

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Based on work with Catawba Indian
Nation and IHS

4 March 2020 TUS at Coushatta

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Outline

- ❖ Emergency Response Plan Background
- ❖ Emergency Response Plan Development
- ❖ Emergency Response Plan Implementation
- ❖ Application of the Emergency Response Plan
- ❖ Roundup, Review, and Questions

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Emergency Response Plan Background

- ❖ An Emergency Response Plan (ERP)
 - Is not a new idea
 - Designed to cover the anticipated mishaps that **WILL** occur when operating mechanical and piped systems
 - Generated to reduce reactivity of Utilities during unanticipated mishaps
 - Promote Asset Inventory, Planning, & Tracking

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Emergency Response Plan Background

- ❖ Requirement of the America Water Infrastructure Act
 - 6 mo. After Risk and Resilience Assessment Certification
 - Systems $\geq 100,000$ by 30 Sep 2020
 - Systems 50,000 to $<100,000$ by 30 Jun 2021
 - Systems 3,300 to $<50,000$ by 31 Dec 2021
 - 5-year cycle for recertification
- ❖ AWIA does not directly apply to most Tribal Systems

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Outline

- ❖ Emergency Response Plan Background
- ❖ **Emergency Response Plan Development**
- ❖ Emergency Response Plan Implementation
- ❖ Application of the Emergency Response Plan
- ❖ Roundup, Review, and Questions

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Emergency Response Plan Development

- ❖ Template Started before Approved & Published AWIA-2018
 - Original plan part of Master Utility Plan project with Poarch Creek – EPA and IHS IA NS-09-M10 (July 2013)
 - ERP Templating for Catawba began Jul/Aug 2017
- ❖ Template has the following note:

**This ERP was created based on work by Poarch Band of Creek Indians and their engineer CDG (CDGE.com) for an Indian Health Service (IHS) Project NS-09-M10 with funding and oversight by IHS and EPA Region 4 for templating for all tribes in EPA Region 4 and Nashville Area IHS. The original template is modified to fit the needs and requirements of the Catawba Indian Nation by IHS Tribal Utility Consultant and the Tribal managers and operations staff.*

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Emergency Response Plan Development

Template Cover Page



Catawba Indian Nation



Water & Wastewater

Emergency Response Plan

**This ERP was created based on work by Poarch Band of Creek Indians and their engineer CDG (CDGE.com) for an Indian Health Service (IHS) Project NS-09-M10 with funding and oversight by IHS and EPA Region 4 for templating for all tribes in EPA Region 4 and Nashville Area IHS. The original template is modified to fit the needs and requirements of the Catawba Indian Nation by IHS Tribal Utility Consultant and the Tribal managers and operations staff.*

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Emergency Response Plan Development

Template Table of Contents



Catawba Indian Nation of South Carolina Emergency Response Plan

Table of Contents

Section	Title	Page
0.	Introduction	3
1.	Emergency Response Mission and Goals	5
2.	System Information	6
3.	Chain of Command – Lines of Authority	7
4.	Emergency Notification	9
5.	Severity of Emergencies	13
6.	Events that Cause Emergencies	17
7.	Water Quality Sampling	19
8.	Effective Communication	20
9.	The Critical Customers and Off-Reservation Contacts	22
10.	Response Actions for Specific Events	25
11.	Alternative Water Sources	32
12.	Curtailing Water Usage	33
13.	Returning to Normal Operation	34
14.	Training and Rehearsals	35
15.	Emergency Status Designations	35
16.	Plan Approval	37

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Emergency Response Plan Development

Introduction Highlights

The _____ Indian Nation must comply with all applicable federal and State of _____ laws regarding public health, security, emergency planning, and local right-to-know laws. Key laws addressing water system security and preparedness are:

- Public Health Security and Bioterrorism Response Act of 2002
- Safe Drinking Water Act
- Emergency Planning and Right-To-Know Act
- **American Water Infrastructure Act 2018**

The Tribal systems also will comply with applicable state and local laws.

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Emergency Response Plan Development

Introduction Highlights

The Catawba Indian Nation has formed an independent *Tribal Emergency Response Commission (TERC)* in accordance with its option under the Title III of the Emergency Planning and Community Right-To-Know Act. Title III contains four major provisions:

- 1) Planning for chemical emergencies,
- 2) Emergency notification of chemical accidents and releases,
- 3) Reporting of hazardous chemical inventories, and
- 4) Toxic chemical release reporting.

The structure and procedures of the TERC provide the overall framework for emergency response planning pertaining to the Tribe's water & wastewater systems.

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Emergency Response Plan Development

Introduction Highlights

- ✓ The document is consistent with, and should be considered, an integral part of the Catawba Indian Nation ERP.
- ✓ The Tribal ERP serves as an umbrella for water/wastewater system emergency preparedness.
- ✓ The 2002 Bioterrorism Act requires water utilities to coordinate, to the extent possible, with Local Emergency Planning Committees (LEPC) to develop and implement an ERP. (Work with other local Utilities.)
- ✓ The Tribal ERP contains plans for coordinating with local, state, and federal emergency management agencies.

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Emergency Response Plan Development

Template Table of Contents



Catawba Indian Nation of South Carolina Emergency Response Plan

Table of Contents

Section	Title	Page
0.	Introduction	3
1.	Emergency Response Mission and Goals	5
2.	System Information	6
3.	Chain of Command – Lines of Authority	7
4.	Emergency Notification	9
5.	Severity of Emergencies	13
6.	Events that Cause Emergencies	17
7.	Water Quality Sampling	19
8.	Effective Communication	20
9.	The Critical Customers and Off-Reservation Contacts	22
10.	Response Actions for Specific Events	25
11.	Alternative Water Sources	32
12.	Curtailling Water Usage	33
13.	Returning to Normal Operation	34
14.	Training and Rehearsals	35
15.	Emergency Status Designations	35
16.	Plan Approval	37

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Emergency Response Plan Development

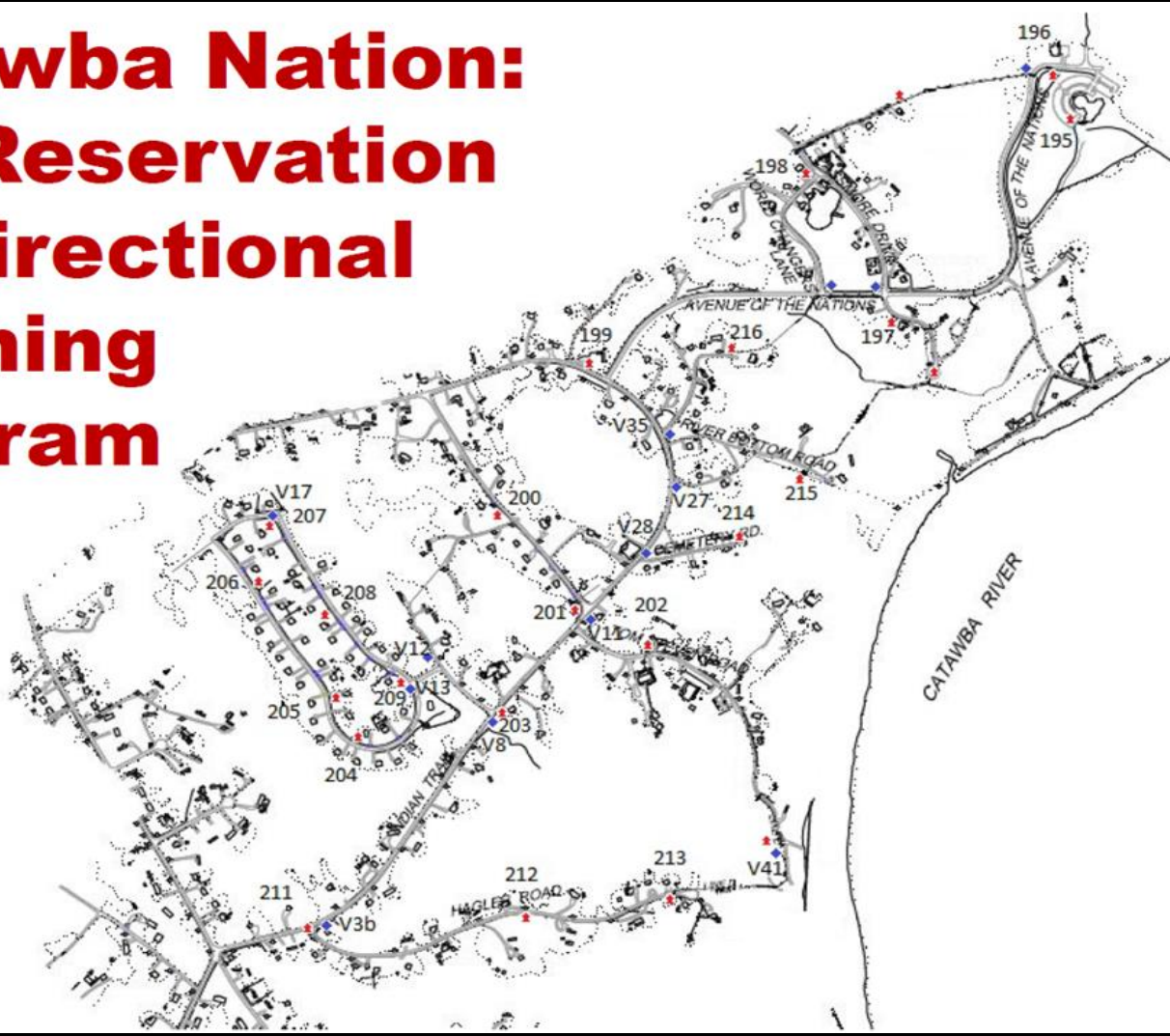
Critical Planning Coordination

- ❖ Unidirectional Flushing Plan
- ❖ Bacteriological Sampling Plan
- ❖ Safety and Health Plans
- ❖ Water line re-pressurization procedures (SOPs)
- ❖ Spill response procedures (SOPs)
- ❖ Etc.

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Emergency Response Plan Development

Catawba Nation: Old Reservation Unidirectional Flushing Program



Critical Planning Coordination

❖ Unidirectional Flushing Plan



Catawba Indian Nation

of South Carolina

Bacteriological Sampling Plan

For the Catawba Indian Nation

Old Res

PWSID 4650063

Reservation

Plan Summary Pages 5 – 7

Approval Date	Signature & Title	Signature & Title
_____	_____	_____
Revision Date	Revision Reason	Signature
_____	_____	_____
_____	_____	_____
_____	_____	_____

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Emergency Response Plan Development

Critical Planning Coordination

❖ Bacteriological Sampling Plan

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Emergency Response Plan Development

Critical Planning Coordination

Catawba Indian Nation Utility Department

MASTER UTILITY PLAN

Safety and Health Program

S&H – 03 CONFINED
SPACE ENTRY

S&H – 09 LADDERS

S&H – 10 Lockout Tagout

safety and Health Program

S&H – 15
WORK ZONE &
TRENCHING
EXCAVATION

S&H – 16
TRAFFIC CONTROL

❖ Safely &
Health
Plans

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

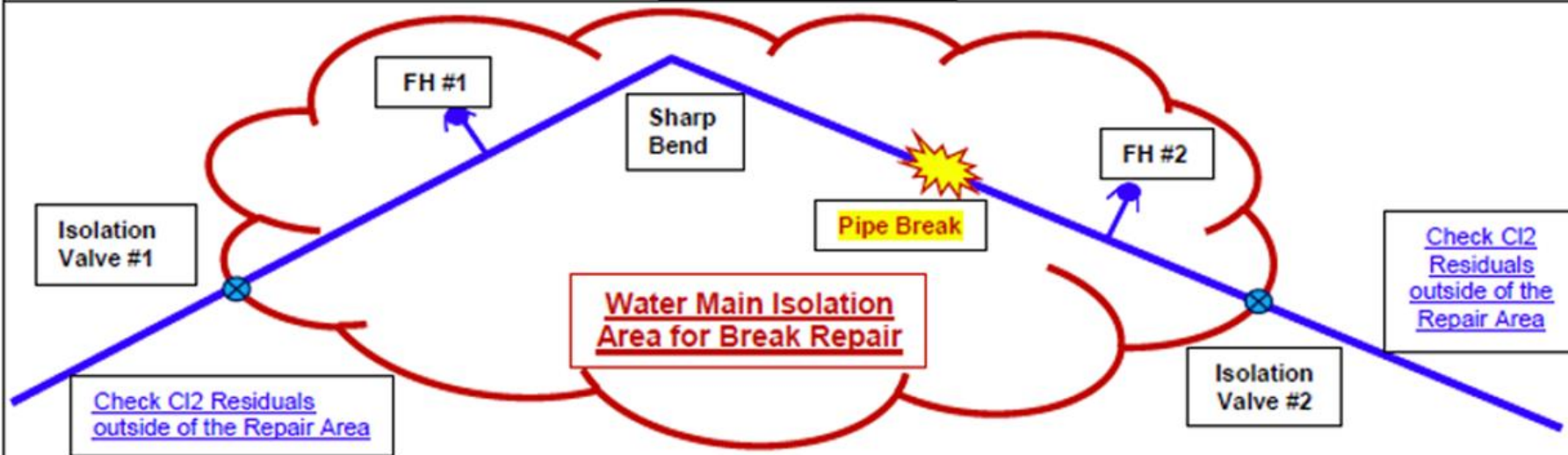
Emergency Response Plan Development

Critical Planning Coordination

Re-pressurization Examples 1 – 3

Re-pressurizing an Isolated Pipe Segment after a Break Repair

Example #1



1. Ensure that non-impacted pipe segments outside the repair area have effective and sufficient Chlorine (Cl₂) residuals prior to opening the isolation valves. If those pipe do not have sufficient Cl₂ residuals, flush the system pipes up to the break area first.
2. Finish all break repairs.
3. **Re-Pressurize the Pipe Segment by Opening Valve #1 (Keep Valve #2 Closed).** *This allows for the*

❖ Water line re-pressurization procedures (SOPs)

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Emergency Response Plan Development

Critical Planning Coordination

Sanitary Sewer Overflows SOP

Managerial Lead: _____
Field Lead: _____
Media Contact: _____

Must develop a personnel action plan in order to effectively address all the issues. Plan should include who does what once a problem is found. Need defined roles for Leadership, Management, Field Personnel, Samplers, if needed, Door to Door Notifiers, and so on. Each general task will have people or groups assign to complete tasks and management will need to fill in the gaps. Each task will likely have a given SOP or the like.

Address cause of the overflow: Sewer/MH plugged or restricted, force main broken, lift station pumps not operating, power outage, control panel malfunction, or etc. Simultaneous address the overflow and impacted area(s).

A. Impact on Ground (Lime Application SOP)

1. Estimate the quantity and begin to address cause(s) and repair system [Sewer Collection System Rehabilitation, Repair, or Abandonment of given sewer collection facility (Gravity Sewer, Manhole, Lift Station, Force Main)] while simultaneously addressing the health and environmental health concerns.
2. Contact Catawba Authorities (use Chain of Command - Lines of Authority – Tribe List)
3. Contact State or Local Authorities as deemed necessary (use Off Reservation

❖ Spill response procedures (SOPs)

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Outline


- ❖ Emergency Response Plan Background
- ❖ Emergency Response Plan Development
- ❖ **Emergency Response Plan Implementation**
- ❖ Application of the Emergency Response Plan
- ❖ Roundup, Review, and Questions


DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Emergency Response Plan Implementation

- ❖ Communicate with Tribal Leadership
- ❖ Run through a Table Top exercise with Operators and Managers
- ❖ Communication & Building relationships with surrounding entities
- ❖ Full field tests with reviews and lessons learned (Internal/External)
➔ plan modifications




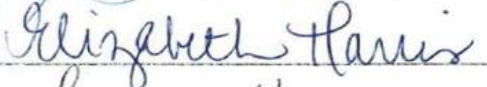

Water and Sanitation Department
Emergency Response Plan



 **Section 16.
Plan Approval**

Plan approval

This plan is officially in effect when reviewed, approved, and signed by the following people:

Title/Name	Signature	Date
Chief Bill Harris		1-27-2020
Assistant Chief Jason Harris		1-27-2020
EC Utility Liaison Sammy Beck		1-27-2020
Tribal Administrator Elizabeth Harris		1/27/20
Environmental Director Scott Hansen		1-30-2020

Plan should be reviewed annually for short updates or changes and revisited fully every five (5) years for formal updated of changes and revisions and subsequent Tribal approval by tribal officials as so identified by title above.

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Outline

- ❖ Emergency Response Plan Background
- ❖ Emergency Response Plan Development
- ❖ Emergency Response Plan Implementation
- ❖ **Application of the Emergency Response Plan**
- ❖ Roundup, Review, and Questions

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Application of Emergency Response Plan

Positives Benefits of Using the Catawba Emergency Response Plan

- 1) Reduced Out of Service Time
- 2) Reduced Boil Water Order Times
- 3) Improved Customer Service
- 4) Reduced Complaints (Customers are better informed)
- 5) Public Notices are Streamlined & Out via Multiple Media outlets with the same message

Tribal Administration appreciates getting the information in a timely, well-organized, and ready-to-go (distribute) manner.

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Application of Emergency Response Plan

Used the Plan to have controlled
system shut down

- 1) Used Notification processes
- 2) Used Alternate Water Sources
- 3) Used Alternate WW Handling
- 4) Used the Unidirectional
Flushing and Re-pressurization
Processes/Plans
- 5) Used Department Interaction
Guideline

From: Elizabeth Harris <Elizabeth.Harris@catawba.com>

Sent: Thursday, December 19, 2019 4:57 PM

To: Catawba Indian <catawbaindian@catawba.com>

Subject: Water Shutdown- January 6th

All,

In speaking with Scott, the Water Department has tentatively scheduled a shut down of water on the Old Reservation on January 6th for hydrant and valve installation. We will have a deluxe heated portable toilet trailer with 3 stalls (similar to the one at the Yap Ye Iswa Festival) here that day for staff use. We will also have plenty of drinking water and hand sanitizer available.

Please let me know if you have any questions.

Thanks,

Elizabeth Harris

Tribal Administrator
Catawba Indian Nation

Administration Greatly Appreciated not
having to send home everyone!

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Application of Emergency Response Plan

Does this look like an
emergency to you?

What would you do
with this Situation?



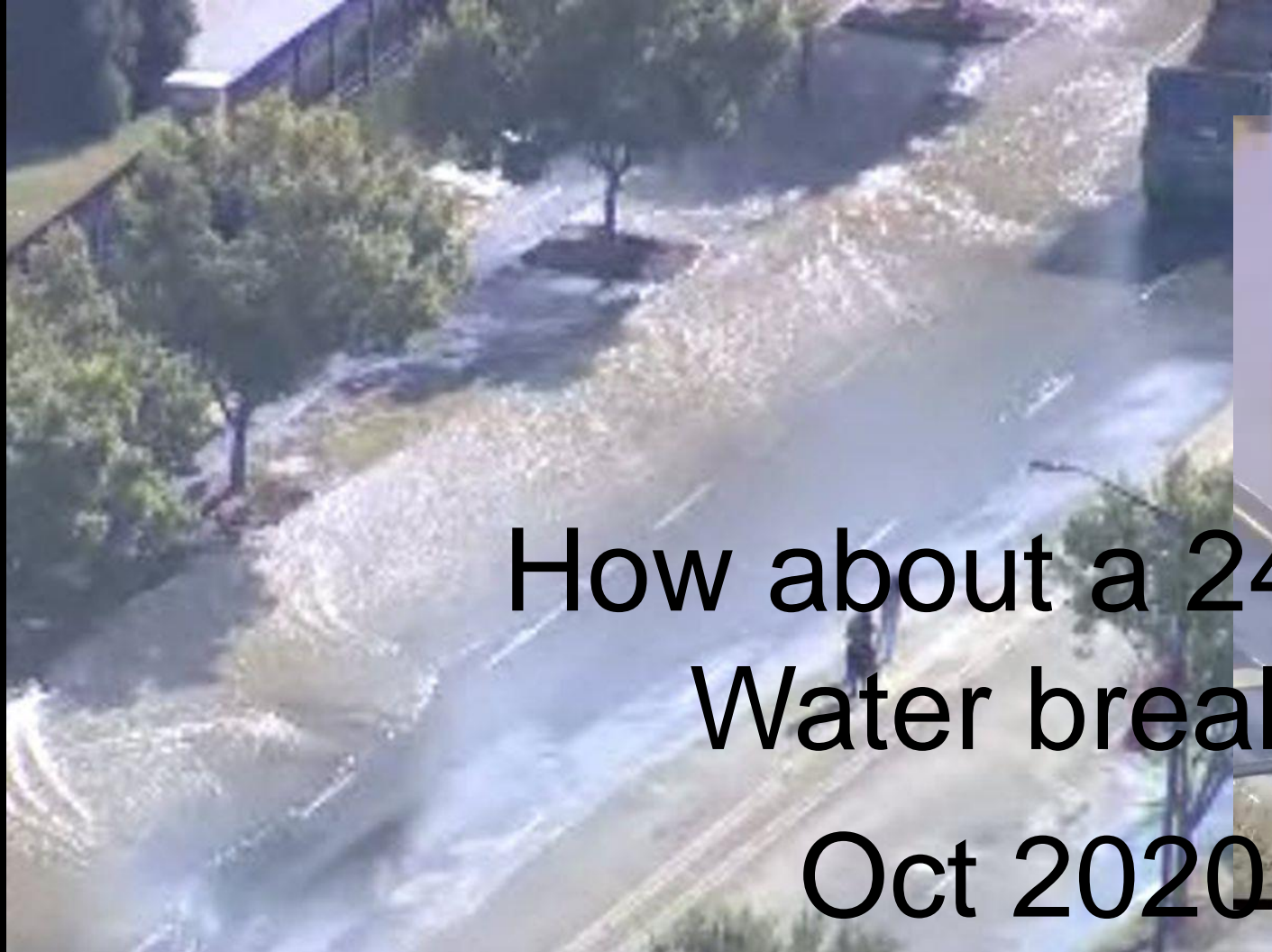
DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Application of Emergency Response Plan

- ❖ Old Res lost all Water Pressure/Supply (July or August 2019)
- ❖ City 12-inch Water Main supplying Old Res impacted by Guardrail post through the main (Took several hours to repair)
- ❖ Notified Customers → Boil Water Order & Notified DHEC
- ❖ Unidirectional Flush Entire System
- ❖ Notified Bacti Sampling Company
- ❖ Flushed Highpoint FH to help remove air
- ❖ Lifted Boil Water Order
- ❖ Still Milky Water due to City's system → lasted about 2 weeks

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Application of Emergency Response Plan



How about a 24-inch
Water break?

Oct 2020

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Application of Emergency Response Plan

- ❖ Coughatta Use of the Template: Experience summary via Ms. Jill Gradney
- ❖ Chitimacha Use of the Template: Experience summary via Mr. Johnny Burgess

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

Emergency Response Plan Summary

An Emergency Response Plan (ERP)

- Designed to cover the anticipated mishaps that **WILL** occur when operating mechanical and piped systems
- Generated to reduce reactivity of Utilities during unanticipated mishaps
- Promote Asset Inventory, Planning, & Tracking
- Complies with EPA and other Requirements

DEVELOPMENT AND IMPLEMENTATION OF AN EMERGENCY RESPONSE PLAN

