

**Analysis of crisis response communication by U.S. Army Corps
of Engineers, Tuttle Creek Lake, Kansas City District during the
flooding crisis of 2019.**

by

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Abstract

In 2019, the Midwestern U.S. experienced extreme amounts of rainfall and snowmelt leading to a flooding crisis. One community under concern during the flooding crisis was Manhattan, Kansas, and surrounding towns because Tuttle Creek Lake, a lake utilized for flood control and managed by the U.S. Army Corps of Engineers (USACE), Kansas City District was operating at full capacity. For over 10 months, Tuttle Creek Lake operated in a flood crisis emergency mode. At one point the lake was so high, the water was close to overtopping the spillway gates put in place to help alleviate water elevation during a flood.

A flood crisis is a stressful situation for all involved, but with clear and precise crisis communication, it is possible to communicate to the public what they need to know to stay informed. While Tuttle Creek Lake and the local community have had a strained history, USACE rangers work to serve the public through flood risk management and other Congressional purposes. With the rise in social media, communicating to the public about flood risk management includes social media like Facebook, in addition to traditional print media and radio.

The purpose of this study was to understand the effectiveness of Tuttle Creek Lake's Facebook communication via their posts during the 2019 flood crisis. One research objective and four research questions were used to guide this study including O1: Categorize and determine the frequency of initial U.S. Army Corps of Engineers Tuttle Creek Lake Facebook posts during the 2019 flood crisis; Q1: What Situational Crisis Communication Theory crisis response strategy or strategies did U.S. Army Corps of Engineers Tuttle Creek Lake publish on Facebook as posts during the 2019 flood threat?; Q2: What original Facebook posts by U.S. Army Corps of Engineers Tuttle Creek Lake generated the most organic public engagement through comments or reactions?; Q3: Did stakeholders express more positive or negative emotions through their responses and reactions on the U.S. Army Corps of Engineers Tuttle Creek Lake's Facebook posts with the most engaged posts during the 2019 flood threat?; Q4: Was there a timeframe during the flood threat when overall Facebook post engagement was the highest? This study used the Situational Crisis Communication Theory (SCCT) to categorize Tuttle Creek Lake's Facebook posts into SCCT crisis response strategies. Once the SCCT strategies were

determined, the posts were sorted through an excel sheet to find the top 15 most engaged posts for the primary and secondary strategies outlined by Situational Crisis Communication Theory. Once the top engaged posts were determined, a pattern for posts within a week of each other was also looked for. To understand how the USACE Facebook post crisis response strategies affected stakeholder emotions, this study utilized LIWC (Linguistic Inquiry and Word Count) to identify positive and negative emotions in the public's comments to each Facebook post. The comments from the 30 top engaged Facebook posts were entered into LIWC, to understand if the stakeholders who commented expressed more positive or negative emotional reactions with their writing on the posts.

Results show the crisis communication strategies used by Tuttle Creek Lake via Facebook posts elicited more positive than negative emotional responses by their stakeholders. The stakeholders were also more engaged during the highest lake elevation when the post engagement and timeline was observed. Recommendations include further research of other crisis communication of Tuttle Creek Lake's Facebook posts for events such as the COVID-19 pandemic. Further research can study internal communication of park rangers during a flood event to see if the internal language becomes more positive or negative during peak flood times as well.

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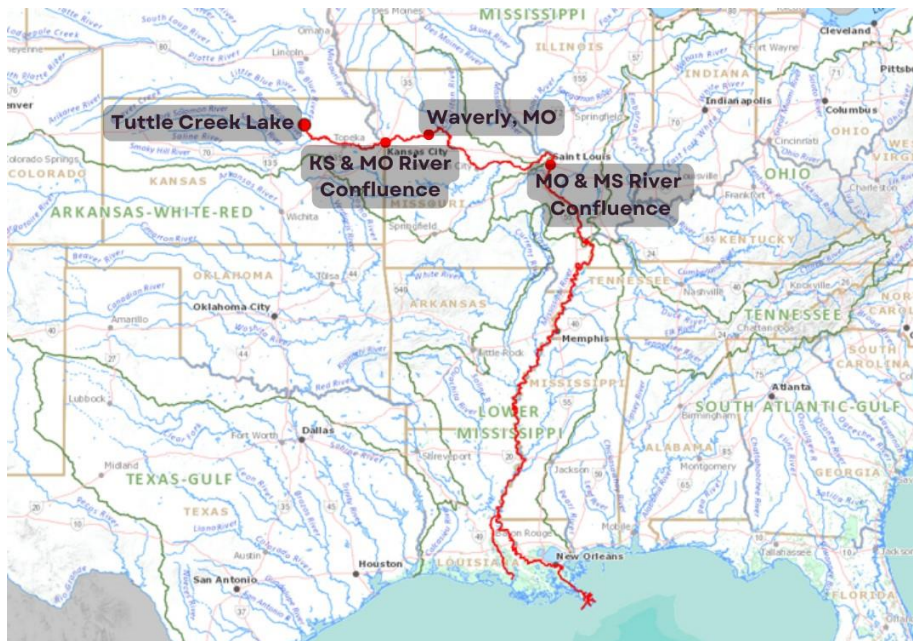
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Chapter 1 - Introduction to U.S. Army Corps of Engineers Tuttle Creek Lake Project and Social Media Crisis Communication

The purpose of this study was to better understand how the U.S. Army Corps of Engineers Tuttle Creek Lake Project interacted with the public via Facebook during the 2019 potential flooding crisis in Manhattan, Kansas. The primary function of Tuttle Creek Dam and Lake is to provide flood risk reduction through controlling lake elevations by raising and lowering dam gates to either release or hold back water. The U.S. Army Corps of Engineers Tuttle Creek Reservoir and Dam is located in Manhattan, Kansas, and the dam's construction began October 7, 1952, to control the flow of the Big Blue River (U.S. Army Corps of Engineers [USACE], 2020). The U.S. Army Corps of Engineers refers to the reservoir and dam on social media as Tuttle Creek Lake, which is how we will refer to it throughout this paper. Figure 1.1 shows Tuttle Creek Lake's location relative to the Missouri and Mississippi Rivers.

Figure 1.1 Tuttle Creek Lake's location within the Missouri River & Mississippi River Watersheds



Source: https://themercury.com/news/local/how-the-tuttle-creek-dam-works/article_b25f3429-6b6e-5bc5-844c-787de2281fae.html

Multiple flooding events have affected Tuttle Creek Lake and its downstream and upstream regions since construction. One flood still on the minds of the Manhattan and

surrounding communities is the flood of 1993. During this year, between May and August, more than 42 inches of rain affected the Tuttle Creek Lake watershed. In July, the lake elevation was increasing to almost overtop the spillway gates, meaning the integrity of the dam would be lost. If water was released through the spillway, the communities downstream would experience flood damage. Unfortunately, the gates did have to be opened for three weeks, flooding many low-lying communities. This created an influx of evacuees who became homeless, and damages cost \$15 billion (Moser, 2018).

The most recent flooding event that Tuttle Creek combatted was the flooding event of 2019. The water level at Tuttle Creek Lake was above the multi-purpose elevation, 1,075 feet, from February 6, 2019, until December 10, 2019, when the water level reached 1,075.00 feet. The second highest water level in Tuttle Creek Lake history was reached on May 31, 2019, with a pool elevation of 1,135.84 (U.S. Geological Survey [USGS], 2022). A raised pool elevation impacts the public population who own land or reside near the lake and those who live upstream and downstream. Elevated lake levels were a concern as family homes were on land along the lake and downstream, and the potential for property flooding was a danger. While none of the dam gates or levees were at risk of failing in a catastrophic event such as the levee failure in New Orleans during Hurricane Katrina, the public was worried and turned to Tuttle Creek Lake for updates and questions. Rising lake levels meant water behind the dam sooner or later needed to be released downstream to maintain the integrity of the Tuttle Creek Dam and the levees. Water releases from Tuttle Creek Dam not only impact flooding in Manhattan, Kansas, but it affected flooding as far as Waverly, Missouri, which is along the Missouri River. With such an expansive concern about water releases, the park rangers at Tuttle Creek Lake used Facebook during the 2019 flood crisis to help them disseminate information in a timely and factual manner to inform the public. The park rangers feel they communicated in a timely manner to help keep the public informed during the 2019 flood crisis (Bean, personal communication, 2019).

Throughout the U.S. Army Corps of Engineers (USACE) Tuttle Creek Lake's time, the relationship USACE Tuttle Creek Lake holds with the public has encountered high tension situations. USACE Tuttle Creek Lake and Dam was constructed to provide protection and recreation to those within the community it serves. Being part of a larger watershed system and the workhorse of the Kansas River, USACE Tuttle Creek Lake is called upon to contain large amounts of water during high volumes of precipitation impacting communities upriver and

downriver (USACE, 2020). A flooding event is a crisis for all of those who live and work for or around Tuttle Creek Lake including Tuttle Creek Lake State park rangers, those who live within the potential flood areas, those who commute to the area, and those who live within or around the city of Manhattan.

During a crisis, the public increases their use of social media (Yan et al., 2014). This poses an opportunity for public affairs specialists to understand how to best utilize their agency's online presence. Public participation in crisis communication is seen as the "new norm" by some experts (Baron, 2010). Those who have a more active social media page during a crisis are seen as more credible than those who only use traditional mass media (Horrigan & Morris, 2005; Procopio & Procopio, 2007; Sweetser & Metzgar, 2007). Better communication practices will allow for Tuttle Creek Lake to become a more credible source of information (Gretzel & Kyung-Han, 2017).

Understanding how to better communicate during a crisis is important for government and military organizations. With the difficult situations the U.S. government and military are inserted into, there will be a need to continually update crisis communication plans. Research that can help aid in the plan would be helpful to make the update of the plan more efficient. Tuttle Creek Lake itself does not have the independence to decide the amount of water released or held in the lake; these amounts are calculated by engineers within USACE to not only provide a benefit to Tuttle Creek Lake, but also benefit upstream and downstream. Tuttle Creek Dam operates two main gates when the lake elevation is at its normal multipurpose pool elevation. If a flooding event occurs, there are 18 separate tainter gates that can be utilized to hold back or release water. In a normal season, Tuttle Creek does not have to use the gates on a regular basis. The gates are perched 41 feet above the multipurpose lake elevation. The normal conservation lake elevation is 1,074 feet. May 2019 became the month with the most rainfall recorded for Kansas, Nebraska, and Missouri that year. Other states are important to acknowledge as Tuttle Creek Lake is not at liberty to let out water through their own decisions and must collaborate with other agencies affected by the flow of the Big Blue River. as it is a tributary to the Kansas River, which is a tributary of the Missouri River, which is a tributary of the Mississippi River.

The Big Blue River is the largest tributary that flows into the Kansas River, which then flows into the Missouri River. Not only is the public in Manhattan, Kansas at risk of flooding

during a Tuttle Creek Dam flood threat, but also those who live along the Big Blue, Kansas, and Missouri rivers. Refer back to Figure 1.1 for reference of the watershed. The USACE rangers must follow orders from the USACE Kansas City District on how much water they can let out of Tuttle Creek Lake. There are engineers that look at how the release at Tuttle Creek Lake can affect the downriver as well as upriver with flooding. On May 31, 2019, Tuttle Creek Lake experienced its second highest pool on record at an elevation of 1,135.84 feet at 11:00 p.m. (USACE, 2020; U.S. Geological Survey, 2022).

Anecdotal feedback from conversations with park rangers about interactions with the public indicated that Tuttle Creek Lake's Facebook presence during the potential flood crisis of 2019 contributed to beneficial crisis communication to the public. This research seeks to better understand how USACE Tuttle Creek rangers are using social media to adequately communicate about crises to stakeholders. More specifically, the purpose of this study was to summarize and assess Tuttle Creek Lake's crisis response via Facebook, and to summarize the level of post engagement in the context of Situational Crisis Communication Theory.

In this study, we used the Situational Crisis Communication Theory to understand the reputational capital USACE Tuttle Creek Lake Project gained, lost, or maintained during the 2019 flooding crisis. Understanding the history of Tuttle Creek Lake and associated challenges is relevant, as there have been public tensions related to the dam over time. The conflict surrounding the construction of the dam created animosity between those living near the Manhattan area and the U.S. Army Corps of Engineers. Today, most of this conflict about the construction of the dam has been resolved, but that does not equate to Tuttle Creek Lake having a positive reputation with the entire public.

History of Tuttle Creek Lake Project Construction and Flooding

Documentation can be found dating back to 1928 discussing the control of flooding, conservation, and the flow of water near the mouth of the Big Blue River. The Flood Control Act of 1936 declared the federal government was within its parameters to help with flood control. Tuttle Creek Reservoir was recommended along with six others around the Missouri River Basin by the 1938 Flood Control Committee Report of the 75th Congress. Through the Flood Control Act of 1944, funding was appropriated for the construction of Tuttle Creek Lake and was coordinated by the U.S. Army Corps of Engineers and the Bureau of Reclamation. After World

War II, the Corps of Engineers' focus was multipurpose reservoir projects, which is why USACE was coordinating the construction of Tuttle Creek Lake (USACE, 2020).

Before Tuttle Creek's location was chosen as the spot for a reservoir on the Big Blue River, other areas were considered in a 1950 study (USACE, 2020). If reservoirs were put upriver, there would need to be multiple reservoirs to help with flood control versus the easier route which was one reservoir at the mouth of the river. Along with studying the effectiveness of the placement of reservoirs, the study also explored the capacities for how much water could be held to reduce flooding, conservation areas, and sedimentation pools (USACE, 2020).

In 1951, the Kansas and lower Missouri Rivers experienced multiple flooding events leading to massive destruction in July (USACE, 2020). The data collected from this construction was used to craft the Definite Project Report in March of 1952. The 1951 Definite Project Report is the basis for the design of Tuttle Creek Dam and Reservoir. This project is part of a larger one called the Pick-Sloan plan, created by Lewis Pick and William Sloan. The Pick-Sloan included 107 dams, 1,500 miles of protective levees, 4.7 million acres of irrigation systems, and 1.6 million kilowatts of hydropower. This plan at the time cost around \$200 million. Originally the plans were to have Tuttle Creek be a dry dam, meaning it would only hold water during flooding events. This changed when a drought occurred in 1952 and 1953. Improved flow of the Kansas River and more recreational opportunities also were reasons for the dry dam stipulation to be changed (USACE, 2020).

Construction on Tuttle Creek Dam began on October 7, 1952, and continued to December 1953 when lack of appropriations caused construction to be suspended (USACE, 2020). The lack of more appropriations being allocated was due to great opposition by Blue Valley residents who opposed the construction Tuttle Creek Dam. Those within the opposition either lived where evacuation was necessary or were community members. The Blue Valley opposition even hired a Hollywood movie producer, Charles Peters, to create a documentary to produce the "Tuttle Creek Story." This movie portrays the Army Corps of Engineers as negative and invading a pristine valley. There were also suggestions for other ways to control flooding in the documentary as well. This movie first premiered on September 18, 1953 (Fountain City Frequency, 2016).

While opposition from locals was strong, construction resumed in 1955 (USACE, 2020). Protection from flooding and regulated releases during low flow periods were of primary interest

to continue construction. Opposition still occurred once construction continued but was reserved mainly to displaced landowners. Finally, the landowners yielded to the court order to vacate. Once the construction of Tuttle Creek Lake's benefits became more evident during the flood of 1960, before completion of the dam, favor began to rise for it to be completed (USACE, 2020). Before Tuttle Creek Lake was completed, it held back its first inflow of water in 1960. Snowmelt after over 46 inches of snow in February and March caused the Big Blue River to flood. Thanks to the Tuttle Creek Dam, the Kansas River at Topeka was four feet less than expected and prevented over \$15 million in damages. A total of 360,000 acres of snowmelt was held back by the dam until discharged at rates of 29,000 cubic feet of water per second. This high discharge rate has not been exceeded to this date (USACE, 2020).

On July 1, 1962, construction was completed, and reservoir operation began. The multipurpose pool level of 1075.0 feet above sea level was attained on April 29, 1963. While costing \$80,051,031 to build, Tuttle Creek as of 2019 has prevented over \$3 billion in damages (USACE, 2020).

One other notable flooding event before 2019, was the flooding event of 1993. The Big Blue River Valley experienced heavy rainfall in the spring and early summer rising Tuttle Creek Lake from 13,000 acres of water to 56,000 acres of water with a crest of 1137.77 feet on July 23, 1993. This was almost 63 feet above the normal conservation pool. This flood resulted in the only spillway release in the reservoir's history. During the peak of the flood, all eighteen tainter gates were opened to four feet allowing a release rate of 60,000 cubic feet of water per second and were open for three weeks (USACE, 2020).

The flooding event of 1993 was shorter than the flooding event of 2019, but it caused flood damage downstream and helped USACE at Tuttle Creek Lake prepare for the future (Brunner, 2018). Brian McNulty, of USACE Tuttle Creek Lake stated in an interview in 2018 with WIBW 13 News that in 1993 he was monitoring the situation from the USACE Kansas City District. He stated that water releases are normally based on downstream events. In 1993 the lake filled up to 63 feet above the multipurpose lake elevation and it was no longer just about people downstream. In my own interview with Melissa Bean, park manager of USACE Tuttle Creek Lake, she said at that point, it became about the integrity of the dam and spillway as the water was about to flow above it and compromise the use of both (Bean, personal communication, 2019).

While opening the tainter gates and subsequently flooding portions of the Manhattan community was justifiable for USACE Tuttle Creek Lake, there were many homes destroyed within Manhattan due to the 1993 release of water from all 18 emergency spillway gates. After the flood, Riley County bought around 500 homes to demolish within the floodplain using federal and state grants. The county also created tighter restrictions on development within the area due to flooding risks (Brunner, 2018).

With the construction of the Tuttle Creek Lake facing opposition throughout the whole process and the infamous flood of 1993 still on many residents' minds, residents who reside in the floodplain of Tuttle Creek Lake may still hold negative feelings, or emotions towards the lake and USACE as the management agency. Research has found that crisis events create negative emotions (Yan et al., 2014). Negative emotions can lead to lack of trust within the organization or result in no longer associating with the organization (Coombs, 2007).

Understanding how the USACE rangers at Tuttle Creek Lake responded to the flooding crisis of 2019 and how the public reacted will allow for better crisis communication by USACE projects in the future. To be able to fully understand the strategies used in the communication during this crisis and the publics' emotional reactions, I researched previous studies focused on the crisis strategies but more importantly how these studies evaluated the reaction by the stakeholders affected by the crisis being studied.

Before the 2019 flood crisis, one of the ways Tuttle Creek communicated to the public was through Facebook along with utilizing traditional media. One major portion of posts was daily lake information updates and water safety reminders. If there was a change to hours of operation for the office, a Facebook post would be made for the update. Any work being conducted around the lake or USACE grounds was communicated through a Facebook post. In 2018, there was a rain event in September where almost 10 inches of rain fell in Manhattan, Kansas (Knapp & Redmund, 2018). During this time, the lake level rose two feet over the next month (USGS, 2018). While not a flooding event, the Facebook posts during this time consisted of daily lake information updates and graphics which portrayed the lake level forecast and explained why water was not being released as the public saw fit. This timeframe of posting in September and October of 2018 was referenced by Bean during personal communication on September 15, 2019.

Tuttle Creek Lake's Facebook page had a following number of 13,847 as of November 2, 2023, with 22% of their followers from Manhattan, Kansas, 5% from Wamego, Kansas and 3.4% from Topeka, Kansas. Due to the length of time this study spanned; the number of followers closer to the flood crisis timeframe was unavailable.

The purpose of this study was to use Situational Crisis Communication Theory to better understand if the crisis communication methods used by USACE Tuttle Creek Lake through original posts on Facebook during the 2019 flood threat created more positive or negative emotional responses by the stakeholders. The research objective and questions guiding this study were:

- *Research Objective 1: Categorize and determine the frequency of initial U.S. Army Corps of Engineers Tuttle Creek Lake Facebook posts during the 2019 flood crisis.*
- *Research Question 1: What Situational Crisis Communication Theory crisis response strategy or strategies did U.S. Army Corps of Engineers Tuttle Creek Lake publish on Facebook as posts during the 2019 flood threat?*
- *Research Question 2: What original Facebook posts by U.S. Army Corps of Engineers Tuttle Creek Lake generated the most organic public engagement through comments or reactions?*
- *Research Question 3: Did stakeholders express more positive or negative emotions through their responses and reactions on the U.S. Army Corps of Engineers Tuttle Creek Lake's Facebook posts with the most engaged posts during the 2019 flood threat?*
- *Research Question 4: Was there a timeframe during the flood threat when overall Facebook post engagement was the highest?*

Key Terms

- **Organic** – The number of unique users who saw the Facebook page in their news feed or the page, and the was not a result of a paid or sponsored post

- Tainter gate – A type of floodgate with a radial arm used to control the flow of water.
- Engagement – likes, comments, reactions, shares, and clicks
- Elevation – the lake level in feet

Chapter 2 - Literature Review

During a crisis, social media is a communication method the audience will turn to, and in some crises, the audience may perceive the social media platform they are receiving communication from to be more credible than traditional media sources (Jin et al., 2012). With the rise in use of social media, studies of crisis communication through social media are increasing.

Previous crisis response research has been conducted to understand if crisis response strategies utilized by other organizations during a crisis have negatively or positively affected the attribution of a crisis to an organization through the emotions by stakeholders. It is important to understand if the emotions stakeholders expressed on Facebook through USACE Tuttle Creek Lake's posts are attributing the crisis to USACE Tuttle Creek Lake and how Situational Crisis Communication Theory (SCCT) states that stakeholders' emotions during a crisis can impact their future behaviors with the organization. Negative emotions can lead to stakeholders holding the agency in crisis accountable for the crisis (Coombs, 2007). By analyzing the emotions of stakeholders from USACE Tuttle Creek Lake's Facebook posts during the latest flood crisis in 2019, we hope to understand how much attribution to the crisis the stakeholder's hold USACE accountable for, versus public understanding that there are many factors into water management. Eriksson (2018) analyzed peer academic articles on crisis communication for social media to inform more effective crisis communication. Through analyzing journal articles on social media crisis communication, he discovered five lessons (Eriksson, 2018), summarized below. These five lessons are important for this study to help with how to properly analyze the communication Tuttle Creek Lake used on social media during the flood crisis of 2019.

Eriksson's (2018) first lesson learned is that dialog used in social media should have the right message, source, and timing to make the communication most effective. The second lesson is for organizations to be prepared and understand social media before a crisis occurs. A social media page should not be started during a crisis; rather, the social media presence needs to be established beforehand to have followers turn to it during a crisis, otherwise they may not know the social media page exists. Third, social media is best used when monitored. The platforms should be monitored by agency employees to help interact with stakeholders and to track emerging issues. Fourth, while social media can be effective in communicating during a crisis, it

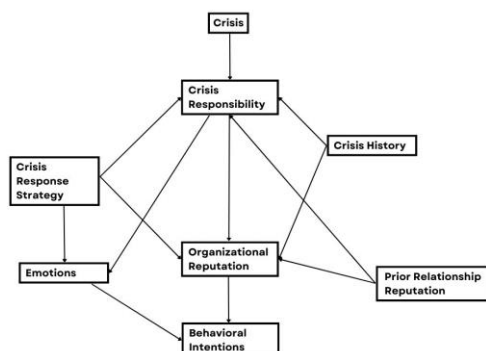
should complement traditional media. Last, social media needs to be used in crisis situations because it allows for a quick and wide dissemination of information (Eriksson, 2018).

The theory used to analyze the content of the Facebook post by Tuttle Creek Lake is an updated version of Situational Crisis Communication Theory (SCCT). The update to SCCT involves the addition of emotion. To better understand if this addition is relevant and correct, a study of consumer responses to Mattel product recalls was conducted by Choi and Lin (2009) who recognized the crisis communication studies focused on the crisis response strategies, but not how SCCT can be affected by stakeholders' emotions. The focus of the study was on positive and negative emotions, and the results of the study indicated the revised SCCT model with emotions is a good fit for assessing emotions and reputation of the organization in crisis (Choi and Lin, 2009).

Theoretical Framework

Situational Crisis Communication Theory (SCCT) is useful for effective crisis communication responses (Avery et al., 2010; Feduik et al, 2010). Rooted in Attribution Theory, SCCT examines how crisis response strategies and previous response strategies affect an organizations' reputation and the publics' behavioral intention due to the response. Crisis managers and their response to a crisis is the center of SCCT, encompassing how the crisis manager assesses the crisis, and how reputational threat factors into how the public will react (Coombs, 2007).

Figure 2.1 shows the SCCT model (Coombs, 2007).



Definitions in SCCT (Coombs, 2007):

- Reputation: aggregative evaluation stakeholders make about how well an organization meets stakeholder expectations
- Stakeholder: any group that can be affected by the behavior of an organization
- Crisis: sudden and unexpected event that can harm stakeholders
- Reputational Capital: organization's stock of perceptual and social assets; the quality of relationship it has established with stakeholders and regard the organization is held in
- Threat: amount of damage a crisis could inflict on organization's reputation if no action is taken. (p. 164-165)

The way a message is framed can shape how the public perceives a crisis. It is the crisis manager's job to establish the frame or shape the crisis frame by emphasizing certain ideas. Controlling how the crisis is framed is important to the crisis manager because the frame will affect how the public defines the crisis, what caused the crisis, who is responsible for the crisis, and what solutions there are for the crisis. By framing the crisis, the crisis manager influences the information the stakeholders focus on to form their opinions and judgments (Coombs, 2007). To evaluate how to frame a crisis, SCCT calls for crisis managers to first identify which crisis cluster the organization falls into based on how responsible the organization is for the crisis in question. There are three crisis clusters based by crisis type: victim cluster, accidental cluster, and intentional cluster. In the victim cluster, the organization has a very weak attribution to crisis responsibility with a mild threat to its reputation. In the accidental cluster, the organization has minimal attribution to crisis responsibility with a moderate threat to its reputation. In the intentional/preventable cluster, the organization has a strong attribution to crisis responsibility and a severe threat to its reputation (Coombs, 2007).

Next, the crisis manager must assess the prior crisis history and relational reputation. The reputational threat posed by the current crisis is directly affected by the organization's crisis history and relational reputation (Coombs, 2004a,b). If there are crises in history the public attributes to be caused by the organization the crisis manager is managing, the reputation threat can be higher. Prior relational reputation is how well the organization has treated the stakeholders in the past. If either the crisis history or relational reputation have been unfavorable in the past, it will intensify the stakeholders' attribution of crisis responsibility to the organization (Coombs, 2007).

Crisis responsibility can affect reputational threat as well as trigger emotional reactions from stakeholders (Coombs, 2007). Stakeholders' emotions impact the attribution of crisis responsibility and the organization's reputation. When the attribution of a crisis responsibility is increased, the feelings of anger increase toward the organization and feelings of sympathy decrease. These negative emotions could cause stakeholders to lash out or sever ties with the organization. The post-crisis reputation is influenced by the emotions stakeholders feel during the crisis and the consequential behavioral intentions (Coombs, 2007).

Crisis managers utilize crisis response strategies to prevent these negative emotions and improve reputational capital. In SCCT, a list of crisis response strategies is provided and is based upon the link between crisis responsibility and reputational threat. Coombs (2007) draws upon previous work to identify three objectives of crisis response strategies crisis managers can pursue to protect the organization's reputation. These objectives are to shape crisis attribution, change the perception of the organization in crisis, and reduce negative affect brought on by the crisis (Coombs, 1995).

The SCCT provides crisis response strategies using the objectives of crisis attribution, changing perception of the organization in crisis, and reducing negative affect brought on by the crisis (Coombs, 2007). The crisis response strategies prescribed by SCCT include:

- Deny: strategies are used to try and distance the organization and its connection to the crisis
- Diminish: strategies seek to console the stakeholders into seeing the crisis in a less harsh view
- Rebuild: strategies are used when a new reputational asset is being created by creating a form of reparation to the victims
- and bolster: strategies utilize the current goodwill held with stakeholders to help keep their reputation afloat. (p. 170)

For more information about SCCT crisis response strategies, please refer to Table 2.1. There are primary response strategies which include the deny, diminish, and rebuild strategy categories, and there are secondary response strategies which include the bolstering response strategies. The bolster categories supplement and support the main three strategies to improve the relationship between the organization and stakeholders in a more positive reaction (Coombs, 2007).

Table 2.1 SCCT Crisis Response Strategies (Coombs, 2007)*Primary crisis response strategies*

Deny Strategies	Definition
Attack the Accuser	Crisis manager confronts the person or group claiming something is wrong with the organization
Denial	Crisis manager asserts that there is no crisis
Scapegoat	Crisis manager blames some person or group outside of the organization for the crisis.
Diminish Strategies	
Excuse	Crisis manager minimizes organizational responsibility by denying intent to do harm/or claiming inability to control the events that triggered the crisis.
Justification	Crisis manager minimizes the perceived damage caused by the crisis.
Rebuild Strategies	
Compensation	Crisis manager offers money or other gifts to victims.
Apology	Crisis manager indicates the organization takes full responsibility for the crisis and asks for stakeholders' forgiveness.

Secondary crisis response strategies

Bolster Strategies	Definition
Reminder	Tell stakeholders about the past good works of the organization.
Ingratiation	Crisis manager praises stakeholders and/or reminds them of past good work by the organization.
Victimage	Crisis managers remind stakeholders that the organization is a victim of the crisis too.

(p.170)

Crisis communication studies using SCCT to categorize social media posts by an organization are few. One study with a similar goal as the research objective in this study uses SCCT to categorize tweets by hotels in Orlando, Florida during three different crisis events that occurred during 2016 including the Zika virus outbreak, Pulse nightclub shooting and an alligator attack leaving one child dead. Barbe & Pennington-Gray (2018), used SCCT to discuss

how organizations should first give communication to the audience/following to keep themselves safe during the crisis. Next, they used SCCT to categorize the tweets into crisis response strategies defined by SCCT. This study recognized the need for proper communication during a crisis and how avoiding the crisis itself, whether the organization is directly related to the crisis or not is more detrimental than acknowledging the crisis. Example tweets were provided for the bolster strategy as all tweets, but one tweet used this strategy of those studied by Barbe & Pennington-Gray (2018). The tweets analyzed showed tweets giving information to keep their followers safe compliments the bolster strategy also used. Using informational updates and the bolster strategy for tweets allowed the public to stay safe and helped to keep the reputational capital from decreasing for hotels.

Another study used SCCT to aid in analyzing tweets by Target, Michaels, and Neiman Marcus' when they experienced data breaches. Conner et al (2014), sought to use SCCT and other crisis response strategies while analyzing tweets and internal communication within Target and Michaels responses to their respective data breaches. Linguistic Inquiry and Word Count (LIWC) was used to analyze the positive and negative word choices within press releases and financial reports. As the crisis continued, internal communications were found to have a more negative tone (Conner et al., 2014). If thinking back to a time where a crisis continued to happen with lack of available solutions, it seems plausible the negative emotions were beginning to also show in communication efforts.

Chapter 3 - Methods

When there is the potential for flooding to occur due to water storage or release USACE Tuttle Creek Dam, Facebook is used as a tool of communication for the USACE Tuttle Creek Lake rangers to disseminate information quickly and accurately. The purpose of this study was to use SCCT to better understand if the crisis communication methods used by USACE Tuttle Creek Lake through original posts on Facebook during the 2019 flood threat created more positive or negative emotional responses by the stakeholders.

The original Facebook posts by USACE Tuttle Creek Lake during the timeframe of the 2019 flooding crisis, 00:00 February 6 to 23:59 December 11, 2019, were analyzed to better understand USACE Tuttle Creek Lake's crisis response during the 2019 flood crisis. Facebook posts by USACE Tuttle Creek Lake were analyzed through a qualitative content analysis to categorize each post into the corresponding crisis strategies detailed by SCCT. Comments on these posts written by the public were qualitatively analyzed by Linguistic Inquiry and Word Count (LIWC) and then quantified with the original posts' crisis response strategy to better determine if a strategy has elicited a public response of attribution independent or dependent emotions. Information posted by USACE, Tuttle Creek Lake on Facebook between 00:00 February 6, 2019, through 23:59 December 11, 2019, was analyzed because based on the U.S. Geological Survey's online data, these are the time frames Tuttle Creek Lake's conservation pool elevation fluctuated into flood storage.

Research Objective 1: Categorize and determine the frequency of initial U.S. Army Corps of Engineers Tuttle Creek Lake Facebook posts during the 2019 flood crisis.

During the time of the 2019 flood threat, February 6 to December 11, 2019, there were a variety of Facebook posts published by USACE Tuttle Creek Lake. This objective categorized these posts into three main categories: Lake Level Updates, Non-Lake Level Updates, and Not Applicable. Many posts published by USACE Tuttle Creek Lake during the 2019 flood crisis fall into a category we created titled Lake Level Updates. These posts are public updates on the lake elevation, inflow, outflow, water temperature, remaining flood pool capacity, U.S. Geological Survey water gage in Waverly, Kansas, and a link to the USACE Kansas City District website where the lake information is updated online. As there are Lake Level Updates posted almost daily, it was important to separate these posts from the others. Information updates are important

in a crisis response to address physical concerns; in this case it was the lake elevation and how close it could be to the public's homes, as outlined by SCCT (Coombs, 2007). Because Lake Level Updates were simple and informational, they were not categorized according to SCCT.

The second category, Non-Lake Level Updates, were for the Facebook posts not providing information updates outlined in Lake Level Updates. The Non-Lake Level Updates category was further analyzed in Research Question One to fully understand what crisis response strategy each post utilized during the 2019 flood threat. All USACE Tuttle Creek Lake Facebook posts during the 2019 flood threat timeline were summarized in terms of count and frequency. A third Facebook post category of "not applicable" was determined. This category included any posts that USACE Tuttle Creek Lake shared from another organization, or profile or cover photo updates. For some shared posts, the rangers at Tuttle Creek Lake added additional wording, but these posts were not included in further data analysis. Eliminating "not applicable: posts from further analysis allowed for the simplification of the process and to narrow the study to original Facebook post content created by rangers at Tuttle Creek Lake. The "not applicable" category included any other Facebook pages, even those affiliated with USACE.

Research Question 1: What Situational Crisis Communication Theory crisis response strategy or strategies did U.S. Army Corps of Engineers Tuttle Creek Lake publish on Facebook as posts during the 2019 flood threat?

Situational Crisis Communication Theory calls for the crisis manager to first begin their communication by using it to address the physical and psychological concerns of the victims (Coombs, 2007). Referred to as instructing information, this information is given first because ethically, it is the responsibility to make sure stakeholders can protect themselves first (Coombs, 2007). As the physical concerns of the flooding event are the water levels, USACE Tuttle Creek Lake had daily updates on the lake level during crisis and non-crisis times. To properly identify and categorize lake level information given almost daily on Tuttle Creek Lake's Facebook page, a category for this information was utilized alongside SCCT in the study (Thelen & Robinson, 2019). It is important for the speed of updates on social media to have a positive impact on the cognitive processing of the public (Lin et al., 2016). By giving reliable updates on Facebook to the public, Tuttle Creek Lake showed what is in the best interest for the public at the fore front of the crisis (Lin et al., 2016). Therefore, the Lake Level Update category does not need to be

sorted into SCCT or other sub-categories, as these posts update the stakeholders on the physical water level of Tuttle Creek Lake allowing them to understand how close their land or area around them is to becoming part of the flood area.

The Non-Lake Level Update posts were further analyzed and sorted into the SCCT crisis response strategies. The crisis response strategy or strategies used were those listed by SCCT: deny and its subcategories of attack the accuser, denial, scapegoat, excuse, justification, compensation, and apology; diminish strategy with its subcategories of lessen the attribution and reinforcing a frame, and bolster crisis strategy and its subcategories of reminder, ingratiation, and victimage.

Language in each pos was qualitatively evaluated based upon if the language fell into the primary or secondary SCCT categories. Primary categories are attacker the accuser, denial, scapegoat, excuse, justification, compensation, and apology. Secondary categories include reminder, ingratiation and victimage (Coombs, 2007). Diminish strategies are like deny strategies. To aid in clarification, language was analyzed, and the codebook updated when a pattern was seen in posts by USACE Tuttle Creek Lake on Facebook with the different crisis response strategies. From Thelen and Robinson (2019), sample posts were first analyzed to understand the tone of USACE Tuttle Creek Lake and what words or phrases used connected more to one crisis strategy response than the other crisis response strategies.

To break down the Facebook posts published by USACE Tuttle Creek Lake, the use of a priori coding was used (Elliott, 2018). Each crisis response strategy given by SCCT provides a guideline for the overall tone of the message and little guidance is given about the specific language. A priori allowed the theory's strategies to be applied to the data and further along the research objective and question. With no specific trigger words for any crisis response strategy within SCCT, the coding was adjusted as necessary to fit the nature of the 2019 flood threat. During the coding and analysis process, specific verbiage gave direction on the crisis response strategy and added to the code book. The coding was continually analyzed and updated to fully analyze all posts accurately. Please refer to Appendix B for the codebook.

The author coded the initial sample of 336 Facebook posts manually. A second coder, after several rounds of training, used the same codebook to code 10% of the selected sample (n=39, 10%) to make sure the coding into categories was reliable. The two coders had 84% agreement in coding the sample posts.

Research Question 2: What original Facebook posts by U.S. Army Corps of Engineers Tuttle Creek Lake generated the most organic public engagement through comments or reactions?

The reach of posts from USACE Tuttle Creek Lake's Facebook page is entirely organic. All the Facebook posts' reach being organic, and none boosted allows for a pure understanding of the impact each post had on the stakeholders and allows for the ability to see if a strategy increases reach. Knowing which strategies increase reach can help for future crisis threats. Through the previous research questions, the ability to understand the attribution through emotions of the crisis to the organization through each post will allow for improvement during the next crisis as well. It is important to note none of the posts by USACE Tuttle Creek Lake were promoted and all reach is organic.

The data from all Facebook posts by Tuttle Creek lake was exported from Facebook during the study timeframe. This data provides the engagement of each post individually in an Excel sheet. Gathering engagement data included sorting each post that USACE Tuttle Creek Lake posted and any post that was only shared by Tuttle Creek Lake was not included as the messaging was first created by a different agency or organization. We then sorted posts by SCCT crisis communication strategy (primary and secondary), then sorted by level of engagement. The 15 posts with highest engagement in primary SCCT categories were further analyzed, and the 15 posts with highest engagement in secondary SCCT categories were further analyzed. While only the top 15 posts from the primary and secondary strategies were studied, each post was categorized into the sub strategies of the primary and secondary strategies. The top 15 posts with primary and secondary SCCT strategies were studied due to time constraints. Engagement was calculated by Facebook through its Insights function. Facebook includes liking or reacting, sharing, clicking, or commenting on a post as engagement.

Research Question 3: Did stakeholders express more positive or negative emotions through their responses and reactions on the U.S. Army Corps of Engineers Tuttle Creek Lake's Facebook posts with the most engaged posts during the 2019 flood threat?

As SCCT relies on the emotional engagement of the public to understand/predict future behavior with an organization, comments on USACE, Tuttle Creek Lake's Facebook posts were

analyzed for positive and negative emotions. To detect the emotions within the comments by stakeholders, Linguistic Inquiry and Word Count (LIWC) software was used. The LIWC program categorized the emotions expressed in the comments and how often the emotion was present. Whichever emotion was expressed the most in that specific comment was used to categorize as positive or negative. The comments of each stakeholder on each post were evaluated to help identify if there is a relationship between a strategy used and the emotional response as either attribution independent or dependent. The previous research of Thelen and Robinson (2019) and Choi and Lin (2009) show the theoretical link of attribution dependent (negative) emotions by stakeholders create a larger crisis attribution to the organization in question.

LIWC calculates the emotional tone by a positive and negative tone dimension. These dimensions are analyzed in a single summary variable with a percentage given for each tone when the output is given. The higher the percentage for the positive and/or negative output, the more positive or negative the tone (LIWC, 2023). Reactions to crisis events can vary in range, but each response is a form of coping which is expressing emotions. LIWC can accurately identify if these emotions expressed are positive or negative based on its word processing software (Tausczik & Pennebaker, 2010).

The 15 top engaged primary strategy posts had all the comments by stakeholders for each post copy and pasted from Facebook to a word document. These collective comments were then run through LIWC to provide results of positive and negative emotional reactions to the Facebook posts. The 15 top engaged secondary strategy posts had all the comments by stakeholders for each post copy and pasted from Facebook to a word document. These collective comments were then run through LIWC to provide results of positive and negative emotional reactions to the Facebook posts. Comments on any post by Tuttle Creek Lake were not included. These comments were then calculated through LIWC's software to provide an output of positive and negative emotions as this was found to allow for the least amount of leeway in cases (del Pilar Salas-Zárate et al, 2014).

Research Question 4: Was there a timeframe during the flood threat when overall Facebook post engagement was the highest?

During the 2019 flooding event, the Tuttle Creek Dam reached its maximum water holding capacity in the month of May. This question seeks to find if there was a time period during this month or another time during the crisis, as it spans almost an entire year, where the public was engaging the most with USACE Tuttle Creek Lake through Facebook comments and reactions. Publishing the lake level information each day allows the public to know when the lake will reach its conservation storage capacity. Understanding if there was a peak engagement related to flood level is important for crisis managers to know how to communicate during the next crisis threat. Knowing of increased engagement and if it corresponds with a specific time frame within the flood will be beneficial for the public in the future for USACE to understand how to communicate in flood stages. An engaged audience is important because this means they are going to be more aware of the crisis and possibly participate with the crisis manager and other stakeholders (Jaing et al., 2016).

To find if there was a time period where there was more engagement, the top 30 posts were looked at in an Excel sheet and sorted by date. From the sorted posts by date, if there is a repeating pattern of multiple posts within the same week then a timeframe can be established of having a higher engagement rate compared to other timeframes.

Chapter 4 - Results

The purpose of this study was to understand how USACE, Tuttle Creek Lake communicated during the 2019 flooding season and the public's positive and negative emotional reactions to the communication. To evaluate the effectiveness of their communication we used SCCT with research objectives and questions to evaluate Facebook post comments to those posts. Research objective one was to categorize and determine the frequency of initial USACE Tuttle Creek Lake Facebook posts during the 2019 flood threat. Research question one was: what SCCT crisis response strategy or strategies did USACE Tuttle Creek Lake publish on Facebook as posts during the 2019 flood threat? Research question two was: what original Facebook posts by U.S. Army Corps of Engineers Tuttle Creek Lake generated the most organic public engagement through comments or reactions? Research question three was: what emotions did stakeholders express through their responses and reactions on the U.S. Army Corps of Engineers Tuttle Creek Lake's Facebook posts with the most engaged posts during the 2019 flood threat? Research question four was: within the top engaged posts, was there a collective of posts that were within a short timeframe of being published or similar lake level reported?

Research objective one: categorize and determine the frequency of initial U.S. Army Corps of Engineers Tuttle Creek Lake Facebook posts during the 2019 flood crisis.

All 408 Facebook posts during the flooding period stretching from February 6 to December 11, 2019, were categorized into one of the following: Lake Level Updates, Non-Lake-Level Updates (further analyzed in RQ 1 and 2), and "Not Applicable." All Facebook posts and data were provided by USACE Tuttle Creek Lake on two CDs. Seventy-two posts were found not applicable and were not researched further. After categorization and omitting posts categorized as not applicable, there were 336 Lake Level Updates or Non-Lake Level Update posts for the flood time frame. The posts categorized as lake level updates totaled 246 posts. Apart from "Not applicable" posts (n=72) and Lake Level Updates (n=246), posts that were not lake-level updates (n=90) were categorized into an SCCT strategy. These 90 posts were researched further in the following research questions.

Research question one asked which SCCT crisis response strategies were used by USACE Tuttle Creek Lake in their published posts.

Through coding, the author and coder were able to identify which strategy was used for each of the 90 posts identified in RO1. Table 4.1 displays strategy categories, their brief definitions, and the number of posts placed in each SCCT category through the coding process. Examples of posts in each strategy can be found in Appendix A.

Table 4.1

The number of Facebook Posts coded to each SCCT Response Strategy

<i>Deny Strategies</i>	Definition	Posts
Attack the Accuser	Crisis manager confronts the person or group claiming something is wrong with the organization	0
Denial	Crisis manager asserts that there is no crisis	0
Scapegoat	Crisis manager blames some person or group outside of the organization for the crisis.	3
<i>Diminish Strategies</i>		
Excuse	Crisis manager minimizes organizational responsibility by denying intent to do harm/or claiming inability to control the events that triggered the crisis.	10
Justification	Crisis manager minimizes the perceived damage caused by the crisis.	8
<i>Rebuild Strategies</i>		
Compensation	Crisis manager offers money or other gifts to victims.	21
Apology	Crisis manager indicates the organization takes full responsibility for the crisis and asks for stakeholders' forgiveness.	6
<i>Bolstering Strategies</i>		
Reminder	Tell stakeholders about the past good works of the organization.	7
Ingatiation	Crisis manager praises stakeholders and/or reminds them of past good work by the organization.	7
Victimage	Crisis managers remind stakeholders that the organization is a victim of the crisis too.	28

Research question two: what original Facebook posts by U.S. Army Corps of Engineers Tuttle Creek Lake generated the most organic public engagement through comments or reactions?

Table 4.2 showcases the 15 posts with highest engagement that fall in the primary SCCT strategy

categories, and the 15 posts with the highest engagement that fall in the secondary SCCT strategy categories, and exactly which strategy was identified for each original post published on the USACE Tuttle Creek Lake Facebook page during the study timeframe.

Among the 15 top engaged posts with primary strategies, there are eight posts utilizing the justification strategy, four posts utilizing the excuse strategy and 3 posts utilizing the scapegoat strategy. There were no top primary posts utilizing attack the accuser or denial as no posts were categorized as either strategy. Posts categorized into the primary strategies of compensation or apology were not within the top fifteen highest engagement posts.

Among the 15 top engaged posts with secondary strategies, there were 13 posts utilizing the victimage strategy and two posts utilizing the ingratiation strategy. While seven posts were categorized in the reminder strategy, none were within the highest engagement posts. Appendix A shows the screenshots of each of the 15 primary and 15 secondary highest engagement posts. Figure 4.1 is the post for the top engaged primary strategy and Figure 4.2 is the post for the top engaged of the secondary strategy.

Table 4.2

Top Engaged Primary and Secondary Facebook Posts

Primary	Strategy	Engagement*
1	Justification	7955
2	Excuse	7309
3	Justification	6700
4	Justification	5686
5	Excuse	4848
6	Excuse	4827
7	Justification	4443
8	Justification	2921
9	Justification	2715
10	Excuse	2696
11	Justification	2243
12	Justification	2228
13	Scapegoat	2164
14	Scapegoat	1977
15	Scapegoat	1870

Secondary	Strategy	Engagement
1	Victimage	12353
2	Victimage	8762
3	Victimage	5604
4	Victimage	5124
5	Victimage	3702
6	Victimage	3407
7	Ingratiation	2033
8	Victimage	1637
9	Victimage	1330
10	Victimage	1314
11	Victimage	1133
12	Victimage	1008
13	Victimage	974
14	Ingratiation	900
15	Victimage	841

*Engagement calculated by Facebook

Figure 4.1 Top Engaged Primary Strategy Facebook Post

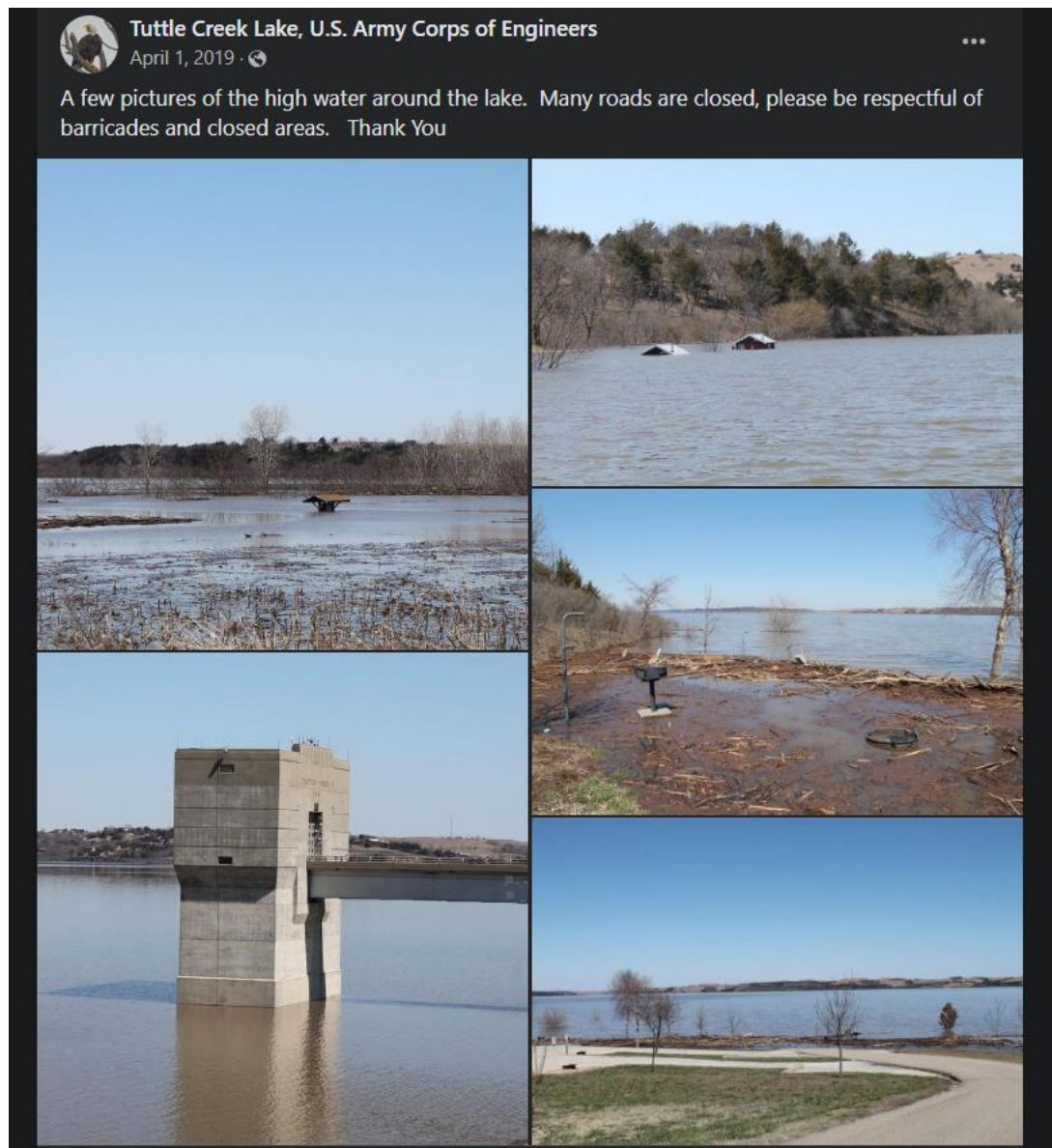
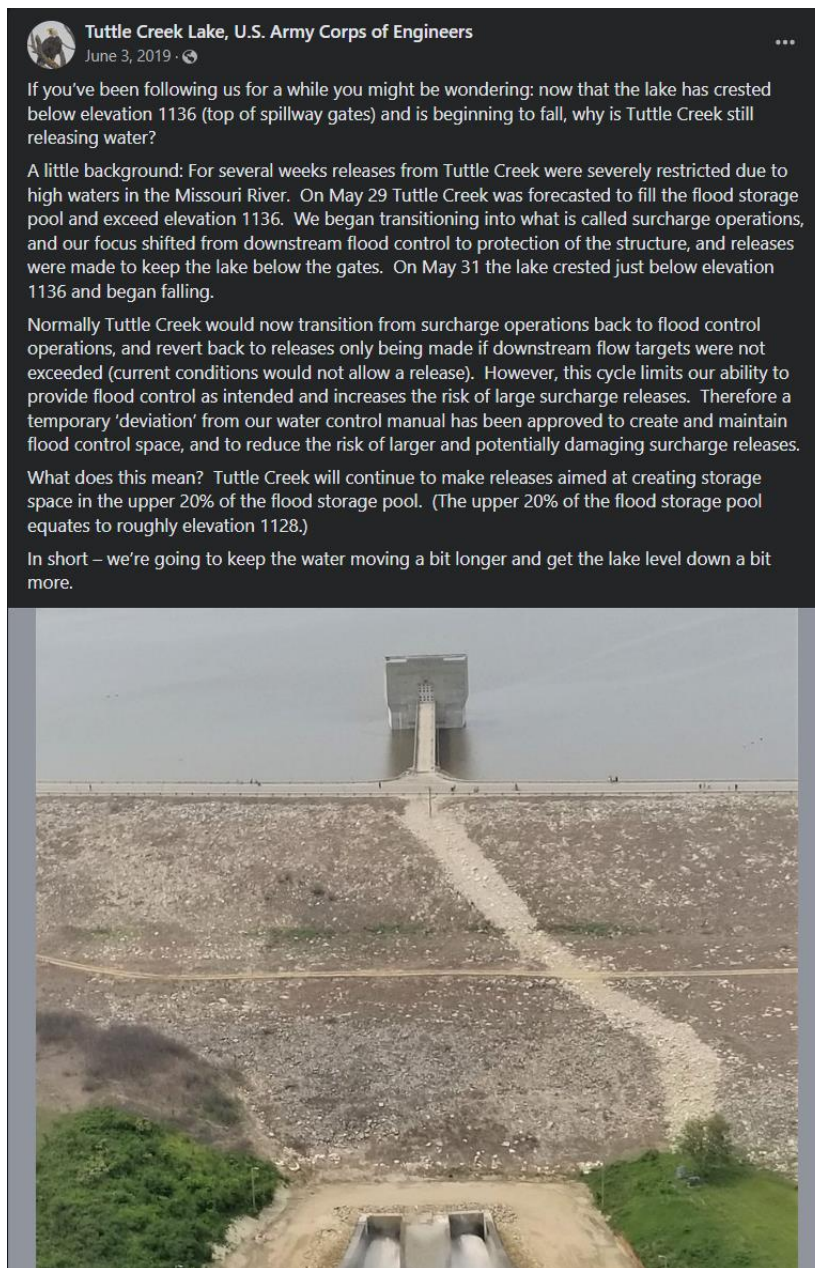


Figure 4.2 Top Engaged Secondary Strategy Facebook Post



Research question three: Did stakeholders express more positive or negative emotions through their responses and reactions on the U.S. Army Corps of Engineers Tuttle Creek Lake's Facebook posts with the most engaged posts during the 2019 flood threat?

Table 4.3 provides 15 top engaged primary posts and 15 top secondary posts along with the positive and negative emotion results by LIWC. Fourteen out of the fifteen highest-engagement posts in the primary SCCT categories had a higher positive emotion value than

negative emotion. All fifteen of the 15 highest engagement secondary SCCT category posts had a larger positive emotion value than negative emotion value. The figures in Table 4.3 are sorted by engagement highest to lowest.

Table 4.3 LIWC Positive and Negative Emotion Results for Facebook Post Comments

Primary	Strategy	Positive Emotion	Negative Emotion
1	Justification	2.46	2.26
2	Excuse	1.20	2.11
3	Justification	6.33	0.63
4	Justification	1.79	0.30
5	Excuse	5.03	0.63
6	Excuse	1.52	0.76
7	Justification	2.44	1.28
8	Justification	1.79	0.30
9	Justification	3.27	2.34
10	Excuse	3.38	0.75
11	Justification	1.78	0.20
12	Justification	3.12	1.56
13	Scapegoat	1.94	1.78
14	Scapegoat	5.41	0.68
15	Scapegoat	10.99	0.00

Secondary	Strategy	Positive Emotion	Negative Emotion
1	Victimage	2.15	1.50
2	Victimage	2.08	1.53
3	Victimage	5.13	3.42
4	Victimage	1.61	0.81
5	Victimage	1.55	0.39
6	Victimage	4.82	2.41
7	Ingratiation	4.60	0.97
8	Victimage	8.56	1.35

9	Victimage	4.28	1.07
10	Victimage	4.81	2.61
11	Victimage	3.66	3.25
12	Victimage	5.63	1.41
13	Victimage	3.45	0.00
14	Ingratiation	6.06	1.52
15	Victimage	4.71	2.44

Research question four: Was there a timeframe during the flood threat when overall Facebook post engagement was the highest?

Tuttle Creek Lake crested at 2,133,000-acre feet of water on Friday, May 31, 2019, at 11:45:00 a.m. central time and held until 02:03:00 p.m. central time. After sorting the top 30 engaged Facebook posts by date a timeframe could be established based on the lake's crest on May 31, it was visible many of the dates were showing the week before and after May 31, when the peak lake elevation was reached, there was increased engagement. Of the top 30 engaged Facebook posts, 14 of the posts fell between June 1 and June 6. Ten of the 30 top engaged Facebook posts by Tuttle Creek lake fell within the week before May 31. The week following the crest of Tuttle Creek Lake, park rangers had 16 posts reach top engagement with four of the posts being lake level updates and 16 posts being non-lake level updates. Over half of the 30 top engaged Facebook posts fell within a span of two weeks that coincides with the peak lake elevation which shows the public was more interested and engaged during this timeframe than other timeframes during the flood crisis. With this much engagement, it shows the week before and after the lake's crest was the most popular. These 16 posts were all evaluated within the top 30 posts in research question two. The four lake level update posts were not evaluated in research question 2. Please refer to Appendix A for all Facebook posts evaluated.

Chapter 5 - Discussion and Conclusion

The purpose of this study was to use Situational Crisis Communication Theory to better understand USACE crisis response strategies via Facebook, and if the crisis communication methods used by USACE Tuttle Creek Lake through original posts on Facebook during the 2019 flood threat created more positive or negative emotional responses by the stakeholders. To begin the study, USACE Tuttle Creek Lake's Facebook posts during the 2019 flood crisis were categorized into SCCT crisis strategies. Categorizing the posts into SCCT crisis response strategies showed which strategies were and were not used by the Corps staff in posting updates to Facebook. Of these Facebook posts, the top 30 engaged posts were determined and the comments from these posts were entered into LIWC to understand if stakeholders were reacting in a positive or negative way to the communication. Among the top 30 engaged posts, the date of each post was studied to understand if there was a period of time where the most engaged posts were close to one another.

After eliminating shared posts (posts not created by Tuttle Creek Lake) and Lake Level Update posts, 90 Facebook posts posted during the flood crisis were categorized into SCCT strategies. For the SCCT primary crisis response strategies, justification (8 top-engagement posts), excuse (4 top-engagement posts) and scapegoat (3 top engagement posts) were used to communicate to the public. For the SCCT secondary crisis response strategies, victimage and ingratiation were used. Two of the 15 top-engagement secondary crisis response strategy posts used the ingratiation strategy while the other 13 used the victimage strategy. We found that for the 30 top-engagement posts, the overall emotional reaction to the posts by USACE Tuttle Creek Lake were more positive than negative, with only one post having a greater negative percentage indicated by LIWC. Of these 30 top-engagement posts, 16 of them were within one week of each other, which was the week following the crest of the lake elevation at Tuttle Creek Lake.

SCCT crisis response strategies of "attack the accuser" and "denial" were not used by Tuttle Creek Lake during the 2019 flood crisis. Attack the accuser is verbally or through writing attacking the accuser as if they are incorrect on the crisis occurring (Coombs, 2007). It would not have been in the best interest for Tuttle Creek Lake to use the crisis response strategy of attack the accuser as this would as it describes be Tuttle Creek Lake confronting the accuser claiming something is wrong (Coombs, 2007). This is different than justification because justification,

which Tuttle Creek Lake used, is helping to rationalize why the crisis is being handled how it is. The “denial” strategy is where the crisis manager will deny a crisis is occurring at all (Coombs, 2007). It would not have been wise not to use the denial strategy, as the lake elevation was visible by those around the lake or those who would follow through the U.S. Geological Survey’s data gauges. Instead, Tuttle Creek Lake used another strategy such as victimage to help remind stakeholders that USACE was also a victim to the heavy snowmelt and rain and was managing to the best of their ability. Not using “attack the accuser” or “denial” crisis communication strategies likely aiding in preserving the reputational capital among stakeholders for Tuttle Creek Lake.

With only 1 out of the 30 top-engagement posts for primary and secondary strategies outputting more negative emotions than positive, the data shows a more positive emotional response from stakeholders’ comments, indicating that whether Tuttle Creek Lake USACE staff knew about SCCT crisis communication strategies, their approach to Facebook post content during the 2019 flood crisis potentially aided in preserving their reputational capital. A possible limitation of this study is that stakeholders could have been more generous with their positive interactions as opposed to their negative interactions, making top-engagement posts naturally more positive. Further research would be needed to determine if this is indeed a limitation to the study. Another limitation of this study includes the time constraints to allow for data analysis of only the 30 top engaged Facebook posts and excluded the analysis of “likes” and “reactions” to each post.

Some of the posts were close to having an equal balance of positive and negative emotion. Further research is needed to better understand if wording or the topic within the post influenced the closeness of emotions. While all but one post had a more negative emotional reaction by stakeholders, there were only two posts that had zero negative emotions associated with the post’s comments. Research should be done to analyze the date, time, and wording of posts to understand what influenced a closer margin of negative and positive emotions between posts. Understanding if a certain phrase or word was utilized in more than one Facebook post would help to further guide crisis communication plans for the U.S. Army Corps of Engineers going forward.

The peak of the flood during the end of May to beginning of June can be argued as the most stressful time for both stakeholders and Tuttle Creek Lake and amounted to 16 out of 30 of

the top engaged posts, yet the comments showed the stakeholders' feelings still leaned to the side of positive.

The findings from this study are beneficial for Tuttle Creek Lake to use during the next crisis event, as they can intentionally use helpful SCCT strategies with reassurance that communication efforts can create positive reactions among stakeholders. While it may seem concerning to post information in a time when people have the possibility to comment negatively, the results show that out of 30 top-engagement posts, the public comments on 29 posts had greater positive emotions than negative emotions. These results indicate that even during a crisis, the public will potentially react in a more positive way than negative way if specific crisis response strategies are used.

The findings from research question four, which found that more than half of the top engaged posts were within a week of the lake elevation peak, can be used for the agency to recognize the importance of communication during the peak of a crisis event. This was most likely achieved because Tuttle Creek Lake not only updated the public on the factual data found on USGS but also took the time to explain the reasoning behind the increase in water storage. The explanations allowed for the strategies of justification or excuse to explain why Tuttle Creek Lake was experiencing the high lake levels. The culmination of both helps to prove the Tuttle Creek Lake rangers' approach to the stressful time yielded positive results.

During a similar crisis, especially a flood, it is important to acknowledge the peak of the crisis such as when water is projected to be the highest, the need for transparency or explaining further than the physical level of flood water is needed. With the results from this study showing the public was most engaged with their Facebook posts during the peak of the flood crisis, we recommend Tuttle Creek Lake, and other reservoir managers, continue to use justification, excuse, scapegoat, victimage, and ingratiation SCCT response strategies. With the higher engagement during the peak of a crisis, it may be concerning to the crisis manager to continually communicate with a more involved public, but with intentional and transparent posts and frequent updates, it is possible to build trust and reassurance. It would be within the bounds for a crisis manager to consider communicating more heavily during the peak of a crisis as more of its stakeholders may be following than normal.

When looking at the secondary crisis response strategy, 13 posts use the response strategy of victimage while two fall under ingratiation. The two "ingratiation" posts highlight the physical

beauty of Tuttle Creek Lake in a time of crisis and show that beauty can bring positive emotions and engagement from stakeholders even in a difficult situation.

One similar study through Twitter by Barbe & Gray (2018), studied the crisis responses through Twitter during three separate crisis events and categorized them using SCCT as well. This study also found the need for communicating during the crisis with the basic information to provide physical safety was needed (Barbe & Gray, 2018). While this study focused on one lake during one crisis, it yields results other USACE projects can learn from and utilize. While the flooding was not a terrorist attack, mass shooting or virus outbreak as Barbe & Gray (2018) studied since the flood of 2019, there has been a global pandemic when questions surfaced as to what would happen to outdoor recreation spaces and increased visitation. Tuttle Creek Lake's crisis communication during the onset and height of the pandemic could also be a future study to compare. Additionally, it is an unfortunate reality, but Tuttle Creek Lake's dam and any other USACE dam could be the target for a terrorist attack, and the crisis responses studied through this study and Barbe & Gray (2018)'s study could be utilized to keep the public informed.

With further research, SCCT can help social media managers learn how to approach their communication strategy in a crisis. While the crisis analyzed in this study was a flood crisis, a similar strategy could be considered during lower water events. We recommend that USACE lake managers review Eriksson (2018)'s five lessons about crisis communication prior to a crisis occurring. the first lesson he found was to make sure to communicate the right message from the right source at the right time. With over half the top engaged posts falling within a week before and after the lake crested, Tuttle Creek Lake also communicated at the right time. Tuttle Creek Lake's Facebook page was the correct source to relay the message instead of the Kansas City District's Facebook page as the public is concerned about the lake itself and may not understand Tuttle Creek Lake falls under the Kansas City District's area of operation.

The second lesson is to not start the media [Facebook page, in this case] during the crisis (Eriksson, 2018). Tuttle Creek Lake's Facebook page was formed in 2013 (Tuttle Creek Lake, n.d.). Tuttle Creek Lake's presence on Facebook was established six years before the crisis began, which means they fortunately already had followers before the 2019 crisis. The third lesson states that the social media page is best when monitored (Eriksson, 2018). Tuttle Creek Lake had multiple posts where the page manager replied within the comments and with 406 posts throughout the entire crisis, the page was sufficiently monitored.

While Tuttle Creek Lake's use of traditional media was not included in this study, it was used as non-applicable posts also included shares from local news media satisfying Eriksson (2018)'s fourth lesson. Tuttle Creek Lake's Facebook posts throughout the crisis and the positive results from this academic study on the public's response help to justify Eriksson (2018)'s last lesson discussing that social media should be used to respond during a crisis.

Prior to this study, no studies were found that combined SCCT and LIWC to analyze the effectiveness of using crisis responses from SCCT to communicate through social media. A Facebook page with a larger following would allow for a broader analysis of comments and the stakeholders emotional reaction to the crisis, as it is possible that more comments would be provided to study by the stakeholders. It would also be beneficial to study an organization posting on multiple social media platforms such as Facebook, Instagram, TikTok, Twitter and Threads. Each of these social media platforms have a different audience, but for government organizations, the taxpayer is their audience, and utilizing more than one form of social media to communicate during a crisis may or may not be beneficial. Tuttle Creek Lake, as mentioned earlier, has had a challenging past with stakeholders in terms of reputational capital due to several reasons. This study's results show that during a potential crisis, even with tensions from past crises, intentional communication strategy can still result in positive emotions among stakeholders. With more data, military and government organizations can understand how to communicate best to inform the public and to keep a positive reputational capital.

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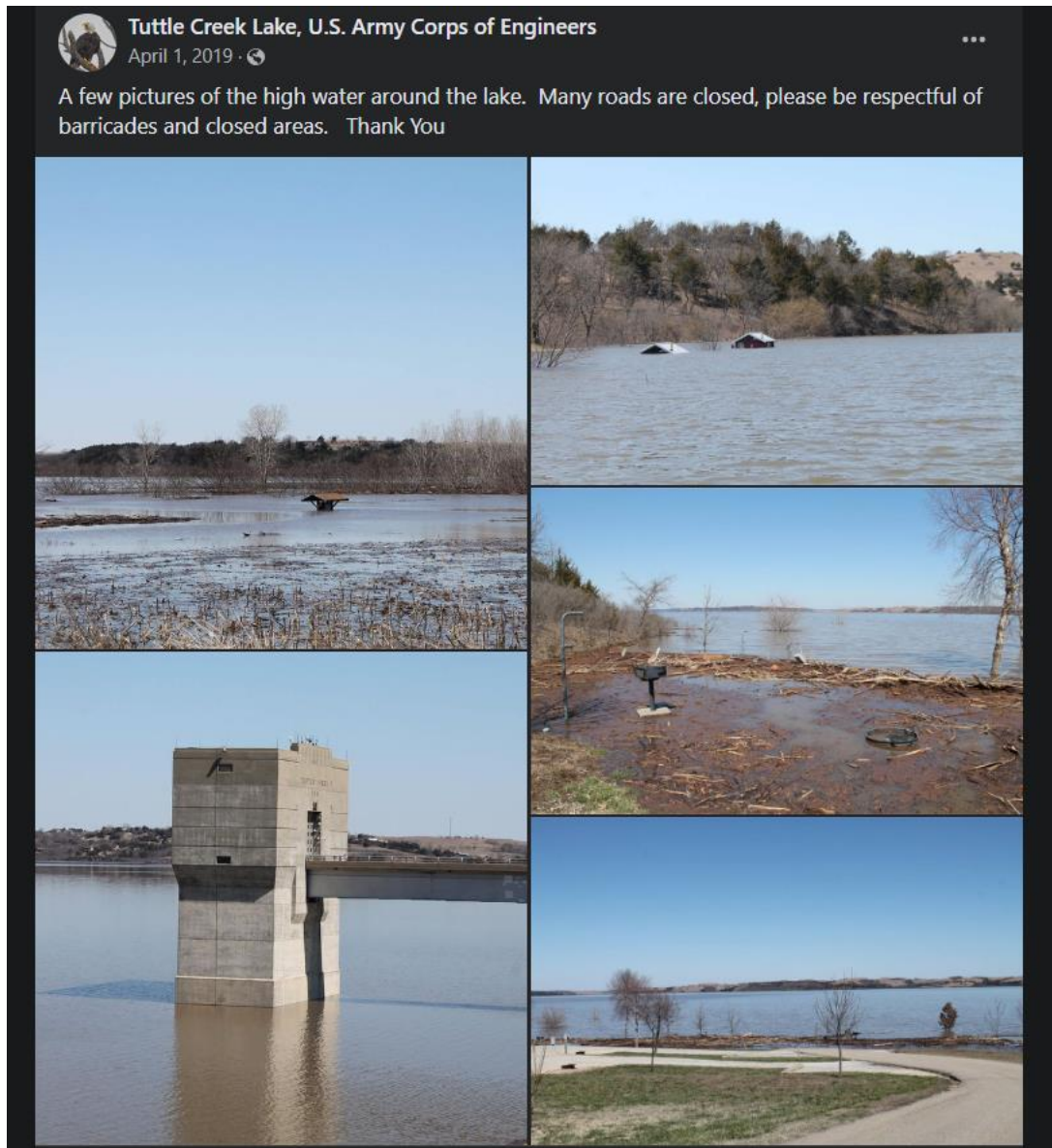
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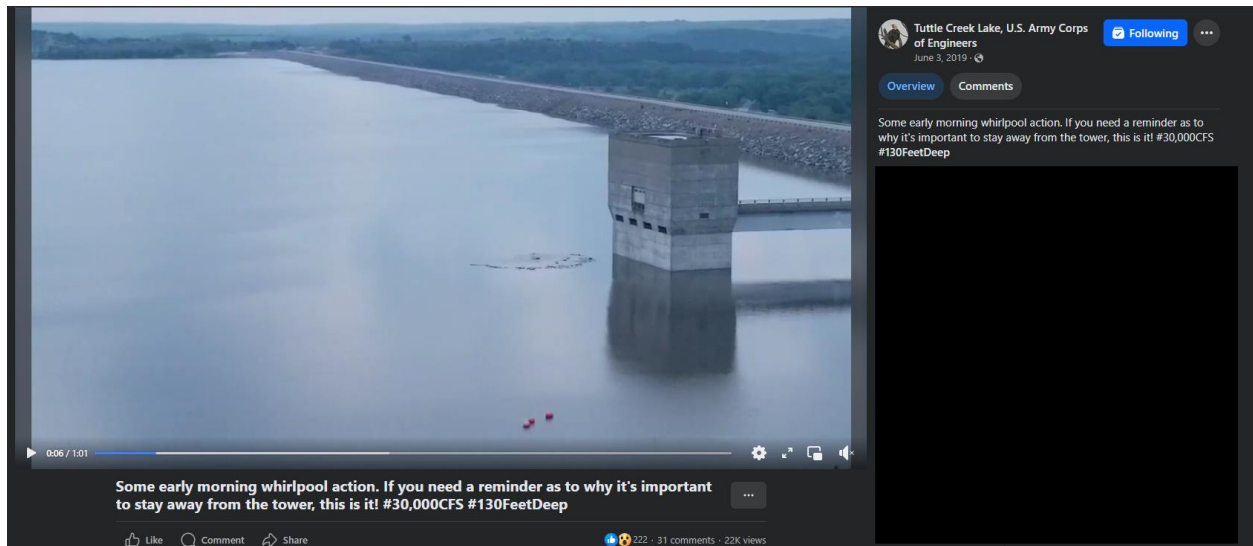
Appendix A - Top Engaged Primary and Secondary Facebook Posts

Appendix A Figure A.1 Top Engaged Primary Strategy Post - Justification



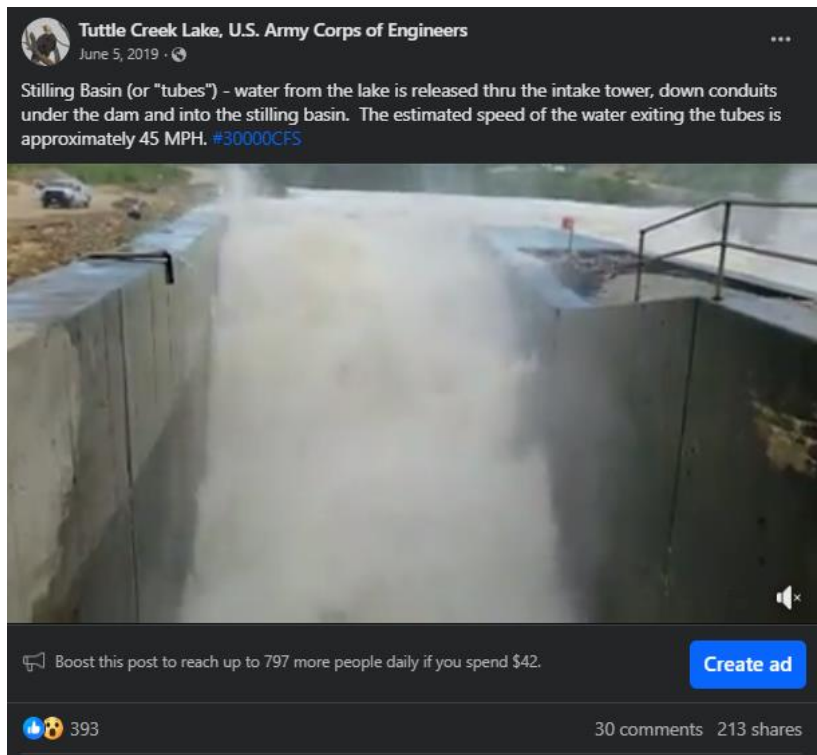
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Appendix A Figure A.2 Second Top Engaged Primary Strategy Post - Excuse



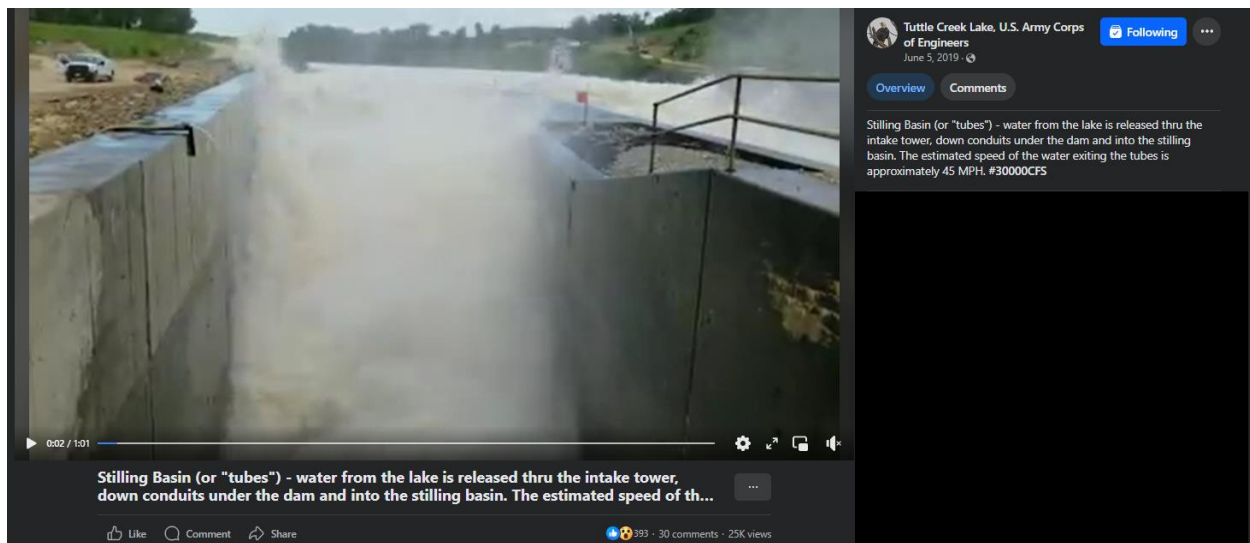
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Appendix A Figure A.3 – Third Top Engaged Primary Strategy Post



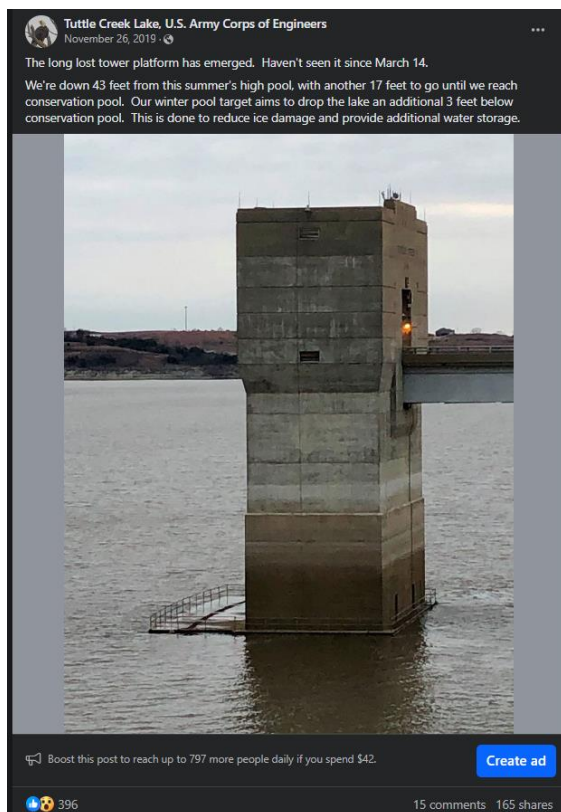
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Appendix A Figure A.4 – Fourth Top Engaged Primary Strategy Post



<https://www.facebook.com/watch/?v=195329864680141>

Appendix A Figure A.5 – Fifth Top Engaged Primary Strategy Post



<https://www.facebook.com/USACEtuttle/posts/2494902103958157>

Appendix A Figure A.6– Sixth Top Engaged Primary Strategy Post

Tuttle Creek Lake, U.S. Army Corps of Engineers
May 28, 2019 · 🌐

When visiting Tuttle Creek Dam please note the restricted areas.

PUBLIC PROHIBITED IN RESTRICTED AREAS

- Vehicles prohibited beyond the west dam parking lot.
- Pedestrians and bicycles may access the spillway overlook via the dam road (K-13) and River Pond Rd.
- The public is not permitted past the spillway overlook.
- Vehicles parked on road shoulders are subject to tow
- Vessels are prohibited in the spillway inlet channel and 100 yards from the tower. Should the spillway gates be opened, vessels will be prohibited from all lake area south of the Marina (Cedar Ridge Park).
- Persons found in violation of this posted restriction are subject to citation and fine.





PEDESTRIAN AND BICYCLE ACCESS ONLY (MARKED BY BLUE LINE)

MEMBERS OF THE PUBLIC ARE PROHIBITED IN THE RESTRICTED AREA (MARKED BY RED SHADE)

Restricted Area Parking Area Corps of Engineers land boundary

Pedestrian and Bicycle Access only Overlook

Corps of Engineers Tuttle Creek Lake
5020 Tuttle Crk. Blvd., Manhattan, KS 66502
(785) 535-8511

📣 Boost this post to reach up to 797 more people daily if you spend \$42. [Create ad](#)

👍 73 43 comments 101 shares

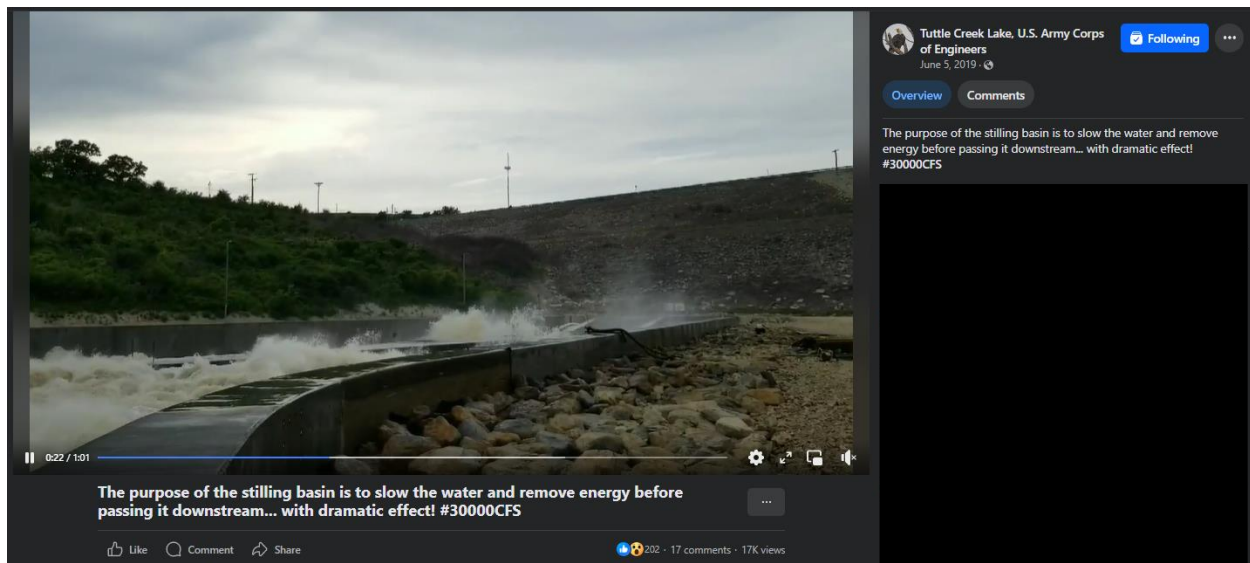
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Appendix A Figure A.7– Seventh Top Engaged Primary Strategy Post



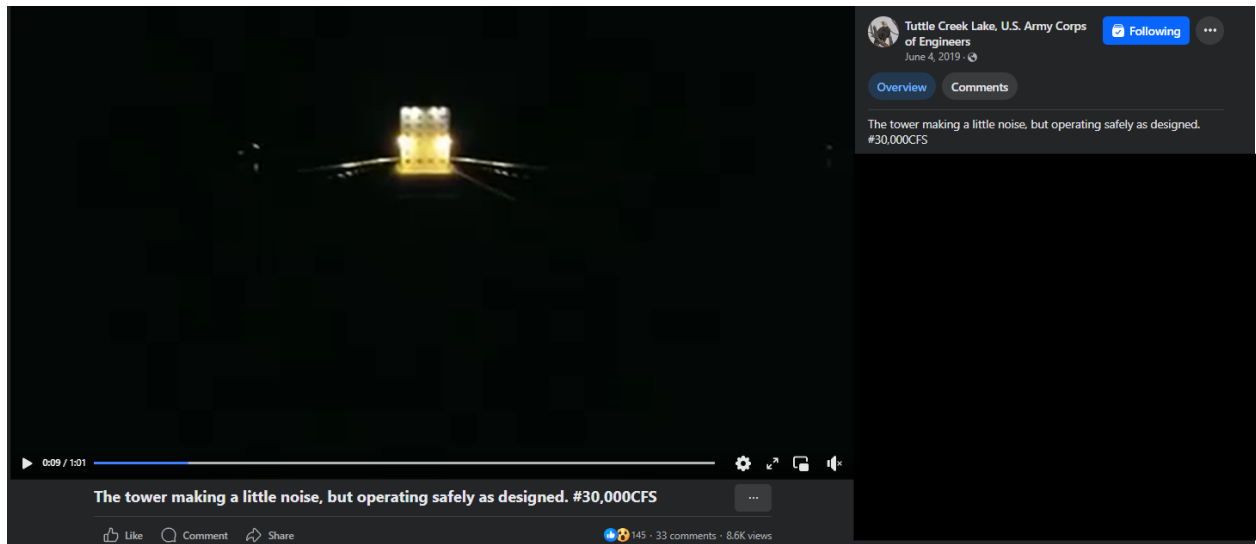
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Appendix A Figure A.8– Eighth Top Engaged Primary Strategy Post



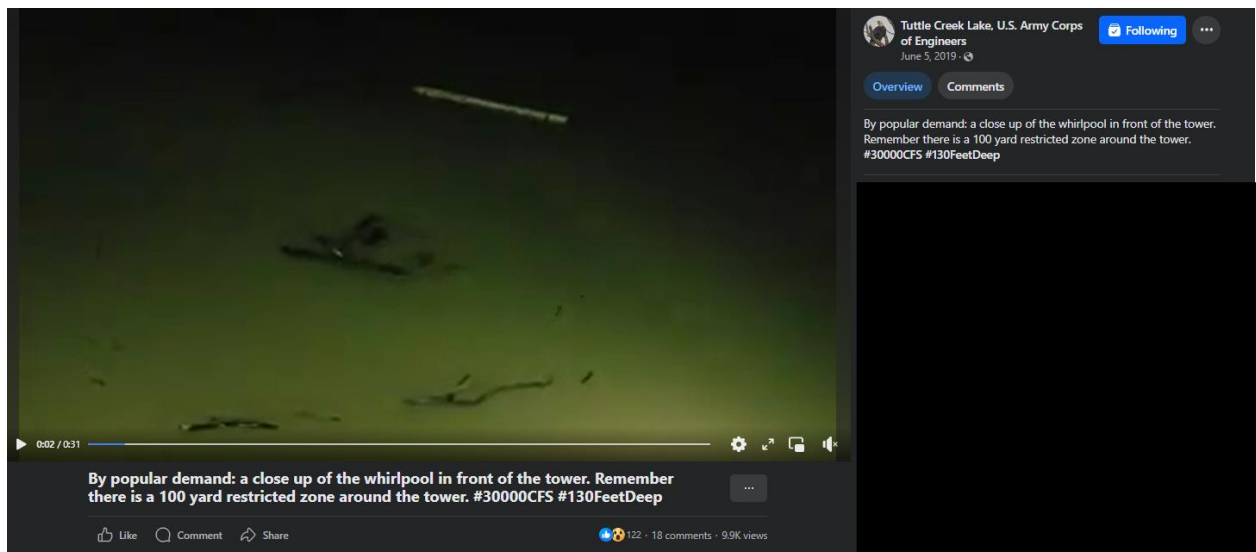
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Appendix A Figure A.9 – Ninth Top Engaged Primary Strategy Post



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Appendix A Figure A.10 – Tenth Top Engaged Primary Strategy Post



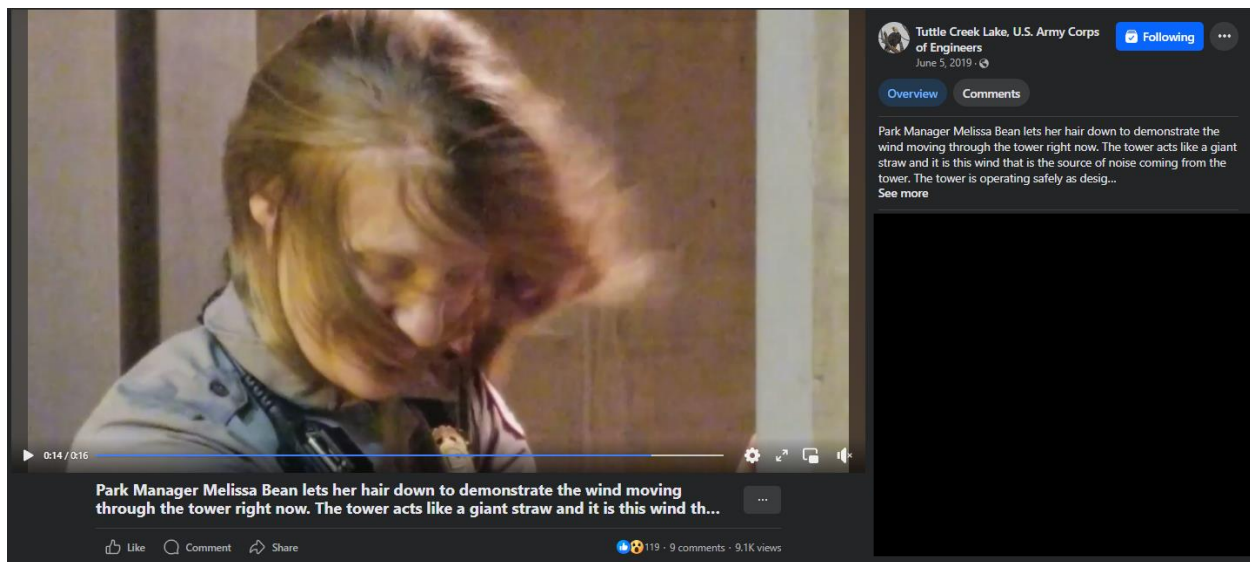
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Appendix A Figure A.11 – Eleventh Top Engaged Primary Strategy Post



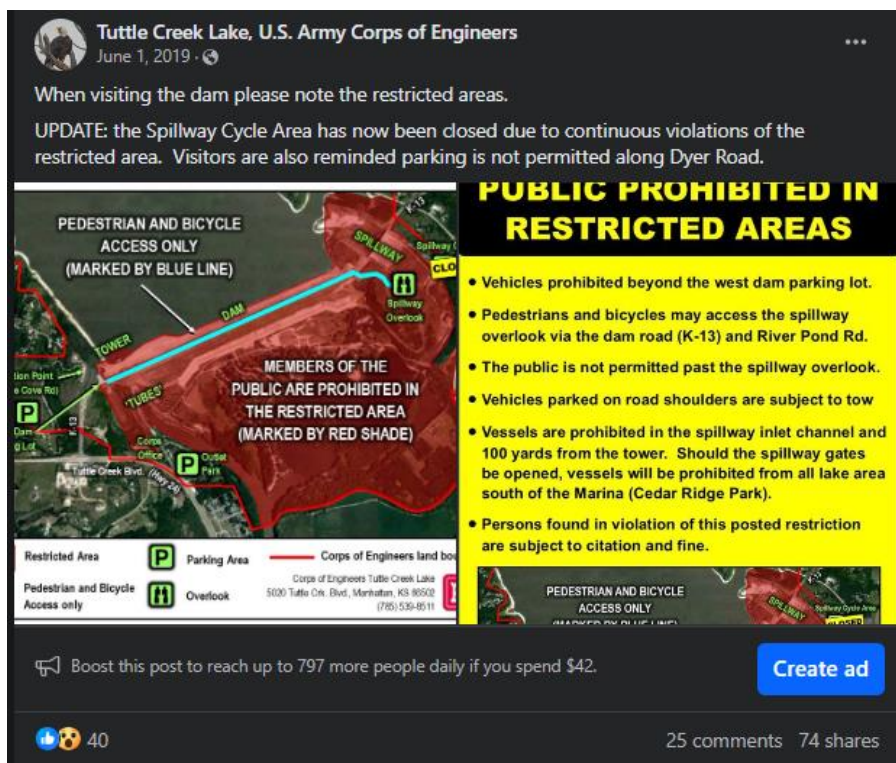
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Appendix A Figure A.12 – Twelfth Top Engaged Primary Strategy Post



<https://www.facebook.com/watch/?v=863172800722910>

Appendix A Figure A.13 – Thirteenth Top Engaged Primary Strategy Post



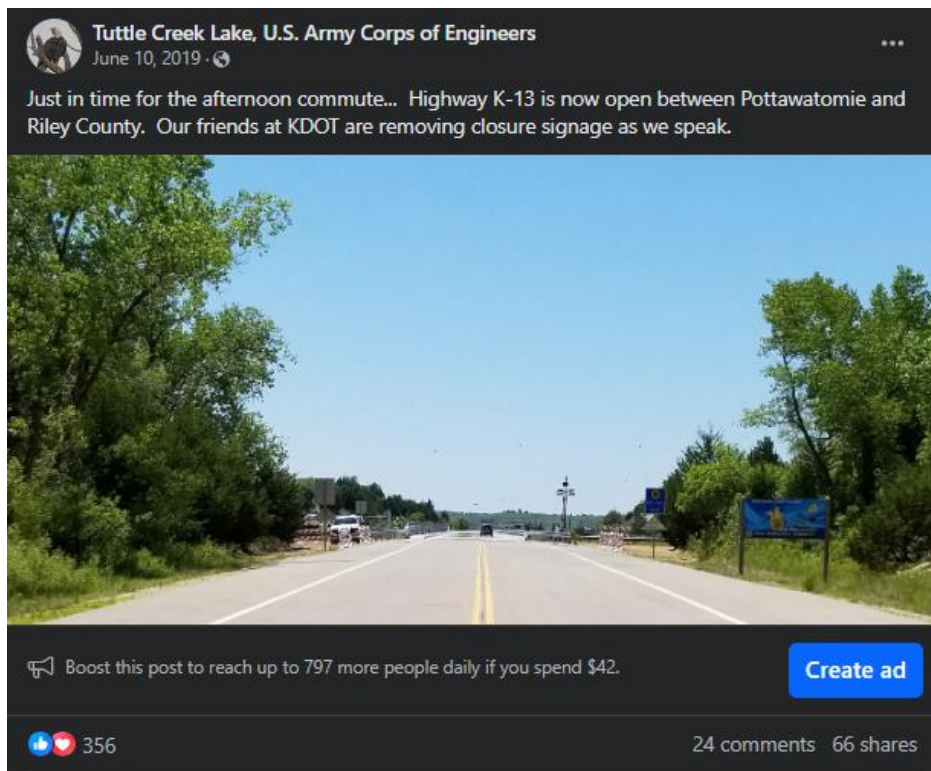
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Appendix A Figure A.14 – Fourteenth Top Engaged Primary Strategy Post



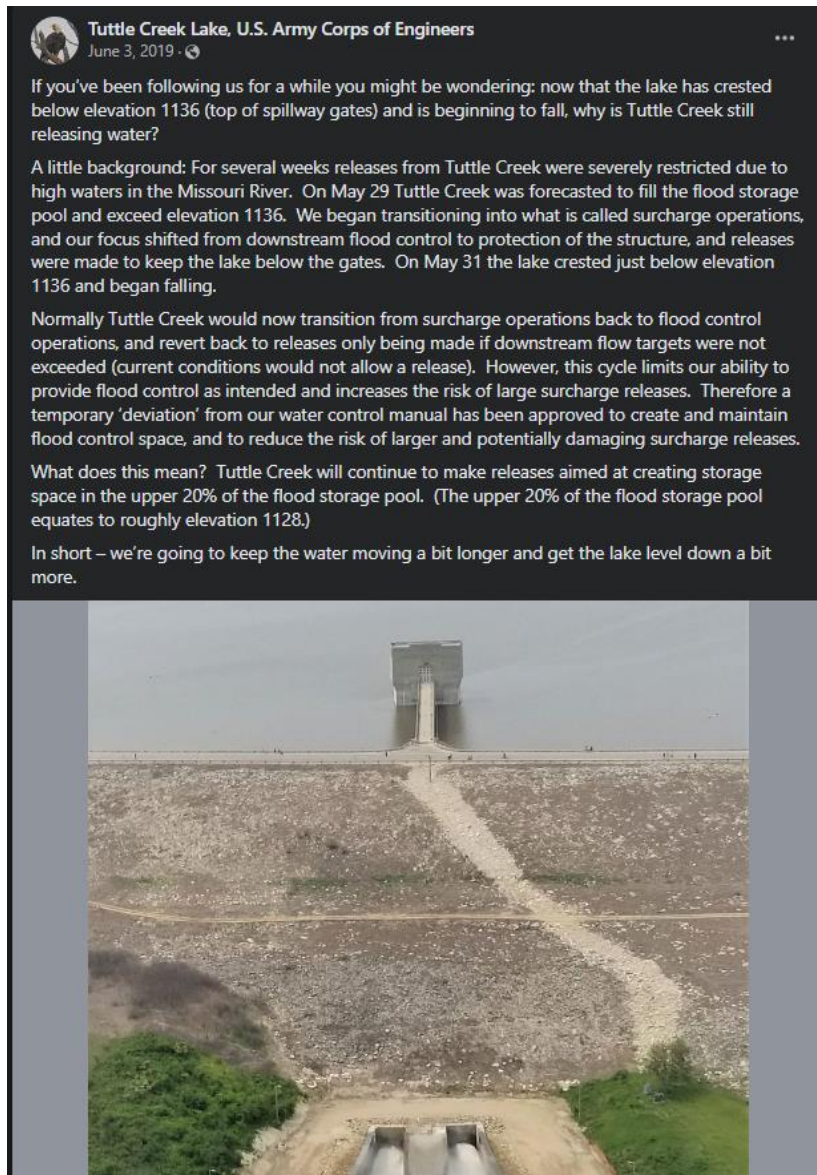
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Appendix A Figure A.15 – Fifteenth Top Engaged Primary Strategy Post



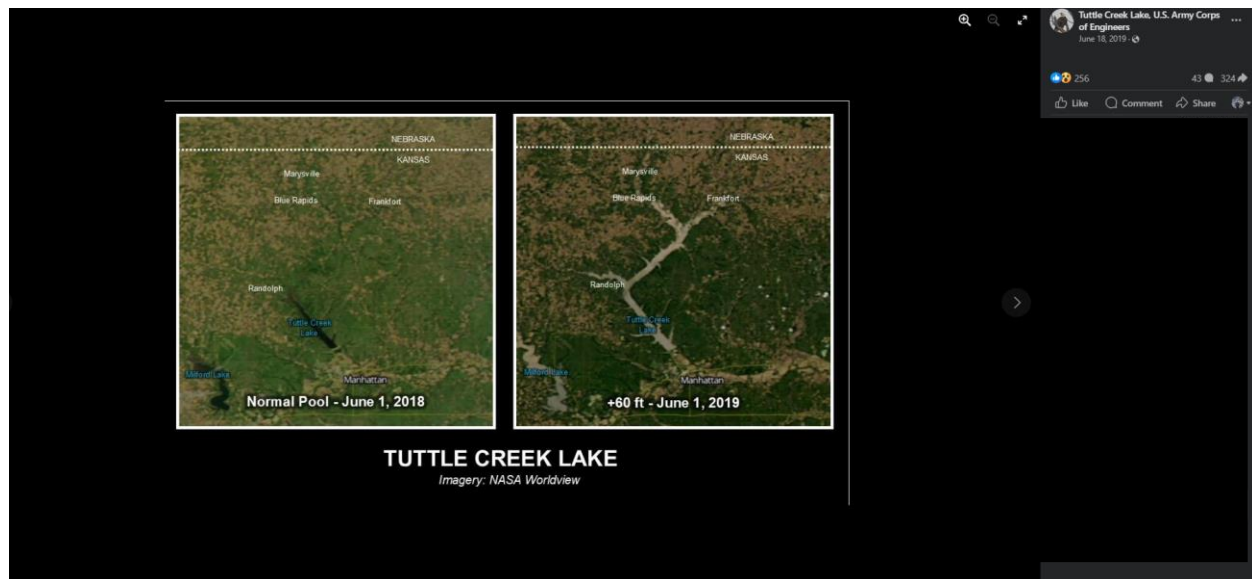
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Appendix A Figure A.16 – First Top Engaged Secondary Strategy Post



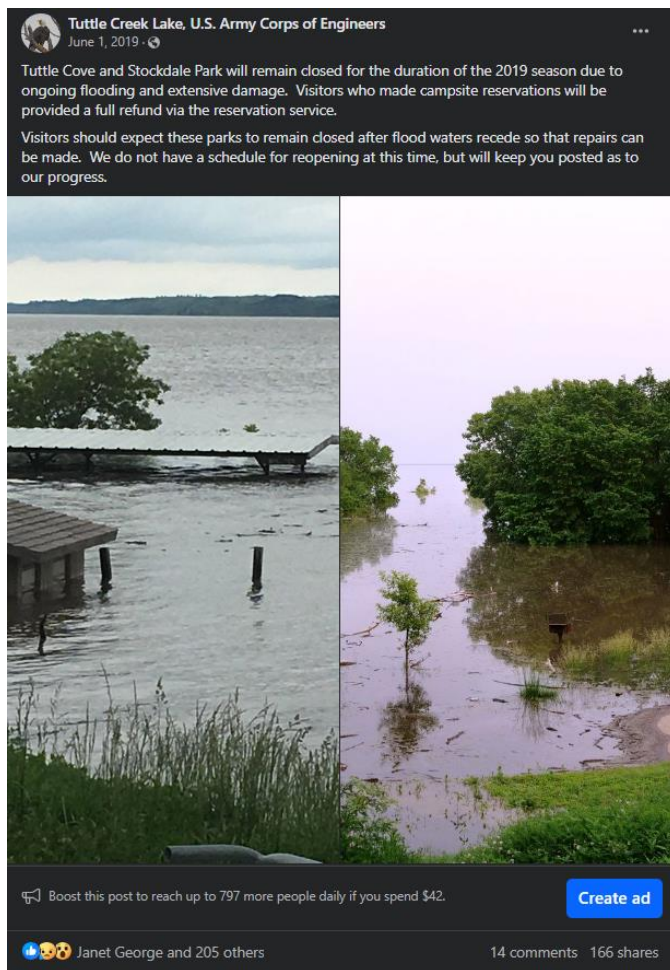
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Appendix A Figure A.17 – Second Top Engaged Secondary Strategy Post



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Appendix A Figure A.18 – Third Top Engaged Secondary Strategy Post



<https://www.facebook.com/USACEtuttle/posts/2165972573517780>

Appendix A Figure A.19 – Fourth Top Engaged Secondary Strategy Post



Tuttle Creek Lake, U.S. Army Corps of Engineers
March 15, 2019 · 🌐

...

The lake will be rising several feet in the next few weeks. Please see the attached News Release.



NEWS RELEASE

U.S. ARMY CORPS OF ENGINEERS

BUILDING STRONG ®

For Immediate Release:
Release #PA-2019-12
March 15, 2019

Contact:
U.S. Army Corps of Engineers
Public Affairs Office
Kansas City, Mo. 64106-2896
Phone: (816) 389-3486
Fax: (816) 389-3434

Tuttle Creek Lake expecting continued lake level rise

MANHATTAN, Kan. – Officials at the Tuttle Creek Lake project want stakeholders – residents, neighbors and area officials – to be aware the of the reason and need for retaining more water than usual for this time of year in the reservoir.

The lake has risen over 14 feet since March 9 and continues to rise. Inflow into the lake peaked today at approximately 48,000 cubic feet per second (cfs) and inflow is forecast to start slowly declining. Outflow from the dam was also reduced to minimum due to downstream flood conditions and is expected to remain at minimum until downstream conditions improve.

This increase in inflow and minimum outflow will result in a continued rise in lake levels for a minimum of the next two weeks. Currently, the lake level is forecast to rise near an elevation of 1113.0 over the next two weeks. Several factors impact this, including additional precipitation in the basin and how quickly downstream conditions recede, so this estimate could change.

Corps-managed campgrounds that include Tuttle Creek Cove and Stockdale Parks are scheduled to open April 15. However, most of both parks will be impacted by the elevated lake levels and the scheduled opening has been delayed until April 30. If conditions require a change to this anticipated opening date, additional information will be announced. Several other parks and facilities around the lake will also be impacted.

Information for Tuttle Creek Lake, other lakes in the Kansas City District, as well as stream flow links are available at <https://www.nwk.usace.army.mil/Locations/Water-Management/>

For additional information, contact the Tuttle Creek Project Office at 785-539-8511 or by email at tuttle.creek@usace.army.mil.

The Kansas City District is a team of dedicated professionals with a strong heritage and proven results who, in collaboration with our partners, proudly serve in the Heartland providing leadership, technical excellence, and innovative solutions to the nation's most complex problems.

-30-

U.S. Army Corps of Engineers – Kansas City District
601 E. 12th Street
Kansas City, Missouri 64106-2896
Visit us online! www.nwk.usace.army.mil/
"Like" us on Facebook! www.facebook.com/usace.kod

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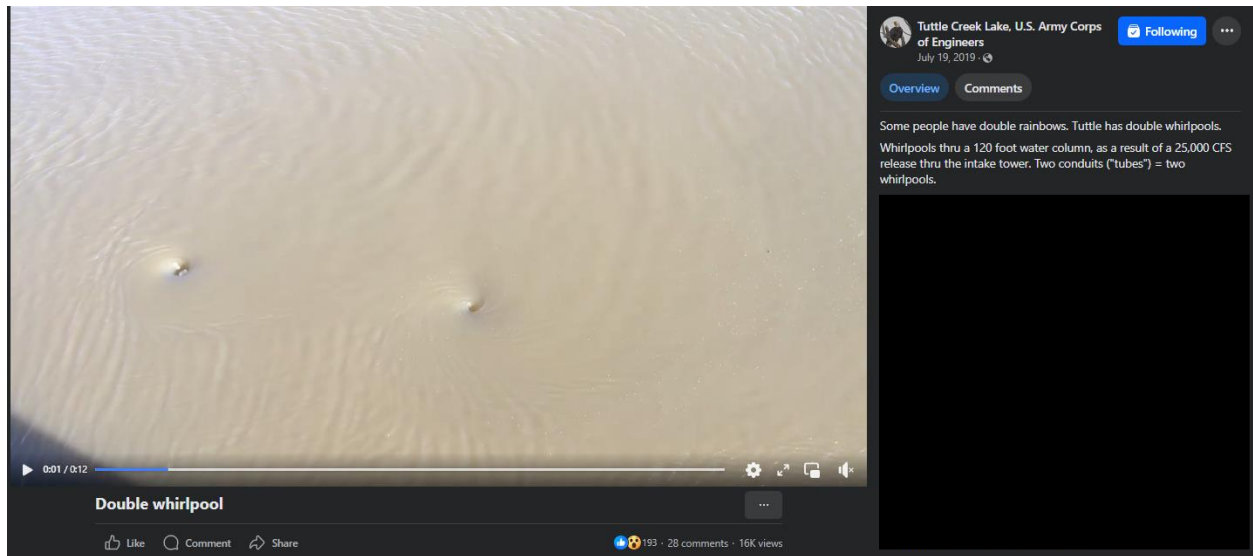
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Appendix A Figure A.20 – Fifth Top Engaged Secondary Strategy Post



<https://www.facebook.com/watch/?v=709207002882857>

Appendix A Figure A.21 – Sixth Top Engaged Secondary Strategy Post



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Appendix A Figure A.22 – Seventh Top Engaged Secondary Strategy Post

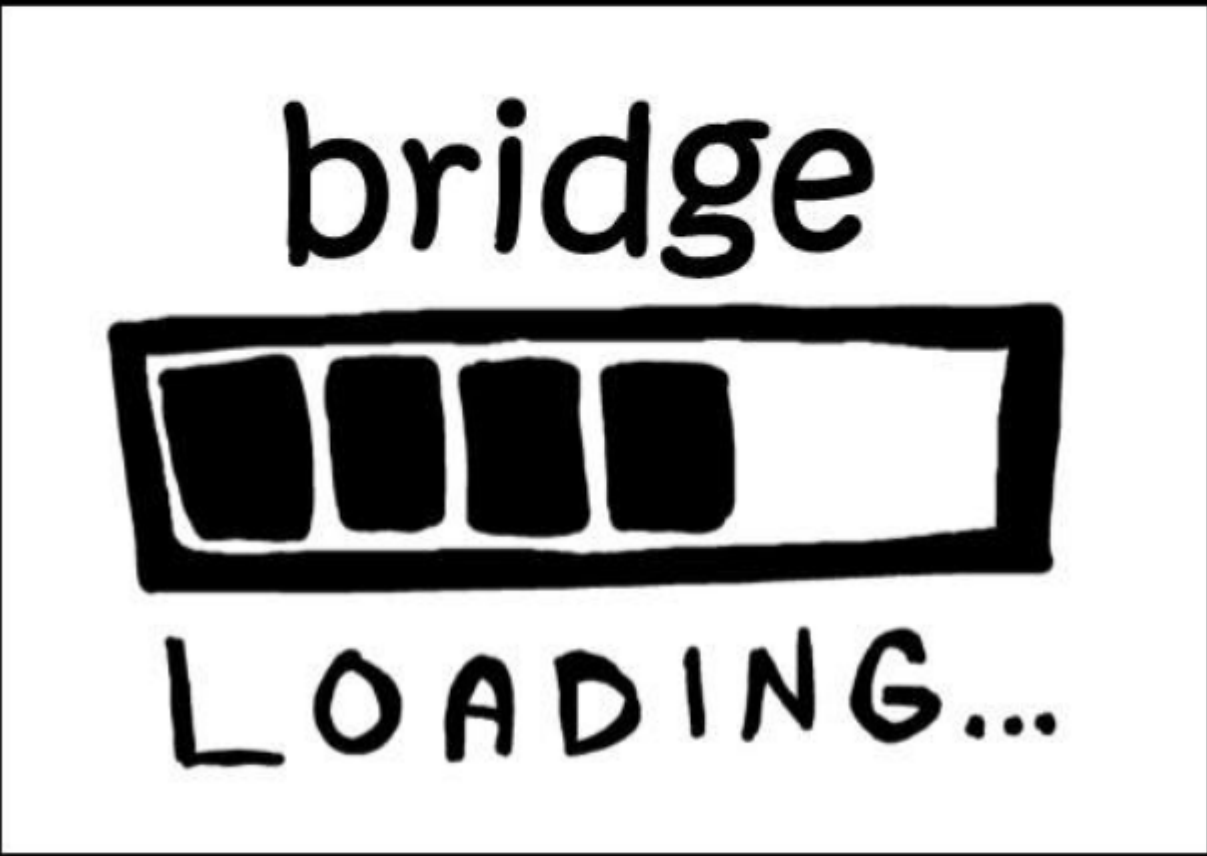


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Appendix A Figure A.23 – Eighth Top Engaged Secondary Strategy Post

**Tuttle Creek Lake, U.S. Army Corps of Engineers**
May 7, 2019 · 🌐

K-13 (SPILLWAY) BRIDGE UPDATE: While we cannot provide a specific opening date, we can provide some insight into our progress. The concrete work is virtually complete with only a small amount yet to be placed in areas around the bridge. The contractor is removing the last remaining forms from the underside of the bridge deck to prepare the bridge for final inspection, but lost upstream access to much of the form work with the lake being high. The lack of upstream access has required the change out of most of the equipment used to complete form removal at the end of the project. We are not waiting for the lake to drop before completing the work, but the high lake levels have slowed progress. We share everyone's eagerness to reopen the bridge, but the safety of our workers and eventual travelers is our primary concern. We hope this provides a bit more understanding as we continue to work towards completion.

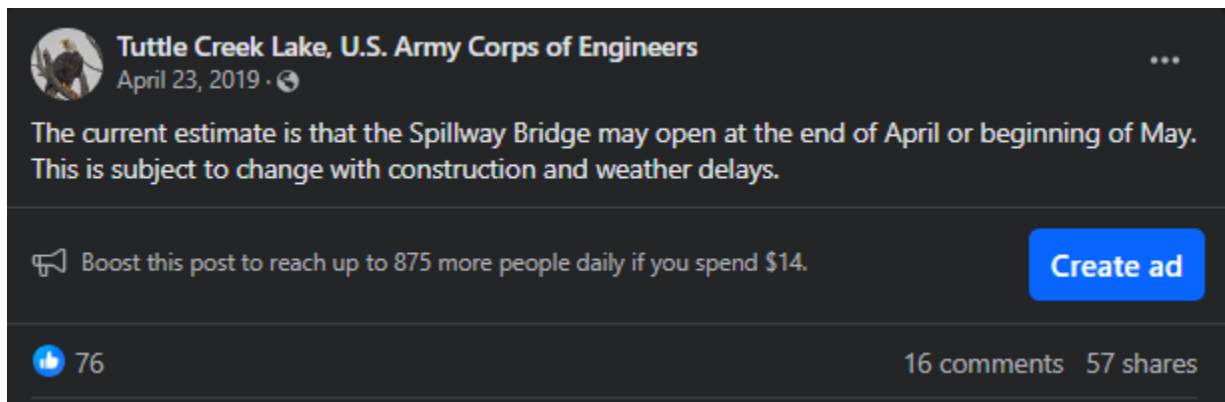


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Appendix A Figure A.24 – Ninth Top Engaged Secondary Strategy Post



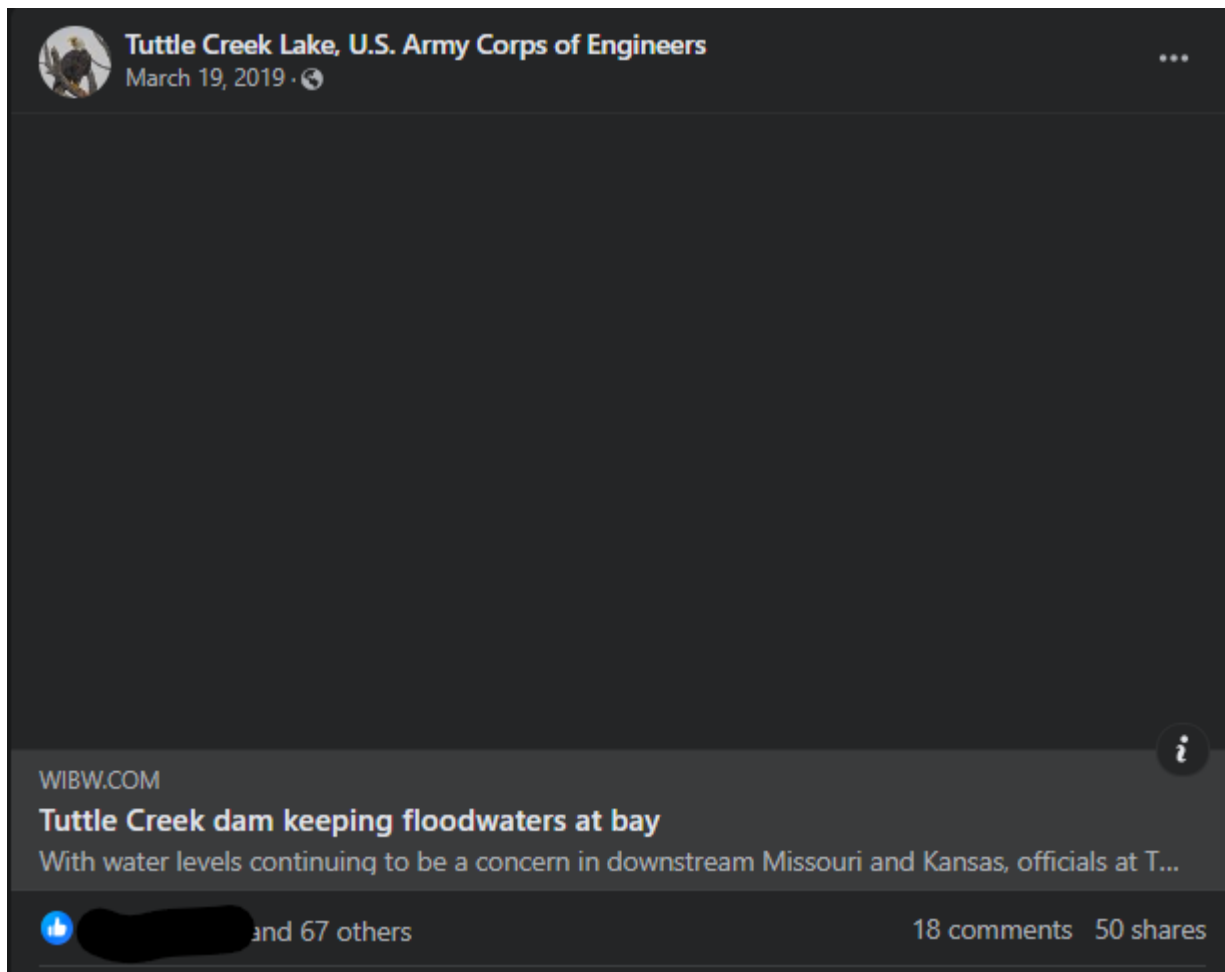
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Appendix A Figure A.25 – Tenth Top Engaged Secondary Strategy Post



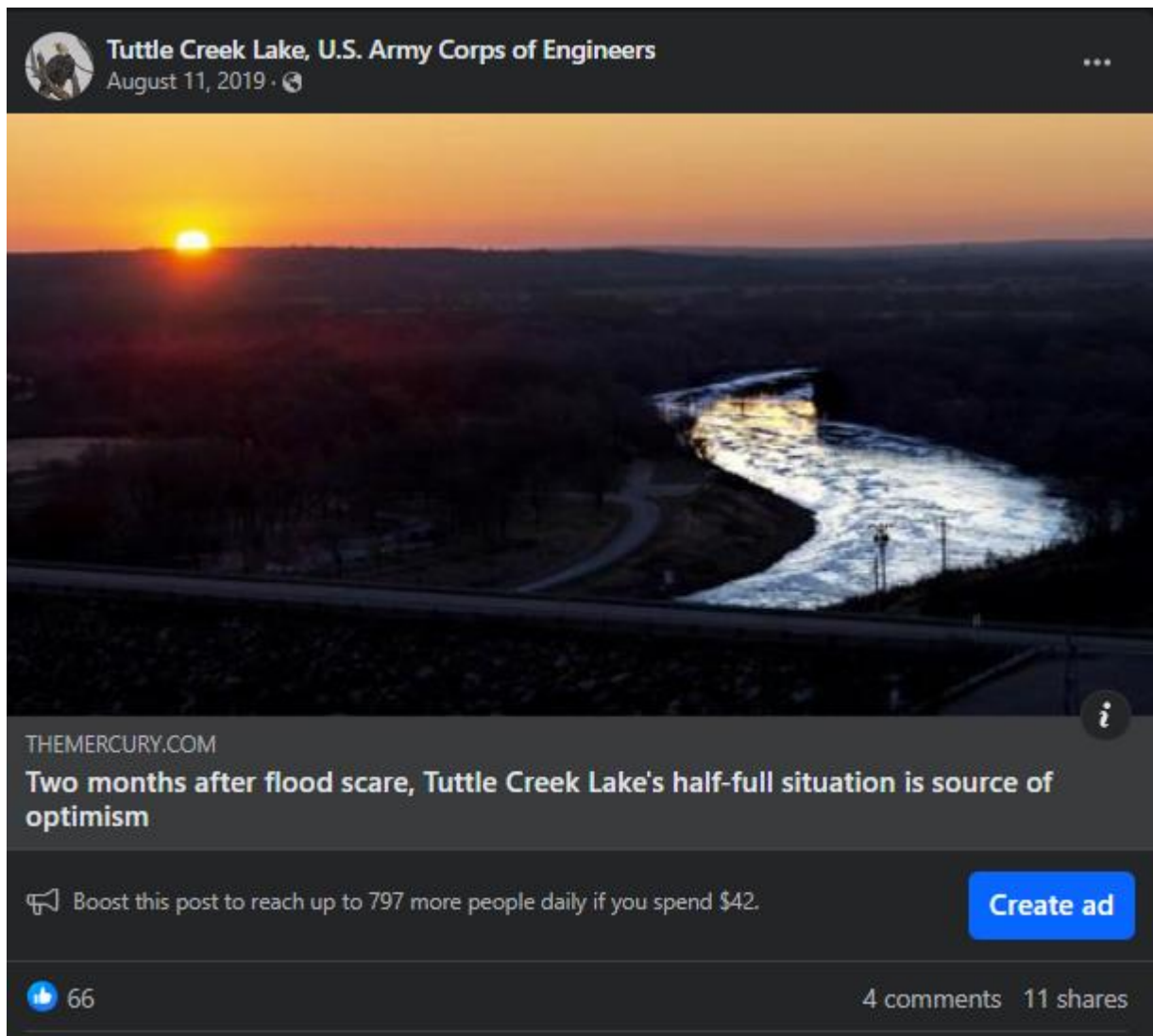
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Appendix A Figure A.26 – Eleventh Top Engaged Secondary Strategy Post



<https://www.facebook.com/USACEtuttle/posts/2048558228592549>

Appendix A Figure A.27 – Twelfth Top Engaged Secondary Strategy Post



<https://www.facebook.com/USACETuttle/posts/2290651397716563>

Appendix A Figure A.28 – Thirteenth Top Engaged Secondary Strategy Post

**Tuttle Creek Lake, U.S. Army Corps of Engineers**
August 13, 2019 · 🌐

A frequent question these days is what's the long-term outlook for Tuttle's lake elevation and releases? Following the Kansas City District, U.S. Army Corps of Engineers Facebook and reading their posts on the Missouri River will give you some perspective on what's influencing the decisions. Give them a like: <https://www.facebook.com/usace.kcd/>



OMAHA.COM

Runoff into Missouri River already exceeds all of 2018; Gavins Point Dam to continue discharging

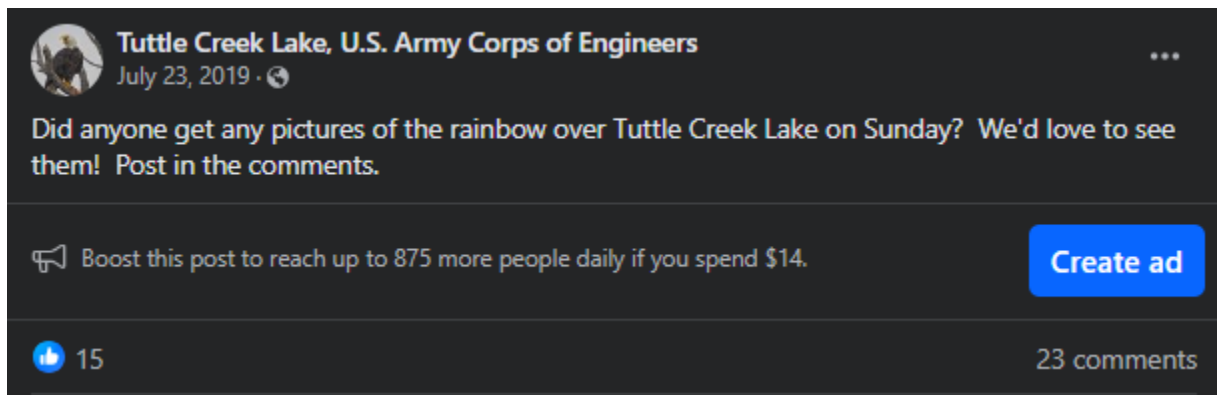
📣 Boost this post to reach up to 797 more people daily if you spend \$42. [Create ad](#)

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2 comments 13 shares

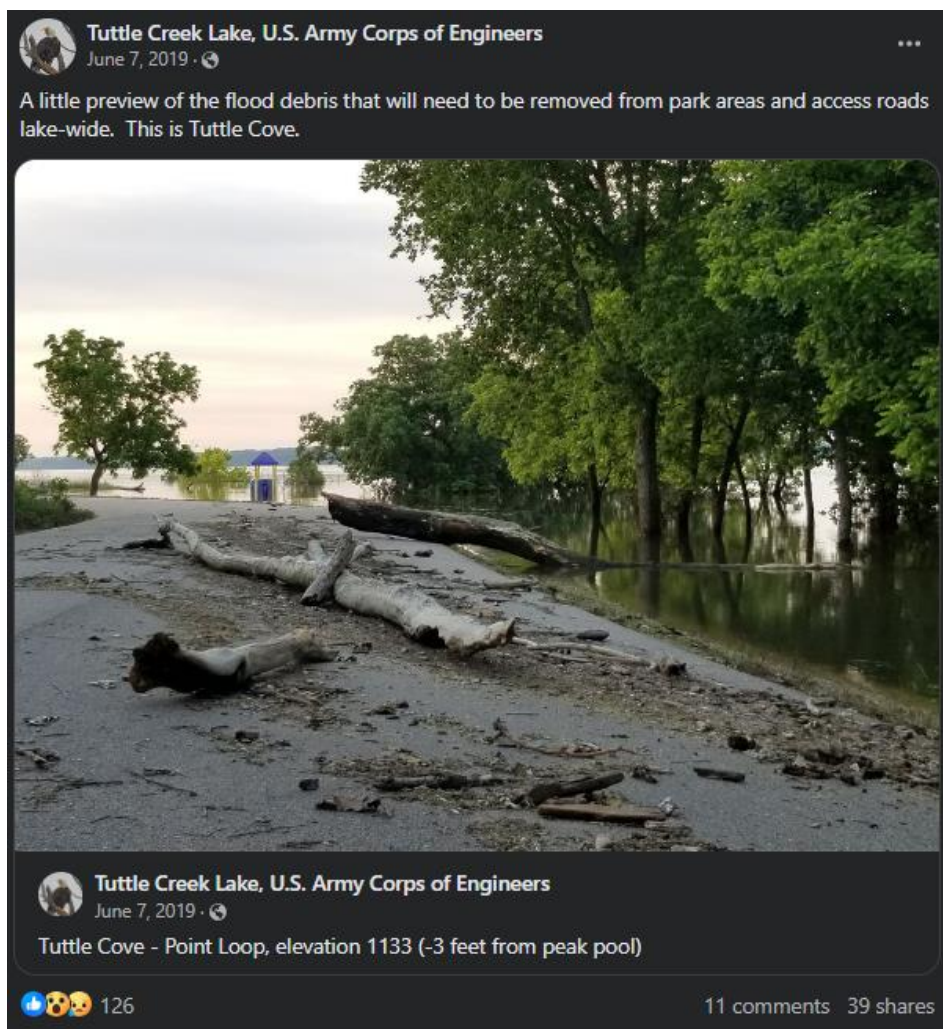
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Appendix A Figure A.29 – Fourteenth Top Engaged Secondary Strategy Post



<https://www.facebook.com/USACETuttle/posts/2258367490944954>

Appendix A Figure A.30 – Fifteenth Top Engaged Secondary Strategy Post

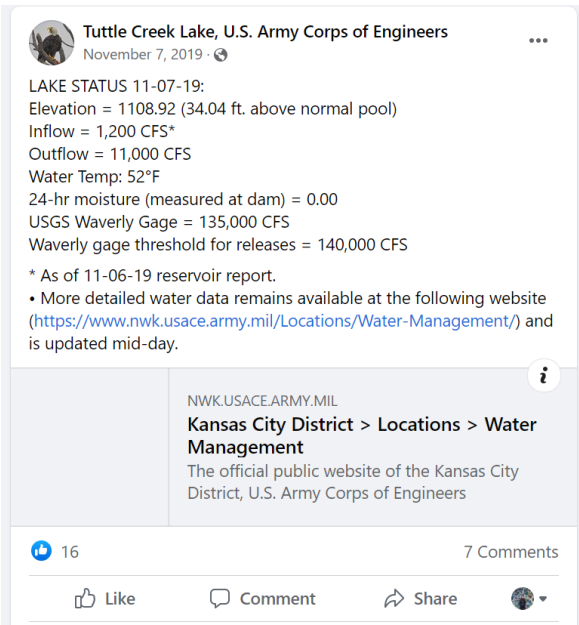


<https://www.facebook.com/USACETuttle/posts/2177058772409160>

Appendix B - Codebook

The definition for the two non SCCT strategies is underneath. For the SCCT strategies the theory described strategy is in normal font while the justification/thought process for why some posts fit in a specific strategy by me are in italics.

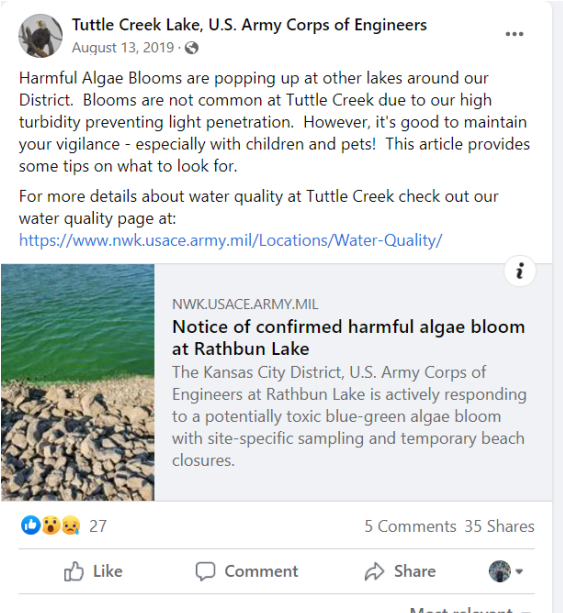
Non-SCCT Strategies

Lake Level Updates	Example
Includes Lake elevation Inflow Outflow Water temperature Remaining flood pool capacity U.S. Geological Survey water gage in Waverly, Kansas Link to the USACE Kansas City District website Some may only have Elevation Outflow Inflow Water Temp	 Tuttle Creek Lake, U.S. Army Corps of Engineers November 7, 2019 · 🌐 LAKE STATUS 11-07-19: Elevation = 1108.92 (34.04 ft. above normal pool) Inflow = 1,200 CFS* Outflow = 11,000 CFS Water Temp: 52°F 24-hr moisture (measured at dam) = 0.00 USGS Waverly Gage = 135,000 CFS Waverly gage threshold for releases = 140,000 CFS * As of 11-06-19 reservoir report. • More detailed water data remains available at the following website (https://www.nwk.usace.army.mil/Locations/Water-Management/) and is updated mid-day. NWK.USACE.ARMY.MIL Kansas City District > Locations > Water Management The official public website of the Kansas City District, U.S. Army Corps of Engineers 16 7 Comments Like Comment Share

Not Applicable	Example
Any Facebook post not directly posted by Tuttle Creek Lake USACE Facebook page falls under this category. This includes shares no matter the source, even if the source is another USACE lake, district, or division. The communication substance had to come immediately from Tuttle Creek Lake, not anyone else. Or any post with absolutely no photos or text would fall into this category as there is nothing to critical think and categorize on. Any post made by Tuttle Creek Lake USACE during this time period is considered in the crisis communication response.	

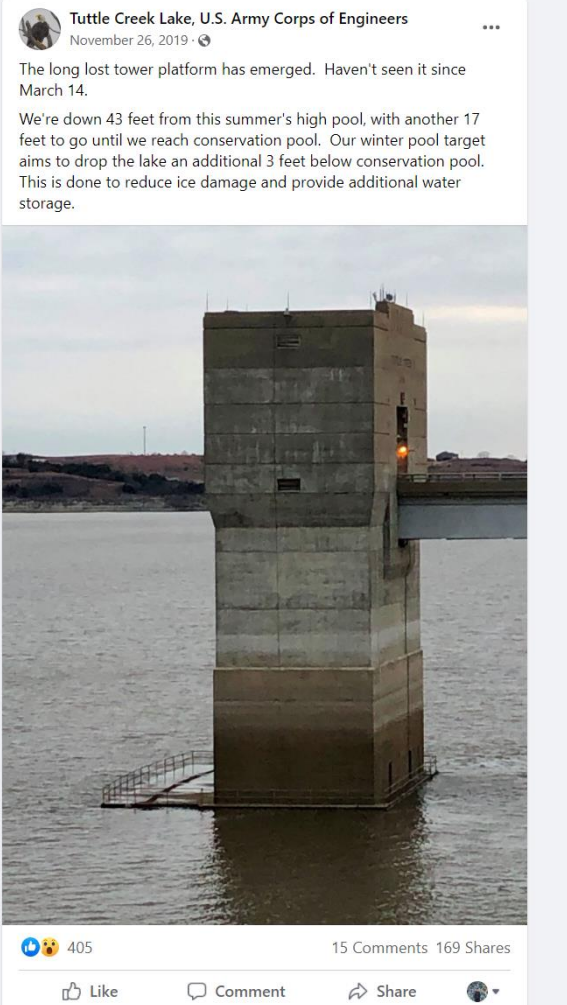
Deny Strategies

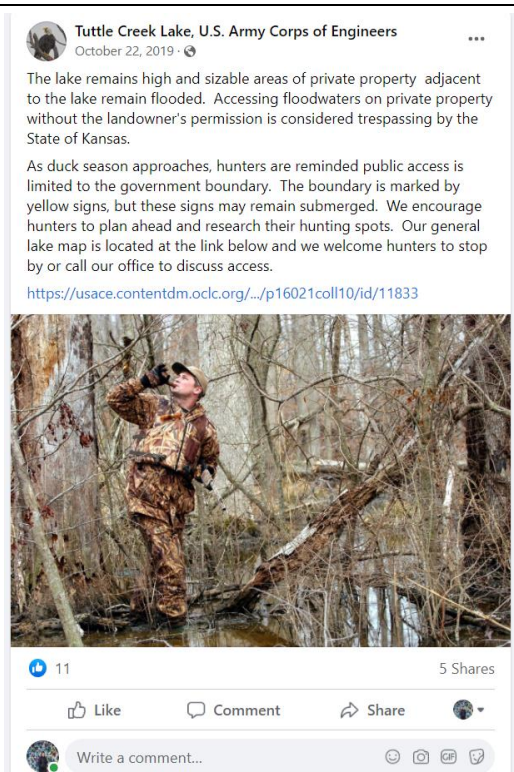
Attack the Accuser	Example Post
Crisis manager confronts the person or group claiming something is wrong with the organization.	

Denial	Example Post
Crisis manager asserts that there is no crisis	

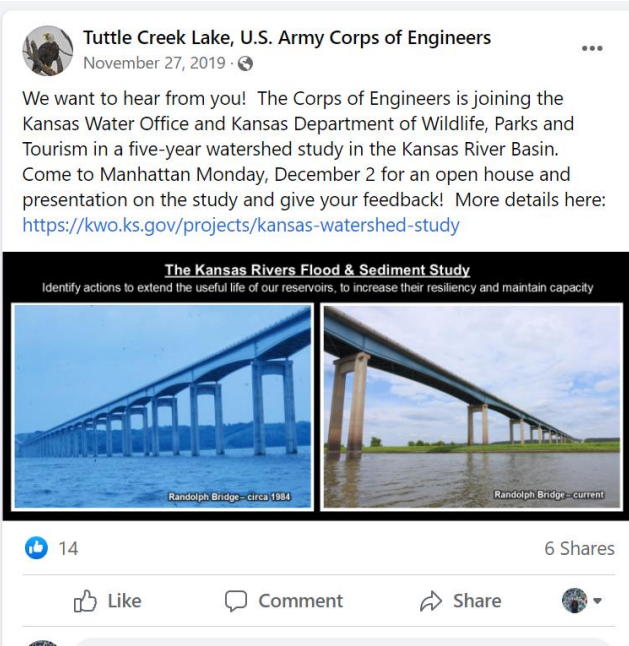
Scapegoat	Example Post
Crisis manager blames some person or group outside of the organization for the crisis. Closed roads by KDOT	Tuttle Creek Lake, U.S. Army Corps of Engineers August 13, 2019 · 🌐 ... A frequent question these days is what's the long-term outlook for Tuttle's lake elevation and releases? Following the Kansas City District, U.S. Army Corps of Engineers Facebook and reading their posts on the Missouri River will give you some perspective on what's influencing the decisions. Give them a like: https://www.facebook.com/usace.kcd/ <i>i</i> OMAHA.COM Runoff into Missouri River already exceeds all of 2018; Gavins Point Dam to continue discharging 👍 29 2 Comments 14 Shares 👍 Like 💬 Comment ➦ Share 🌐

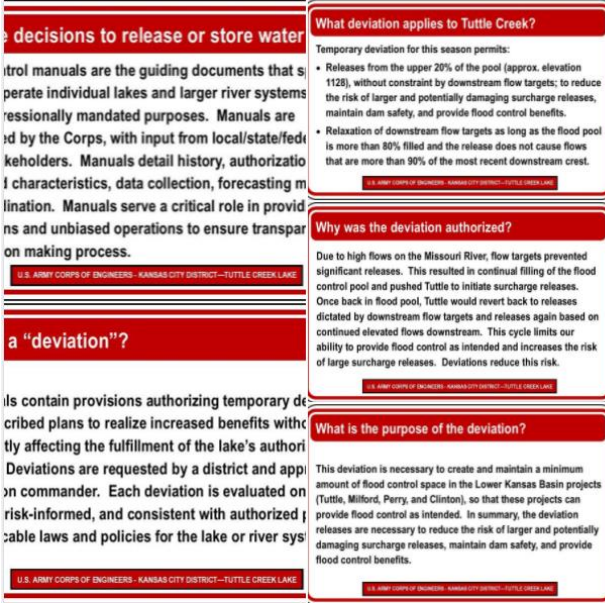
Diminish Crisis Response Strategies

Excuse	Example Post
Crisis manager minimizes organizational responsibility by denying intent to do harm/or claiming inability to control the events that triggered the crisis. The change in lake level and the dangers that come with it – they cannot control themselves the lake level since it’s all part of a bigger system. Warning others about the dangers coming with the changing levels. May mention Kansas City District and how they must hold water or let go based off what they’re saying to do. May mention of incoming rain or rain had or large inflow. Example: Last sentence talks as to why the pool level is being changed. Roads reopening no mention of KDOT	 Tuttle Creek Lake, U.S. Army Corps of Engineers November 26, 2019 · 🌐 The long lost tower platform has emerged. Haven't seen it since March 14. We're down 43 feet from this summer's high pool, with another 17 feet to go until we reach conservation pool. Our winter pool target aims to drop the lake an additional 3 feet below conservation pool. This is done to reduce ice damage and provide additional water storage.  👍👎 405 15 Comments 169 Shares 👍 Like 💬 Comment ➦ Share 🌐

Justification	Example Post
Crisis manager minimizes the perceived damage caused by the crisis. Maybe sounds somewhat tone deaf if you think about the situation. Reminds the public about what the issues are but how to mitigate how much the crisis will impact recreation experience.	 Tuttle Creek Lake, U.S. Army Corps of Engineers October 22, 2019 · 🌐 The lake remains high and sizable areas of private property adjacent to the lake remain flooded. Accessing floodwaters on private property without the landowner's permission is considered trespassing by the State of Kansas. As duck season approaches, hunters are reminded public access is limited to the government boundary. The boundary is marked by yellow signs, but these signs may remain submerged. We encourage hunters to plan ahead and research their hunting spots. Our general lake map is located at the link below and we welcome hunters to stop by or call our office to discuss access. https://usace.contentdm.oclc.org/.../p16021coll10/id/11833 11 · 5 Shares Like · Comment · Share Write a comment...

Rebuild Crisis Response Strategies

Compensation	Example Post
Crisis manager offers money or other gifts to victims. (Including the opportunity to speak out at public meetings as an “other gift” Reminds them of the areas still open to the public – visitor center, overlook Including as a “gift” to victims the gift of good advice about what to do when approaching unsafe flood conditions where recreation is not possible. – turn around don’t drown	 Tuttle Creek Lake, U.S. Army Corps of Engineers November 27, 2019 · 🌐 We want to hear from you! The Corps of Engineers is joining the Kansas Water Office and Kansas Department of Wildlife, Parks and Tourism in a five-year watershed study in the Kansas River Basin. Come to Manhattan Monday, December 2 for an open house and presentation on the study and give your feedback! More details here: https://kwo.ks.gov/projects/kansas-watershed-study The Kansas Rivers Flood & Sediment Study Identify actions to extend the useful life of our reservoirs, to increase their resiliency and maintain capacity Randolph Bridge - circa 1984 Randolph Bridge - current 14 · 6 Shares Like · Comment · Share

Apology	Example Post
Crisis manager indicates the organization takes full responsibility for the crisis and asks for stakeholders' forgiveness. Frequently asked questions and their answers to help people understand what is going on in the crisis. This shows they take responsibility and are trying to help mitigate the struggles related.	 Tuttle Creek Lake, U.S. Army Corps of Engineers added 5 new photos. July 3, 2019 · 🌐 We are simply unable to keep up with the volume of Facebook messages, comments, and other queries. Please refer to the following photos/slides. Have a question that wasn't covered? You can post a comment to the album, but if you need an immediate answer call or visit our office (see "about" for contact). We will continue to provide updates and other information to our Facebook page. Emergency Alerts will be made through your area's Emergency Notification System - not our Facebook. Album updated July 3, 2019 - see comments on individual slides for details. Five additional slides were also added.  decisions to release or store water ontrol manuals are the guiding documents that s perate individual lakes and larger river systems essionally mandated purposes. Manuals are d by the Corps, with input from local/state/fedi keholders. Manuals detail history, authorizatio f characteristics, data collection, forecasting m lination. Manuals serve a critical role in provid ns and unbiased operations to ensure transpar on making process. What deviation applies to Tuttle Creek? Temporary deviation for this season permits: - Releases from the upper 20% of the pool (approx. elevation 1128), without constraint by downstream flow targets; to reduce the risk of larger and potentially damaging surcharge releases, maintain dam safety, and provide flood control benefits. - Relaxation of downstream flow targets as long as the flood pool is more than 80% filled and the release does not cause flows that are more than 90% of the most recent downstream crest. Why was the deviation authorized? Due to high flows on the Missouri River, flow targets prevented significant releases. This resulted in continual filling of the flood control pool and pushed Tuttle to initiate surcharge releases. Once back in flood pool, Tuttle would revert back to releases dictated by downstream flow targets and releases again based on continued elevated flows downstream. This cycle limits our ability to provide flood control as intended and increases the risk of large surcharge releases. Deviations reduce this risk. What is the purpose of the deviation? This deviation is necessary to create and maintain a minimum amount of flood control space in the Lower Kansas Basin projects (Tuttle, Milford, Perry, and Clinton), so that these projects can provide flood control as intended. In summary, the deviation releases are necessary to reduce the risk of larger and potentially damaging surcharge releases, maintain dam safety, and provide flood control benefits. 244 77 Comments 457 Shares Like Comment Share

Bolstering Crisis Response Strategies

Reminder	Example Post
Tell stakeholders about the past good works of the organization. (Also add in upcoming annual event promotions seeing as it also helps jog the memory of the old events and memories experienced at the lake.)) Bobber	

Ingratiation	Example Post
The crisis manager praises stakeholders and/or reminds them of past good work by the organization. Wanting the public to share photos or remind them to get out and enjoy the park with their family, friends, or animals. – reminder of how nice the park is and why they would want to come back	



Tuttle Creek Lake, U.S. Army Corps of Engineers



July 23, 2019 · 🌐

Thank you for the kind words Manhattan Mercury, and thank you to the community for your understanding. Water management and flood control can be overwhelming and we recognize and appreciate your efforts to stay informed and engaged.



THEMERCURY.COM

EDITORIAL | Thanks to the Corps for keeping us dry in face of flood threat

👍 121

13 Comments 12 Shares

👍 Like

💬 Comment

➦ Share



Victimage	Example Post
Crisis managers remind stakeholders that the organization is a victim of the crisis too. Showing how the flood has damaged areas around the lake. Relates to the public through also ready for the flood to be over such as in example post.	



Tuttle Creek Lake, U.S. Army Corps of Engineers

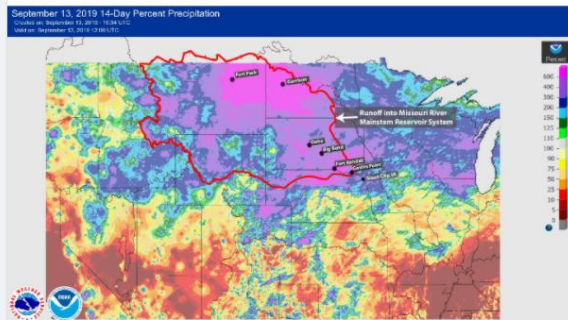
September 24, 2019 · 🌐

...

Tuttle Creek is feeling the impacts from the rainfall that occurred in the Dakotas earlier this month. This article is worth another share for some understanding as to what's currently influencing the reduction in our releases.

The record-setting rainfall event is now making its way thru the Missouri River near Waverly, MO. Once that surge passes and space opens back up we should be able to increase our outflow. If, during this time, the lake goes above elevation 1114.4 our release criteria at Waverly will increase from 140,000 to 180,000 CFS and we should likewise be able to increase outflow. Let's hope we can keep the lake from going much higher (barring any significant rainfall in the Tuttle Creek basin).

#RainRainGoAway



Northwestern Division, US Army Corps of Engineers USACE

September 13, 2019 · 🌐

Releases from Gavins Point Dam changing

<https://go.usa.gov/xVQFH>

According to the [US National Weather Service Missouri Basin River Forecast Center](#), rainfall d... [See more](#)

👍👎 28

2 Comments 15 Shares

👍 Like

💬 Comment

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