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# WASTE AND WATER WOES:

Popular conservation programs should focus on small-scale and sustainable farms, not industrial-scale farms

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***Waste and Water Woes:  
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and sustainable farms, not industrial-scale farms***

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**Note on Data**

IATP acquired all the NRCS data used for this report via a direct request to NRCS staff. The data reflects program usage in Fiscal Year 2022. The top five EQIP practices in each state in Fiscal Year 2022 are shown in the appendix to this report.

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## SUMMARY

This report, which examines Fiscal Year 2022 enrollment in the United States Department of Agriculture's (USDA) Environmental Quality Incentives Program (EQIP), is a follow-up to IATP's [Payments for Pollution](#) report. Among other findings, this report again finds that industrial practices, or practices that are often structural rather than plant or natural systems-based, receive an outsize share of EQIP funding. Two of the top 10 EQIP practices by total dollar amount spent are practices we identified as industrial, providing little to no conservation benefits, in our previous report: waste facility cover and waste storage facility. Together, these two practices, which prop up harmful, polluting concentrated animal feeding operations (CAFOs), were awarded over \$100 million of taxpayer dollars in 2022 under the guise of conservation. These two practices also appear on the top 10 list of most expensive practices on a per-contract basis. From this dishonorable top 10 list, at least eight could be considered industrial, with practices targeted toward large-scale, animal or commodity crop operations. The most expensive EQIP grant an individual farm can receive is for the construction of a methane digester, which is over \$280,000 on average. We discuss the harms of these digesters further in the paper.

We contrast these expensive, industrial practices with some of the more popular, low cost, true conservation practices offered through EQIP. By steering away

from six-figure industrial practices and toward lower cost practices that help farmers adapt to a changing climate and conserve soil and water, EQIP can serve more farmers and bring more conservation benefits. This is especially important in a time when USDA turned away roughly three in four farmers who applied for EQIP in 2022.

This paper also examines the state of water and agriculture in the U.S. as it relates to EQIP. Irrigation-related practices remained some of the more popular and costly uses of EQIP dollars in 2022. As climate change intensifies, droughts lengthen and aquifers deplete, there will likely be more demand for irrigation infrastructure. We discuss the need for better water use regulation across the country to lessen the strain on EQIP. Improvements in soil health, more thoughtful crop rotations and learning from traditional ecological knowledge can also go a long way in conserving the U.S.' water resources.

EQIP is a program that is funded through the once-every-five-years Farm Bill. As the 2018 Farm Bill is set to expire on September 30, 2023, we believe this report is timely. As Congress debates and begins to write the 2023 Farm Bill, we hope this report can be a good resource in understanding how EQIP dollars are spent, and how the program can be retooled to build resilience for farms and farmers nationwide.



# WASTE AND WATER WOES

## INTRODUCTION

We release this report in the wake of yet another report by the Intergovernmental Panel on Climate Change (IPCC) on the nature of the climate crisis. The IPCC report concludes that we are much closer to a warmer world than previously thought, leading to a different reality for billions of people across the globe.<sup>1</sup> Effects once expected to occur decades in the future are happening now, leading to a new urgency for climate action by governments.

While Farm Bill conservation cost-share programs may not seem important when considering the global scale of climate change, they can help to reduce emissions and help farms become more climate resilient. Many farming practices supported by the Environmental Quality Incentives Program (EQIP) can build rich and healthy soils in a variety of climates, soils which are better able to withstand weather extremes such as floods and droughts.<sup>2</sup> EQIP can also help farmers diversify their operations by removing some of the financial burden from conserving a farm’s soil and water.

To support climate resilience for the most farmers possible, EQIP should focus on practices that are both resilient and cost-effective. As IATP found in its 2022 *Payments for Pollution* report, a sizable chunk of EQIP dollars in the Midwest are spent on expensive

practices that are not resilient and may in fact make the climate crisis worse. These practices include waste storage facilities and waste facility covers, practices intended to prevent seepage of liquid animal manure from CAFOs into local water supplies. These EQIP payments, which are essential nodes of many CAFO’s business plans, are among the most expensive practices and serve only a small number of farmers. CAFOs — specifically their large manure lagoons — are also a huge source of [methane](#), a potent greenhouse gas, as well as ammonia, hydrogen sulfide and particulate matter,<sup>3</sup> all of which pose risks to human health. Many rural communities stand in strong opposition to the pollution generated by CAFOs, and as others have written, CAFOs are also harmful from an animal welfare perspective.<sup>4</sup>

This report builds on *Payments for Pollution* in two important ways. First, it provides Fiscal Year 2022 data on practice usage and money spent. Second, this report takes a deep dive into EQIP practices nationwide, examining practices that may be common outside of the Midwest.

Table 1 displays the top 10 EQIP practices by dollar amount spent in 2022. Two of these practices, waste facility cover and waste storage facility, were included in our list of industrial practices in *Payments for Pollution*. Both are largely used by CAFOs to store liquid

**Table 1: Top 10 EQIP Practices by Dollar Amount Spent, Nationwide, 2022**

Practice	NRCS Practice Standard #	Number of Contracts	Total \$ Spent on Practice	Average Contract \$ Amount
Cover Crop	340	15,533	\$129,040,843	\$8,307.53
Fence	382	13,387	\$78,751,843	\$5,882.71
Brush Management	314	13,575	\$77,442,091	\$5,704.76
Waste Facility Cover	367	1,079	\$71,205,470	\$65,992.09
Waste Storage Facility	313	892	\$50,346,086	\$56,441.80
Irrigation System, Sprinkler	442	1,413	\$50,336,668	\$35,623.97
Forest Stand Improvement	666	5,271	\$45,443,655	\$8,621.45
Irrigation Pipeline	430	2,492	\$45,200,128	\$18,138.09
Pipeline (livestock)*	516	8,779	\$37,488,940	\$4,270.30
Heavy Use Area Protection	561	8,927	\$34,816,912	\$3,900.18

Source: United States Department of Agriculture. Natural Resources Conservation Service. *NRCS Protracts 10 13 2022*.



animal waste, a potent source of methane and risk for water supplies. These two practices are more expensive on a per-contract basis than others on the list, as they require large amounts of concrete and liner to prevent liquid waste from leaking into surrounding waterways and groundwater. Despite these protective measures, animal waste often escapes and contaminates local water. In North Carolina, where many hog CAFOs lie within 100 miles of the Atlantic Ocean, several hurricanes have struck and caused lagoons to overflow, including Hurricane Florence in 2018, Hurricane Matthew in 2016 and Hurricane Floyd in 1999.<sup>5</sup>

## HOW DOES EQIP WORK?

Over 160 different practices are eligible for EQIP funding. Farmers who wish to implement EQIP conservation practices on their land work with local Natural Resources Conservation Service (NRCS) staff to determine which practice or practices make the most sense. Different regions of the country pose different resource concerns, such as water quality and wildlife habitat. Proposals for EQIP practices that address regional resource concerns are often ranked higher than those that do not. The regional resource

concerns are determined by NRCS in consultation with county and state technical advisory committees (STACs), open to farmers, landowners, conservationists and members of the general public.

In most cases, a farmer will receive technical guidance on how to install an EQIP practice, pay for it, install it and then receive reimbursement from NRCS. Low-income farmers, farmers of color, veteran farmers, and new and beginning farmers can be eligible for [advance payments](#) so the up-front cost burden is lower.

We have provided the practice standard number used by the NRCS. A full and up-to-date list of practice standards and eligibility is available on the NRCS [website](#).<sup>6</sup>

## ANAEROBIC DIGESTERS: COSTLY AND COUNTERPRODUCTIVE

The single costliest practice eligible for EQIP payments is the anaerobic digester. In 2022, EQIP awarded \$1,983,965 to just seven anaerobic digesters, all of which are in California. That comes out to an average of \$283,424 per contract. Just one digester contract would be the equivalent of 4% of New Jersey's entire

**Table 2: Top 10 Most Expensive EQIP Practices by Average Per-Contract Payment, Nationwide, 2022**

Note: The **bolded** practices are largely used to support CAFOs.

Rank	Practice	NRCS Practice Standard #	Number of Contracts	Total \$ Spent on Practice	Average Contract \$ Amount
1	<b>Anaerobic Digester</b>	366	7	\$1,983,965	\$283,424
2	<b>Pond Sealing or Lining Concrete</b>	522	34	\$4,646,545	\$136,663
3	Groundwater Recharge Basin or Trench	815	8	\$1,044,671	\$130,584
4	<b>Waste Treatment Lagoon</b>	359	2	\$204,840	\$102,420
5	Fish Passage	396	33	\$2,286,372	\$69,284
6	<b>Waste Facility Cover</b>	367	1,079	\$71,205,470	\$65,992
7	Aquaculture Ponds	397	1	\$56,910	\$56,910
8	<b>Waste Storage Facility</b>	313	892	\$3,086,643	\$56,442
9	Pond Sealing or Lining	521	63	\$3,439,359	\$62,590
10	Edge of Field Water Quality Monitoring Data Collection and Evaluation	201	6	\$321,605	\$53,601

Source: United States Department of Agriculture. Natural Resources Conservation Service. *NRCS Protracts 10 13 2022*.



Exterior shot of an anaerobic digester, *USDA*.

EQIP allocation in 2022 or around 6.6% of Massachusetts' allocation. The money spent on these seven digesters could instead have helped 238 farmers plant cover crops.

Expensive anaerobic digesters are most often installed at CAFOs to capture methane gas from manure lagoons. Once captured, methane gas is often channeled into natural gas pipelines. Digesters are key nodes in a growing movement to use biogas derived from animal manure for energy, sometimes under the guise of “green” or “renewable” energy. If the market for biogas continues to grow, with the help of state and federal subsidies, it will create further incentives to expand CAFOs to produce more manure. Livestock have the potential to be valued less for meat, dairy and wool and more for the waste they produce.

IATP has [written](#) about how biogas, and digesters in particular, is a false climate solution that further props up a polluting system of animal production, in which rural communities pay the price. Biogas diverts precious resources away from true solutions that reduce emissions and make the agricultural system more climate resilient.<sup>7</sup> EQIP is not the only source of taxpayer dollars that can be used for methane

digesters. The Rural Energy for America Program (REAP) run by USDA also provides public funding for biogas infrastructure, as do some state-level programs.<sup>8</sup> With limited time to meet climate target dates set by the U.S. and global community, we cannot afford costly distractions such as biogas when other proven solutions exist and broader systems reforms are needed.

## EQIP IMPROVEMENT ACT

When EQIP was first created in the 1996 Farm Bill, CAFOs were not eligible for funding through the program. The EQIP Improvement Act, a bill introduced in March 2023 by Senators Cory Booker (D-NJ) and Mike Lee (R-UT), would reform the way EQIP practices are prioritized, bringing the program more in line with its original intent of conservation while deprioritizing expensive practices that don't have much environmental benefit. Sens. Booker and Lee have identified 25 practices currently eligible for EQIP funding that would have a lower federal cost-share. Under this bill, most EQIP practices would be eligible for 75% federal cost-share, whereas the practices in Table 3 would only be eligible for 40%. Additionally, all EQIP contract holders would only be eligible for less than \$125,000



in payments over four years. The average contracts for the practices targeted under the EQIP Improvement Act are well below the payment limits, indicating that only the largest contracts and largest farms would be affected.

Many of the practices that IATP identified as industrial in *Payments for Pollution* are reflected in Table 3. These practices are italicized. As we highlighted in the 2022 report, our list of 10 practices was not exhaustive, but rather examples of the cost, scale and effects of EQIP payments for practices that are not effective at conserving the environment and may in fact make the climate and conservation crises worse.

## WHAT ARE SOME EXAMPLES OF COST-EFFECTIVE, CLIMATE-RESILIENT EQIP PRACTICES?

Table 4 highlights a handful of climate-resilient EQIP practices that can serve as cost-effective alternatives to the more expensive structural and industrial practices. Some of these practices help build soil health and soil organic carbon, while others, such as high tunnel systems, windbreaks and multi-story cropping, can help farmers insulate their crops from extreme weather events and improve productivity. Others, such as silvopasture and prescribed grazing, work to better integrate livestock and natural systems. As with any

**Table 3: Practices targeted by EQIP Improvement Act**

Note: The **bolded** practices are those identified as “industrial” in IATP’s 2022 *Payments for Pollution* report.

Practice	NRCS Practice Standard #	Number of Contracts	Total \$ Spent on Practice	Average Contract \$ Amount
Access Road	560	671	\$5,719,100	\$8,523
<b>Animal Mortality Facility</b>	316	384	\$12,235,916	\$31,864
Aquaculture Pond	397	1	\$56,910	\$56,910
Clearing and Snagging	326	20	\$148,555	\$7,428
Dam	402	1	\$26,754	\$26,754
Dam using diversion	348	6	\$148,737	\$24,790
Dike	356	182	\$4,166,907	\$22,895
Diversion	362	454	\$1,079,598	\$2,378
Fish raceway or tank	396	33	\$2,286,372	\$69,284
Irrigation pipeline	430	2,492	\$45,200,128	\$18,138
Irrigation reservoir	436	235	\$4,161,712	\$17,709
Land clearing	460	298	\$364,200	\$1,222
Land smoothing	466	256	\$1,067,697	\$4,171
Livestock pipeline	516	8,779	\$37,488,940	\$4,270
Obstruction removal	500	706	\$4,673,214	\$6,619
Pond	378	594	\$4,877,882	\$8,212
<b>Pumping plant</b>	533	3,967	\$24,335,497	\$6,134
Spoil spreading	572	76	\$105,802	\$1,392
Surface drain using a field ditch	607	9	\$51,520	\$5,724
Main or lateral surface drain	608	8	\$107,352	\$13,419
Vertical drain	630	0	0	0
<b>Waste facility closure</b>	360	140	\$3,453,894	\$24,671
<b>Waste storage facility</b>	313	892	\$50,346,086	\$56,442
<b>Waste transfer</b>	634	431	\$5,223,592	\$12,120
Waste treatment lagoon	359	2	\$204,840	\$102,420

Source: United States Department of Agriculture. Natural Resources Conservation Service. *NRCS Protracts 10 13 2022*.

**Table 4: Usage of 10 Climate Resilient EQIP Practices, Nationwide, 2022**

Practice	NRCS Practice Standard #	Number of Contracts	Total \$ Spent on Practice	Average Contract \$ Amount
Alley cropping	311	5	\$43,575	\$8,715
Conservation cover	327	1,460	\$4,521,721	\$3,097
Conservation crop rotation	328	1,841	\$7,506,982	\$4,078
Prescribed grazing	528	8,983	\$24,887,238	\$2,770
Critical area planting	342	3,166	\$3,233,756	\$1,021
High tunnel system	325	2,919	\$29,383,316	\$10,066
Multi-story cropping	379	69	\$438,254	\$6,352
Windbreak/shelter-break establishment	380	542	\$1,281,505	\$2,364
Silvopasture establishment	381	113	\$567,708	\$5,024
Riparian forest buffer	391	286	\$861,169	\$3,011

Source: United States Department of Agriculture. Natural Resources Conservation Service. *NRCS Protracts 10 13 2022*.

practice, not all of these are useful in all contexts — there are many parts of the country where a riparian forest buffer is not possible, for example. Farmers and researchers are continuing to learn more about ways to conserve soil and water in dry conditions, and whether practices like those in Table 4 can be useful on such farms.

USDA has worked to incorporate local and regional climate realities into its resource conservation priorities, and its existing structures, such as county committees and State Technical Advisory Committees (STACs), can be good tools to ensure conservation programs work for climate resilience regardless of location. More can be done to better incorporate climate resilience into these advisory bodies, as well as the funding that ultimately comes from the USDA.

The list of practices in Table 4 is not comprehensive but provides a sample of conservation practices that are both cost-effective and can be climate resilient.

## EQIP AND IRRIGATION

Comparing EQIP practices in the Eastern U.S. to the West, one major difference becomes apparent immediately: irrigation. In almost every Western state, irrigation-related practices are present in the top five EQIP practices by total amount of money spent. In the case of California, three of the top five practices by dollars spent are irrigation-related practices.

In an era of erratic rainfall and drying aquifers, the question arises: Should an environmental program such as EQIP be paying for expensive irrigation projects? The answer? It depends.

In California, it is practically impossible to grow food in much of the state without some form of irrigation. According to the State of California, over one-third of the U.S.' vegetables and three-quarters of its nuts and fruits are grown there.<sup>9</sup> For the state's Central Valley, irrigation water comes from reservoirs of rain and melted snowpack from the Sierra Nevada Mountains and other surrounding mountain ranges. In Southern California, the Colorado River is a major source of irrigation water. In both cases, the overall water supply is variable. So far, in 2023, unusually high amount of rain and snow from "atmospheric rivers" has helped bust a years-long drought and ensure the water supply is largely secure this year. However, as we saw in previous years, droughts can be long-lasting and appear with little warning, exacerbated by the more intense heat that comes with climate change.

The water situation in Kansas is different than California. Instead of being reliant on snowpack, much of western Kansas receives its irrigation water from the Ogallala Aquifer. This ancient water lies under the High Plains and has varying levels of depth. The portion of the aquifer that lies under Southwest Kansas is relatively shallow and has been depleted much quicker than it can be replenished. Many farms are digging





EQIP-funded water filtration and drip irrigation system on California tomato farm, *USDA*.

deeper wells, changing irrigation systems, or giving up on irrigation altogether. In addition, for decades, Kansas has had a policy of “planned depletion,” which essentially mandates the aquifer be drained for the sake of irrigating crops.<sup>10</sup> A December 2022 law in Kansas is attempting to address the Ogallala crisis by allowing restrictions on water use, though results may differ across groundwater administration districts.<sup>11</sup>

As we highlighted in our 2022 report *Payments for Pollution*, Kansas spends fewer EQIP funds on industrial practices than other states in the Midwest and Great Plains. Some of Kansas’s top EQIP practices include cover crops and brush management. Despite the widespread use of irrigation in the state, unlike California, very few EQIP dollars go to irrigation in Kansas. While the state is at a crossroads when it comes to water, it will be interesting to see if farmers and conservationists turn to EQIP for solutions.

Many of the irrigation practices EQIP pays for are intended to decrease the amount of water used in irrigated fields, practices that are known as “precision irrigation.” EQIP helps pay for micro irrigators and sprinkler style irrigators, which both use less water than traditional flood and furrow irrigation systems. EQIP also helps pay for irrigation pipelines, the

smoothing of land for irrigation and pumping plants for moving water. One side effect of precise applicators is they increase soil salinity, which is detrimental for most crops.<sup>12</sup> In order to combat excessive soil salinity, excess water beyond what is needed for the plant may be used, sometimes up to 26% more water.<sup>13</sup> Precision irrigation technologies may provide “more crop per drop,” but they do not necessarily lead to an overall reduction in water use.

Better monitoring and regulation of water levels in aquifers and reservoirs is necessary if irrigation agriculture is to continue in much of the U.S. In places where feasible, more support should be provided for growers who wish to adopt [dry farming](#) practices.

## WHAT IS COMBUSTION SYSTEM IMPROVEMENT?

In California, the top EQIP practice by dollar amount spent is the “[Combustion System Improvement](#)” practice. This practice helps farmers replace or retrofit fossil-fuel burning combustion engines and systems with cleaner and/or more renewable options. While also operating outside of California (it is operating with some success in Puerto Rico), in California, the practice works in tandem with the Carl Moyer Memorial

Air Quality Standards Attainment [Program](#) to reduce particulate matter and nitrous oxide released from engines, heaters, pumps, tractors and other agricultural combustion systems.<sup>14</sup> Considering the high levels of air pollution in places like California’s Central Valley, this practice can go a long way in providing healthier air, especially for farmers, farmworkers and others who spend their days outdoors.

## CONCLUSION

This report further underscores the recommendations we made in *Closed Out* and *Payments for Pollution* — there is a great need for additional funds to connect farmers with cost-effective, climate-resilient farming practices. In this vein, Congress should seek to protect funding for conservation agriculture outlined in the Inflation Reduction Act while instituting further reforms akin to the EQIP Improvement Act that divert funding away from costly, high emissions industrial-scale practices and toward proven practices that insulate farmers from the shocks of climate change.

The effects of climate change are real, and they are happening now. We must do what we can to mitigate what we can and adapt to the rest. With reforms, EQIP can play a meaningful role in both mitigation and adaptation.



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## Endnotes

1 Intergovernmental Panel on Climate Change. *AR6 Synthesis Report: Climate Change 2023*. 2023. Accessed April 13, 2023. <https://www.ipcc.ch/report/ar6/syr/>.

2 Girija Veni, V., Ch. Srinivasarao, K. Sammi Reddy, K.L. Sharma, and Ashish Rai. “Soil health and climate change,” in *Climate Change and Soil Interactions*, ed. Majeti Narasimha Vara Prasad and Marcin Pietrzykowski (Cambridge, Massachusetts: Elsevier, 2020), 751.

3 National Association of Local Boards of Health. *Understanding Concentrated Animal Feeding Operations and Their Impact on Communities*. 2010. Accessed April 13, 2023. [https://www.cdc.gov/nceh/ehs/docs/understanding\\_cafos\\_nalboh.pdf](https://www.cdc.gov/nceh/ehs/docs/understanding_cafos_nalboh.pdf).

4 American Society for the Prevention of Cruelty to Animals. *Revealing the Problem with Factory Farming*. <https://www.aspc.org/protecting-farm-animals/problem-factory-farming>. Accessed April 27, 2023.

5 Environment America. *Agricultural Waste Lagoons: Accidents Waiting to Happen*. <https://environmentamerica.org/wp-content/uploads/2022/08/AccidentsFactsheet-ManureLagoons-1.pdf>. Accessed April 25, 2023.

6 Natural Resources Conservation Service. *Conservation Practice Standards*. <https://www.nrcs.usda.gov/resources/guides-and-instructions/conservation-practice-standards>. Accessed May 10, 2023.

7 Murphy, Sophia and Ben Lilliston. *True or False? Evaluating solutions for agriculture and climate change*. Institute for Agriculture and Trade Policy. <https://www.iatp.org/true-or-false-climate-solutions>. Accessed May 3, 2023.

8 United States Department of Agriculture Rural Development. *Rural Energy for America Program Renewable Energy Systems & Energy Efficiency Improvement Guaranteed Loans & Grants*. <https://www.rd.usda.gov/programs-services/energy-programs/rural-energy-america-program-renewable-energy-systems-energy-efficiency-improvement-guaranteed-loans>. Accessed May 3, 2023.

9 California Department of Food and Agriculture. *California Agricultural Statistics Review 2021-2022*. [https://www.cdfa.ca.gov/Statistics/PDFs/2022\\_Ag\\_Stats\\_Review.pdf](https://www.cdfa.ca.gov/Statistics/PDFs/2022_Ag_Stats_Review.pdf). Accessed April 23, 2023.

10 Kansas Geological Survey. *Sustainable Development of Water Resources*. [https://www.kgs.ku.edu/Publications/pic9/pic9\\_3.html](https://www.kgs.ku.edu/Publications/pic9/pic9_3.html). Accessed May 5, 2023.



11 Condos, David. *With the Ogallala Aquifer drying up, Kansas considers limits to crop irrigation*. Kansas News Service. April 9, 2023. Accessed April 24, 2023. <https://www.kansas.com/news/state/article274099780.html>

12 Nickel, Raylene. *New life for saline soil. Here's how some perennial grasses can lower soil salinity*. Successful Farming. 2017. <https://www.agriculture.com/crops/cover-crops/new-life-for-saline-soil>. Accessed April 25, 2023.

13 Hanson, Blaine R. and Warren E. Bendixen. University of California, Agriculture and Natural Resources. *Drip irrigation controls soil salinity under row crops*. California Agriculture 49(4): 19-23. <https://doi.org/10.3733/ca.v049n04p19>. Accessed April 18, 2023.

14 California Air Resources Board. *Carl Moyer Memorial Air Quality Standards Attainment Program*. <https://ww2.arb.ca.gov/our-work/programs/carl-moyer-memorial-air-quality-standards-attainment-program>. Accessed May 10, 2023.

## See also:

- NRCS FY23 Payment Schedules for Conservation Programs: <https://www.nrcs.usda.gov/getting-assistance/payment-schedules>
- University of Illinois Gardner Policy Series: A View of the Farm Bill Through Policy Design, Part 1: EQIP <https://farmdocdaily.illinois.edu/2023/04/a-view-of-the-farm-bill-through-policy-design-part-1-eqip.html>
- Center for Rural Affairs: What to Know About EQIP Application Rankings and Advance Payment Options <https://www.cfra.org/sites/default/files/PDFResources/Case%20studies/CCG%20fact%20sheets/eqip-application-rankings-and-advance-payment-option.pdf>
- Aqueduct Water Risk Atlas: [https://www.wri.org/applications/aqueduct/water-risk-atlas/#/?advanced=false&basemap=hydro&indicator=w\\_awr\\_def\\_tot\\_cat&lat=30&lng=-80&mapMode=view&month=1&opacity=0.5&ponderation=DEF&predefined=false&projection=absolute&scenario=optimistic&scope=baseline&threshold&timeScale=annual&year=baseline&zoom=3](https://www.wri.org/applications/aqueduct/water-risk-atlas/#/?advanced=false&basemap=hydro&indicator=w_awr_def_tot_cat&lat=30&lng=-80&mapMode=view&month=1&opacity=0.5&ponderation=DEF&predefined=false&projection=absolute&scenario=optimistic&scope=baseline&threshold&timeScale=annual&year=baseline&zoom=3)

## APPENDIX

### Top Five EQIP Practices by total statewide dollar amount, Fiscal Year 2022

Source: United States Department of Agriculture. Natural Resources Conservation Service. *NRCS Protracts 10 13 2022*.

State	NRCS Practice Standard #	\$ Spent Statewide
<b>Alabama</b>		
Tree/Shrub Establishment	377	\$3,380,561
Forest Site Preparation	363	\$2,420,698
Prescribed Burning	730	\$1,917,378
Cover Crop	146	\$1,783,150
Fence	345	\$1,726,358
<b>Alaska</b>		
Tree/Shrub Establishment	36	\$2,561,409
Animal Trails and Walkways	10	\$2,144,577
Forest Stand Improvement	55	\$2,129,268
Residue Management, Mulch Till	27	\$251,007
High Tunnel System	17	\$152,825
<b>Arizona</b>		
Brush Management	113	\$3,170,948
Fence	112	\$1,398,206
Trough or Tank	196	\$1,216,268
Pipeline	109	\$1,164,885
Forest Stand Improvement	14	\$890,682
<b>Arkansas</b>		
Cover Crop	763	\$7,342,825
Irrigation Land Leveling	199	\$5,625,414
Irrigation Pipeline	281	\$4,904,829
Pumping Plant for Water Control	149	\$2,725,160
Waste Facility Cover	97	\$2,537,635
<b>California</b>		
Combustion System Improvement	396	\$21,933,222
Irrigation System, Micro	250	\$10,273,175
Irrigation Pipeline	187	\$4,137,842
Irrigation System, Sprinkler	73	\$3,402,074
Forest Stand Improvement	263	\$3,302,322
<b>Colorado</b>		
Irrigation Pipeline	229	\$5,257,084
Forest Stand Improvement	270	\$5,222,454
Cover Crop	468	\$5,150,007
Irrigation System, Sprinkler	112	\$3,078,108
Conservation Crop Rotation	70	\$1,860,752



<b>State</b>	<b>NRCS Practice Standard #</b>	<b>\$ Spent Statewide</b>
<b>Connecticut</b>		
Waste Facility Cover	11	\$890,029
Waste Storage Facility	6	\$855,320
Forest Stand Improvement	46	\$446,223
Brush Management	85	\$379,381
Forest Harvest Trails & Landings	33	\$251,978
<b>Delaware</b>		
Heavy Use Area Protection	182	\$1,457,833
Waste Facility Cover	19	\$1,016,360
Cover Crop	40	\$708,331
Irrigation System, Sprinkler	12	\$580,590
Amendments for Treatment of Agricultural Waste	69	\$408,627
<b>Florida</b>		
Herbaceous Weed Control	396	\$3,904,399
Cover Crop	183	\$2,904,477
Brush Management	278	\$2,728,203
Forest Site Preparation	172	\$2,054,435
Tree/Shrub Establishment	157	\$1,722,644
<b>Georgia</b>		
Cover Crop	484	\$6,648,203
Waste Facility Cover	85	\$6,196,215
Tree/Shrub Establishment	389	\$4,636,908
Forest Site Preparation	490	\$4,398,428
Fence	456	\$2,597,753
<b>Hawai'i</b>		
Fence	122	\$1,744,369
Tree/Shrub Establishment	50	\$1,335,653
Brush Management	135	\$1,215,714
Trough or Tank	111	\$685,330
Mulching	91	\$557,632
<b>Idaho</b>		
Irrigation Pipeline	171	\$3,491,933
Irrigation System, Sprinkler	109	\$2,848,326
Brush Management	69	\$1,335,812
Structure for Water Control	185	\$1,281,072
Fence	143	\$1,124,144
<b>Illinois</b>		
Waste Facility Cover	32	\$2,246,156
Underground Outlet	345	\$1,675,104
Cover Crop	285	\$1,648,823
Heavy Use Area Protection	123	\$1,269,304
Waste Storage Facility	11	\$999,527

<b>State</b>	<b>NRCS Practice Standard #</b>	<b>\$ Spent Statewide</b>
<b>Indiana</b>		
Cover Crop	1,142	\$6,467,672
Brush Management	642	\$3,484,972
Waste Facility Cover	63	\$2,777,818
Waste Storage Facility	41	\$2,198,845
Nutrient Management	196	\$1,244,940
<b>Iowa</b>		
Cover Crop	1,034	\$9,890,153
Waste Facility Cover	22	\$4,363,902
Waste Storage Facility	34	\$2,855,176
Underground Outlet	129	\$1,485,291
Grade Stabilization Structure	42	\$1,322,996
<b>Kansas</b>		
Terrace	563	\$4,238,082
Cover Crop	433	\$4,207,392
Underground Outlet	272	\$2,015,139
Brush Management	773	\$1,819,308
Nutrient Management	119	\$1,450,468
<b>Kentucky</b>		
Fence	841	\$3,467,044
Forest Slash Treatment	183	\$2,923,272
Cover Crop	334	\$2,440,110
Pipeline	400	\$1,294,384
Pasture & Hayland Planting	292	\$1,194,188
<b>Louisiana</b>		
Cover Crop	230	\$3,675,521
Irrigation Pipeline	73	\$2,306,108
Irrigation Land Leveling	145	\$2,232,767
Heavy Use Area Protection	474	\$1,122,609
Fence	295	\$965,248
<b>Maine</b>		
Waste Facility Cover	27	\$2,251,755
Waste Storage Facility	19	\$1,496,156
Heavy Use Area Protection	55	\$812,302
Fish Passage	6	\$782,217
Forest Stand Improvement	83	\$642,845
<b>Maryland</b>		
Waste Facility Cover	13	\$1,594,069
Heavy Use Area Protection	153	\$1,350,315
Wildlife Habitat- Restore and Management	25	\$1,041,550
Fence	127	\$654,076
Waste Storage Facility	15	\$500,148

<b>State</b>	<b>NRCS Practice Standard #</b>	<b>\$ Spent Statewide</b>
<b>Massachusetts</b>		
Waste Facility Cover	7	\$745,793
Waste Storage Facility	6	\$615,439
High Tunnel System	33	\$418,426
Brush Management	62	\$301,991
Forest Stand Improvement	27	\$266,640
<b>Michigan</b>		
Cover Crop	480	\$8,870,832
Waste Facility Cover	40	\$3,317,496
Waste Storage Facility	25	\$1,977,166
Nutrient Management	102	\$1,261,088
Agrichemical Handling Facility	22	\$988,702
<b>Minnesota</b>		
Cover Crop	646	\$3,942,074
Waste Facility Cover	34	\$3,732,956
Waste Storage Facility	38	\$3,007,925
Pest Management	147	\$1,783,587
Underground Outlet	351	\$1,658,744
<b>Mississippi</b>		
Cover Crop	845	\$10,715,367
Irrigation Pipeline	165	\$4,310,086
Fence	798	\$3,943,620
Dike	154	\$3,657,191
Grade Stabilization Structure	400	\$3,031,804
<b>Missouri</b>		
Cover Crop	866	\$4,998,280
Fence	677	\$3,581,923
Terrace	92	\$2,784,216
Pasture & Hayland Planting	294	\$2,124,947
Pipeline	314	\$1,770,505
<b>Montana</b>		
Forest Slash Treatment	452	\$3,758,923
Forest Stand Improvement	350	\$3,602,932
Fence	241	\$3,541,978
Pipeline	334	\$2,354,584
Brush Management	214	\$2,327,976
<b>Nebraska</b>		
Cover Crop	538	\$2,837,744
Brush Management	433	\$2,477,414
Prescribed Grazing	268	\$2,197,756
Irrigation System, Sprinkler	53	\$1,725,140
Pumping Plant for Water Control	225	\$1,610,308



<b>State</b>	<b>NRCS Practice Standard #</b>	<b>\$ Spent Statewide</b>
<b>Nevada</b>		
Irrigation Pipeline	60	\$2,624,092
Irrigation System, Sprinkler	21	\$1,011,420
Structure for Water Control	149	\$929,440
Irrigation Ditch & Canal	22	\$770,200
Irrigation Land Leveling	21	\$255,832
<b>New Hampshire</b>		
Brush Management	163	\$647,687
Forest Stand Improvement	78	\$492,427
Wildlife Habitat, Early Successional	99	\$369,578
Pest Management	52	\$358,450
High Tunnel System	40	\$352,148
<b>New Jersey</b>		
High Tunnel System	50	\$1,501,421
Cover Crop	190	\$887,970
Floodwater Diversion	25	\$704,147
Waste Facility Cover	7	\$631,986
Wildlife Habitat- Restore and Management	9	\$361,834
<b>New Mexico</b>		
Irrigation System, Sprinkler	84	\$4,082,272
Brush Management	178	\$3,694,486
Forest Stand Improvement	114	\$2,316,965
Fence	168	\$2,253,947
Trough or Tank	327	\$1,672,622
<b>New York</b>		
Waste Storage Facility	21	\$2,615,326
High Tunnel System	162	\$2,126,404
Waste Facility Cover	26	\$1,717,577
Heavy Use Area Protection	55	\$1,140,192
Forest Stand Improvement	174	\$1,014,406
<b>North Carolina</b>		
Animal Mortality Facility	47	\$5,402,826
Waste Facility Cover	54	\$4,137,976
Cover Crop	154	\$2,983,853
Waste Storage Facility	51	\$2,131,907
Forest Stand Improvement	90	\$1,029,564
<b>North Dakota</b>		
Nutrient Management	157	\$3,670,627
Pipeline	212	\$2,212,557
Residue Management, No Till & Strip Till	126	\$2,173,162
Wildlife Wetland Habitat Management	500	\$2,162,069
Fence	315	\$1,979,178

<b>State</b>	<b>NRCS Practice Standard #</b>	<b>\$ Spent Statewide</b>
<b>Ohio</b>		
Waste Facility Cover	119	\$8,000,717
Cover Crop	730	\$6,204,787
Waste Storage Facility	79	\$3,990,234
Brush Management	1,186	\$2,842,747
Nutrient Management	164	\$2,253,816
<b>Oklahoma</b>		
Pasture & Hayland Planting	454	\$5,741,440
Brush Management	1,023	\$3,122,482
Cover Crop	368	\$2,947,761
Irrigation System, Sprinkler	42	\$2,139,966
Irrigation System, Micro	12	\$1,501,746
<b>Oregon</b>		
Forest Stand Improvement	361	\$5,190,506
Brush Management	543	\$2,696,049
Forest Slash Treatment	482	\$2,322,925
Irrigation System, Sprinkler	82	\$2,205,724
Irrigation System, Micro	52	\$1,872,282
<b>Pennsylvania</b>		
Waste Facility Cover	106	\$6,668,242
Waste Storage Facility	100	\$4,774,311
Cover Crop	464	\$3,083,320
Heavy Use Area Protection	234	\$2,967,299
Fence	361	\$1,410,519
<b>Rhode Island</b>		
Wildlife Habitat- Restore and Management	54	\$1,053,046
High Tunnel System	27	\$406,568
Lined Waterway or Outlet	9	\$167,733
Waste Storage Facility	1	\$155,160
Forest Stand Improvement	32	\$148,425
<b>South Carolina</b>		
On-Farm Equipment Efficiency Improvements	96	\$5,047,351
Cover Crop	302	\$4,062,968
Waste Facility Cover	31	\$2,550,725
Tree/Shrub Establishment	185	\$1,725,116
Forest Stand Improvement	81	\$1,691,250
<b>South Dakota</b>		
Cover Crop	514	\$3,847,305
Pipeline	409	\$3,829,097
Fence	276	\$2,043,928
Prescribed Grazing	446	\$1,760,183
Well	45	\$1,374,481

<b>State</b>	<b>NRCS Practice Standard #</b>	<b>\$ Spent Statewide</b>
<b>Tennessee</b>		
Cover Crop	881	\$5,103,522
Streambank & Shoreline Protection	133	\$3,108,334
Fence	892	\$3,096,342
Pipeline	634	\$1,811,943
Grade Stabilization Structure	137	\$1,711,856
<b>Texas</b>		
Brush Management	2,717	\$29,248,896
Fence	1,470	\$9,918,950
Irrigation System, Micro	89	\$8,713,436
Irrigation System, Sprinkler	170	\$7,127,340
Tree/Shrub Establishment	165	\$3,359,190
<b>Utah</b>		
Irrigation Pipeline	303	\$6,512,192
Irrigation System, Sprinkler	243	\$6,228,555
Brush Management	169	\$3,060,334
Range Planting	69	\$1,351,209
Pipeline	111	\$1,140,444
<b>Vermont</b>		
Waste Storage Facility	16	\$2,008,286
High Tunnel System	84	\$945,363
Brush Management	298	\$667,923
Pasture & Hayland Planting	49	\$587,705
Pond Sealing or Lining Concrete	3	\$513,223
<b>Virginia</b>		
Fence	619	\$3,553,196
Waste Facility Cover	26	\$2,415,419
High Tunnel System	143	\$1,656,286
Pipeline	255	\$1,509,902
Pasture & Hayland Planting	199	\$1,457,638
<b>Washington</b>		
Residue Management, Mulch Till	64	\$3,112,043
Irrigation System, Sprinkler	44	\$1,887,325
Nutrient Management	103	\$1,491,158
Tree/Shrub Establishment	52	\$1,464,325
Prescribed Grazing	57	\$1,213,856
<b>West Virginia</b>		
Waste Facility Cover	41	\$2,643,849
Fence	533	\$1,696,728
Heavy Use Area Protection	504	\$1,151,710
Streambank & Shoreline Protection	40	\$810,403
Waste Storage Facility	34	\$750,034



<b>State</b>	<b>NRCS Practice Standard #</b>	<b>\$ Spent Statewide</b>
<b>Wisconsin</b>		
Cover Crop	633	\$5,700,549
Waste Storage Facility	39	\$5,271,330
Pond Sealing or Lining Concrete	24	\$3,193,838
Heavy Use Area Protection	97	\$1,696,282
Fence	212	\$1,290,943
<b>Wyoming</b>		
Irrigation System, Sprinkler	117	\$5,628,862
Fence	233	\$2,997,956
Irrigation Pipeline	135	\$1,590,839
Pipeline	127	\$1,349,852
Herbaceous Weed Control	64	\$1,319,669
<b>Pacific Basin</b>		
Waste Facility Cover	11	\$286,268
High Tunnel System	28	\$155,404
Manure Transfer	13	\$65,924
Waste Storage Facility	10	\$62,626
Composting Facility	8	\$55,307
<b>Puerto Rico</b>		
Mulching	60	\$1,536,978
Waste Facility Cover	29	\$1,494,954
Fence	238	\$930,663
Heavy Use Area Protection	143	\$920,831
Combustion System Improvement	12	\$819,110