

MDSS Prototype Software Architecture Overview



Presented by

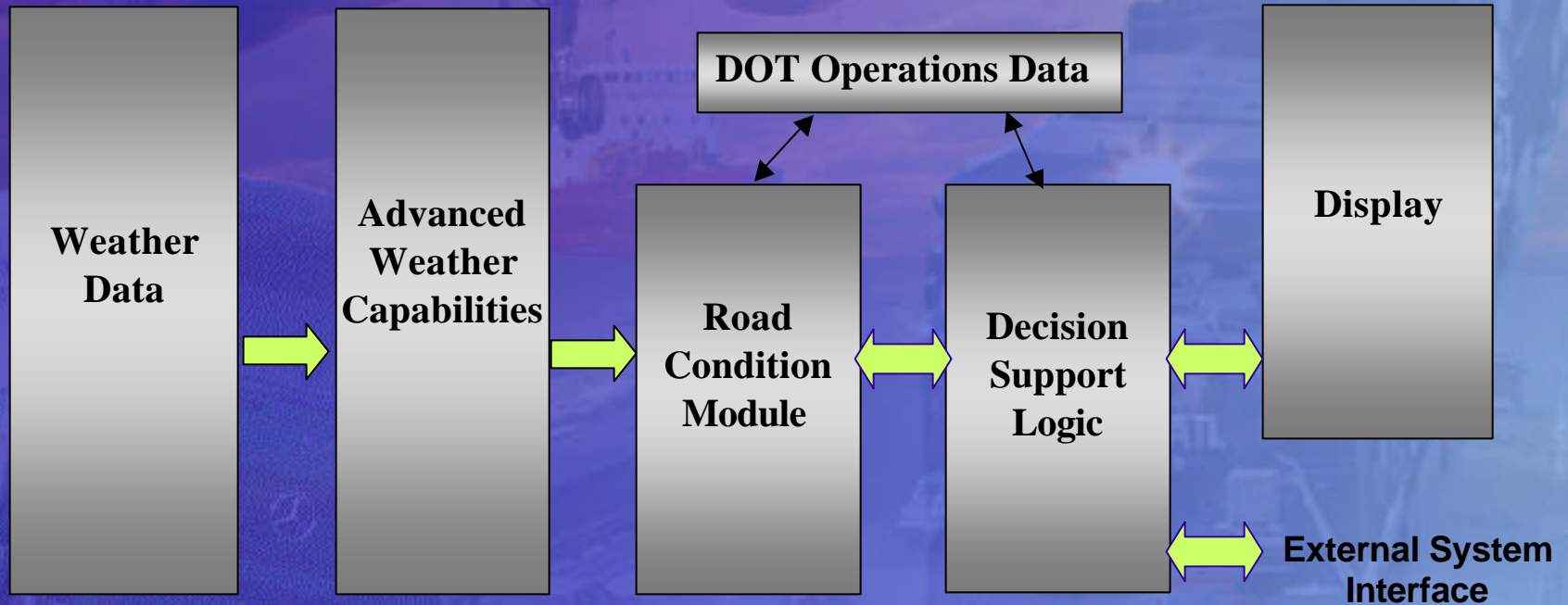
Bill Myers

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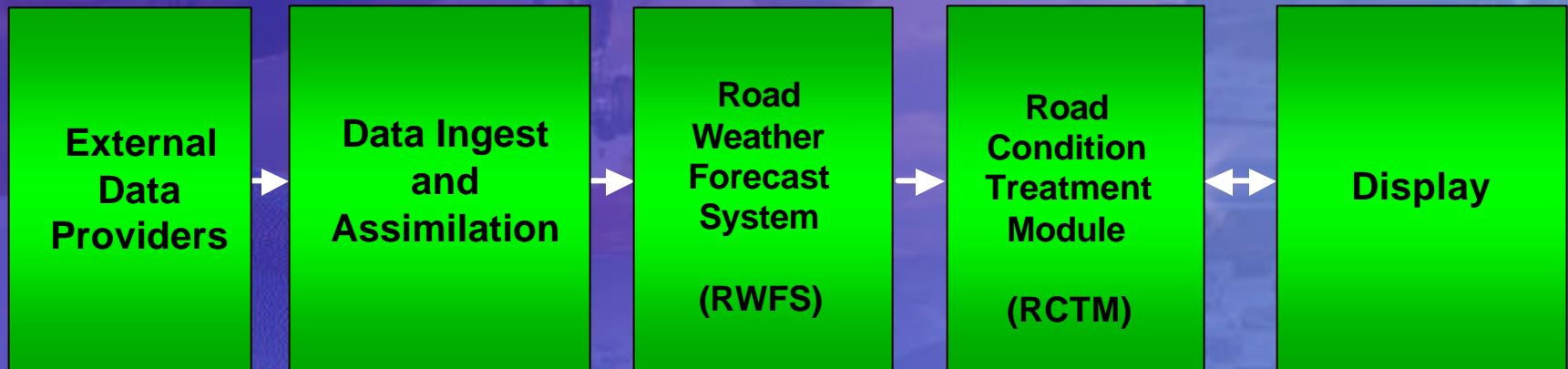


MDSS Prototype Overview

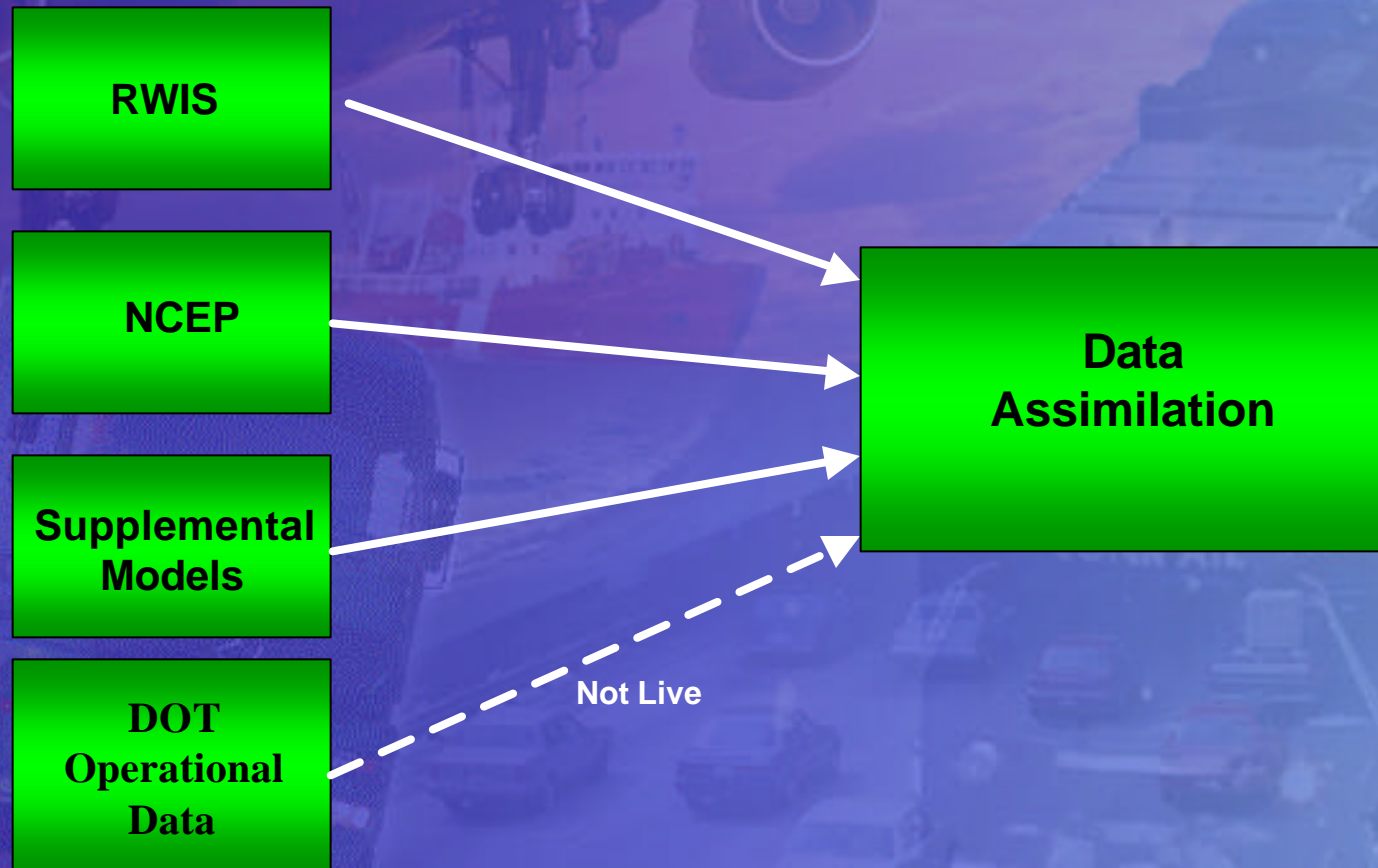
Conceptual Structure from 2001



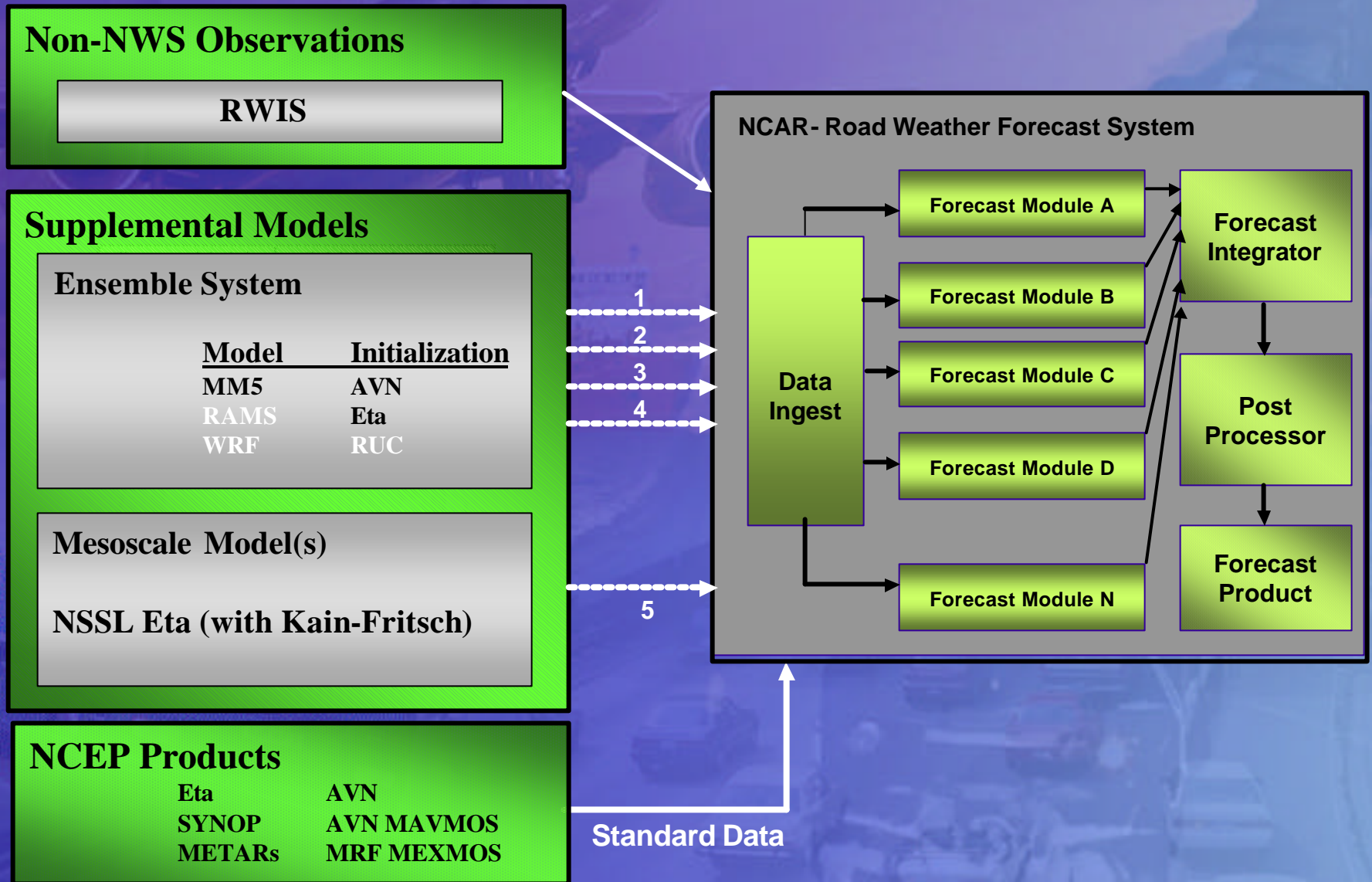
MDSS FP Data Flow



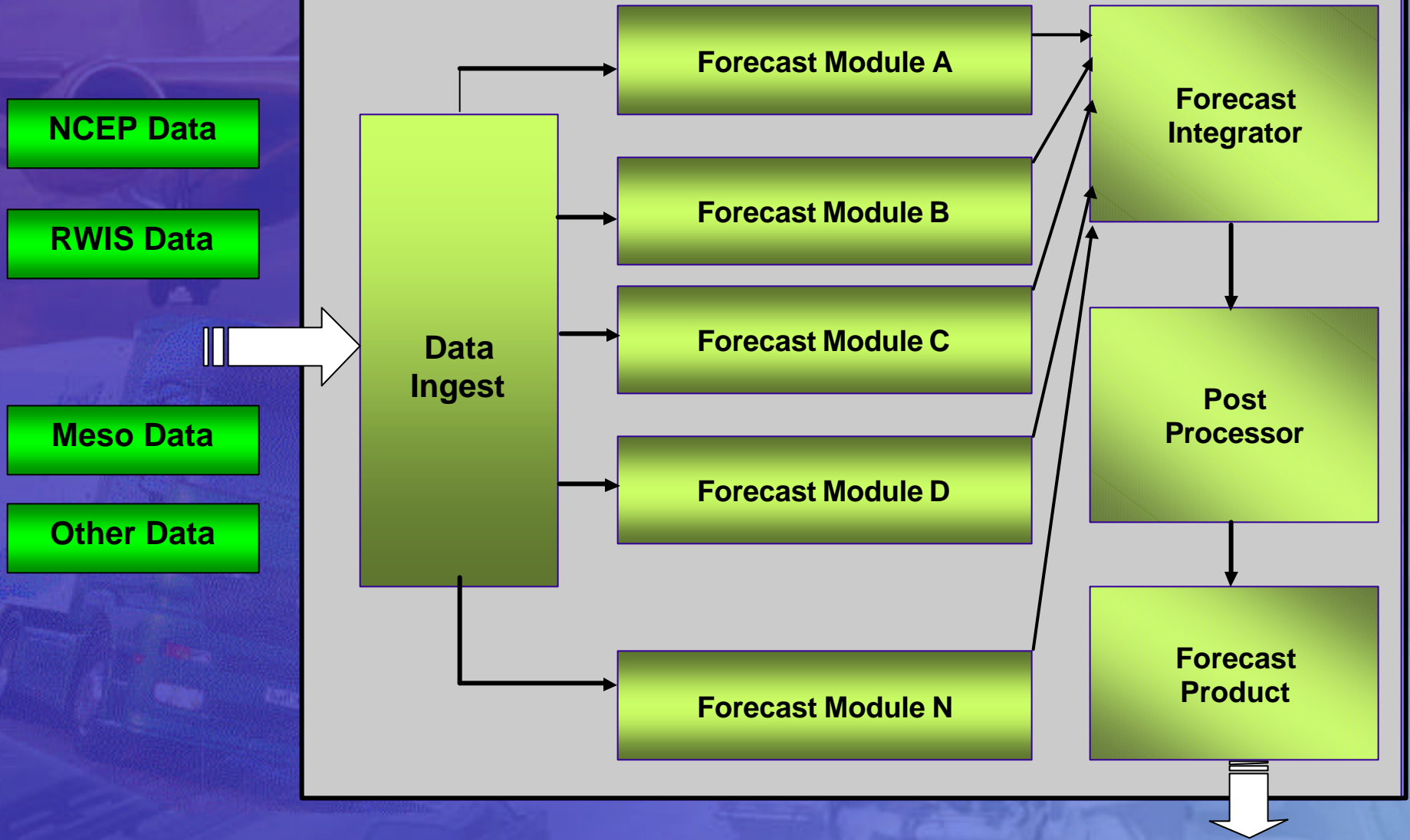
MDSS FP Data Ingest Subsystem



MDSS FP Road Weather Forecast System



NCAR- Road Weather Forecast System



Functional Prototype - Cycles

The functional prototype operates in three primary modes:

- 1) Provide results with no maintenance actions.**
- 2) Provide results based on automated maintenance recommendations (standard rules of practice).**
- 3) Allow user to modify maintenance recommendations.**

MDSS Display System

Select Treatment

Define Treatment Scenario

Select Material:

- NaCl
- MgCl
- Sand

Treatments:

- NaCl at 125 lbs / 2-lane mile at 18:00
- NaCl at 100 lbs / 2-lane mile at 22:30
- Sand at 175 lbs / 2-lane mile at 6:00

Select Amount:

25 lbs / 2-lane mile

Select Start Time:

18:00 Hrs

Morris Area Road Conditions

Current Time: 02/23/02 19:46

Morris Alerts:

0 to 12 Hours	12 to 24 Hours	24 to 48 Hours	Category
Extreme	Extreme	Extreme	Extreme
Poor	Poor	Poor	Poor
Marginal	Marginal	Marginal	Marginal
OK	OK	OK	OK

Database: View Ops

Select Treatments:

- TH-28 Morris
- I-94 Alexandria

View Treatments:

- TH-28 Morris
- I-94 Alexandria

Legend: Extreme, Poor, Marginal, OK

Legend: Mobility: 1.0 (Normal %), Road Temp: 30.42 deg. F, Snow Depth: 0.0 inches, Chem Conc: 3.84 %

Legend: Treat and Flow NaCl 400.0 lbs/2-lane mi, Treat and Flow NaCl 375.0 lbs/2-lane mi, Treat and Flow NaCl 350.0 lbs/2-lane mi, Treat and Flow NaCl 325.0 lbs/2-lane mi, Treat and Flow NaCl 300.0 lbs/2-lane mi

Legend: 1 3am 204 3 6 9 12pm 15 18 21 3am 205 3 6 9 12pm 15 18

Treatment Selector for I-94 Alexandria

Displayed Result:

- Mobility
- Snow Depth on Road
- Road Surface Temp.
- Chemical Conc.
- Remaining NaCl Stock

Treatments:

Select: None

Recommended:

- Select: (Re) Calculate
- Treat and Flow NaCl 375.0 lbs/2-lane mi
- Treat and Flow NaCl 350.0 lbs/2-lane mi

Alternative 1:

- Select: Delete Calculate
- Treat and Flow NaCl 400.0 lbs/2-lane mi

Buttons: View Ops Database, Add New Treatment Scenario, Close

Legend: 1 3am 204 3 6 9 12pm 15 18 21 3am 205 3 6 9 12pm 15 18