



WASHOE COUNTY

Integrity Communication Service

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STAFF REPORT

BOARD MEETING DATE: July 14, 2020

DATE: May 12, 2020

TO: Board of County Commissioners

FROM: Dwayne Smith, P.E., Division Director, Engineering and Capital Projects
Community Services Department, 328-2043, desmith@washoecounty.us

THROUGH: David Solaro, P.E., Arch., Assistant County Manager

SUBJECT: Presentation on the current status of the Lemmon Valley Closed Hydrobasins short and long term mitigation strategies with possible direction to staff to continue the work, and further to possibly direct staff to: 1) initiate the revision of the current FEMA designated flood plain boundary and pool elevation for the East and West Lemmon Valley Closed Hydrobasins; and 2) to develop a policy for new development within unincorporated Washoe County areas located within the East and West Lemmon Valley Hydrobasins to increase volumetric mitigation of new development located within a 100-year FEMA designate floodplains to 1.3:1 (removal:placement). (Commission District 5.)

SUMMARY

The Washoe County Community Services Department (CSD) continues to actively respond to and maintain various flood and stormwater protections in the Lemmon Valley area as a result of the 2017 regional flood events. This work includes continuous field activities such as barrier operation and pump maintenance, the development and implementation of short term and long term flood mitigation strategies, collaborating with regional partners to align stormwater and flood policy and response and to continue to provide a safe and secure environment for the existing and future residents of the Lemmon Valley area.

Through this continued effort, staff has identified that the current Federal Emergency Management Agency (FEMA) floodplain is based on outdated survey and topographical analysis and using better tools such as laser imaging, detecting, and ranging (LIDAR) has identified areas along the perimeter of the flood pool that do not reflect actual pool boundaries. In these areas existing residential structures exist within the actual flood pool elevation of 4924' above mean sea level (AMSL) but like many areas that were mapped using older techniques, the property owners are likely not aware of the situation. In addition, preliminary analysis focused on updated regional storm patterns, new precipitation measurements, and subsequent lake level responses has revealed that under several scenarios the true impacts from the 100-year storm event may result in water elevations higher than currently identified. While precipitation events cannot be predicted or stopped, to help reduce the potential for possible future damaging events, staff recommends that more accurate analysis and understanding of the potential impacts is necessary to develop meaningful strategies to protect the area residents and businesses.

AGENDA ITEM # _____

Any required professional services contract necessary for this continued effort will be brought before the Board of County Commissioners for consideration and direction.

Regionally, there has been discussion regarding the potential modification to volumetric mitigation required by new development when developing areas within FEMA designated flood plains. Currently, all new development is conditioned to follow FEMA standards and requirements for the placement of construction materials within designated flood plains. Subsequent mitigation requirements and area specific modifications are identified in Washoe County Development Code and currently require the removal of an equal volume of material for every quantity of material placed within Zones A, AE and AO. To mitigate associated impacts, it is recommended that the Board direct staff to implement a policy for the East and West Lemmon Valley Hydrobasins that requires all new development to continue to incorporate all regional development code requirements and to further increase volumetric mitigation in FEMA designed flood zones located within the East and West Lemmon Valley Closed Hydrographic Basin from 1:1 (removal:placement) to 1.3:1 (removal:placement). While the development community has expressed support for this change, staff will continue to discuss with the development community the need and approach in finalizing a policy. State of Nevada Floodplain management and Community Service Rating (CRS) has expressed support for the implementation of this policy.

Washoe County Strategic Objective supported by this item: Stewardship of our community.

PREVIOUS ACTION

April 23, 2019 – The Board retroactively authorized the emergency purchase of the temporary flood mitigation system from US Flood Control Corp [in the amount of \$210,909], to protect residential homes most vulnerable to immediate water elevation increases of Swan Lake in the areas of Pompe Way and Shane Way in Lemmon Valley. The purchase was conducted pursuant to NRS 332.112 and 338.011.

April 9, 2019 – The Board provided recommendation to discuss and provide policy direction to staff related to the closed East Lemmon Valley Hydrographic Basin to include next steps to address lasting elevated lake levels.

April 9, 2019 – The Board authorized Assistant County Manager, Dave Solaro, to enter into all necessary emergency agreements and construction contracts for the continued development and implementation of the 2019 mitigation and response measures associated with the Lemmon Valley Wastewater Treatment Plant for access road and berm improvements [not to exceed \$500,000], and for seepage, bypass, and backup pumping systems associated with the treatment plant and collection system [not to exceed \$150,000], pursuant to NRS 332.112 and 338.011.

December 12, 2017 – The Board acknowledge receipt of an update on the 2017 North Valleys Flood Incident; directed staff to submit Federal Emergency Management Agency (FEMA) Hazard Mitigation Grant applications for the proposed purchase of specific residences located within the Swan Lake FEMA designated floodplain that were impacted by the 2017 presidentially declared February 2017 flood; and approved the transfer of up to \$300,000 as needed from contingency funds to the Capital Improvement Fund for the construction of additional temporary flood barriers in the Swan Lake area.

September 12, 2017 – The Board affirmed the continued flood response activities related to the 2017 January and February floods and directed staff to initiate the development of a flood response plan for North Valleys closed hydro-basins, a flood mitigation plan for North Valleys closed hydro-basins and to pursue the application process for a FEMA Hazard Mitigation Grant, for the possible purchase of specific residences located within the Swan Lake floodplain that were impacted by the 2017 presidentially declared February flood.

June 27, 2017 – The Board approved the use of General Fund Contingency and committed proceeds received from the sale of water rights [\$2,895,600] from the Capital Improvement Fund in FY 2017 to cover the County's expenses related to the January and February 2017 flood events.

May 23, 2017 – The Board approved gifting general funds to cover the cost of County building permit fees for specific assessor's parcel numbers affected by Swan Lake (and the immediate vicinity) flooding when demonstrated that individual insurance carriers would not cover the cost of County building permit fees.

May 9, 2017 – The Board received an update on the North Valleys flood incident operation.

April 25, 2017 – The Board directed staff to return with a District Attorney opinion regarding the possible methods for gifting general fund money for building permits related to the Lemmon Valley Flood.

March 28, 2017 – Washoe County staff provided an update to the Board on emergency operations related to the February 23, 2017 Declaration of State of Emergency and received approval of actions taken by the County Manager pursuant to emergency powers related to the state of emergency.

March 21, 2017 – Washoe County staff provided an update to the Board on emergency operations related to the February 23, 2017 Declaration of State of Emergency and received approval of actions taken by the County Manager pursuant to emergency powers related to the state of emergency.

March 14, 2017 – The Board ratified a Declaration of a State of Emergency by the Washoe County Manager on February 23, 2017 and received an update on the related emergency operations for the North Valleys flood response.

BACKGROUND

Current direction by the Board includes the continued upkeep, maintenance, and response focused on providing for life safety for the residents who live in the closed hydrographic basin known as the East Lemmon Valley Hydrographic Basin within Washoe County. The protections were put into place during the 2016/2017 water year which ran from October 2016 through September 2017. During that water year, a series of storms (atmospheric rivers) beginning in October 2016 and continuing through February 2017 impacted our entire region with record level rains and snows. The continued rain events in the lower elevations resulted in saturated soil conditions and extensive runoff of stormwater.

Previous direction to staff has included the following:

- Continue flood response activities related to the 2017 floods. This includes the operation and management of existing barrier systems to maintain the lake within

its current boundary, maintaining access for area residents and emergency service providers and to pump water from outside of the barrier systems into Swan Lake during storm and precipitation events.

- Continue to develop and implement immediate projects in response to community requests.
- Continue to implement short-term projects to assist in the removal of some water from the lake creating space for additional water storage.
- Develop a flood mitigation plan for the North Valley's closed hydro-basins that identifies potential long-term approaches dealing with stormwater, floodwater and effluent water management and through feasibility assessment can be designed, funded and constructed.
- Pursue the application process for a Federal Emergency Management Agency Hazard Mitigation Grant, for the possible purchase of specific residences located within the Swan Lake floodplain that were impacted by the 2017 presidentially declared February flood.

Working both internally and with regional partners, staff continue to implement the directions of the Board and to effectively plan and develop strategies and projects that continue to protect the residents of the Lemmon Valley closed hydro-basins and to identify opportunities to implement mitigation efforts related to the existing flood pools and leverage the help and assistance of new development.

FISCAL IMPACT

This presentation does not have a fiscal impact. Prior Board approvals include the commitment of \$2,895,600 from the Capital Improvements Fund water rights proceeds to cover expenses related to the January and February 2017 flood events, approved on June 27, 2017 and an FY20 augmentation on September 24th, 2019 of the committed funding source in the amount of \$2,500,000 for expenses related to current and future mitigation of flood/storm water impacts in the North Valleys.

Prior to presentation to the Board, all associated contracts and purchase orders related to Washoe County's continued flood response in the Lemmon Valley area will be presented to the Financial Impact Review Committee for consideration of recommendation to the County Manager for final consideration. Following existing policy, those contracts will be presented to the Board for final consideration.

RECOMMENDATION

It is recommended the Board of County Commissioners acknowledge a presentation of the current status of the Lemmon Valley Closed Hydrobasins short and long term mitigation strategies with possible direction to staff to continue the work, and further to possibly direct staff to, 1) initiate the revision of the current FEMA designated flood plain boundary and pool elevation for the East and West Lemmon Valley Closed Hydrobasins, and 2) to develop a policy for new development within unincorporated Washoe County areas located within the East and West Lemmon Valley Hydrobasins to increase volumetric mitigation of new development located within a 100-year FEMA designate floodplains to 1.3:1 (removal:placement).

POSSIBLE MOTION

Should the Board agree with staff's recommendation, a possible motion would be:
"Acknowledgement of a presentation of the current status of the Lemmon Valley Closed Hydrobasins short and long term mitigation strategies with possible direction to staff to continue the work, and further to possibly direct staff to, 1) initiate the revision of the current FEMA designated flood plain boundary and pool elevation for the East and West Lemmon Valley Closed Hydrobasins, and 2) to develop a policy for new development within unincorporated Washoe County areas located within the East and West Lemmon Valley Hydrobasins to increase volumetric mitigation of new development located within a 100-year FEMA designate floodplains to 1.3:1 (removal:placement)."