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Subject: Update on Lake Petit Dam Maintenance

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Update on Lake Petit Dam Maintenance

Over the past several weeks, the POA has been working with our engineer of record, Geosyntec, to test the operation of the lower-level outlet of Lake Petit Dam.

Below is a breakdown of what happened, what was learned, and what steps are to be taken in the coming months.

Q: Did the Lake Petit Dam sluice gate work?

A: The sluice gate operated even after more than a half-century of inactivity. The testing was made possible by the recent installation of a specially tailored plug, which was inserted into the low-level outlet as a backup in case there were any issues with the gate. The plug performed as designed and allowed the reservoir to maintain its normal level while allowing divers to safely operate and inspect the gate. Click the April 27 Board meeting button below and go to the 8:40 mark to watch a video that features a closeup of the plug.

April 27 Board Meeting

While the gate had no major issues, it was determined that seven of the 37 stem guides that keep the 378-foot-long stem aligned showed cracks during the testing process. (The stem is what pulls the gate open and pushes it

closed.) Replacing these weathered, 50-year-old components will involve coordinating and securing new parts with the gate manufacturer and having an underwater contractor install the new parts with the plug in place.

Q: How much are these new parts going to cost?

A: The parts are not especially expensive, and the gate manufacturer and the POA will determine the correct design for the parts. The new stem guides will have to be custom-made – these are not off-the-shelf purchases – and installed sometime this year.

Q: Will the ongoing work require the lake to be lowered?

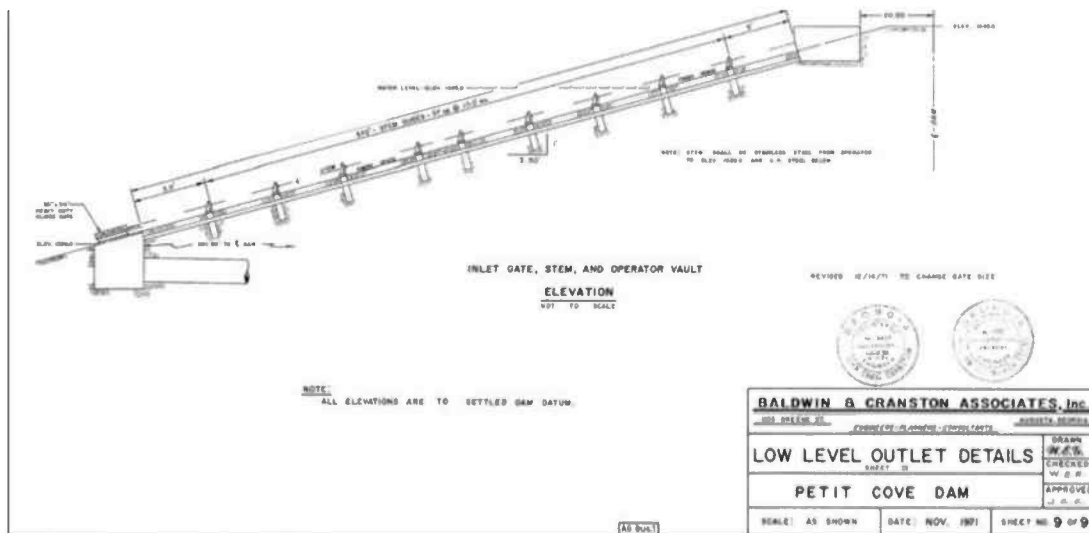
A: All of the work, which has been mostly conducted below the surface of the lake, will not require the lowering of the lake water. The plug is in place and the gate is closed, ensuring that Petit's summer season, including the July 2 fireworks show, is on schedule. The Marina will continue its operations, the eagles on Eagle Island will be unaffected, and summer on the lake will unfold as planned.

Q: Besides the replacement of the seven stem guides, are there additional areas in need of maintenance?

A: Crews are exploring whether to replace all 37 stem guides. Each of the cast-iron pieces is bolted to concrete piers, which are spaced at 10-foot intervals along the lake side of the dam (*see diagram below*). Whether it's more prudent to replace all of the stem guides at once and to look at also replacing the concrete piers to which they are attached is something that will be explored.



One of the 37 stem guides bolted along Lake Petit Dam



Q: How much will all of this unanticipated work cost?

A: The cost of replacing all 37 stem guides and even the concrete piers will be determined by the recent data gathered from diving inspections during the gate test. Geosyntec will work with the POA to determine the extent of the work needed. With parts that are more than a half-century old, the team is looking at what needs to be replaced to provide the best operation in the future.

Q: With the plug in place, will we be able to lower the lake if needed?

A: There is a bypass flow line near the spillway that gives us the option of lowering the lake by up to seven feet if necessary. There are no current plans to lower the lake level.

Q: Is Georgia Safe Dams aware of the test?

A: Throughout the planning and actual testing phases of this project, we have been keeping Georgia Safe Dams apprised of our work on a frequent basis. They thoroughly understand the results of the test and the next steps we are taking. They have asked for a schedule of the next phase of the project as soon as it becomes available.

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