



Principles of Turbidity Controls

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Approaches to Limit Turbidity

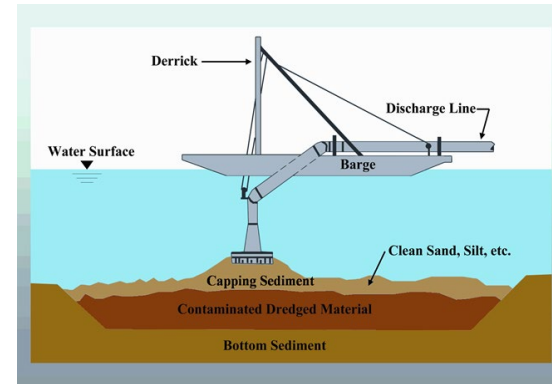
- Prevent fluidization of dredged material by minimizing entrainment of water
 - Preserves density and cohesive properties
 - Restricts stripping of the discharge and erosion of placed dredged material
 - Limits volume of turbid water released by settling and consolidation of placed dredged material

BMP -- Dredge sediment mechanically and place dredged material mechanically



Approaches to Limit Turbidity

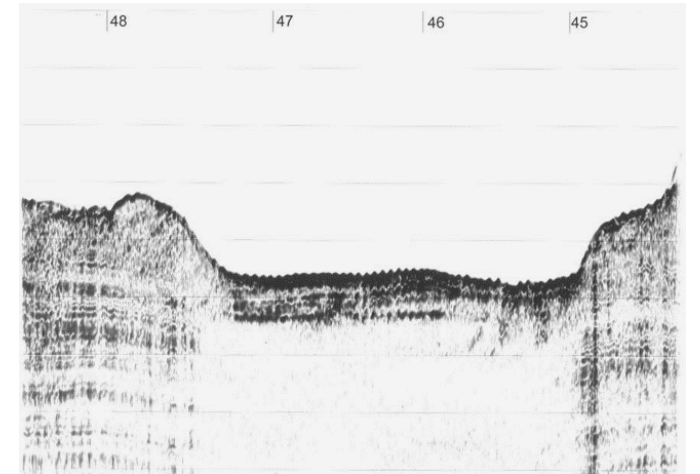
- Limit exposure of dredged material to water column
 - Reduces stripping of dredged material
 - Reduces entrainment volume of water and subsequent release of turbid water; entrains fluid mud instead of water when discharged at the bottom of the water column and within the fluid mud
 - Filters release of turbid water like a sludge blanket clarifier



BMP – Use of tremie tube, submerged discharge or diffuser

Approaches to Limit Turbidity

- Limit exposure to shear stress, turbulence or mixing energy
 - Reduces resuspension during collapse of the discharge on the sediment bed
 - Reduces erosion of placed dredged material



BMP – Deeper water, placement in a depression or confinement

Approaches to Limit Turbidity

- Reduce water column velocity
 - Restricts dispersion
 - Promotes sedimentation
 - Restricts transport
 - Restricts resuspension and erosion



BMP – Silt curtain

