Outline

- ESLR Overview
- Funding Opportunity
- Questions

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ESLR Overview

- **<u>Goal</u> -** Facilitate informed adaptation planning and coastal management decisions through a multidisciplinary research program that results in integrated models and tools of dynamic physical and biological processes capable of evaluating vulnerability and resilience under multiple sea level rise (SLR), inundation, and management scenarios.

- **<u>Eligibility</u> -** academic, federal, state, and private sector.

- **Approach**
  - **Collaborative science/management approach;**
  - **User-driven and outcome oriented;**
  - **Sound science to inform decision making.**

ESLR Overview

Project Key
★ Active
★ Prior

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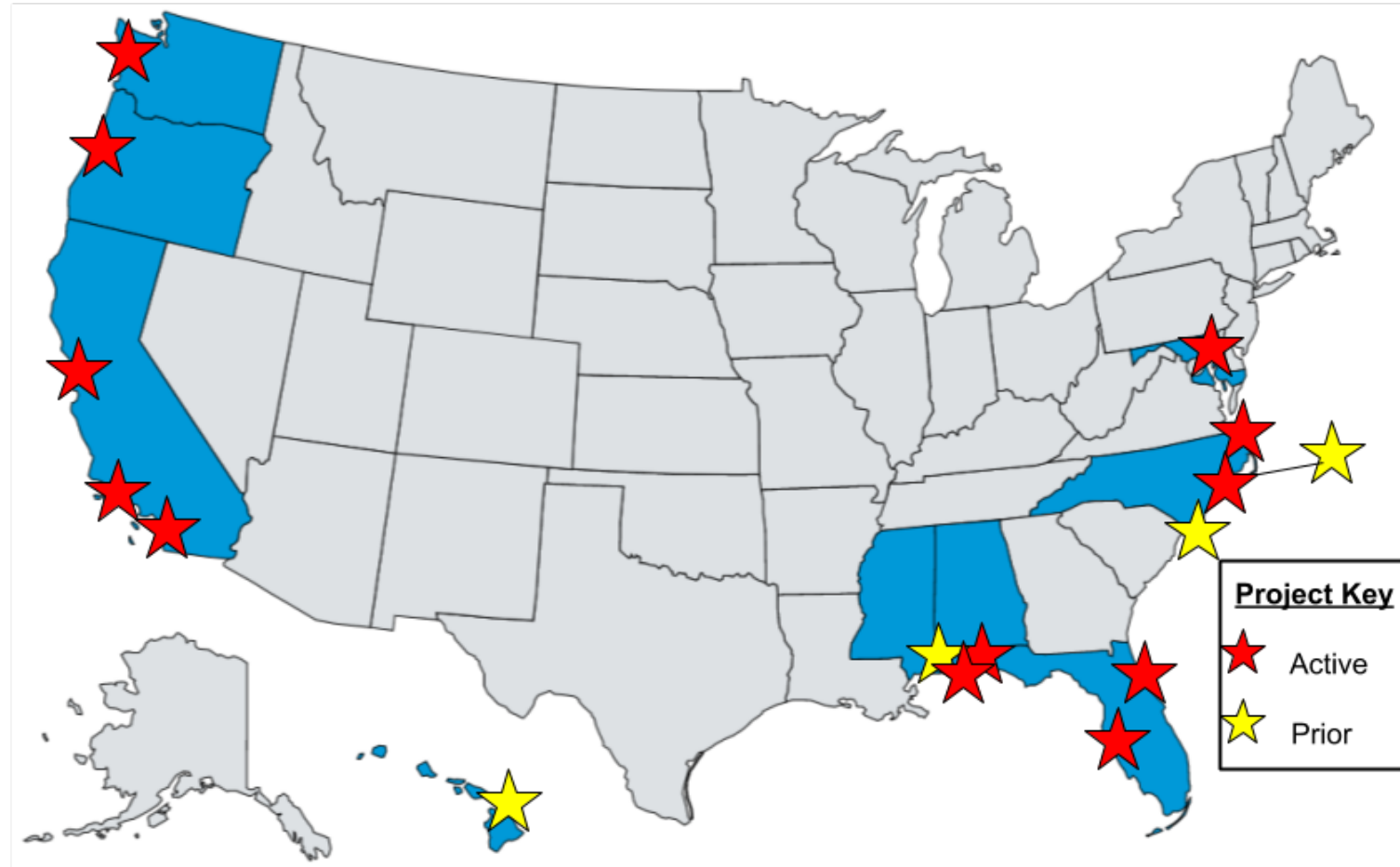
ESLR Overview

- ## Definitions:
  - Natural features are existing ecosystems including coastal marshes and wetlands, dune and beach systems, oyster and coral reefs, forests, coastal rivers and floodplains, and barrier islands that provide multiple benefits to communities, such as storm protection through wave attenuation or flood storage capacity and enhanced water services and security.
  - Nature-based features (or green/grey infrastructure) are engineered systems where natural features are built or combined with hard or structural engineering approaches (i.e., conventional traditional, or grey approaches) to create a hybrid system such as in a living shoreline or dune with a buried sea wall.
  - Surface Transportation – This includes road, rail, and public transportation.

FY2021 Funding Opportunity has Two Focus Areas

- Two Focus Areas:
    1. **Coastal Resilience Focus Area**
        - 2-4 projects; $200-400k per year for 2-4 years
        - focuses broadly on mitigating impacts of inundation on coastal ecosystems, communities, and infrastructure (excluding a principle focus on surface transportation infrastructure)
    2. **Surface Transportation Resilience Focus Area**
        - 2-4 projects; $200-500k per year for 2-4 years
        - focuses on evaluating NNBF approaches for surface transportation infrastructure, including road, rail, and public transportation

FY2021 FFO Coastal Resilience Focus Area Priorities

1. Quantify the vulnerability of coastal communities, infrastructure, and ecosystems due to SLR and inundation, based on shoreline condition through the advancement of existing predictive approaches, field-based studies and/or dynamic models;

2. Quantify the social, economic, and/or ecological benefits that natural and nature-based features provide for communities, infrastructure, and ecosystems in comparison to grey protective infrastructure with respect to the risk of inundation under future SLR;

3. Predict the effects of SLR and inundation on ecosystems, and/or communities and infrastructure under varying risk management strategies to inform technical and policy actions that increase long term coastal resilience.

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FY2021 FFO Surface Transportation Resilience Priorities

1. Quantify the vulnerability of surface transportation systems to SLR and inundation, based on shoreline condition through advancing existing predictive approaches and dynamic models that could include field based studies (required). NCCOS/CRP specifically seeks to fund at least one proposal that will include a focus on both the following two sub-priorities:

   - Enhance hydrodynamic model resolution to allow for localized and regional surface infrastructure vulnerability assessments (optional), and;

   - Quantify the relationship between inundation and surface transportation asset deterioration (optional).

2. Quantify the social, economic, and/or ecological benefits that NNBF provide for communities, infrastructure, and ecosystems in comparison to conventional (i.e., grey) protective infrastructure with respect to the risk of inundation under future SLR (required); and,

3. Predict the effects of SLR and inundation on surface transportation infrastructure under varying risk mitigation and management strategies, including-protective benefits of the NNBF scenarios, in order to inform technical and policy actions that increase long term transportation infrastructure resilience (required).

FY2021 FFO Additional Comments for Priorities

- Proposed new or novel modeling approaches require significant justification and explicit end-user demand for funding;

- Where possible, proposals should build on and leverage existing research and prior projects;

- Ecosystem service assessments of NNBF must explicitly include coastal protection provided by the feature.

- Regional evaluations of suites of NNBF approaches are preferred over a local focus.

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FY2021 FFO Collaborative Science Process

- Proposals should apply a highly integrated and collaborative management-science approach and outline a continuous engagement process with relevant end-users that clearly defines management linkages and drivers.

- Management linkages could include, but are not limited to: end-users serving on the project team, pre-project meetings, annual workshops, training on application of information or tools, and inclusion of selected managers on coordination calls where local knowledge and natural resource management issues can help guide objectives and methods.

- In both focus areas, the quality of the applied science and basic science are valued equally (combine to represent 70% of the scoring criteria).

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FY2021 FFO Collaborative Science Process Continued

- We encourage the inclusion of a MTAG, and/or a dedicated principal investigator focused on coordinating end-user engagement.

- Examples of possible partners and possible results and outcomes of the applied and/or enhanced management capabilities are described for each focus area in the FFO.

- Proposals should clearly demonstrate the value added of the proposed work, partnerships, and, where possible, leverage related regional efforts

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Interdisciplinary Project Teams are most Successful

- Successful proposals are usually highly interdisciplinary and can include ecologist, biologists, chemists, engineers, economists, social scientists, and/or lawyers.

- For the Surface Transportation Resilience focus area, it is expected that individuals who develop, design, build, and/or manage transportation infrastructure will be part of the project team, which could include transportation planners, engineers, and environmental specialists at state departments of transportation, local transportation agencies, and metropolitan planning organizations.

Questions?

LOI is **required** to submit a full proposal, see FFO for details

LOI is due October 16 by 11:59 PM ET

LOI Evaluated for responsiveness to FFO, all LOI can submit a proposal

LOI Feedback provided in approximately 2 weeks

Full proposals due January 7 by 11:59 PM ET

Please email Trevor.Meckley@noaa.gov with questions.

See ESLR Website for link to funding opportunity and webinar recording: https://coastalscience.noaa.gov/research/coastal-change/ecological-effects-sea-level-rise-program/