Forest Harvesting Practices BMP Update

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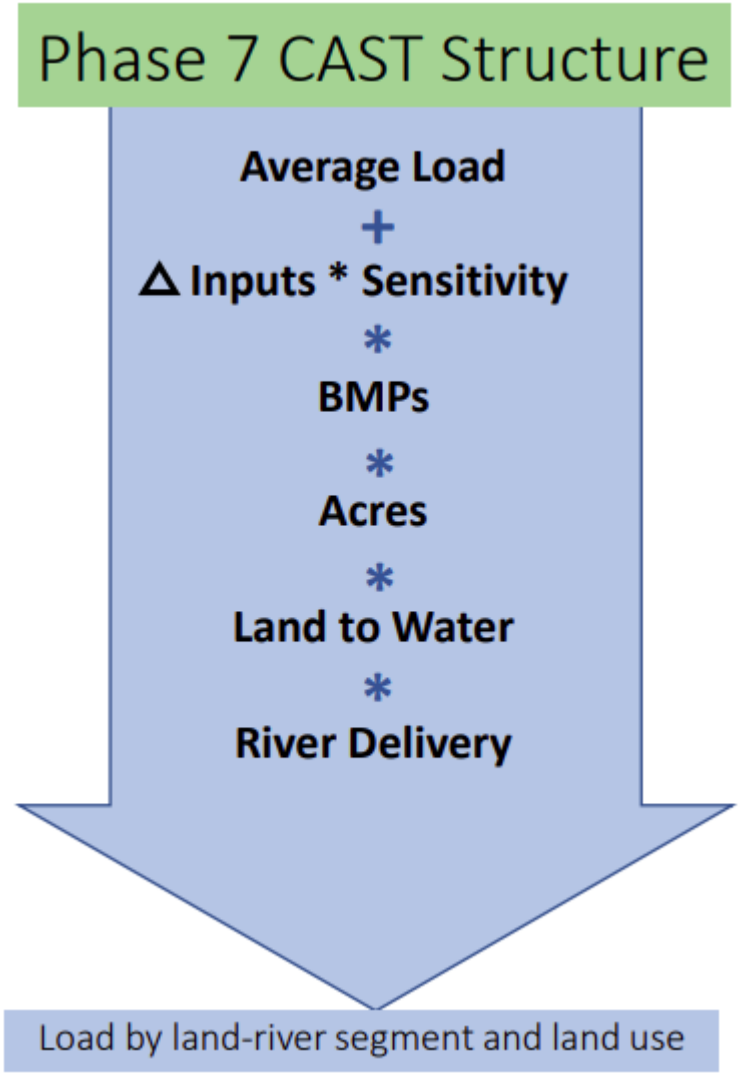
Introduction – CAST & Timber Harvest BMPs

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

Literature Review

Reference	Sediment	Nitrogen	Phosphorus
Hawks, Bolding et al. (2022)	64%	/	/
Hawks, Aust et al. (2022)	83%	/	/
Lakel et al. (2009)	97%	/	/
A.J. Lang et al. (2022)	88.2%	/	/
Dangle et al. (2019)	100%	/	/
Cristan et al. (2019)	75.6%	/	/
Maine FS (2021)	“Not measurable”	/	/
Witt Et al. (2016)	“Low impact”	“Low impact”	/
DaSilva et al. (2012)	/	“No significant increase”	No significant increase
Marchman et al. (2013)	/	“Statistically insignificant”	Statistically insignificant
Boggs et al. (2015)	/	“No significant increase”	No significant increase
Average	**85%**	**/**	**/**
Edwards & Williard Average	**67%**	**51%**	**72%**
Current CAST Efficiencies	**60%**	**50%**	**60%**

Recommendations

1. Recommend **no changes to base loading rates** of harvested forests.
2. Recommend changing the efficiency rates to:
   - **TSS from 60% to 85%**
   - **TN from 50% to 90%**
   - **TP from 60% to 85%**
3. Recommend changing the **credit duration to three years.**

Process moving forward

1. Approval by the FWG on September 4th
2. Present the recommendations to the Watershed Technical Workgroup on October 3rd
3. Present the recommendations to the WQGIT on October 28th