



## A View of the Farm Bill Through Policy Design, Part 1: EQIP

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April 13, 2023

*farmdoc daily* (13): 69

Gardner Policy Series

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Recommended citation format: Coppess, J. and A. Knepp. "A View of the Farm Bill Through Policy Design, Part 1: EQIP." *farmdoc daily* (13): 69, Department of Agricultural and Consumer Economics, University of Illinois at Urbana-Champaign, April 13, 2023.

Permalink: <https://farmdocdaily.illinois.edu/2023/04/a-view-of-the-farm-bill-through-policy-design-part-1-eqip.html>

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As Congress takes tentative steps towards reauthorizing the Farm Bill, this article introduces a multi-part series presenting a view of the Farm Bill through the perspective of policy design. The discussion begins by reviewing the Environmental Quality Incentives Program (EQIP) as it was reauthorized in the conservation title (Title II) of the Agricultural Improvement Act of 2018. The Congressional Budget Office projects that EQIP will spend almost \$20 billion in the 2023 Baseline, with an additional \$7.25 billion in spending from the Inflation Reduction Act of 2022 (*farmdoc daily*, February 23, 2023). USDA's Natural Resources Conservation Service (NRCS) reports that nearly \$6 billion in total assistance was obligated during fiscal years (FY) 2018 to 2022 under EQIP (NRCS Financial Assistance Program Data, [farmers.gov](https://farmers.gov)).

### Background

The articles in this series will explore the major mandatory titles, policies, and programs in the Farm Bill. The articles also serve as previews and updates on the development of a Policy Design Lab at the University of Illinois. The Policy Design Lab is a project of the Gardner Agriculture Policy Program in conjunction with the National Center for Supercomputing Applications (NCSA), the Institute for Sustainability, Energy, and Environment (ISEE), the Institute for Government and Public Affairs (IGPA), and the College of Agricultural, Consumer, and Environmental Sciences (ACES); it is very much a work-in-progress, with much of the website under construction. Conceptually, the Policy Design Lab will be a web-based resource in which to explore and analyze existing policies and policy alternatives. The effort will work from statutory and legislative text to incorporate and apply research, publicly available data, and computational resources for analysis and visualization efforts; research and data guided by statutory provisions or legislative options to produce comparative analysis. One goal will be to advance understanding about existing policy outcomes, as well as research-backed potential outcomes of alternative designs. Eventually, it will also seek to improve understanding of the policymaking process and facilitate open discussions about policy options. Development begins with the major mandatory farm bill programs to establish the status quo, visualized through maps of the distribution of benefits and

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payments by State. The first policies explored are those in the Environmental Quality Incentives Program (EQIP).

## Discussion

In the Agricultural Improvement Act of 2018 (P.L. 115-334), Congress reauthorized EQIP through FY2023 and extended the authorization through FY2031 in the Inflation Reduction Act of 2022 (P.L. 117-169). The statutory text for all Farm Bill authorizations can be found on the compilations page of the Senate Committee on Agriculture, Nutrition, and Forestry (Senate ANF) website (Senate ANF, Library: [Compilations](#)). The Office of the Law Revision Counsel of the U.S. House of Representatives maintains the up-to-date U.S. Code and EQIP is in Title 16, Chapter 58 (16 U.S.C. §3839aa et seq.). Figure 1 presents excerpts from the EQIP statute in the Senate ANF compilation for the EQIP program purposes and definitions for practices.

Figure 1. EQIP Statutory Excerpts

<p>79 FOOD SECURITY ACT OF 1985 Sec. 1240A</p> <p><b>CHAPTER 4—ENVIRONMENTAL QUALITY INCENTIVES PROGRAM AND CONSERVATION STEWARDSHIP PROGRAM</b></p> <p><b>Subchapter A—Environmental Quality Incentives Program</b></p> <p><b>SEC. 1240. 116 U.S.C. 3839aa   PURPOSES.</b> The purposes of the environmental quality incentives program established by this subchapter are to promote agricultural production, forest management, and environmental quality as compatible goals, and to optimize environmental benefits, by—</p> <p>(1) assisting producers in complying with local, State, and national regulatory requirements concerning—</p> <p>(A) soil, water, and air quality;</p> <p>(B) wildlife habitat; and</p> <p>(C) surface and ground water conservation;</p> <p>(2) avoiding, to the maximum extent practicable, the need for resource and regulatory programs by assisting producers in protecting soil, water, air, and related natural resources and meeting environmental quality criteria established by Federal, State, tribal, and local agencies;</p> <p>(3) providing flexible assistance to producers to install and maintain conservation practices that sustain food and fiber production while—</p> <p>(A) enhancing soil, water, and related natural resources, including grazing land, forestland, wetland, and wildlife;</p> <p>(B) developing and improving wildlife habitat; and</p> <p>(C) conserving energy; and</p> <p>(4) assisting producers to make beneficial, cost-effective changes to production systems, including addressing identified, new, or expected resource concerns related to organic production, grazing management, fuels management, forest management, nutrient management associated with crops and livestock, pest management, irrigation management, adapting to, and mitigating against, increasing weather volatility, drought resiliency measures, or other practices on agricultural and forested land.</p>	<p><b>SEC. 1240A. 116 U.S.C. 3839aa-1   DEFINITIONS.</b> In this subchapter:</p> <p>(6) <b>PRACTICE.</b>—The term “practice” means 1 or more improvements and conservation activities that are consistent with the purposes of the program under this subchapter, as determined by the Secretary, including—</p> <p>(A) improvements to eligible land of the producer, including—</p> <p>(i) structural practices;</p> <p>(ii) land management practices;</p> <p>(iii) vegetative practices;</p> <p>(iv) forest management;</p> <p>(v) soil testing;</p> <p>(vi) soil remediation to be carried out by the producer; and</p> <p>(vii) other practices that the Secretary determines would further the purposes of the program; and</p> <p>(B) conservation activities involving the development of plans appropriate for the eligible land of the producer, including—</p> <p>(i) comprehensive nutrient management planning;</p> <p>(ii) planning for resource-conserving crop rotations (as defined in section 1240L(d)(1));</p> <p>(iii) soil health planning, including increasing soil organic matter and the use of cover crops;</p> <p>(iv) a conservation planning assessment;</p> <p>(v) precision conservation management planning; and</p> <p>(vi) other plans that the Secretary determines would further the purposes of the program under this subchapter.</p>
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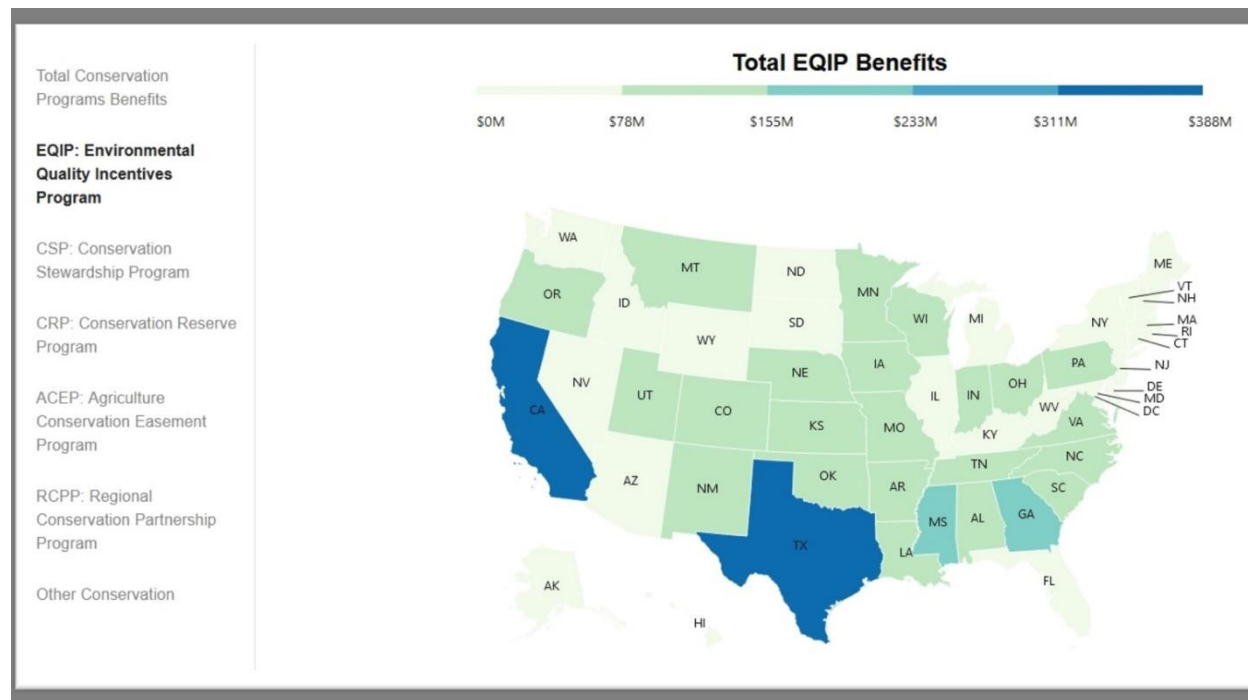
EQIP is funded through the Commodity Credit Corporation (CCC), which provides mandatory funding each fiscal year using borrowing authority. In the 2018 Farm Bill, Congress authorized fixed amounts of funding each fiscal year for EQIP, beginning with \$1.75 billion in FY2019-2020, increasing to \$2.025 billion in FY2023. With the Inflation Reduction Act, that funding authorization of \$2.025 billion continues through FY2031. Figure 2 provides a screenshot of the funding authority from the updated statute as presented by the Office of Law Revision Counsel website (16 U.S.C. §3841).

**Figure 2. CCC Funding for EQIP**

<ul style="list-style-type: none"> <li>❏ CHAPTER 58—ERODIBLE LAND AND WETLAND CONSERVATION AND RESERVE PROGRAM (sections 3811 to 3871f)             <ul style="list-style-type: none"> <li>CHAPTER 58—Front Matter</li> <li>❏ SUBCHAPTER I—DEFINITIONS (section 3801)</li> <li>❏ SUBCHAPTER II—HIGHLY ERODIBLE LAND CONSERVATION (sections 3811 to 3814)</li> <li>❏ SUBCHAPTER III—WETLAND CONSERVATION (sections 3821 to 3824)</li> <li>❏ SUBCHAPTER IV—AGRICULTURAL RESOURCES CONSERVATION PROGRAM (sections 3830 to 3839b-5)</li> <li>❏ SUBCHAPTER V—FUNDING AND ADMINISTRATION (sections 3841 to 3847)                 <ul style="list-style-type: none"> <li>SUBCHAPTER V—Front Matter</li> <li>Sec. 3841. Commodity Credit Corporation (<a href="#">view pending updates</a>)</li> <li>Sec. 3842. Delivery of technical assistance</li> <li>Sec. 3843. Repealed. Pub. L. 113-79, title II, §2710(a), Feb. 7, 2014, 128 Stat. 770</li> <li>Sec. 3844. Administrative requirements for conservation programs</li> <li>Sec. 3845. Environmental services markets</li> <li>Sec. 3846. Regulations</li> <li>Sec. 3847. Data on conservation practices</li> </ul> </li> <li>❏ SUBCHAPTER V.A—OTHER CONSERVATION PROGRAMS (sections 3851 to 3851a)</li> <li>❏ SUBCHAPTER VI—STATE TECHNICAL COMMITTEES (sections 3861 to 3862)</li> <li>❏ SUBCHAPTER VII—AGRICULTURAL CONSERVATION EASEMENT PROGRAM (sections 3865 to 3865d)</li> <li>❏ SUBCHAPTER VIII—REGIONAL CONSERVATION PARTNERSHIP PROGRAM (sections 3871 to 3871f)</li> </ul> </li> <li>❏ CHAPTER 59—WETLANDS RESOURCES (sections 3901 to 3932)</li> <li>❏ CHAPTER 59A—WETLANDS (sections 3951 to 3957)</li> <li>❏ CHAPTER 60—FISH AND SEAFOOD PROMOTION (sections 4001 to 4017)</li> <li>❏ CHAPTER 61—INTERJURISDICTIONAL FISHERIES (sections 4101 to 4107)</li> <li>❏ CHAPTER 62—AFRICAN ELEPHANT CONSERVATION (sections 4201 to 4246)</li> <li>❏ CHAPTER 62A—ASIAN ELEPHANT CONSERVATION (sections 4261 to 4266)</li> <li>❏ CHAPTER 63—FEDERAL CAVE RESOURCES PROTECTION (sections 4301 to 4310)</li> <li>❏ CHAPTER 64—NORTH AMERICAN WETLANDS CONSERVATION (sections 4401 to 4414)</li> <li>❏ CHAPTER 65—INTERNATIONAL FORESTRY COOPERATION (sections 4501 to 4505)</li> <li>❏ CHAPTER 66—TAKE PRIDE IN AMERICA PROGRAM (sections 4601 to 4608)</li> <li>❏ CHAPTER 67—AQUATIC NUISANCE PREVENTION AND CONTROL (sections 4701 to 4730)</li> <li>❏ CHAPTER 68—PACIFIC YEW CONSERVATION AND MANAGEMENT (sections 4801 to 4807)</li> </ul>	<p><b>§3841. Commodity Credit Corporation</b></p> <p><b>(a) Annual funding</b></p> <p>For each of fiscal years 2014 through 2031, the Secretary shall use the funds, facilities, and authorities of the Commodity Credit Corporation to carry out the following programs under this chapter (including the provision of technical assistance):</p> <p>(1) The conservation reserve program under subpart B of part I of subchapter IV, including, to the maximum extent practicable-</p> <ul style="list-style-type: none"> <li>(A) \$12,000,000 for the period of fiscal years 2019 through 2023 to provide payments under section 3834(c) of this title; and</li> <li>(B) \$50,000,000 for the period of fiscal years 2019 through 2023, including not more than \$5,000,000 to provide outreach and technical assistance, to carry out section 3835(f) of this title to facilitate the transfer of land subject to contracts from contract holders to covered farmers or ranchers, as defined in section 3835(f)(1) of this title.</li> </ul> <p>(2) The agricultural conservation easement program under subchapter VII using to the maximum extent practicable-</p> <ul style="list-style-type: none"> <li>(A) \$400,000,000 for fiscal year 2014;</li> <li>(B) \$425,000,000 for fiscal year 2015;</li> <li>(C) \$450,000,000 for fiscal year 2016;</li> <li>(D) \$500,000,000 for fiscal year 2017;</li> <li>(E) \$250,000,000 for fiscal year 2018; and</li> <li>(F) \$450,000,000 for each of fiscal years 2019 through 2031.</li> </ul> <p>(3) The programs under part IV of subchapter IV, using, to the maximum extent practicable-</p> <ul style="list-style-type: none"> <li>(A) for the <a href="#">environmental quality incentives program</a> under subpart A of part IV of subchapter IV-             <ul style="list-style-type: none"> <li>(i) \$1,750,000,000 for fiscal year 2019;</li> <li>(ii) \$1,750,000,000 for fiscal year 2020;</li> <li>(iii) \$1,800,000,000 for fiscal year 2021;</li> <li>(iv) \$1,850,000,000 for fiscal year 2022; and</li> <li>(v) \$2,025,000,000 for each of fiscal years 2023 through 2031; and</li> </ul> </li> <li>(B) for the conservation stewardship program under subpart B of part IV of subchapter IV-             <ul style="list-style-type: none"> <li>(i) \$700,000,000 for fiscal year 2019;</li> <li>(ii) \$725,000,000 for fiscal year 2020;</li> <li>(iii) \$750,000,000 for fiscal year 2021;</li> <li>(iv) \$800,000,000 for fiscal year 2022; and</li> <li>(v) \$1,000,000,000 for each of fiscal years 2023 through 2031.</li> </ul> </li> </ul>
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Exploration of EQIP policy design begins with reviewing the total EQIP funding distribution. Figure 3 includes an interactive map of the total EQIP funds from FY2018 to FY2022 by State and the State's share of the national total (<https://policydesignlab.ncsa.illinois.edu/eqip>). In total, the map presents the distribution of nearly \$4.7 billion to all 50 States. For close observers, that total is less than the total obligations reported by NRCS on its website (<https://www.farmers.gov/data/financial-assistance/overview>). The map is based on data received by NRCS through a Freedom of Information Act (FOIA) request for EQIP payments and NRCS reports obligations, which may account for the discrepancy. In terms of performance by State, Texas has received the most in total EQIP funding at over \$433.5 million (9% of the national total), followed by California at over \$386 million (8% of the national total); by comparison, Illinois has received \$54 million (1.2% of the national total).

**Figure 3. Distribution of Total EQIP Benefits (2018-2022)**



Total EQIP funding and distribution presents a partial perspective of EQIP's design. In the statute, Congress authorized payments to producers who enter into EQIP contracts with USDA; the contract and



payments are for the performance or implementation of one or more practices to cover a portion of the costs ([16 U.S.C. §3839aa-2](#)). Congress has defined categories of practices in the statute that are either improvements (6(A)) or conservation planning (6(B)) ([16 U.S.C. §3839aa-1](#); see also, Figure 1). Almost all funds are spent on improvement practices. From these statutorily-defined categories of conservation practices and planning, NRCS provides technical and financial assistance using a vast set of practice codes (NRCS, [Conservation Practice Standards Information](#)). For example, in Illinois the unit cost for basic cover crop practice (practice code 340) is \$61.89 per acre (NRCS, [Illinois EQIP Payment Rates](#)).

In this initial stage of development, we have aggregated the spending by practice code into the statutory definitional categories. The interactive map allows a user to select from among the seven categories of improvement practices (land management, forest management, structural, soil remediation, vegetative, other improvement and soil testing) and five categories for conservation planning. The map will present the distribution of spending for each category selected, as well as interactive tables for State performance data and the share of total EQIP spending for each of the categories.

For example, selecting the structural practices produces a revised map in which California and Texas stand out. California leads the nation with more than \$290 million in funds (13% of national total for structural practices); Texas follows with nearly \$154 million (7% of the national total). By comparison, Illinois received \$32 million (1.5% of the national total). The interactive table below the map presents additional data on the performance by State; nearly 75% of California's EQIP funds are for structural practices but only 35% of Texas' EQIP funds are for those practices. Illinois receives nearly 60% of its EQIP funds for structural practices. The structural category includes practices such as agrichemical handling facility (practice code 309), high tunnel system (practice code 325), anaerobic digesters (practice code 366), and many irrigation practices such as irrigation pipeline (practice code 430), irrigation sprinkler system (practice code 442), and surface and subsurface irrigation system (practice code 443). From a perspective on policy design, these practice codes and the aggregated spending connect the purposes of the program, such as conserving surface and ground water, with the definitions of practices for which financial assistance payments can be contracted ([16 U.S.C. §3839aa-1\(6\)\(A\)\(i\)](#)). In total, we estimate nearly 51% of the total EQIP funding from FY2018-2022 was spent on structural practices.

The map of structural practice spending can be compared to that of the other categories, such as vegetative practices, for example. Vegetative practices include cover crops (practice code 340), windbreak/shelterbreak (practice code 380), field border (practice code 386), grassed waterway (practice code 412), saturated buffer (practice code 604), and similar practices. In this category, the interactive map presents a wider distribution of benefits. Tennessee leads the Nation in funding for vegetative practices with nearly \$49 million (7% of the national total for vegetative practices), followed by Missouri at nearly \$47.5 million (7% of national total); Illinois received \$7 million (1% of the national total). In total, vegetative practices accounted for 16% of total EQIP funds and was the third largest category after structural (51%) and land management (21%).

## Concluding Thoughts

To put it simply, the words of the statute contain the policies of the programs enacted by Congress. Those words drive agency implementation and operation, ultimately resulting in the distribution of the benefits authorized by Congress. The benefits are paid to individuals and have political implications, the collection or aggregation of which impact the political development of policies. A new Policy Design Lab being developed at the University of Illinois is working to apply research, data, computational resources, and statutory or legislative textual analysis to visualize policy design. This article initiates a series on the mandatory programs in the Farm Bill and the development of web-based resources for policy design and analysis. Beginning with EQIP—the largest working lands program, distributing more than \$5 billion in funds under the 2018 reauthorization to farmers and landowners to assist with the cost of adopting conservation practices—this article and the interactive maps present a review of the performance of the program and initiate a view of the Farm Bill through a lens on policy design.

## References

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