

The White House Roadmap for Accelerating Implementation of Nature-based solutions

CFN | Duke University 2024

Lydia.Olander@Duke.edu

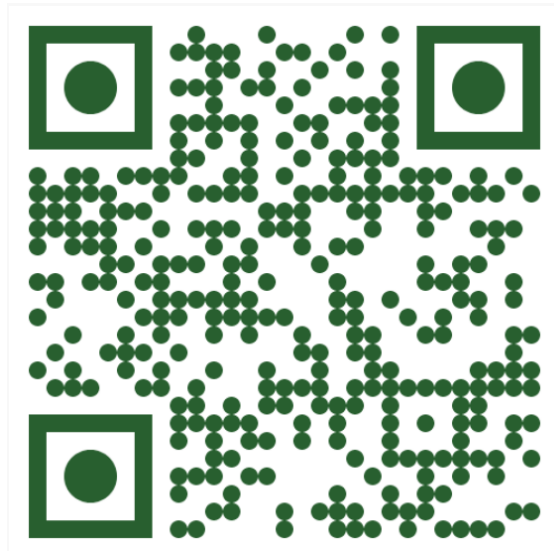


Happy Earth Week!

**Biden-Harris Administration Launches
Conservation.gov**

Conserved 41M acres over last 3 years

On track to meet 30x30



Executive Order Earth Day 2022

- EO 14072 Strengthening the Nation's Forests, Communities and Local Economies
 - **Sec. 4 .** *Deploying **Nature-Based Solutions** to Tackle Climate Change and Enhance Resilience*
 - 1. Report on key opportunities for greater deployment of nature-based solutions** across the Federal government, including through policy, guidance, and program changes
 - 2. Guidance on valuation of ecosystem and environmental services and natural assets** in Federal regulatory decision-making
 - 3. National Nature Assessment**

What Are Nature-Based Solutions (NBS)?

*Nature-based solutions are actions to protect, sustainably manage, or restore natural or modified ecosystems to address societal challenges, simultaneously providing **benefits for people and the environment.****

- *Provide a common vision & term*
- *Elevate NBS as go to tool for climate, nature & equity*
- *Decades of experience – Ready to scale*
- *Strategic path for acceleration*
- *With special attention for areas with federal investment – infrastructure & climate*

* Definition from White House Report 2022.

THE WHITE HOUSE

OPPORTUNITIES TO ACCELERATE NATURE-BASED SOLUTIONS: A ROADMAP FOR CLIMATE PROGRESS, THRIVING NATURE, EQUITY, & PROSPERITY

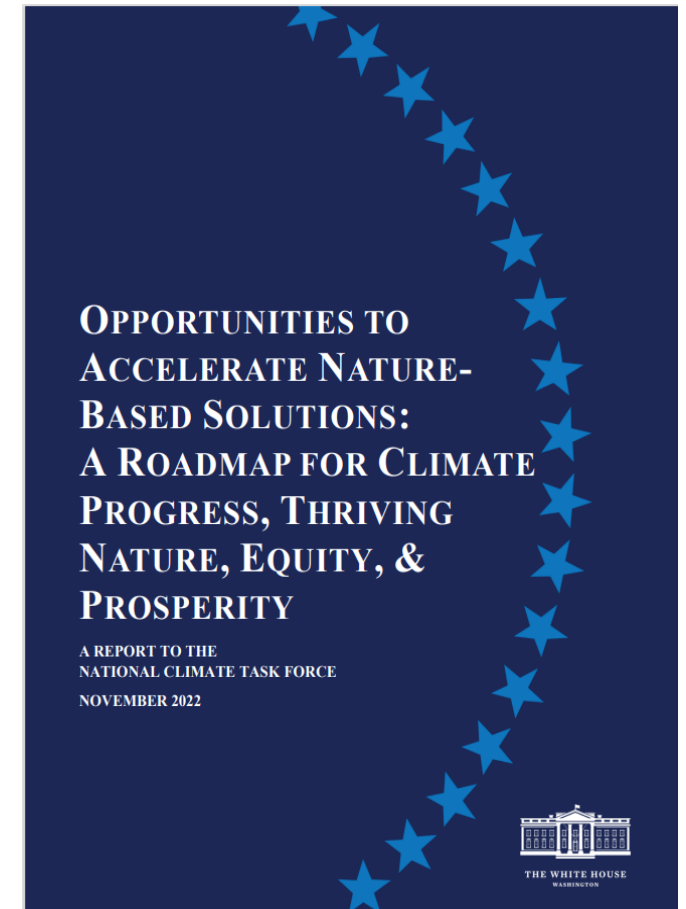
A REPORT TO THE NATIONAL CLIMATE TASK FORCE
NOVEMBER 2022

Block with evergreen
Locate tree or east of
Shade A/C Unit

NBS EVERYWHERE!!!

*Got to address the barriers.
Financing alone will not get us there.*

1. Policy
2. Funding
3. Federal Assets, Lands & Waters
4. Workforce
5. Evidence & Innovation



1.POLICY

Account for Nature: Benefit–Cost Analysis



- Benefit-cost analysis underpins decisions on major regulations, programs and funding
- Costs and benefits from changes in environment often not fully accounted for—missing costs & opportunities
- Modernizing Regulatory Review
 - Updated federal guidance on regulatory review, BCA, and adding **a new guidance on ecosystem services**

1.POLICY

Expedite NBS permitting and review



- New interagency subcommittee on permitting launched 2023
- Review of permitting and review processes required for NBS across federal agencies
- Collecting examples of permitting and review solutions that could expedite the process

1. POLICY

Include NBS in Alternatives & Strengthen use of NBS in hazard mitigation

Federal Flood Risk Management Standard

FEMA Building Community Resilience with NBS [Building Community Resilience With Nature-Based Solutions, Strategies for Success \(Nature Based Solutions Guidebook 2023\)](#) ([fema.gov](https://www.fema.gov))

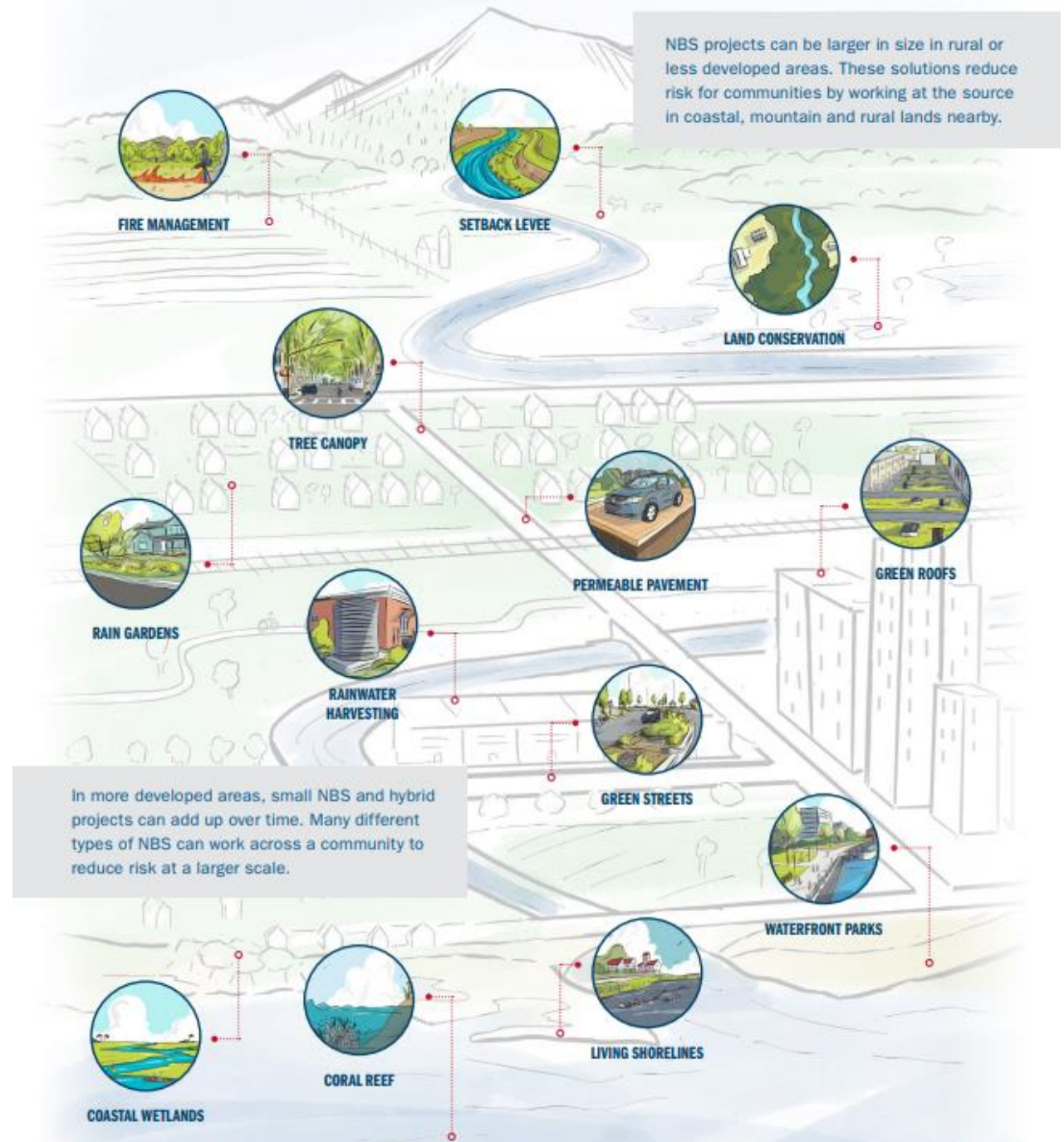


FIGURE 3: Using different NBS across rural to urban landscapes.

New Online Tool for implementing FFRMS

Includes section on nature-based solutions

Federal Flood Standard Support Tool (Beta)

Launch Tool

Background

Nature-Based Solutions

Resources

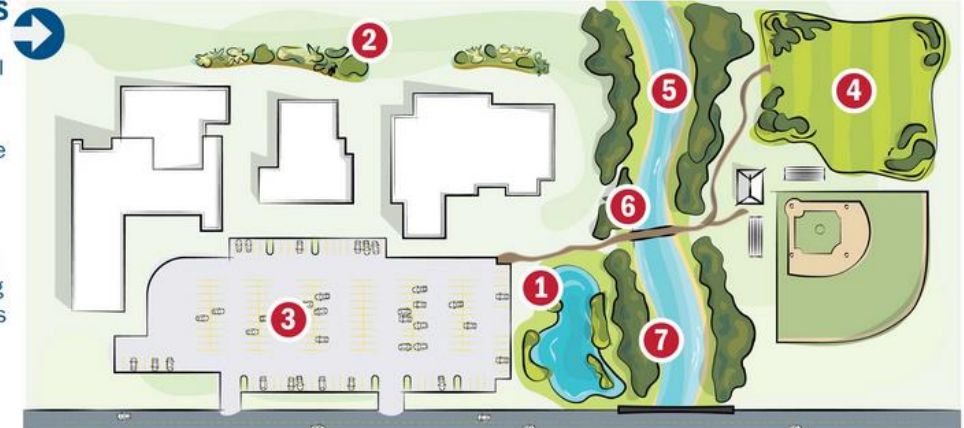
Status Map



Nature-Based Solutions

NATURE-BASED SOLUTIONS FOR PROJECT CONSIDERATION

The implementation of natural features and nature-based solutions could result in a reduced need or could replace more traditional flood control measures such as floodwalls by increasing ground infiltration, increasing storage and flow capacity, and slowing stream runoff. These solutions can also: 1) improve water quality and habitat, and 2) provide co-benefits for the school and students in



DOI Department Policy on NBS 12-2023



- a) **Prioritize NBS** - Bureaus and Offices should use their authorities to prioritize and integrate NBS, either solely or in combination with gray infrastructure, wherever practicable, unless alternatives are demonstrated to be more beneficial when the full range of co-benefits and lifecycle costs are considered
- b) **Benefit people and nature** - Bureaus and Offices should demonstrate how NBS measurably maximize benefits to both people and nature when designing and implementing NBS.
- c) Etc...

- It is the policy of the Department to implement NBS to the maximum extent practicable and as permitted by law. The goal of this policy is to address challenges facing the Nation while we protect, sustainably manage, restore, and enhance managed natural, cultural, and infrastructure resources and assets, thereby providing measurable co-benefits. Bureaus and Offices will incorporate principles of NBS into policies, plans, guidance documents, agreements, and other instruments for the management or co-stewardship of resources under the Department's jurisdiction. The Department is committed to high-return NBS investments that facilitate cross-bureau collaboration, leverage partnerships, improve climate security, include IK wherever appropriate, and apply evidence-based approaches to measure, monitor, report, and verify the effectiveness, efficiency, and equitability of NBS implementation.

2.FUNDING Embed NBS in federal funding programs (BIL, IRA, etc...)

OMB MEMO ON CLIMATE SMART INFRASTRUCTURE INVESTMENTS

“3. Recommended Best Practices for Financial Assistance Programs to **Leverage Nature-Based Solutions to Increase Climate Resilience of Infrastructure**”



THE DIRECTOR

EXECUTIVE OFFICE OF THE PRESIDENT
OFFICE OF MANAGEMENT AND BUDGET
WASHINGTON, D.C. 20503

November 29, 2023

M-24-03

MEMORANDUM FOR HEADS OF EXECUTIVE DEPARTMENTS AND AGENCIES

FROM: Shalanda D. Young *Shalanda D. Young*

SUBJECT: Advancing Climate Resilience through Climate-Smart Infrastructure Investments
and Implementation Guidance for the Disaster Resiliency Planning Act

In order to make the Nation’s infrastructure investments resilient to the effects of climate change, Federal agencies need to take coordinated action. Such action ensures communities benefit from these investments for decades to come.

Executive Order (E.O.) 14008, *Tackling the Climate Crisis at Home and Abroad*, sets forth the Biden-Harris Administration’s commitment to ensuring infrastructure investments increase the Nation’s climate resilience¹, while also promoting environmental justice and equity. On December 5, 2022, President Biden signed into law the Disaster Resiliency Planning Act (Pub. L. No. 117-221) (“DRPA”), which requires the Office of Management and Budget (“OMB”) to establish guidance regarding agencies’ incorporation of natural disaster resilience into real property asset management and investment decisions. Consistent with E.O. 14008 and the DRPA, this memorandum provides guidance to Federal agencies² on the incorporation of assessments of natural hazard and climate risk information as part of each Federal agency’s real property³ asset management and investment decisions.

Our Nation and its communities face increasing levels of hazard exposure due to the effects of climate change.⁴ Investing in “climate-smart infrastructure,” as discussed in Section 1

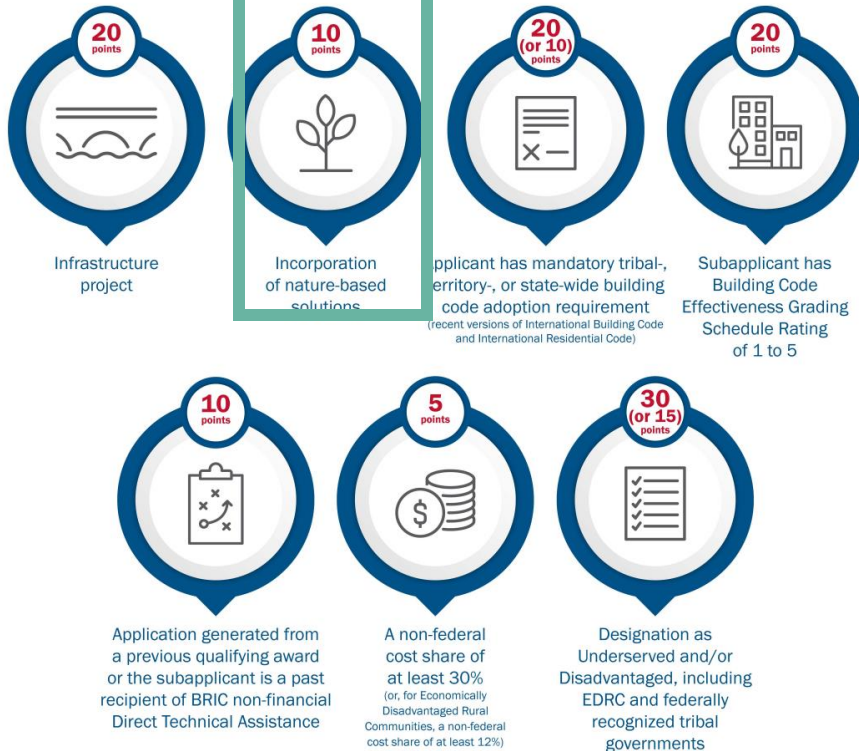
2.FUNDING

Embed NBS in federal funding programs (BIL, IRA, etc...)

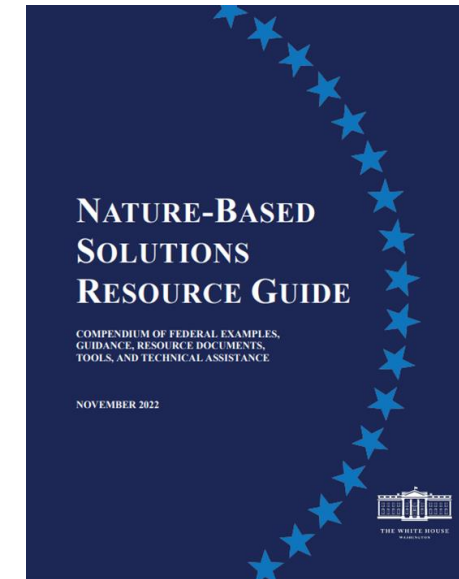
Building Resilient Infrastructure and Communities

FEMA BRIC gives points for NBS

BRIC Technical Evaluation Criteria



Identified 140 federal funding programs that are supporting or could support nature-based solutions.



2.FUNDING

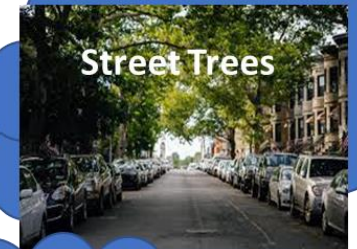
Embed NBS in federal funding programs (BIL, IRA, etc...)

[Greenhouse Gas Reduction Fund | US EPA](#)

- National Climate Investment Fund
- Clean Communities Investment Accelerator
- **\$22 Billion investment**
- Expanding # of green banks and their capital
- An opportunity to expand the scope of GBs & community lenders to include NBS

Projects Must Meet ALL criteria

- ☑ Reduce GHG
- ☑ Reduce or avoid other air pollutants
- ☑ **Deliver additional benefits**
 - Increased flood mitigation
 - Urban heat island effect mitigation
 - Increased climate smart training and jobs
 - Brownfield redevelopment and reclamation of mines and wells
- ☑ Not otherwise financed
- ☑ Mobilize private capital
- ☑ Support commercial technologies



Best places to find information on current funding for NBS

The screenshot shows the EPA website's 'Green Infrastructure Funding Opportunities' page. The top navigation bar includes 'Environmental Topics', 'Laws & Regulations', 'Report a Violation', and 'About EPA'. A search bar is present in the top right. The left sidebar lists various categories, with 'Funding Opportunities' highlighted. The main content area features a 'What's New' section with two bullet points: one about the EPA Water Infrastructure Finance and Innovation Act (WIFIA) program and another about the USDA's Watershed & Flood Prevention Operations (WFPO) Program.

The screenshot shows the National Wildlife Federation's 'Nature-based Solutions Funding Database'. The page features a large header image of a river and forest. Below the header, there is a search bar and a filter section with dropdown menus for 'PURPOSE', 'ELIGIBILITY', 'SUPPORT TYPE', 'COST SHARING', and 'AGENCY'. A search icon and a 'RESET' button are also visible. The text below the header describes the database as an interactive tool for finding federal funding and technical assistance for nature-based solutions.

12
Funding
opportunities

8
Agencies

Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Discretionary Grants Program

Promoting Resilient Operations for Transformative, Efficient, and Cost-Saving Transportation (PROTECT) Formula Program

The Bipartisan Infrastructure Law established

Climate Resilience Regional Challenge

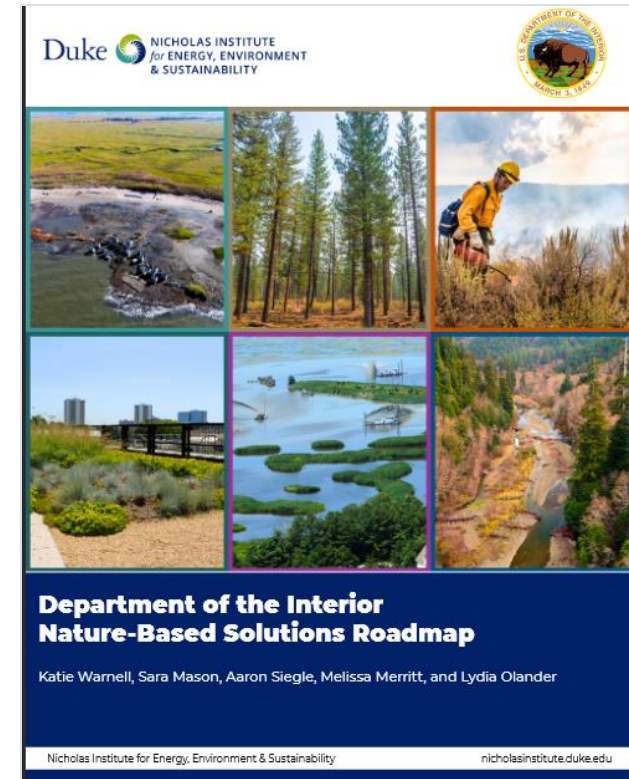
Through funding from the Inflation Reduction Act (IRA), this one-time program supports projects that build the resilience of coastal communities facing extreme weather, like hurricanes and storm

3. Federal Assets:

Climate Adaptation Plans






DOI NBS Roadmap



29 NBS strategies & fact sheet



Duke  NICHOLAS INSTITUTE for ENERGY, ENVIRONMENT & SUSTAINABILITY

**Department of the Interior
Nature-Based Solutions Roadmap**

Katie Warnell, Sara Mason, Aaron Siegle, Melissa Merritt, and Lydia Olander

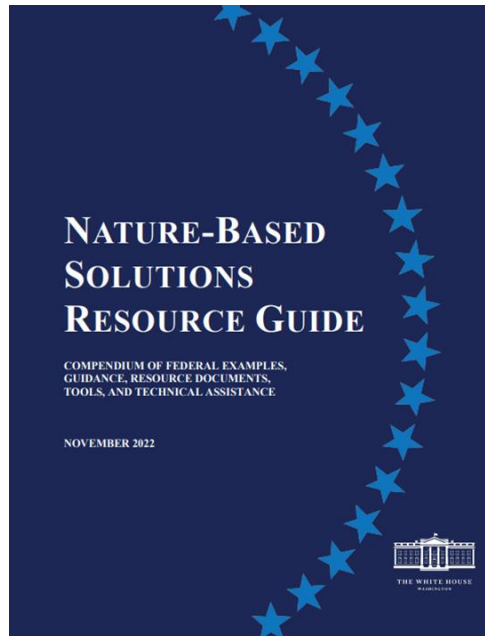
Nicholas Institute for Energy, Environment & Sustainability nicholasinstitute.duke.edu

Habitat category	# of strategies included	Example strategy
Coastal	9	Living shorelines
Riverine	5	Floodplain reconnection
Forests	3	Thinning
Human habitats and gray/green infrastructure	4	Urban stormwater & runoff management
Inland wetlands	2	Peatland restoration
Grasslands/sagebrush	2	Sagebrush restoration
Multiple habitats	4	Prescribed burn

- Definition of the strategy
- Technical approach – general methodology, site suitability, operations & maintenance
- Tools, training, and resources
- Likely benefits
- Strategy-specific barriers and solutions for practitioners
- Example projects
- Fact Sheets

4. Workforce:

Training: Over 200 agency resources – informational guides, data, tools, trainings, and technical assistance



Climate Corps Include NBS

Forest Service invests \$15 M to engage young adults in wildland fire prevention, restoration and other natural and cultural resource management projects.

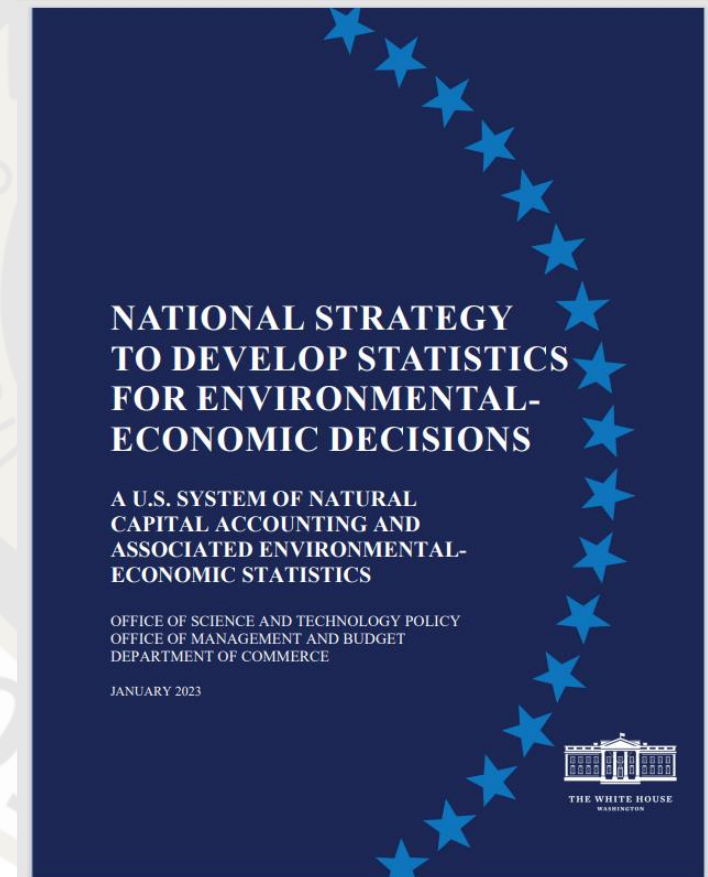


5. Evidence & Innovation: Accounting for Nature

Nature is important to the economy—and our lives. But we don't have a full picture of how.

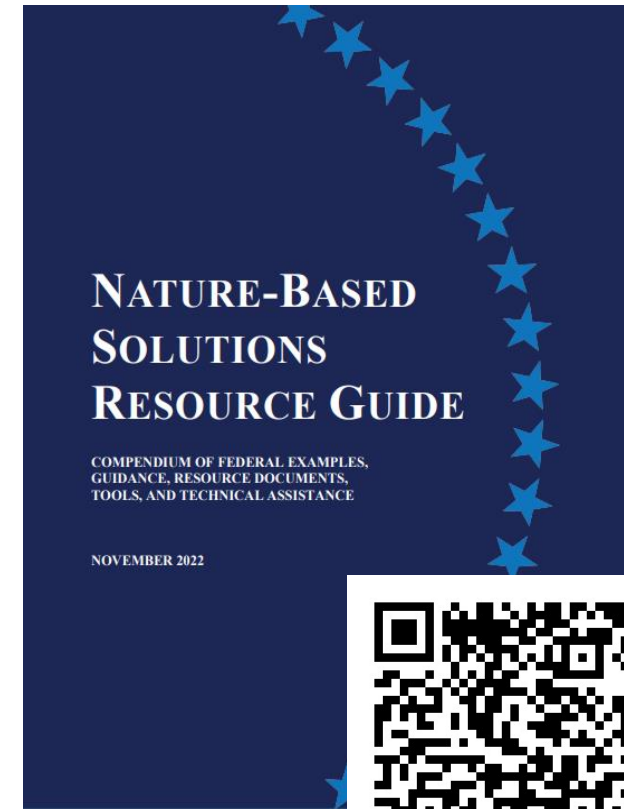
Strategy to develop Natural Capital Accounts for the US

The White House Office of Science and Technology Policy (OSTP), the Office of Management and Budget (OMB), and the U.S. Department of Commerce led the development of the final **National Strategy to Develop Statistics for Environmental-Economic Decisions**, working with more than 27 federal departments and agencies and incorporating input received from the public.



Resource Guide Building on Federal History

- Federal agencies have been doing great work to advance NBS for decades
- NBS [Resources Guide](#)
 - **30 agency examples**
 - Over 200 agency resources – informational guides, data, tools, trainings, and technical assistance
 - List of 140 federal funding programs that are supporting or could support nature-based solutions.



White House can't do it alone.

Lydia's current list of actions for advancing the adoption of Nature-Based Solutions (NBS).



Collecting and organizing information on effectiveness and performance of NBS



Developing standards and best practice guidance that integrate adaptive management



Expanding the project pipeline and avenues for private sector finance of NBS



Streamlining and coordinating federal nature data sharing



Training and education for a broad suite of critical actors



Designing permitting to encourage NBS

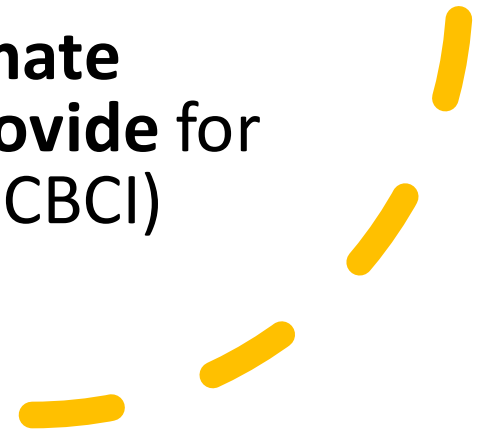
Need Information on effectiveness and performance of NBS

To create value



Information needed for:

- **Making the business case for return on investment**
- **Data for nature risk disclosure and tracking nature related ESG commitments**
- **Nature related impact standards or biodiversity credits**
- **Measuring and valuing the climate resilience dividend NBS can provide for innovative insurance products (CBCI)**

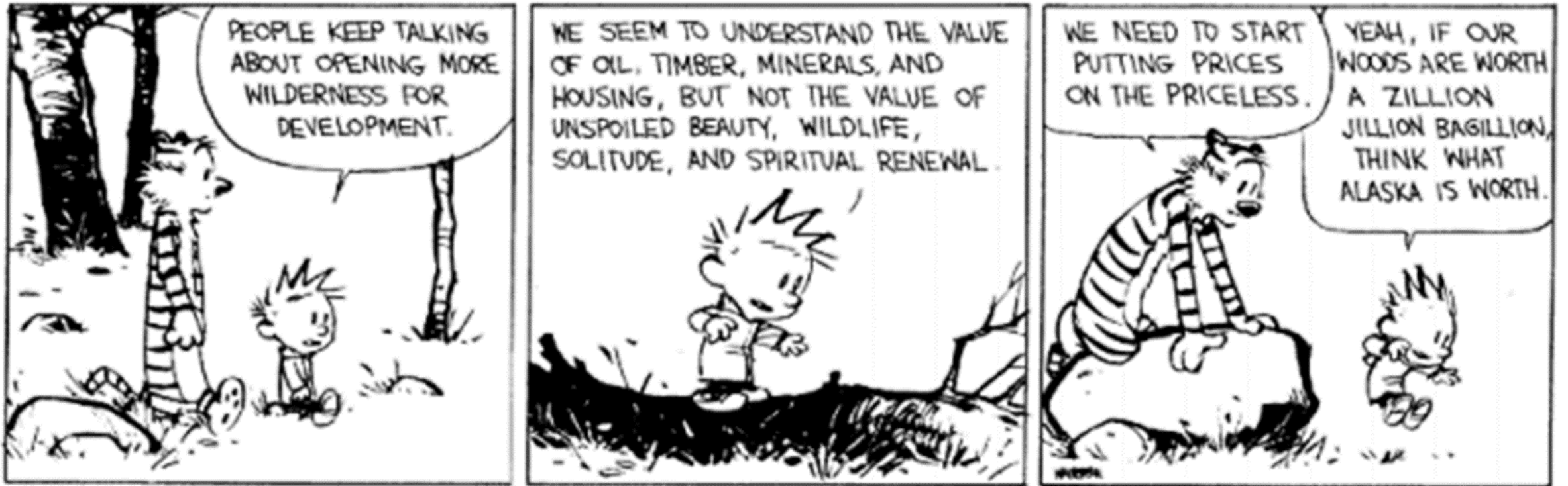


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Thank you

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Financing alone will not get us there.*

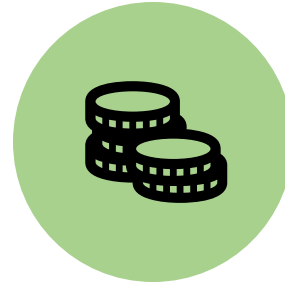




Creating value – revenue stream



Environmental Markets –
Restoration or creation of habitat
**Avoided conversion & Improved
Forest Management**



Environmental Market – Co-
benefits vs Stacking



Public funding



Alternative ways of creating value
(e.g., insurance)