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CLIMATE RESILIENCE DESIGN GUIDANCE

SITE SUITABILITY FORM

The Site Suitability Form is one form in a series (that also includes the Regional Coordination Form and Flexible Adaptation Pathways Form) that accompany and supplement the Climate Resilience Design Standards Tool and Climate Resilience Design Guidance. This **optional form** serves to document additional project information and encourage consideration of climate resilience in project planning and design.

A. CONTEXT

The Climate Resilience Design Standards and Guidance includes:

- **Climate Resilience Design Standards Tool:** a web-tool that provides a preliminary climate hazard exposure and risk screening and recommended climate resilience design standards for projects with physical assets within the Commonwealth of Massachusetts
- **Climate Resilience Design Guidance:** considerations, best practices, and forms to inform integration of **Climate Resilience Design Standards Tool** outputs in preliminary planning and design.

There are several forms associated with the Climate Resilience Design Guidance: Project Form, Site Suitability Form, Regional Coordination Form, and Flexible Adaptation Pathways Form. The forms are structured as follows:

Form Name	Abbreviation	Complete For...	Submission Process
Project Form	N/A	Project Questions: Overall Project	Only submit this form if the web-tool is inaccessible. Please follow instructions of your grant and other application process.
		Asset Questions: Each Asset	

Form Name	Abbreviation	Complete For...	Submission Process
Site Suitability Form	Form-SS	[Optional] Overall Project	Submit these optional forms as a complete package to supplement your grant application or other process.
Regional Coordination Form	Form-RC	[Optional] Overall Project	
Flexible Adaptation Pathways Form	Form-AP	[Optional] Overall Project	

B. SITE SUITABILITY FORM OVERVIEW

The Site Suitability (SS) considerations support site selection, including evaluation of a project's geographic location, existing conditions, and asset placement. Users should assess and re-assess site suitability early in the planning and design phase so that the location and assets can serve intended functions and permitted activities, before, during and after climate impacts. These Site Suitability considerations do not include adaptation strategies and are focused on the potential ability of project site to reduce exposure to climate change, mitigate adverse climate impacts and/or provide benefits, and protect, conserve, and restore critical natural resources on-site and off-site. The considerations and best practices do not provide direct guidance on current regulations or permitting requirements, therefore users should review the current regulatory environment, as relevant to the site, including those elements that govern allowable and permitted activities. Once users have considered Site Suitability, an assessment should be made whether or not to proceed with the project in the planned location.

The Site Suitability Form (Form-SS) is an optional form and recommended for completion as part of the Climate Resilience Design Standards and Guidance process.

The Site Suitability considerations and questions are structured into three best practices:

- SS-1.** Reduce exposure to climate hazards
- SS-2.** Mitigate adverse climate impacts and provide benefits
- SS-3.** Protect, conserve, and restore critical natural resources on-site and off-site

C. FORM QUESTIONS

Provide the responses to the following questions related to the **overall project** to the best of your knowledge. The Site Suitability best practices provide a framework for responding to the questions in conjunction with the project outputs of the Tool.

SS-1 Reduce exposure to climate hazards.

The location of the project has planning and design implications and directly informs preliminary climate hazard exposure ratings from the Tool. If you receive a high or moderate preliminary exposure rating, you may want to consider alternative site locations early in the project planning phase. There may be physical assets where this is unfeasible. In that case, additional consideration should be given to how the location of the project could mitigate climate impacts (SS-2) as well as incorporate flexible adaptation pathways (AP).

- *Example Case Study:* MassDOT District Maintenance Facility Relocation, Milton, MA
- *Case Study Relevance:* Site-specific climate hazard exposure was an important driver for this project, which resulted in the relocation of a district maintenance facility that was originally planned as a retrofit to an existing Fuel Depot. Given the planned asset's high criticality and near-term exposure to coastal flooding, the project team decided to select an alternative site for the new district maintenance facility.

SS-1 QUESTIONS

SS-1.1 Does the site currently support the function of major physical assets as identified in Project Inputs of the Tool? ☐ Yes ☐ No

SS-1.2 What makes this site desirable? Does the function, history, or asset's community significance require this specific location?
Click or tap here to enter text.

SS-1.3 Are there notable elevation changes on-site that may expose the assets to additional risk (such as increased water flow or erosion)? ☐ Yes ☐ No

If yes, identify and describe. Click or tap here to enter text.

SS-1.4 Are there other locations where this asset could be relocated away from coastal and/or riverine flooding exposure, particularly high exposure areas (such as FEMA A or V Zones, etc.)? Click or tap here to enter text.

If not, what makes the relocation unfeasible or impractical at this time? [Click or tap here to enter text.](#)

SS-1.5 Are there other on-site locations where critical assets can be relocated away from coastal and/riverine flooding exposure and impact? ☐ Yes ☐ No

SS-1.6 Is access to the site threatened by current or future flood impacts? ☐ Yes ☐ No

If yes, describe. Click or tap here to enter text.

SS-2 Mitigate adverse climate impacts and provide benefits.

If alternative sites with lower exposure rating scores are unfeasible for your project, there may be opportunities to reduce climate impacts as a result of the site's location and planned improvements. For example, placing a flood barrier at the location of the initial flood pathway versus end of the flood pathway will provide more flood protection. This holds true for opportunities to increase stormwater detention and infiltration in upgradient areas of the watershed and/or cooling centers in the middle of heat islands.

- *Example Case Study:* Draw 7 Park Flood Barrier, Somerville, MA

- **Case Study Relevance:** Located at the mouth of the Lower Mystic River watershed, the project's preliminary exposure ratings for both coastal and riverine flooding are high. The planned project was to revitalize the existing recreational park on the site. Based on the preliminary sea level rise and storm surge exposure and risk rating, the project team identified that the park revitalization scope could be expanded to include flood protection and a living shoreline. Additional flood modeling prepared for regional efforts showed that the site is a major flood pathway and allows future flanking of the adjacent Amelia Earhart Dam. Refer to regional coordination (RC-2) for additional information.

SS-2 QUESTIONS

SS-2.1 Could the site provide opportunity for the following at the neighborhood scale?

SS-2.1.1 Coastal flood protection? ☐ Yes ☐ No

SS-2.1.2 Inland stormwater protection? ☐ Yes ☐ No

SS-2.1.3 Extreme heat mitigation? ☐ Yes ☐ No

SS-2.2 Do any of the abovementioned site opportunities provide additional social or co-benefits? ☐ Yes ☐ No

If yes, identify and describe. Click or tap here to enter text.

SS-2.3 What benefits are provided directly to populations in Environmental Justice neighborhoods or climate vulnerable populations?

Click or tap here to enter text.

SS-2.4 Will the project require removal of existing infrastructure or structures? ☐ Yes ☐ No

If yes, describe. Click or tap here to enter text.

SS-2.5 How will adverse impacts (to the surrounding neighborhood) be mitigated (whether during demolition, remediation, construction, or operation)? Click or tap here to enter text.

SS-2.6 Could the site provide assets or resources for neighborhood scale or regional emergency operations (such as staging, logistics/distribution, sheltering, response)?

☐ Yes ☐ No

SS-3 Protect, conserve, and restore critical natural resources on-site and off-site.

The planned improvements at the site location may have detrimental impacts to critical natural resources on-site and off-site. Site Suitability should consider impacts to natural resources and ways to protect, conserve, and restore these natural resources. Site recommendations include avoiding or minimizing the disruption of existing native vegetation and trees, and incorporating the restoration of existing degraded areas on-site that are barren, compacted, or dominated by invasive plant species with native species. Asset Owners and project teams should assess what type of natural ecosystems currently exist on the site and include as Natural Resource assets in the Climate Resilience Design Standards Tool.

- *Example Best Practice:* Land conservation as resilience – Land Trust Alliance, Conservation in a Changing Climate [Webpage](#)
- *Practice Relevance:* This comprehensive webpage provides a variety of resources, best practices, and tools that help designers, planners, and the general public better understand land trusts and their importance as a tool in planning for climate change. It takes users through a framework for learning and planning in a step-by-step manner and user-friendly format. The resources are U.S. specific and place-based, supported by the U.S. Fish and Wildlife Service.

SS-3 QUESTIONS

SS-3.1 What type of natural resources currently exist at the site (forest, grassland, freshwater, wetland, estuary, ocean/coastal)? Click or tap here to enter text.

SS-3.1.1 As planned, would the project impact natural resources currently existing at the site? ☐ Yes ☐ No

SS-3.2 Is the site an urban, semi-urban, or rural location? Click or tap here to enter text.

SS-3.3 Is there published data or evidence of endangered species at the site or that use the site? ☐ Yes ☐ No

If yes, please provide a source or sources. Click or tap here to enter text.

SS-3.3.1 As planned, would the project impact endangered species at the site or that use the site? ☐ Yes ☐ No

SS-3.4 From currently accessible information and data, will environmental remediation be necessary or likely? ☐ Yes ☐ No

If yes, describe. Click or tap here to enter text.

SS-3.5 Is protection, conservation, or restoration of natural resources planned for implementation on site? How so? Click or tap here to enter text.