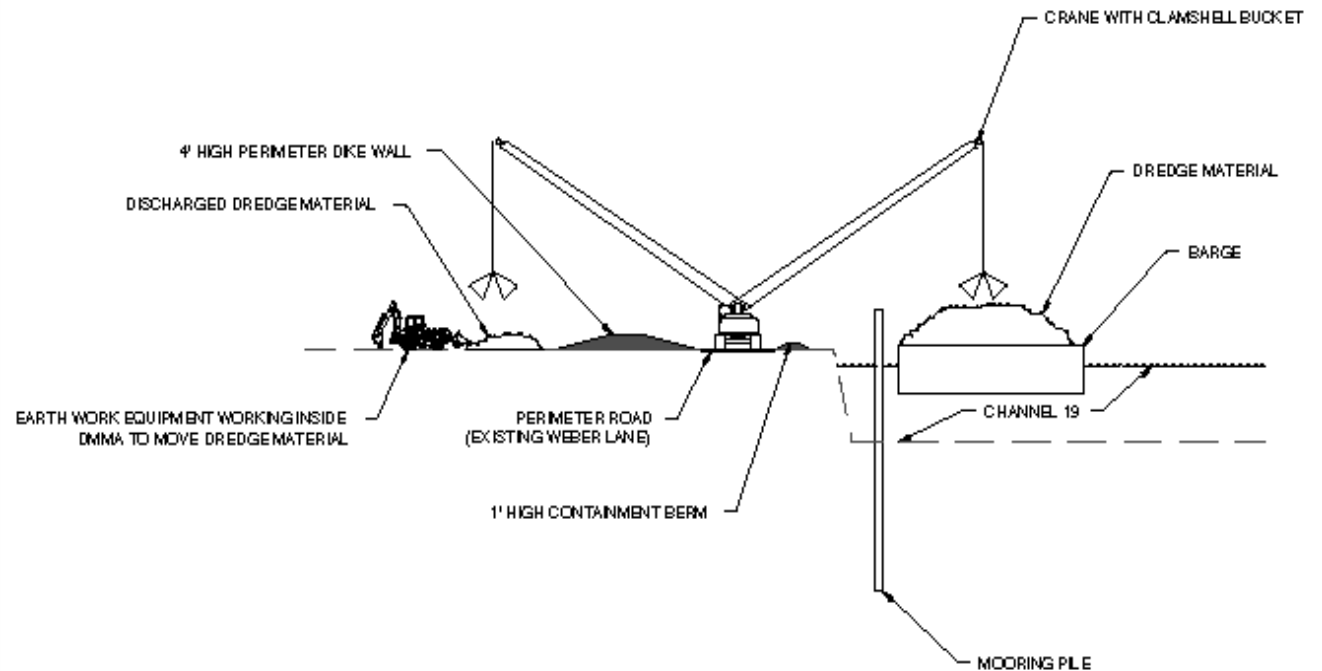


Port Richey Dredging and Dredge Material Management Permit File No. 51-0238686-002



Proposed Permit Modifications




2 March 2010





File No. 51-0238686-002 Proposed Modifications

Concerns with Permit as Written

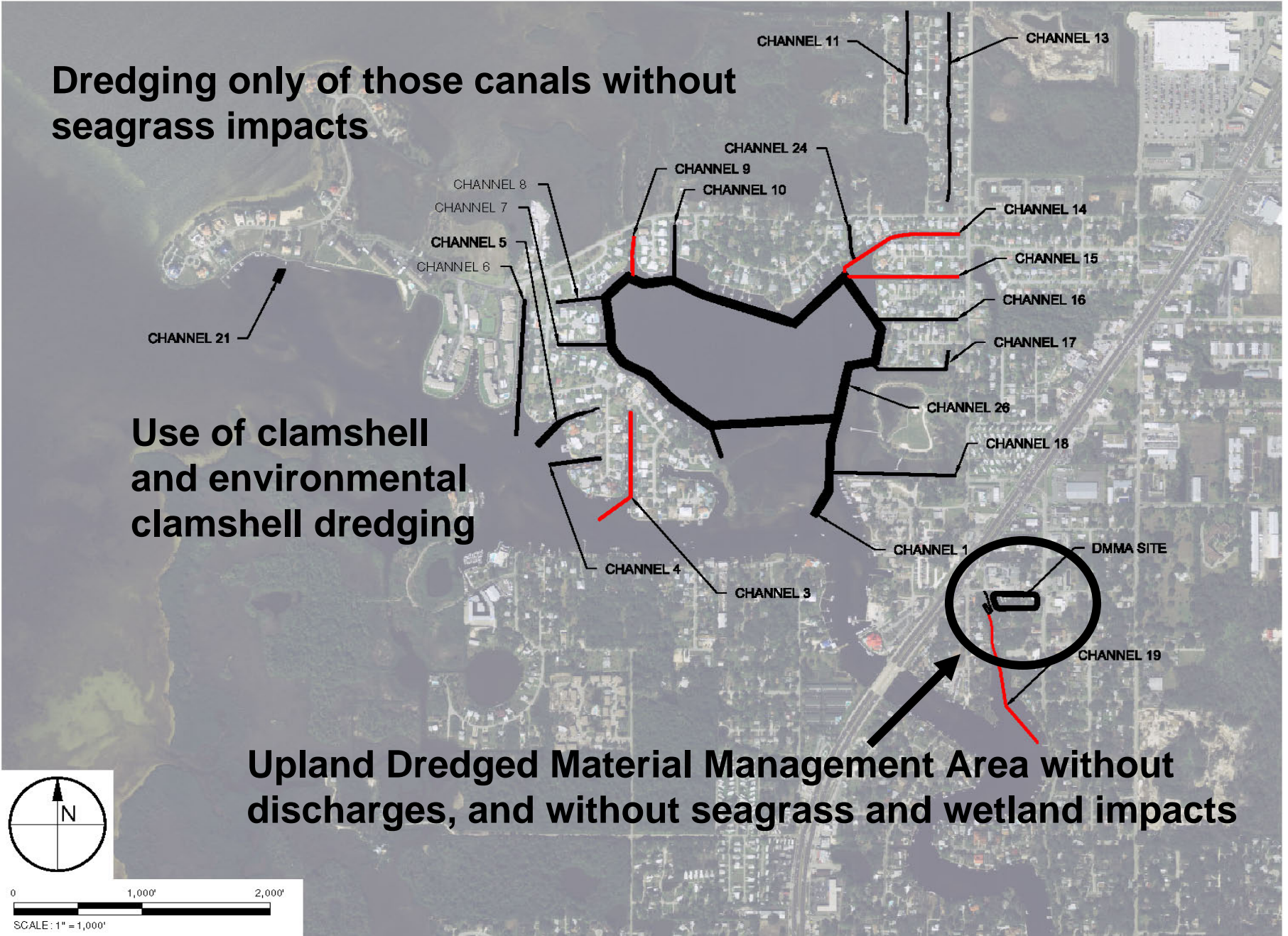
- 
 - **Clamshell dredging techniques offer a simpler and safer (less chance of failure) operation**
- 
 - **With mechanical dredging, material management impacts and risks are reduced or eliminated**
- 
 - **Simpler plan focusing on mechanical dredging and no-discharge material management provides greater avoidance and minimization now and for all future events**

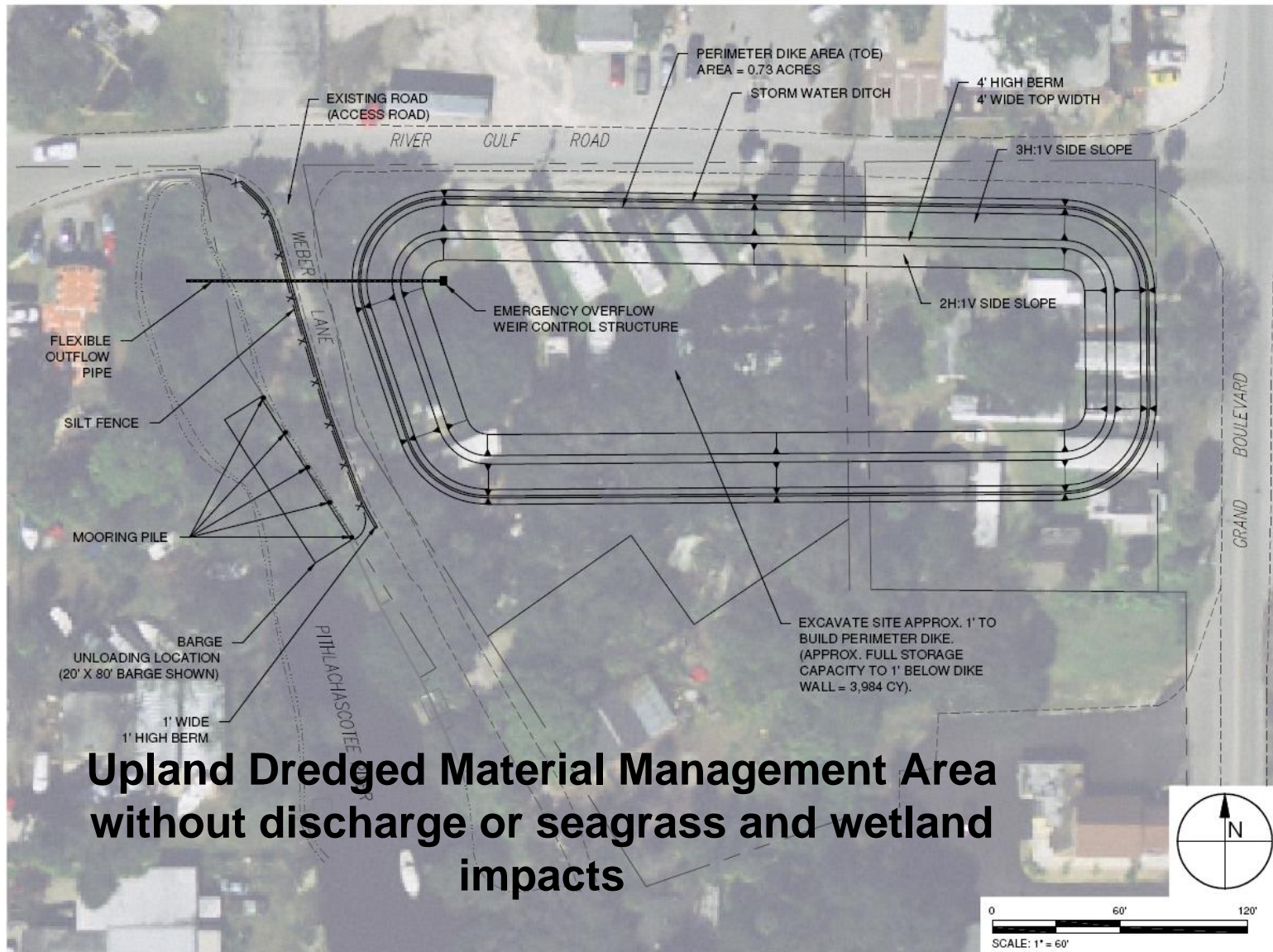


Dredging only of those canals without seagrass impacts

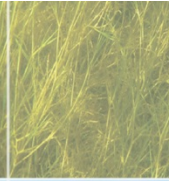
Use of clamshell and environmental clamshell dredging

Upland Dredged Material Management Area without discharges, and without seagrass and wetland impacts





Upland Dredged Material Management Area without discharge or seagrass and wetland impacts



Regular (Open)
Clamshell



Environmental
Clamshell



Tim Welp. 2001. ERDC Researchers Investigate Sediment Resuspension and Loading Characteristics Associated with Several Types of Clamshell Buckets.

Dredging Research, Vol. 4, No. 2



Engineering Controls Type of Dredge

- **Empirical Solids Releases**

Resuspension of fine-grained
mass of dredged sediment to water
column

- Mechanical dredges

- Open or watertight → 0.2 to 9%, typically 0.5 to 2%
- Environmental → 0.1 to 5%, typically 0.3 to 1%

- Hydraulic dredges → 0.01 to 4%, typically 0.2 to 0.8%

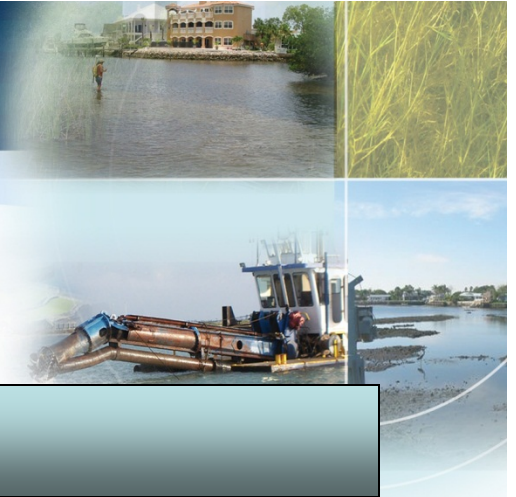
See
Dredging
Papers in
CD



Dredged Material Assessment and Management Seminar
15-17 September 2009, Detroit, MI

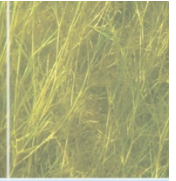
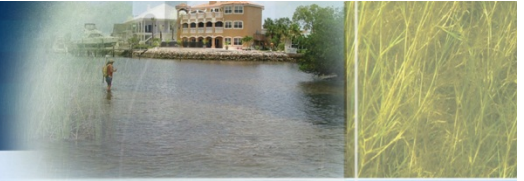


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Timothy.L.Welp@usace.army.mil; 601-634-2083.



Water Quality Concerns

- **Environmental clamshell equivalent to hydraulic dredge sediment disturbance**
 - **Open clamshell use already approved**
-
- **Use of clamshell dredging techniques results in no discharge from temporary material management area.**



Proposed Permit Modifications



- Use open clamshell dredging for sediments without exceedances
- Use environmental clamshell in areas with sediments of concern
- All sites - turbidity curtains and turbidity monitoring
 - If turbidity exceed 29 NTU above background, dredging will cease until compliance sampling site meets compliance conditions.
- Use upland site as temporary material management area
 - no discharge necessary with use of clamshell



AYLOR ENGINEERING, INC.



Thank You.

DISCUSSION?