

Lower Chesapeake Bay LTAR, Henry A Wallace Beltsville Agricultural Research Center, Beltsville, MD

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The Lower Chesapeake Bay (LCB) LTAR encompasses areas of the Chesapeake Bay watershed south of the Susquehanna River basin. The LCB-LTAR includes intensively monitored watershed sites on the Eastern and Western shores of the Chesapeake Bay. USDA-ARS research activities are distributed across the Henry A. Wallace Beltsville Area Research Center (BARC), the US National Arboretum, and the Choptank River Watershed. Partner organizations include the Baltimore Ecosystem Study and the Smithsonian Environmental Research Center (SERC) which participates in the National Ecological Observatory Network (NEON).

The LCB-LTAR is led by USDA-ARS's Hydrology and Remote Sensing Laboratory in Beltsville. Through its extensive collaboration, the LCB- LTAR explores linkages between agriculture, urban and forest land use areas, bringing together expertise in air, water, and soil quality research, ecological assessment, and advanced remote sensing technology.

The LCB-LTAR falls within USDA's Northeast farm production region, the Mid-Atlantic HUC 2 region, and NEON's Northeast and Mid-Atlantic domains. With a focus on the coastal plain physiography of the Bay region, the LCB-LTAR offers insight into agricultural production conditions extending from the northeaster to the southeastern US, and includes species characteristic of biomes to both the north and south of the region.

Research and technology transfer within the LCB-LTAR is built upon strong partnerships across the Chesapeake Bay region with major University of Maryland, federal agencies (USDA-NRCS, USGS, USEPA), state and local conservation agencies, and non-profit organizations (Chesapeake Bay Foundation).

Specific Goals are to:

1. Provide a venue to explore beneficial opportunities and to minimize the negative aspects of the agriculture-urban interface.
2. Enhance the ecological benefits and services provided by agricultural lands in the protection and restoration of the Chesapeake Bay watershed.
3. Develop adaptive strategies for agricultural production systems in response to changes in climate within this vulnerable coastal region.
4. Develop decision-support tools to implement effective, efficient, and economically-viable agricultural systems, land and water resource management, and conservation practices.