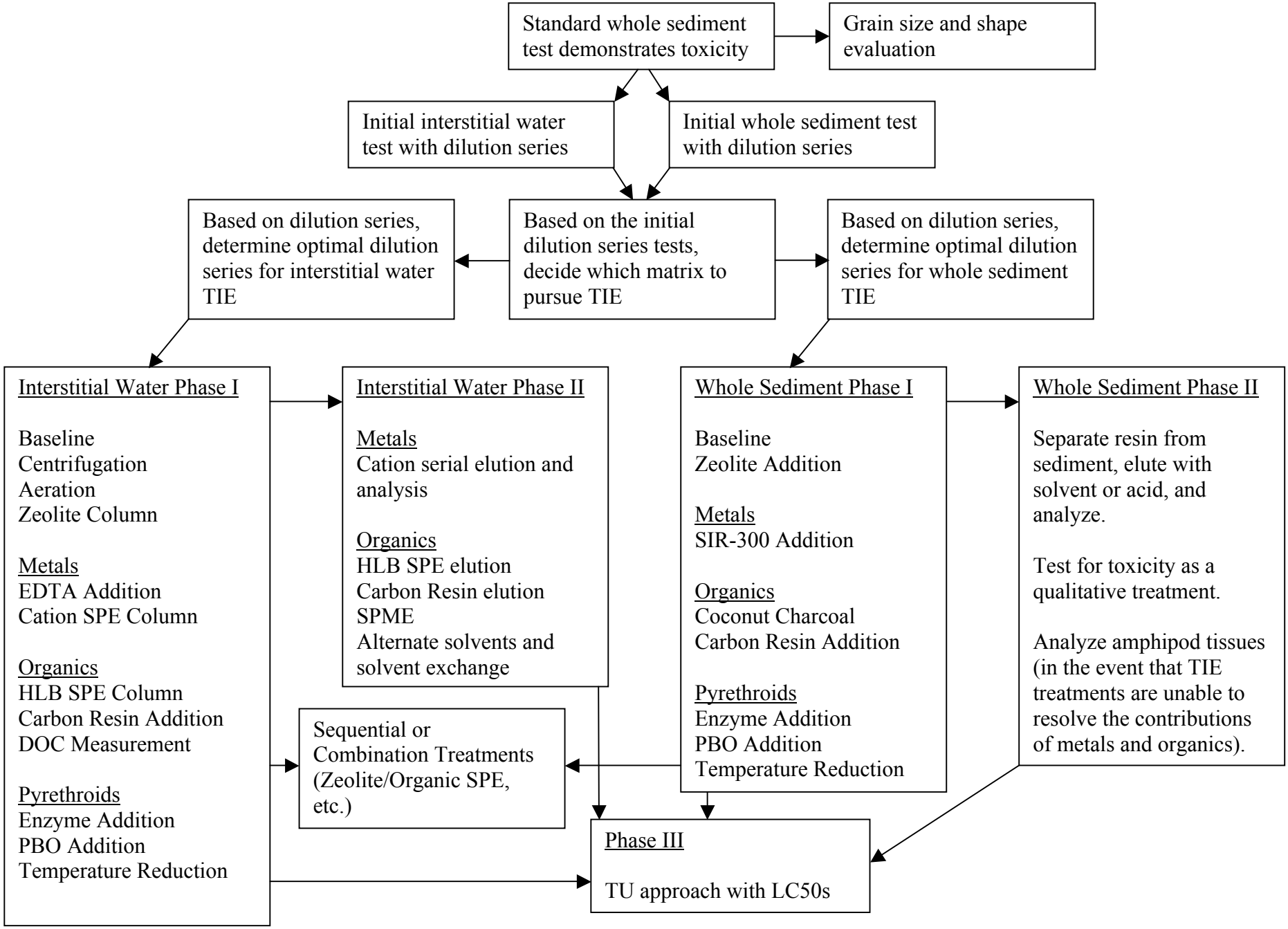
Standard whole sediment test demonstrates toxicity
Grain size and shape evaluation
Initial interstitial water test with dilution series
Initial whole sediment test with dilution series
Based on dilution series, determine optimal dilution series for interstitial water TIE
Based on the initial dilution series tests, decide which matrix to pursue TIE
Based on dilution series, determine optimal dilution series for whole sediment TIE
Interstitial Water Phase I
Baseline
Centrifugation
Aeration
Zeolite Column
Metals
EDTA Addition
Cation SPE Column
Organics
HLB SPE Column
Carbon Resin Addition
DOC Measurement
Pyrethroids
Enzyme Addition
PBO Addition
Temperature Reduction
Interstitial Water Phase II
Metals
Cation serial elution and analysis
Organics
HLB SPE elution
Carbon Resin elution
SPME
Alternate solvents and solvent exchange
Whole Sediment Phase I
Baseline
Zeolite Addition
Metals
SIR-300 Addition
Organics
Coconut Charcoal
Carbon Resin Addition
Pyrethroids
Enzyme Addition
PBO Addition
Temperature Reduction
Whole Sediment Phase II
Separate resin from sediment, elute with solvent or acid, and analyze.
Test for toxicity as a qualitative treatment.
Analyze amphipod tissues (in the event that TIE treatments are unable to resolve the contributions of metals and organics).
Sequential or Combination Treatments (Zeolite/Organic SPE, etc.)
Phase III
TU approach with LC50s