

The Role of Non-State Forest Governance on the Implementation Rate of Forestry Best Management Practices: Current Status and Future Directions

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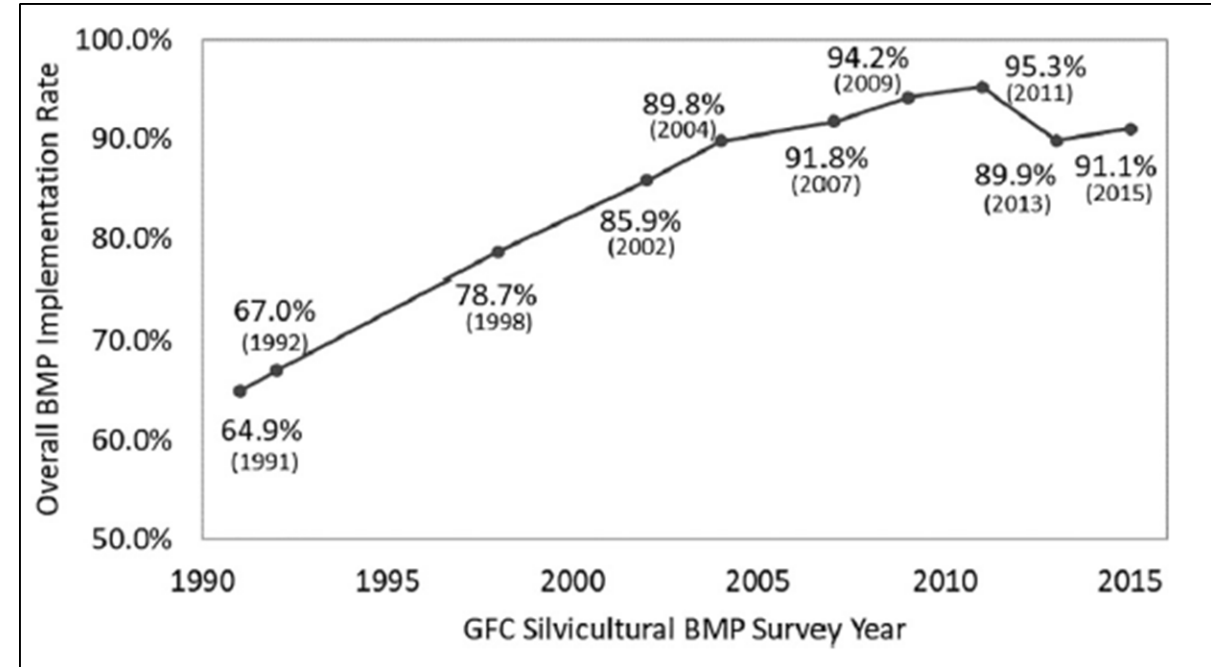
Forestry Best Management Practices (BMPs)

Best management practices (BMPs) are proactive and often voluntary practical methods or practices used during forest management to achieve goals related to water quality, silviculture, wildlife and biodiversity, aesthetics, and/or recreation.



Forestry BMPs in Georgia

- Since 1977, the GFC is responsible for developing, educating, implementing, & monitoring the use of BMPs for forestry operations in Georgia.
- GFC undertakes biennial survey to monitor BMP compliance rate at the state level since 1991.



SFI Fiber Sourcing Standards

- Wood consuming mills are certified
 - Promotes forestry BMPs
 - Outreach to landowners
 - Training of harvesting professionals



Fiber Sourcing Standard

Count of survey sites by year and by the number of overlapping wood baskets

40 Miles Sourcing Radius

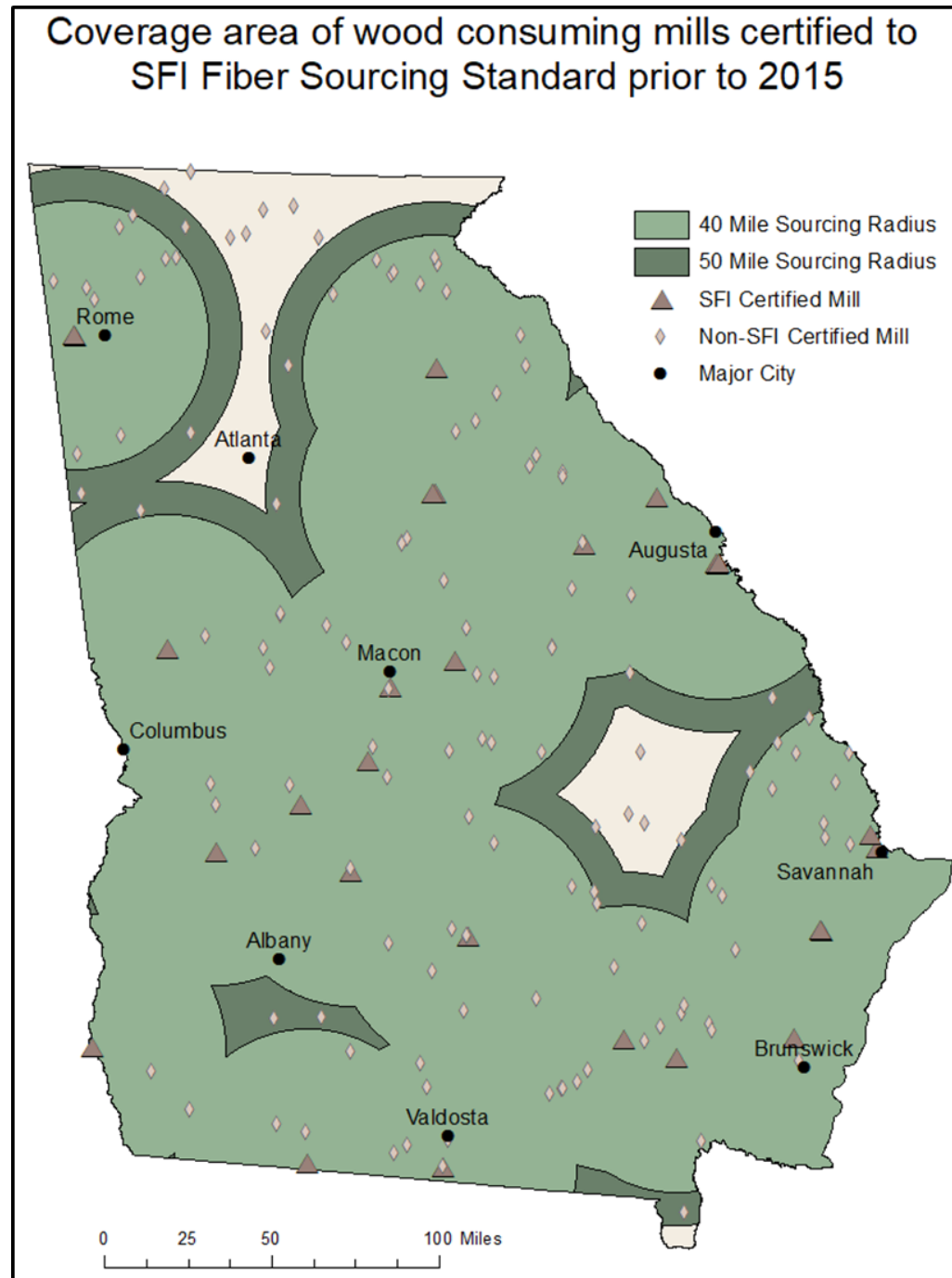
Survey Year	0 Overlaps	1 Overlap	2 Overlaps	3 Overlap	4 Overlaps	5 Overlaps	Total Overlaps
2002	172 (85.5%)	120 (86.6%)	17 (93.1%)	5 (85.3%)			314 (66.35%)
2004	128 (90.4%)	160 (91.9%)	20 (90.0%)	4 (89.5%)			312 (91.1%)
2007	123 (94.6%)	152 (93.6%)	51 (90.1%)	7 (94.0%)			333 (93.4%)
2009	56 (95.6%)	73 (95.7%)	39 (92.7%)	32 (94.5%)	10 (93.6%)	1 (100.0%)	211 (94.9%)
2011	46 (97.1%)	54 (95.3%)	45 (95.0%)	26 (96.9%)	11 (96.1%)		182 (96.0%)
2013	38 (93.1%)	61 (90.2%)	47 (91.0%)	23 (93.4%)	14 (91.3%)	1 (89.7%)	184 (91.5%)
2015	25 (87.7%)	42 (93.2%)	60 (93.6%)	35 (91.4%)	13 (97.4%)	12 (92.0%)	187 (92.4%)
Total	588 (90.9%)	662 (92.0%)	279 (92.3%)	132 (93.4%)	48 (94.5%)	14 (92.4%)	1723 (91.9%)

50 Miles Sourcing Radius

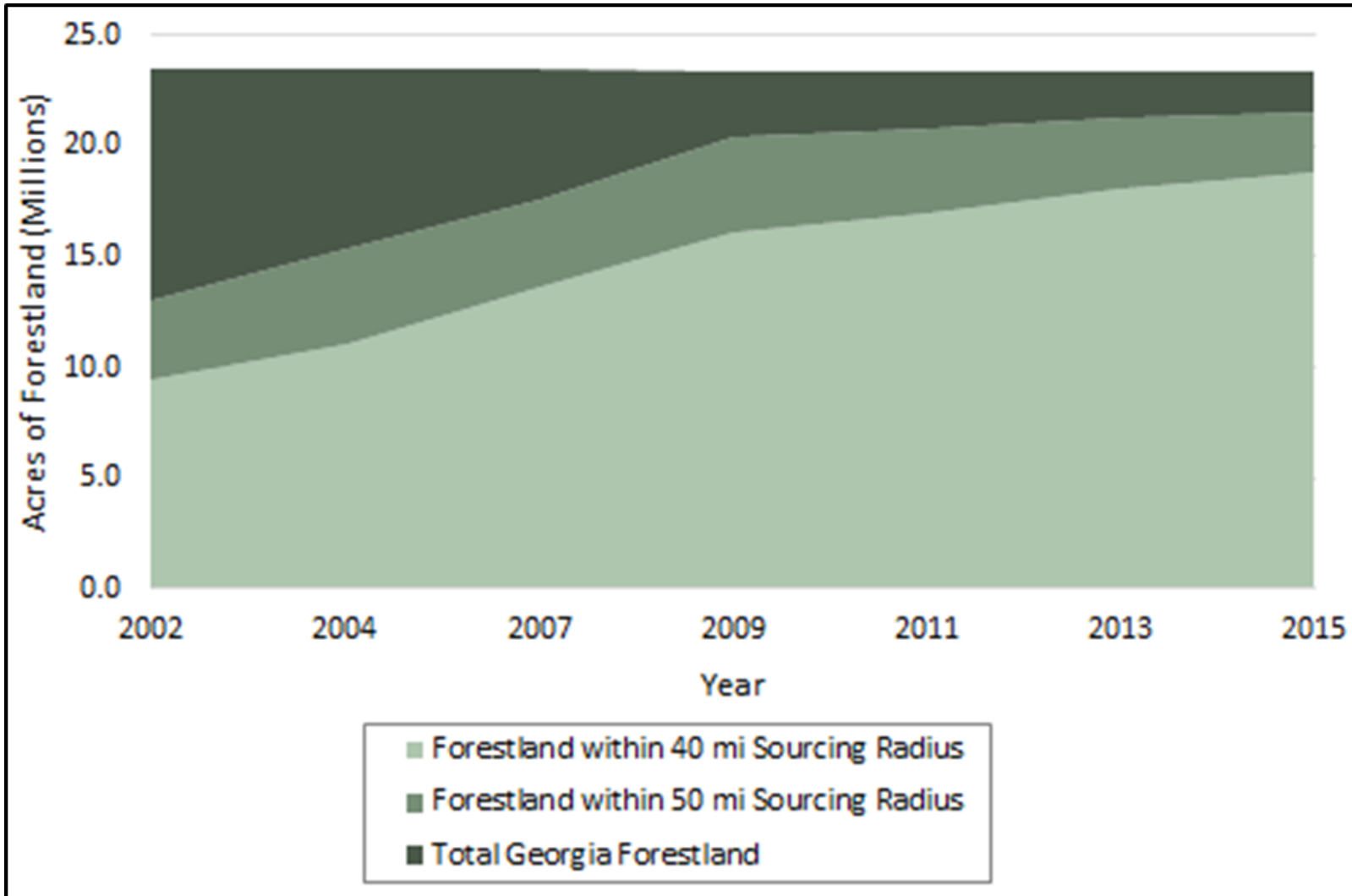
Survey Year	0 Overlaps	1 Overlap	2 Overlaps	3 Overlaps	4 Overlaps	≥ 5 Overlaps	Total Overlaps
2002	119 (86.3%)	149 (85.6%)	35 (88.9%)	11 (89.1%)			314 (86.3%)
2004	67 (91.3%)	194 (90.9%)	34 (91.2%)	17 (92.8%)			312 (91.1%)
2007	64 (95.2%)	155 (94.1%)	81 (92.4%)	24 (88.6%)	9 (92.2%)		333 (93.4%)
2009	20 (94.1%)	75 (95.9%)	46 (95.0%)	38 (92.7%)	20 (94.7%)	12 (95.9%)	211 (94.8%)
2011	10 (96.2%)	50 (96.8%)	50 (96.9%)	37 (96.1%)	20 (91.1%)	15 (95.7%)	182 (95.9%)
2013	14 (92.6%)	44 (92.8%)	56 (90.1%)	27 (92.5%)	28 (90.9%)	15 (91.2%)	184 (91.4%)
2015	9 (90.0%)	36 (92.2%)	38 (91.8%)	35 (93.1%)	25 (95.5%)	44 (91.5%)	187 (92.4%)
Total	303 (90.5%)	703 (91.6%)	340 (92.5%)	189 (92.7%)	102 (92.9%)	86 (92.8%)	1723 (91.8%)

Kruskal-Wallis test

Influence of Fiber Sourcing Standard



Influence of Fiber Sourcing Standard





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Effects of the sustainable forestry initiative fiber sourcing standard on the average implementation rate of forestry best management practices in Georgia, United States



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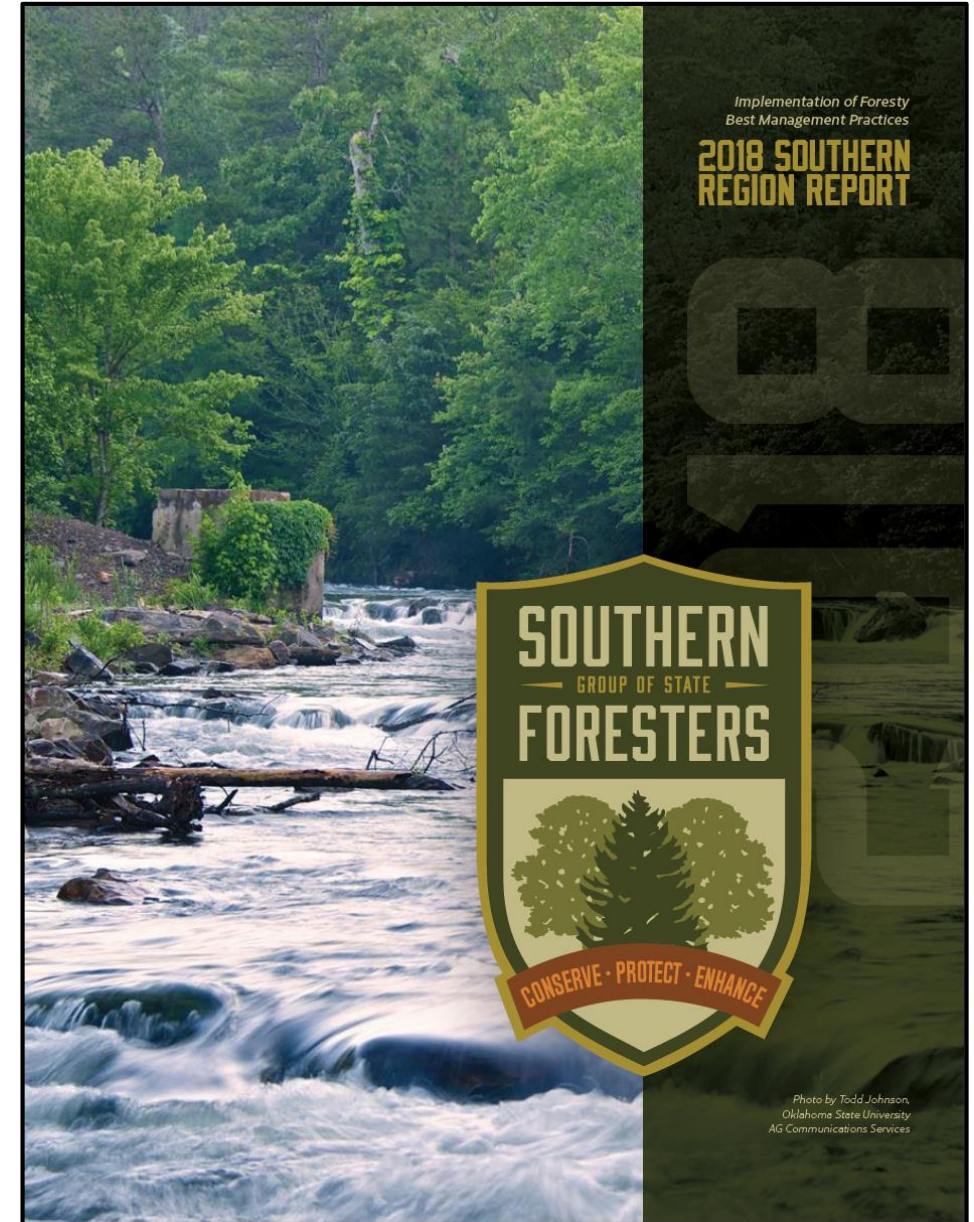
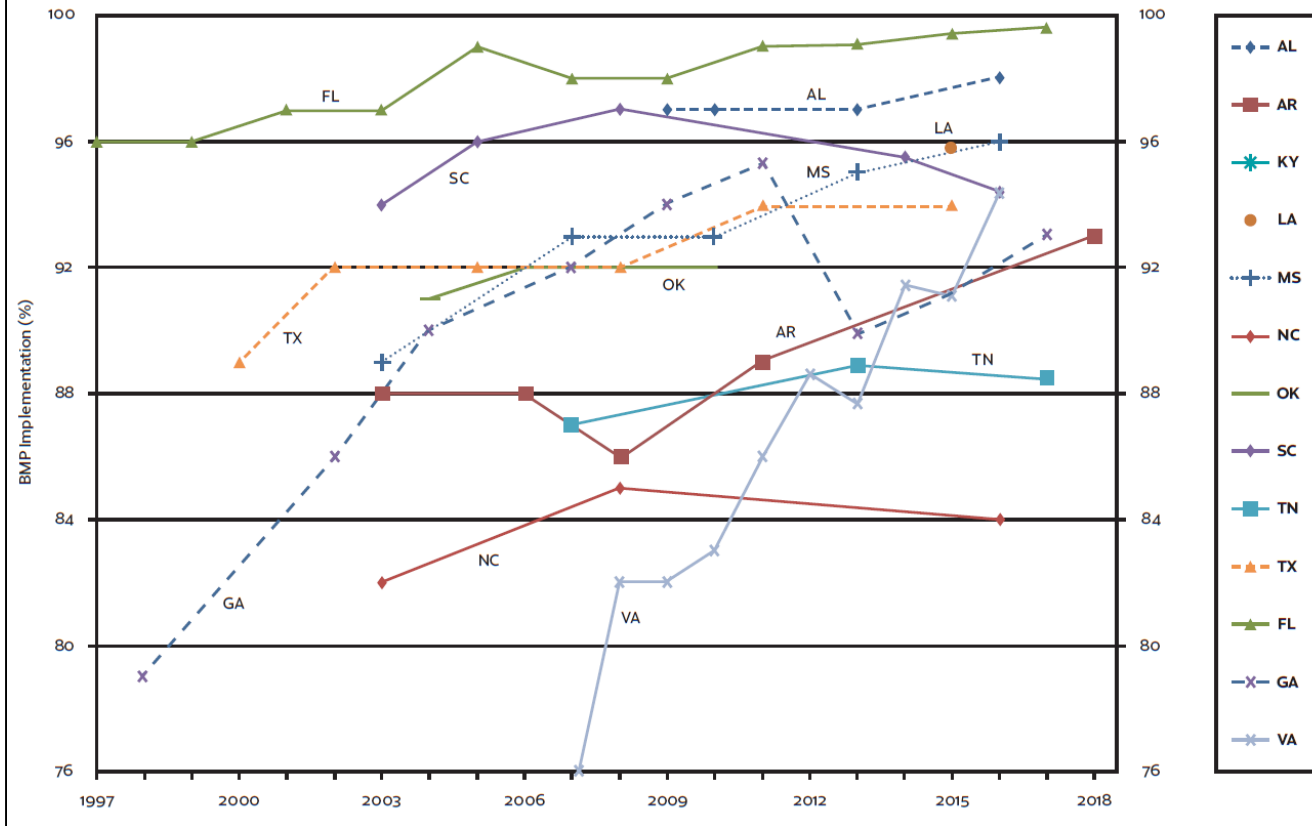
Forest certification
Southern United States
Spatial modeling
Sustainability

ABSTRACT

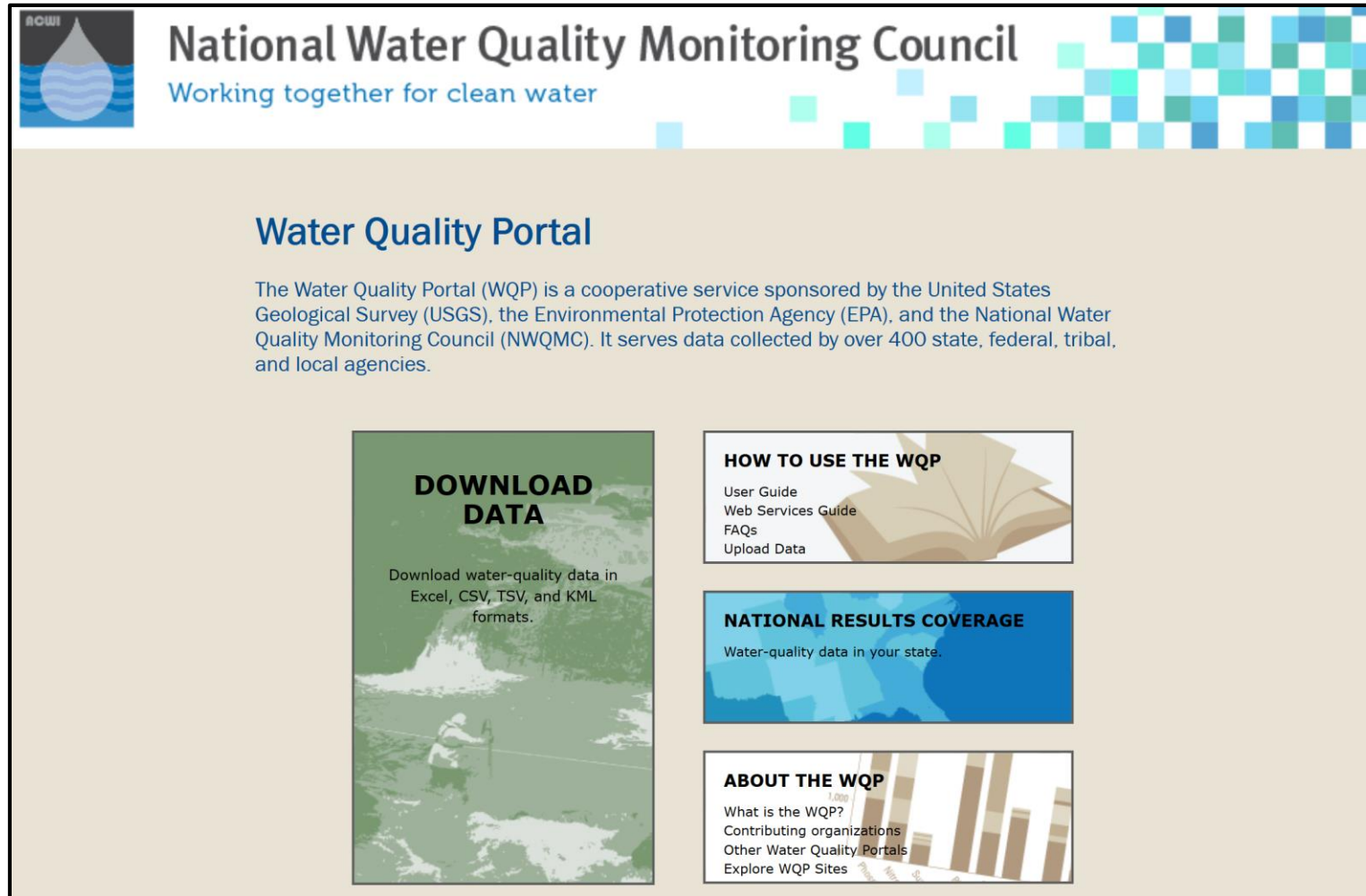
Much of the discourse on the sustainability of forestry resources revolves around certified forestland. It is typically assumed that certified forestland is the hallmark of sustainable forestry. This reasoning has led to a general perception that uncertified forestlands are not sustainably managed. In this regard, the role of the Sustainable Forestry Initiative (SFI) Fiber Sourcing Standard is instrumental in promoting sustainable forest management on uncertified forestlands. We used an advanced spatial approach to determine the influence of the SFI Fiber Sourcing Standard over space and time on Georgia's forestlands. We also assessed differences in the implementation rate of forestry Best Management Practices (BMPs) in Georgia on harvested sites located within the sourcing radius of mills certified to SFI Fiber Sourcing Standard relative to those harvest sites located outside the sourcing radius of certified mills. Our results suggest that the SFI Fiber Sourcing Standard affects 80% or more of total forestland in Georgia. We also found that the average BMP implementation rate on harvested sites located within the sourcing radius (about 65 km) of certified mills is about 2% higher relative to harvested sites located outside the sourcing radius of such mills over time. Our results indicate that the SFI Fiber Sourcing Standard is helping in ensuring sustainability of forestlands in Georgia, as forestry BMPs are an important indicator of sustainable forest management. We hope our results will bring clarity to the overall sustainability of uncertified forestlands in Georgia and other forested regions in North America in the context of global private forest governance systems like the SFI Fiber Sourcing Standard.

BMP Survey Data

Figure 3. Changes in Overall BMP Implementation by State



Water Quality Data



The screenshot shows the homepage of the National Water Quality Monitoring Council (NWQMC) Water Quality Portal. At the top left is the NWQMC logo, which features a stylized water drop and waves. To the right of the logo is the text "National Water Quality Monitoring Council" and the tagline "Working together for clean water". Below this is a decorative header with a pattern of blue and green squares. The main content area has a light beige background. The title "Water Quality Portal" is centered. Below it is a paragraph describing the portal as a cooperative service sponsored by the USGS, EPA, and NWQMC, serving data from over 400 agencies. There are three main sections: "DOWNLOAD DATA" with a background image of a river and text about downloading data in Excel, CSV, TSV, and KML formats; "HOW TO USE THE WQP" with a background image of an open book and links to User Guide, Web Services Guide, FAQs, and Upload Data; and "NATIONAL RESULTS COVERAGE" with a background image of a map of the United States and text about water-quality data in your state. At the bottom right is a section titled "ABOUT THE WQP" with a background image of a bar chart and links to What is the WQP?, Contributing organizations, Other Water Quality Portals, and Explore WQP Sites.

National Water Quality Monitoring Council
Working together for clean water

Water Quality Portal

The Water Quality Portal (WQP) is a cooperative service sponsored by the United States Geological Survey (USGS), the Environmental Protection Agency (EPA), and the National Water Quality Monitoring Council (NWQMC). It serves data collected by over 400 state, federal, tribal, and local agencies.

DOWNLOAD DATA

Download water-quality data in Excel, CSV, TSV, and KML formats.

HOW TO USE THE WQP

- User Guide
- Web Services Guide
- FAQs
- Upload Data

NATIONAL RESULTS COVERAGE

Water-quality data in your state.

ABOUT THE WQP

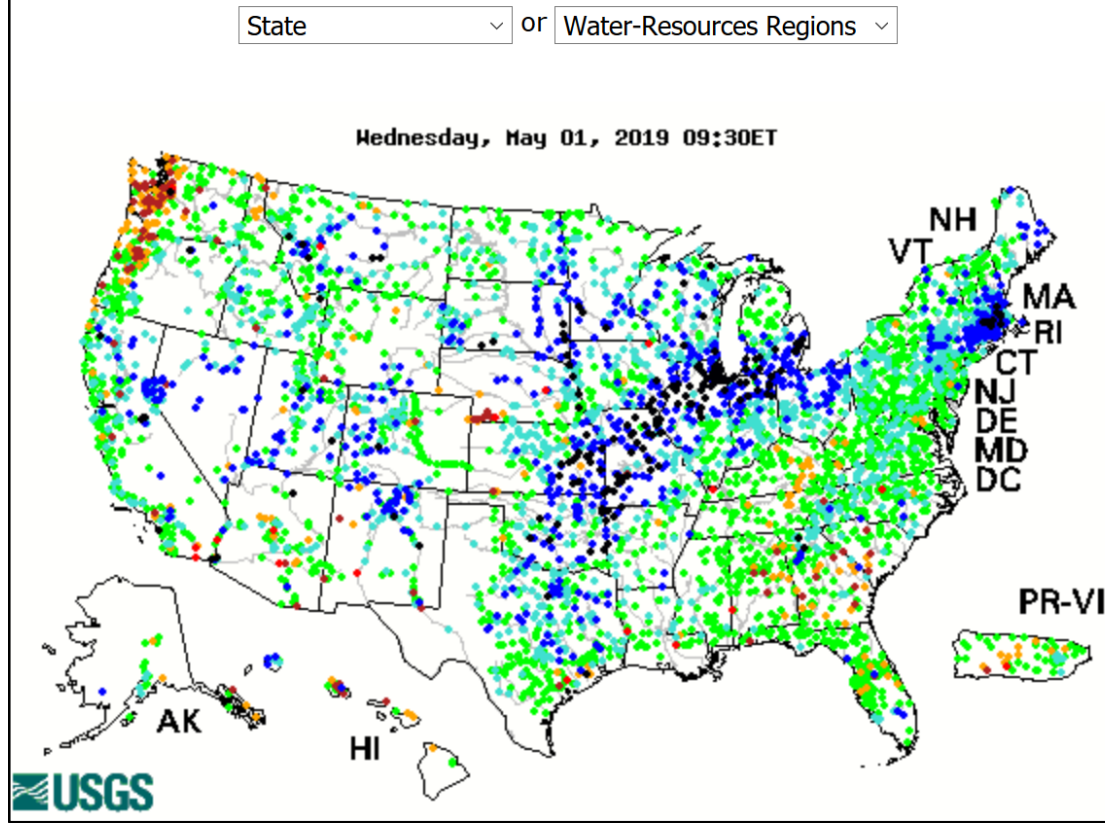
- What is the WQP?
- Contributing organizations
- Other Water Quality Portals
- Explore WQP Sites

Various state agencies and water management districts collect water quality data.

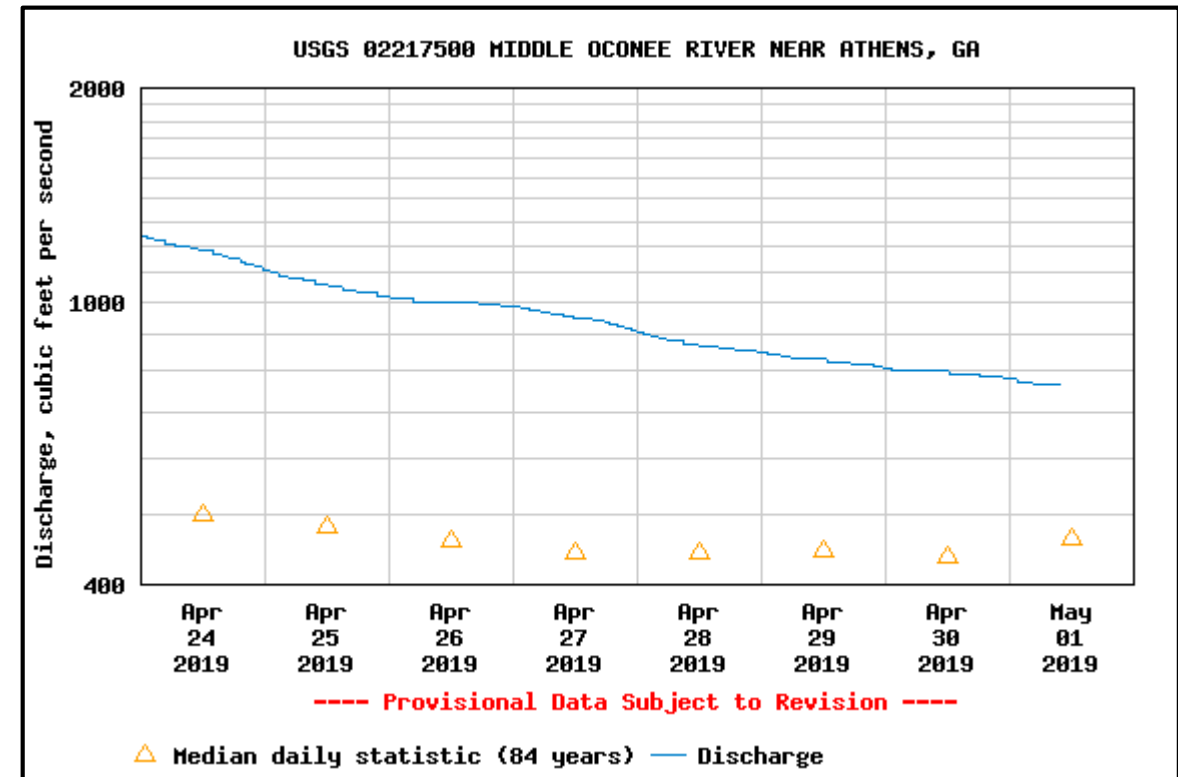
<https://www.waterqualitydata.us/>

Water Flow Data

Map of real-time streamflow compared to historical streamflow for the day of the year (United States)



https://waterwatch.usgs.gov/?id=ww_current



Future Direction

- Risk of sourcing fiber on water quality and flows
- Need for an interface risk assessments with existing BMP guidelines

Thanks!



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protecting and conserving Georgia's forests