Forest Harvesting Practices BMP Potential Changes

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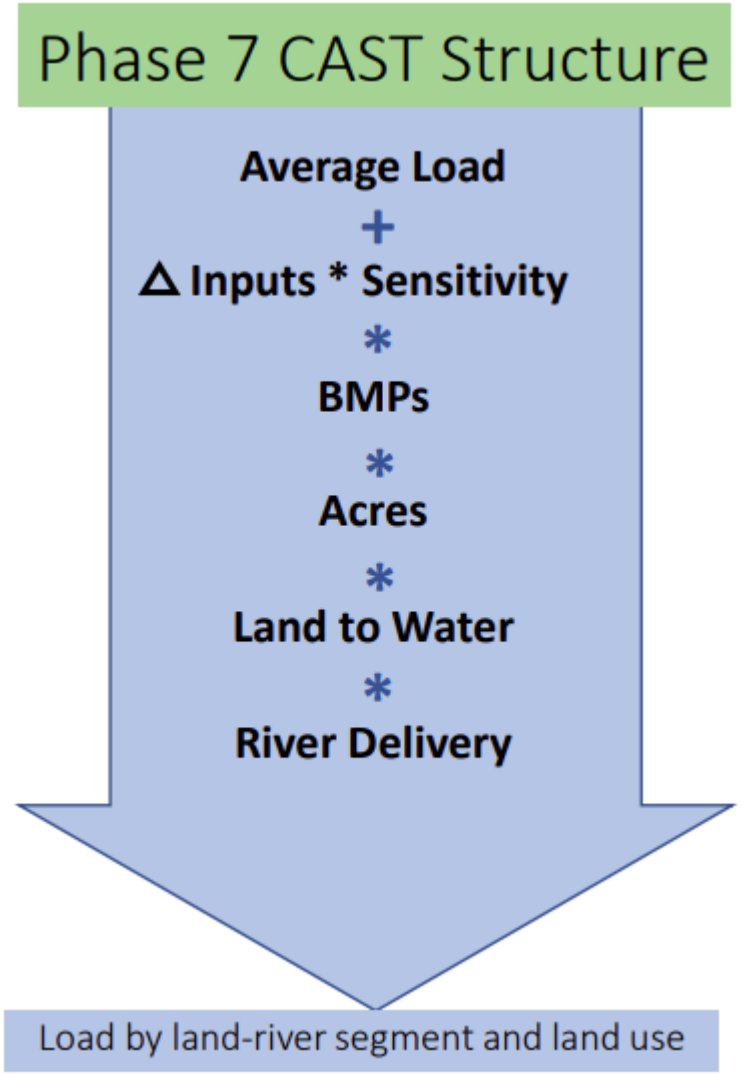
Introduction – CAST & Timber Harvest BMPs

Chesapeake Assessment Scenario Tool

CAST – water quality modeling tool

States can receive sediment & nutrient reduction credits by reporting timber harvest BMPs

- BMPs apply an efficiency on modeled loads: XX% reduction based on land use



Potential Cast Changes

1. Base loads from harvested forests
2. Efficiency rates of timber harvest BMP
3. Credit duration

Current Timber Harvest BMP in CAST:

Forest Harvest BMPs decrease loads by:

- Total Suspended Solids (TSS) – **60%**
- Total Nitrogen (TN) – **50%**
- Total Phosphorus (TP) – **60%**

- Determined via 2009 report by Pamela Edwards & Karl Williard
- No differentiation in BMP type
- 1-year credit duration
- More information in the BMP Guide, Page 162

Research Methodology

- Published 2009 – Present
- Within the CBW or neighboring states
- Eastern mixed deciduous and pine forests
- Interview with experts

*Initial exploration – not fully encompassing

Literature Review

Reference	Sediment	Nitrogen	Phosphorus
Hawks, Bolding et all, 2022*	99.85%	/	/
Hawks, Aust et all, 2022	83%	/	/
Lakel et all, 2022	97%	/	/
Maryland DNR, 2009	77%	/	/
A.J. Lang et all, 2022	88.2%	/	/
Dangle et all, 2019	100%	/	/
Cristan et all, 2019	75.6%	/	/
Maine FS, 2014	Not measurable	/	/
DaSilva et all, 2011		No significant increase	No significant increase
Marchman et all, 2013		Statistically insignificant	Statistically insignificant
Boggs et all, 2015		No significant increase	No significant increase
Average	**88.66%**	**/**	**/**
Current CAST Efficiencies	**60%**	**50%**	**60%**

Overall Findings

1. Insufficient evidence for loading rate changes
2. Evidence for efficiency changes
   - Consensus from literature – higher efficiencies
   - Consensus from experts – higher efficiencies
3. Evidence for credit duration changes

Process for Altering CAST Efficiencies

1. Approval for exploration by FWG
2. Approval for exploration by Water Quality GIT
3. Input from FWG, THTF, & Watershed Technical WG
4. Finalize report; Develop recommendations with FWG
5. Final approval from Water Quality GIT