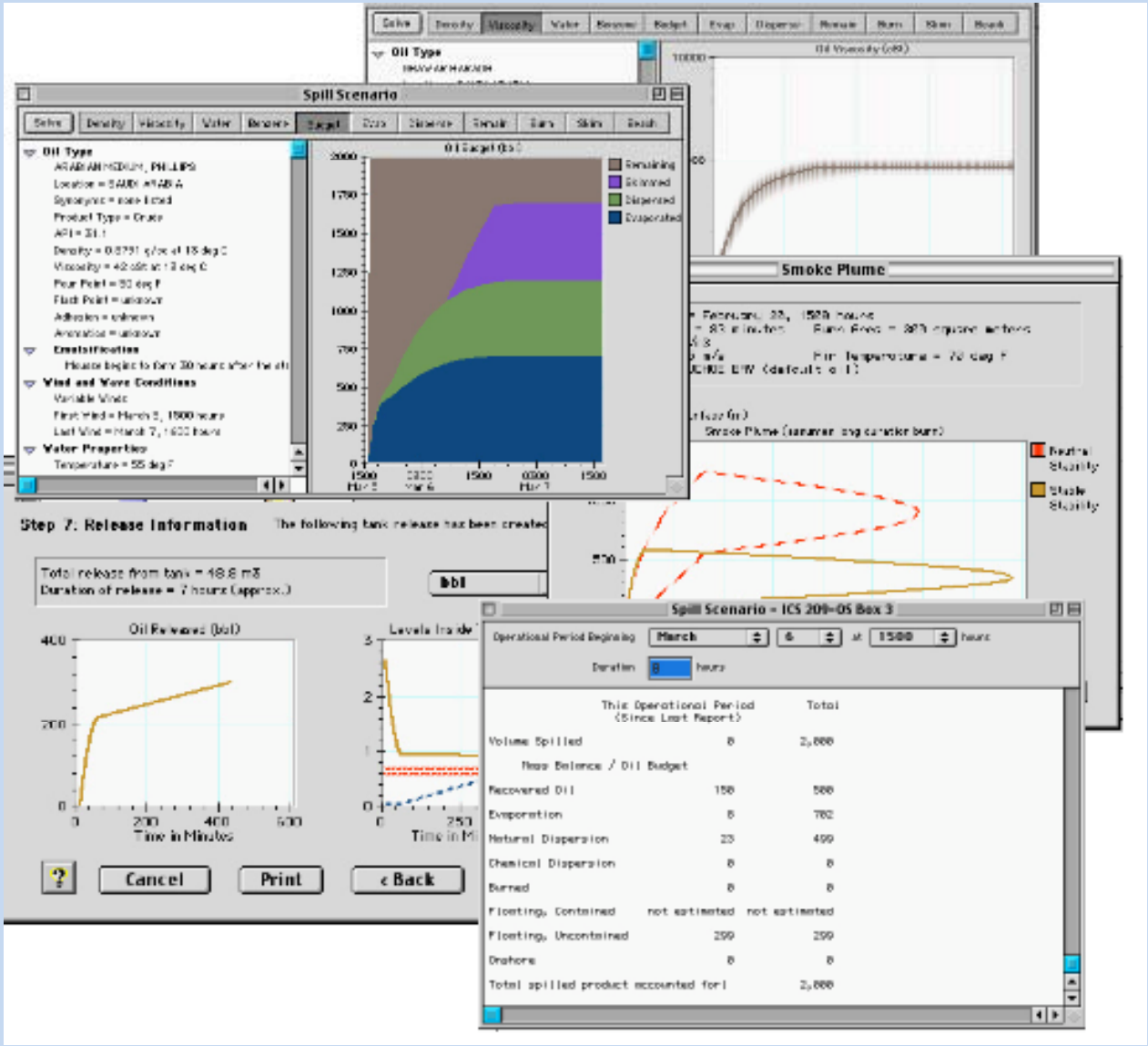
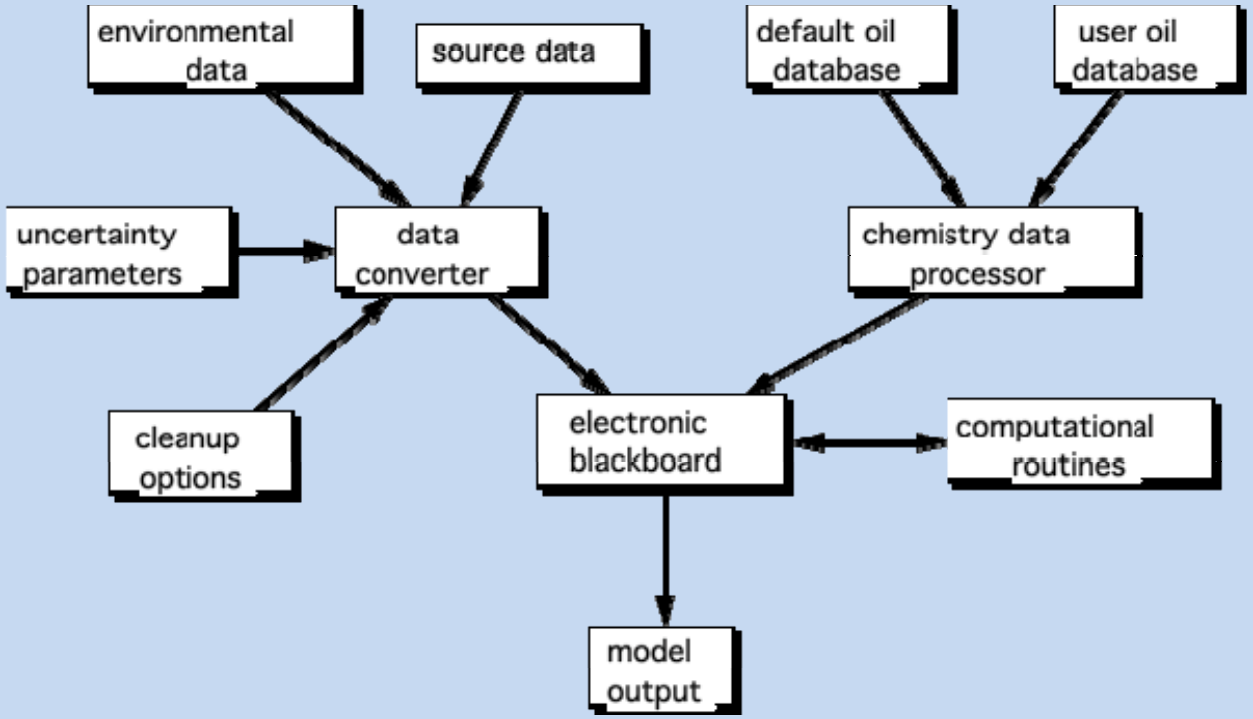
ADIOS2- The Legacy

- ADIOS2 (Automated Data Inquiry for Oil Spills) is an oil weathering model that incorporates a database containing more than a thousand crude oils and refined products, and provides quick estimates of the expected characteristics and behavior of oil spilled into the marine environment. The predictions it makes, presented as both graphics and text, are designed to help answer questions that typically arise during spill response and cleanup.

ADIOS2 GRAPHICS



ADIOS2 Structure



THE PRIMARY PURPOSE OF THE MODEL

ADIOS 3

Is a **RESPONSE** Tool

Not a research project
Not a damage assessment model
Not for legal or political purposes

Information Quality Act

- Models are required to use data of known quality, apply sound analytical techniques, and undergo review before dissemination
- Third-party information are subject to the same requirements

What Platform?

ADIOS 1

ADIOS 2

ADIOS 3

POSSIBLE CONCEPTUAL DESIGN FOR THE NEW MODEL

- Like ‘concept automobiles’ the actual production model will not end up looking exactly like this strawman.

- Consider this presentation as a topic for discussion

Assumption: You are somewhat familiar with ADIOS2

ADIOS3

STRAWMAN

Oil Library

- Refined products → Product names and simple properties

- Crude Oils → Oil names and simple properties
- (sort by name, API, location)

OR

- Custom Oil

Go to properties screen

ADIOS3

River spill

Vessel

Confined

Platform

Pipeline

Well blowout

Mystery slick

Leaking vessel

- Total

OR

- Rate (beginning)
- Rate (ending)

Duration

Units

OR

ADVANCED CALCULATION

Is vessel anchored (stationary)?

Yes

no

Environmental data

- Similar to ADIOS2 except adjustments for type of spill
- EXAMPLES-
- River spill will ask for current data, river cross section, and sediment load, but not fetch
- Leaking tanker that is not anchored will not ask for current data

OR: template for NWS

UNITS

wind	knots
Wave height	feet

date	Monday	Tuesday	Wednesday	Thursday
Wind speed (10 m.)				
Wind direction (degree)				
Wave height				
Wave period (sec)				

Update response website

Add/
Change

oil	winds	Spill type	output
response	Leak	Water properties	uncertainty

1. Incident Name		
3. HAZMAT/Oil Spill Status (Estimated, in gallons)		
Common Name(s):		
UN Number:		
CAS Number:		
	Adjustments To Previous Operational Period	
Volume Spilled/Released		
Mass Balance - HAZMAT/Oil Budget		
Recovered HAZMAT/Oil		
Evaporation/Airborne		
Natural Dispersion		
Chemical Dispersion		
Burned		
Floating, Contained		
Floating, Uncontained		
Onshore		
Total HAZMAT/Oil accounted for:	N/A	
Comments:		
4. HAZMAT/Oil Waste Management (Estimated, Since Last Report)		

Low values

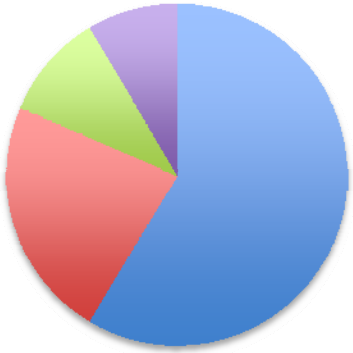
High values

Time since release

oil fate

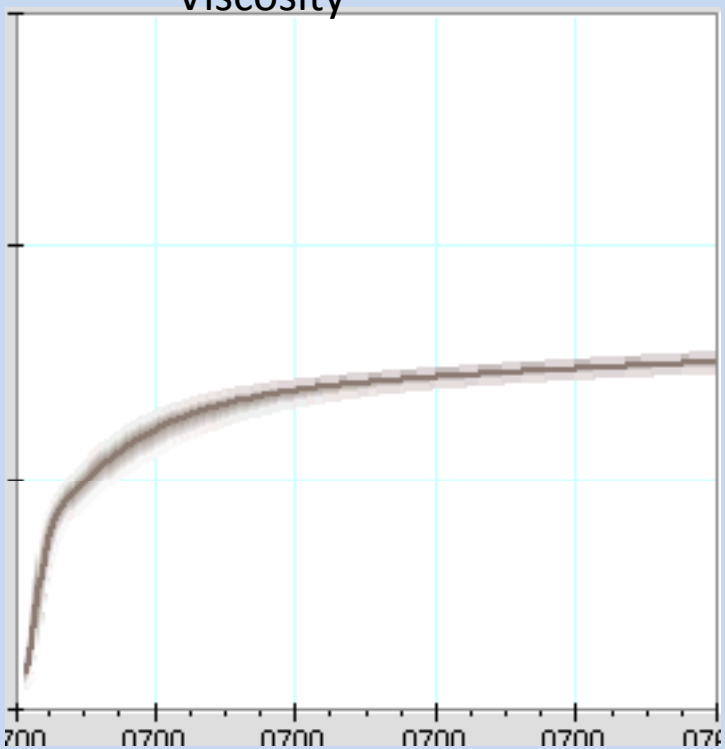
SLICK PROPERTIES

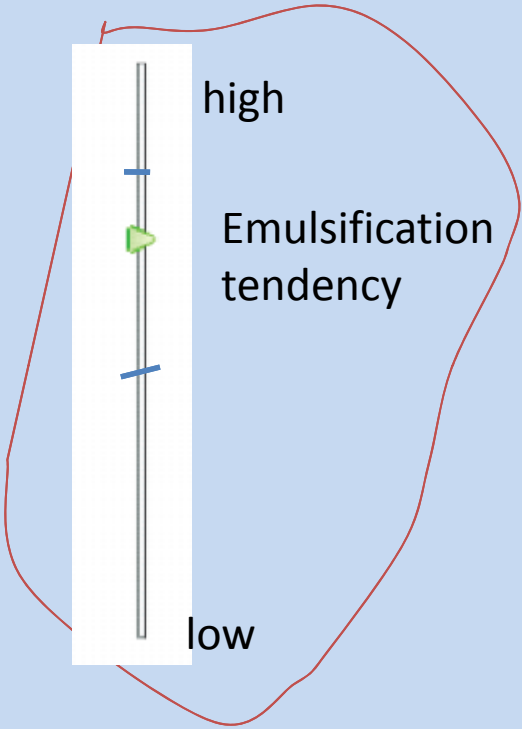
RESPONSE EFFECTIVENESS



SLICK PROPERTIES

Viscosity



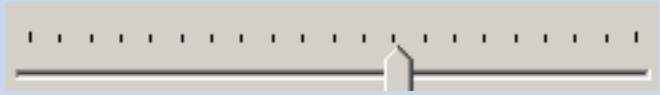


RESOURCES AT RISK

- How far from shore? _____
- Average water depth _____
- Beach types **sand** **rocky** **marsh** **mangrove**
- Coral reefs? (yes/no)
- Rafting bird risk

low high

- Marine resources

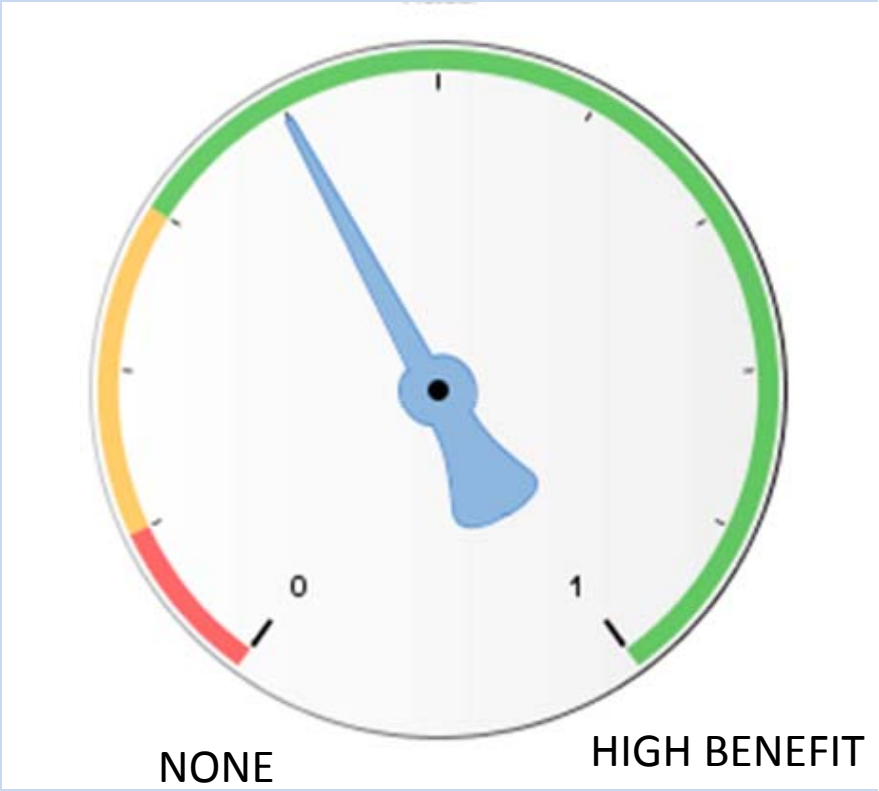


Response Utility Benefit/Cost

Skimming operations multiplier factor

0 4

Dispersant effectiveness operations

0% 100%

Apply changes to oil budget table