

Amendment to Wake County Multi-Jurisdictional Hazard Mitigation Plan Approved and Adopted Dec 2019 Annex G, Town of Holly Springs, NC

Section 4.5.1 (Dam Failure) page 61

Upon adoption by The Town of Holly Springs, NC on (date) the following is an amendment to the above referenced Multi-Jurisdictional Hazard Mitigation Plan to meet the planning requirements of the FEMA High Hazard Dam Repair Program.

Enhanced State Plan Compatibility

Dam Failure is identified as a hazard in section 3.2.7 of the 2018 Enhanced 322 Plan for NC. Extent of hazard is described in section 3.2.7.2 and includes Table 3-16 Dam Hazard Classification which provides a description of hazard classification (low, intermediate and high) with description of impacts (loss of road service, damage to infrastructure, economic damage, loss of life) and provides a set of quantitative guidelines for specific damages to establish ranking. A narrative description of the ranking process is on page 360 of the plan in Section 4.2.2.2 which describes dam safety capabilities. Section 3.2.7.3 quantifies the number of dams in the state and identifies 1,429 as high hazard dams that would pose a risk to public safety and property in the event of failure. Figure 3-26 on page 111 of the plan is a density map of the state showing the number of potential high hazard dams by count per county on the scale 0-10, 11-20, 21-30, 31-80, 81-160 as of 11/20/2017. Eight specific dam failure incidents occurring between 1976 and 2016 are identified in table 3-17 Dam Failure History.

Dam Failure Vulnerability is assessed in section 3.4.5.9, page 262 of the 2018 Enhanced 322 Plan for NC. The consequence analysis identifies six sectors that could be impacted: People (including public and public confidence) Responders, Operations/Continuity of Ops, Built environment (property, facilities, infrastructure) Economy, and Environment. Each sector includes a description of impacts, but does not suggest an impact rating (low, intermediate, high, etc)

Dam failure mitigation measures and plan amendments were developed in cooperation with NCEM, NCDEQ and local government agents.

The Town of Holly Springs, NC along with the rest of Wake County identifies Dam Failure as a hazard in Section 1.3 of the Multi-Jurisdictional Hazard Mitigation Plan. Table 4.2 on page 47 identifies Bass Lake Dam as a high-hazard dam according to NC Department of Environmental Quality Dam Safety Section analysis. Page 69 of the plan includes a hazard history which recognizes a dam failure at Bass Lake in 1996; no additional dam failures have been recorded in Holly Springs since then.

Failure of the Bass Lake Dam is addressed on page 69, 4.14 of the plan assessing impact as critical; spatial extent (in relation to Wake Co) as negligible (obviously higher for Holly Springs proper) and probability is stated as possible. The potential impacts of climate change on rainfall rates and amounts

will likely increase both probability and risk of dam failure in Wake County and Holly Springs, NC. The total risk impact priority associated with dam failure is 2.4—medium priority.

The Town of Holly Springs NC has a current Emergency Action Plan for Bass Lake Dam on file with the Dam Safety Section of the NC Department of Environmental Quality.

The Town of Holly Springs, NC hereby adopts and requests State and FEMA recognition of the following as amendments to Annex G of the December 2019 Wake County Multijurisdictional Hazard Mitigation Plan:


Annex G Amendment A: Annex G.5 Mitigation Strategy page 387 Actions S-1 and S-2 are hereby amended to include the following dam failure mitigation actions:

- 1) Geotechnical investigation to establish data for risk analysis and development of engineering designs/solutions
- 2) Build upstream dam to reduce load on existing dam
- 3) Property Acquisition in inundation area(s) below dam
- 4) Raise crest of dam to increase storage capacity
- 5) Add additional spillways, widen or lower existing spillways to increase discharge capacity
- 6) Warning systems to alert downstream areas of potential dam failure
- 7) Improve flow path below dam to increase conveyance capacity
- 8) Encourage conservation or re-forestation of upstream land to reduce runoff
- 9) Development of community Stormwater Management Plans for upstream communities
- 10) Complete an Emergency Action Plan in conjunction with NCDEQ for all High Hazard Dams in the county
- 11) Permanently breach hazardous dams, or modify risers such that dam can no longer impound water, but may still provide attenuation of peak flooding by acting as a stormwater retention feature

Annex G Amendment B: Annex G.5 Mitigation Strategy page 387 Actions S-1 and S-2 are hereby further amended to include The FEMA High Hazard Dam Repair Program as potential funding sources

Adopted this, the 17th day of August, 2021 by the Town of Holly Springs, NC

Attest:

Mayor Dick Sears  (signature)

(NAME) Town Clerk  (signature AND SEAL)



