NEW YORK STATE OF OPPORTUNITY | Department of Environmental Conservation

STREAM ACTIVITIES GP-0-20-002; ATTACHMENT 1

Community Risk and Resiliency Act (CRRA) Analysis

Name of Applicant (from Joint Application Form):			
Email:		Phone:	
Mailing Address: Street:	City:	State:	Zip:
Project Location (from Joint Application Form):			
Town (where property taxes paid):		County:	
Street Address:	City:	State: NY	Zip

To comply with the requirements of the New York State Community Risk and Resiliency Act (CRRA) and Condition No. 4.i of the Stream Activities General Permit GP-0-20-002, please complete the following questionnaire for any bridge or culvert project that will result in the disturbance of over 100 linear feet of stream bed or banks OR is considered "critical transportation infrastructure". (For each question, additional sheets may be attached, as needed.)

1. New York State Flood Risk Management Guidance for Implementation of CRRA dated August 2020 ("CRRA Flood Risk Guidance") is available on DEC's website at: https://www.dec.ny.gov/energy/102559.html . By signing below, the applicant affirms that they have access to the guidance and are aware of the guidelines pertaining to future riverine flows on pages 15 and 16, and guidelines for transportation infrastructure covered on pages 30-39 and Table 5, addressing bridges and culverts in nontidal areas.

2. Is the structure "critical transportation infrastructure", as described on page 35 of the CRRA Flood Risk Guidance? ____ Yes ____ No

   If yes, please describe the type of access or facility for which the bridge or culvert is deemed critical:

   _____

   _____

3. Is the structure a bridge or culvert? ____ Bridge ____ Culvert

4. Using the appropriate category in Table 5 of the CRRA Flood Risk Guidance, identify the design guidelines applicable to the structure that is the subject of the permit application:

   Relevant Peak Flow: _____ recurrence interval (e.g., 50-year, 100-year)
   Relevant Peak Flow Rate: _____ cubic feet per second
   Expected Service Life of structure: _____ years
   Amount of Freeboard*: _____ feet above flow elevation at projected peak flow

5. Does the proposed structure or repair meet the design guidelines identified in the CRRA Flood Risk Guidance? ____ Yes (proceed to Certification and sign form) ____ No (complete questions 6-9)

6. Please provide the following information based on the proposed design of the structure:
   Relevant Peak Flow: _____ recurrence interval (e.g., 50-year, 100-year)
   Relevant Peak Flow rate: _____ cubic feet per second
   Expected Service Life of structure: _____ years
   Amount of Freeboard*: _____ feet above flow elevation at projected peak flow

7. Based on the design differences between the information in questions 4 and 6, please describe the risks of future flooding, erosion, structural damage, or other results that would likely occur if the proposed structure is installed. If reasonably known, please also indicate potential economic impacts of the risks described.

   _____
   _____
   _____
   _____

8. Considering the information provided in response to items 6 and 7, provide an explanation of why the proposed structure cannot be installed or modified to meet, or more closely align with, the guidelines in the CRRA Flood Risk Guidance.

   _____
   _____
   _____
   _____

9. Provide any other information relevant to the proposed structure/design that demonstrates that the future risks of climate change have been considered:

   _____
   _____

Certification:

In addition to the Joint Application Form provided with this attachment, I hereby submit this form and the attachments indicated to indicate that the future risks of climate change have been considered for the proposed project, as required by the New York State Community Risk and Resiliency Act (CRRA). The project proponent hereby certifies that all information contained herein is true, accurate, and complete to the best of my knowledge and belief.

_____ _____

Project Applicant/Proponent Signature Date

_____ _____

Signature of Preparer (if different than Applicant/Proponent) Date

INSTRUCTIONS FOR SELECTED QUESTIONS

Question 2:

"Critical Transportation Infrastructure" includes bridges and culverts that meet any of the following conditions:

- The bridge or culvert provides sole access to any of the following facilities, and practical detour routes are not available in case of loss or closure of the asset:
  - facilities designed for bulk storage of chemicals, petrochemicals, hazardous or toxic substances, or floatable materials
  - hospitals, rest homes, correctional facilities, dormitories, patient care facilities
  - major power generation, transmission, or substation facilities
  - major communications centers, such as civil defense centers
  - major emergency service facilities, such as central fire and police stations
- The bridge or culvert is part of a designated evacuation route.

Question 3:

"Bridges" are structures carrying a road, path, railway line, canal, or other linear feature across a river, ravine, railroad, or other obstacle and spanning more than 20 feet through the centerline of the linear feature.

"Culverts" are structures carrying a stream or an open drain under a road, path, railway line, canal or other linear feature, and having a span of less than 20 feet through the centerline of the linear feature.

Question 4:

Responses to this question are to reflect the recommended design guidelines contained in Table 5 (pp. 31 and 32) of the CRRA Flood Risk Guidance, based on hydrologic and hydraulic analyses conducted by a qualified professional. Information on "Future Riverine Flows" on pp. 15-16 of the CRRA Flood Risk Guidance should also be used to develop the relevant design guidelines. This information indicates that flow multipliers of 110 or 120 percent should be used to increase the peak flow parameter used in the hydraulic analysis, (e.g., Q_{50}), depending on the location of the project (see Figure 3). The USGS StreamStats application referenced in the CRRA Flood Risk Guidance may be accessed at: https://streamstats.usgs.gov/ss/ . As noted in the CRRA Flood Risk Guidance (p. 30), nothing in the guidance "...shall be construed to supersede professional engineering judgment or federal and state engineering requirements and practices."

*"Freeboard" used here and in question 6 refers to either "bridge freeboard" for a bridge or "roadway freeboard" for a culvert. See pp. 32-33 of the CRRA Flood Risk Guidance for further explanation.

Question 5:

If the proposed structure or repair meets all the design guidelines in the CRRA Flood Risk Guidance, then no further analysis is needed, and the form may be signed and provided with other permit application materials. If the structure or repair does not meet all the design guidelines, the rest of the form must be completed.

Question 6:

Responses to this question must reflect the design capacity and information for the proposed structure or repair based on hydrologic and hydraulic analyses conducted by a qualified professional. The information is to be compared to the information provided in the response to question 4.

Question 7:

The response provided to this question should generally describe the physical consequences and, if reasonably known, the economic consequences of structure failure or overtopping from flood waters.