

MEMORANDUM

December 10, 2013

To: All Interested Parties

From: Lanty Wylie

COMMENTS: TCEQ Complaint Investigation Report - March 15, 2013

On March 15, 2013 The Texas Commission on Environmental Quality "TCEQ" inspected Hide-A-Way Lake Club, Inc., "HAWL" Number 1 Dam. This inspection is attached.

It is my concern that several SAFETY recommendations by TCEQ have not been followed or addressed by the governing body of HAWL, or the City of Hideaway, eight months past. This apparent lack of attention to Safety of the public demonstrates a need for immediate action by TCEQ and/or the Texas Attorney General.

All references are to the March 15, 2013 TCEQ Investigation Report:

1. Page 1. PERSONNEL CONTACTED:

Doug Byrd is listed as Chairman, Building Committee; Hideaway Lakes [sic] Community Church. Byrd is also a member the Hide-A-Way Lake Club, Inc., Board of Directors. This begs a question of what organization does Byrd represent in this event as "Personnel Contacted."

2. Page 4 Para. 1.

"The Church has been performing the work on its own property and is therefore not subject to approval by the Dam Safety Program."

Nothing could be further from the truth.

- a) The on-site sewage facilities are not on Church property.
- b) The parking lot is not on Church property.
- c) The access berm and road way, extending into the spillway, are not Church property.
- e) The proposed children's play ground will be in the emergency dam spillway.
- f) Seven new light poles in the spillway are not on Church property.
- g) According to the Hide-A-Way Subdivision Smith County Records:

Volume 1308 Page 549 Cabinet 5 Page 26, part of the South side of the spillway face is on Hide-A-Way property. This spillway is part and parcel of the spillway bank protection system.

3. Page 4 Para. 2.

"It is noted that during the Probable Maximum Flood "PMF" flood event, the water would be above the floor slab elevation." (Church floor slab)

- a) What is the emergency spillway evacuation plan when the PMF flood event occurs?

- b) What is the anticipated property damage in a PMF flood event?
- c) Is there an estimated loss of life during a PMF flood event with an estimated 600 persons in the church?
- d) Why did TCEQ allow the spillway side to be cut down and hauled off, to expose the floor slab, when these dangerous events were likely to occur?
- e) What is the emergency evacuation procedure to evacuate the homes on Lake Park Circle when water over flows the church slab? (Remember the North Face of the spillway was cut down to slab level.)
- f) Has FEMA been notified of this risk exposure to property in the vicinity of the spillway?

4. Page 4 Last Para., Last Sentence

"The pilot channel (service spillway) in the emergency spillway was flowing and could possibly be considered a stream; therefore, if it is considered to be a stream, it would be difficult to install an approved irrigation system in the channel with the required setback. In addition, there could be no irrigation during flows in the emergency spillway channel."

- a) What type of valve or shut-off device is to be installed to prevent effluent from being sprayed into the Third Lake when water is flowing in the service channel?
- b) What procedure is in place to prevent this unauthorized spraying?
- c) What is the penalty for breaching this requirement?
- d) The church septic spray field is, of this Memo, active in the emergency dam spillway.
- e) The septic spray field runs directly into HAWL's third lake via the spillway.

5. Page 5. Electrical system

In regard to electrical poles in the spillway, the church has removed the 4 wooden electrical/light poles in the spillway. After the March 15, 2013 report was published, the church as installed seven (7) steel electrical light poles with concrete footing in the spillway.

6. Page 5. Bridges

- a) TCEQ stated that the wood bridges would be washed out during a PMF so as not to collect debris. How would the planned steel bridge be integrated into this plan?
- b) In the event of a PMF, what is the evacuation plan for persons trying to transverse the spillway with a washed out bridge? What is the plan to evacuate vehicles from the spillway during a PMF event as every vehicle exit in the spillway is against water flow?
- c) HAWL has developed a Master Plan that allows for some emergency use of church property in the event of an emergency in HAWL.
- d) TCEQ should declare this a dangerous plan as there is a spillway on the North exit and a Dam on the South exit from the church area.
It would be logical to assume there should be an EVACUATION PLAN, instead of an emergency occupy plan for this isolated church area.

7. Page 6. Parking lot

The parking lot is not evacuated when extreme rainfall events are expected.

- a) I have observed the spillway, behind my home, when, according to the National Weather Service extreme rainfall was expected.
- b) By the above referenced TCEQ report is apparently giving approval for more vehicles to be parked in the spillway from the present 120 vehicles to about 230 total vehicles.
- c) I am not aware of an impact study to increase the number of vehicles parked in the spillway.
- d) I am not aware of method to evacuate the people from vehicles trapped in the spillway during a PMF event.

8. Page 7. Road crossing the spillway.

- a) As of the date of this Memo, there are no swinging barriers that could be closed, to prevent parking, if the spillway is engaged.

9. Page 8. RECOMMENDATIONS (By TCEQ)

First bullet: "The **Club** should ensure that an emergency parking policy be developed and implemented by the Church so that vehicles are not in the parking lot when extreme rainfall events are expected or occur."

- a) The Club has no known policy as of the date of this Memo.

CONCLUSION

The only obvious conclusion to this TCEQ inspection is that, TCEQ recommends and the Church, HAWL, and the City **DOES NOTHING**.

The facts are stated in TCEQ's report; the conclusions are my own and are to the best of my knowledge and belief.

Lanty Wylie



**DAM SAFETY SECTION
CRITICAL INFRASTRUCTURE DIVISION**

Complaint Investigation Report

GENERAL INFORMATION

INVENTORY NO.: TX00261

DAM: Hide-A-Way Lake Dam No. 1

OWNER: Hide-A-Way Lake Club, Inc. (Club)

STREAM: Hubbard Branch BASIN: Sabine

LOCATION: 14 miles NW of Tyler COUNTY: Smith

DAM HEIGHT: 43 feet SIZE: Intermediate

NORMAL CAPACITY: 1,715 AF MAXIMUM CAPACITY: 4,261 AF

INVESTIGATION DATE: March 15, 2013

PREVIOUS DAM INSPECTION DATE: August 16, 2011

INVESTIGATION TEAM:

Warren D. Samuelson, P. E., Manager, Dam Safety Section
Debra Rankin, P. E., Dam Safety Section

PERSONNEL CONTACTED:

Dennis Godoy, General Manager, Club
Chris Meador, General Maintenance Superintendent, Club
Doug Byrd, Chairman, Building Committee, Hideaway Lakes Community Church
David Simmons, Building Committee, Hideaway Lakes Community Church
David Stubblefield, Building Committee, Hideaway Lakes Community Church
Charles Hanger, Hanger Construction, Church Contractor

BACKGROUND

In August 2006, an individual complained about a septic system in the emergency spillway, wooden foot bridges across the service spillway, an elevator constructed along the right emergency spillway slope, the asphalt parking lot for use by the Church in the emergency spillway, and electrical service in the emergency spillway.

As a result, the Club was requested by TCEQ to have an engineer evaluate the hydraulic adequacy of the emergency spillway to determine the impact, if any, of the access ramp and the elevator. C. T. Brannon Corporation (Brannon) completed the evaluation in 2007. The study revealed that neither the elevator nor the access ramp had a significant impact on the calculated water surface elevation within the discharge channel. The study also indicated that the paved parking lot could be a positive benefit.

The individual that complained was informed by letter of the results of the study and informed that the models used to perform the evaluation were appropriate to perform the study. The individual was also informed that the dam and spillways met the requirement of the Dam Safety rules in 30 Texas Administrative Code Chapter 299 (Chapter 299).

The Dam Safety Program inspected the dam and spillways on March 24, 2006, and August 16, 2011. No items were noted that indicated that the dam was not in agreement with the requirements in Chapter 299.

Additional complaints from other individuals were received in 2013, including a letter that was received on March 19, 2013, and a telephone call on March 20, 2013, after the most current investigation performed on March 15, 2013.

COMPLAINTS

The complaints included the Church cutting the right side slope of the spillway, the elevator shaft for the Church on the right spillway side slope, on-site sewage facilities proposed in the spillway, an electrical system in the spillway, a handicap access ramp for the Church on the right spillway side slope, bridges across the spillway pilot channel (service spillway), the parking lot for the Church in the emergency spillway channel, Federal Emergency Management Agency (FEMA) requirements, tree stumps, cracks in the crest of the dam, leasing of the spillway area to the Church, and a road crossing the spillway.

One of the people who complained in 2013 indicated that a new hydrologic and hydraulic study needed to be performed.

PRE-INVESTIGATION MEETING

A meeting was held with all of the persons contacted before the March 15, 2013, investigation. The following was discussed during the meeting:

- The old Church building had burned down due to an apparent lightning strike.
- The floor slab elevation of the new building for Hideaway Lakes Community Church (Church) would be 446.72 feet msl, the same floor elevation of the Fellowship Hall.
- The new Church building will tie directly into the existing Fellowship Hall.
- The elevation of the soil on the spillway side of the Church was at approximately 449.0 feet msl. This area was to be lowered to 446.72 feet msl, the same elevation as the floor slab elevation.
- All work for the Church was being performed on the Church property.

- The elevator that was on the emergency spillway slope would be removed; however, work had not started due to the need to remove the associated hydraulic fluids for the elevator. The walkway from the elevator to the Church had already been removed.
- A driveway would be constructed that would extend from Lake Cross Road in front of the new Church building, for unloading, to the parking lot in the emergency spillway.
- The Church members did not think the Church had a policy for emergency evacuation of the parking lot during a flood event.

RESULTS OF INVESTIGATION

Since there have been a number of complaints, this report will cover each complaint separately. A separate inspection report will cover the inspection of the dam.

Figure 1 is a location map. Figure 2 is a topographic map. Figures 3 and 4 are aerial photos of the dam and spillway. Figure 5 is a site plan for the Church. Figure 6 is a sketch of the dam and surrounding area, indicating photo locations. Note that right and left indications are from the perspective of an observer looking downstream. The water level of the lake was approximately 0.05 of a foot above the service spillway crest (pilot channel in the emergency spillway). See Photo No. 1.

H&H study

- The person who complained asked that a new hydrologic and hydraulic (H&H) study be undertaken. In 1980, a study was undertaken as part of the Corps of Engineers Phase I evaluation. The H&H study found the dam and spillways would pass 100% of the probable maximum flood (PMF) with 0.3 feet of freeboard (the design storm event for this dam per the requirements at that time). In 2007, the Brannon H&H study found the dam and spillways would also pass 100% of the PMF (still the requirement at that time). Another H&H study was performed by Freese & Nichols, Inc. in 2012 as part of a breach analysis. The preliminary report indicated that the dam and spillways would only pass 79% of the PMF, which would be adequate to meet the Dam Safety rules in Chapter 299. The rules adopted in January 2009 indicate that a dam of this size and hazard classification would be considered adequate if it passed 75 % of the PMF and the owner had an emergency action plan, an operation and maintenance plan, an inspection plan, and provided an annual report to the TCEQ. The Club meets these requirements; therefore, the dam met the requirements of the rule with the preliminary study. However, additional field measurements have been taken and a revised study has been performed. The new study revealed that the dam and spillways pass 100% of the PMF with about 0.5 feet of freeboard. Therefore, the dam and spillways continue to be hydraulically adequate and meet the requirements of Chapter 299.

Spillway right side slope

- The complaint is that the Church had excavated, and continues to excavate, the right side slope of the emergency spillway too much, which would allow water to flow through the cut and flood the houses below the Church. The individual that complained stated that the Dam Safety Program should have approved the work performed by the Church.

The Church has been performing the work on its own property and is therefore not subject to approval by the Dam Safety Program. The investigation revealed that the footprint for the Church building had been lowered so the Church could be rebuilt at the same floor slab elevation as the Fellowship Hall. The floor slab elevation is to be 446.72 feet msl. The property on the west side of the building was planned to be lowered to that same elevation to allow vehicles to drop-off passengers before parking. Since the property had been lowered from previous elevations, a study has been undertaken by the Dam Safety Program staff. The purpose of the study was to determine if the lowering of the church property will result in any flooding impact to the Church or any houses below the Church.

The study revealed that during a 75% PMF event, the required flood event for this dam, water would be below the floor slab elevation of the church and would not enter the Church building or would not endanger houses downstream of the Church. It is noted that during the PMF flood event, the water would be above the floor slab elevation.

See the comments in the CONCLUSIONS section.

Elevator

- There has been a complaint voiced by several individuals over the last few years about the presence of the elevator that was constructed by the Church on the right side slope of the emergency spillway without approval of the Dam Safety Program. A hydrologic and hydraulic study performed by Brannon in 2007 indicated that the elevator would not affect the dam's ability to pass the required flood flows through the spillway. The current complaint again is that the elevator was not approved by the Dam Safety Program before construction. As indicated in the 2007 hydrologic and hydraulic report, there would be no significant impact during a flood event. However, during the current TCEQ investigation, members of the Church Building Committee indicated that the elevator and associated building were to be removed. In the TCEQ letter to the Club, and copied to the Church, dated March 28, 2013, it was recommended that the elevator and associated building be removed as soon as possible due to the safety (damaged building) and environmental (hydraulic fluids) concerns. It was requested that the Club notify the agency when the elevator is removed.

On-site sewage facilities

- The complaint is that a spray irrigation on-site sewage facility (septic system) is proposed to be installed in the emergency spillway and has not been approved by the Dam Safety Program. This facility was not discussed with the Club or the Church committee during the investigation. The TCEQ Dam Safety Program does not have jurisdiction over on-site sewage facilities, and the local on-site sewage facilities permitting office would need to be contacted and would have to approve the system prior to installation. There is no objection by the Dam Safety Program to an approved irrigation system being installed in the emergency spillway provided that there are no treatment units above ground in the channel and the appropriate setbacks from water are maintained. The pilot channel (service spillway) in the emergency spillway was flowing and could possibly be considered a stream; therefore, if it is considered to be a stream, it would be

difficult to install an approved irrigation system in the channel with the required setback. In addition, there could be no irrigation during flows in the emergency spillway channel.

Electrical system

- The complaint is that an electrical system was installed in the emergency spillway without approval of the Dam Safety Program. Since this complaint was stated in a letter that was received after the investigation, the investigation party did not check any evidence of an above ground electrical system. There was a portable generator/light system parked in the parking lot. It is obvious that there was an electrical system used to power the elevator that apparently was underground and possibly will be removed when the elevator is removed. Even though the Dam Safety Program has no jurisdiction over electrical systems, there is no objection by the Dam Safety Program to an electrical system installed in the emergency spillway provided that there are no electrical poles or transformers in the channel. In a previous complaint in 2006, it was indicated that an electrical pole existed at the right upstream side of the channel next to Lake Cross Road. That pole no longer exists. See Photos 4 and 16.

Handicap Access Ramp

- The complaint is that the handicap access ramp was not approved by the Dam Safety Program and would have a detrimental impact on flows through the spillway. The ramp was not approved by the Dam Safety Program. Therefore, as stated previously, the Club was requested to have an engineer evaluate the effect of the ramp on spillway flows. Brannon performed an evaluation in 2007 that indicated that the ramp would not have a significant impact on spillway flows. The Dam Safety Program accepted the report and indicated by letter that the dam and spillway met the requirements of Chapter 299.

Bridges

- The complaint is that debris could lodge on the two foot bridges across the service spillway, causing the water level in the lake to be higher than planned, possibly causing houses to be flooded along the lake. A footbridge was first constructed across the spillway before the 1976 inspection. It was located upstream of the road, closer to the spillway crest. At some point after the 1983 inspection and before the 1988 inspection, that bridge was either removed or washed out and another bridge was built just downstream of the road (Photo No. 3). Finally, another bridge was constructed at some point after the 2001 inspection and before 2006 near the downstream end of the parking lot (Photo No. 5). It is noted that Brannon did not address the bridges during the 2007 evaluation. Brannon did indicate that the 100-year flood event would stay within the service spillway channel. Based on the elevations shown for passage of 75% of the PMF, the bridges would be under water, even if there was debris collected on the bridges. From experience of viewing the results of numerous spillway engagements by the writer of this report, the force of the water would either wash the bridges away or damage them significantly. Therefore, there would be no significant impact to the flows during a major flood event. It is possible that debris would stack up against the sides of the upstream bridge and possibly the downstream bridge during smaller storm events. The center section of each bridge is open up to the flood flows and allows for passage of the service spillway

flows. A recommendation will be made to the Club in a separate inspection report.

Parking lot

- The complaint is that the asphalt parking lot is proposed to be expanded, again without approval from the Dam Safety Program. The parking lot expansion was not discussed during the investigation with the Club or the Church committee. As explained in the Dam Safety Program approval letter of September 16, 1980, the parking lot can be expanded provided there are no changes to the existing elevations in the spillway. In the TCEQ letter of March 28, 2013, it was requested that a copy of the plan view for the parking lot be submitted. It was also recommended that the Club ensure that an emergency parking policy be developed and implemented by the Church so that vehicles are not in the parking lot when extreme rainfall events are expected or occur. The policy should tie evacuation of the parking lot to the level in the pilot channel and the rate of rise in that channel.
- It was noted during this current investigation that the existing driveway from the Church to the parking lot is higher than the spillway channel. In the TCEQ letter of March 28, 2013, the Club was advised that the driveway should be lowered so that the original elevations in the spillway are maintained.

Federal Emergency Management Agency (FEMA) requirements / City ordinances

- The complaint is that the Club is not following the FEMA requirements as well as the "City ordinances" regarding drainage and culverts in the subdivision. This complaint is not within the jurisdiction of the Dam Safety Program.

Tree stumps

- The complaint is that the Club has cut large trees and left the stumps. The location was not specified in the complaint. It is assumed that the reference is made to tree growth removed from the downstream toe of the dam. Trees removed from other locations in the subdivision should be addressed with the Club. The investigation revealed that the tree growth evident during the August 2011 inspection on the lower portion of the downstream slope in the rock riprap had been cut off. None of the tree stumps left were large (Photo No. 19). A recommendation will be made to the Club in a separate inspection report.

Cracks in crest of dam

- A complaint made in the past was that there were cracks in the dam that would affect the integrity of the dam. These cracks have been documented during previous inspections. They were evident in photos taken during the 2001 inspection. The cracks exist in the surface of a walkway installed sometime after the 1983 inspection. The walkway was constructed by placing railroad ties on top of each other and soil placed behind the ties (Photos 17 and 18). It appears that there has been settlement of this soil due to dry weather, or the soil has been displaced through holes beneath the ties. Some of cracks had been filled, and some had sealed due to rains. While unsightly and possibly a safety issue for people walking along the walkway, the cracks do not affect the original part of the dam or the integrity of the dam. A recommendation will be made to the Club in a separate inspection report. No cracks were noted in the road on top of the dam.

Leasing of spillway area

- The complaint is that the emergency spillway should not be leased to the Church. This is an issue between the Club and the Church and is not within the jurisdiction of the Dam Safety Program.

Road crossing the spillway

- The complaint is that during spillway engagement, cars could be washed off the road and people injured. This is not within the jurisdiction of the Dam Safety Program. It is the responsibility of the Club. It was noted that there were no warning signs posted and no swinging barriers that could be closed if the spillway is engaged.

CONCLUSIONS

The following conclusions were determined as a result of the March 15, 2013, investigation:

- None of the objects cited by the complaints would threaten the integrity of the dam or compromise the safety of the dam.
- The design storm for Hide-A-Way Lake Dam No. 1, per the Dam Safety Program rules, is 75% of the PMF. The revised H&H study revealed that the dam passes 100% of the PMF. Therefore, the required 75% of the PMF standard has been met.
- Plan approval of the Church building was not required since the Church is building on the Church's own property, which is not on the dam or in the spillway.
- The recent H&H study indicates that water will not enter the Church building nor will endanger houses downstream of the Church during passage of 75% of the PMF or smaller storms.
- The elevator on the right spillway side slope was found in 2007 to have no impact on flood flows through the spillway. The current investigation revealed that the elevator and associated building will be removed.
- The handicap access ramp was also found in 2007 to not have an impact on flood flows through the spillway. Therefore, no further studies will be undertaken.
- Approval of an on-site sewage facility, approval of an electrical system, complaints regarding FEMA requirements, leasing of the spillway area, and the road crossing the spillway are not within the jurisdiction of the Dam Safety Program.
- The bridges could possibly collect debris during small flood events; however, the bridges would either be destroyed or damaged during passage of 75% of the PMF and would not have an impact on flood flows.
- The original parking lot was approved by the Dam Safety Program in 1980. Expansion of the parking lot can be undertaken provided there are no changes to the spillway elevations.
- There were no issues identified with the tree stumps and the cracks in the crest walkway that affect the integrity of the dam. Recommendations are made to the Club in a separate inspection report.

Hide-A-Way Lake Dam No. 1
March 15, 2013
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RECOMMENDATIONS

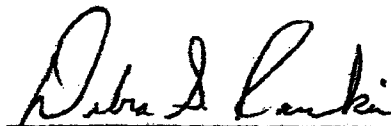
There are no recommendations offered that are Dam Safety Program related.

By letter of March 28, 2013, the following recommendations were made to the Club regarding the parking lot in the spillway:

- The Club should ensure that an emergency parking policy be developed and implemented by the Church so that vehicles are not in the parking lot when extreme rainfall events are expected or occur.
- The existing driveway from the Church to the parking lot should be lowered so the original elevations in the spillway are maintained.



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