

Loading Rates in the Phase 6 Watershed Model

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Presentation to Agriculture Workgroup

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Phase 6

Initial Calibration Load =

Nutrients

Estimate Spatial Average EOS
Based on land use and inputs

Estimate watershed delivery
variance based on landscape
parameters

Estimate small stream effects

Directly Simulated in HSPF

Estimated
Average
Load + Sensitivity * Δ Inputs
*

BMPs

*

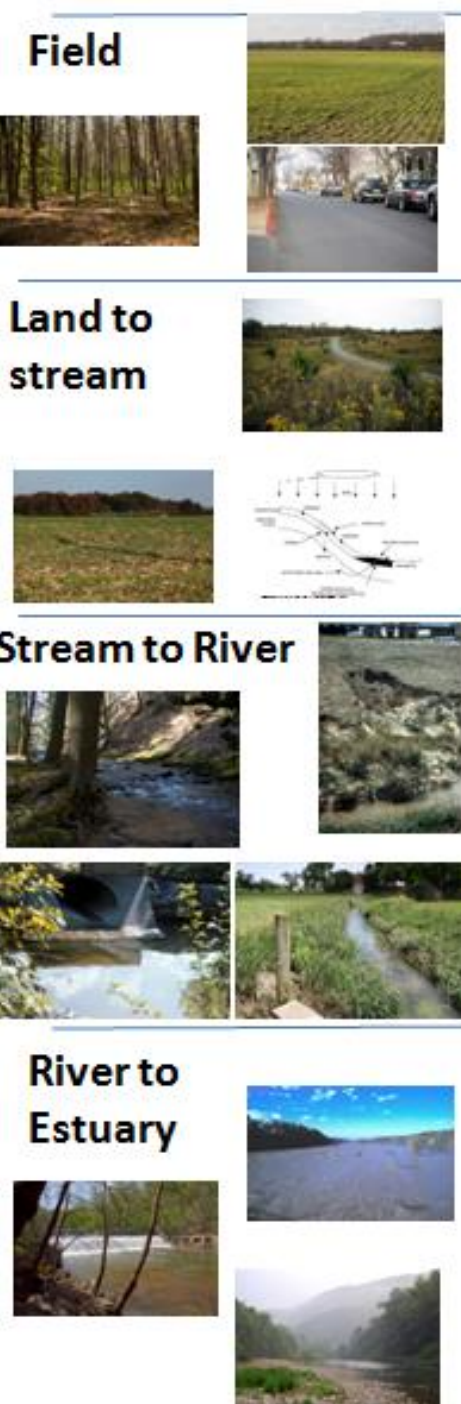
Watershed Delivery Variance

*

Stream Delivery

*

River Delivery



Phase 6

Initial Calibration Load =

LRWVG



Estimated
Average
Load

+ Sensitivity * Δ Inputs

*

BMPs

*

Estimated with Sparrow
Estimated by Land Data team



Watershed Delivery Variance

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Estimated with Sparrow
Estimated by USGS / WVU / Land Data team



Stream Delivery

*

Simulated in HSPF
Calibrated with data, WRTDS, and Sparrow



River Delivery

Multiple
models

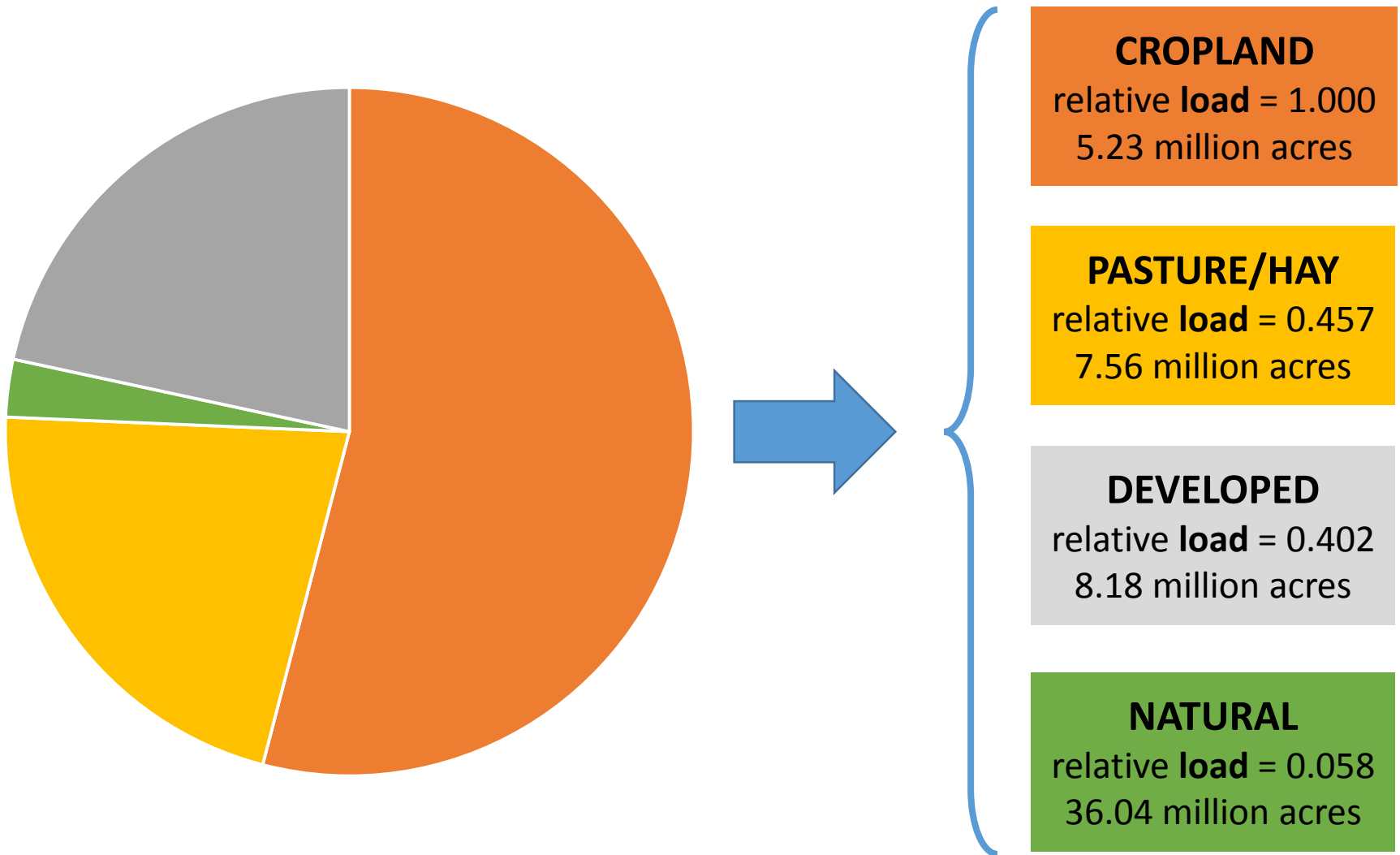


Inputs



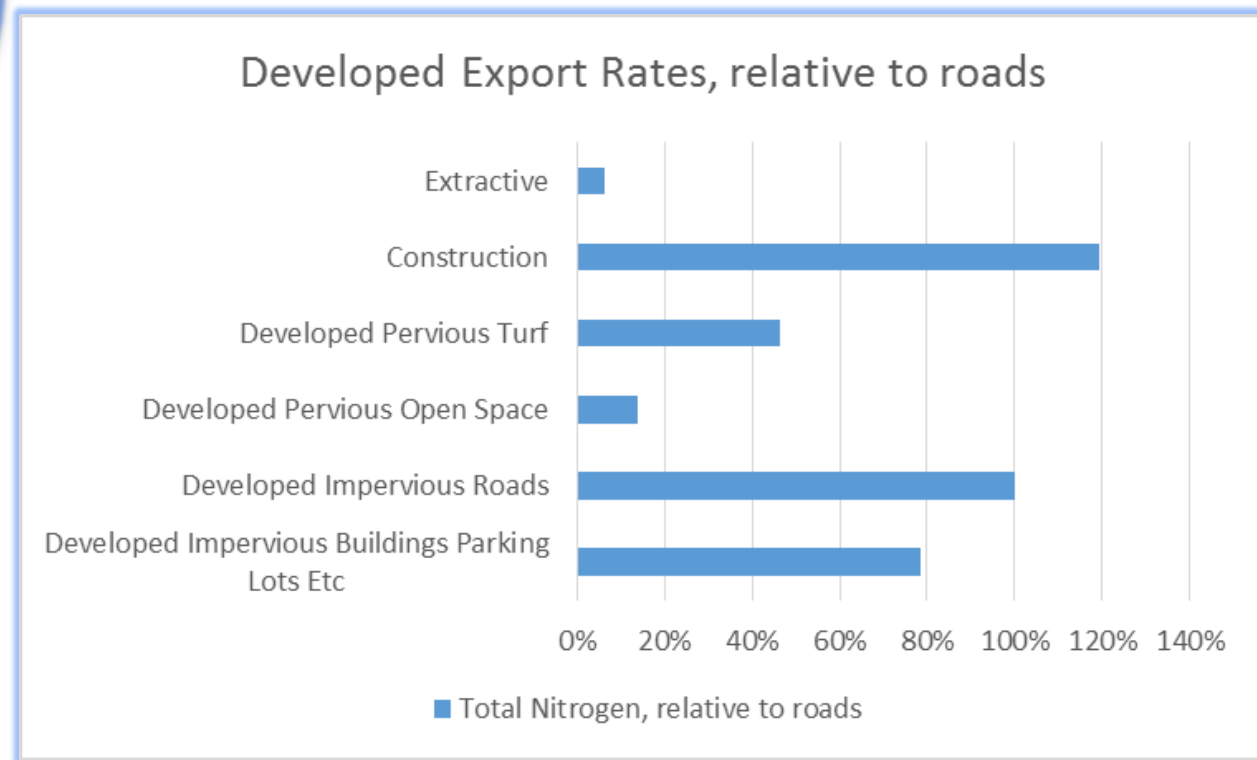
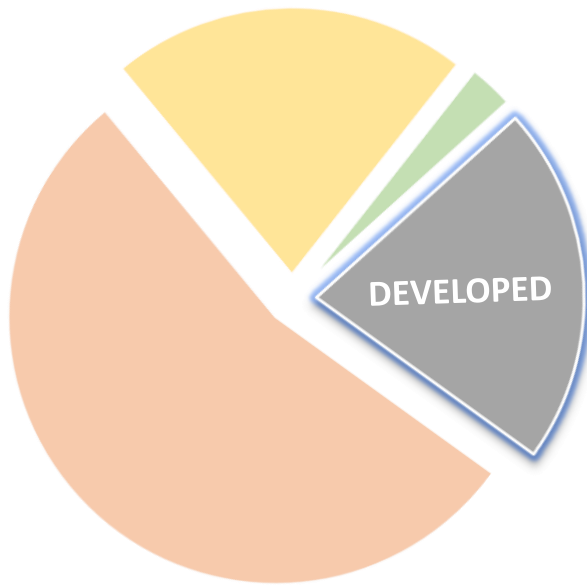
Scenario Builder

Decision Point #1: Total Nitrogen Load



- This provides loading rates for the major land-use categories.

Decision Point #2: Develop Relative Loading Rates



- This provides global loading rates for land-uses.
- There is a process in place to further break out loading rate spatially.

TN Target Development

Decision Point #1

*Global Model:
e.g. Sparrow*

Crop
~25 Lbs/A/Yr

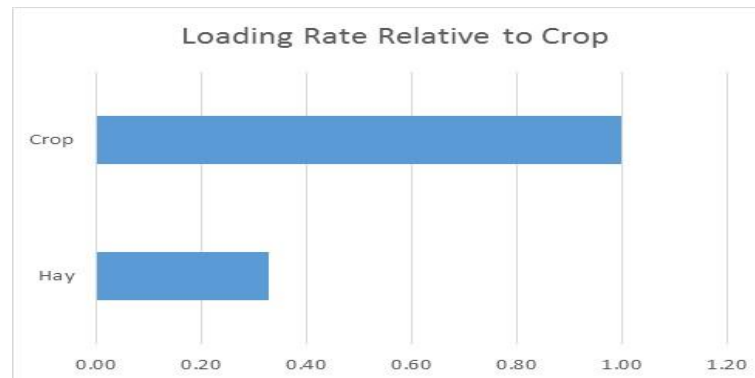
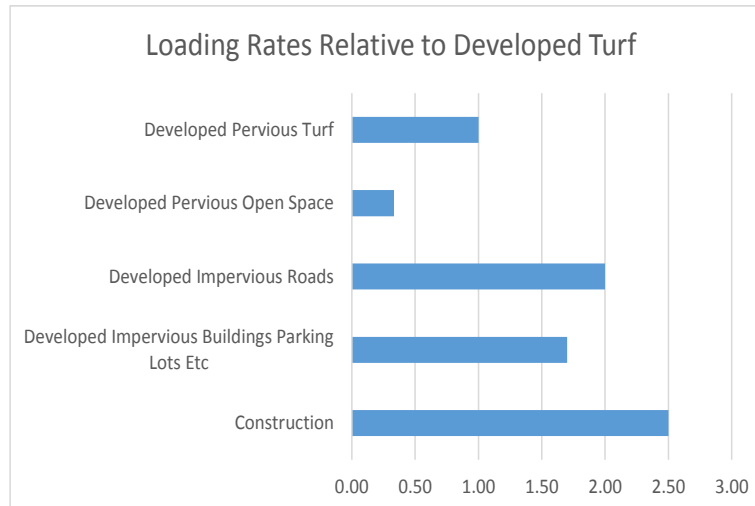
Pasture/Hay
~20 Lbs/A/Yr

Urban
~10 Lbs/A/Yr

Natural
~2 Lbs/A/Yr

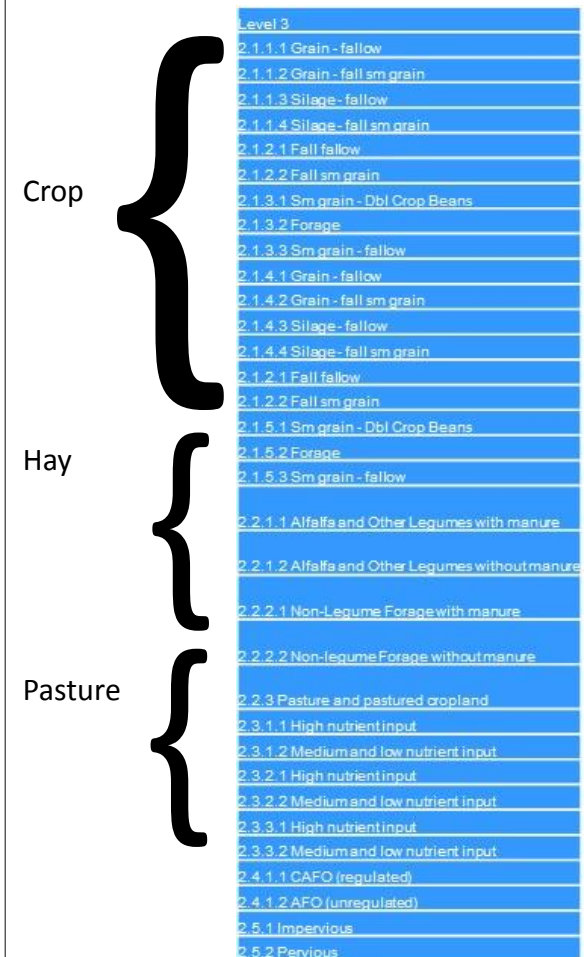
Decision Point #2

*Land use specific information:
Literature and models*



Decision Point #3

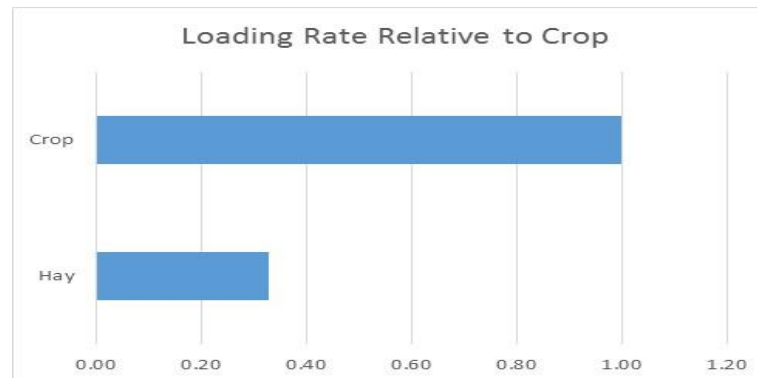
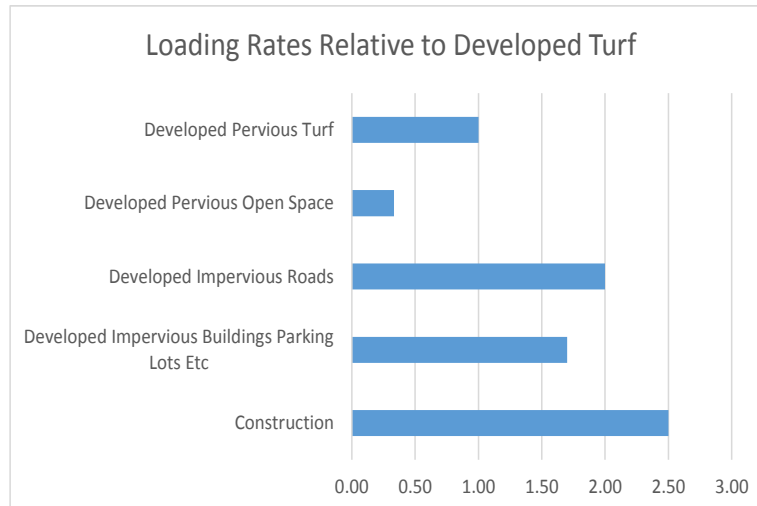
Map the land uses



Charge to this group

Decision Point #2

*Land use specific information:
Literature and models*



Decision Point #3

Map the land uses

