

Bradshaw, Theresa

From: Wohlberg, Matt
Sent: Wednesday, April 02, 2014 5:19 PM
To: Robert Kent
Cc: Heines, Jim; Barnes, Kirsten; Lawrence, Ellen; charlottedalfonso@yahoo.com; Kreuter, Dave; Wang, A.J.; Saunders, Scott; Glantz, Barry; Kramer, Cynthia; Hoffman, Robert; Perkins, Mark C.; Rhoades, Jeanne
Subject: RE: Stormwater Control and repairs at CC Golf Course

Mr. Kent,

Thank you for your comments regarding the dam project. Please find my responses below (in blue). I will be happy to discuss these topics further, if you wish.

The conceptual design/alternative review report is too big to send. I can extract several pages of the document that have the estimate information for you and send those tomorrow.

Sincerely,

Matt

CITY OF CREVE COEUR

Matt Wohlberg, P.E.
City Engineer

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Mr. Wohlberg:

It is understood that the City is currently making some temporary repairs to the South Pond Dam to get us through the next golf season. Looking down the road a bit and having done some research on this subject, (And having replaced pond risers, pressure grouted dams and performed other such repairs during the time I was actively managing my concrete restoration company) I have the following questions concerning the repair of the entire system.

This is important now that I understand that the legal investigation reveals that the City is entirely responsible for the mitigation of the storm water problem.

The questions are:

1. Has the consultant determined the cost to install a fore bay and siltation cleanout bay in the North Pond?
Not exactly. The conceptual cost estimate included removal of silt from the northern lakes and the installation of a hydrodynamic separator unit to pull silt out of the stormwater before it reaches the lakes. The estimated cost of this work was \$410,000 (say, \$400,000 to \$450,000). I imagine silt removal and creating an armored-bottom fore bay out of the northern lake would cost about the same.
2. Has the consultant evaluated the cost to repair the stone walls of the North Pond?
No. The extent of any issues with these walls and the cost of necessary repairs are currently unknown.
3. Has the consultant determined the cost to clean out the three north ponds, the intervening creek and the South Pond?
Silt removal from the creek was not included in the review. The estimate for silt removal from the northern ponds is \$310,000, and the estimate for silt removal from the southern pond is \$130,000. The estimate was \$100 per cubic yard of material removed, hauled away, and disposed of.
4. Has the consultant determined the cost to upgrade the rip-rap of the ponds and the creek, install stone edging along the top of each to facilitate mowing?
Replacement of the rip rap along the northern ponds (those without the boulder wall) with a boulder edge was estimated to be \$75,000.
5. Has the consultant determined whether he wants to add and compact soil to the dam or perform deep pressure grouting of the existing structure?
The proposal is to add and compact soil to the dam.
6. Has the consultant contacted the Corps of Engineers to get a 404 permit for the East Tributary?
We have just recently submitted for the 404 permit. The initial goal for the project was to make the repair as soon as possible, and we could forego the 404 permit when we were operating on an emergency basis. This is no longer the case, so we applied for the permit.
7. Has the consultant evaluated the cost of installing a continuation of the reinforced concrete pipe of the East tributary to the confluence and connection with the 54" proposed drain pipe under the dam?
I discussed enclosing the east tributary with the consultant in November. The concern is that enclosing the creek may not be permissible through the Army Corps of Engineers and would have distracted from the issue at hand.
8. Has the consultant calculated the hydraulics with this regard as to the input to the Runnymede extension?
*The hydraulics of the existing and proposed conditions have been modeled, and the design and these models continue to be revised to meet the satisfaction of MSD. Our intent with the project has been to create no increase in the amount of water that enters into the 96" pipe that runs south to the Runnymede subdivision (beyond the flow that would be before the problems with the dam). Adding to this flow will prompt MSD to require that the modeling extend beyond the entrance to this pipe, and this will only drive up the cost of the design.
Regarding the 96" pipe, our best option appears to be to leave it alone. In addition to the extra modeling, MSD will require that either a headwall or a flared-end section is installed at the end of the pipe if the pipe is modified in any way. MSD has given us the option to leave the pipe alone, and I think we should take it.*
9. Has the consultant determined the cost of re-grading the entire East tributary and re-grading or rebuilding of the collapsing gabion walls of the East tributary versus installing the extension of the East tributary concrete pipe?
No. See question #7.
10. Has the consultant considered the savings to be had by using the removed siltation material to fill over the buried reinforced concrete pipe draining the South pond and East tributary versus having to haul it to a dump?
We discussed using the silt from the pond to fill the east tributary. Beyond the concerns stated in question #7, the consultant was concerned that the silt that was removed may not be permissible as a fill material.
11. Has the consultant evaluated the costs of remediation of the golf course twice if done in two phases (North and South) versus doing it in one complete program?
*We did not get an estimate for restoring both the north and south areas, but I imagine that this work will be about the same cost whether done as part of one project or two. The areas are relatively far apart, and there will not be any redundancy in disturbance if the project is in two phases, so there does not appear to be a significant amount of savings in this regard for doing both north and south projects at once.
The City is eliminating the need and cost for restoring the south area twice by combining the dam repair with the siltation removal in the south pond. We are also looking at making the first phase of the golf cart path replacement extend off of the south end of the course so that those construction vehicles use and disturb the same area (in August) that will be restored next winter after the dam repair.*
12. Have they considered how much additional siltation and double work will be required if they do it in two phases?
We do not have an estimate for how much silt may enter the south pond in the years between making the repair in the south and the one in the north.
13. Has the consultant estimated the cost to clean out the overgrown honeysuckle and other trash trees and collapsed materials in the creek and ponds?
The consultant estimated that removing invasive species along the east channel, addressing some grading concerns, and planting native species would cost \$60,000 (or \$300 per linear foot of the creek). No estimate was provided for the ponds.

I recognize these are a lot of questions, but you can hardly make informed decisions on whether to do this one phase or two phases if you do not have substantial facts. Doing the South end and HOPING that you do not have surprises on the North end is not good planning or financial decision making.

At this point, the north ponds are stable. There does not appear to be an emergency to address these ponds immediately (but there did not appear to be an emergency at the dam a year ago either). We can plan for what we know and for what we can see, but there will always be some surprises. The failure of the dam and the resulting discussion and planning for its repair has given much more attention to the northern ponds than would have been otherwise. As it stands, the plan to make improvements to the northern ponds within the next five years is much more proactive than what has transpired for the south pond and dam. Staff would recommend an acceleration of this schedule if we notice that conditions are getting worse.

I think that we have two very different situations with the north ponds and the south pond and dam. The north ponds were dredged out within the past ten years and are coming due for another round of silt removal. The south pond was not dredged out when the northern ponds were most recently, and this work was put on as a near-term project in the CIP projections last year. The main difference between these areas, and what has forced the issue recently, is the failing dam. We are learning that the dam and its concrete channel have had issues for as long as 30 years. A plan from the early 1980s indicates that eroded areas all around the channel needed attention, and the existing channel has several drill holes where the channel had been mudjacked or similar in the past. We do not have a similar situation at the north end, as far as we know.

I am hoping (and I used that word on purpose) that the increased attention to the lakes through the current project and the planned improvements in the near term will reduce the chance that there will be significant surprises for the north end. If we are planning to have the construction at the north end within five years, the survey and design need to start within the next three or four years so that the permitting can be in place for construction to start on time. Monitoring the site for three years before a survey and engineering review occurs seems appropriate.

In my opinion, it is a lot more important to be paying them to provide these necessary facts, than what color stone to use or what landscape plantings might be appropriate.

If any or all of these estimates have been completed, I would appreciate a copy to review.

From: kentivcouncil@charter.net [mailto:kentivcouncil@charter.net]

Sent: Thursday, March 27, 2014 12:57 PM

To: Wohlberg, Matt

Cc: Heines, Jim; Barnes, Kirsten; Lawrence, Ellen; charlottedalfonso@yahoo.com; Kreuter, Dave; Wang, A.J.; Saunders, Scott; Glantz, Barry; Kramer, Cynthia; Hoffman, Robert; Perkins, Mark C.; Rhoades, Jeanne

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Have they considered how much additional siltation and double work will be required if they do it in two phases?

Has the consultant estimated the cost to cleanout the overgrown honeysuckle and other trash trees and collapsed materials in the creek and ponds?

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If any or all of these estimates have been completed, I would appreciate a copy to review.

I appreciate your patience and close attention.

Further, I will be available for any questions, clarifications or discussion of the pros and cons of these items to you and/or the consultant at your convenience, if you so desire.

Bob Kent