# An Assessment of Forestry BMPs in North Carolina from 2018-2020

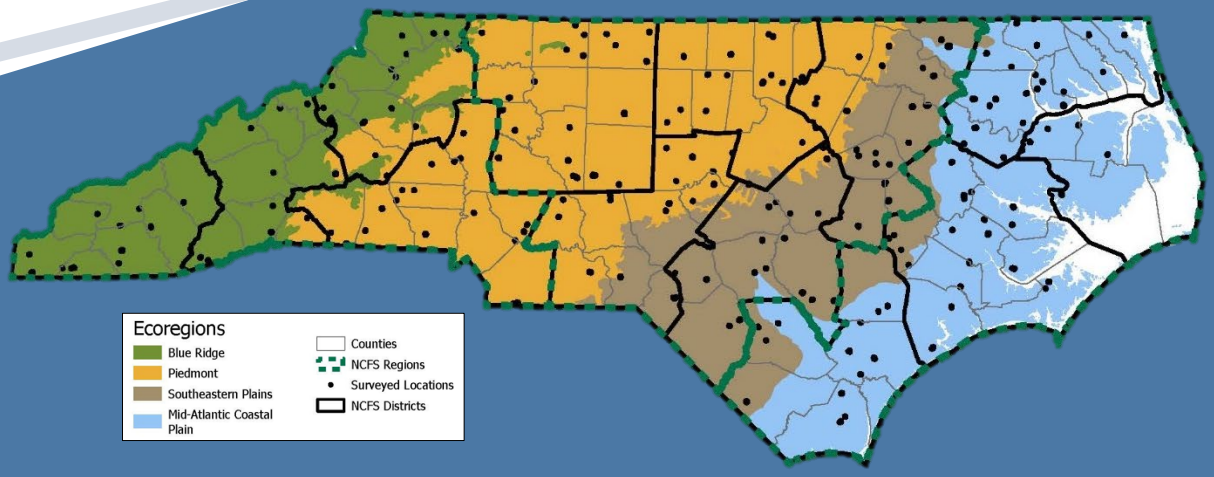
This recurring survey assesses the frequencies of properly vs. improperly implemented Best Management Practices (BMPs) and potential visible risks to water quality across the state.

Overall BMP implementation was 83% statewide.

Evaluators assessed 31,427 BMP implementation opportunities statewide, including 8,855 in the Blue Ridge, 13,717 in the Piedmont, 4,005 in the Southeastern Plains, and 4,895 in the Mid-Atlantic Coastal Plain. Respectively, BMP implementations was 76%, 84%, 89%, and 87%.

When BMPs were properly implemented, there was almost no risk to water quality.

Risks to water quality occurred 701 out of the 5,397 times we observed improperly implemented or missing BMPs, or 13% of those observations. These situations made up approximately 2% of all BMP implementation opportunities.




## Other Resources from NCFS Water Resources Branch

2018-2020 BMP Survey Report

BMP Survey Storymap: https://arcg.is/199S8L

Forest Preharvest Planning Tool: https://ncforestservice.gov/water_quality/fppt.htm

# Methods

Data was collected on 216 tracts in 98 of North Carolina's 100 counties.

Potential sites were identified using satellite imagery via the SouthFACT tool. If unavailable, we assessed other sites that were identified through random selection or while in transit in various locations throughout the state. As a last resort, we would inquire about recent harvests from local NCFS staff.

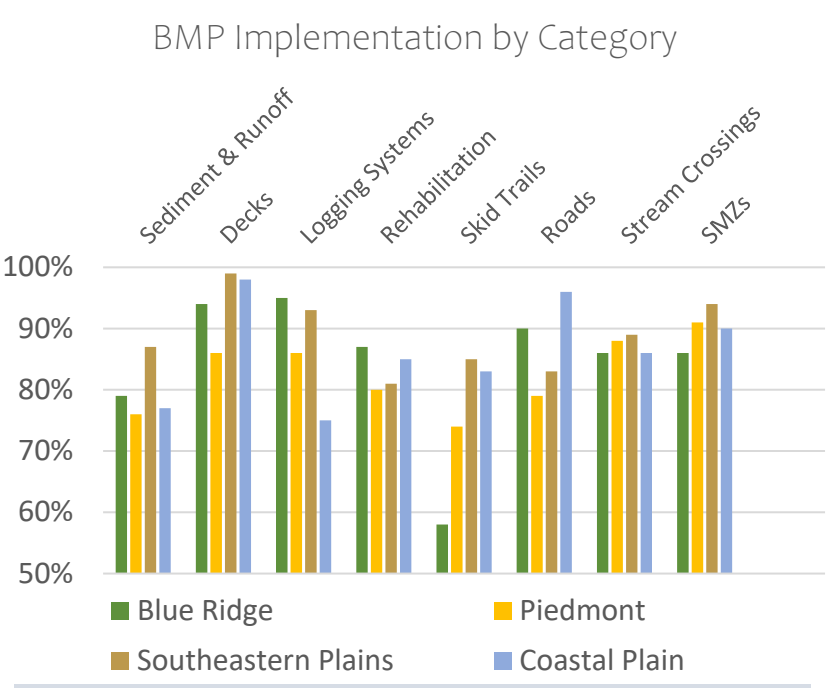
Active or recently completed timber harvests were evaluated for this survey. This method varies from similar BMP monitoring surveys completed by other states in which only completed harvests are evaluated.

When a BMP implementation opportunity presented itself, we assessed whether the BMP had been properly implemented and whether the situation presented a risk to water quality.

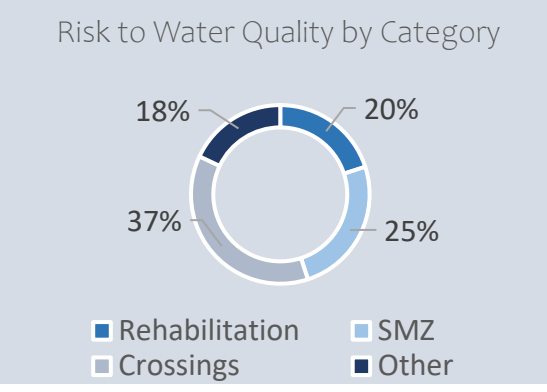
# Results

**Bridge mats were the most used stream crossing type and had the lowest frequency of risks to water quality.**

**Risks to water quality were observed when streamside management zones (SMZs) were less than 10 feet wide. Most SMZs were less than 50 feet wide with minimal risks to water quality.**




This table shows the percentage of properly implemented BMPs by category and ecoregion. Note that categories with less than 30 applicable BMPs observed in one or more ecoregion were excluded.




**Water quality risks were frequently observed with poor road location and stabilization, operating heavy machinery near streams, and unstable stream crossing approach ways.**

**The use of water control structures such as waterbars, turnouts, or broad-based dips to incrementally direct runoff along roads and skid trails is key for protecting water quality.**