Shadow Run Dam Corporation, Inc.
Shadow Run Dam, 2025 Visual Inspection

Performed on December 13, 2025

Prepared for:
Shadow Run Dam Corporation, Inc.

Prepared by: CDM Smith
Certificate of Authorization #20 2002 N. Lois Avenue, Suite 200
Florida 33607

This item has been digitally signed and sealed by Glen Robert Andersen on the date adjacent to the seal.

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Digitally signed by Glen R Andersen
DN: CN=Glen R Andersen, dnQualifier=A01410D000001971E201C0100061F9F, O=CDM SMITH, C=US
Date: 2026.01.20 08:55:07-05'00'

Glen R Andersen

Samantha Archuleta
CDM Smith, Inc.

Glen Robert Andersen, Sc.D., P.E.
CDM Smith, Inc.

This report has been prepared for a project specific use authorized by Shadow Run Dam Corporation, Inc. This report is based upon the available information and data visually observed on August 5th by CDM Smith and provided by Shadow Run Dam Corporation, Inc., and is prepared in accordance with, generally accepted engineering practices.

Memorandum

To: *Catherine Scaglione, President Shadow Run Dam Corporation, Inc.*
From: *Samantha Archuleta*
Reviewed: *Glen Andersen, Sc.D., P.E.*
Date: *January 20, 2026*

Subject: *Shadow Run Dam 2025 Biennial Inspection Riverview, Florida*

Shadow Run Dam Ownership Responsibilities

The Shadow Run Dam has a High Hazard rating. This means that a failure or mis-operation will probably cause a loss of human life.

The owners of the Shadow Run Dam are responsible for operating and maintaining it in a safe manner. These responsibilities include:

- Being aware of applicable laws and regulations;
- Implementing proper operation and maintenance practices;
- Addressing rehabilitation needs;
- Performing emergency action planning; and,
- Hiring and implementing the recommendations of qualified dam safety engineers.

The purpose of these responsibilities is to:

- Reduce the possibility of dam safety incidents and a failure;
- Reduce Shadow Run Dam owner's liability;
- Improve the safety of the dam; and,
- Help reduce the risk to the affected communities.

It has been our privilege to perform the biennial inspection for the Shadow Run Dam for three cycles. Over that time, we have witnessed a decreasing level of community commitment and support for their ownership responsibilities. Accordingly, we have documented deteriorating conditions of the dam.

On the day of this current inspection, we were informed that this will likely be the last biennial dam safety inspection because funding mechanisms for on-going inspections and maintenance/repair tasks have never been established and the original seed funding has run out. This development represents a safety risk to both the people traversing the dam and to those living downstream of it. This risk will increase over time.

The same two members of the Shadow Run Dam Safety Committee (Bea Adams and Cathy Scaglione) have been present for each of our inspections and have been trained, along with others, during these to spot impending dam safety issues. However, at the beginning of this inspection, they informed us of

their resignations due to the apparent lack of commitment from the community to shoulder the burden of routine inspections and to fund recommended maintenance and rehabilitation tasks.

Accordingly, and to decrease ongoing risks, we recommended lowering the water level in Lake Grady and actively managing the water levels before impending storms (as they have been doing) to minimize the depth of water against the upstream face of the dam.

We also recommended that the Shadow Run Dam owners consider decommissioning the dam to permanently remove this escalating risk.

Purpose and Scope

CDM Smith, Inc. (CDM Smith) has prepared this technical memorandum to present our existing conditions assessment of the Shadow Run Dam located at the end of Shadow Run Blvd of the Shadow Run Subdivision in Riverview, Florida. This report summarizes our field observations and provides recommendations for correcting deficiencies. The inspection was completed following the requirements of the Florida Department of Environmental Protection (FDEP) for (phosphate) dam safety inspections, outlined in the Florida Administrative Code (FAC) Rule 62-672.

The findings and recommendations presented in this report are based on the following scope of services:

- Perform a site visual inspection accompanied by the Dam Safety Committee;
- Identify potential deficiencies;
- Provide training to help the committee identify potential developing issues; and,
- Prepare a technical memorandum providing a summary of the visual inspection and any recommendations for maintenance activities.

The safety inspection was performed on foot on December 13, 2025. The inspection included visual observations of the earthen dam and spillway structure, documented with photographs of selected areas. Observations were made of the embankment crest and slopes, spillway inlet and outlet structures and related appurtenances and emergency structures, and the downstream toe area. In addition to the visual inspection, discussions were held with the Shadow Run Dam Corporation (SRDC) members regarding the performance of the dam over the past two (2) years.

It is our opinion that the Shadow Run Dam is in Fair condition and has deteriorated from our prior inspection. Recommendations for maintenance and repair tasks are provided with priority ranking based on safety considerations.

This memorandum and associated scope of services do not include detailed investigations, global stability analyses or modeling that involve topographic surveys, subsurface investigations, materials testing, and/or hydrologic and hydraulic considerations.

Report Nomenclature

This report uses standard dam nomenclature. References made to direction (right and left) are from the perspective of standing on the crest of the dam and facing downstream. References to

upstream and downstream are relative to the dam centerline; upstream is facing Lake Grady.

Site Background

Shadow Run Dam is located at 2819 Shadow Run Blvd, Riverview, FL 33569, refer to the Site Map on Figure 1. The dam is approximately 3.0 miles southwest of US-301 and Boyette Road intersection. The reservoir features one dam north of the reservoir. The reservoir is fed by Bell Creek. The water elevation is controlled by the overflow spillway. The spillway consists of a concrete winged drop inlet spillway with a notched weir & a four (4) ft diameter lift gate.

The original Lake Grady Dam failed numerous times prior to 1997 (Wood, 2018). The present dam was redesigned in 1997 by BCI Engineers & Scientists, Inc. (BCI) and was completed in 1998. Prior dam safety inspections were completed by BCI in 2000, 2002, 2007 and 2011, by Wood in 2018, and by CDM Smith in 2023. An Emergency Action Response Plan (EAP) was prepared by COMAK in 2022.

General Dam Information	
Dam Name:	Shadow Run Dam/Lake Grady Dam
Dam Location:	Riverview, FL
Lat/Long Coordinates (dec.):	27.837675 / -82.273713
Year Constructed	(1) 1969 (2) 1998
Designer	(1) Natural Resources Conservation Service (NRCS) (2) BCI Engineers & Scientists, Inc.
Steam and Watershed:	Bell Creek,
Purpose:	Recreation, Fish and Wildlife Pond
Regulatory Agency	SWFWMD
Category:	High Hazard
NID No.:	FL00176
Reservoir Data	
Normal Pool Elevation:	35
Storage Area:	3,119 acre-ft
Maximum Storage Capacity:	32,000 CY
Dam Data	
Type:	Earthen Embankment
Length:	1,015 ft
Height:	30 ft
Crest Width:	30 ft
Crest Elevation:	44.5 ft
Spillway Works	
Type:	Concrete winged drop inlet spillway with a notched weir & 4 ft diameter lift gate
Crest Length:	205 ft (principal spillway - 148 ft & auxiliary spillway - 57 ft).
Low Level Weir Crest Elevation:	34.6 ft
Mid-Level Weir Crest Elevation:	35.6 ft
High Level Weir Crest Elevation:	40.6 ft

Regular Site Inspection and Maintenance

SRDC members did not conduct regular inspections nor did they perform most of recommended repair and maintenance tasks on the dam since the last formal inspection in 2023. This is apparently due to limited staffing and constrained funding. A form was developed by CDM Smith and SRDC to track inspections quarterly. However, that form was not used between the 2023 and the 2025 inspection.

CDM Smith recommends the owners of the Shadow Run Dam take responsibility to organize and carry out routine visual inspections on at least a quarterly basis and that these be documented on the form previously created. We further recommend that the maintenance and repair tasks identified herein be systematically implemented to lower the overall risk of this dam. The results of the quarterly visual inspections should be documented, read to identify developing trends, and provided to the next engineer performing the biennial inspection in 2027.

Visual Inspection

The visual inspection of the dam was performed on December 13, 2025, by CDM Smith representative Glen Andersen, P.E. Members of the SRDC accompanied CDM Smith at the Site. The weather during the inspection was sunny with no precipitation. The inspection assessed the general dam condition based on observations from the ground surface. A summary of significant findings is organized and presented in the following sections.

These inspection activities did not include topographic surveying, subsurface explorations, non-destructive testing, nor engineering analyses.

Embankment Crest

The crest was inspected by walking the length and observing the condition of the surface between the shoulders. The crest is approximately 30 ft wide and is sloped towards the reservoir side. A paved walkway and park benches are present along the crest for use by the community residents. A line of wooden power poles run the length of the dam crest near the downstream shoulder. The crest was recently mowed to facilitate the visual inspection. Key observations of the dam crest are listed below and shown in Photographs No. 1 through 4 in Appendix A.

- The crest has been recently mowed. The crest has good grass coverage and is free of large vegetation. The paved path is in good condition. No cracking was observed within the pavement nor on the embankment surface (Photo No. 1 and 2).
- After straightening, the power poles appear to be in good alignment (Photo No. 3). However, these are expected to continue tilting downslope as the downstream slope slides downward due to surface water infiltration. The powerline connecting to the lift gate control should be observed to make sure that it is not overstressed by the expected future downslope tilting.
- An abandoned piezometer (MW-1) is located near the right abutment. The piezometer pipe is broken above the ground surface and is missing a cap (Photo No. 4). A second piezometer (MW-2) was noted on the plans and previous visual safety inspection. However, this was not identified during the 2023 nor 2025 safety inspection.

Upstream Slope

The upstream slope was inspected by walking the length of the dam and observing the conditions at the surface between the crest and the shoreline. The slope is approximately 2.5H to lV (horizontal to vertical). The slope was recently mowed to facilitate the visual inspection. Most of the right side of the dam a portion of the left side of the upstream slope has overgrown woody vegetation along the shoreline. Representatives of the SRDC stated that the woody vegetation was left in place to attempt to slow down the erosion caused by wave attack. Overall, the upstream slope is in fair condition. Key observations of the upstream slope are listed below and shown in Photographs No. 5 through 10 in Appendix A.

- The upstream slope has been mowed recently. Woody vegetation is present along the entire shoreline. (Photo No. 6 through 10).
- A small ant mound was identified on the upstream slope, right of the spillway (Photo No. 5).
- Slope oversteepening (erosion) has progressed along the shoreline, with a substantial increase in erosion compared to previous inspections. This is due to wave action against the slope. Conditions are notably worse, particularly on the right side of the dam between the spillway and right abutment, where scarps now exhibit more extensive near-vertical faces and deeper cuts (Photo No. 8).
- These over-steepened portions of the upstream slope represent tripping and fall hazards and should be isolated from foot traffic to prevent injuries.
- No shoreline protection is present downslope of the woody vegetation (Photo No. 6 through 10).
- A lake level gauge is located approximately midway along the dam. Note, the gauge is challenging to read from the shoreline (Photo No. 10). A newer gauge was installed to the right of the spillway and was reading El 33.7 ft at the time of the inspection.

Downstream Slope and Toe Area

The downstream slope and toe area was inspected by walking the length of the dam and observing the conditions at the surface between the crest and the edge of property. The downstream slope is approximately 2.5H to 1V (horizontal to vertical). The slope was recently mowed to facilitate the visual inspection. Overall, the downstream slope is in satisfactory condition. Key observations of the downstream slope are listed below and shown in Photographs No. 11 through 26 in Appendix A.

- Poor grass coverage is present near the left abutment (Photo. No. 11).
- The downstream slope of the embankment is uneven at various sections along the length of the dam. The undulating surface indicates surficial slope instabilities or internal erosion (Photo No. 12 through 14).
- Small ruts are present along the downstream slope. These are likely due to mowing during wet ground conditions (Photo No. 15 and 16).
- A low point on the downstream slope is present near the right abutment. Note, this low zone is in line with the lowest portion of the downstream area along the creek that runs

parallel to the embankment. This low point was not previously identified in the 2023 inspection (Photo No. 17).

- A chain link security fence is present at the downstream toe area and runs along the top of the spillway culverts and along the downstream toe of the dam, to the right of the spillway outlet and encloses three sides of the spillway outlet structures. The portion of this security fence that runs parallel with the dam is leaning downstream, indicating soil movement. Surface erosion was identified along the security fence on both the left and right side of the spillway (Photo No. 18 through 20).

- Foot/drainage paths are present running along the chain link fence to the left of the spillway outlet structures (Photo No. 20 and 21).

- Between the downstream toe of the dam and edge of property, the ground surface is overground with grassy and woody vegetation and small to large trees. As a result of this vegetation, the ground surface cannot be easily inspected. However, the SRDC recently cleared some of this vegetation along the fence line to permit access. Multiple wet areas were identified approximately 35 to 55 ft downstream of the toe on the right of the spillway. Flowing water was not observed. It is unclear if the standing water is a result of seepage through the dam or weather conditions (Photo No. 21 through 24).
- An unnamed tributary of Bell Creek runs parallel to the embankment, approximately 50 to 100 ft downstream of the toe. This tributary is likely fed by seepage from Lake Grady. The tributary banks are overground with grassy and woody vegetation. A large tree was uprooted near the tributary (Photo No. 24 through 26).
- Wet areas in the downstream toe area (during prior inspections) were dry and firm. This is attributed to the lower water level in Lake Grady.

Spillway Works

The concrete spillway structure is located along the western portion of the dam and discharges into Bell Creek. The system is composed of a concrete winged drop inlet spillway with a notched weir, reservoir low-level lift gate, stilling basin, four (4) concrete culverts, apron exit slab, and exit channel. The concrete box culverts are each 12 ft wide by 8 ft high, with a length of 104 linear ft. The spillway structure is enclosed within a security fence with access controlled by SRDC members. The lift gate can be operated both mechanically and with electrical controls. Key observations of the spillway works are listed below and shown in Photographs No. 27 through 45 in Appendix A.

- A floating barrier was not present around the reservoir-side perimeter of the spillway (Photo No. 27).

- Woody and grassy vegetation were present along the left and right spillway wingwalls. Loose material was identified near the concrete wingwalls and concrete slab (Photo No. 27 through 30).

- The lake level was lowered prior to the inspection. Minimal flow was observed in the spillway, and the notched weir was not discharging during the inspection. (Photo No. 31).

- Moisture was observed to be coming through the concrete spillway walls to right of the

spillway gate. However, there was no sign of significant leaks (Photo No. 32).

- Aquatic vegetation is present within the stilling basin (Photo No. 43).
- A buildup of material was noted along the top of the gate seal. Leakage was observed along the seating joint of a circular discharge gate. This indicates a wear on the seal. Based on images from pervious inspections, the leakage around the gate does not appear to be worsening (Photo No. 32 and 33).
- Two (2) of the concrete culverts were inspected during the 2025 visual inspection. The culverts exhibit no signs of major cracking or surface spalling. The various panels within the culverts appear to be tilting slightly. A few of these have apparent gapping, where the bottom width of the joint is wider than the top width of the joint, indicating independent movement of the segment and possible loss of materials below the culverts. Efflorescence at the ceilings and wall joints indicates moisture moving through the joint at select locations. No transport of soil through the joints were observed at these locations. No significant depressions or voids were observed in the embankment over the culvert (Photo No. 34 through 37).
- The spillway exit channel into Bell Creek is protected with riprap, downstream of the outlet apron exit slab. Visual inspection of the exit slab revealed large broken concrete pieces along the toe that serve as the riprap. Some of these pieces appear displaced and settled compared to their position during the last inspection, with visible voids between the blocks and indications of erosion. These results may indicate material loss and continued erosive forces. No obstructions were identified within the exit channel. The exit channel shoreline is overgrown with grassy vegetation and small to large trees (Photo 40 and 41).

Instrumentation

A piezometer (MW-1) is located along the eastern side of the dam crest. The piezometer PVC protective casing and well casing were broken, and no cap was present on the well. Therefore, no readings were taken. A piezometer (MW-2) is shown on the design plan located approximately 350 ft east of the spillway. This has been observed in previous inspections. However, it was not observed during the 2025 inspection.

Recommendations

Overall, the Shadow Run Dam is in fair condition. Its' condition has deteriorated from the 2023 inspection. This condition presents dam safety concerns and requires repair and maintenance tasks. In accordance with the severity and potential impact to dam safety, the noted issues have been classified by CDM Smith as low priority, medium priority, or high priority. Most of the issues identified were classified as low priority. However, three (3) are high priority by CDM Smith. These are summarized below in Table 1.

Note, the high priority issues do not pose immediate safety of stability concern on the existing dam. However, they may compromise the stability of the dam if left unmonitored and unrepaired.

Dam Decommissioning

The risk of owning the Shadow Run Dam is determined by multiplying the likelihood of failure by the cost of failure. If it is not maintained and operated correctly, the likelihood of failure increases year after year. Hence, the risk of owning the Shadown Run Dam has increased from the 2023 inspection.

Ultimately, the decision to decommission it will be based on balancing costs against benefits. The costs of failure of the Shadow Run Dam include damage to property and the environment and the loss of life. The benefits include the continued use of Lake Grady and the Shadow Run Park.

The Florida dam decommissioning follows federal and state rules and requires extensive planning for safety, environment (sediment and fish), and public interest. Depending on the specific characteristics of the dam being removed, it requires permits from multiple agencies such as the Corps of Engineers (USACE), U.S. Fish & Wildlife Service (FWS), National Marine Fisheries Service (NMFS), Southwest Florida Water Management District), and the Florida Department of Environmental Protection.

Key steps in the dam decommissioning process include stakeholder engagement, environmental impact assessments, sediment management, and compliance with the Clean Water Act (CWA) and the Endangered Species Act (ESA) for fish passage and habitat restoration.

CDM Smith provides dam decommissioning services across the US with one of our senior engineers currently functioning as the Vice Chair of the Dam Decommissioning Committee for the US Society on Dams (USSD). At your request, we can engage our Dam Decommissioning group to provide more details and information on the process necessary to decommission the Shadow Run Dam.

Table 1: Observations and Recommendations

Location	Observation	Recommendations	Priority
Embankment Crest	A utility pole on the left side of the dam is leaning downstream at an angle of approximately 4 degrees to the vertical. Since, the utility poles were recently reset, this leaning represents slow downslope movements of the embankment crest on its downstream side	Consider making improvements to the surface water runoff to prevent ponding on the surface and rapid and efficient conveyance. Continue to monitor movement of the utility poles on the dam crest. Continue monitoring additional movement and signs of slope instability or internal erosion, such as bulging material, crest subsidence, or seepage flow with turbidity.	Low
	A small ant mound was identified near the abandoned piezometer (MW-1).	Use pesticides to control identified ant mounds.	Low
Upstream Slope	A depression is located on the left of the spillway and approximately halfway between the crest and the shoreline and may have been caused by surface erosion. Poor grass coverage is noted at and surrounding this location.	Regrade the slope to remove the depression and improve grass coverage along the upstream slope, particularly near the shoreline of the reservoir and identified depressions to prevent further surface erosion.	Low
	Slope oversteepening is present along the length of the shoreline. Slope oversteepening is most prevalent on the right side of the dam, between the spillway and right abutment.	Regrade the slope with engineered fill and install riprap with separator fabric to strengthen the slope and prevent further scarping. Note that based on photographs and notes provided within previous inspection reports provided to CDM Smith (dated 2018 & 2022), the slope oversteepening along the upstream slope appears to be worsening. Maintain good grass coverage in this area and continuously monitor the slope during regular maintenance and	Medium

Location	Observation	Recommendations	Priority
		quarterly inspections for additional scarps and continued oversteepening. Consider preventing foot traffic in this area until it can be repaired to protect against slips, trips, and falls.	Medium
	Woody vegetation is present along the shoreline. If allowed to grow into large trees, these will become a risk to dam safety because they can be uprooted during a heavy storm event and decrease the effective width of the dam.	Install shoreline protection, such as riprap or similar, along the length of the dam to prevent/slow slope oversteepening due to wave action.	Medium
Downstream Slope and Toe Area	The downstream slope of the embankment is uneven at various sections along the length of the dam. The undulating surface indicates potential surface erosion, internal erosion, or shallow slope stability issues.	Monitor for changes in the slope surface during regular maintenance and quarterly owner's inspections. Immediately notify the EOR if subsidence increases, or seepage is present along the downstream slope of the embankment.	Low
	Small ruts are present along the downstream slope.	Avoid mowing during wet conditions.	Low
	A low point on the slope was identified near the right abutment. There is a low point in the downstream area at this location. This low point has been wet during prior inspections, but was dry and firm during this inspection due to the lower water level in Lake Grady.	During owner's inspections and regular maintenance, monitor the low point identified on the embankment crest and the corresponding low point beyond the toe of the dam. Immediately notify the Engineer of Record (EOR) if additional subsidence occurs or turbidity is noted within the observed seepage. This may be an indicator of internal erosion within the embankment.	Low

	Surface erosion was identified along the security fence on both the left and right side of the spillway. Foot/drainage paths are present running along the chain link fence, to the left of the spillway outlet structures.	Place riprap along the left and right sides of the chain link fence (near the spillway works) to prevent further surface erosion. Discourage community residents from using this as a walking path between the crest and spillway exit channel.	Low

Location	Observation	Recommendations	Priority
Downstream Slope and Toe Area	Between the downstream toe of the dam and edge of property, the ground surface is overground with grassy and woody vegetation and small to large trees. The ground surface could not be clearly observed.	Clear grassy and woody vegetation from the downstream toe of the dam to the edge of property (approximately 60 ft downstream of toe). This will increase visibility, improving monitoring for animal burrows, potential seeps, and heave and uplift/blowout.	Medium
	Multiple low areas were identified approximately 35 to 55 ft downstream of the toe, right of the spillway. These were dry and firm because of the low water level in Lake Grady.	Monitor these areas for evidence of the migration of fines.	Medium
	The banks of the unnamed tributary of Bell Creek that runs parallel to the embankment approximately 50 to 100 ft downstream of the crest are over steepened.	Regrade the side slopes and add riprap or similar form of erosion control to prevent additional undercutting.	Low
	The unnamed tributary banks are overground with grassy and woody vegetation.	Clear grassy and woody vegetation from the tributary banks for easy observation of the area. Conduct and document visual inspections of the creek, focusing on the lowest elevations where piping might first be observed.	Medium

Spillway Works	No Lockout/Tagout procedures are in place for opening spillway. It is difficult to see the entire downstream area if there are people present downstream of the spillway.	Clear heavy vegetation from area along spillway and immediately downstream of spillway to be able to assess whether people are present prior to opening the spillway. Implement a lockout/tagout procedures for the spillway gate openings to increase safety.	High
	A floating barrier was not present around the reservoir-side perimeter of the spillway.	Install a floating barrier within the reservoir to prevent debris blocking the spillway.	Medium
	The dust cover over the manual lift gate mechanism was washed downstream.	Replace the dust cover and regrease the mechanism	High

Location	Observation	Recommendations	Priority
Spillway Works	Woody and grassy vegetation is present along the left and right spillway wingwalls.	Clear the woody and grassy vegetation adjacent to the spillway wingwalls to improve visibility and prevent damage to the concrete structure	Medium
	The ladder used to access the manual gate controls is not fully secured to the concrete structure.	Fully attach ladder to the concrete structure for safety. Note, to manually open the gate, the only access is via a boat. We do not recommend accessing the manual controls by walking on top of the spillway walls. Consider installing a drawbridge or catwalk over the plunge pool for easier access to the manual gate controls.	High
	Aquatic vegetation is present along the left side of the overflow spillway.	Clear vegetation surrounding the spillway intake to ensure spillway does not get blocked by debris, causing the reservoir pool to rise.	Low
	Moisture was observed on the concrete spillway, right of the spillway gate.	Continue to monitor moisture observed on concrete structure during quarterly owner's inspections. Document increases in flow rates.	Low
	Aquatic vegetation is present within the stilling basin.	Clear aquatic vegetation within the stilling basin for better visibility.	Low
	Leakage was observed along the seating joint at the top of a circular discharge gate. When the gate is closed, it pulls down on the seal causing it to leak.	Evaluate the potential for replacing the seal around the reservoir gate. Until the seal is replaced, we recommend the gate be opened less frequently due to the potential of additional damage to seal. However, it is important to maintain Lake Grady at a lower level until a funding mechanism can be established to permit recommended maintenance and repair items.	Medium

Location	Observation	Recommendations	Priority
Spillway Works	The various panels within the concrete culverts have apparent gapping. Efflorescence at the ceilings and wall joints indicates moisture moving through the joint at select locations.	During quarterly owner's inspections, walk the culverts and look for loose materials along the concrete joints. Record any evidence of the movement of soils into the culverts.	Low
	The exit channel shoreline is overgrown with grassy vegetation and small to large trees. The ground could not be observed in this area.	Clear vegetation surrounding spillway in the exit channel to improve visibility. Overground vegetation may conceal erosion, developing hazards, and prevent the dam operator from seeing people downstream prior to opening the spillway.	Low
	The riprap downstream of the spillway apron has settled significantly from the 2023 inspection.	Repair the riprap by placing a separator fabric, bedding material and properly-sized riprap.	Medium

Closing

This memorandum has been prepared exclusively for the Shadow Run Dam Corporation and is based on visual inspections as understood at this time and described in this memorandum.

These recommendations have been prepared in accordance with generally accepted engineering practices. No other warranty, express or implied, is made.

Figures
Location Map

Appendixes
Appendix A — Photo Log

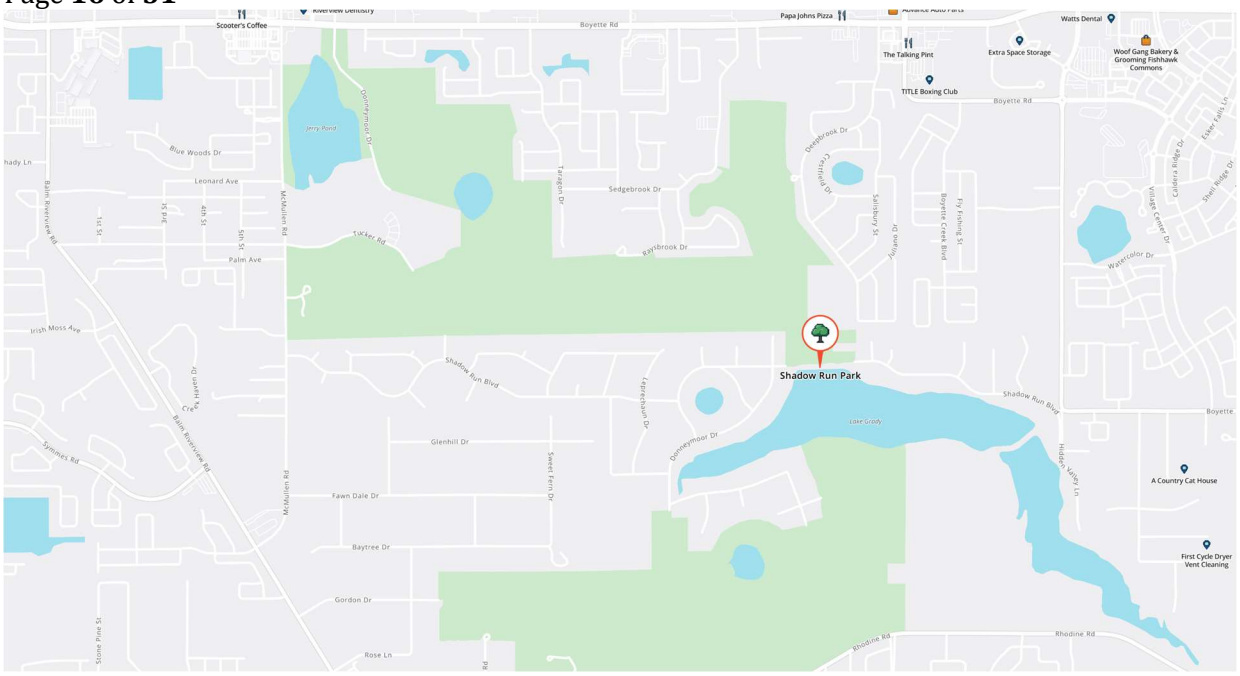


Figure 1 Location Map for Shadow Run Dam

Appendix A – Photo Log


Shadow Run
Park
esri

Photo Log — Shadow Run Dam

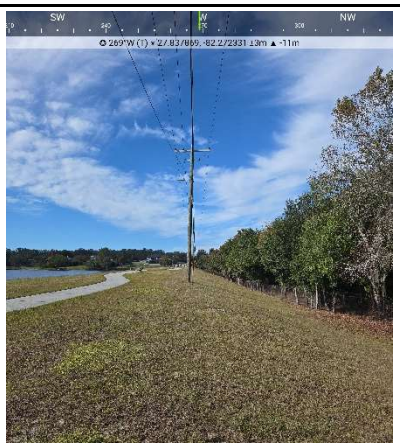
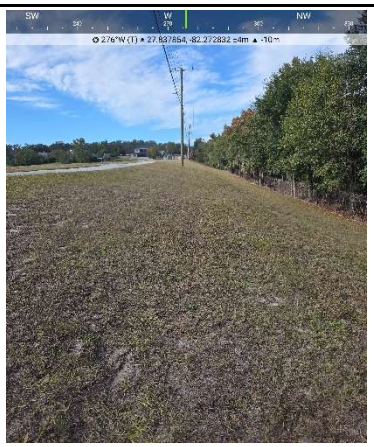
Photo 1	
December 13, 2025 10:50 AM	
View of dam crest facing left from the left abutment. Good grass coverage and recently mowed. A walking path extends the length of the embankment. Note, utility lines along the downstream shoulder.	
Photo 2	
December 13, 2025 10:50 AM	
View of embankment crest, facing left from the right abutment. Good grass coverage and recently mowed. A walking path extends the length of the embankment. Note, utility lines along the downstream shoulder.	
Photo 3	
December 13, 2025 10:57 AM	
View of utility poles, facing left from the right abutment. Note, 3rd pole is leaning downstream at an angle of approximately 4 degrees from the vertical.	

Photo 4	
December 13, 2025 10:53 AM	
View of abandoned piezometer MW-1. Note, the piezometer pipe is broken above the ground surface and is missing a cap.	

Photo 5	
December 13, 2025 10:51 AM	
View of ant mound on upstream slope, right of the spillway.	
Photo 6	
December 13, 2025 9:19 AM	
View of reservoir shoreline on the left side of the dam. Note, overgrown woody vegetation along the shoreline. Note, organic material in reservoir. Note, shoreline protection is absent, and signs of erosion are visible.	
Photo 7	
December 13, 2025 9:19 AM	
View of depression near shoreline left of the spillway intake. Note, overgrown woody vegetation along the shoreline.	

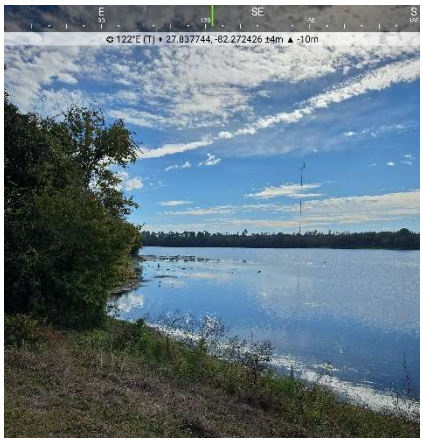
Photo 8	
December 13, 2025 10:51 AM	
View of near vertical scarps on the right side of the dam, facing the right abutment. Note, poor grass coverage and overgrown woody vegetation.	

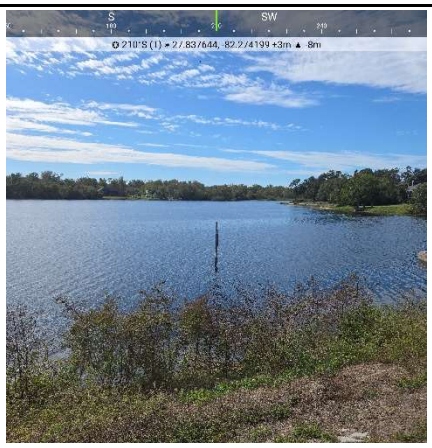
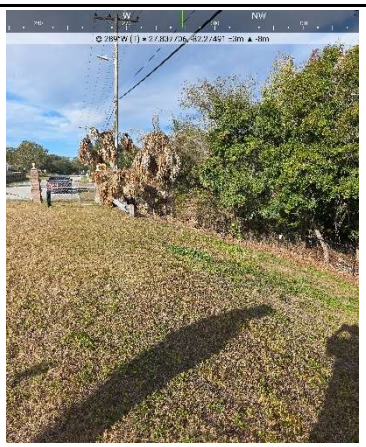
Photo 9	
December 13, 2025 11:07 AM	
View of over steepened upstream slope facing left abutment. Note, poor grass coverage and overgrown woody vegetation.	
Photo 10	
December 13, 2025 11:11 AM	
View of lake level gauge from embankment crest.	
Photo 11	
December 13, 2025 9:21 AM	
View of downstream slope along the left abutment. Note, poor grass coverage.	

Photo 12	
December 13, 2025 9:21 AM	
View of downstream slope, facing right from left abutment. Note, uneven slope surface.	

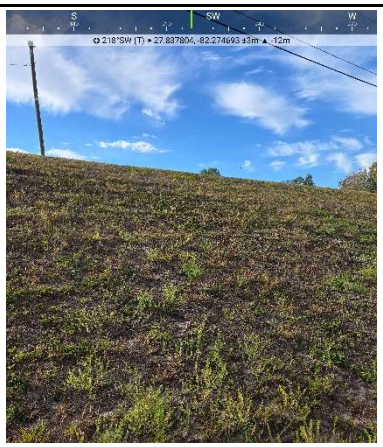
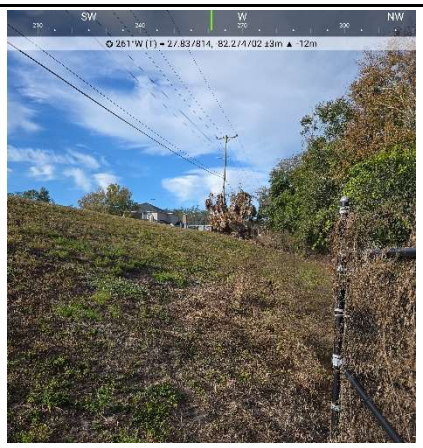
Photo 13	
December 13, 2025 9:23 AM	
View of downstream slope, facing upstream. Note, uneven slope surface.	
Photo 14	
December 13, 2025 11:06 AM	
View of downstream slope facing left from right abutment. Note, uneven slope surface.	
Photo 15	
December 13, 2025 9:23 AM	
View of shallow ruts on downstream slope located left of the spillway.	

Photo 16	
December 13, 2025 11:06 AM	
View of shallow ruts on downstream slope.	

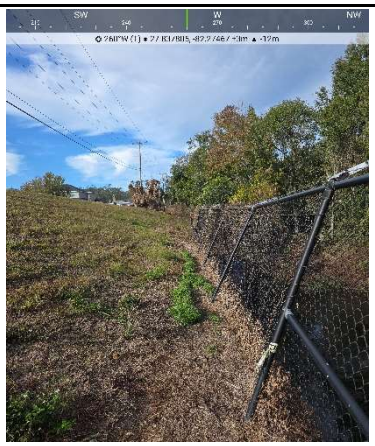
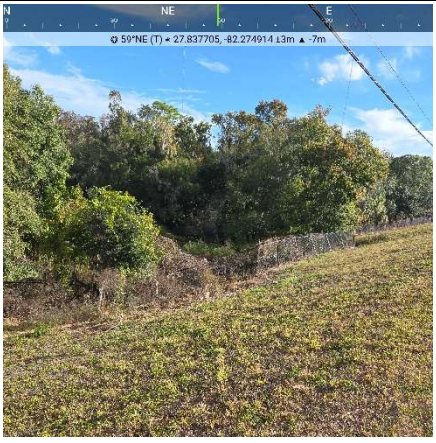
Photo 17	
December 13, 2025 9:21 AM	
View of low area on downstream slope. Note the slope subsidence is in line with low point in the downstream toe area along the unnamed tributary running parallel to the embankment.	
Photo 18	
December 13, 2025 9:24 AM	
View of security fence facing the left abutment from the right side of the spillway. Note the security fence is leaning downstream.	
Photo 19	
December 13, 2025 9:21 AM	
View of oversteepening/erosion of the downstream slope along left side of security fence. Note, overgrown grassy and woody vegetation on the fence line.	

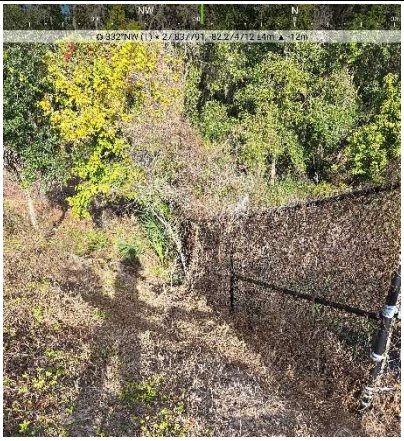
Photo 20	
December 13, 2025 9:22 AM	
View of oversteepening/erosion along left side of the security fence. Note, owner says pathway used by community residents to fish in the exit channel.	

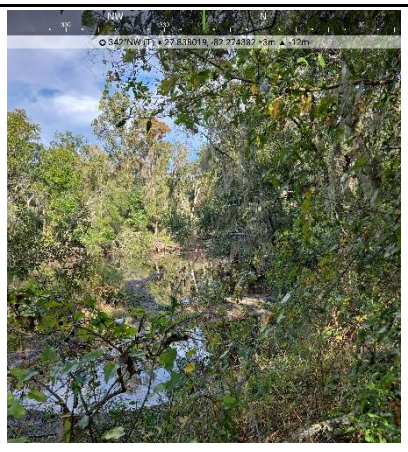
Photo 21	
December 13, 2025 9:30 AM	
View of overgrown grassy and woody vegetation downstream of embankment toe. Note, a footpath is visible.	
Photo 22	
December 13, 2025 10:15 AM	
View of small wet area downstream of embankment toe.	
Photo 23	
December 13, 2025 10:15 AM	
View of standing water downstream of embankment toe.	

Photo 24	
December 13, 2025 10:24 AM	
View of wet soil near unnamed tributary of Bell Creek. Recommend to remove vegetation to observe more easily.	

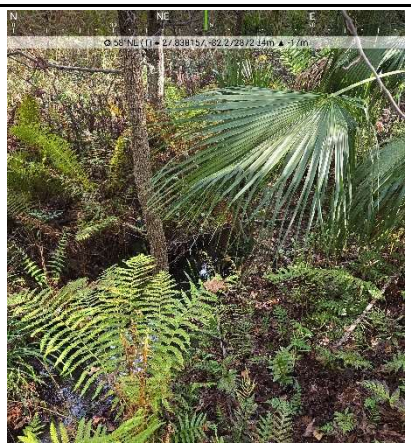
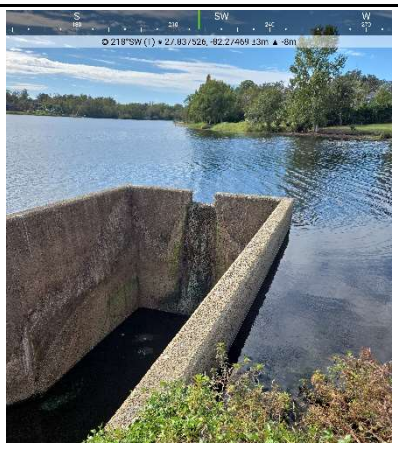
Photo 25	
December 13, 2025 10:34 AM	
View of uprooted tree adjacent to unnamed tributary of Bell Creek.	
Photo 26	
December 13, 2025 10:39 AM	
View of lowest point along unnamed tributary of Bell Creek. Recommend to clear area and conduct a quarterly visual inspection.	
Photo 27	
December 13, 2025 11:17 AM	
View of left drop inlet spillway with notched weir. Note a floating barrier is not present around reservoir-side of the spillway perimeter.	

Photo 28	
December 13, 2025 11:16 AM	
View of woody and grassy vegetation along the left spillway wingwall.	

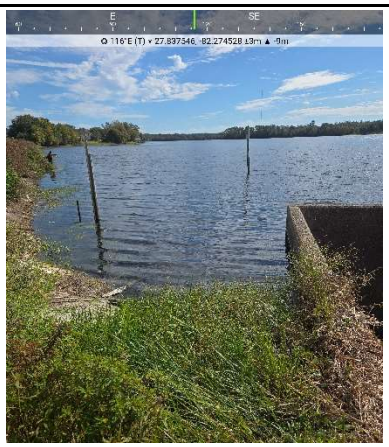
Photo 29	
December 13, 2025 11:15 AM	
View of right drop inlet spillway.	
Photo 30	
December 13, 2025 11:15 AM	
View of woody and grassy vegetation along right spillway wingwall.	
Photo 31	
December 13, 2025 9:33 AM	
View of left drop inlet spillway with notched weir from stilling basin.	

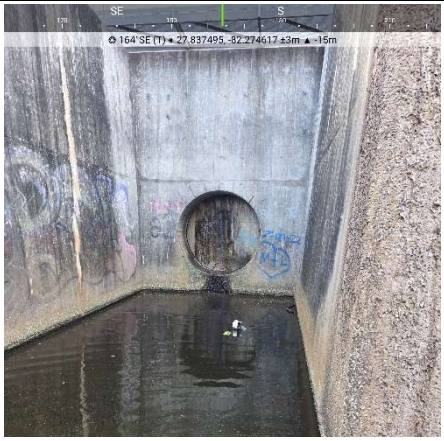
Photo 32	
December 13, 2025 9:33 AM	
View of leakage along the seating joint circular discharge gate.	

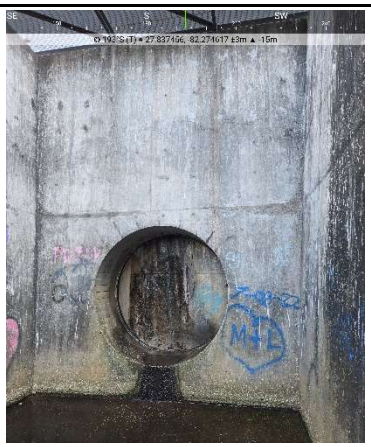
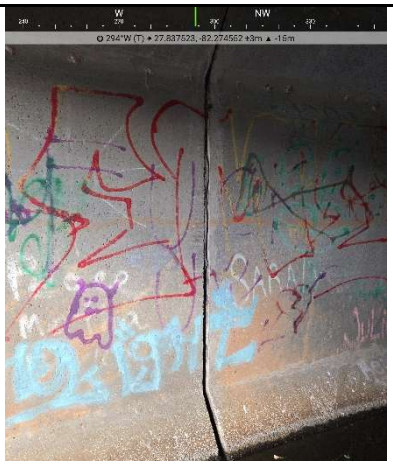
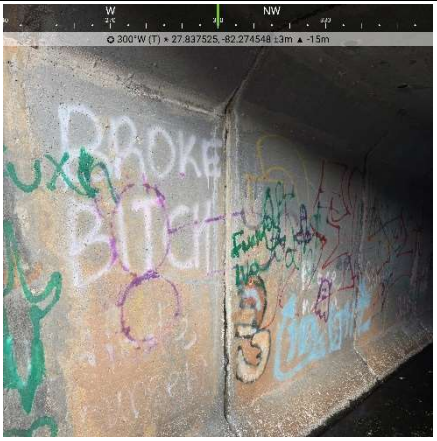
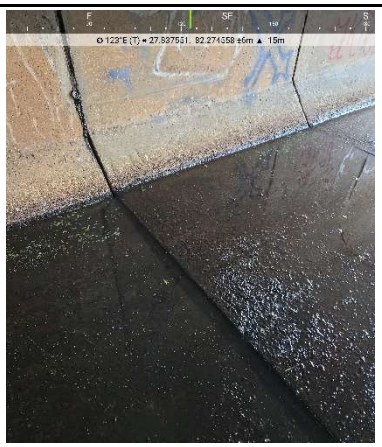
Photo 33	
December 13, 2025 9:34 AM	
View of leakage along the seating joint circular discharge gate.	
Photo 34	
December 13, 2025 9:35 AM	
View of apparent gapping within concrete conduit joint. Note gapping at the bottom of conduit is wider than at the top.	

Photo 35	
December 13, 2025 9:46 AM	
View of efflorescence at the ceiling and wall joints.	
Photo 36	
December 13, 2025 9:36 AM	
View of joint along the bottom of the conduit.	
Photo 37	
December 13, 2025 9:32 AM	
View of efflorescence between the culvert sections.	
Photo 38	
December 13, 2025 9:26 AM	
View of vegetation surrounding spillway exit channel.	
Photo 39	

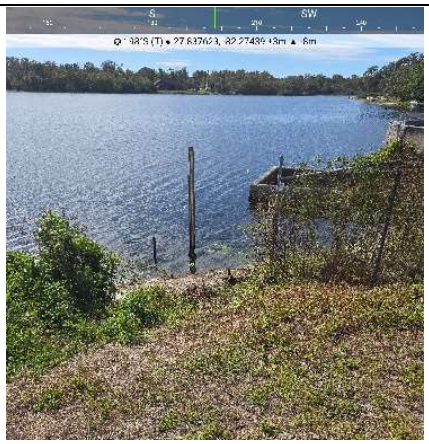
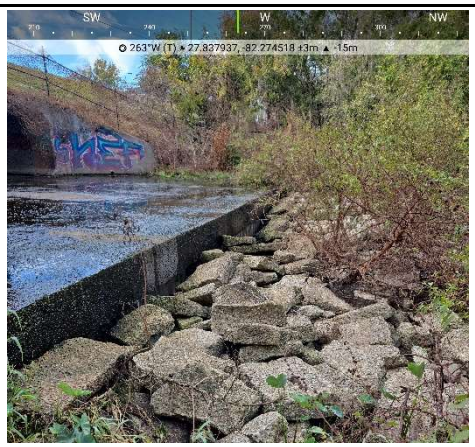
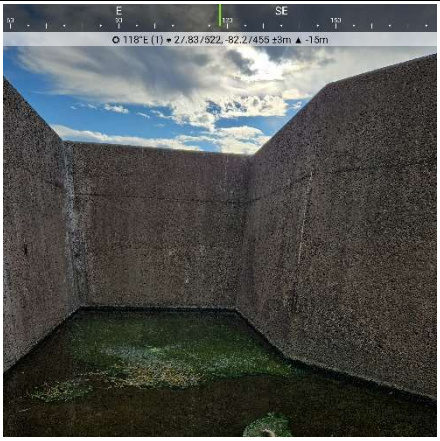
December 13, 2025 11:12 AM	
View of upstream slope with significant erosion observed at the upstream toe with a pronounced steep drop near the waterline.	
Photo 40	
December 13, 2025 9:28 AM	
View of splash pad with large broken concrete pieces along the toe near the culvert outlet. Note, the concrete pieces appear displaced and settled, with visible material loss and signs of erosion.	
Photo 41	
December 13, 2025 9:21 AM	
View of riprap and broken concrete pieces along the channel outlet area. Note, several pieces appear displaced and settled, with voids between blocks and signs of erosion around the toe.	
Photo 42	
December 13, 2025 9:31AM	
View inside concrete box culvert showing interior walls and ceiling.	

Photo 43	
December 13, 2025 9:35 AM	
View of right drop inlet spillway from stilling basin. Note, organic material in stilling basin.	
Photo 44	
December 13, 2025 10:16 AM	
View of eroded area exposing tree roots and creating a void near the base of a tree. Note, soil loss and potential instability along the slope.	
Photo 45	
December 13, 2025 10:43 AM	
View of overgrown grassy and woody vegetation along unnamed tributary of Bell Creek.	