

NRCS AND FSA CONSERVATION PRACTICE DATA

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Watershed Technical Workgroup
November 2, 2017

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USDA AND USGS COOPERATOR AGREEMENTS

UNITED STATES DEPARTMENT OF AGRICULTURE

MEMORANDUM OF UNDERSTANDING

WITH

U.S. GEOLOGICAL SURVEY

CERTIFYING USDA AGENCY: FARM SERVICE AGENCY

UNDERSTANDING NUMBER: FSA/USGS-001-2015

Purpose

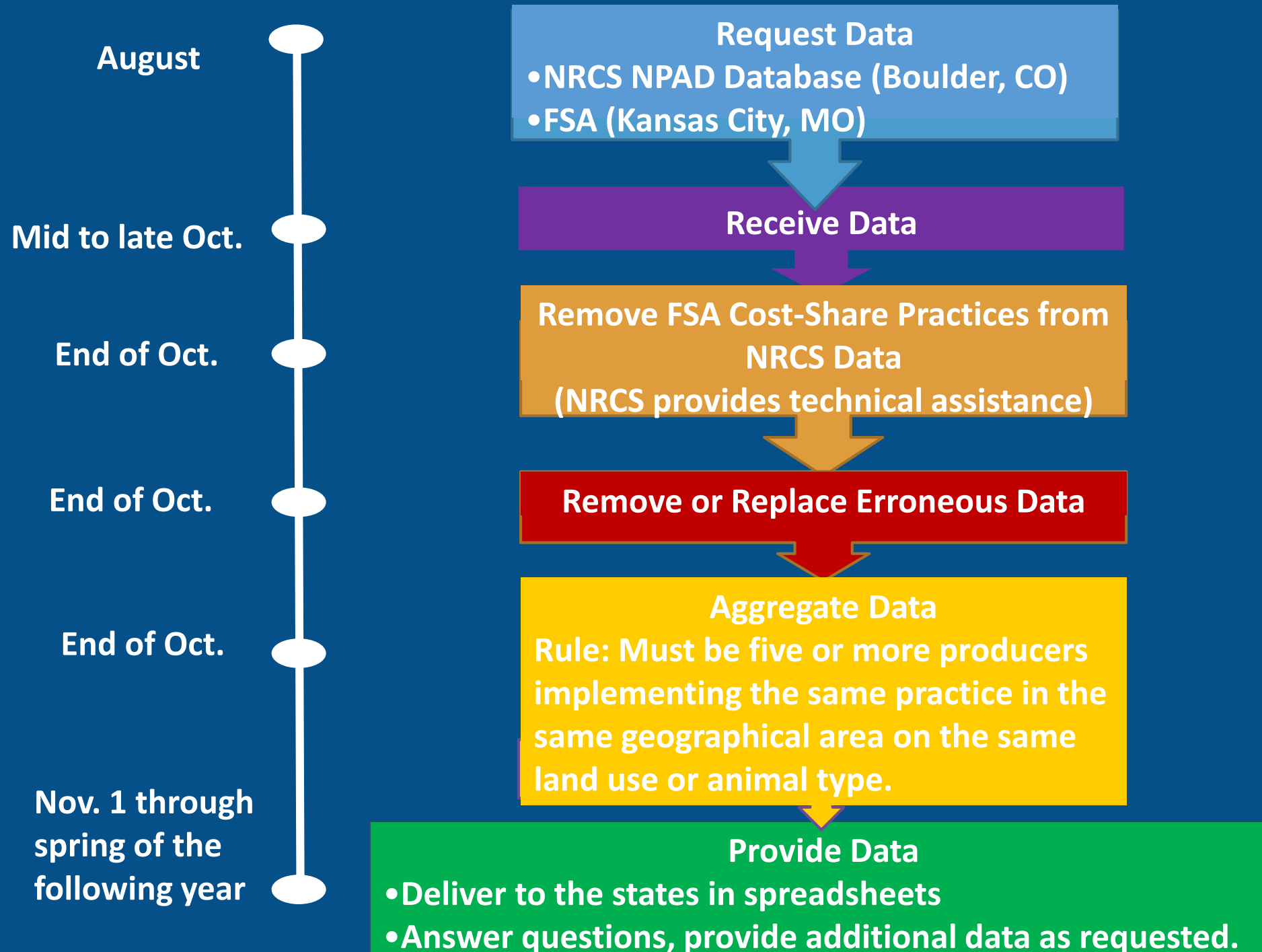
This USDA Cooperator Memorandum of Understanding is being issued by Farm Service Agency (FSA) to establish that U.S. Geological Survey (USGS) has been certified by FSA to be working in cooperation with the Secretary of Agriculture by providing technical assistance to a USDA program that concerns an agricultural operation, agricultural land, farming practice, or conservation practice. An individual or organization (governmental or non-governmental) certified by FSA to be working in cooperation with the Secretary of Agriculture on a USDA program where access is required to data that is protected by 7 U.S.C. § 8791 of the Food, Conservation and Energy Act of 2008 is known as a USDA Cooperator.

**NATURAL RESOURCES CONSERVATION SERVICE (NRCS)
UNITED STATES DEPARTMENT OF AGRICULTURE (USDA)**

**ACKNOWLEDGMENT OF REQUIRMENTS FOR PROTECTION OF PRIVACY OF
PERSONAL AND GEOSPATIAL INFORMATION RELATING TO NATURAL
RESOURCES CONSERVATION PROGRAMS**

Purpose and Background

The purpose of this Acknowledgment (hereinafter "Acknowledgment compliance") is to require acknowledgment by the U.S. Geological Survey (USGS) of the requirements of the Privacy Act of 1974, as amended (5 USC 552), Section 1244 of the Food Security Act of 1985, as amended (16 USC 3844); and Section 1619 of the Food, Conservation, and Energy Act of 2008 (7 USC 8791)(the 2008 Farm Bill); which prohibits disclosure of certain information by the Department of Agriculture (USDA), and its cooperators. The U.S. Geological Survey (USGS) assists NRCS



DATA OVERVIEW

CHARACTERISTICS OF DIFFERENT DATA SOURCES

	NRCS	FSA	CBP
Geography	latitude/longitude, aggregated to larger scales for producer privacy	County –FSA data issues make other geographic scales unreliable. Other scales may be available in the future.	County – May have been provided to CBP by modeling segment, HUC 4, state, or other
Year	2006 +	2005 +	States submitted historical data from 1985 +
Units	Units vary (e.g.: feet, number, acres, animal units, acre feet, cubic feet, linear feet per year)	Units are always acres	Units vary and are different than NRCS for the same practice
Trends over Time	Year of implementation and duration	Year of implementation and duration	Some BMPs are what was implemented that year and others are cumulative implementation
Source Sectors	Cropland, pasture, animals	Cropland and pasture	Cropland, pasture, animals, developed, natural, and septic
Additional Information	Some practices funded by FSA so reported in both NRCS and FSA data sets		<ul style="list-style-type: none"> Includes data from NRCS, FSA, and other data sources Practice names and definitions do not match NRCS and FSA

BMP NAME RELATIONSHIPS

- NEIEN Appendix
- It was requested that all FSA and NRCS practices be considered valid in NEIEN (not necessarily CAST).
- Not all FSA and NRCS practices provide a water quality benefit or are accepted by the Chesapeake Bay Program for the Annual Progress Report.

	A	B	C	D	E	F
1	NRCS Practice Code	NRCS Practice Name	CAST BMP Name	NEIEN Status	Credit Duration	
126	558	Roof Runoff Structure	Barnyard Runoff Control	Release	10	
127	560	Access Road				
128	561	Heavy Use Area Protection		Draft	1	
129	562	Recreation Area Improvement				
130	566	Recreation Land Grading and Shaping				
131	568	Trails and Walkways				
132	570	Stormwater Runoff Control				
133	572	Spoil Spreading				
134	574	Spring Development	Off Stream Watering Without Fencing	Draft	10	
135	575	Trails and Walkways				
136	578	Stream Crossing				
137	580	Streambank and Shoreline Protection	Non Urban Stream Restoration	Release	10	
138	582	Open Channel				
139	584	Channel Bed Stabilization	Non Urban Stream Restoration	Release	10	
140	585	Stripcropping	Soil Conservation and Water Quality Plans	Draft	10	
141	586	Stripcropping, Field				
142	587	Structure for Water Control	Water Control Structures	Release	10	
143	590	Nutrient Management		Retired	1	
144	591	Amendments for the Treatment of Agricultural Waste	Poultry Litter Amendments (alum, for exa	Release	1	
145	592	Feed Management	Dairy Precision Feeding and/or Forage Ma	Draft	1	
146	592	Feed Management	Dairy Precision Feeding and/or Forage Ma	Release	1	
147	595	Integrated Pest Management (IPM)		Draft	1	

PROTECTING PRODUCER PRIVACY

- Aggregation rules are specified by USDA and agreed to by USGS.
- Data may be shared only when each practice is reported by five or more producers. Otherwise, individual producers potentially could be identified and this would violate producer confidentiality. Where there were five or more producers reporting a practice in a county, then the data are provided at the county scale. Where there were less than five producers reporting a practice in a county, then the data are provided at the state scale. Data not meeting these criteria are withheld.
- Geographic Scale is the entire county for all counties that are in the Chesapeake Bay Watershed. There are some counties that have only a portion in the Chesapeake Bay Watershed. When you report to NEIEN, indicate that you are reporting for “state” and do not specify “CBWS-only” since the entire county is included.

NRCS CONSERVATION TECHNICAL ASSISTANCE

- Conservation Technical Assistance is any practice that: is recommended by NRCS, meets NRCS technical standards, and is not funded by USDA. Those practices implemented as CTA did not receive cost-share from USDA.
- Because the CTA practices are not under contract, it is not known if the practice was maintained, re-reported in other years, or what entity may have provided funding. Where another entity provided funding, it is likely that the funding entity included the CTA practice in their reporting.
- NRCS CTA practices are included separately.

DATA IMPROVEMENTS

NRCS PRACTICE DATA IMPROVEMENTS

- 2012: Plans and contracts were not linked in some instances. NRCS corrected the following year.
- 2012: Not all practice data made it to NPAD. Non-Protracts expenditures were stored in PRS and IDEA. In subsequent years, updates were made to include more of this information in NPAD.
- 2017: Conservation Stewardship Program (CSP) program. The vagueness of the rules for CSP made it impossible to maintain accurate linkages of contract to practice for CSP in NPAD. NRCS conducted a heavy cleanup of CSP practices in 2015. NRCS has indicated that new CSP contracts written in fiscal year 2017 will have the practice/contract link similar to other programs.

NRCS LIVESTOCK AND LAND USE TYPES

- Livestock and land BMPs are included in the data sets where present in the NRCS source data. Where not present, those fields are listed as null. In some cases, there were several instances of the BMP not meeting the privacy protection criteria if the animal type or land use was considered and the data were not releasable.
- Forest buffers on forest and land practices applied to water are not included.
- Aggregation rules updated annually because of new practices in new dataset

NRCS IMPLEMENTATION LEVELS

- Practice 313, Waste Storage Facility
 - Where amount was greater than 3 for the same customer, contract, and year, then the number was set to 1. In some cases, the original number was 313, the practice code. In others, it appeared to be the number of square feet (such as 160,602) rather than the count of facilities. This is not occurring in the 2017 data, but occurred in older records.
- Practice 558, Roof Runoff Structures
 - Many instances where the quantity reported is the linear feet or animal numbers rather than the number of structures, as is indicated in the unit name.
 - Should the quantity be reset to 1 where the amount is greater than 2? Some other number?

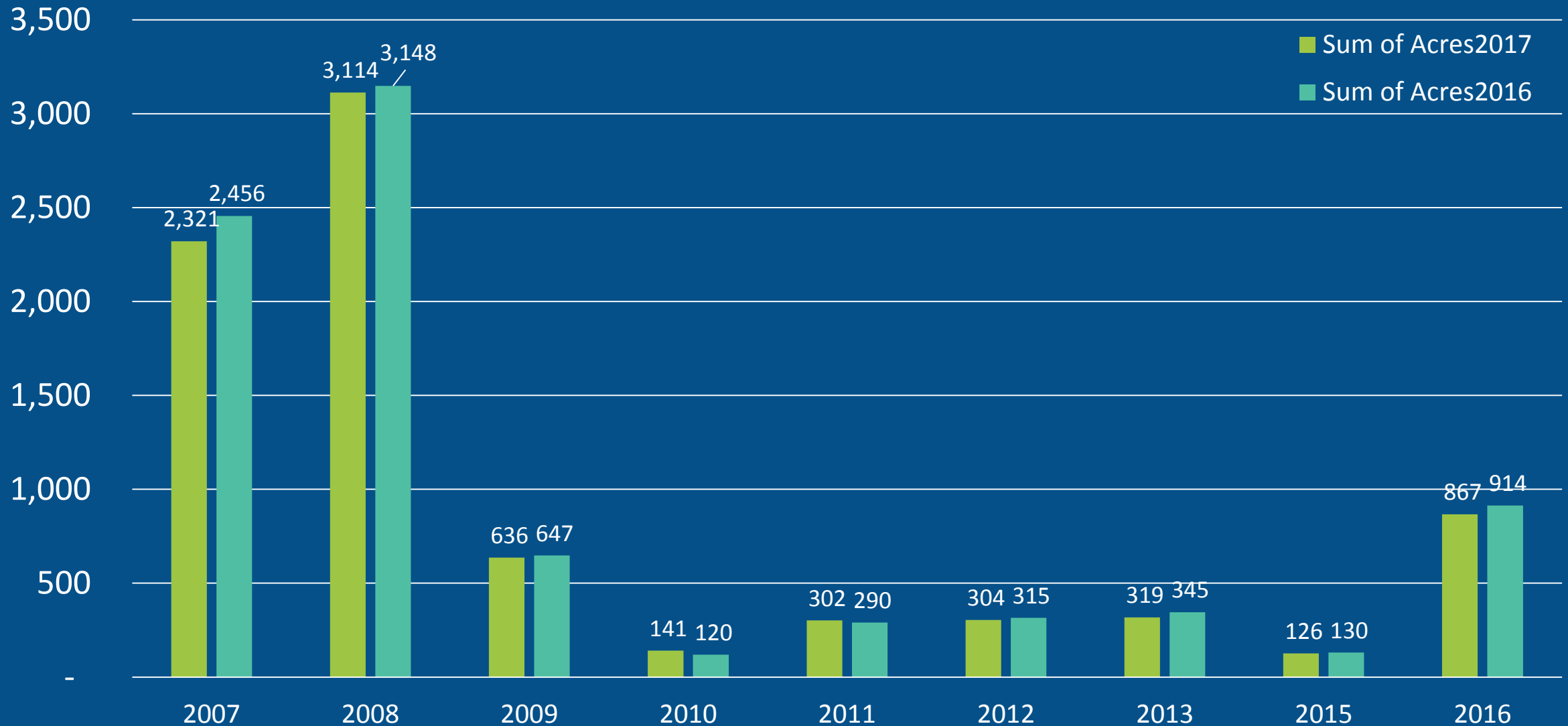
NRCS UMBRELLA AND COMPONENT PRACTICES

- Example: Barnyard Runoff Management System has roof runoff structure (367), heavy use area protection (561), diversion (362), and vegetated treatment area (635).
- These are treating the same acre of land, and we would count them as treating different acres because we don't have a way to know they are associated.
- Contract information is not the answer. Some contracts have many practices, and only some are treating the same acre or conservation need.
- CBPO tracks practices, rather than the treatment of a conservation need. Urban stormwater has transitioned to tracking the treatment of an environmental need rather than a list of BMPs with the Stormwater Performance Standards (runoff reduction and stormwater treatment). Agriculture has yet to do so.
- In the meantime, should component practices could be considered as “draft” in NEIEN status?

FSA BUFFER REENROLLMENT

- Practice acres are the total acres implemented and includes re-enrolled acres. Since historical data is rarely removed, including the re-enrollment would result in double-counting.
- Expired acreage is the amount per contract, not practice.
- Subtracting the expired acreage for a contract from the total acres per practice may result in a negative amount, since multiple practices can be in the contract.

COMPARISON OF 2016 AND 2017 DATA REQUEST FSA: ALL STATES-RIPARIAN BUFFERS



Data for historical years changes. It comes from FSA with these differences.

USE OF DATA AND CONCLUSIONS

- USDA datasets provide a consistent source of information that is comparable over time, but only represent a portion of BMPs implemented in the agricultural sector.
- State-reported datasets include all practices and source sectors, but have redefined BMP names or changed reporting details rather than changing actual management of the land.
- USDA data will be most useful where consistency in reporting and comparability of data over time is important.
- State-reported data are more useful when all sectors and all practices implemented is required.
- Relying solely on USDA data appears to leave out significant amount of implementation, and this varies depending on the BMP. For example, cover crops are primarily implemented using state funds, and most of the cover crop implementation will not be present in the USDA data. However, cover crops are well-represented in the Chesapeake Bay Program data.

ACKNOWLEDGEMENTS

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EXTRA SLIDES

OVERLAP BETWEEN FSA AND NRCS DATA

- For practices that FSA cost-shares, but NRCS provides technical assistance, the practices are included in the FSA data and are not included in the NRCS data.
- The overlap only occurs for some CRP practices. These practices were identified by NRCS using the FSA Handbook for Agricultural Resource Conservation Program for state and county offices (2-CRP (Revision 5) 8/7/2013). The section referenced begins on page 596.

https://www.fsa.usda.gov/Internet/FSA_File/2-crp_r05_a17.pdf