

# Analysis of Farmer Sign-up Data and Implementation Funds

Scientific and Technical Advisory  
Committee

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# Purposes of Evaluation

- USGS has requested conservation data to inform its evaluation of the effects of conservation practices by enhancing models, expanding regional monitoring and explanation of water-quality changes, and monitoring and assessing changes in small watersheds.
- The Chesapeake Bay Commission requested the Chesapeake Research Consortium assess how the Chesapeake Bay Watershed Initiative (CBWI) advanced progress in addressing watershed water quality concerns and how improvements can be made to maximize the impact of every agricultural practice implemented and dollar spent.
- USDA has a Chesapeake Bay TMDL milestone commitment to evaluate the Chesapeake Bay Watershed Initiative (CBWI) program contained in the Food, Conservation, and Energy Act of 2008.

# Approach

- Collaborative approach including USGS, USDA, EPA, Chesapeake Bay Foundation, Chesapeake Research Consortium, and the Chesapeake Bay Commission.
- USGS has obtained data from USDA, building on the 2013 USGS Open File Report.
- Track implementation changes over time, beginning with 2006. Consider leveraging and partnership effects associated with BMP implementation.
- Compare implementation of CBWI, all USDA, and non-USDA reported to CBP (state-implemented)



## **Integrating Federal and State Data Records to Report Progress in Establishing Agricultural Conservation Practices on Chesapeake Bay Farms**

By W. Dean Hively, Olivia H. Devereux, and Peter Claggett

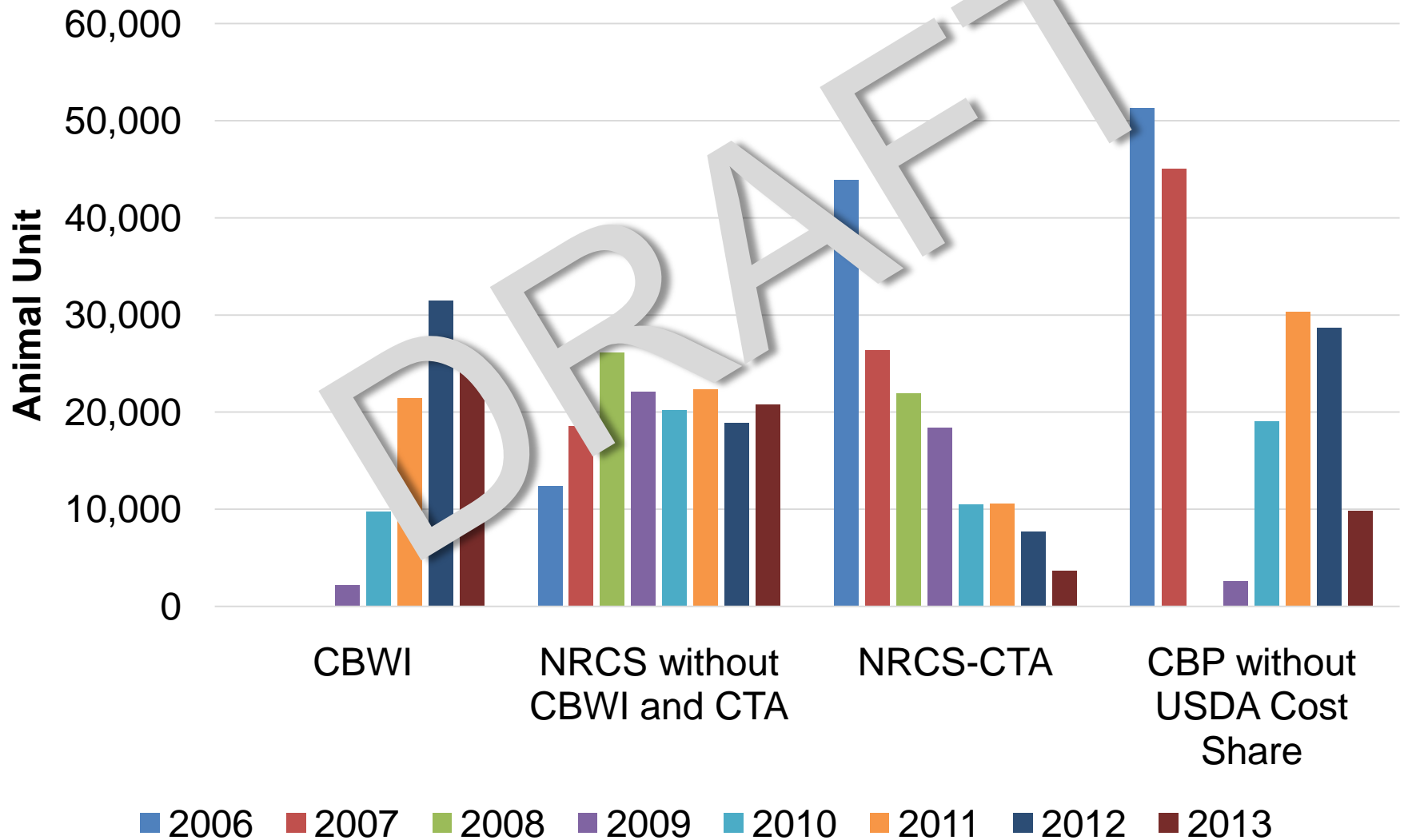
# What were the annual fluctuations in implementation by funding source?

- Funded programs—CBWI, all USDA, and non-USDA reported to the Chesapeake Bay Program (CBP)
- Positive implementation indicates that the reported levels are improbable except where the state primarily provides funding for that practice.
- Negative implementation indicates:
  - States are reporting less than the USDA-cost-shared amount, and agriculture is not receiving the credit it should receive
  - States are reporting the practice under other names or with different mapping to CBP BMPs. The mapping of these BMPs should be handled by the NEIEN plug-in so that there is consistency, but can be circumvented by submitting data to NEIEN using other BMP names.

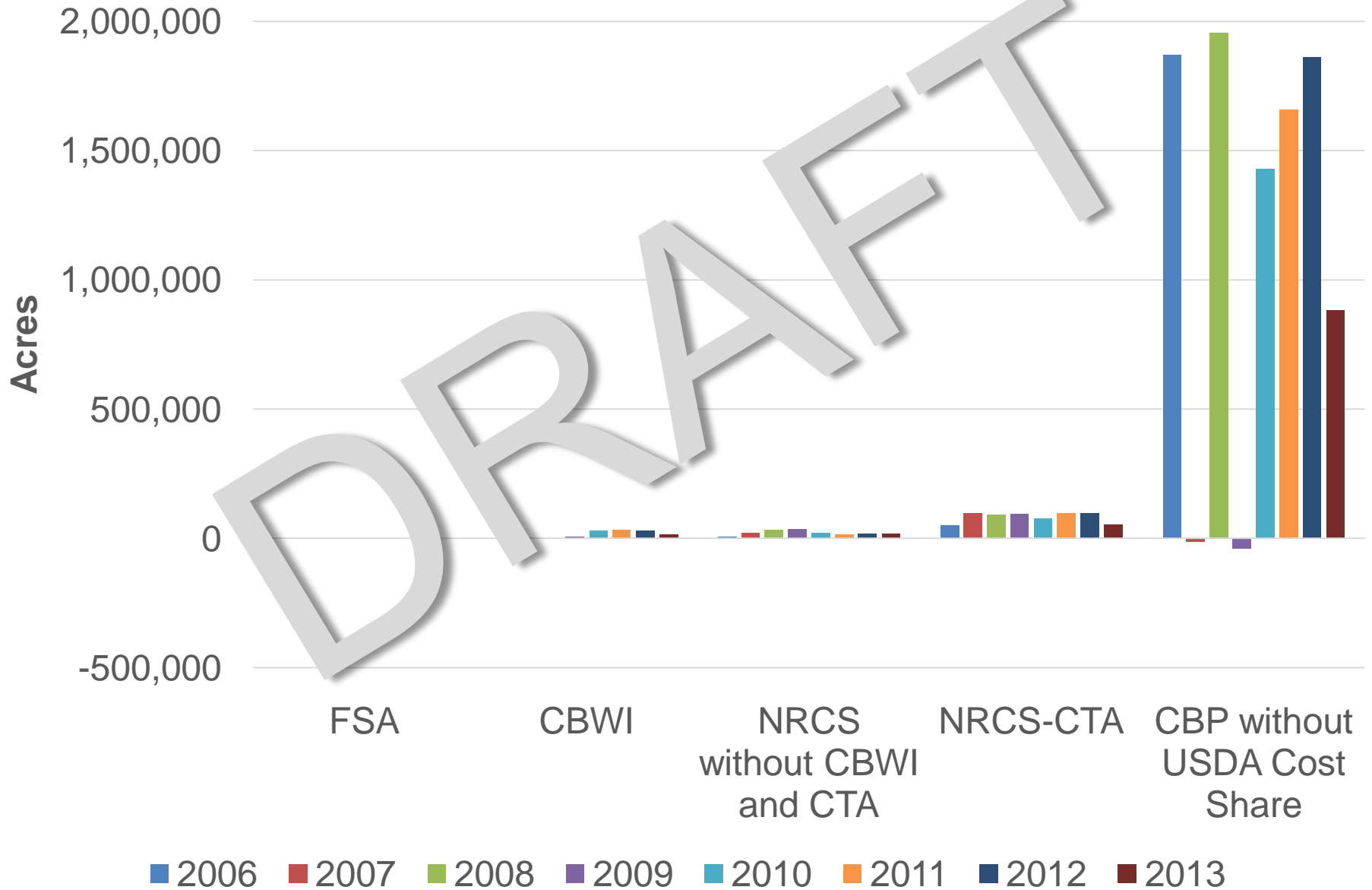
# Cover Crops - All Types



# AWMS-NRCS No. of Systems Converted to AU using 145 AU/System



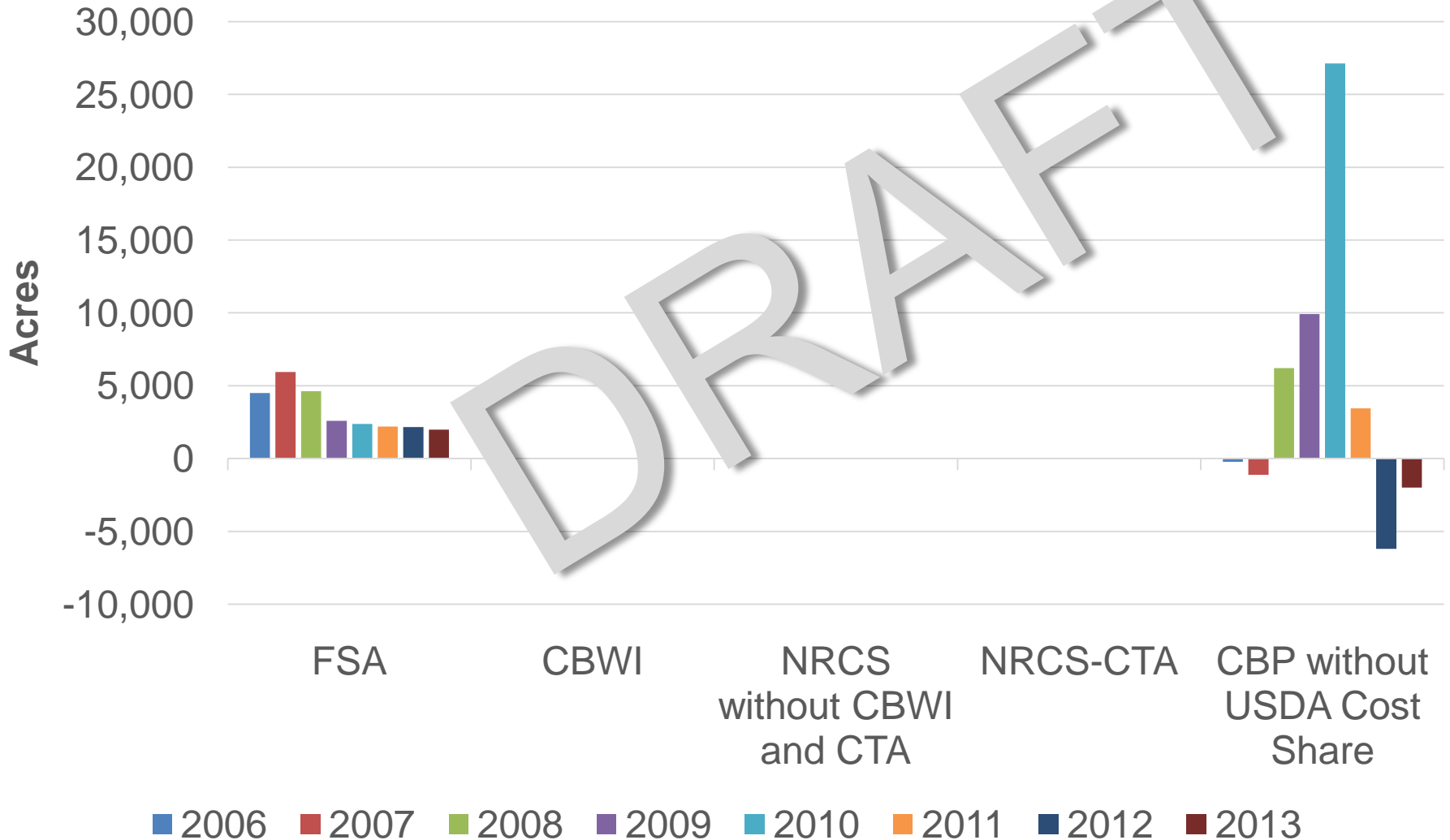
# Conservation Tillage



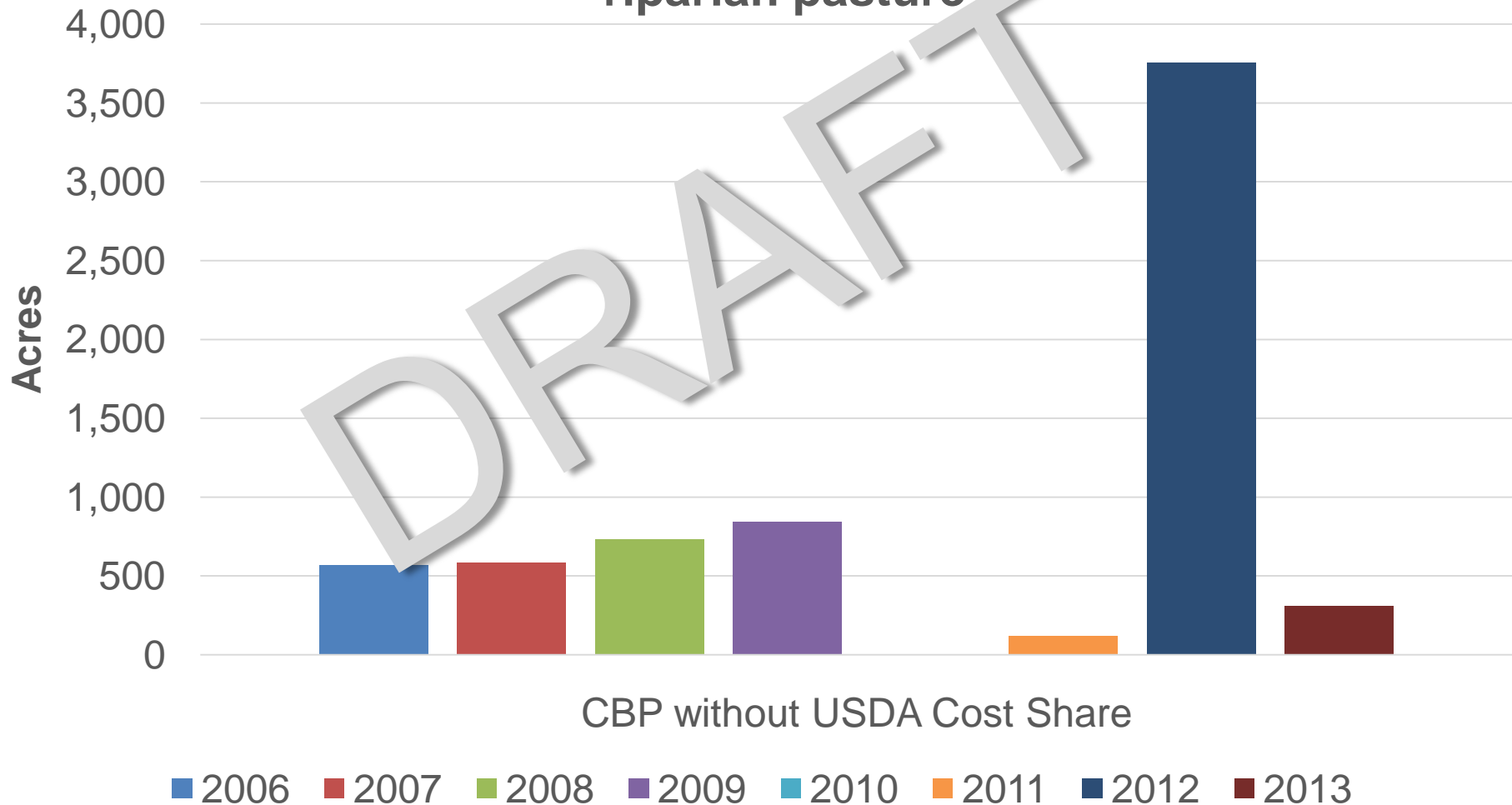
# Nutrient management-all types



# Upland Forest Buffers - USDA cost share is riparian, but not known to be on pasture so is credited by CBP as upland



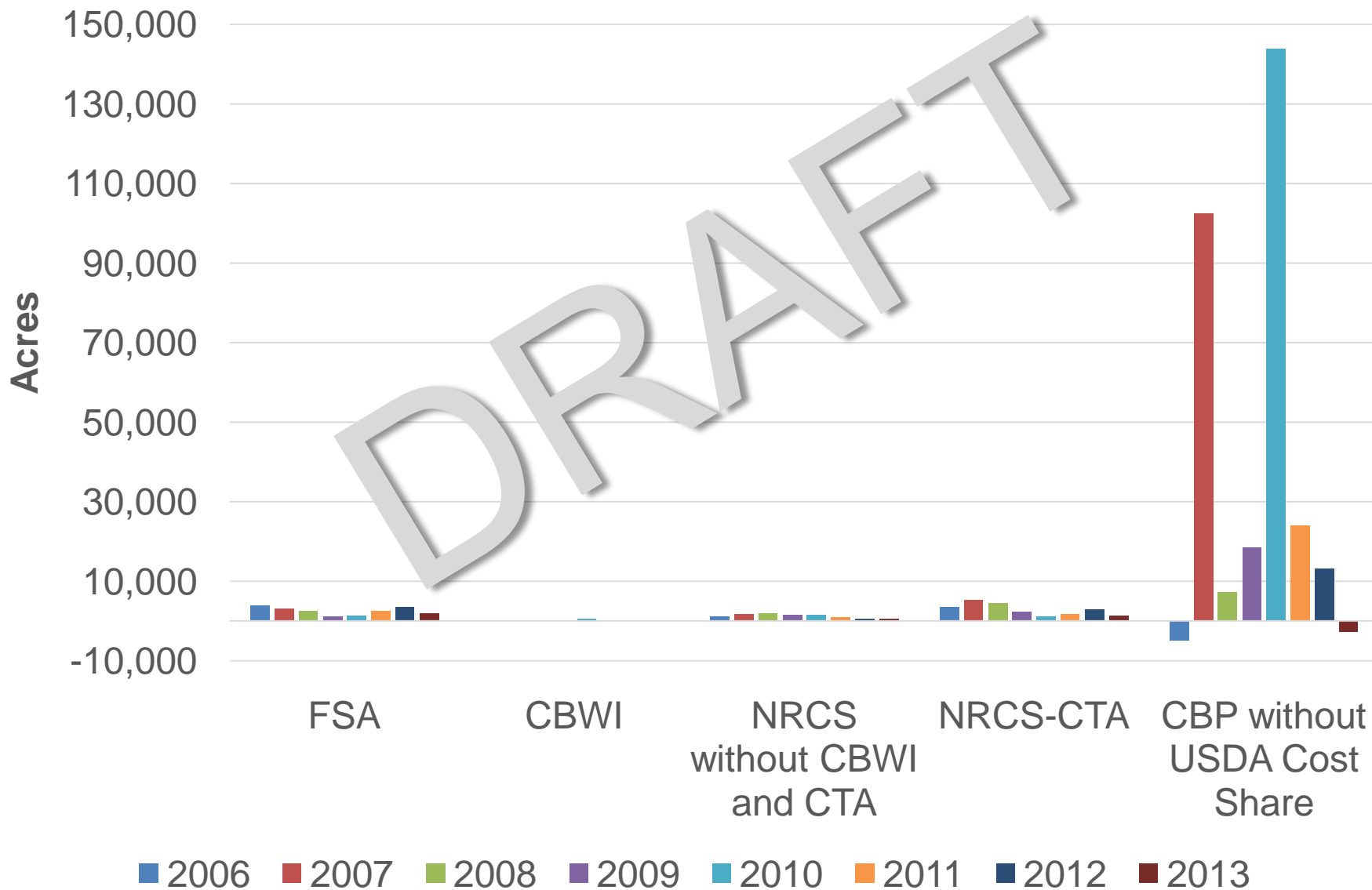
**Forest buffers-riparian pasture  
Only reported through CBP  
USDA cost share is reported as Forest Buffers-not  
riparian pasture**



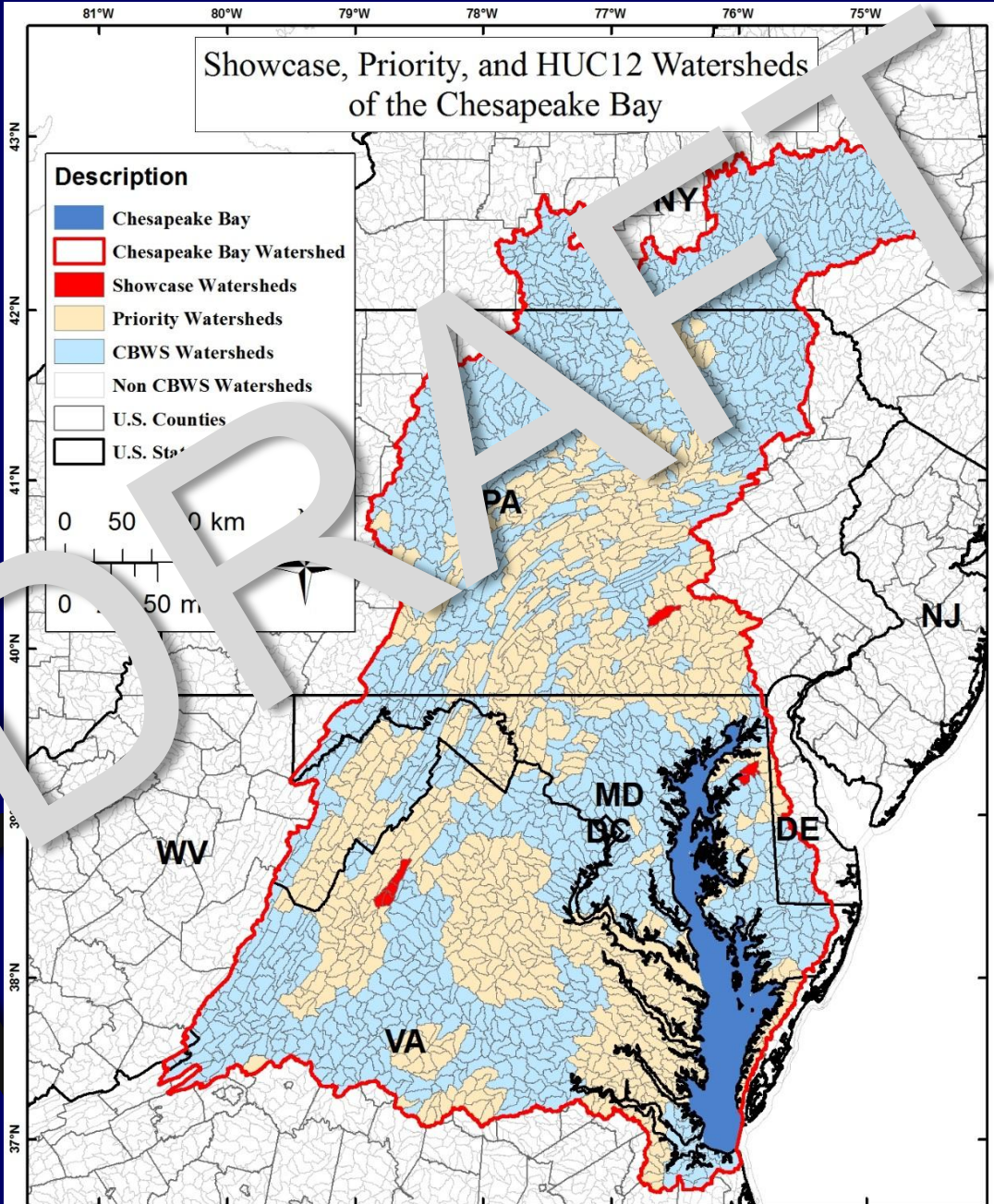
# Land retirement to pasture



# Land retirement to hay without nutrients



# Showcase, Priority, and HUC12 Watersheds of the Chesapeake Bay

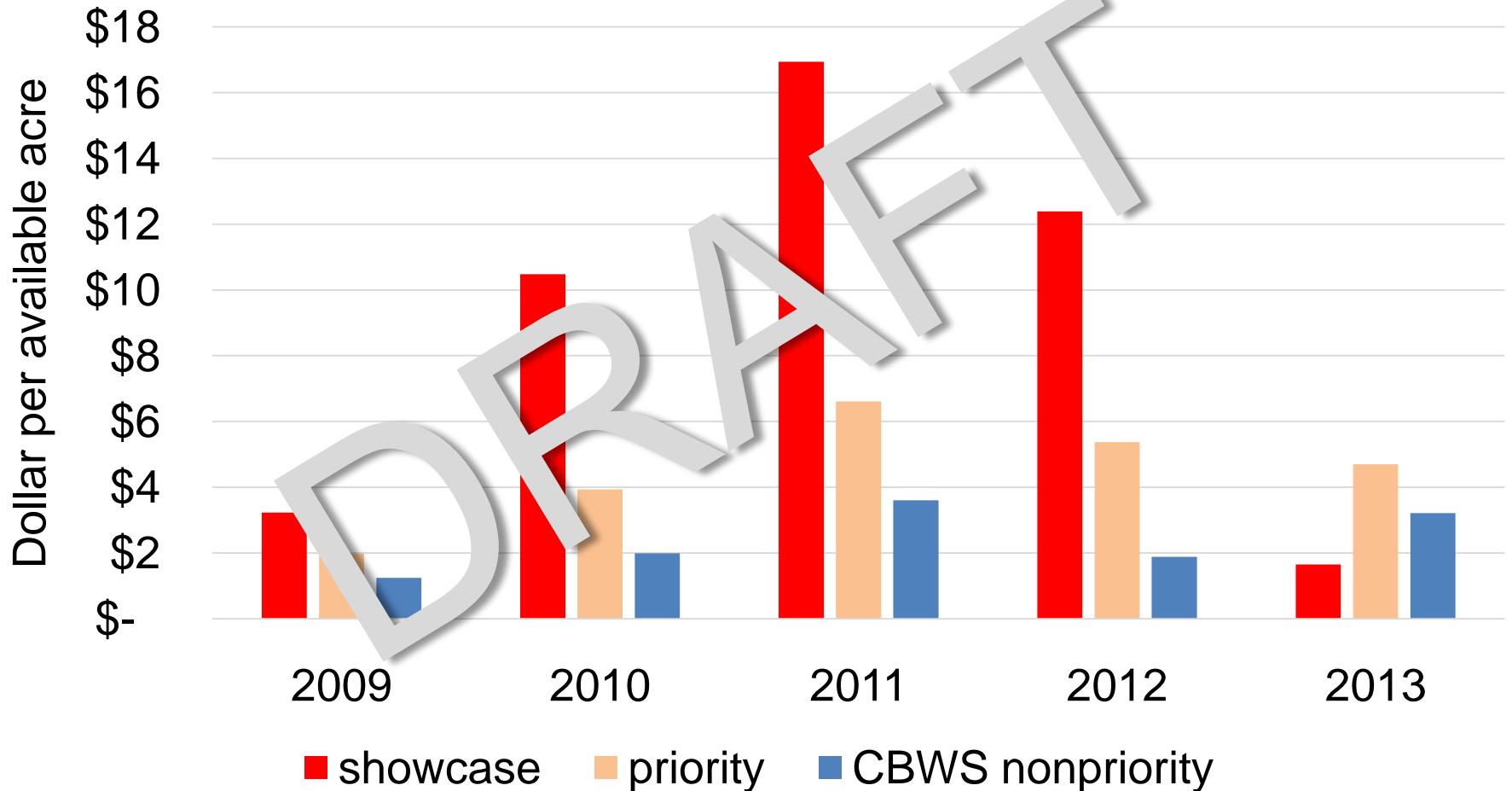


7/9/2014, USGS-EGSC.

These data are preliminary and are subject to revision. They are being provided to meet the need for timely, best science information.

# How much funding was in showcase vs. non-showcase watersheds?

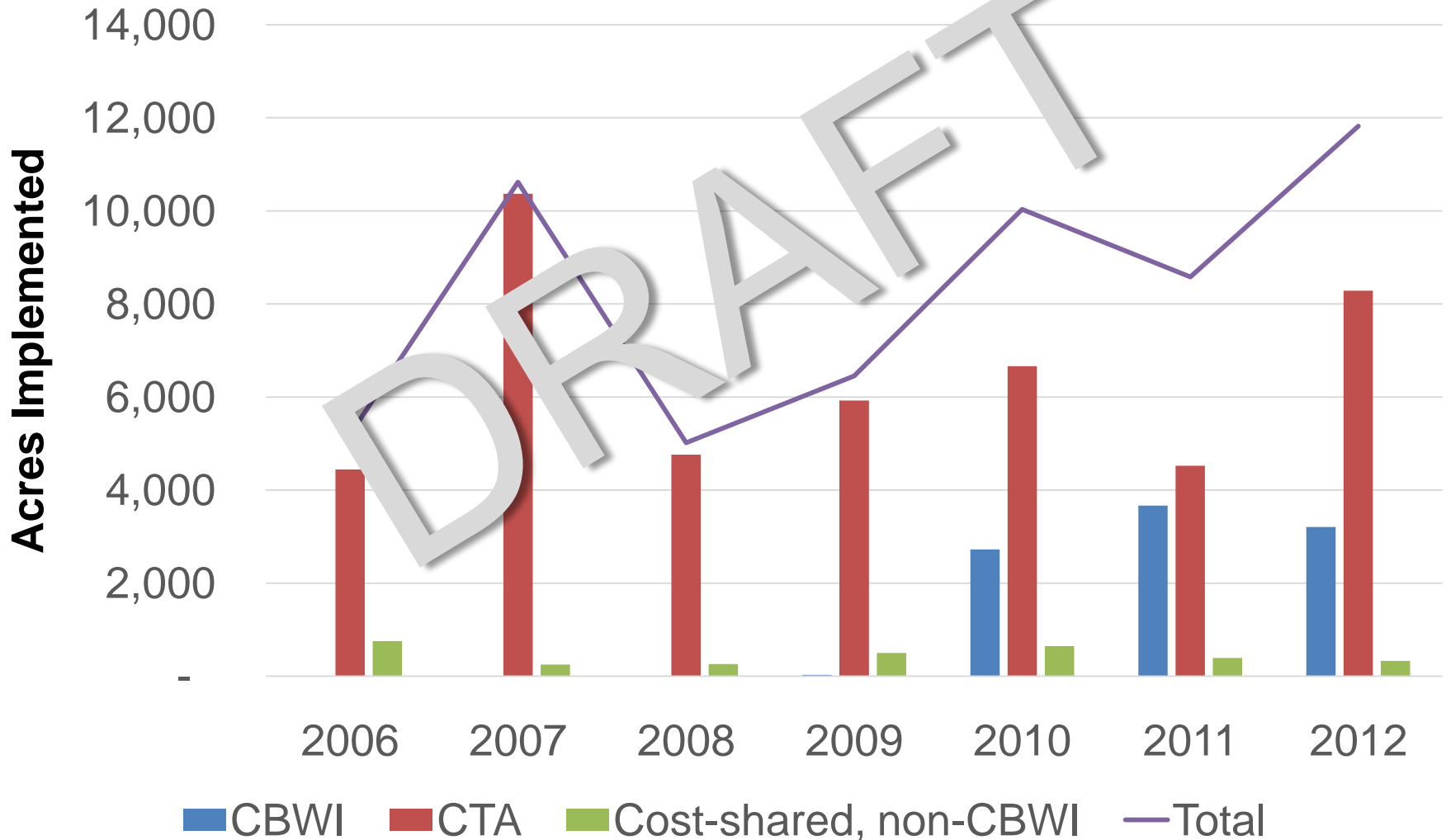
CBWI Dollars Spent Per Available Acres



# Did NRCS funding leverage additional implementation?

- Did CBWI funding supplanted other funding sources, which would result in static practice implementation in the Chesapeake Bay but increases in other areas where state and other funds could have been redirected?
- The chart shows total acres of BMPs, leaving out BMPs measured in units of AU, no., ft., ac-ft., etc... Most BMPs are measured in acres.

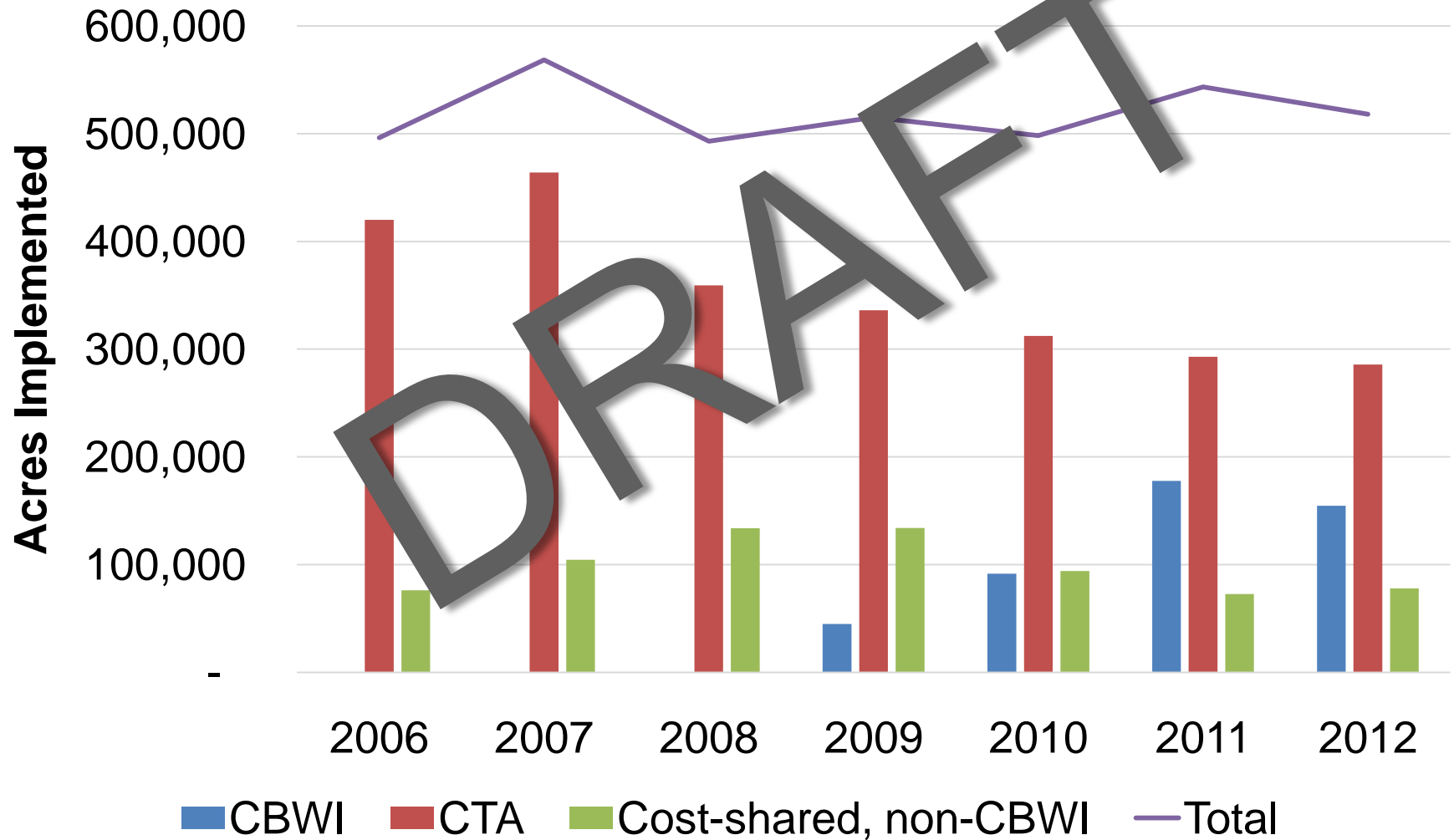
# Implementation in the Chesapeake Bay Showcase Watersheds by NRCS Program



# Acknowledgements



# Implementation in the Chesapeake Bay Priority Watersheds by NRCS Program



# Implementation in the **entire** Chesapeake Bay Watershed by NRCS Program

