

Using Social Media and Regulatory Support to Make a Bad Day Better

Greg Mize, TDEC

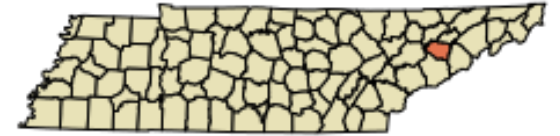
Mike Norton, Dandridge Water



SETTING THE STAGE

DANDRIDGE, TN

- 2nd oldest town in TN
- < 3,500 customers
- Distribution System:
 - 135 miles water lines (primarily PVC and ductile iron, sized 2" to 12")
 - 7 water tanks with 2,012,000 total capacity
 - 3 water suppliers



SOURCE CHANGE DECISION

- Inconsistent Water Supply
- Seasonal Outages
- Lack of Communication from Wholesaler
- Hard Water #1 Complaint

(Side note: there will ALWAYS be a #1 Complaint)

PROCESS OF CHANGE

- Performed Engineering Study
 - Options:
 - Partner with nearby utility
 - Extend water supply to new source
 - Build water plant
- Decision: Extend Water Supply Line
 - More cost effective
 - Deleting “Middle-Man”
 - Increased control of service and cost

WATER QUALITY POTENTIAL ISSUES

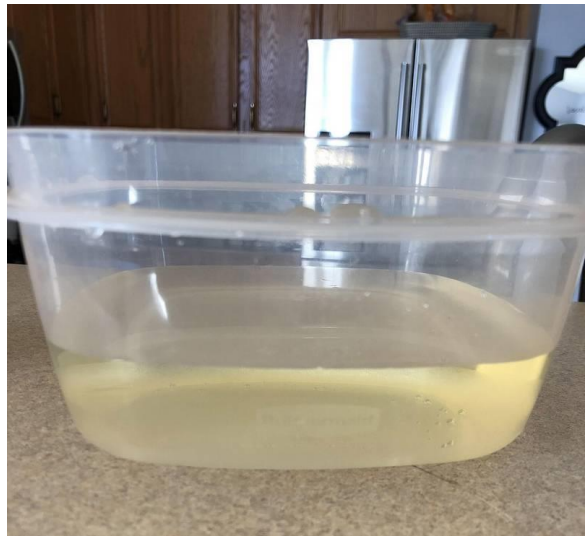
- Differing
 - Water Source
 - Water Quality
 - Treatment Process (Corrosion Control Method)
- Discussed with new supplier was reassured no issues should arise in transition of mixing of sources
 - Historical transition of similar/nearby utility had no issues

CONSTRUCTION OBSTACLES

- Approximately 11 miles of 12” laid
- Change orders completed without prior approval
- 1 year PAST contract time
- 1st time accessing liquidated damages
- Concession made to complete project
- Agreement with existing source
- **OBSTACLES FACED=UNHAPPY TOWN CLIMATE**
- **NEW WATER SOURCE IS FINALLY ONLINE!**



...or so we thought.



NEW CHALLENGES

- **Customer outcry about unusual color**
- **Concerns of unsafe water**
- **How do you gage exaggeration?**
- **No accountability for factual reporting**

**Temperature Change
(Summer Heat)**

**Pipe Age
(2nd Oldest Town-
first records
1930's)**

**Discolor
ed
Water**

**Different
Corrosion
Control
Methods**

pH

**Pipe Material
(galvanized & cast
iron)**

***Case study potential**

TDEC ASSISTANCE

- OCC-Optimum Corrosion Control for Lead & Copper
- Town volunteered to take additional Lead & Copper to aid with confidence in OCC
 - TDEC performed sampling in oldest, worst locations known, along with a single established site, and maintained chain of custody
 - Third party testing
 - Results validated OCC values

REGULATORY PARTNERSHIP

- TDEC added credibility to approach
- Regulatory authority was available at public meetings for questions and to show awareness
- Responsibility is on utility to openly communicate

TDEC FOCUS/VALUES/ROLE

- Primary Concern-New Water Source-What is required? Source also blended with other wholesaler.
- Luckily, source only new to Dandridge, years of historical data for OCC evaluation. (Flint, MI)
- Concerns = Consolidation Agreement, Return to Standard Pb/Cu Monitoring (40 Sites), Burden to System, Connect Galvanized Line Routinely.

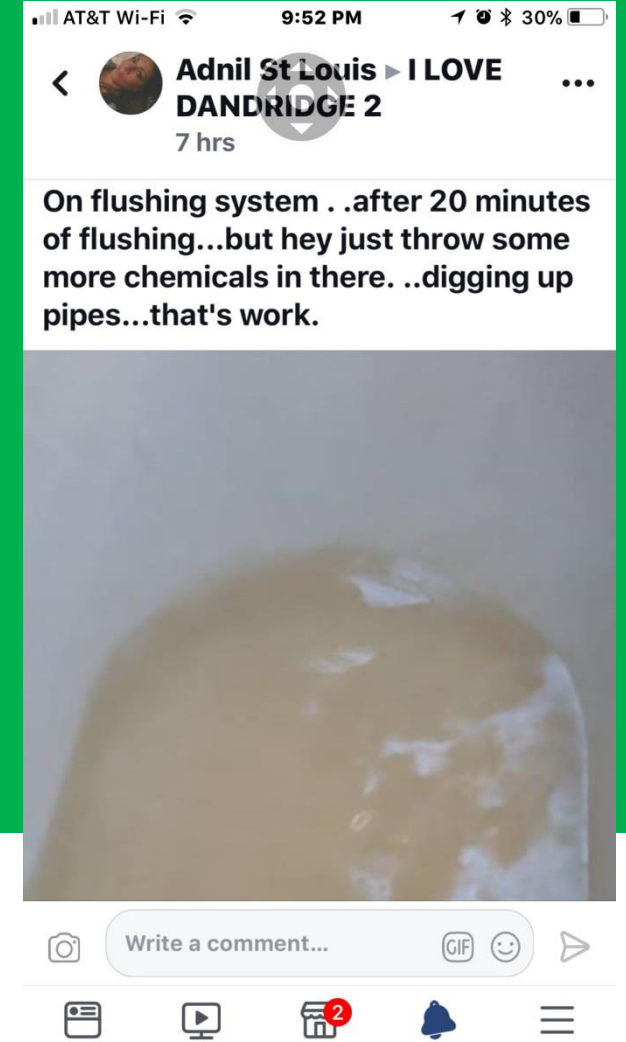
TDEC SOCIAL MEDIA

- Significant rise in use of social media by systems over past 2-3 years.
- TDEC loves it, informs greater # of customers while limiting calls and time spent on providing same information multiple times (for systems and TDEC). Approximately 2 calls to Knox TDEC by Dandridge customers.
- Misinformation still concern (outside posts).

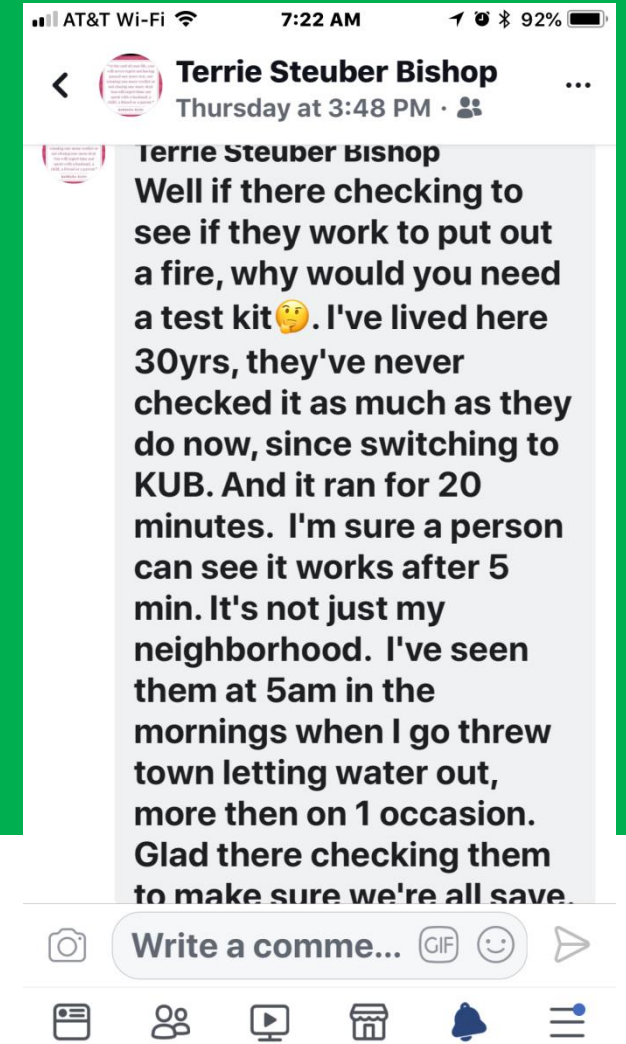
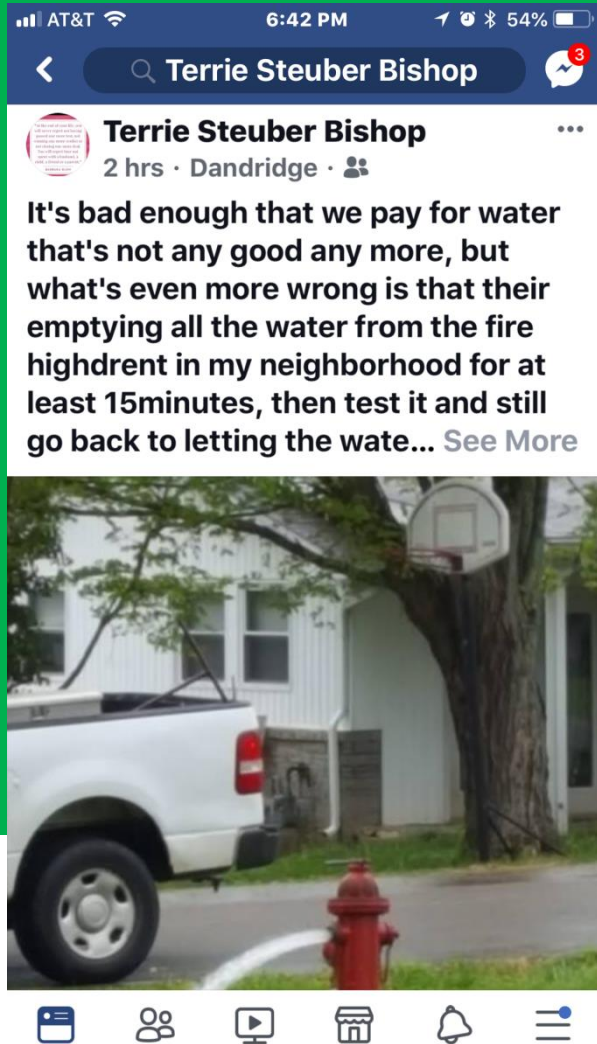
SOCIAL MEDIA STORM

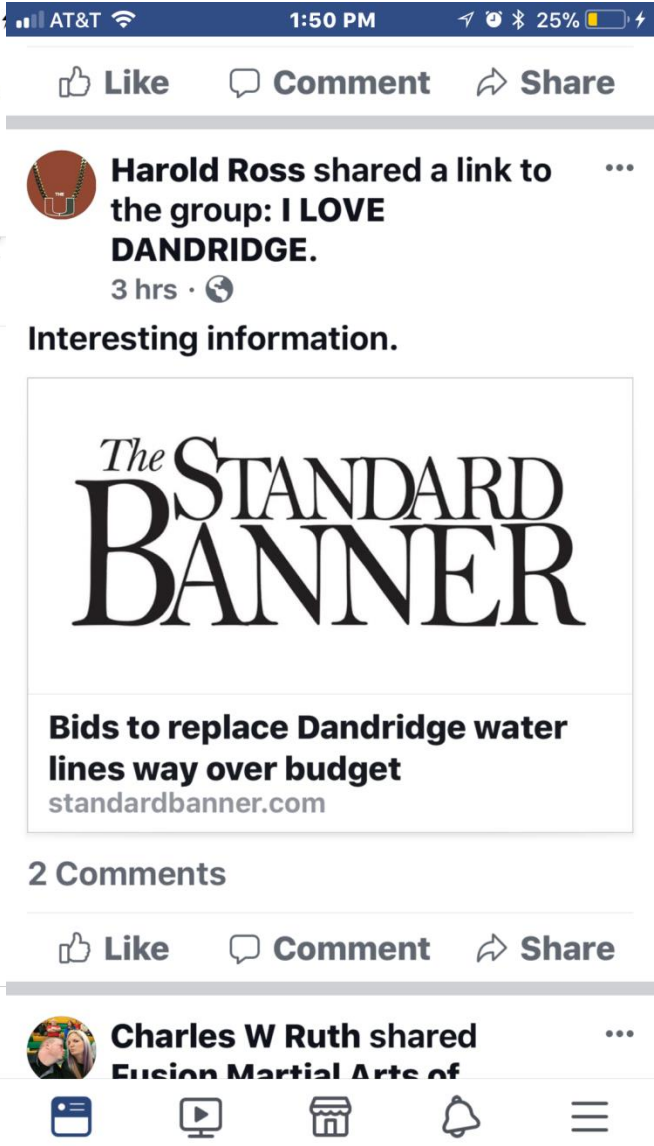
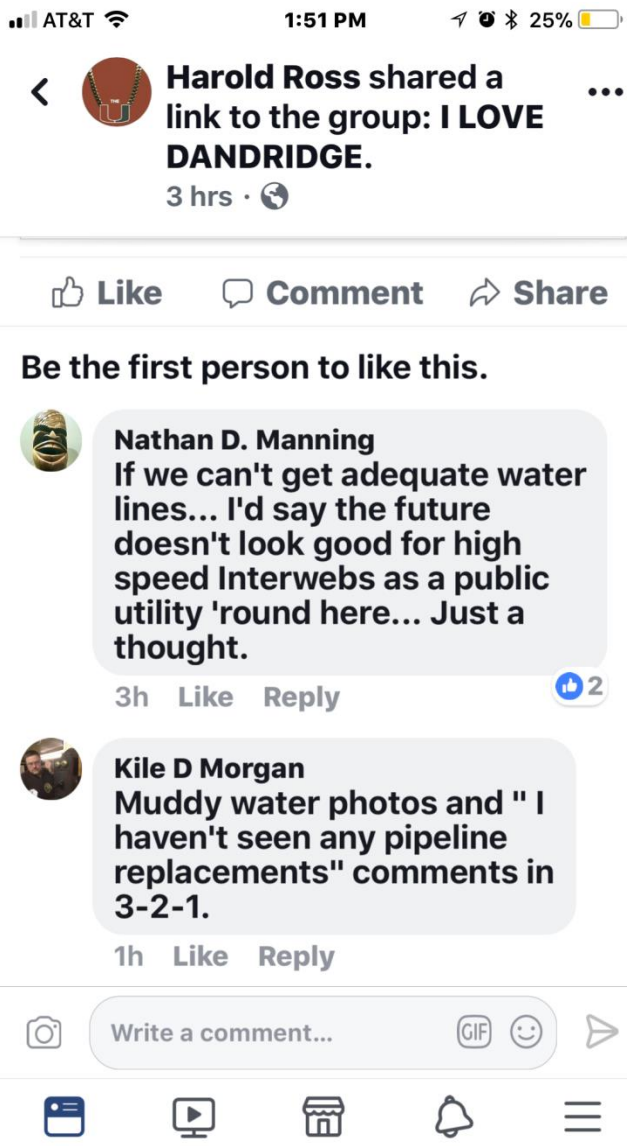
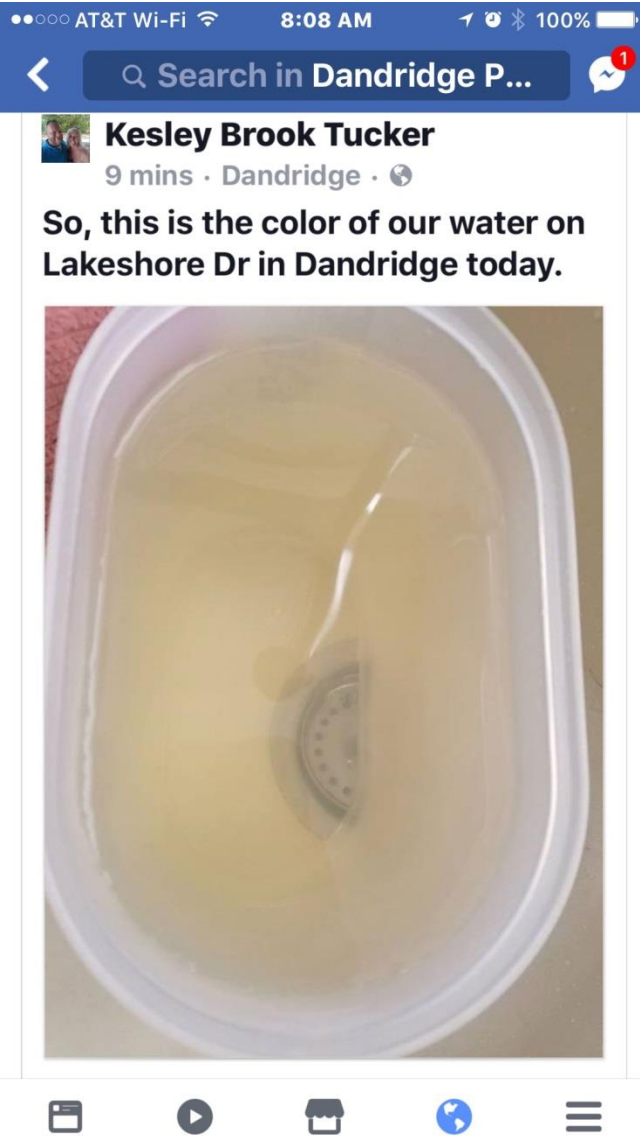


SOCIAL MEDIA STORM



SOCIAL MEDIA STORM





MANAGING NEGATIVE SOCIAL MEDIA

- Be proactive, not just reactive when possible
- Identify key issues for citizens & areas for improved customer service/communication
- Control the conversation, be the trusted news source for accurate information
- Meet them where they are:
 - Social media
 - Newspaper
 - Public Meetings

MANAGING NEGATIVE SOCIAL MEDIA

- Facilitate conversations around the topic, encourage participation
- Know when or how to censor
- Use resources available:
 - Embrace regulatory assistance/partnership

DWMF RESPONSE

01

Customer
Education

02

Bill
Adjustment
Program

03

Ice
Pigging

04

Line
Replacement
Plan

05

TDEC
Partnershi
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CUSTOMER EDUCATION

- Billing Inserts
- Website
- Facebook
- Customer calls/site visits to follow-up on known site from Bill Adjustment Source (filter demos)
- Public Meeting (TDEC Present)

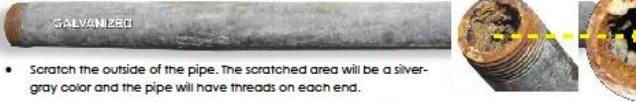
BILL INSERTS/CUSTOMER HANDOUTS



HOUSEHOLD PLUMBING AND WATER QUALITY HOW TO IDENTIFY GALVANIZED PLUMBING

Water quality can change as it leaves the distribution system and enters private-side plumbing in homes and businesses. Household galvanized pipes are old, iron pipes that can affect water quality as they pass through your home and to your taps. Installed in many homes that were built before the 1970's, galvanized plumbing is known to build-up iron corrosion scales causing discolored water and lowered pressure. DWMF delivers high quality drinking water through a series of underground pipes and pipes to our customers to identify household plumbing to ensure high quality water reaches your tap.

How can I identify household galvanized plumbing?



- Scratch the outside of the pipe. The scratched area will be a silver-gray color and the pipe will have threads on each end.
- Use a magnet—strong magnets will typically stick to galvanized pipes.
- Galvanized pipes are old, corroded iron pipes.

How can I identify household copper plumbing?

- Scratch the outside of the pipe. The scratched area will have the color of a copper penny.



How can I identify household plastic plumbing?

- Plastic pipe is usually white in color and will have a clamp where it is joined to the water supply piping.



What should I do if I have household galvanized plumbing?

- A plumber can advise you of the types of pipes in your home.
- Residents should consider replacing their plumbing if they have corroded galvanized plumbing.
- If pipe replacement is not an option, Dandridge Water recommends a treatment device installed at the tap or use a filtration pitcher. While Dandridge Water does not certify or endorse specific home drinking water treatment devices, we advise you search the NSF International website for certified drinking water treatment devices at www.nsf.org/Certified/DWTU.



Where can I find additional information about my water?

- Visit our website at www.dandridgewater.com
- Contact us at (865) 397-3696 or water@dandridge.net



Straight From the Tap

With recent concerns about water quality, discoloration and current water line replacement projects, I want to assure you that the water you receive from DWMF is safe. DWMF meets and exceeds all drinking water quality standards and regulations. We are proud of our excellent water quality record.

In Dandridge we place a great value on the interests and concerns of the people we serve. We have recently begun another waterline replacement project. While we know replacement projects are expensive, this continual investment in maintaining and replacing our infrastructure is also an investment in our community's health and future.

Our mission is to deliver quality water and to collect and treat wastewater in the Town of Dandridge in a safe, progressive and fiscally responsible manner for the health and welfare of the community.

If you have questions, please call us at 865-397-3696.

Thank you,

Mike Norton
Superintendent

How do I determine the quality of my water?

DWMF water is routinely sampled and analyzed for water quality from the sources, through the treatment processes, and throughout our distribution system to ensure water service that meets or exceeds all drinking water standards established by state and federal regulations. Summaries of our test results are distributed to our customers annually in a [Consumer Confidence Report](#).

What Are Some Things That Can Come From Pipes or Plumbing?

Lead and copper can come from service connections and home plumbing. Homes with older fixtures or service lines can have traces of lead or copper in the tap. Those homes were built before standards were established for low lead plumbing.

Corrosion control measures are utilized to minimize the risk for our customers. Above the mandated lead and copper testing, DWMF has recently performed additional testing to ensure safe drinking water. The results exceeded the drinking water quality standards. For more information, please visit www.dandridgewater.com, e-mail water@dandridge.net or call the office at (865) 397-3696 and ask for Mike Norton, ext. 104 or Tana Benson, ext. 103.

Why Am I Hearing About Water Discoloration Concerns When My Water is Clear?

Less than 5% of customers are experiencing water discoloration. The majority of the 5% have internal plumbing such as galvanized pipes that are causing the discoloration. DWMF does have some cast iron and galvanized pipes in our system as well that are contributing to the issue.

When the zinc coating on the inside of galvanized iron pipe begins to wear thin, water becomes discolored as it comes in contact with iron or natural minerals already on the pipes. The longer the water sits in the pipes, the worse the discoloration will be.

What is Dandridge Doing to Help?

In addition to flushing our mains, we have allowed eligible customers to flush their lines. As a long term aid, we have formulated a replacement plan to rid all galvanized and cast iron pipe in our system. While DWMF internal replacements are already in progress, Phase 1 is scheduled to bid in March 2017. Phase 2, the final phase, is scheduled to be completed by 2018. Visit www.dandridgewater.com to view the construction map and plan.

What Can You Do if You Are Experiencing Water Discoloration?

Contact the office at (865) 397-3696 to report discolored water. Only customers who contact us prior to and are to advised flush their lines will be eligible for billing adjustments.



Common Water Quality Questions

Is my water safe to drink? The word, "safe" is a relative term that must be considered based on each individual's health and overall well-being. Since drinking water comes from sources that include: rivers, streams, lakes, reservoirs and wells, the water may contain trace amounts of some natural and man-made rates. As long as these contaminants are at or below levels set by the U.S. Environmental Agency (EPA) and Tennessee Division of Water for drinking water standards, the water is ed safe to drink for healthy people. People with severely weakened immune systems or other health conditions should consult with their personal physicians to discuss their drinking water

I determine the quality of my water? DWMF water is routinely sampled and analyzed for ality from the sources, through the treatment processes, and throughout our distribution system to ater service that meets or exceeds all drinking water standards established by state and federal ns. Summaries of our test results are distributed to our customers annually in a [Consumer ce Report](#).

n Questions about Discolored Water:

or milky water: Occasionally your water may look cloudy or milky. Cloudy or milky-looking usually the result of lots of tiny air bubbles suspended in the water. The bubbles are so small that almost invisible, but together they look like someone poured milk in your water. If you allow a water to stand for a few moments, the air bubbles will rise to the surface. This phenomenon is traimed air and does not affect the quality of your water and is not harmful to consume. If the es not clear up, contact us at (865) 397-3696.

uration brown or yellow water from the tap: The internal plumbing of your house may be the : discolored water only appears for a minute or two after your tap is turned on. When the zinc n the inside of galvanized iron pipe begins to wear thin, water becomes discolored as it comes in with bare iron. The longer the water sits in the pipes, the worse the discoloration will be. That's are most likely to notice the problem first thing in the morning or when you have just returned ng out of your home for some period of time. After running your tap for a few minutes, clean sm your water heater or water main will replace the discolored water. Since iron is an essential : condition poses no health hazard. If the discoloration bothers you, however, flush the tap water becomes clear, saving the flushed water for iron-loving plants.

it brown or yellow water from the tap: Sediments in water mains sometimes get stirred up e hydrants are used and when the flow of water in mains is changed. These sediments may cause er to turn brown or yellow. Wait 30 to 40 minutes after you notice the discolored water, and try n the cold water in your bathtub for a minute or two. You'll probably notice that it clears right : sediments settle quickly back to the bottom of water mains. Discolored water due to sediments : known health threat, but for aesthetic reasons you should avoid doing laundry until the water ars up.

lead in my water? If present, elevated levels of lead can cause serious health problems, y for pregnant women and young children. Lead in drinking water is primarily from materials ponents associated with service lines and home plumbing. DWMF is responsible for providing lity drinking water, but cannot control the variety of materials used in plumbing components. ur water has been sitting for several hours, you can minimize the potential for lead exposure by



WEBSITE

The screenshot shows a web browser window with the address bar containing <http://www.dandridgewater.com/>. The page title is "Water". The browser's address bar also shows "http://www.dandridgewater.com/" and a search box with the text "Search...". The browser's menu bar includes "File", "Edit", "View", "Favorites", "Tools", and "Help". The browser's status bar shows "http://www.dandridgewater.com/".

The website content includes the DandridgeWater logo, a navigation menu with links for "About", "New Service", "Billing Info", "Water / Sewer", "Links & Resources", "FAQ", "Water Discoloration", "News", and "Contact Us". A search icon is also present. The main heading is "Discolored Water Concerns".

Discolored Water Concerns

While 95% of our customers aren't experiencing any discolored water issues, we understand that several of you are. Of the customers experiencing issues, the majority of those issues are due to galvanized plumbing in your homes. DWMF has some cast iron and galvanized plumbing in our system as well, which is attributing to the discoloration in a few areas.

What are we doing to help alleviate the issue? In addition to flushing our mains, we have allowed and encouraged customers, who have called in with concerns and received approval, to flush inside their homes; we are adjusting the water bills to average usage so that you are not bearing the cost for the flushing. As a long-term aid, we have formulated a Replacement Plan to rid all galvanized and cast iron pipe in our system. (The map to the right shows the Replacement Plan.) Phase I of the plan was completed in October 2017. Phase II, the much larger scale project, awarded US Highway 25-70 and E. Main Street sections on December 12, 2017. The remaining sections not awarded will be discussed with Town Council in January. Phase III (DWMF's Internal Replacement) is already in progress.

For more information, please look at Discolored Water section of our website.

Facebook

Work continues along E. Meeting St. Please continue to follow traffic control measures setup through the work zone lights. We are thankful for the great work of the Merkel Construction and Franklin Excavating crew performing this installation.



Dandridge Water Management Facility
Published by Tana Benson [?] · February 15, 2017 · 🌐

While 95% of our customers aren't experiencing any discolored water issues, we understand that several of you are. To learn more about why this is occurring and how we are responding, visit <http://www.dandridgewater.com/faq/water-discoloration/>



WWW.DANDRIDGEWATER.COM
Water Discoloration
Visit the post for more.

👤 1,194 people reached

Boost Post

Dandridge Water Management Facility
Published by Tana Benson [?] · August 29, 2016 · 🌐

For those customers that have experienced some water discoloration, we want you to know that we are out flushing the lines again today. In doing so, it is possible that some customers may experience lower than normal flows due to the flushing. Please let us know if you have any concerns.

Dandridge Water Management Facility added an event.
January 20, 2017 · 🌐

The Town of Dandridge has had some customers of Dandridge Water Management Facility that have experienced discoloration in their water service after the switch to the Knoxville Utility Board as our main source of water. The Town has been flushing lines and working with customers to assist in this issue. The Town has also regularly tested waterlines to verify the safety of the water supply. The town has safe water, the coloration is an aesthetic concern. The Town requested that the Tennessee Department of Environment and Conservation test our water for lead and copper to verify our results. Those tests confirmed that our water is safe. The water coming from KUB has been tested and does not have any discoloration. The discoloration that some customers have experienced is due to a change in the chemical make-up of the water in combination with galvanized and cast iron pipes throughout the city. The Town is working diligently with TDEC, KUB and our engineer to resolve this issue. The town will host a public meeting on January 29, 2017 at 1pm at the Field of Dreams Activity Center to share the plan to resolve the issue with local customers. Customers are encouraged to attend. If you have experienced discoloration in your water, please contact the water department at www.dandridgewater.com, water@dandridgetn.gov, 865-397-3696, or come by the public meeting on Sunday January 29th from 1 to 2pm.

Dandridge Water Management Facility
Published by Tana Benson [?] · August 30, 2016 · 🌐
http://www.standardbanner.com/.../article_02aefbc6-6ebd-11e6-...

The STANDARD BANNER

WWW.STANSTANDBANNER.COM

Dandridge: Orange-colored water holds no danger

Softer water from Dandridge's new wholesale source has introduced a...

Dandridge Water Management Facility
Published by Tana Benson [?] · January 28, 2017 · 🌐

Come Join us tomorrow from 1pm-2pm for a Public Meeting regarding water discoloration in Dandridge and the Town's plan to resolve the issue. The following is a link to our website highlighting the construction phase map of the scheduled water line replacement:
<http://www.dandridgewater.com/water-sewer/water-projects/#DandridgeWaterPublicMeeting>

DANDRIDGEWATER.COM

Water Projects

Current Projects Cast Iron/Galvanized Replacement Replacement of the cast iron and galvanized water lines in the DWMF system is in process. While the internal replacement plan has already begun co...





Dandridge Water Management Facility



Published by Mike Norton [?] · August 26, 2016 · 🌐

Sometimes when we say we are "covered up", we really mean it. Happy Friday.

<https://www.facebook.com/john.shadwick/posts/10206970278200428>



MYFOX8.COM

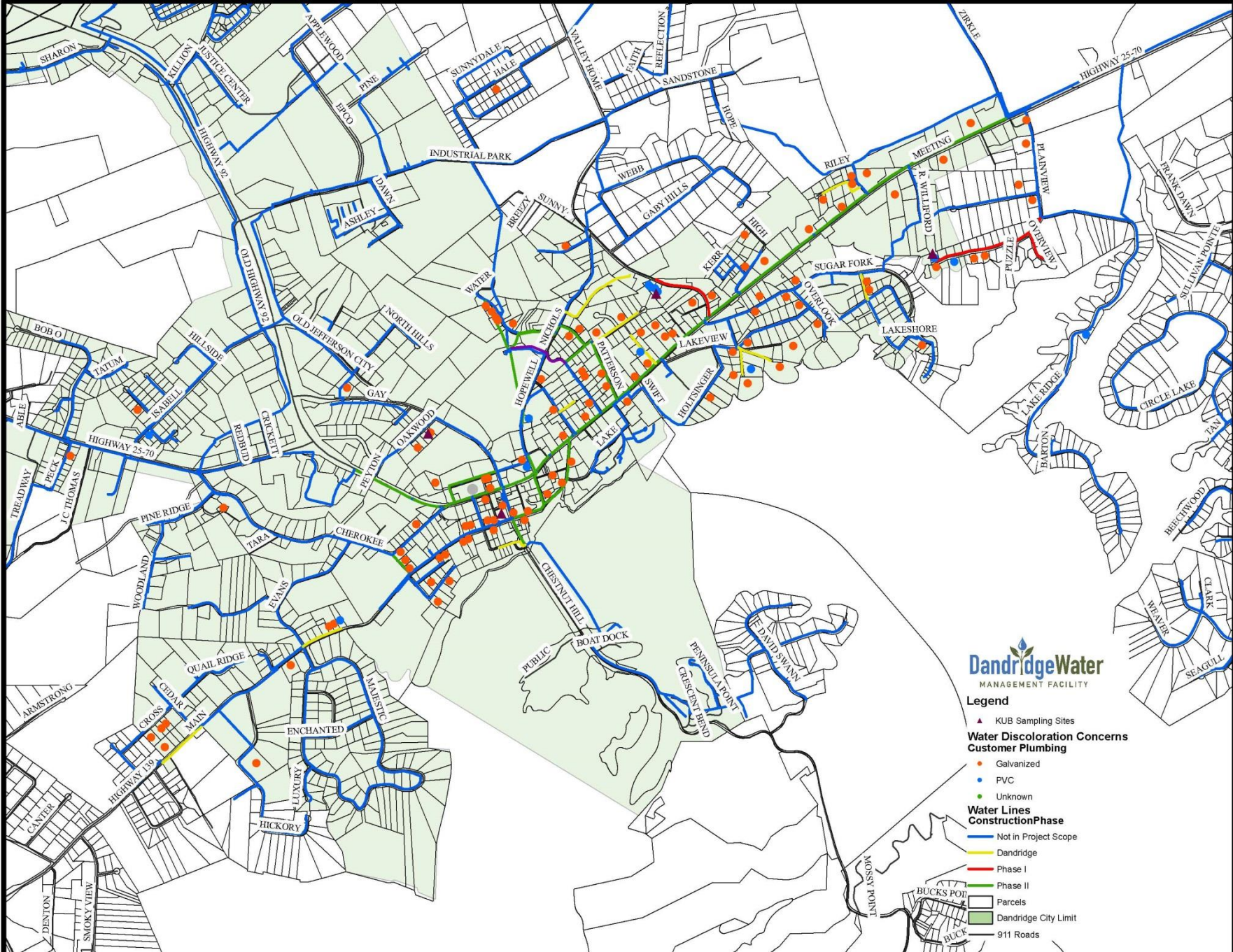
Utility worker's submerged photo goes viral

HOOD COUNTY, Texas – This is one dedicated utility worker! When...



PUBLIC MEETING

- Presentation to group
- Q&A session after
- Maps provided visual component to increase customer engagement
- Accurate data was made available
- CMMS allowed for specific, customizable results



DWMF Lead & Copper Sampling
 Collected by Greg Mize, TDEC on 1/10/17

Sample Location	Sample #	Lead (mg/L)	Copper (mg/L)
Courthouse	1st	0.00228	0.27
	2nd	0.00278	0.0236
Oakwood	1st	0.00275	0.0102
	2nd	ND	0.00218
Plainview	1st	0.0027	0.0324
	2nd	ND	0.00625
Valley Home	1st	0.00361	0.229
	2nd	ND	0.0233
Battlefield	1st	ND	0.522
	2nd	ND	0.0181

EPA-MCL (Maximum Contaminant Level)	
Copper	1.3 mg/L
Lead	0.015 mg/L

Reporting Unit
 milligrams per liter (mg/L) = parts per million (ppm)

Did You Know?
 Another way to define these reportable units is by equating ppm to "1 drop in million gallons," which shows that these units reflect a very small amount.

What are MCL's and who sets them?
 EPA has established National Primary Drinking Water Regulations, which are legally enforceable standards that apply to public water systems. These standards protect drinking water quality by limiting the levels of specific contaminants that can adversely affect public health and which are known or anticipated to occur in public water supplies. These are enforceable standards called "maximum contaminant levels" (MCLs) which are established to protect the public against consumption of drinking water contaminants that present a risk to human health. An MCL is the maximum allowable amount of a contaminant in drinking water which is delivered to the consumer.



- Legend**
- ▲ KUB Sampling Sites
 - Water Discoloration Concerns Customer Plumbing**
 - Galvanized
 - PVC
 - Unknown
 - Water Lines ConstructionPhase**
 - Not in Project Scope
 - Dandridge
 - Phase I
 - Phase II
 - Parcels
 - Dandridge City Limit
 - 911 Roads





ICE PIGGING

- Provided quick response
- Showed customers a willingness to try new concepts
- Outside of the Box Attempt
- Ultimately, not as successful as desired



DOWNFALLS

- “Soap Box” Avenue (may or may not be educated or accurate)
- “Topix” mentality
- Dictated change in customer service approach
- Negativity can weigh heavy on management/operators



PERKS

- Customers know to call & have options
- Platform for discussing ideas
- Easy outlet for information (cost effective)
- Understand the reasons and process
- Access to educate (leaks, project updates, etc.)
- While some will never understand or take the right approach, the majority do and just want to be informed and government transparency

SOCIAL MEDIA CRISIS PLAN

- Have a media crisis plan in place
- Identify key team members and resources
- Know the chain of command
- Use communication channels effectively
- Educate staff to ensure consistent message



Identification

Social Media Crisis Plan

Escalation

Communication

Documentation

Identification

- Determine real “issue” and “solution”
- Identify what sources to monitor and how often: social media pages, news, or websites
- Know what your plan is if your crisis goes viral

Escalation

- What to KNOW for negative, vulgar, threatening or accusatory posts
 - What impact does this have on your department?
 - Is there concern for public or employee safety?
 - Has it already been picked up by the news?
 - Does this require response?
 - Can it be deleted or hidden from your social media?

Communication

- Communication is VITAL
- Provide official statement on your sites and for media
- Keep communication open
- Arrange after hours communications
- Give frequent updates

Documentation

- What to Document?
 - Screenshots of individual posts or discussions
 - Who has shared? Major pages, news sources, etc. and what is their reach for your area?
 - Customer information of documented calls and posts
 - News articles



Dandridge Water Management Facility

@DandridgeWater

Home

About

Photos

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Posts

Community

Events

Info and Ads

Our mission is to deliver quality water and to collect and treat wastewater in the Town of Dandridge in a safe, progressive and fiscally responsible manner for the health and welfare of the community.

ADDITIONAL CONTACT INFO

✉ water@dandridgetn.gov

🌐 <http://dandridgewater.com>

MORE INFO

📍 About

Water and Wastewater Facility located in Dandridge, Tennessee

📄 General Information

Post Deletion & Retention Disclaimer: The DWMF reserves the right to remove any comments or posts without notice. This shall include but not be limited to: inappropriate comments including those that are discriminatory, obscene or sexual in nature, threaten or defame an individual or entity, support or oppose political candidates or proposals, violate the intellectual property rights of another party, promote illegal activity or commercial products or services or are not related to the topic in the original posting. Keep in mind that all of your comments are public records and subject to disclosure. Requests for public records may be submitted to water@dandridgetn.gov.

🏢 Government Organization · Public Utility Company

Post Deletion & Retention Disclaimer

- Create a disclaimer about removing posts & comments.
- Post publicly, in Facebook or on website, if appropriate



