USDA BUILDING BLOCKS FOR CLIMATE SMART AGRICULTURE AND FORESTRY
What is Climate-Smart Agriculture and Forestry?

• Promotes increases in agricultural and forest productivity and farm and forest incomes;

• Builds greater resilience to climate change for forest and agricultural systems;

• Reduce and/or remove greenhouse gas emissions associated with agriculture, forests, and land use change; and

• Increases renewable energy production from farms and forest biomass.
Background

• U.S. Commitment – 26-28% reduction in GHG emissions below 2005 levels by 2025

• USDA is well-positioned to contribute
  • One of the only departments that can both reduce GHG emissions and store carbon
  • Goal dovetails with much of the work that agencies are already doing (e.g., Soil Health Initiative, forest restoration, climate change adaptation)

• Secretary’s announcement – April 23 at Michigan State
  • Outlined the building blocks
  • Established a goal of reducing emissions by 120 MMTCO$_2$e per year by 2025
  • Announced early actions by industry and nonprofit partners
Principles of the USDA Building Blocks

• **Voluntary and incentive-based** – Building on existing legislation and our history of “cooperative conservation.”

• **Focused on multiple economic and environmental benefits** – Through efficiency improvements, improved yields, or reduced risks.

• **Meet the needs of producers** – By focusing on working farms, ranches, forests, and production systems.

• **Assess progress and measure success** – Through quantitative goals and objectives.

• **Cooperative and focused on building partnerships** – With industry, farm groups, and conservation organizations.
Process

Identified 10 Building Blocks

Soil Health                                  Private Forest Growth and Retention
Nitrogen Stewardship                         Stewardship of Federal Forests
Livestock Partnerships                       Promotion of Wood Products
Conservation of Sensitive Lands              Urban Forests
Grazing and Pasture Lands                    Energy Generation and Efficiency

Preliminary Data Collection and Proposals

• Relevant programs and authorities
• Technologies and practices
• Metrics for quantifying benefits
• Co-benefits
• Barriers, constraints, and tradeoffs
## Building Block Goals

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<thead>
<tr>
<th>Building Block</th>
<th>Goals (by 2025)</th>
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<tr>
<td>Soil Health</td>
<td>Promote soil conservation practices that improve soil organic matter, reduce emissions from soils and equipment, and promote healthier soils nationwide</td>
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<td>Nitrogen Stewardship</td>
<td>Reduce nitrous oxide emissions and provide cost savings through application of 4 “Rs”</td>
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<td>Livestock Partnerships</td>
<td>Install 500 anaerobic digesters; install impermeable covers on 10% of dairy cattle and swine operations</td>
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<td>Conservation of Sensitive Lands</td>
<td>Enroll 400,000 acres of CRP with high GHG benefits; protect 40,000 acres through easements; transfer expiring CRP acres to permanent easements</td>
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<td>Grazing and Pasture Lands</td>
<td>Establish grazing management plans on an additional 9 M acres, for a total of 27 M acres</td>
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<td>Private Forest Growth and Retention</td>
<td>Through FLP and CFP, protect almost 1 M acres of working landscapes</td>
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<td>Stewardship of Federal Forests</td>
<td>Reforest 32,000 acres per year on National Forest System lands</td>
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<td>Promotion of Wood Products</td>
<td>Increase the number of building projects supported through technical assistance from 280 in 2014 to 2,000 in 2025</td>
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<td>Urban Forests</td>
<td>Plant 100,000 additional trees in urban areas</td>
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<tr>
<td>Energy Generation and Efficiency</td>
<td>Promote renewable energy technologies and improve energy efficiency through EECLP, REAP, and NOFEI (EQIP), and RHS programs</td>
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Private Forest Growth and Retention

Technologies and Practices:
• Protect environmentally important forestland threatened by conversion to non-forest use by acquiring conservation easements or fee interest in lands

Authorities and programs:
• Forest Legacy Program (FLP)
• Community Forest and Open Space Conservation Program (CFP)
• Forest Stewardship Program (FSP)

Expected Benefits:
• Protect an additional 995,000 acres
Stewardship of Federal Forests

Technologies and Practices:
• Reforest after stand-replacing wildfire, insects & disease, or other natural disturbance
• Restore federal lands to make them more resilient to disturbance

Authorities and Programs:
• Organic Administration Act
• Multiple-Use Sustained-Yield Act of 1960
• National Environmental Policy Act of 1969 (NEPA)
• Endangered Species Act of 1973
• Forest and Rangeland Renewable Resources Planning Act (RPA) of 1974, as amended by National Forest Management Act (NFMA) of 1976

Expected Benefits:
• Reforest 32,000 post-disturbance acres per year.
• Treat 2.7 million acres of National Forest System lands annually to sustain or restore watershed function and resilience.
• Treat 1.4 million acres of high priority fuels in the Wildland Urban Interface on NFS lands annually.
Promotion of Wood Products

Technologies and Practices:
• Increase the number of low-rise buildings using wood products as building materials.

Authorities and Programs:
• Cooperative Forestry

Expected Benefits:
• Increase the number of building projects supported through technical assistance from 280 in 2014 to 2,000 in 2025
Urban Forests

Technologies and Practices
• Encourage homeowners to plant trees in energy saving locations around their homes

Authorities and Programs
• Urban & Community Forestry

Expected Benefits
• Plant an average of 10,000 additional trees in urban areas per year through 2025
Partnerships

American Forest Foundation
Partnerships

- The Arbor Day Foundation – Work with 19 partners in 17 states and DC to plant 40,000 trees in urban areas
- Green Diamond Resource Company and Forest Policy Forum – Implement a set of principles to ensure forest sector can help mitigate climate change
- American Forest Foundation – New partnership with USFS to engage woodland owners in wildfire mitigation
- Trust for Public Land and Forest Climate Working Group – Implement a toolkit that helps forestland owners estimate the carbon benefit of their practices and provides models of policies that can improve forest carbon
- Lyme Timber Company – List 46,500 acres of FL timberland with the California Air Resources Board
- The Nature Conservancy – Enroll 2,000 acres to reforest marginal cropland in the Lower Mississippi Valley
Next Steps – National Implementation Plans

- Actions with direct GHG and carbon benefits
- Policy and guidance
- Outreach and training
- Partnerships
Next Steps – Metrics

• Two purposes
  • Do a better job of what we are already doing
  • Track progress toward the goals that are laid out here

• Two parts
  • Practice and technology data
  • Greenhouse gas calculations

• Tracking both direct impacts of USDA actions and indirect effects of practice and technology diffusion
Climate Hub Workshops

- Implement the building blocks on the ground
- Account for regional differences and priorities
- Tools, programs, and partnerships at the local and regional level
Discussion and Questions?
Contact

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