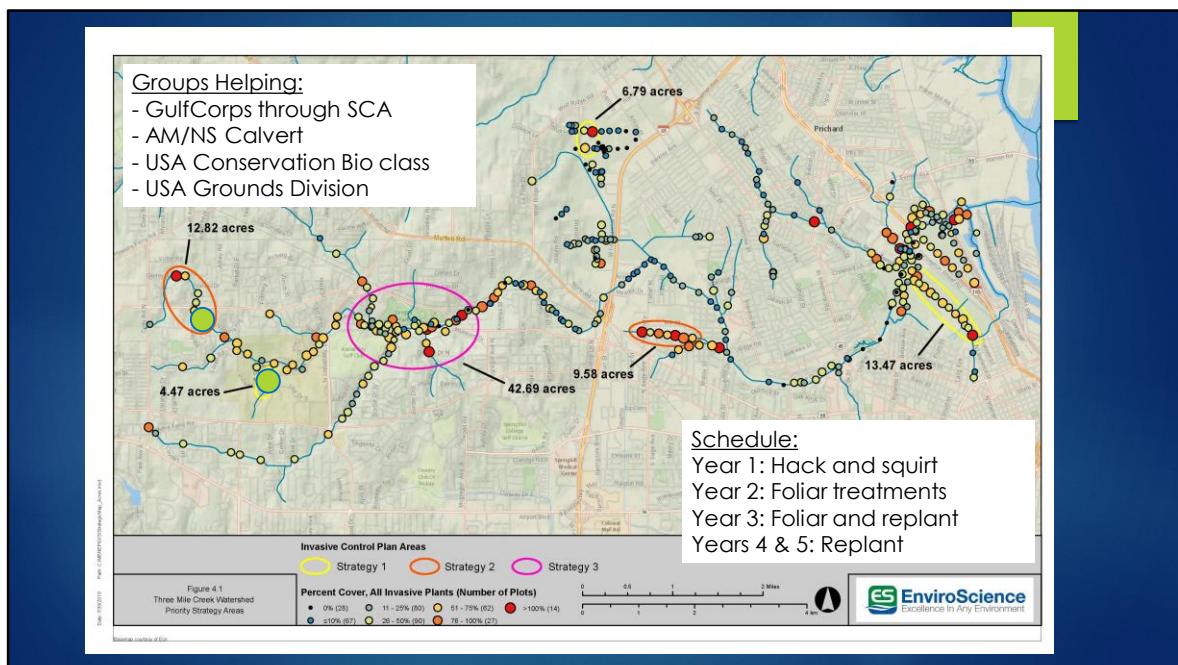
This is a page from the species-specific schedule of preferred and secondary treatment activities and an implementation schedule for the 43 invasive plant species encountered during sampling. Each species was ranked according to the Alabama Invasive Plant Council invasiveness ranking system to estimate relative severity of invasiveness by species.

# Invasive Species Control Plan

- ▶ Project Goals:
  - ▶ Watershed wide effort
  - ▶ Six priority areas, 90 acres
  - ▶ Plants and apple snails
  
- ▶ Project Update:
  - ▶ Plan completed April 2019
  - ▶ Planning meeting November 2019
  - ▶ Working with volunteers and GulfCorps
  - ▶ Forging partnerships



Goals for the Plan are centered on six priority areas across the Watershed from the University of South Alabama east to Langan Park, Toulmins Spring Branch, and One Mile Creek. With the Plan delivered in April 2019, a planning meeting was held at AM/NS Calvert in November 2019 to discuss implementation with funding from RESTORE expected to be forthcoming soon. Volunteer groups and partnerships will be very important for stretching resources as far as possible. GulfCorps has already been engaged, along with USA student service learning groups and AM/NS Calvert volunteers.



Gulf Corps personnel, provided through the Student Conservation Association, will undertake a massive cleanup before dealing with the infestation of Chinese Privet. Following the clean up, GulfCorps will perform hack and squirt herbicide applications on large Chinese Privet plants to on the USA owned parcel off Zeigler Blvd. A working schedule includes initially using hack and squirt to thin existing Chinese Privet (in place, so roots remain to keep soil in place), followed by foliar applications, and then replacement/replanting with native species. Dr. Jeremiah Henning's USA Conservation Biology class student service learning groups and USA Grounds Division will work on campus to conduct a trash clean up and monitor invasive species along Three Mile Creek. AM/NS Calvert associates have also volunteered to manually remove small Privet plants from the wet ground on campus near Three Mile Creek within one of the priority areas.

# Invasive Species Control Plan – Apple Snails

- ▶ Eliminate habitat (emergent vegetation)
- ▶ Crew 3x week during growing season (Mar 1 – Nov1)
- ▶ Collection of eggs and adults for first year
- ▶ Regulatory approvals needed
- ▶ Copper sulfate treatments
- ▶ Lower water level
- ▶ Timing is critical!



With the City planning to dredge and improve the condition of the Langan Park Lake, control and eradication of the island apple snail is a particularly challenging problem that merited a lot of discussion at the November planning meeting. Efforts to eliminate eggs before they hatch will require intensive attention of crews of eight or more people, first eliminating emergent shoreline vegetation and then working at least three times per week between March and November to eliminate egg masses and collect and dispose of adults. We anticipate seeking regulatory approval, and the U. S. Fish and Wildlife Service will help provide guidance. Chemical treatment in the lakes will involve copper sulfate application. The idea of pumping water around or siphoning water over the downstream dam to reduce lake water levels and volume could facilitate collection of adults by volunteers and reduce costs and increase efficacy of chemical treatments. A downstream drip system will be installed post-lake treatments to eliminate snails downstream in the Creek. MBNEP will use some of its implementation funding to assist in apple snail eradication efforts.

## UPDATE: USA CAMPUS

### Two Projects (Section 319 funded)

\* addressing runoff volume, runoff velocity, & sediment  
to Three Mile Creek

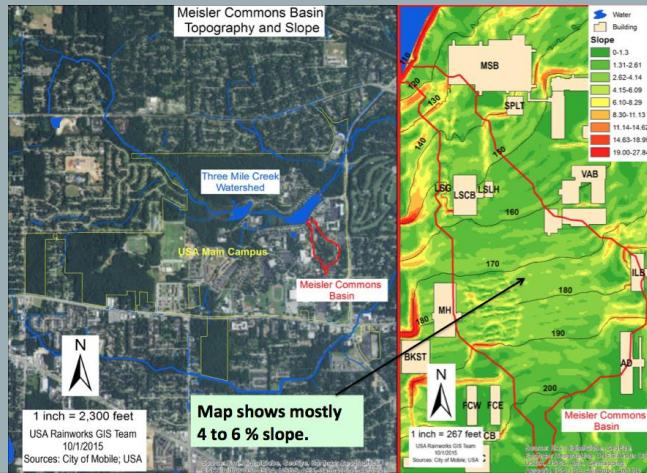
1. Meisler Commons Bio-Infiltration
2. Parking Lot BioSwales



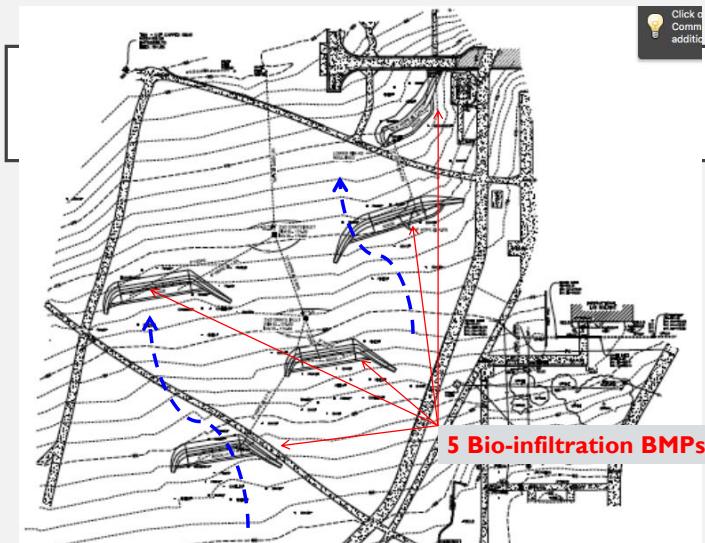
USA Civil Engineering Professor and Department Chair, Dr. Kevin White, introduced two on-going ADEM Section 319-funded and completed projects the University has implemented to address stormwater runoff volume, velocity, and sediment loads to Three Mile Creek: Meisler Commons Bio-Infiltration and Parking Lot BioSwales.

## USA BIO-INFILTRATION BMPS

Addressing erosion/sediment transport from a small, high-slope  
sub-watershed near the Adm Building....Implemented Sept 2017

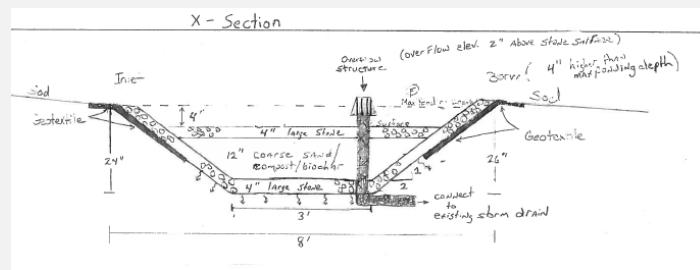


The Meisler Commons drainage sub-basin lies just west of the Administration Building on an approximately-5% slope. The area is mostly open, with a lot of trees and some bare soil.

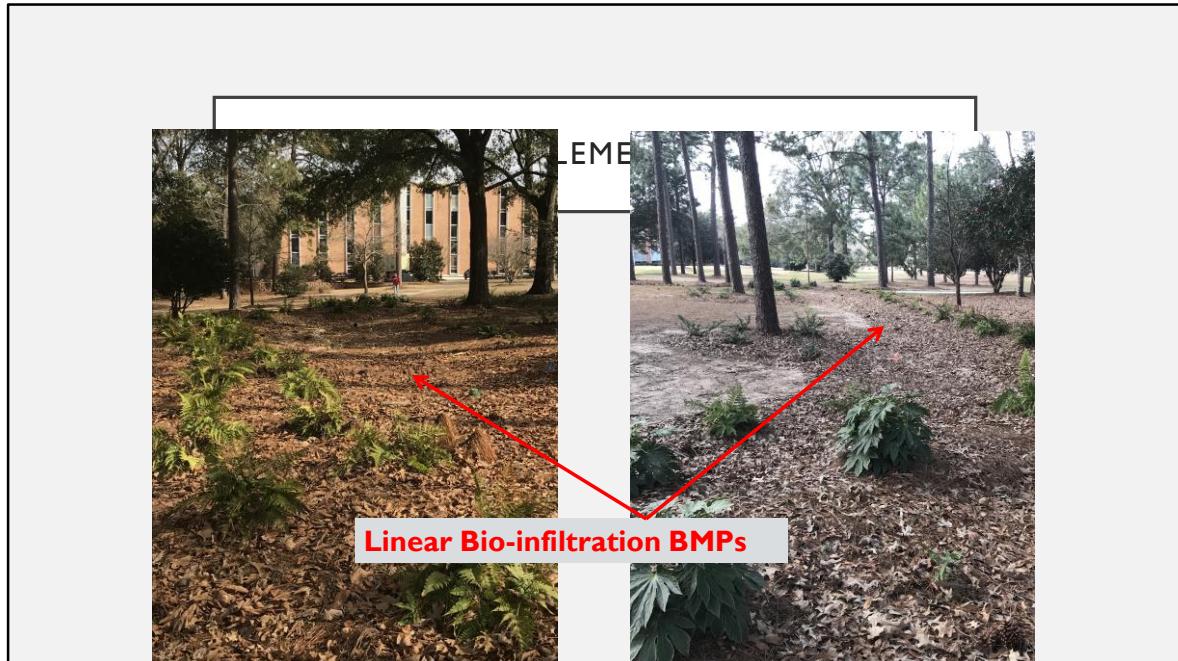


Five linear infiltration basins were installed to catch runoff down slope.

## BIO-INFILTRATION CROSS SECTION



This cross-section shows the two-foot deep infiltration matrix, consisting of coarse sand, compost, and biochar, sandwiched between two 4"-wide layers of stone. They were installed in 2017 with "mushroom inlets" positioned two inches above the top stone layer to carry overflow to storm drains.



These linear bio-infiltration best management practices or BMPs form inconspicuous depressions in the landscape.

## SAMPLING/MODELING RESULTS

- Sampling indicates **78% sediment conc reduction**
- STEPL & Region 5 Models predict **75% sediment load reductions** <https://www.southalabama.edu/departments/publicrelations/pressreleases/0520109stormwater.html>



Jordan Blackman, a USA student, sampled runoff above and below the Commons, indicating a 78% sediment load reduction on water draining to Three Mile Creek, similar to predictions derived from STEPL and Region 5 models.

**PROJECT #2**  
**PARKING LOT BIO-INFILTRATION**  
**(USA-HUMANITIES)**

- Two curbed islands were re-engineered to be linear bio-infiltration devices
- Curbs on the uphill side removed, depressions created, filled with rock and landscaped



The second USA project involved re-engineering two curbed islands in the parking lot near the Humanities and Chemistry Buildings. The curbs on the uphill side of the islands were removed, depressions were created and filled with crushed stone to form an infiltration matrix, and then landscaped. Stormwater running off from this lot approximately 100 meters to Three Mile Creek has begun to form a gully. Another project may be undertaken to address that problem.

## BIO-INFILTRATION DEVICES: HUMANITIES PARKING LOT



Installed July-August 2019

These resulting BMPs catch stormwater runoff allowing it to infiltrate, reducing volume and velocity of the stormwater collecting on this previously impervious surface. Temporary signage, explaining these low-impact development measures, has been installed to inform students, faculty, and visitors.

## STORMWATER-LID WORKSHOP

LAST WEEK-JANUARY 30

- In response to a request from the USA President's "Mayors Luncheon" (August 2019)
- **USA hosted**, USA/MBNEP coordinated, Advanced Drainage Systems, Inc. sponsored
- Speakers: Katie Dylewski (MBNEP), Dr. Eve Brantley (Auburn University and Alabama Cooperative Extension System), Dan Ballard (City of Auburn), Mark Joersz (ADS), Dr. Kevin White (USA)
- Field trip to 2 LID sites on USA Campus
- **45 attendees:** City of Mobile, Daphne, Saraland, Robertsdale, Gulf Shores, Chickasaw, Semmes, DR Horton, AL Forestry Commission, White-Spunner Construction, ALDoT, ADEM, Mobile Baykeeper, USA, Volkert, Goodwyn, Mills & Cawood, AL Soil & Water Conservation, Driven Engineering, Thompson Engineering, 3 students

At the USA President's Mayor's Luncheon in August 2019, lots of questions involved use of low impact development measures as USA continues to grow. In response, a Stormwater-LID Workshop was developed (with Katie Dylewski's help) and held on the campus on January 30, 2020. Case studies were presented by Dr. White, Katie Dylewski, Dr. Eve Brantley of Auburn University and the Alabama Cooperative Extension System, Dan Ballard of the City of Auburn, and Mark Joersz of Advanced Drainage Systems (who sponsored the event). Forty-five engineers, municipal employees, agency representatives, engineers, and students attended the Workshop.

## FIELD TRIP



The Workshop included a field trip to view the Bio-Infiltration project, the re-engineered parking lot, and the pervious Mitchell Center parking lot, perhaps the first LID project in Mobile, installed 20 years ago.

Brad Crosson of the U.S. Army Corps of Engineers Regulatory Division asked about the difference in maintenance requirements for the re-engineered parking lot with Bio-Infiltration. Dr. White responded that very little additional maintenance was required. He noted that if there was grass or bare soil, sediment might be problematic. He noted that if there was a sediment source upslope, a grassed filter strip would be needed as pre-treatment to allow sediment in runoff to be filtered before entering the practice. Some weeding is required, but maintenance requirements are concerned with aesthetics and not performance.

# Twelve Mile Creek Headwaters Restoration

- ▶ Project Goals:
  - ▶ Stabilize and restore 1,800 linear feet
  - ▶ Target erosion and sedimentation
  - ▶ Improve habitat and water quality
  
- ▶ Project Update:
  - ▶ NWP 27 secured
  - ▶ RESTORE Bucket 2 funding – March 2020
  - ▶ Next steps: 100% design, bidding, construction
  - ▶ Construction timeline: November 2020

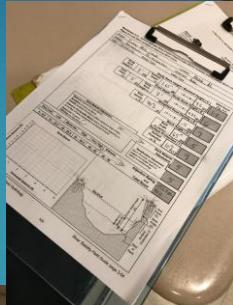


Ms. Dylewski reassumed the floor to introduce the RESTORE Bucket 2-funded restoration of erosion-impacted and sediment-delivering headwaters to the Twelve Mile Creek tributary, considered the major source of sediment to the lakes at Langan Park. The Project goals include stabilizing and restoring 1,800 linear feet of degraded stream channel, targeting erosion and sedimentation, and improving habitat condition and water quality.

Engineering and design have been completed to the 60% stage, a Nationwide 27 Permit for aquatic habitat restoration has been secured, and RESTORE funding is expected to be released in March 2020. Next steps involve developing engineering plans to 100%, then bidding to hire a construction contractor, with construction expected to begin in November 2020.

## Field Training - USA Students

- ▶ September 2019
- ▶ Geomorphology Class
- ▶ Hands on, professional experience
- ▶ BEHI, NBS, and BANCS modeling
- ▶ Post construction monitoring



In September, the tributary was used for field trainings of Dr. Alex Beebe's Geomorphology students. Students collected data and ran models to determine potential sediment reductions. This exercise was potentially a "train the trainer" opportunity, as Dr. Beebe received training to increase his and the University's capacities. The students will assist with post-construction monitoring.

Linda St. John asked Katie what type of ground cover will be planted? Ms. Dylewski responded that we will be guided by what native plants currently exist there and suggested that maybe grasses would be planted. Bob Harris of the Alabama State Port Authority recommended aggressive planting of grasses to stem invasion by exotic nuisance species. Roberta Swann responded, affirming Mr. Harris' suggestion based upon stream restoration experiences in the D'Olive Watershed with invasive nuisance species. Deep rooted grasses are suggested to inhibit concentrated flows around trees and shrubs. Using grasses would allow any runoff traveling through the riparian area to sheet flow, which is especially important if a stormwater outfall or culvert is creating a concentrated source of flow in the area. Grasses create necessary roughness to slow water and filter out sediment

## 12 Mile Creek and Langan Park Lake - Coordination

### RESTORE:

Application was submitted November 22, 2019. The RESTORE grant includes both sections of Twelve Mile Creek and Langan Park Lake. We are awaiting review.

### Corp of Engineers:

The City of Mobile is working on getting responses to comments received for the USACE Individual Permit.



Janic Terry, Assistant City Engineer for the City of Mobile, introduced the RESTORE Bucket 3-funded, restoration efforts in two sections of Twelve Mile Creek and the Langan Park Lake. The RESTORE application for funding was submitted on November 22, 2019, and the City is currently developing responses to comments received for the U.S. Army Corps of Engineers Individual Permit.

## 12 Mile Creek (Lower)



- Design Completion:
  - 95% - Downstream of University
  - 80% - Upstream of University
- Concept:
  - Add energy dissipater at East Drive
  - Reinforce stream to Museum Drive
  - Restore volume at Museum Forebay

### Estimated Timeline

- Dependent on approval of Bucket 3 funds
- Construction to begin once design is complete and anticipated to last 12 months



The City's engineering and design efforts for areas downstream and upstream of University Blvd. are 95% and 80% complete, respectively. The design concept includes installation of an energy dissipater at East Drive, reinforcement to the stream channel at Museum Drive, and restoration of volume at the Museum forebay.

Depending upon approval and dispersal of RESTORE Bucket 3 funds, construction will begin once design is completed, and is anticipated to last 12 months.

## Langan Park Lake Dredging



- 30% Design has been completed
- Permitting process requirements identified.
- Island apple snail abatement plan will be created.
- Dredging operations plan and temporary and permanent disposal plans are being created.

### Estimated Timeline

- Dependent on approval of Bucket 3 funds
- RFQ for completion of design – 2 months after Bucket 3 award
- Design complete – 14 months after notice to proceed given for design
- Construction to begin once design is complete and anticipated to last 12 months (**contingent on completion of restoration work upstream in Twelve Mile Creek**)



Engineering and design have been completed to the 30% stage for dredging of three to five feet of sediment from Langan Park Lake. Elements necessary for permitting process requirements have been identified. A plan to abate island apple snails will be created, along with a dredging operations plan and temporary and permanent disposal plans. MBNEP Director Roberta Swann reiterated that some of our RESTORE funding for implementation of the Invasive Species Control Plan will be used to supplement City efforts to abate apple snails.

The timeline will be dependent on approval of Bucket 3 funds. A Request for Qualifications for completion of design will be released two months after funding is awarded. It is anticipated that the design will be completed within 14 months of notice to proceed. Construction will begin once design is completed and is expected to last 12 months. Construction will be contingent upon completion of restoration work upstream in Twelve Mile Creek.

# Three Mile Creek Greenway Trail



February 7, 2020



Matt Jollit of the City of Mobile stepped up to discuss development and construction of the Three Mile Creek Greenway. Construction will begin east of I-65, as shown on the in the segments on the map.

## Current Activity

- Completing construction documents for Segment 6N (TAP Grant assisted).
- RESTORE Grant application: Update submitted to Treasury for review (1/31).
- Design focus remains east of I-65 for RESTORE funding.
- Funding and implementation plan being created for Segments 1 & 2.
- Greenway Safety Plan in development with MPD and MFRD.
- Real Estate Negotiations being finalized.



Concurrently, the first two sections of the trail beginning at the Japanese Gardens are being worked on for a construction package. Transportation Alternatives Program (TAP) Grant funds are being used to fund construction documents of Segment 6N. An updated RESTORE Grant application was submitted to the U. S. Department of Treasury on January 31, 2020, with design focus on sections east of I-65.

A funding and implementation plan is being created for western-most Segments 1 and 2.

A safety plan is in development with the Mobile Police and Fire and Rescue Departments.

Real estate negotiations are being finalized.

Segment 7 will have connectivity to the Broad St. redevelopment.

## Next Steps

- Community outreach & updates
- Section 6N TAP Grant submission & implementation
- Construction documentation
- CE & I contract development

- Timeline:

Segment 6N:

Notice of Award - 1 MAY 20 / Construction – 1 NOV 20

Segments 5 & 7N:

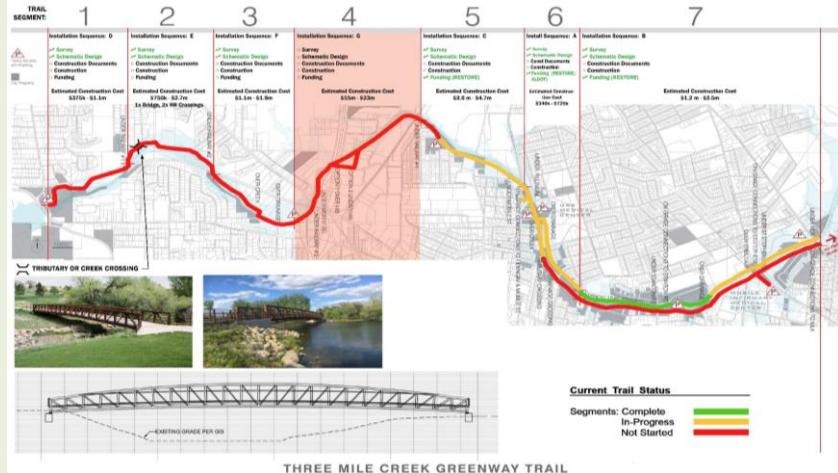
Notice of Award - 1 MAY 20/ Design – 1 DEC 20 /  
Construction - 1 JAN 22



Community outreach and updates will continue as TAP Grant application for Section 6N is submitted and construction is implemented.

Construction documentation and construction engineering and inspection contracts are in development.

A Notice of Award for construction is anticipated for Segments 5, 6N, and 7N in May 2020. Construction of Segment 6N is projected to be complete by November 2020. Design for Segments 5 & 7N are expected to be completed by December 2020 and construction is anticipated to take close to a year and be complete by the end of 2021.



This slide summarizes funding and the Greenway construction progress and strategy, including schematics of bridge design and the trail transitions from the north to the south sides of Three Mile Creek. A general strategy is to shift from Sections 5 though 7 and then to try to get trail established in Sections 1 and 2 to the west. Segments 3 & 4, crossing I-65 will be undertaken when funding is available to connect eastern and western segments.

## Three Mile Creek Greenway Trail



Matt Jollit  
[matt.jollit@cityofmobile.org](mailto:matt.jollit@cityofmobile.org)

Jennifer Greene  
[jennifer.greene@cityofmobile.org](mailto:jennifer.greene@cityofmobile.org)

Here is contact  
information for City

staffers related to the

Three Mile Creek

Greenway Trail.

# Three Mile Creek Wet Weather Conveyance and Storage Facilities Project Status Update

February 7, 2020

Mobile Area Water and Sewer System Engineering Manager, Daryl Russell, discussed initiatives being undertaken in the Watershed, including the construction of wet weather conveyance and storage facilities.



MAWSS is constructing two new severe weather attenuation tanks (SWATs) adjacent to an existing tank with 8M gallons of capacity east of and close to Tricentennial Park. SWATs provide temporary side stream storage capacity for waste water during heavy rain events, after which the water is pumped at a controlled rate back into sanitary sewer infrastructure.

## Three Mile Creek Wet Weather Storage Facilities

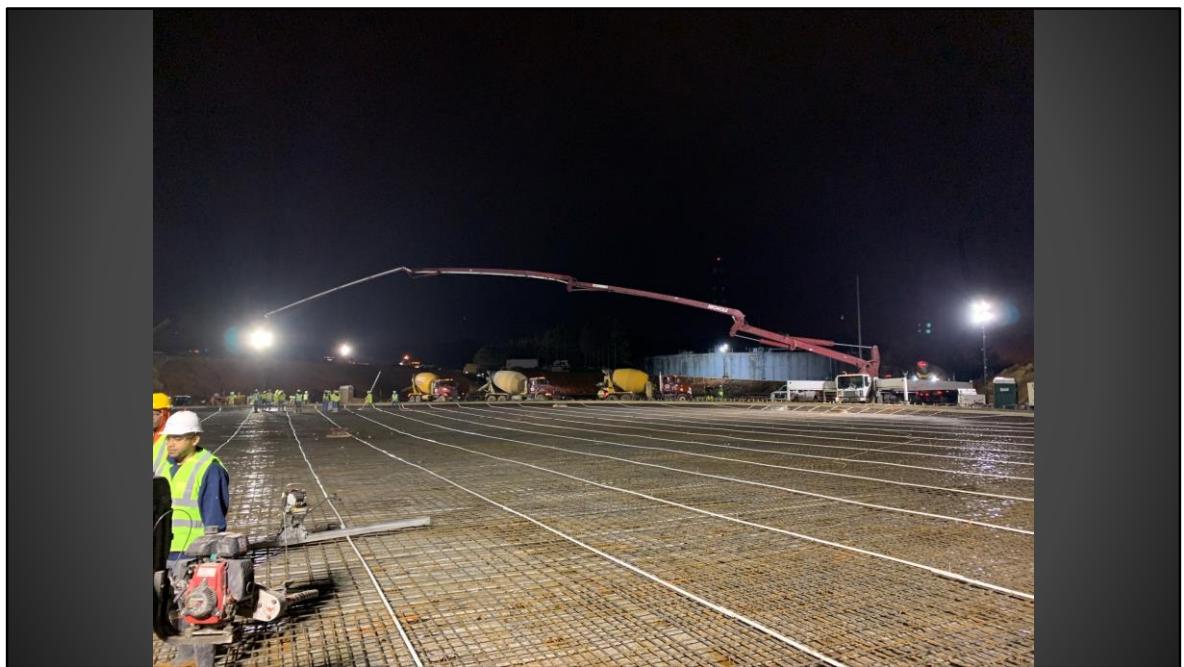
- \* Increase existing storage at SWAT location from 8 million gallons to 28 million gallons.
- \* Increase SWAT pumping capacity from 23 mgd to 52 mgd.

The new SWATs will increase existing storage at the SWAT location from 8 million gallons to 28 million gallons with pumping upgrades that will increase capacity from 23 million gallons per day to 52 million gallons per day.

## Project Status

- \* Foundations for both tanks ready for concrete
- \* Tank No. 3 foundation poured on Saturday
- \* Tank No. 2 foundation poured on Tuesday
- \* Sheet piling is in place at lift station and contractor is beginning to excavate within the sheet cell
- \* Scaffolding on site for holding walls and roof

Foundations for both new SWATs have been poured, sheet piling is in place at the lift station and excavation within the sheet cell is underway. Scaffolding has been erected on site for construction of walls and roof.



Construction photos show the immense scale of the project...



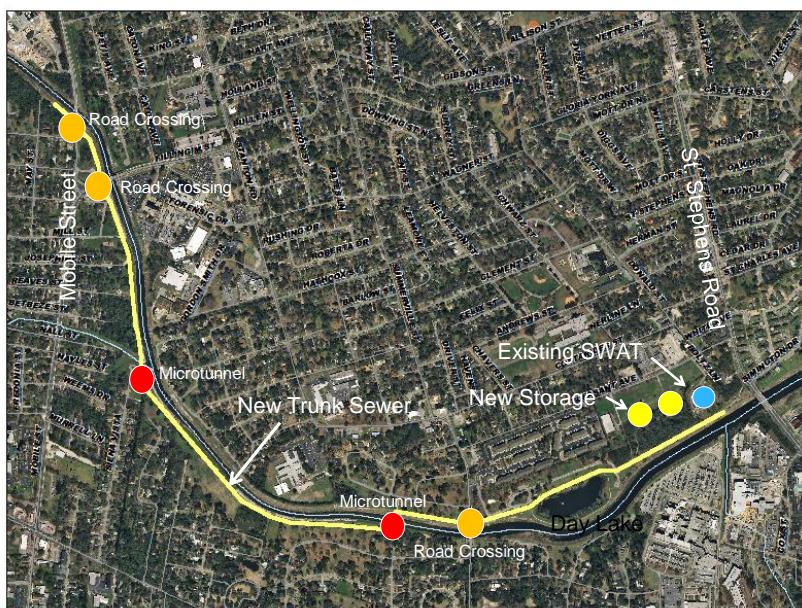
These SWATs represent an over-\$16 million investment to alleviate sanitary sewer overflows during rain events. MAWSS is employing a similar strategy at Halls Mill Creek using berms rather than tanks. No subsequent SSOs have been reported since construction of the Halls Mill Creek facility, and engineers hope for similar results with Three Mile Creek.



A photograph of well creation...



...and staging of scaffolding.



Along with SWAT construction, a second MAWSS Three Mile Creek Watershed project being implemented to reduce the incidence and frequency of SSOs is an upgrade to sanitary sewer trunk main lines.

## THREE MILE CREEK TRUNK SEWER

- \* 11,000 LF of new 60" gravity sewer main; replacing existing 42"/48" main
- \* Mobile St (south) → Stanton Rd (north) → St. Stephens Rd (SWAT)

Approximately 11,000 linear feet of new 60" gravity sewer main will replace aging 42"-48" infrastructure. Replacement will stretch from Mobile Street to St. Stephens Road. With an award of over \$16 million, both projects reflect an investment of close to \$35 million to reduce SSOs.

## Project Status

- \* Easement clearing ongoing
- \* Silt fencing placed
- \* Pipe is arriving on site
- \* Contractor is setting dewatering system for boring  
Stanton Road

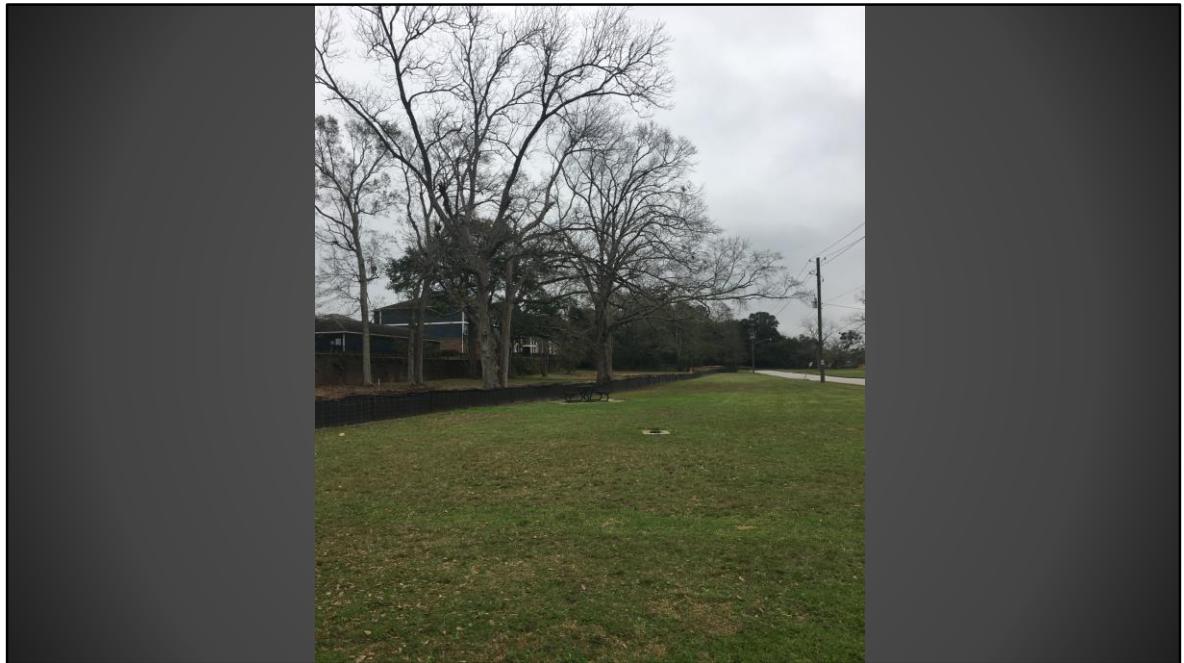
Project status: MAWSS is clearing easements pre-construction. Silt fencing has been placed, new pipe is arriving on site, as the construction contractor is setting a dewatering system for boring under Stanton Road.



Easement clearing...



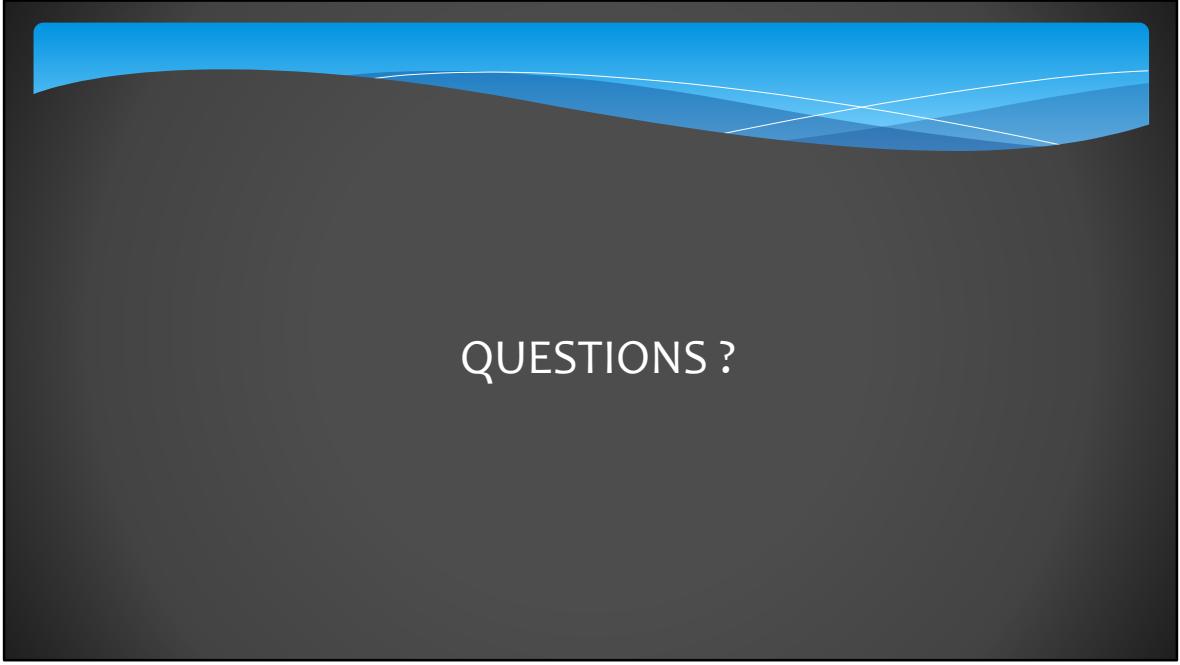
Delivery and storage of 60" pipe...



Silt fencing in place along the route.

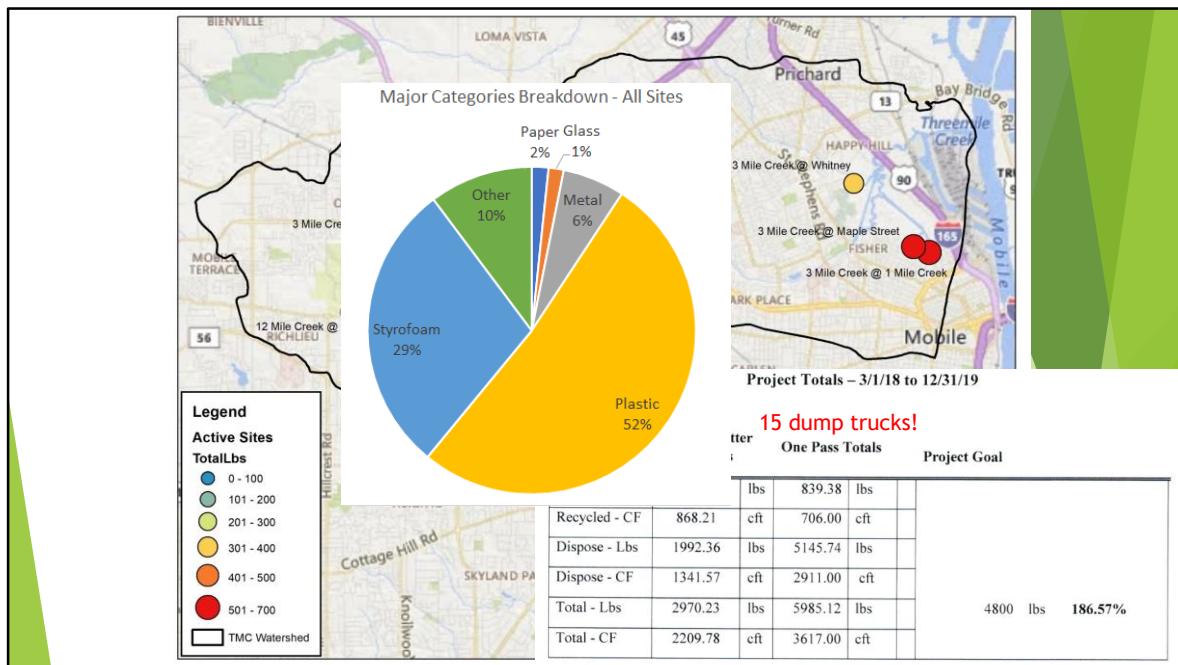


Micro-tunneling at Stanton Road.



## QUESTIONS ?

Director Charles Hyland commented that MAWSS has been working on this design for "some time." The original design focused on minimizing the removal the trees. He reported that Mayor Stimpson asked MAWSS to work with the Greenway consultant who wanted them to realign the pipe, requiring the removal of significantly more trees. Replacement of trees will be addressed later.



Jason Kudulis, a Project Manager for the MBNEP, provided a litter update, reporting on Three Mile Creek trash abatement efforts. He noted the first full-scale implementation of deployment of Litter Gitter floating trash collection devices began at the Maple Street tributary. The MBNEP was able to secure funding from the EPA Gulf of Mexico Program (GOMP) to have Osprey Initiative deploy 10 of the portable collection devices, channel recyclables appropriately, and use the EPA's Escaped Trash Assessment Protocol (ETAP) to characterize litter and understand sources to guide incentivization or business-responsibility programs. Responding to ongoing data collection and analysis, six Litter Gitters remaining in the watershed are performing with similar efficacy as the original 10. A total of 9,000 lbs of litter has been harvested from Creek waters and tributaries – enough to fill 15 dump trucks! While the GOMP contract with Osprey has expired, MBNEP secured funding to extend the project through March, giving the 3MC Partnership time to secure additional funding.

**How Long Until It's Gone?**

Do you know how long it takes for your trash to decompose?  
Different materials decompose at different rates!

**Survey Results: Percentage**

N=279				
Did you notice your packaging today was not styrofoam?	Are you aware that litter in streets and parking lots makes its way to waterways?	Do you prefer paper or styrofoam?	Would you be willing to pay more for sustainable packaging? How much?	Would you like to follow our progress with this campaign and other coastal AL projects?
Yes: 72%	Yes: 92%	Paper 40%	5 cents 24%	Yes 59%
No: 28%	No: 8%	Styrofoam 27%	10 cents 25%	No 41%
		No Preference 33%	25 cents 20%	
			35 cents 14%	
			I would not be willing to pay more 17%	

**Plastic vs Paper**

Orange Peel 6 MONTHS      Diaper 450 YEARS      Cigarette Butt 1.5-10 YEARS

**Clean Water Future**

[www.mobilebneap.com](http://www.mobilebneap.com)

[www.cleawaterfuture.com](http://www.cleawaterfuture.com)

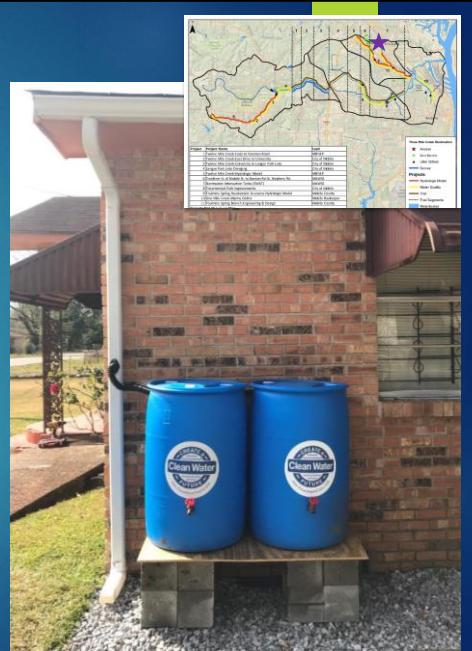
Another part of a Three Mile Creek trash abatement program is the “Ditch the Disposables” program, intended to encourage the use of more sustainable packaging and reductions in single-use, disposable items, like plastic straws and Styrofoam cups and containers. A team, including MBNEP’s Madison Blanchard and consultant Troy Ephraim, canvassed Prichard businesses to determine who might be interested in a partnership to investigate the problem. Big White Wings, a popular restaurant in Prichard specializing in take out, stepped up and participated in a week-long pilot project using more sustainable packaging and surveying customers. Customers who participated became eligible to win a 50” TV. The survey was completed by 279 customers, the majority of whom:

- Noticed that Big White Wings packaging was NOT Styrofoam;
- Were aware that litter in streets and parking lots makes its way into waterways;
- Preferred paper packaging over Styrofoam; and would like to follow progress with this campaign and other coastal Alabama projects.

Perhaps the most significant finding from the survey was that 83% of respondents would be willing to pay more for sustainable packaging.

# Prichard Rain Barrel Program

- ▶ Project Goals:
  - ▶ Encourages water conservation and introduces homeowners to stormwater runoff management
  - ▶ Install 100 two-barrel systems
  
- ▶ Project Update:
  - ▶ Installed 60 two-barrel systems
  - ▶ Support from AL Power and Greif
  - ▶ Working with housing authority to install at 53 more homes



The Prichard Rain Barrel Program began in 2017 as a project undertaken by the Coastal Alabama Conservation Corps. With donations of barrels from Coca-Cola and Greif/Soterra, volunteers, some from the University of South Alabama, recruit residents of the flood-prone, low-to-moderate income, Toulmins Spring Branch and Prichard communities to receive free two-barrel (110-gallon) rainwater harvest systems, installed by Alabama Power volunteers along with storm gutters, downspouts, and other hardware. Primarily intended to reduce the volume of stormwater runoff entering Toulmins Spring Branch, this Program also educates property owners on the impacts of stormwater runoff and nonpoint source pollution. A particular benefit of the Program is the provision of free, though non-potable, water in a community that pays particularly high prices for their water. Many community members are using the barrel systems to provide water to irrigate gardens and flower beds.

Three Mile Creek Restoration Project Inventory Estimated Schedule of Activities																										
	Jan 2020	Feb 2020	Mar 2020	Apr 2020	May 2020	June 2020	July 2020	Aug 2020	Sep 2020	Oct 2020	Nov 2020	Dec 2020	Jan 2021	Feb 2021	March 2021	April 2021	May 2021	June 2021								
USA Campus Stormwater Management Program	COMPLETE																									
USA-Three Mile Creek Restoration	Delayed																									
12 Mile Creek- Hydrologic Model	COMPLETE																									
<b>RESTORE Bucket 2</b>		Phase two Awarded																								
12 Mile Creek- Cody to Foreman Rd. Invasive Species Planning and Implementation	Addressed RESTORE comments		Engineering & Design 100%			Const. Bids		Constructions Starts			Const. Ends	Warrenty & Maintenance														
		Invasive Species Mangement Plan Implementation																								
<b>RESTORE Bucket 3</b>																										
12 Mile Creek- East Drive to University	Responding to USACE Comments		Grant Pending																							
12 Mile Creek- University to Langan Park Lake	Responding to USACE Comments		Grant Pending																							
Langan Park Lake- Dredging		Grant Pending																								
Tricentennial Park improvements	COMPLETE																									
Tricentennial Park improvements- Kayak Launch	COMPLETE																									
<b>RESTORE Bucket 1</b>																										
Three Mile Creek Greenway Trunk line- North of Mobile St. to Stanton- St. Stephens Rd	Const. Starts		Const. Starts																							
Stormwater Attenuation Tanks (SWAT), Trash Abatement- 10 Litter Gitters; SWAMP; Waste Stream Red	Const. Starts		Const. Starts																							
<b>RESTORE Bucket 3</b>		Implemented & actively maintained																								
NRDA Toulmins Spring	Pending																									
Toulmins Spring Headwaters to source	Pending																									

The Three Mile Creek Project Timeline continues to be refined, and any time estimates are subject to change depending on availability of funds. If details of your project need updating please let the MBNEP Program office know, and we will update it..

This will be updated and replaced once I hear back from project partners to confirm dates.

## Three Mile Creek Restoration Information

Contact:

Mobile Bay  
National Estuary Program  
251-431-6409

[mbnep@mobilebaynep.com](mailto:mbnep@mobilebaynep.com)

