

Part 540 – Operation and Management

Subpart D – Exhibits

540.65 List of National Projects

UNITED STATES DEPARTMENT OF AGRICULTURE NATURAL RESOURCES CONSERVATION SERVICE PLANT MATERIALS PROGRAM PROJECT LIST		
Project #	Project Title	Project Statement
Biomass/Biofuel 1.1	Selection of plants and management techniques to promote viable options for fuel production or generation.	The U.S. Department of Energy identified herbaceous and woody plant species as biofuel sources (e.g., switchgrass, giant miscanthus, willows, and poplars). In addition to these plants, there are other herbaceous and woody plants that may have characteristics suitable for biofuel technology but have not been evaluated. Agronomic practices are needed to determine the most effective and efficient approach in maximizing biomass production and fuel quality of current and potential biofuel crops in different geographical regions of the United States.
Critical Area 1.1	Controlling erosion on highly disturbed areas such as highways, dams, etc.	Improved erosion control techniques and plant materials are needed to control erosion on highly disturbed areas such as highways, dams, etc.
Cropland 1.1	Controlling erosion on cropland with cropping and residue management systems.	Winter legumes and other plants used for cover crops on cropland in the PMC service area do not produce a seed crop prior to chemical burn down in the spring. Therefore, if cover crops are an objective of the landowner, they will need to be replanted annually. Earlier maturing plants and other techniques are needed to reduce establishment costs of cover crops. In other parts of the United States, row crops are often harvested too late for establishment of cover crops before the onset of winter temperatures. Without a cover crop to utilize excess nutrients and provide winter cover, surface erosion from wind and water results on fields in this area. With a cover crop, there is the opportunity to capture excessive nitrogen and phosphorus, produce organic matter for the site, trap snow, and improve moisture infiltration.
Cropland 2.1	Controlling erosion on cropland with vegetative barriers in the United States.	During the 1980s and 1990s, the potential of using herbaceous vegetative barriers to help prevent water erosion was tested at a number of locations by several agencies. A number of species have been used for this purpose and additional species are being tested.
Cropland 3.1	Controlling erosion on cropland by crop conversion to perennial crops or less erosive annuals.	Livestock farmers and ranchers have the option of growing perennial forage crops for feeding purposes. To make this option attractive, perennial forages are needed that have higher yields, quality, and adaptation to soils with limitations.

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Cropland 4.1	Protecting surface and ground water with vegetative filters.	Biological filters for surface and shallow ground water will be extensively used to correct and/or protect water quality. Improvements in design, plant materials, and management will aid both effectiveness and efficiency of vegetative filters.
Forestland 1.1	Conservation systems for controlling erosion and improving water quality within forested watersheds.	Forest practices differ throughout the country; however, all regions need native plant options to use in erosion control following forest disturbance and/or harvest.
Mineland 1.1	Improve erosion control and the quality of water leaving mined land and other drastically disturbed sites.	While great strides have been made in general revegetation of mineland, the demand for energy has reopened old mines and opened new mines. Improved plant materials are needed for bio-remediation and more effective treatments of these areas.
Natural Areas 1.1	Maintaining plant diversity and controlling soil erosion on natural areas.	Improved plant materials of additional species are needed to aid in preventing erosion and providing diversity from natural areas.
Pasture/Hayland 1.1	Improving forage production and other conservation systems with cool season plants.	Many cool season herbaceous species in common use for conservation systems are introduced. Native plant alternatives need to be developed.
Pasture/Hayland 2.1	Improving forage production and other conservation systems with warm season plants.	Improved selections of native warm season plants will aid in the effectiveness of conservation and forage systems. The number of improved warm season grasses for pasture and hayland is limited.
Rangeland 1.1	Improving the ecological status, production and soil protection of rangeland.	Rangelands have been degraded by recurring and extended periods of drought, improper use by domestic stock, colonization by invasive species, and wildfires. Management, establishment techniques, and improved drought tolerant, pest free native species are needed.
Urban 1.1	Developing plants to use in urban areas to control erosion and protect water quality.	Heavy use, compacted and "made" soils, limited rooting space, and heat islands effects make plants vulnerable in urban settings. Only a limited number of native species have been tested for use in urban settings.

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Urban 2.1	Developing plants to use in urban areas to reduce water quantity use (xeriscapes fit here).	Expansion of urban areas and population growth is threatening to overtake existing water supplies. Need for native plants for landscaping are increasing, and only a limited number of improved native plant materials have been fully tested for this use. Plants tested will be drought tolerant.
Water Quality 1.1	Develop the technology for creating and restoring wetlands for water quality improvement.	The technology of using wetlands for water quality purposes has improved dramatically over the last two decades. New wetland restoration and wetland creation techniques have provided the need for a diversity of technology and plant materials to address this purpose.
Water Quality 2.1	Develop plants and the technology for restoring or creating riparian areas for water quality improvements.	Riparian areas have been ravaged by recent hurricanes. There is a need to develop plants and t technology to assist municipalities reestablish riparian areas.
Water Quality 3.1	Develop the technology for stabilizing channels for soil erosion control.	The native species that can be used in bioengineering practices in the United States need to be improved. National Engineering Handbook, Part 650 (Engineering Field Handbook), Chapter 18 - Soil Bioengineering for Upland Slope Protection and Erosion Reduction, lists a number of potential species for these practices, but additional species are needed with supporting data and installation technology.
Water Quality 4.1	Develop plants for shoreline erosion control.	Development and changes in hydrology and littoral drift patterns accelerate coastal and shoreline erosion. Additional species are needed for effectiveness and diversity and help municipalities revegetate. Secondary dense species are particularly needed.
Wildlife 1.1	Develop plants for improving wildlife habitat.	Farm Bill programs increasingly target wildlife benefits. Native plant species and management technology are underrepresented in the marketplace for regional and sub-regional use.