Adding 2D Sediment Data and Viewing Results

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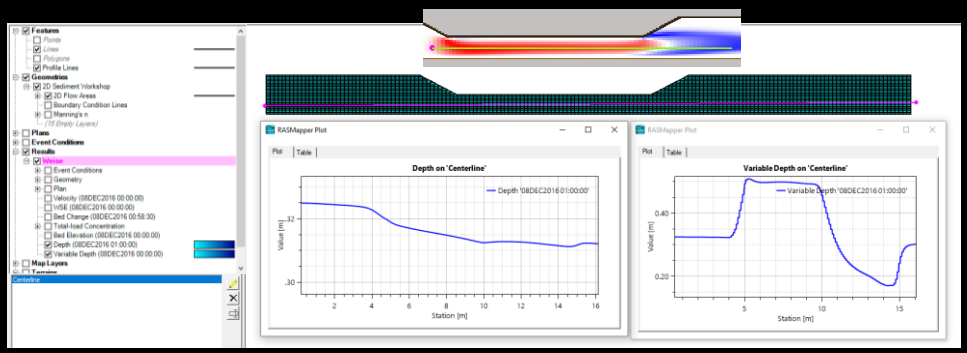
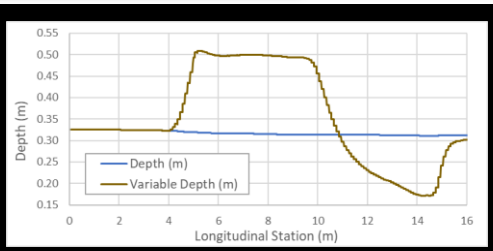
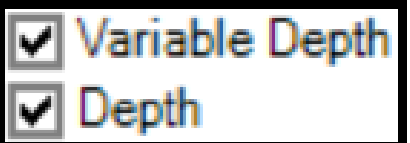
1

Depth vs Variable Depth

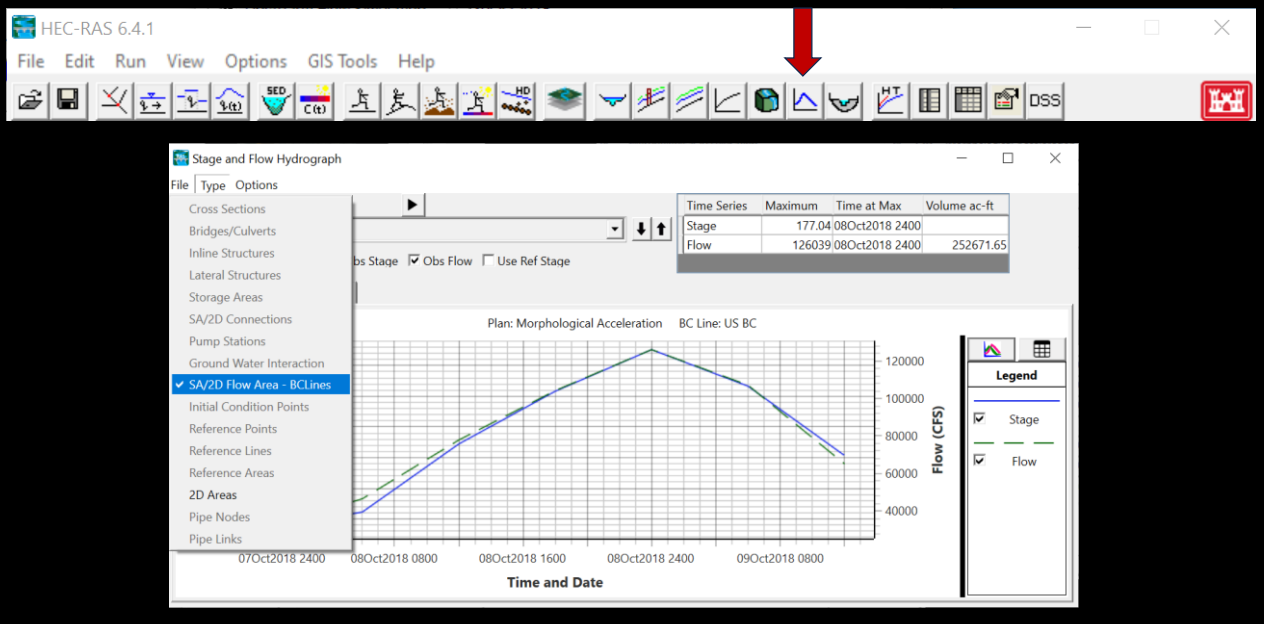




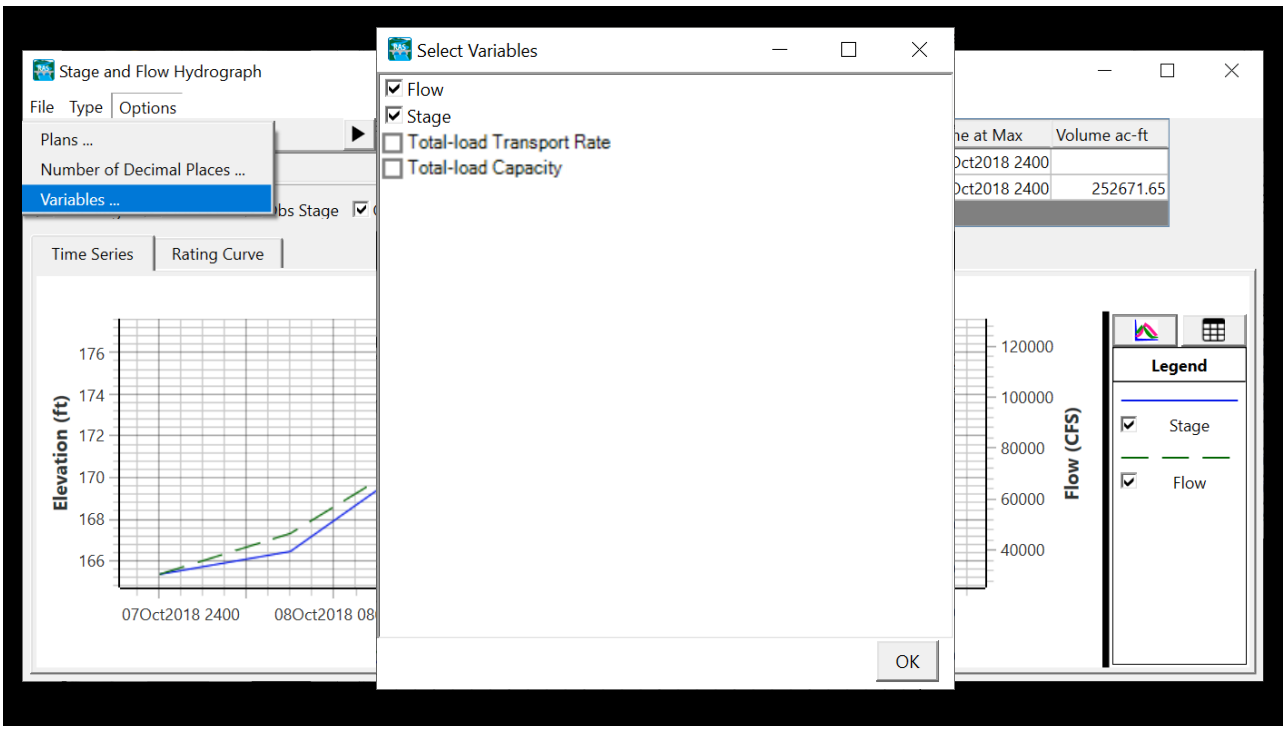


2

Default Reference Lines: Boundary Conditions

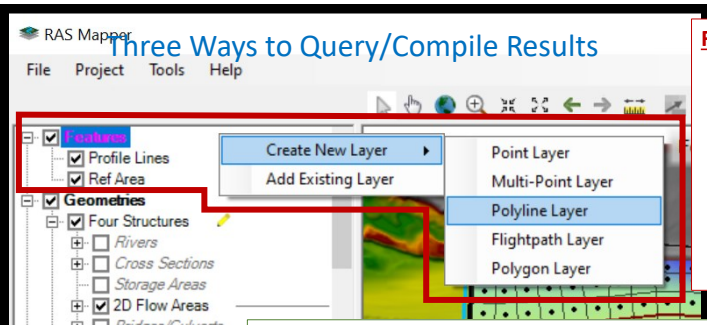


3



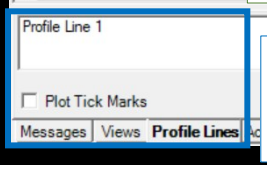
4

Three Ways to Query/Compile Results



Feature Layers:
- Can be points, lines, or polygons
- Polygons compile data from all cells but lines don't
- Polygons preform multiple operations over multiple cells – Lines plot variables on a XS
- Plot more parameters than Reference Lines
- Shared by all geometries
- Must run RAS to query results
- Query in the Mapper (Right Click)

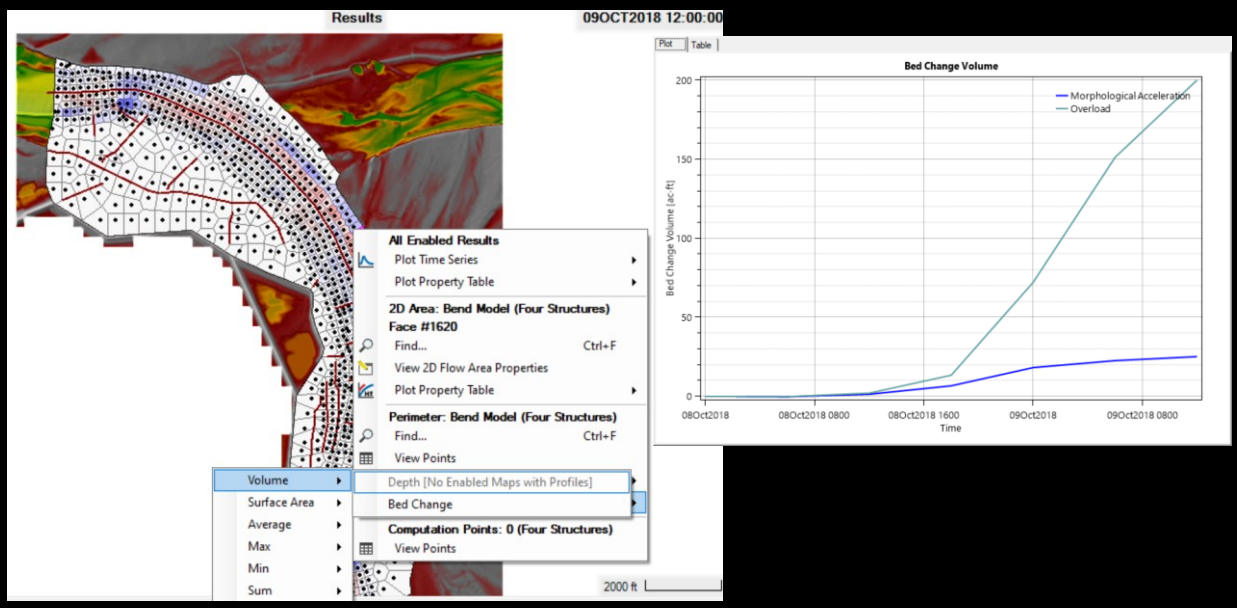
Reference Points/Lines/Areas:
- Can be points, lines, or polygons
- Can compile results for lines or areas from multiple cells
- Unique to each geometry
- Boundary conditions are automatically Reference Lines
- Query in the time series plotter in the main RAS menu
- Must run RAS to query results
- Limited to 4 variables (Q, Stage, Conc, & Qs)



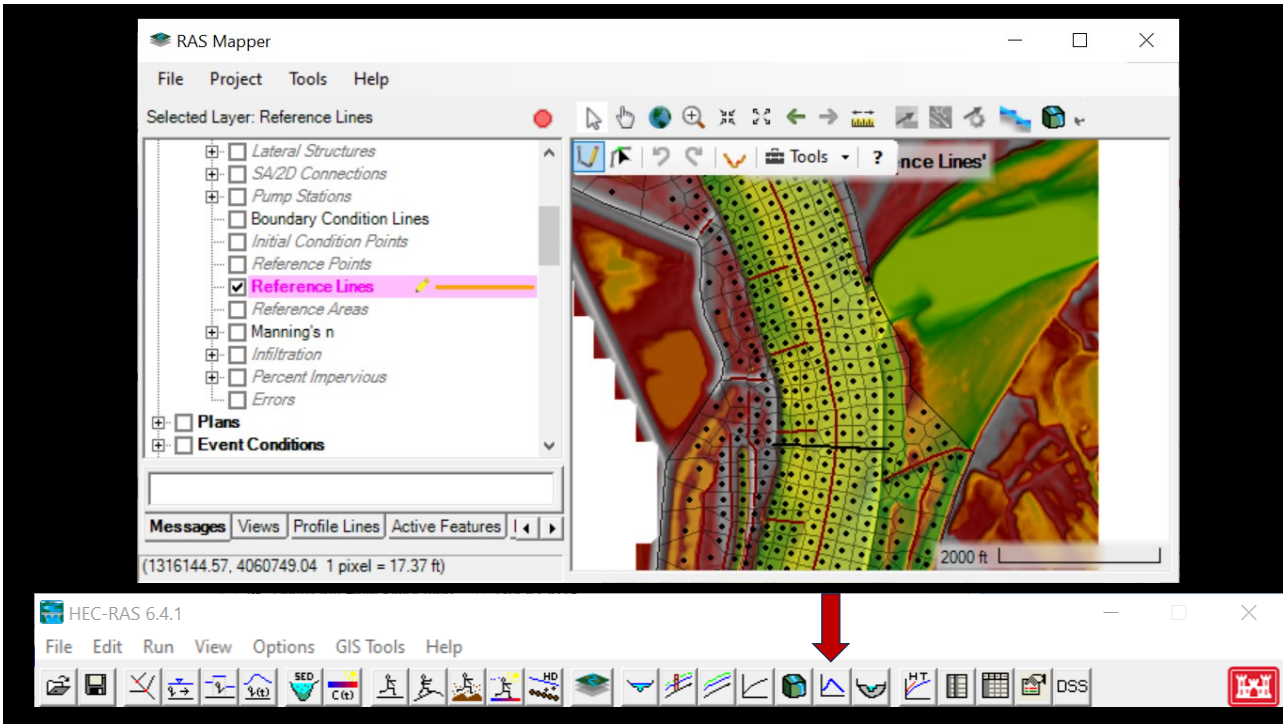
Profile Lines:
- Can only be lines
- Only plot variables for cells along the line (do not sum or average)
- Computes results on the fly (don't need to re-run RAS

5

Results by Perimeter (Whole 2D Area)



6


RAS Mapper
File Project Tools Help
Selected Layer: Reference Lines
Lateral Structures
SA/2D Connections
Pump Stations
Boundary Condition Lines
Initial Condition Points
Reference Points
Reference Lines
Reference Areas
Manning's n
Infiltration
Percent Impervious
Errors
Plans
Event Conditions
Messages Views Profile Lines Active Features
(1316144.57, 4060749.04 1 pixel = 17.37 ft)
Tools
2000 ft
HEC-RAS 6.4.1
File Edit Run View Options GIS Tools Help
DSS

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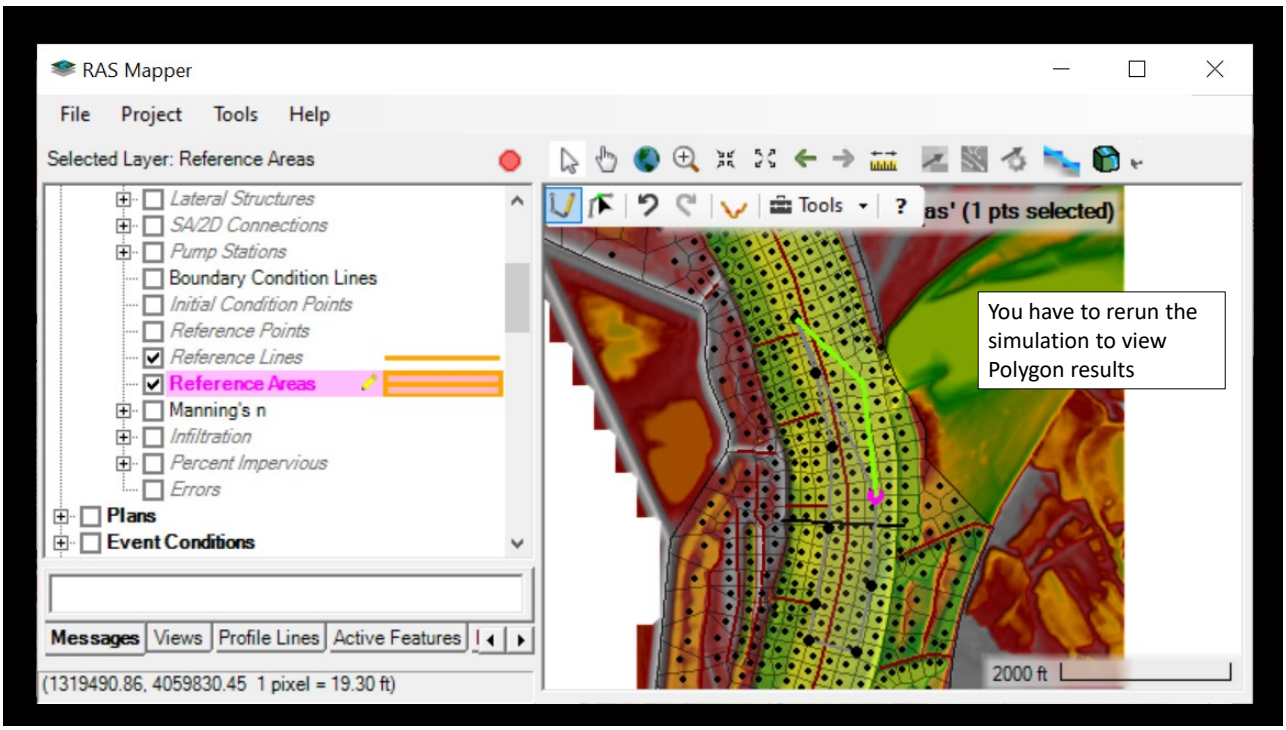
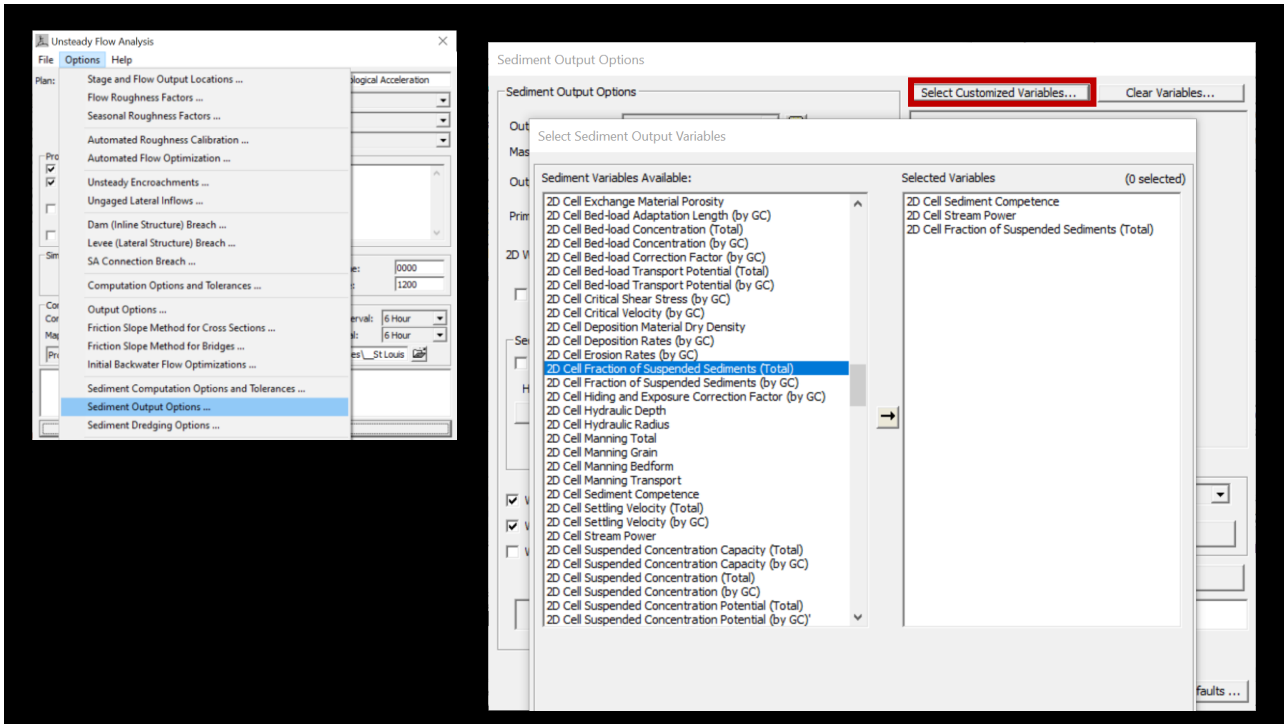
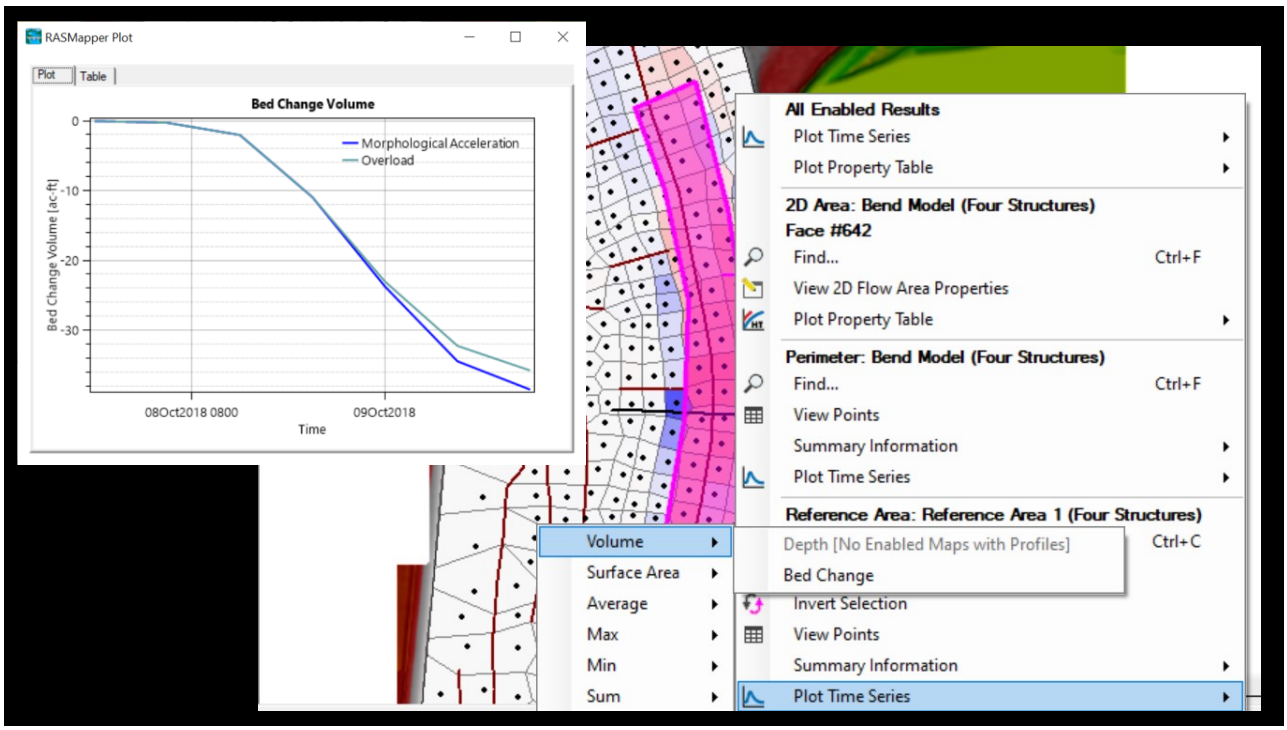

RAS Mapper
File Project Tools Help
Selected Layer: Reference Areas
Lateral Structures
SA/2D Connections
Pump Stations
Boundary Condition Lines
Initial Condition Points
Reference Points
Reference Lines
Reference Areas
Manning's n
Infiltration
Percent Impervious
Errors
Plans
Event Conditions
Messages Views Profile Lines Active Features
(1319490.86, 4059830.45 1 pixel = 19.30 ft)
Tools
as' (1 pts selected)
You have to rerun the simulation to view Polygon results
2000 ft

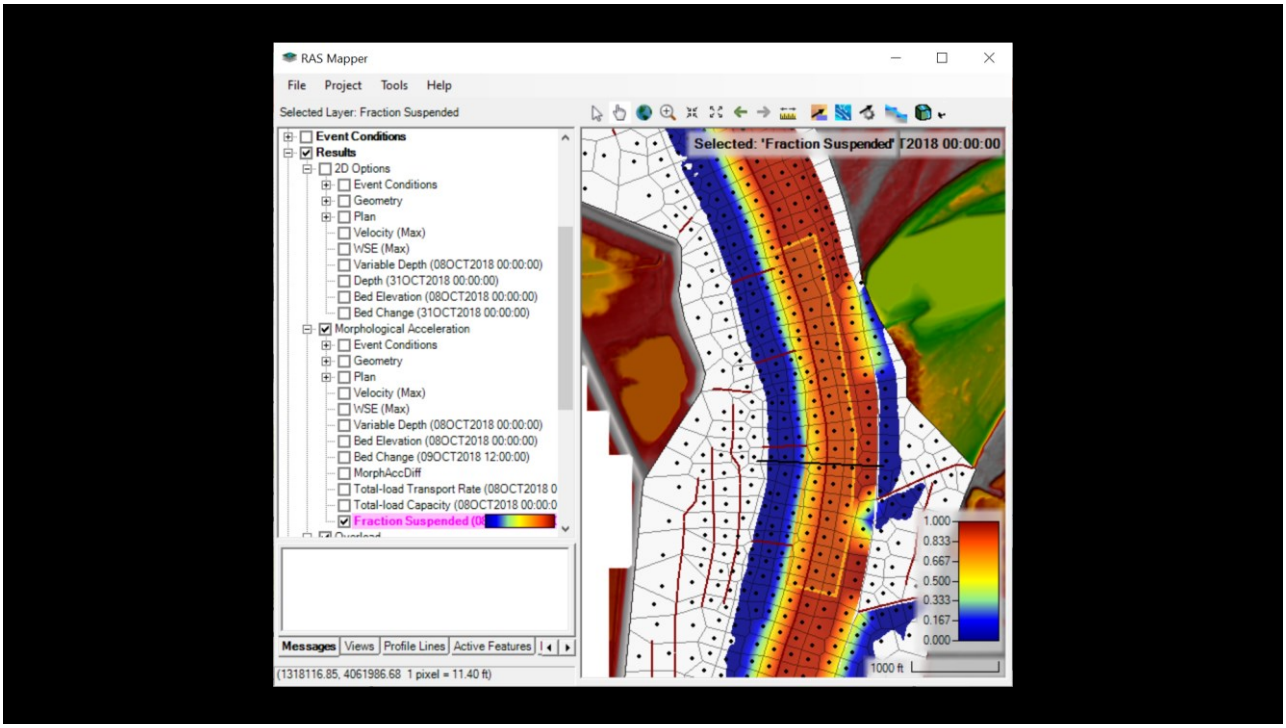
8


Unsteady Flow Analysis
File
Options
Help
Stage and Flow Output Locations ...
Flow Roughness Factors ...
Seasonal Roughness Factors ...
Automated Roughness Calibration ...
Automated Flow Optimization ...
Unsteady Encroachments ...
Ungaged Lateral Inflows ...
Dam (Inline Structure) Breach ...
Levee (Lateral Structure) Breach ...
SA Connection Breach ...
Computation Options and Tolerances ...
Output Options ...
Friction Slope Method for Cross Sections ...
Friction Slope Method for Bridges ...
Initial Backwater Flow Optimizations ...
Sediment Computation Options and Tolerances ...
Sediment Output Options ...
Sediment Dredging Options ...
Sediment Output Options
Sediment Output Options
Select Customized Variables...
Clear Variables...
Select Sediment Output Variables
Sediment Variables Available:
Selected Variables
(0 selected)
2D Cell Exchange Material Porosity
2D Cell Bed-load Adaptation Length (by GC)
2D Cell Bed-load Concentration (Total)
2D Cell Bed-load Concentration (by GC)
2D Cell Bed-load Correction Factor (by GC)
2D Cell Bed-load Transport Potential (Total)
2D Cell Bed-load Transport Potential (by GC)
2D Cell Critical Shear Stress (by GC)
2D Cell Critical Velocity (by GC)
2D Cell Deposition Material Dry Density
2D Cell Deposition Rates (by GC)
2D Cell Erosion Rates (by GC)
2D Cell Fraction of Suspended Sediments (Total)
2D Cell Fraction of Suspended Sediments (by GC)
2D Cell Hiding and Exposure Correction Factor (by GC)
2D Cell Hydraulic Depth
2D Cell Hydraulic Radius
2D Cell Manning Total
2D Cell Manning Grain
2D Cell Manning Bedform
2D Cell Manning Transport
2D Cell Sediment Competence
2D Cell Settling Velocity (Total)
2D Cell Settling Velocity (by GC)
2D Cell Stream Power
2D Cell Suspended Concentration Capacity (Total)
2D Cell Suspended Concentration Capacity (by GC)
2D Cell Suspended Concentration (Total)
2D Cell Suspended Concentration (by GC)
2D Cell Suspended Concentration Potential (Total)
2D Cell Suspended Concentration Potential (by GC)'
2D Cell Sediment Competence
2D Cell Stream Power
2D Cell Fraction of Suspended Sediments (Total)

9


RASMapper Plot
Plot
Table
Bed Change Volume
Morphological Acceleration
Overload
Bed Change Volume [ac-ft]
0
-10
-20
-30
08Oct2018 0800
09Oct2018
Time
All Enabled Results
Plot Time Series
Plot Property Table
2D Area: Bend Model (Four Structures)
Face #642
Find... Ctrl+F
View 2D Flow Area Properties
Plot Property Table
Perimeter: Bend Model (Four Structures)
Find... Ctrl+F
View Points
Summary Information
Plot Time Series
Reference Area: Reference Area 1 (Four Structures)
Volume
Surface Area
Average
Max
Min
Sum
Depth [No Enabled Maps with Profiles] Ctrl+C
Bed Change
Invert Selection
View Points
Summary Information
Plot Time Series

10


RAS Mapper
File
Project
Tools
Help
Selected Layer: Fraction Suspended
Event Conditions
Results
2D Options
Event Conditions
Geometry
Plan
Velocity (Max)
WSE (Max)
Variable Depth (08OCT2018 00:00:00)
Depth (31OCT2018 00:00:00)
Bed Elevation (08OCT2018 00:00:00)
Bed Change (31OCT2018 00:00:00)
Morphological Acceleration
Event Conditions
Geometry
Plan
Velocity (Max)
WSE (Max)
Variable Depth (08OCT2018 00:00:00)
Bed Elevation (08OCT2018 00:00:00)
Bed Change (09OCT2018 12:00:00)
MorphAccDiff
Total-load Transport Rate (08OCT2018 0
Total-load Capacity (08OCT2018 00:00:0
Fraction Suspended (0
Messages
Views
Profile Lines
Active Features
(1318116.85, 4061986.68 1 pixel = 11.40 ft)
Selected: 'Fraction Suspended' T2018 00:00:00
1.000
0.833
0.667
0.500
0.333
0.167
0.000
1000 ft

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