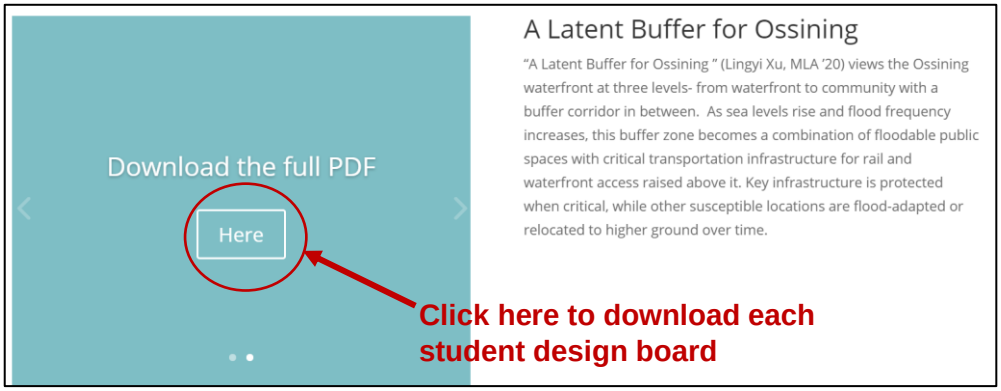
REQUEST FOR PROPOSALS: Climate-adaptive Design Phase II

Appendix D: Additional Resources for Developing Your Proposal

Helpful reference materials that may be useful in preparing your project proposal

I. *CaD Studio student conceptual design boards* from CaD Studio

Available online and downloaded at the following links (click right arrow on the image for each design board and select "Download the Full PDF").



Village of Catskill

- Student design board (1): https://trophic.design/cad/catskill/

City of Hudson

- Student design boards (4): https://trophic.design/cad/hudson/

City of Kingston*

- Rondout East Strand, Student design boards (8): https://trophic.design/cad/kingston-iii/
- Block Park, Student design boards (5): https://trophic.design/cad/kingston-i/
- CaD Kingston Lookbook: https://trophic.design/200225-kingston-lookbook-high-res/
- CaD Kingston Public Exhibition Posters: https://trophic.design/wp-content/uploads/2019/05/2019-05-06-Kingston-Exhibit-Full-Set_web.pdf

Town and Village of Ossining

- Student design boards (10): https://trophic.design/cad/2019-ossining/
- CaD Ossining Lookbook: https://trophic.design/wp-content/uploads/2020/10/CaD-Ossining-LookBook.pdf
- CaD Ossining Public Exhibition Posters: https://trophic.design/wp-content/uploads/2020/10/200630-Ossining-Exhibition-.pdf

*Site locations that received Climate-adaptive Design Phase II funding in 2019 are not eligible for this RFP and include Kingston Point Beach and Village of Piermont.

II. Principles of Climate-adaptive Design

The design process and implementable project developed through this work should:

- meet the standards for receiving all applicable state and local permits and be justifiable as reasonable and necessary,

- consider up-to-date maps and data (see links below for regional climate projections and mappers for flooding and tidal wetland migration, etc.) on current and future projected conditions,
- adequately and cost-effectively withstand flood and erosion risk now and over the life of the project,
- be cost-effective over the long term given operation, ongoing maintenance and replacement costs,
- maintain and add ecological value to the site(s) by conserving or restoring existing natural features and their potential pathways to migrate over time (for example, wetlands moving upland with sea-level rise),
- improve or create water-dependent or water-enhanced uses and/or relocate water-independent uses out of risk areas,
- aim to improve Diversity, Equity, and Inclusion (DEI) and mitigate negative impacts like green gentrification,
- create new opportunities for public access, education and/or interpretation that can be enjoyed throughout the year, and
- address contaminated soils, brown fields, etc.

III. Guidance and resources for the Hudson Valley region

- See examples of completed CaD Phase II projects in this Sustainable Shorelines webinar recording: Resilient Hudson River Shoreline Designs from CaD Phase II in Kingston and Piermont 2020
- Climate Projections for the Hudson Valley https://wri.cals.cornell.edu/hudson-river-estuary/climate-change-hudson-river-estuary/helping-communities-become-climate-resilient/climate-projections-nys/
- Hudson River Flood Impact mapper: http://www.ciesin.columbia.edu/hudson-river-flood-map/
- Hudson River Sustainable Shorelines: https://www.hrnerr.org/hudson-river-sustainable-shorelines).
    - Resources for Planning, Designing, Constructing, and Maintaining a Nature-Based Shoreline Protection Project (PDF): https://www.hrnerr.org/wp-content/uploads/sites/9/2020/12/SustainableShorelineBrochure-final-mv-web3.pdf
    - Handbook: Managing Shorezones for Ecological Benefit (PDF): https://www.hrnerr.org/wp-content/uploads/sites/9/2019/02/273743856-Shorezones-Handbook-3.pdf
    - Case Studies: Demonstration Site Network: https://www.hrnerr.org/hudson-river-sustainable-shorelines/demonstration-site-network
    - Design considerations https://www.hrnerr.org/hudson-river-sustainable-shorelines/design-considerations
    - Regulatory guidance https://www.hrnerr.org/hudson-river-sustainable-shorelines/regulatory-guidance
- Protecting the Pathways: Sea-Level Rise Affecting Marsh Migration https://scenichudson.maps.arcgis.com/apps/MapSeries/index.html?appid=9190b7560a574ad69cd91b43e383b203
- Scenic Hudson's Revitalizing Hudson Waterfronts https://www.scenichudson.org/sites/default/files/u2/revitalizing-hudson-riverfronts.pdf
- NYS WRI Resources for Adapting: https://wri.cals.cornell.edu/hudson-river-estuary/climate-change-hudson-river-estuary/resources-resilience/

- Climate-adaptive Design Studio (Phase I): https://wri.cals.cornell.edu/hudson-river-estuary/climate-change-hudson-river-estuary/climate-adaptive-design/
- Advancing Climate-adaptive Design (Phase II): https://wri.cals.cornell.edu/hudson-river-estuary/climate-change-hudson-river-estuary/climate-adaptive-design/implementing-climate-adaptive-designs/

IV. New York State Guidance and Resources

- NYSGIS Clearinghouse: http://gis.ny.gov/gisdata/inventories/details.cfm?DSID=1136
- NYS Climate Change Clearinghouse: https://www.nyclimatescience.org/
- Natural Heritage Database: https://www.ncnhp.org/
- NYS WRI Funding climate adaptation & resilience: https://wri.cals.cornell.edu/hudson-river-estuary/climate-change-hudson-river-estuary/helping-communities-become-climate-resilient/funding-climate/

The Community Risk and Resiliency Act

The Community Risk and Resiliency Act (CRRA) requires state agencies and applicants to consider future physical climate risks including storm surge, sea-level rise, flooding, and extreme weather events in certain permitting, funding, and regulatory actions. The use of natural resilience measures to reduce these risks is imperative to protecting our state's communities and environment. New York has made reducing these risks a priority for the state. For more information, see these resources:

- Model Local Laws to Increase Resilience
- Using Natural Measures to Reduce the Risk of Flooding (PDF)
- State Flood Risk Management Guidance (SFRMG) (PDF)
- Estimating Guideline Elevations (PDF)
- Guidance for Smart Growth Public Infrastructure Assessment (PDF)
- Sea-level Rise Projections (6 NYCRR Part 490)

Time Range	2020s	2050s	2080s	2100
Mid-Hudson Valley Region Sea-level rise (inches)	Up to 9	Up to 27	Up to 54	Up to 71
Lower Hudson Valley/NYC Region sea-level rise (inches)	Up to 10	Up to 30	Up to 58	Up to 75

Climate Smart Communities Enhance community resilience to climate change through the adaptation-focused Pledge Element 7

Climate Smart Communities is a community certification program of the DEC Office of Climate Change. Municipalities can complete a range of actions to become certified, focused on climate change mitigation and adaptation. The following actions from Pledge Element 7 are relevant to concepts supported by this RFP.

- PE7 Action: Climate Vulnerability Assessment
- PE7 Action: Evaluate Policies for Climate Resilience
- PE7: Climate Adaptation Plan
- PE7: Shade Structures Policy

- PE7: Conserve Natural Areas
- PE7: Green Infrastructure
- PE7: Culverts and Dams
- PE7: Riparian Buffers
- PE7: Strategic Relocation
- PE7: Nature-Based Shorelines
- PE7: Source Water Protection
- PE7: Water Conservation & Reuse
- PE7: Water-smart Landscaping

V. Diversity, Equity, Inclusion and Justice (DEIJ) resources

- Inclusive Planning for Community Resilience: https://wri.cals.cornell.edu/hudson-river-estuary/climate-change-hudson-river-estuary/resources-resilience/inclusive-planning-community-resilience/
- Sustainable CT Equity Toolkit: https://sustainablect.org/fileadmin/Random_PDF_Files/Files_and_Resources/SustainableCT_EquityToolkit_January2019.pdf
- Example of stakeholder engagement from Kingston's Climate-adaptive Design Phase II process in 2019-2020: https://engagekingston.com/kingston-point-climate-adaptive-design
- Whole Measures for Urban Conservation (PDF), The Nature Conservancy: https://www.nature.org/content/dam/tnc/nature/en/documents/Whole_Measures_for_Urban_Conservation_11-2017.pdf
- Workforce Diversity and Inclusion Strategic Plan, NYSDEC (PDF): https://www.dec.ny.gov/docs/administration_pdf/wfdiplan.pdf
- Office of Environmental Justice, NYS DEC: https://www.dec.ny.gov/public/333.html
- Diversity, Equity, and Inclusion Commitment Statement, NEIWPCC (PDF): http://neiwpcc.org/wp-content/uploads/2021/01/DEI-Commitment-2020_final_01.15.2021.pdf

Guidance on creating an inclusive planning process from Climate Smart Communities

An inclusive planning process values, includes, and works with a fair representation of citizens from the community and is essential to completing this action. Local governments should develop or update a climate adaptation plan using an inclusive planning process that includes all stakeholders from the very beginning, such as: residents, local leaders, businesses, employers, schools, landowners and tenant organizations, local farmers, local government entities representing all sectors, transportation entities, utilities, healthcare providers, community-based organizations, churches, and all others affected. Representation ideally will reflect the demographic makeup of the community's residents.

It is essential to include underrepresented and marginalized communities who may be at greater risk from climate change impacts. Groups to specifically target include black, indigenous, and people of color (BIPOC) communities, immigrants, low-income residents, people with disabilities and/or chronic health conditions, people who speak English as a second language, lesbian, gay, bisexual, transgender and queer (or questioning) and other (LGBTQ+) residents, individuals experiencing homelessness, youth, seniors, rural and urban residents, and residents of dwellings with greater exposure to the impacts of climate change (e.g. flooding, heat).

Remember that these groups are not a monolith, and outreach will look different from group to group and from community to community. Working with a diversity of stakeholders across sectors and scales will likely increase the quality of potential adaptation strategies, provide opportunities for new partnerships, and help build local support for implementing your plan.

Best practices for inclusive stakeholder engagement

- Commit to listening and learning; focus on asking open-ended questions.
- Be patient and process-oriented (as opposed to goal-oriented).
- Build long-term relationships to pursue projects that have tangible benefits for the community.
- Expand and diversify partnerships with community-based organizations whose scopes go beyond environmental work.
- Engage residents of most heavily impacted neighborhoods as leaders in the process.
- Increase the internal capacity of the adaptation subcommittee to incorporate equity considerations by completing antiracism and/or equity and the environment trainings; see resources below in Section G.
- For project communications, use multiple platforms to reach as much of your community as possible, including social media, emails, websites, and other virtual means as well as printed materials posted in public spaces/events and mailed to residents (e.g., on the back of their water bill).
- Consider the following guidance for events:
    - Advertise events through outreach venues used by target audience.
    - Offer events at a time of day/day of week that is most convenient for working people, or in conjunction with existing community meeting and events.
    - Offer events in target neighborhoods at trusted locations (e.g., churches/community centers).
    - Offer childcare, food and stipends to event attendees.
    - Be willing to alter meeting plans and processes if they are not working well for participants.
    - Address historical injustices and current inequities that impact residents.
    - Employ a peer-to-peer, rather than “expert lecturer” approach.
    - Compensate an organizer from within the community.
    - Simplify and translate outreach messages to be more easily accessible.

Read more from *PE7 Action: Climate Adaptation Plan*: https://climatesmart.ny.gov/actions-certification/actions/#open/action/88