Decision Criteria

1. **Fish survival area** (hundreds of square meters): proxy criteria estimated as possible upstream sea-run fish (Atlantic salmon, Alewife, Blueback herring, American eel) biomass calculated using functional habitat units (Roy et al., 2018).
2. **River recreation area** (square kilometers): estimated downstream area of river that may increase or decrease with a dam decision alternative, combines functional area for whitewater and flatwater recreation defined by Roy et al. (2019).
3. **Reservoir storage** (cubic kilometers): estimated storage potential of the reservoir, based on its volume (Roy et al., 2018).
4. **Annuitized project costs** (2018 $USD/yr): estimated total project costs (capital and operation & maintenance) on an annual basis using a 6.2% discount rate and a 20 year lifetime.
5. **Number of properties impacted**: estimated number of properties impacted by the decision alternative, based on potential changes in viewshed or property value (Roy et al., 2018).
6. **Breach damage potential** (unitless): a proxy for safety based on the State hazard rating, which indicates the potential for downstream property damage, injury, and death in the case of dam breach (Roy et al., 2018).
7. **Annual electricity generation** (GWh/yr): average estimate based on nameplate capacity from FERC licenses for each hydropower project.
8. **Annual carbon dioxide (CO2) emissions reduction** (metric kilotonnes per year): estimate of avoided carbon dioxide emissions from annual hydropower-generated electricity production; based on decreasing generation from the State's electricity generation mix; does not include life cycle emissions impacts.
9. **Indigenous cultural traditions and lifeways** (unitless): rating to convey the importance of the dam for preserving/restoring the culture and practices of indigenous people.
10. **Community identity** (unitless): rating to convey the importance of the dam for preserving the existing community identity for residents living along or on islands within the river.
11. **Industrial historical importance** (unitless): rating to convey the importance of the dam for preserving/restoring the industrial history of the site.
12. **Aesthetic value** (unitless): rating to convey the importance of improving or preserving aesthetics (e.g., appearance, scenic value, smell, sound).
13. **Public health** (unitless): rating to convey the importance of public health, which is connected to air, water, and land pollution.
14. **Socio-environmental justice** (unitless): rating to convey the importance of socio-environmental justice issues (e.g., negative environmental effects that target disadvantaged groups – people of lower socio-economic status or with less political or economic power).