

Top Ten Factors

when considering a cobble berm

Cobble berms are an effective and resilient nature-based approach for coastline protection. What factors should you keep in mind when considering a cobble berm?

Initial Considerations

- 1 Define the resiliency goals at your site**
Identify community goals for your project (like reducing erosion) and the physical processes threatening your site (like water levels, wave action, and strong currents).
- 2 Assess site compatibility for a cobble berm**
Confirm that the project area naturally has cobbles, either at the site or directly adjacent to it. Be sure that the physical footprint of your project is large enough for the cobble berm to shift over time.
- 3 Identify partnerships and funding opportunities**
Seek out information and expertise that may be relevant to your project. Reach out to local or state environmental agencies that can help guide you along this process and identify funding sources.

Approach Benefits

- 7 Mimic the natural environment**
Cobble berms imitate naturally-occurring coastlines, and dynamically respond to stressors such as erosion and storms.
- 8 Preserve and protect community spaces**
Enhance coastal resilience by safeguarding community areas such as public parks and coastal access routes, ensuring shoreline access for recreation.
- 9 Support coastal ecosystems over time**
Nature-based coastal protection introduces habitats for local plants and wildlife, supporting biodiversity while aligning with coastal stabilization goals.

Engineering Criteria

- 4 Partner with professionals to evaluate design options**
Seek out expert guidance to help confirm that the existing physical processes and site conditions are appropriate for a cobble berm project.
- 5 Design a suitably sized cobble berm**
Collaborate with experts to design a cobble berm with a suitable project footprint, slope, and cobble size specific to your site and resilience goals.
- 6 Identify a source of cobbles**
Look for an offsite upland source for cobbles matching the existing sediment at your site (typically 3 – 10 inches in size). Be sure to select rounded, not crushed, stone to allow the cobbles to move freely.

Guiding Principles for Success

- 10 There is no "one size fits all" solution for coastal resilience.** Each project is unique and presents its own opportunities and challenges. Careful planning, engineering, and regular monitoring and maintenance are essential for the success of any project. Unlike "traditional" gray infrastructure, cobble berms are adaptable to coastal climate challenges and provide numerous co-benefits to local communities and ecosystems.

To ensure success, projects should:

- Consult with engineering experts or other qualified professionals.
- Actively engage with local and state regulatory agencies.
- Minimize impacts while maximizing ecosystem benefits.
- Develop a tailored monitoring and maintenance plan.