

Email sent from Johnston, Iowa

From: Kevin Stewart

Sent: Friday, June 12, 2015 10:03 AM

To: Scott Brink

Cc: 'Mark Westberg'; Brian Nielsen; Bob Glancy; Bryan Rappolt; Brad Simmons; Rick Newman; Diana Reimer; Chris Jones; Steve Nguyen; Mark Cooney; Ken MacKenzie; George Cotton

Subject: Lena/MGR tabletop exercise

Importance: High

Hi Scott,

Got your VM. We have tentatively scheduled the TTX for June 30. Location TBD. I hope we can pull this off. I am out of office until 6/22.

Met w/Lakewood's Brian Nielsen last Friday. Reviewed some critical thresholds for rain, streamflow and MGR water levels. He is writing-up the results of that meeting in the form of a flood response plan for Lakewood. I'm sure he will be sharing that information with us all.

Our meteorologists are tasked with putting together the weather scenario for the exercise. NWS will also be involved. Have not received anything yet.

Mark W. was going to estimate the Q threshold that would impact the Swadley area of W.R. Have not heard from him yet on this. I also thought W.R. GIS was going to assist with some related mapping too. Not sure what has been done.

I have also met with CMWC and Jeffco EM. They will be involved with TTX.

I have been working with one of our consultants to better understand the spillway rating for MGR. We comprehend the situation much better now, but given the SEO-approved gate operation plan, fully understanding what happens when the lake level rises above 31 is a bit difficult. Until things change, we should base our downstream flood response planning for worst case releases from MGR should the lake W.S. rise above 31. We have a much feel now for what the worst case might be.

Attached is a recent summary that I pulled together. This was an attempt to more clearly state the situation concerning MGR.

Have also met with Ken MacKenzie and George Cotton about the master plan hydrology and the assumptions that were made in developing 100-year flows from MGR. Not totally clear on this yet, but what we are reasonably certain of is that the peak outflow from MGR (spillway + outlet) will be approximately 1,300 cfs when the W.S. reaches 31.0—the level when the spillway gates are scheduled to automatically lower. The 100-year MGR outflow from the MP is approximate 1,900 cfs. For this to occur, the gates would have to be in a state of lowering.

After I return from my travels, I will prepare an interim gate operation plan for consideration by all concerned parties. The plan I have in mind involves a staged sequential lowering of the gates beginning with Gate #2 in two 2-foot increments until it equals the height of Gate #1. Then proceed with incremental lowering of both gates in 1-foot increments. We will further propose that each staged lowering would not begin until the lake W.S. subsequently rises again to 31. It is our opinion that this plan, or something similar, will 1) assure the safety of the dam in a manner consistent with DWR/SEO requirements; 2) be relatively easy to implement by CMWC operators; 3) will prevent MGR outflows from exceeding inflows for events larger than the 100-year design storm; 4) provide maximum flood control benefit for impact areas downstream of MGR; and 5) offer greatest protection for the water supply stored below W.S. 25 (MGR's conservation pool level).

I hope this brings everyone up-to-speed on our understanding of the situation. Let me know if you have any comments or questions.

I may have forgotten a few need-to-know folks above. Please feel free to forward this to appropriate parties.

Kevin