

## I. Potential Dredging Scenarios:

1. **Baseline conditions (such as associated with storm event)**
2. Offshore stripping (predominately sand) – mechanical dredging
3. Offshore stripping of overburden sediments (predominately sand)– hopper dredging w/ overflow
4. Offshore stripping of overburden sediments (predominately sand) – hopper dredging w/ overflow limited to middle 1/3 of channel.
5. Offshore stripping of overburden sediments (predominately sand)– hopper dredging w/ no or minimal overflow
6. Hopper placements into deep water placement area (DWPA) – assumed maximum load
7. Offshore ‘rock chopping’ (limestone) – cutterhead (dredge location)
8. Offshore dredging (limestone) – cutterhead dredging (dredge location)
9. Offshore dredging (limestone) – cutterhead dredging (dredge location) with dredging 1/3 of channel first (gradient creation) then outer portions.
10. Offshore dredging (limestone) – (discharge location) cutterhead discharge to scows w/ overflow (w/o green valves)
11. Offshore dredging (limestone) – (discharge location), cutterhead discharge to scows w/ overflow (w/ green valves)
12. Offshore dredging (sand and limestone) – (discharge location), cutterhead discharge to scows w/ no to minimal overflow/release of scow supernatant
13. Offshore dredging (sand and limestone) – (discharge location), cutterhead direct discharge of scow **supernatant** into deep water (150’ to 200’ depths) via submerged pipeline, fate of placed sediments.
14. Offshore dredging (limestone) – (discharge location/DWPA), cutterhead direct discharge of **sediments** to deep water at an undetermined discharge depth. Model to determine effective discharge depth and buffer distance from 3<sup>rd</sup> reef tract (floating pipeline).
15. Offshore dredging (limestone) – (discharge location/DWPA), cutterhead direct discharge of **sediments** via submerged pipe.
16. Offshore scow releases (limestone and sand) – (discharge location/DWPA), release sediments into deep water area – assumed maximum load.
17. Offshore dredging (sand and limestone) – mechanical dredging (backhoe) of all material
18. Offshore cleanup/grade achievement (assumed fine limestone) – hopper dredging w/ no or minimal overflow
19. Offshore cleanup/ grade achievement (assumed fine limestone) – mechanical dredging
20. Inshore stripping (predominately silts) – mechanical dredging
21. Inshore stripping of overburden sediments (predominately silt)– hopper dredging w/ overflow
22. Inshore stripping (predominately silts)- hopper dredging w/ no or minimal overflow
23. Hopper placements of inshore sediments into deep water placement area (DWPA) – assumed maximum load
24. Inshore ‘rock chopping’ (limestone) – cutterhead
25. Inshore dredging (limestone) – cutterhead dredging
26. Inshore dredging (limestone) – mechanical dredging (backhoe)

27. Inshore dredging (limestone) – (discharge location), cutterhead discharge to scows w/ overflow (w/ green valves)
28. Inshore dredging (limestone) – (discharge location), cutterhead discharge to scows w/ no to minimal overflow - release of scow supernatant
29. Inshore dredging (silt and limestone) – (discharge location), cutterhead direct discharge of scow supernatant into deep water (150' to 200' depths) via submerged pipeline.
30. Inshore dredging (silt and limestone) – (discharge location), cutterhead direct discharge of sediments to deep water via floating pipe. Model to determine necessary discharge depth and buffer distance from 3rd reef tract.
31. Inshore cleanup/grade achievement (limestone) – mechanical dredging
32. Inshore cleanup/grade achievement (limestone) – hopper dredging w/ overflow (w/ green valves)
33. Inshore cleanup/grade achievement (limestone) – hopper dredging w/ overflow (w/o green valves)
34. Inshore cleanup/grade achievement (limestone) – hopper dredging w/o overflow.
35. Inshore cleanup/grade achievement (limestone) – hopper dredging w/ no to minimal overflow
36. Testing of Model Accuracy with run for Miami Harbor III (based on data availability)

**Note:**

- 1. Modeling for all placement scenarios at the ODMDS will be conducted separately. The ODMDS location is located further offshore and further from resources.**
- 2. It is unlikely that inshore work would be conducted by hopper dredging due to limited maneuverability. Therefore, these scenarios may be eliminated in the near future.**
- 3. Dredging equipment and discharge methods may vary significantly throughout the project based on equipment capabilities, limitations, availability, cost, etc.**

**Rock Chopping definition: Cutting blades applied to sediment and rocks without suction.**

**Green valves: Any time sediments entrained with air increases turbidity. Hopper and scows with green valves – discharge tubes 6 to 8 feet below water to eliminate any air within entrainment.**