Representation of Lag Times in the Phase 6 Watershed Model

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Modeling Workgroup

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Load for a land use in a segment =

Estimated Average Load + **Sensitivity** * **Δ Inputs**

*

BMPs

*

Watershed Delivery Variance

*

Stream Delivery

*

River Delivery

Phase 6

Load for a land use in a segment =

Estimated

Average + Sensitivity * Δ Inputs

*

*

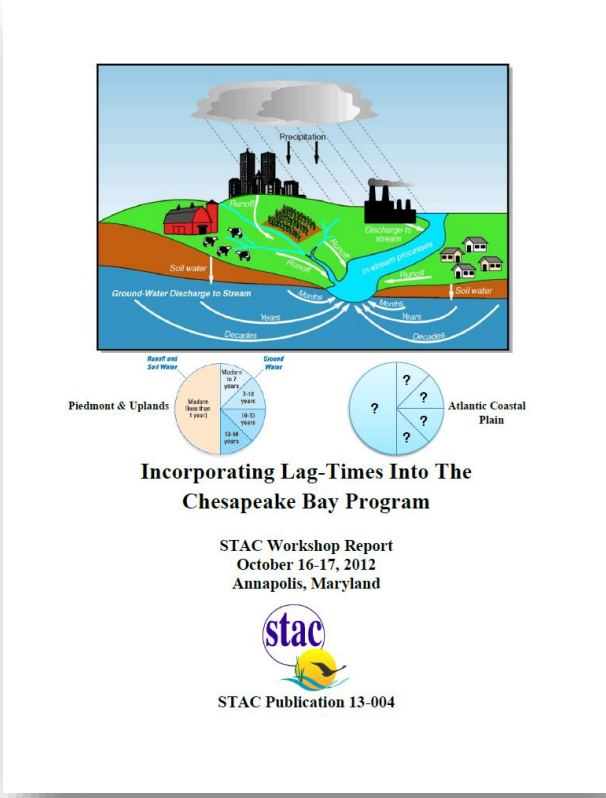
River Delivery

Lag Times

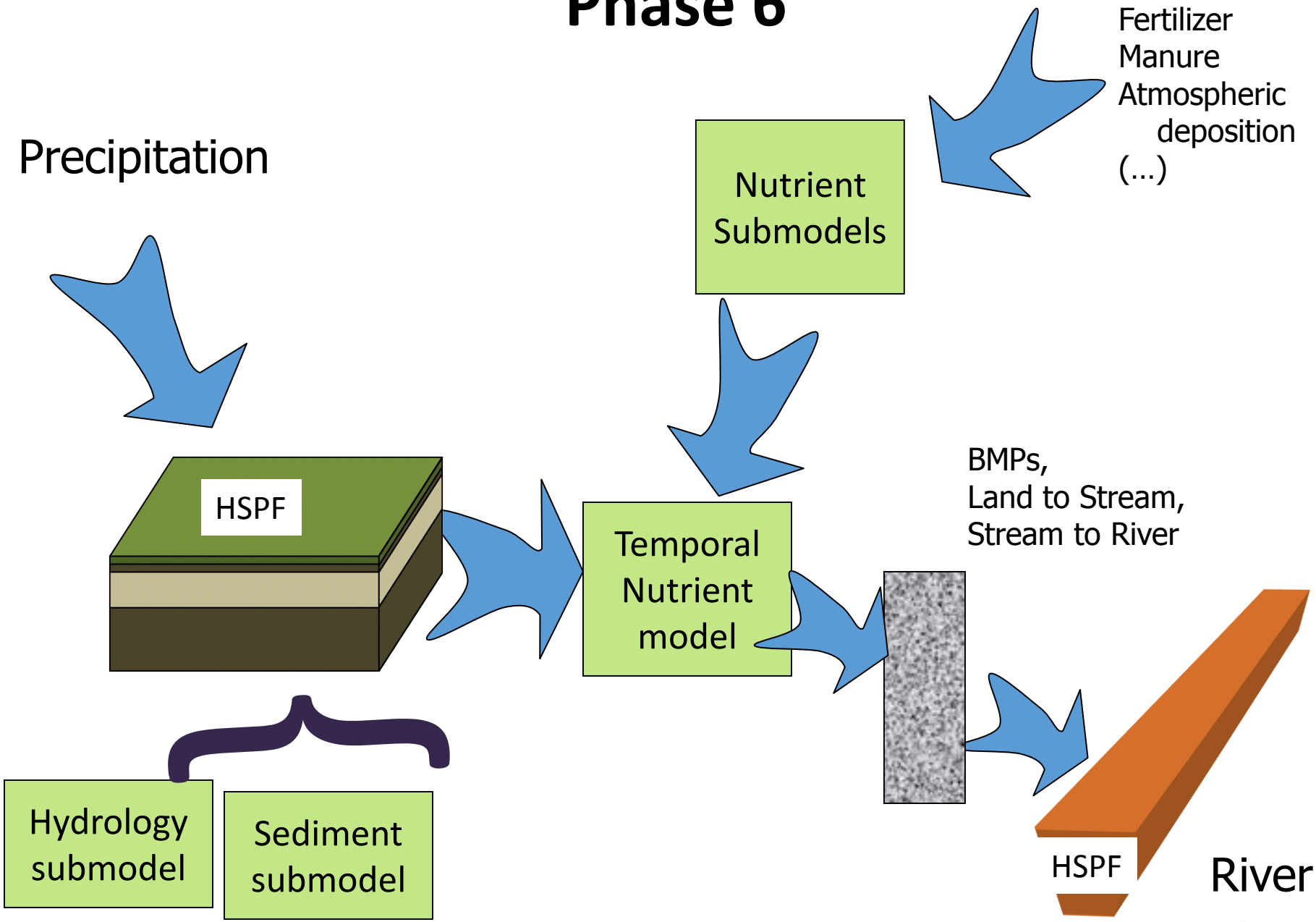
Phase 6

Lag Times

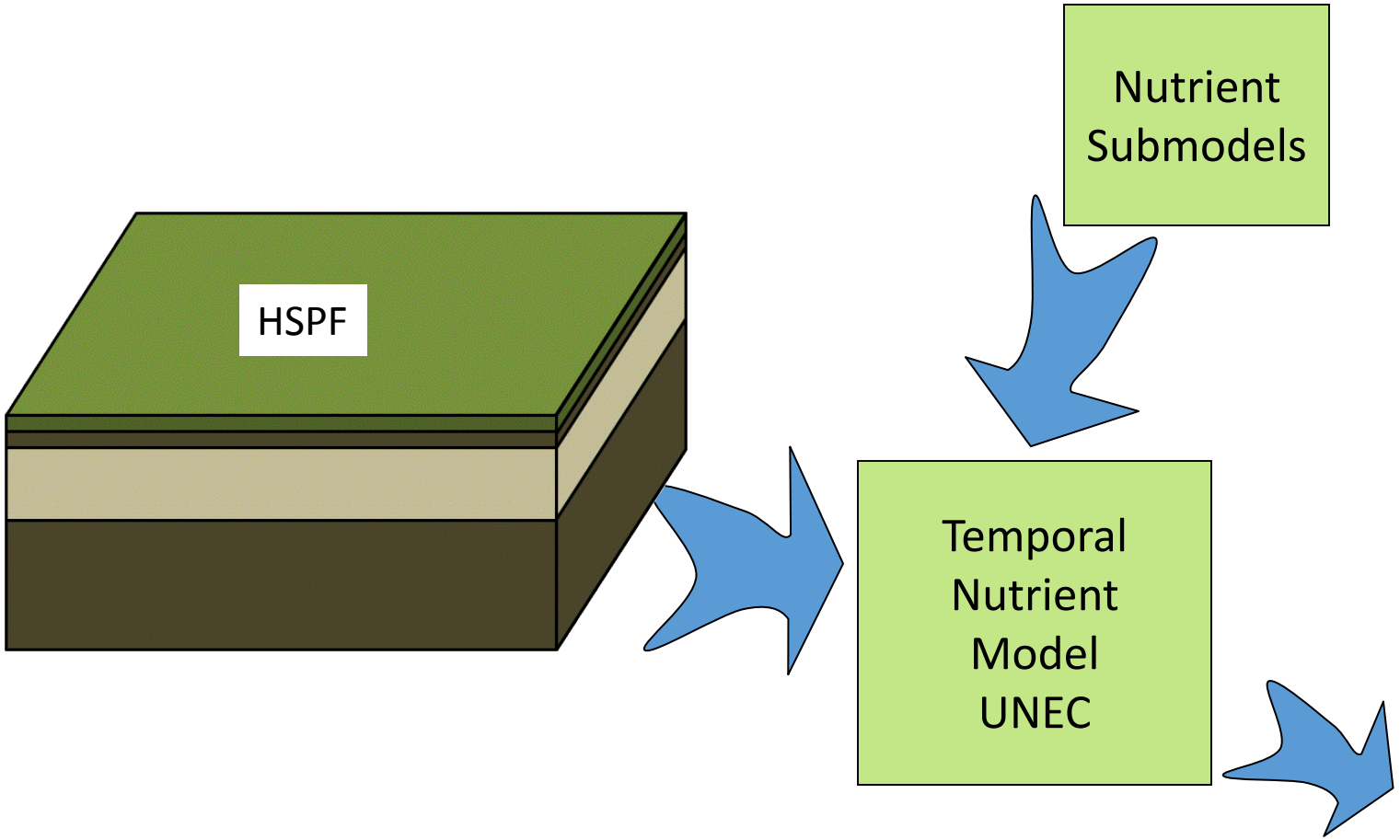
- STAC recommendation
- Improve Calibration
- Will be needed to answer future management questions about lag times
- Phase 6 structure makes lag necessary.



Phase 6

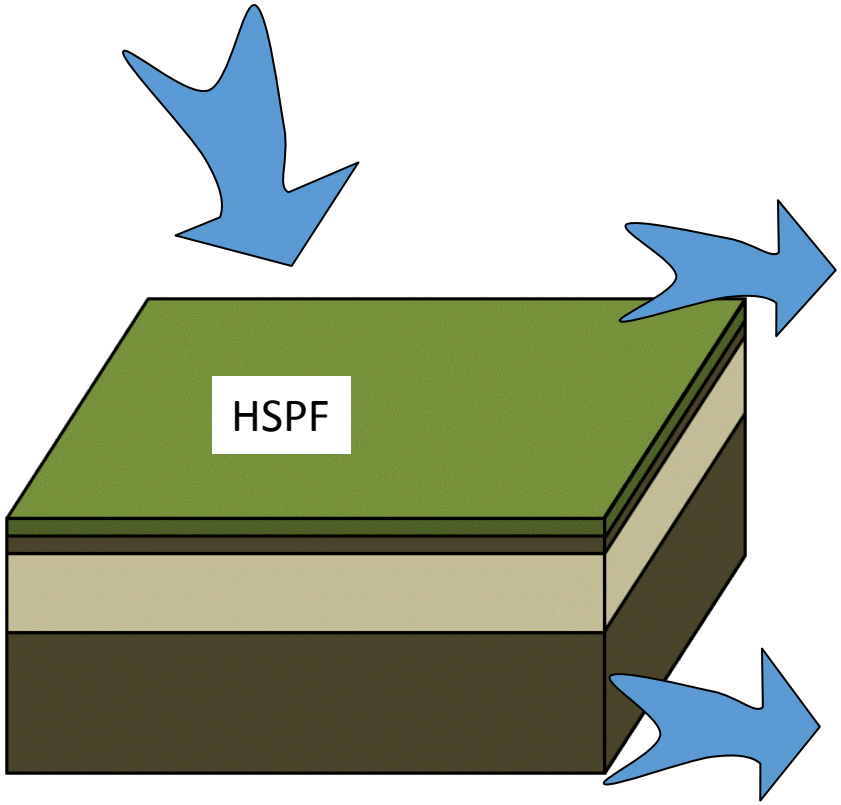

Fertilizer
Manure
Atmospheric deposition
(…)
Precipitation
Nutrient Submodels
HSPF
Temporal Nutrient model
BMPs,
Land to Stream,
Stream to River
Hydrology submodel
Sediment submodel
HSPF
River

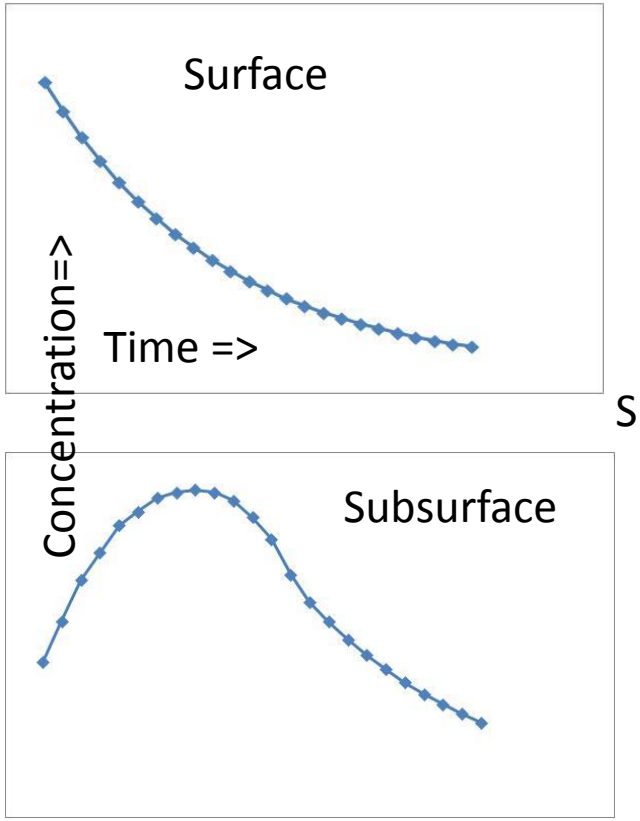
Phase 6



Lag Models - Nitrogen

Each Loading Event



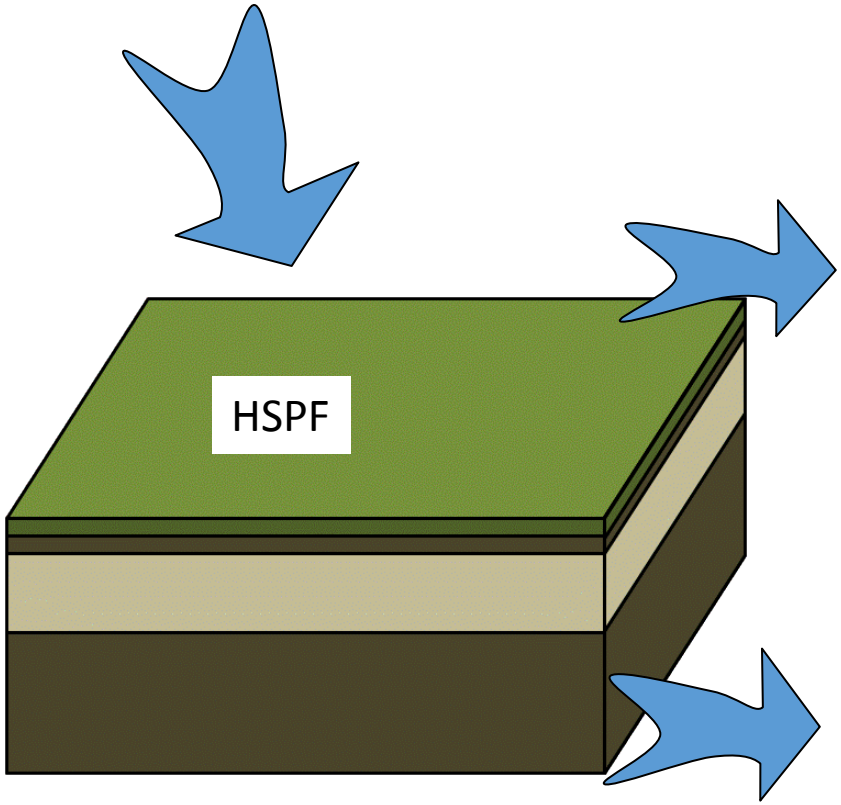


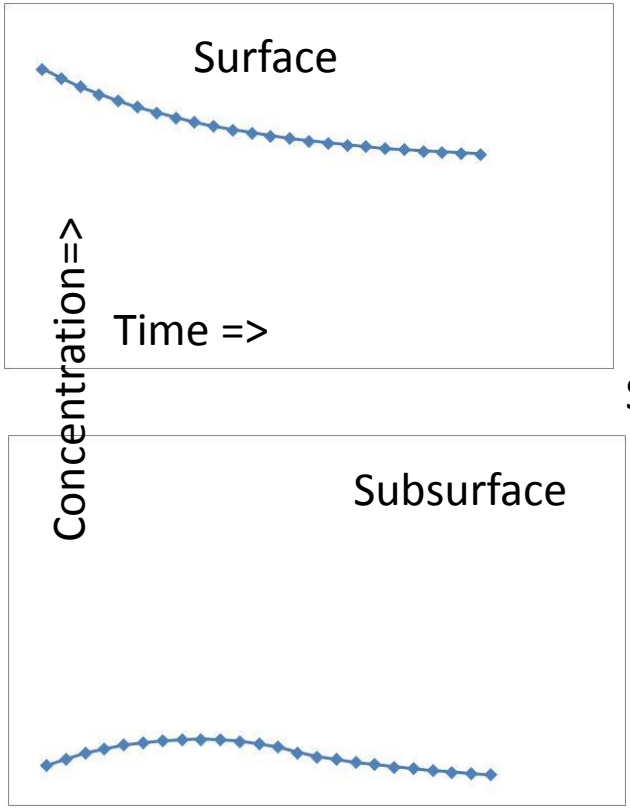
Sum=

Nutrient Submodels

Lag Models - Phosphorus

Each Loading Event





Sum=

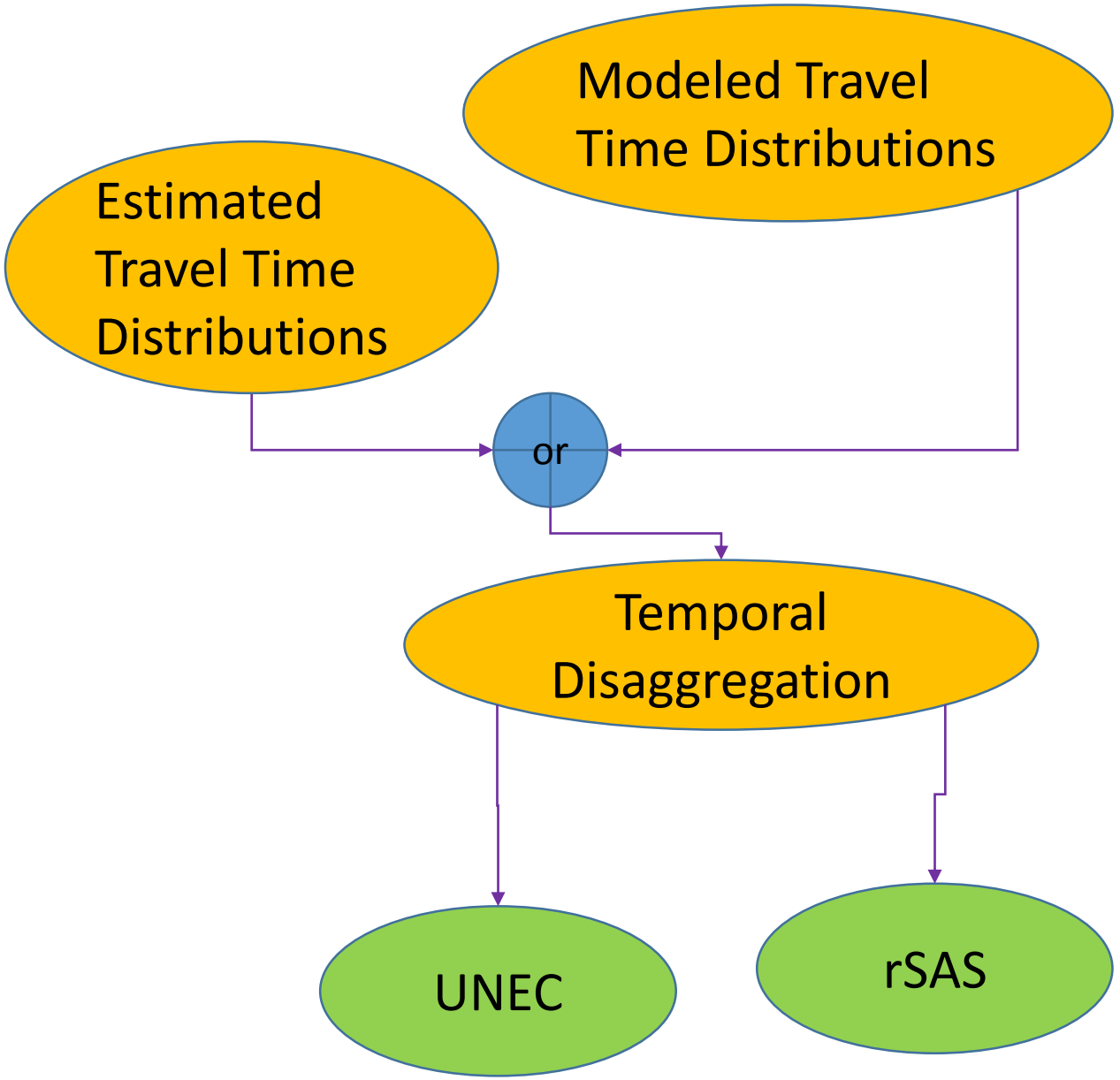
Nutrient Submodels

Finished

Planned Update in 2015

Each box represents a dataset, model, or process

Lag Time



Parameterization

Nutrients:

- Nitrate
- Ammonia
- Organic Nitrogen
- Phosphate
- Organic Phosphorus

X

Flowpaths

- Surface flow
- Interflow
- Sediment bound
- Groundwater