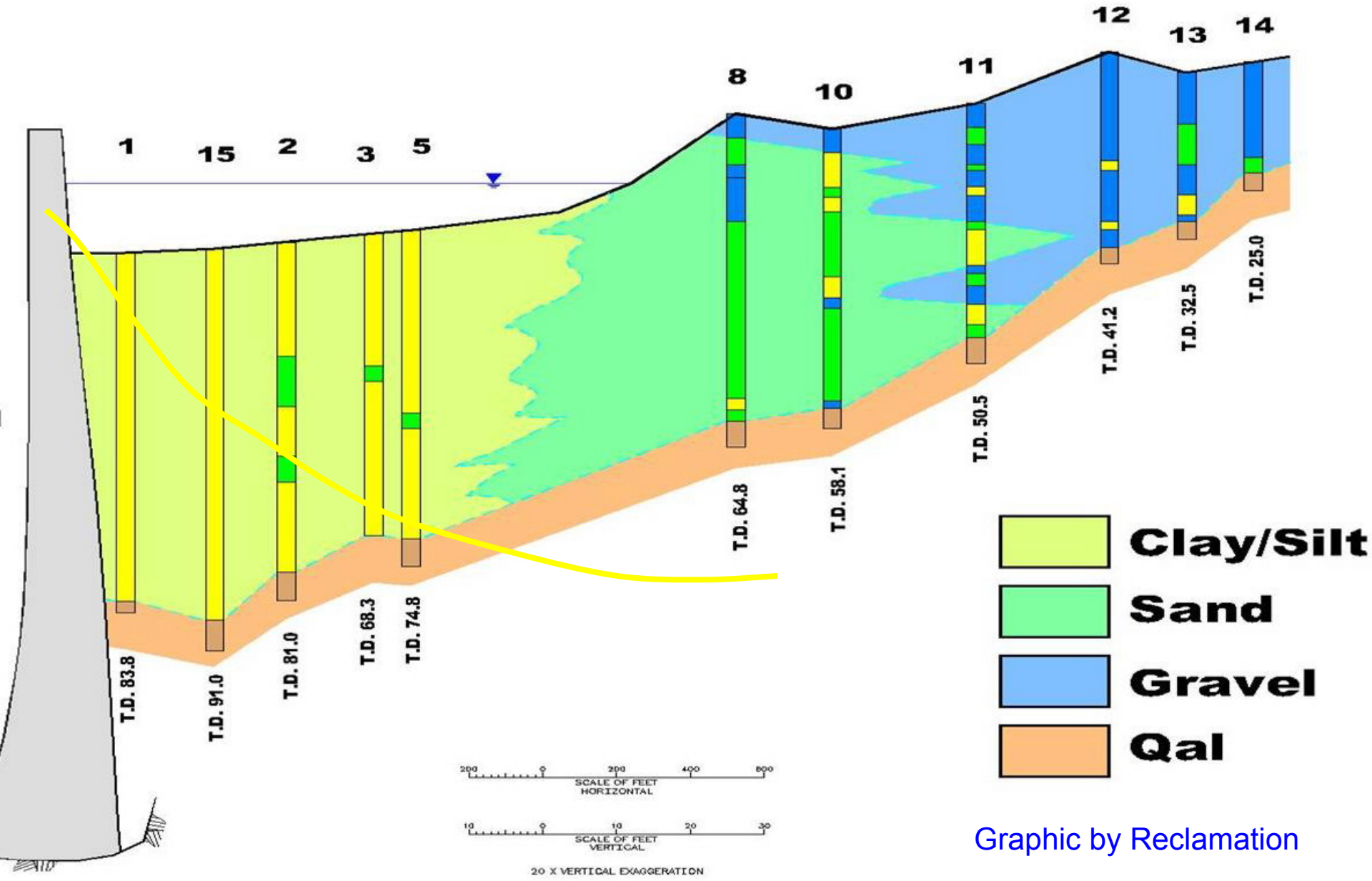
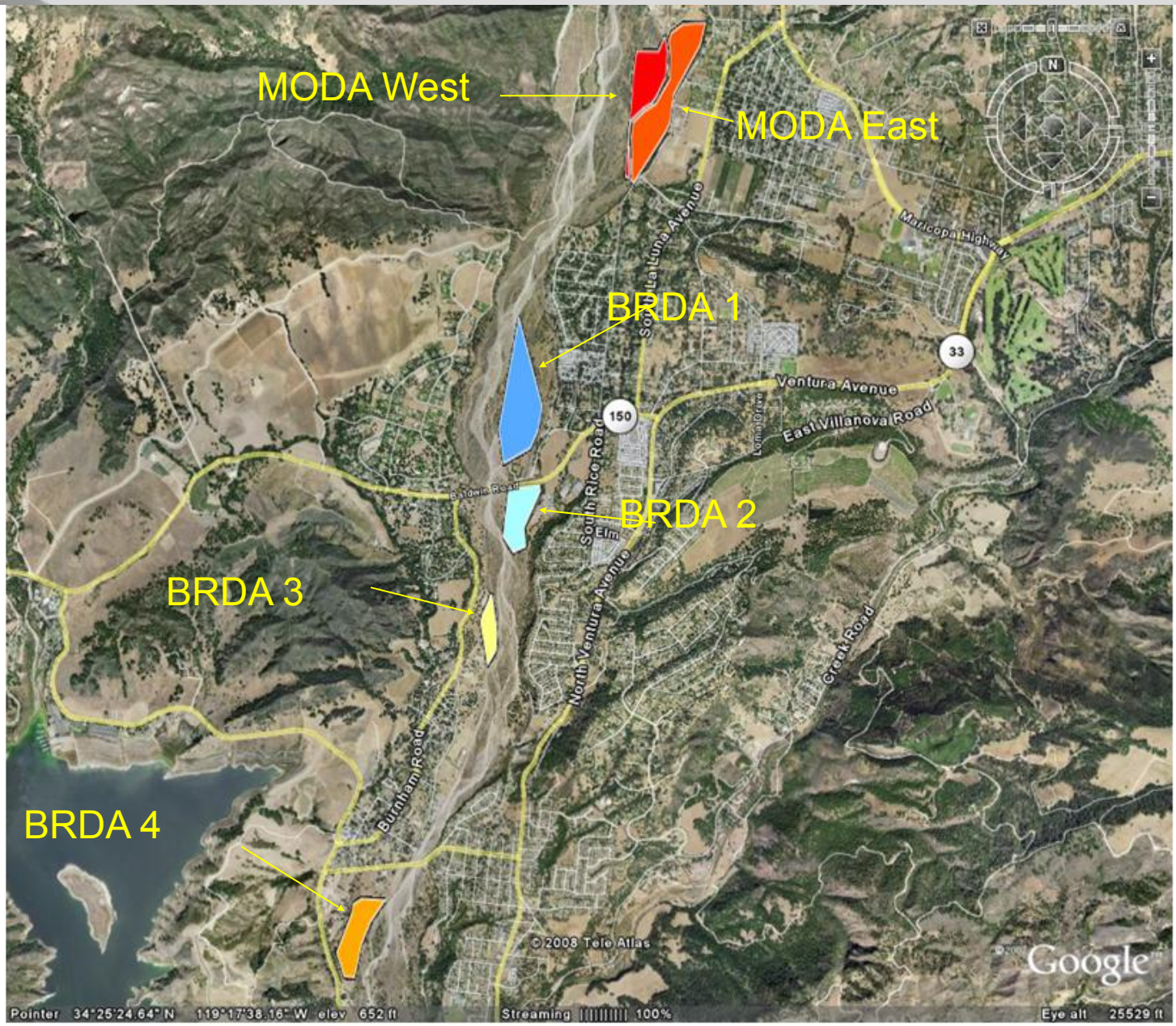

Matilija Dam Ecosystem Restoration Project

Sediments Upstream of Dam

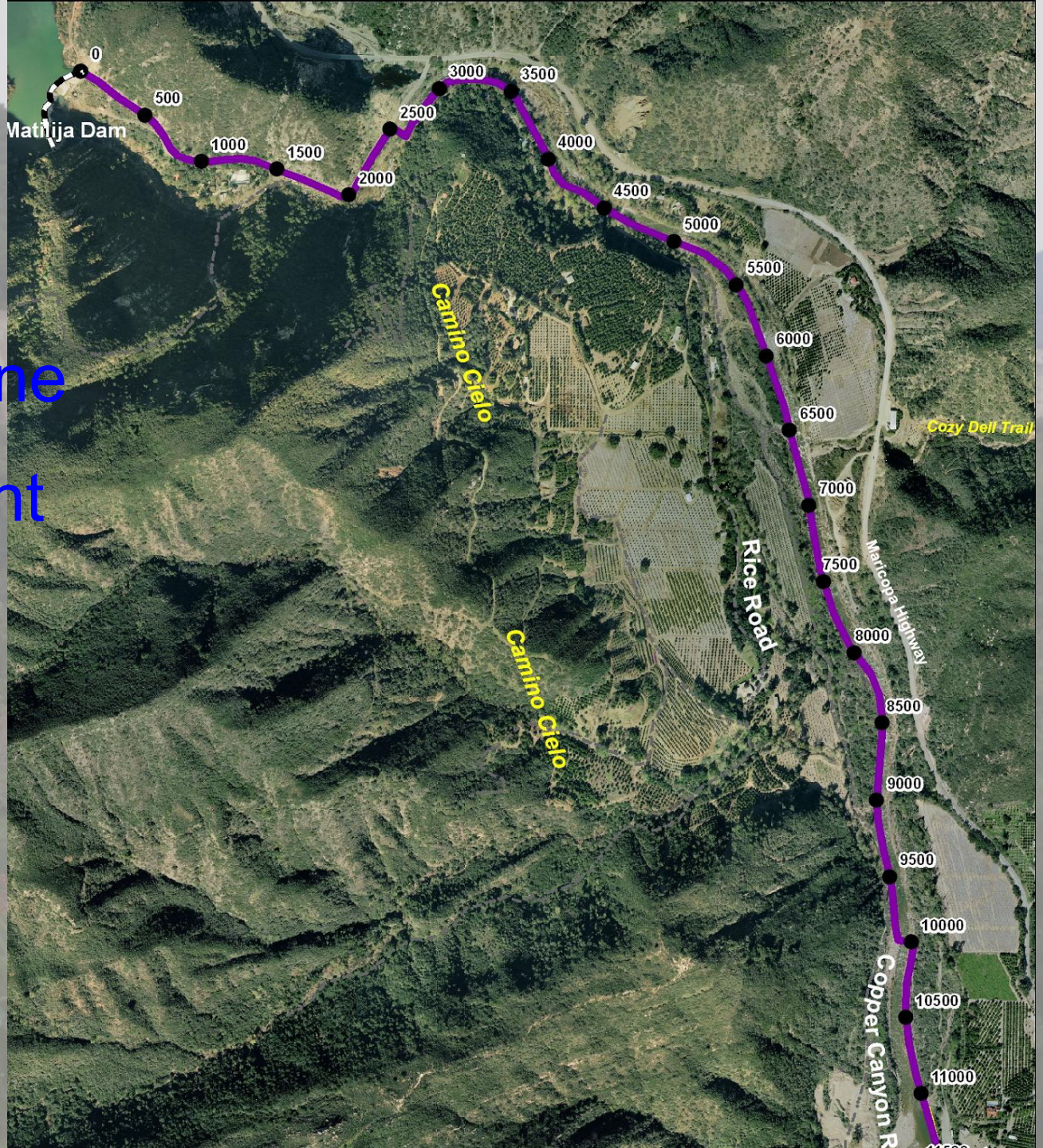


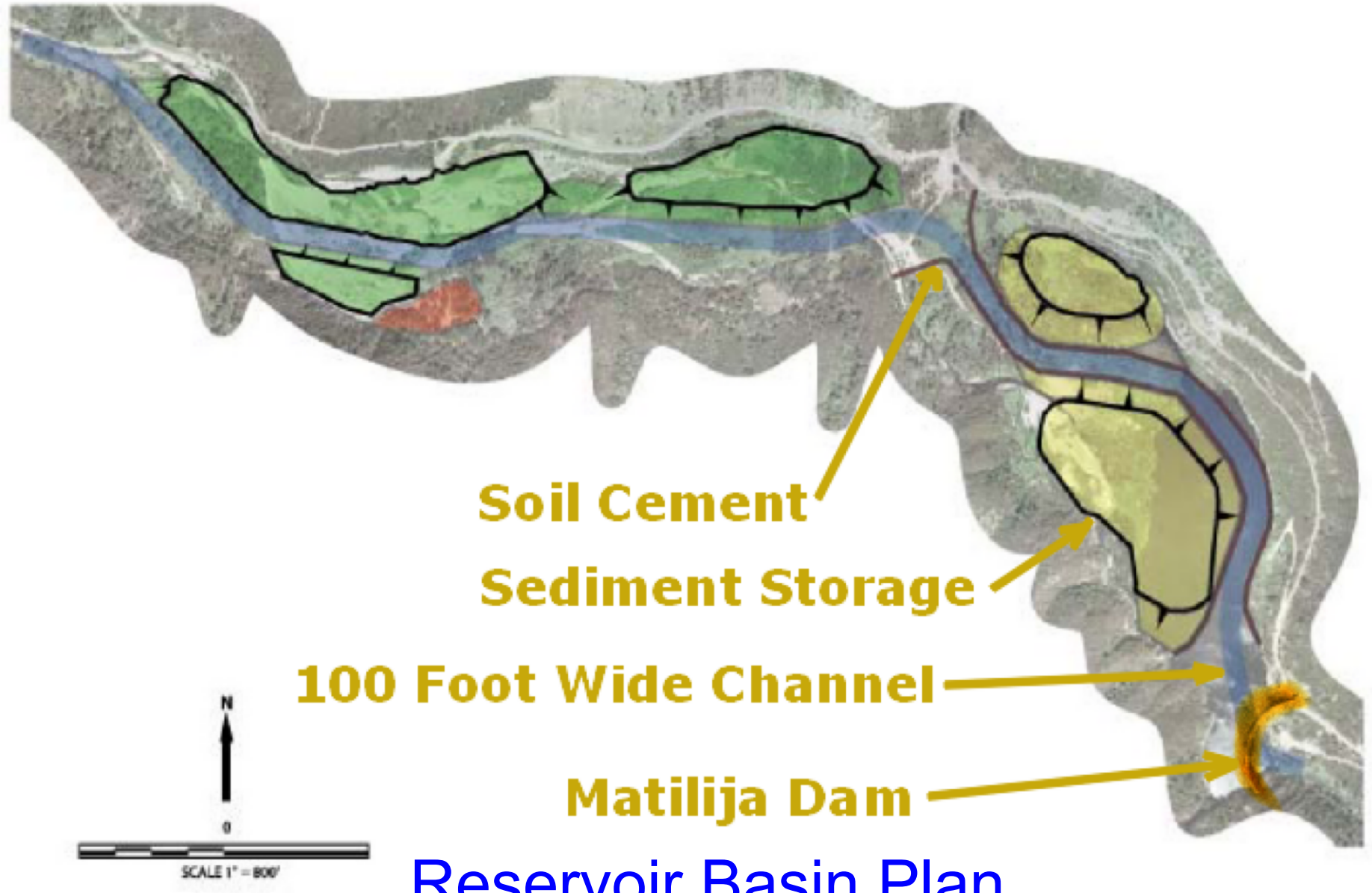
Graphic by Reclamation

Slurry Disposal Sites



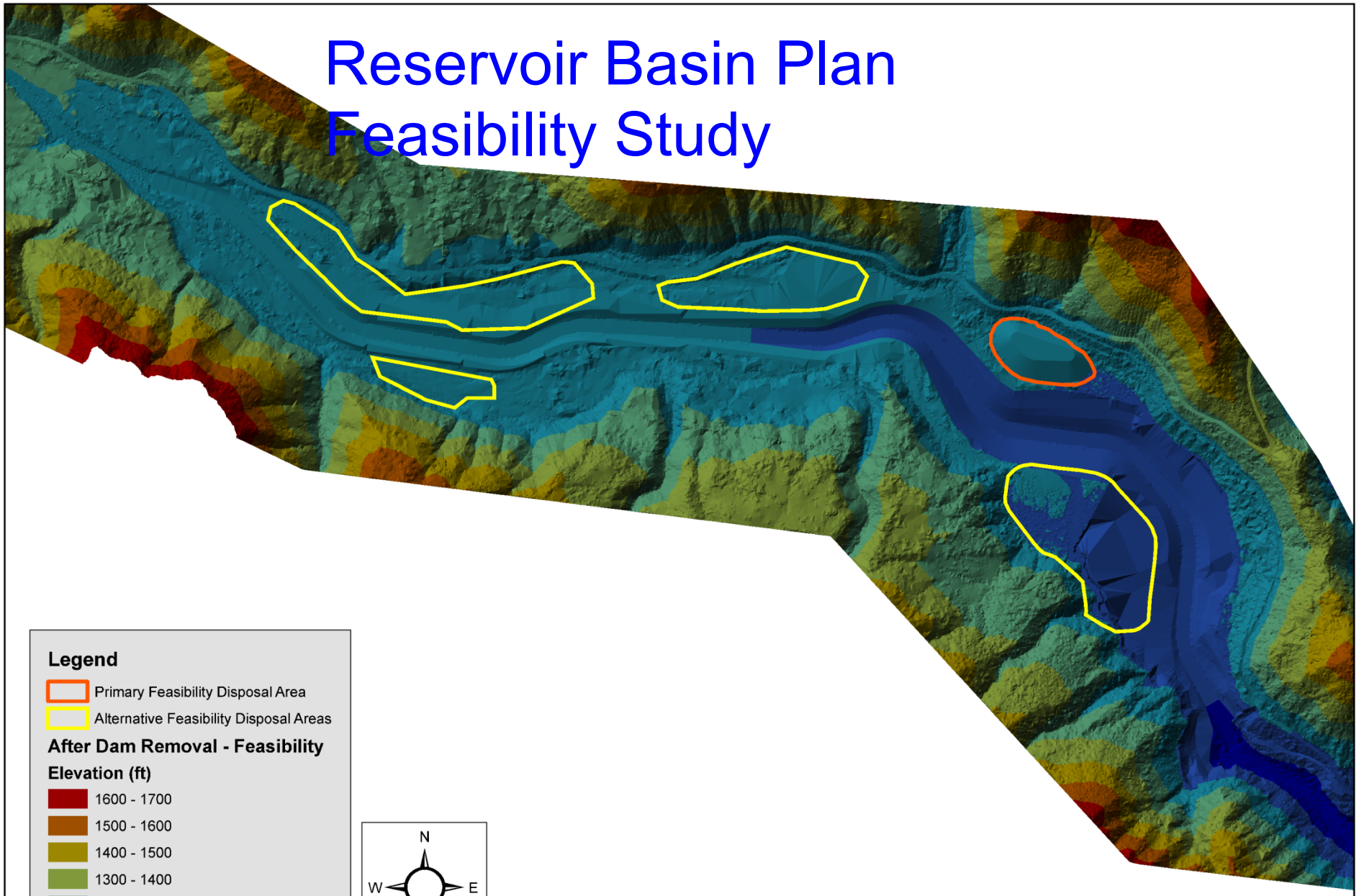
Slurry Line Alignment





Reservoir Basin Plan Feasibility Study

Reservoir Basin Plan Feasibility Study

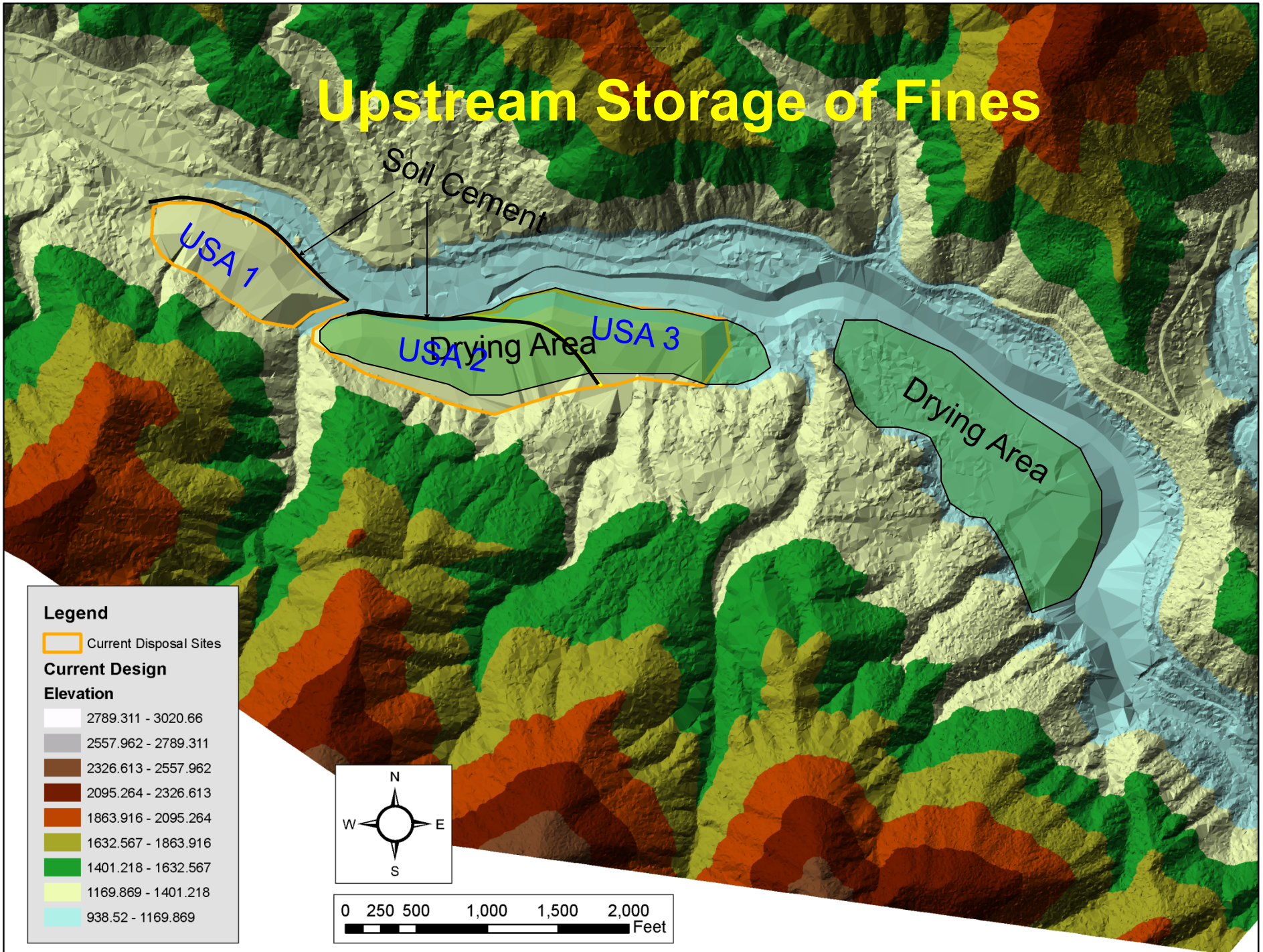


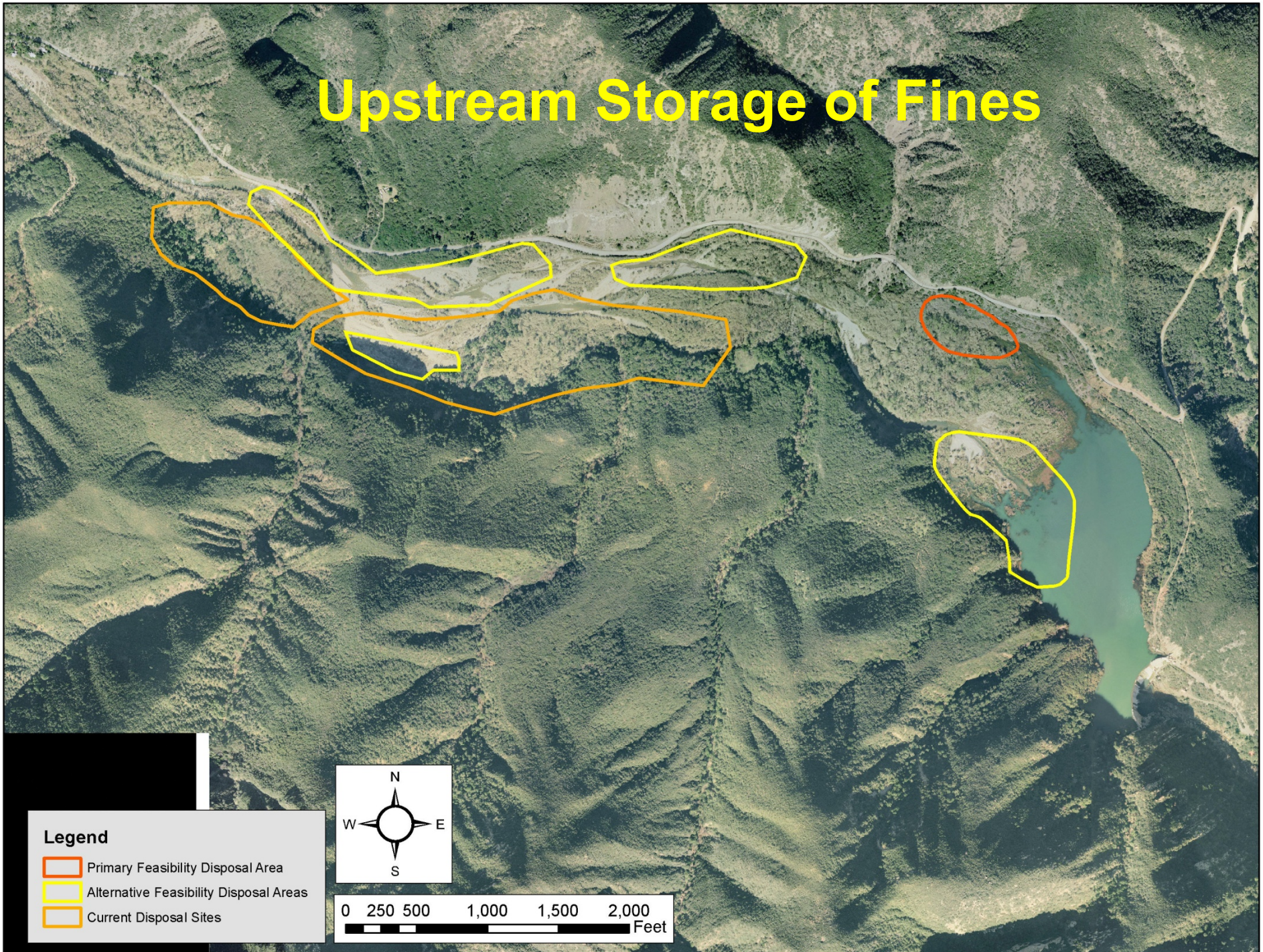
Concerns

- Cost
- Community Resistance
- Constructability

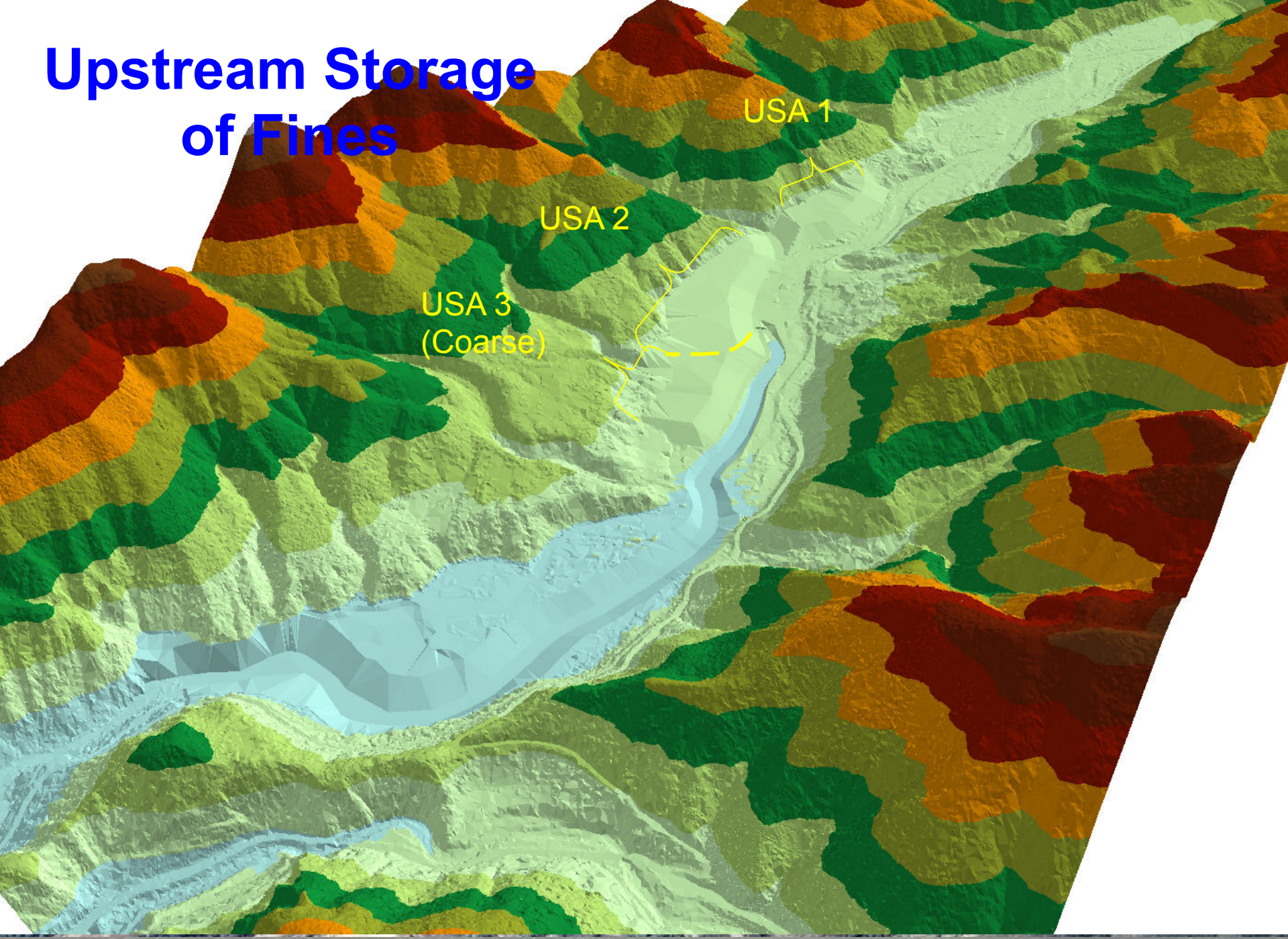
Upstream Storage of Fines

- Can a constructable alternative be developed to permanently sequester the fine sediments upstream of the dam so as to prevent impact to Lake Casitas? If so, what would be the environmental impacts and cost?


Upstream Storage of Fines
Soil Cement
USA 1
USA 2
USA 3
Drying Area
Drying Area
Legend
Current Disposal Sites
Current Design
Elevation
2789.311 - 3020.66
2557.962 - 2789.311
2326.613 - 2557.962
2095.264 - 2326.613
1863.916 - 2095.264
1632.567 - 1863.916
1401.218 - 1632.567
1169.869 - 1401.218
938.52 - 1169.869
N
W
E
S
0 250 500 1,000 1,500 2,000
Feet

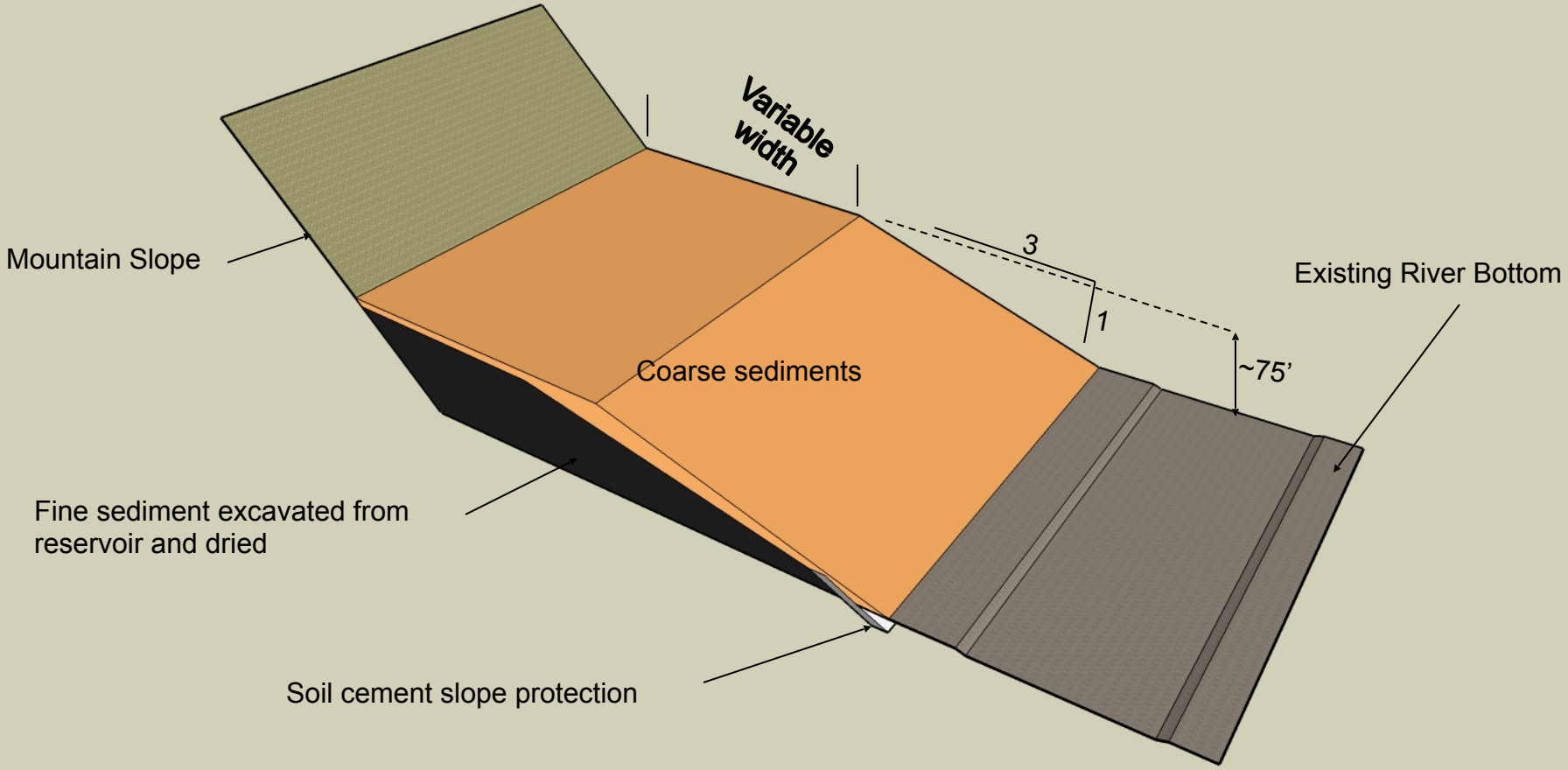

Upstream Storage of Fines
Legend
Primary Feasibility Disposal Area
Alternative Feasibility Disposal Areas
Current Disposal Sites
N
W
E
S
0 250 500 1,000 1,500 2,000
Feet

Upstream Storage of Fines

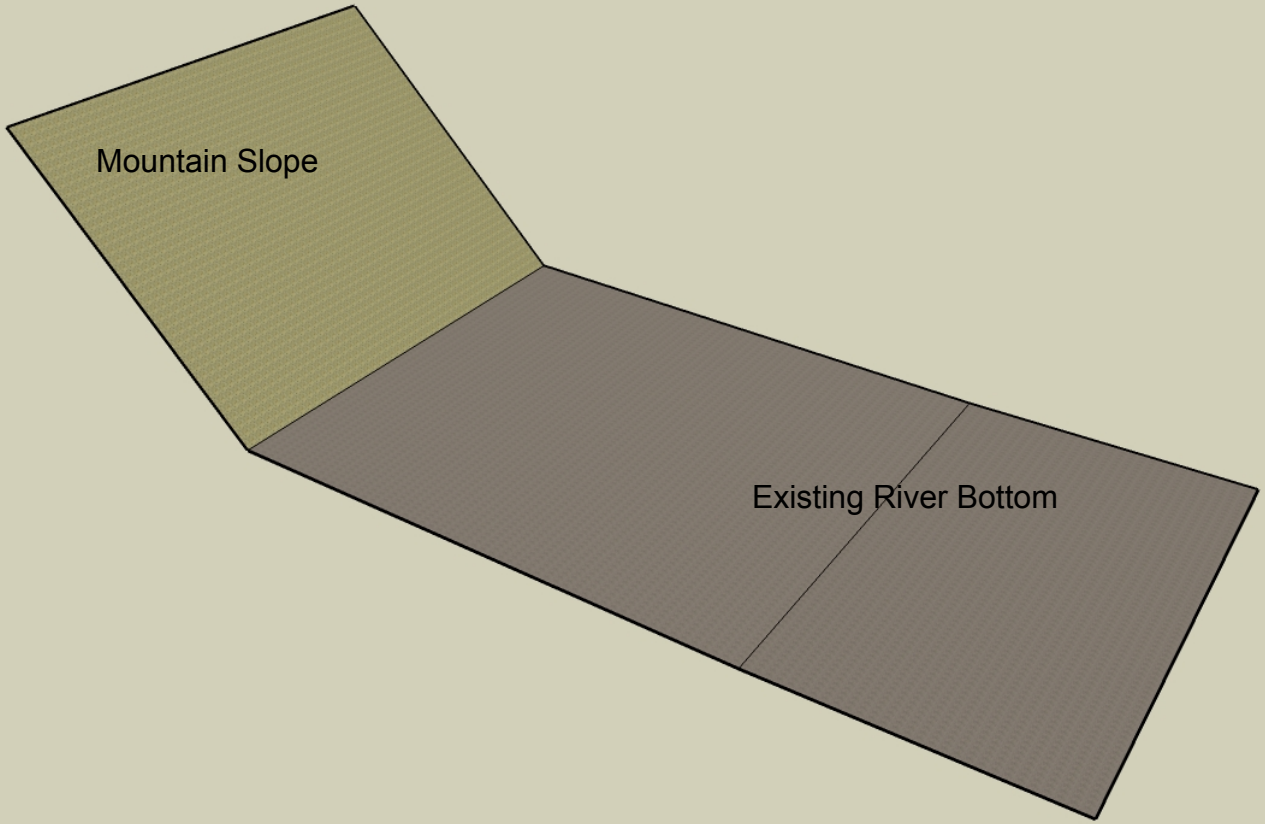


Upstream Stockpile Areas

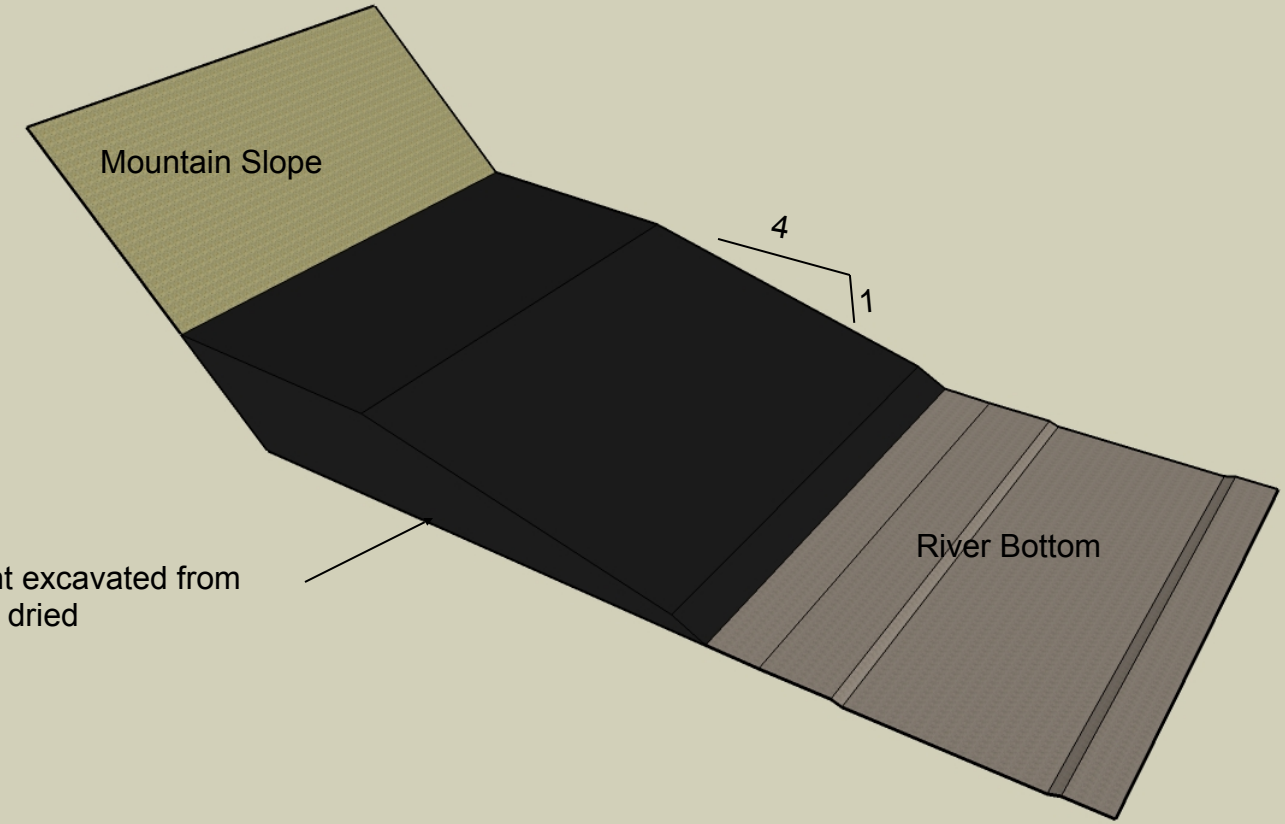
Typical Cross Section



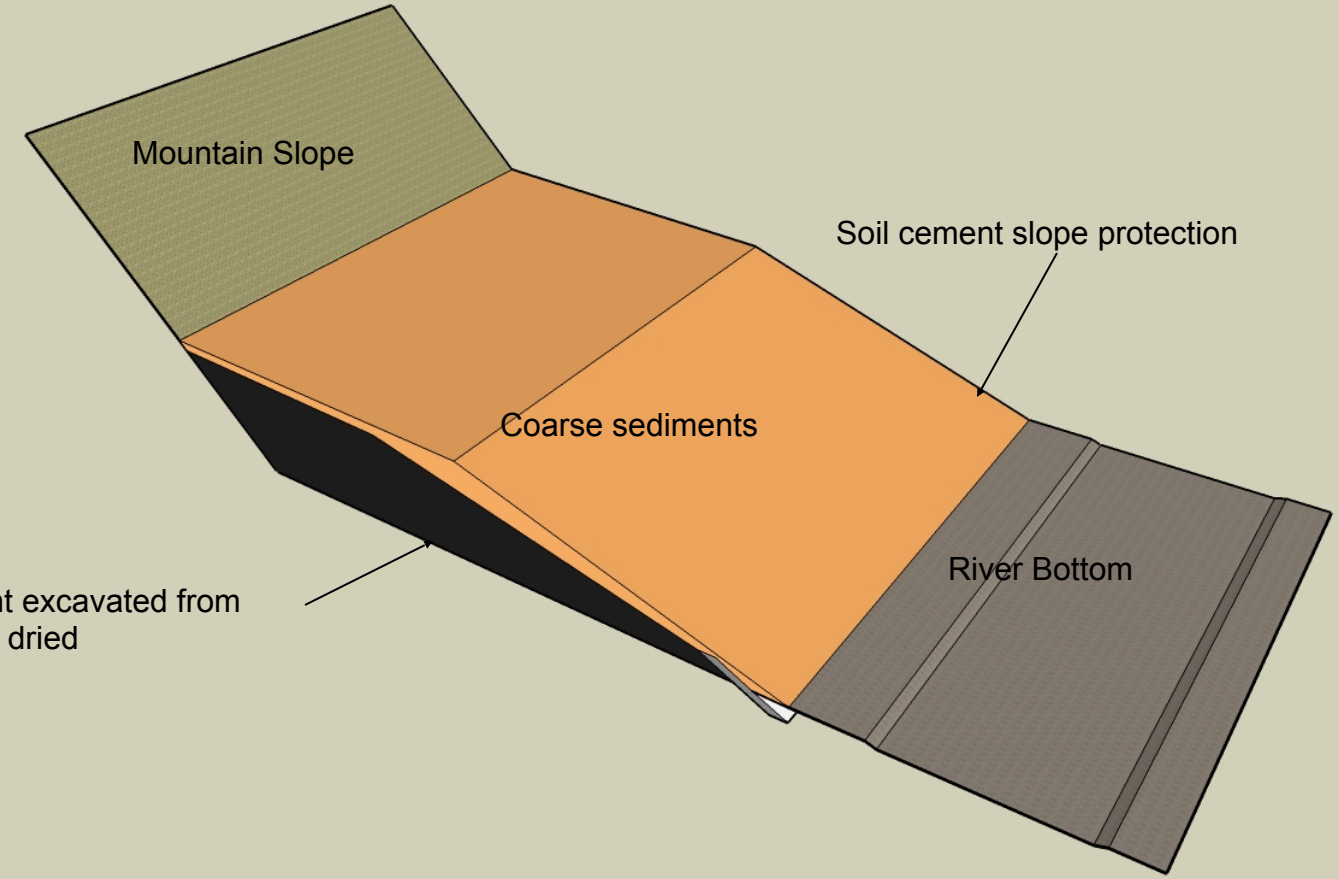
Typical Cross Section



Typical Cross Section



Typical Cross Section



Disposal Issues

- Biological Resources
- Land Use & Recreation
- Hydrology & Water Quality
- Aesthetics
- Noise
- Traffic
- Cost

Disposal Site Footprints*

HABITAT	MODA	BRDA (1&2)
Alluvial Scrub	29.5	26
Grassland	32.5	14
Channel	3	18
Mule Fat Scrub	0	11
Coastal Sage Scrub	1.5	0
Oak Woodland	8	2
Ruderal/Barren	0.5	0.5
Trees	163	82
Total Acres	75	71.5

*Slurry line & staging area footprints not shown

Feasibility Plan vs. Proposed Upstream Stockpiles

PRELIMINARY ESTIMATES:

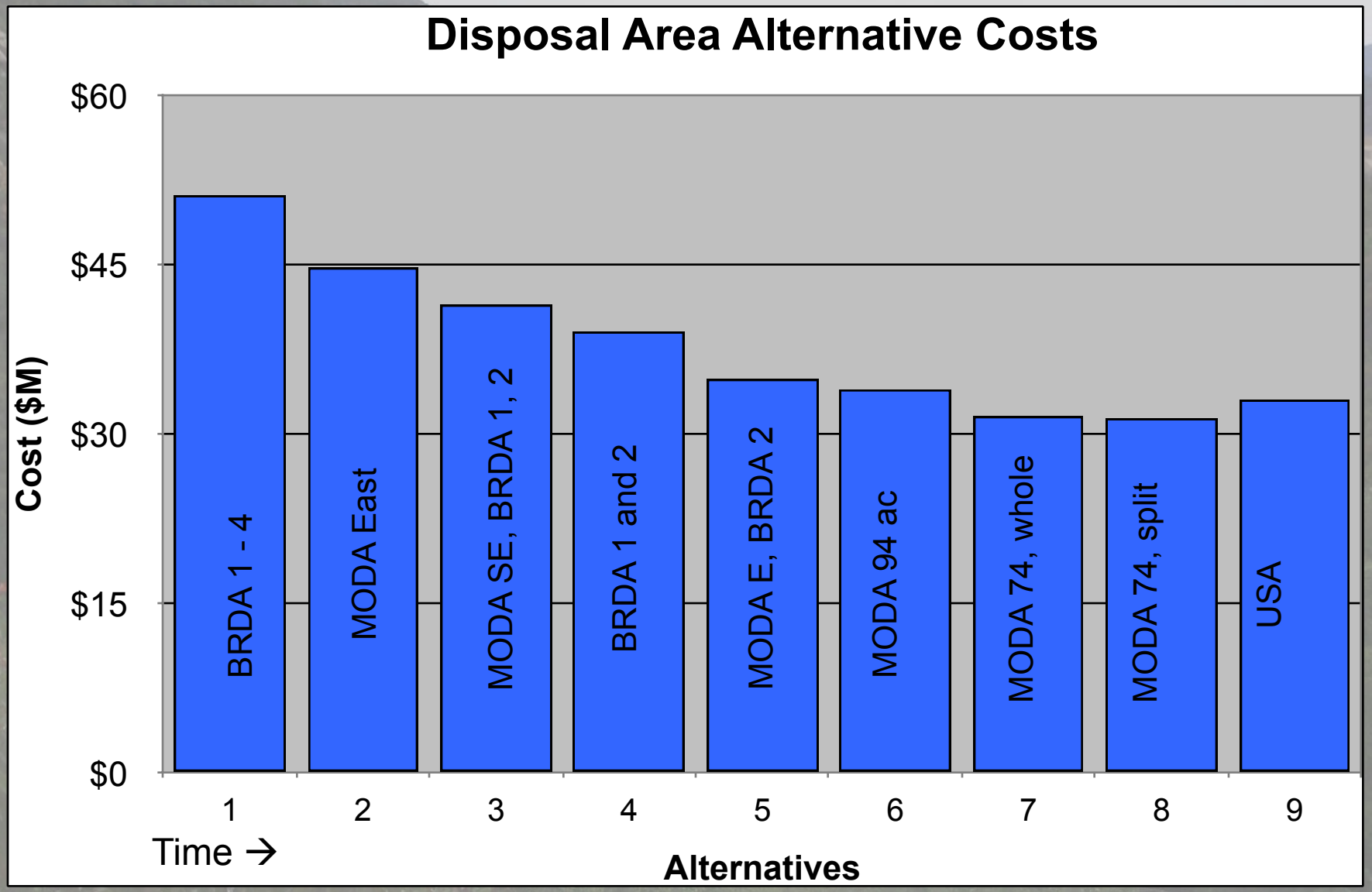
- Same linear distance: 1.8 river miles
- Footprint total difference of 37 acres:
  225 Feasibility v. 262 USA
- But avoids impacts to 75+ acres downstream
- Both alternatives avoid historic/cultural resources

Feasibility Plan vs. Proposed Upstream Stockpiles

Habitat Type	Feasibility	USA	Net Change
Alluvial Scrub	2.5	2.5	0
Freshwater Marsh	12.5	12.5	0
Channel	25	25	0
Lake/Dam Pool	28.5	28.5	0
Mixed Riparian Tributaries	2	4.5	+2.5
Giant Reed/Willow Riparian	84.5	84.5	0
Chaparral	56	73	+17
Coastal Sage Scrub	7.5	7.5	0
Oak Woodland	1	3	+2
Oak Woodland/Chaparral	1.5	11	+9.5
Oak Woodland/Giant Reed	2.5	8.5	+6
Total Acres	223.5	260.5	37

Disposal Alternatives Comparison

HABITAT	MODA	BRDA (1&2)	Net USA
Alluvial Scrub	29.5	26	0
Grassland	32.5	14	0
Coastal Sage Scrub	1.5	0	0
Freshwater Marsh	0	0	0
Lake/Dam Pool	0	0	0
Channel	3	18	0
Mule Fat Scrub	0	11	0
Mixed Riparian Tribs	0	0	2.5
Giant Reed/Willow	0	0	0
Chaparral	0	0	17
Oak Woodland Types	8	2	17.5
Ruderal/Barren	0.5	0.5	0
Total Acres	75	71.5	37


Disposal Area Alternative Costs
$60
$45
$30
$15
$0
Cost ($M)
BRDA 1 - 4
MODA East
MODA SE, BRDA 1, 2
BRDA 1 and 2
MODA E, BRDA 2
MODA 94 ac
MODA 74, whole
MODA 74, split
USA
1
2
3
4
5
6
7
8
9
Time →
Alternatives

Advantages of Upstream Storage

- Eliminates Impacts To Communities Adjacent To Downstream Disposal Sites
- Cheaper Than BRDA
- Eliminates Slurry Line Construction Impacts
- Eliminates Water Needed for Slurry Activity
- Decreases Overall Project Footprint
- Decreases Construction Risk
- Decreases Environmental Impacts
- Improves Water Quality
- Decreases Real Estate Issues

Summary