

Now that the funding and determination letters are in place we can move on to the construction phase of the project.

1). Mobilization of the barge includes.

- a). Most the time the barge can be driven to the creek or bayou where the project is located.
- b). Find a localized temporary dock to tie up to at night like behind a land owners house.



- c). Locate an area where we can unload the trees and brush to either chip them up or burn them.

2). Desnaging and selective clearing operation.

- a). Cut and load trees and debris.



- b). On board depth recorder will locate sunken trees on the bottom that can't be seen.



- c). The lifting capacity of the loader is enough to handle extremely large trees. The largest one to date is a 36in diameter pine tree.



- d). Clearing trees from the banks of a creek or bayou are painless when using the hydraulic driven chainsaw with rotating grapple.



- e). Loading the hopper of the barge only takes minutes when dealing with average size trees (up to 18 inches) then it's time to head to the nearest staging area with approximately 40 cy of trees and debris.



- f). Once at the staging area it only takes less than 5 minutes to unload and place on the bank.



- 3). Land base chipping or burning of cleared material.
- a). After the material reaches the staging area it will need to be disposed of. Due to where we have been working local regulations required us to chip and haul off the debris. This is done very easy by using a small backhoe to gather the material and haul to the chipping machine.



- b). Our experience so far has shown that an 18" Vermeer chipper has been sufficient to handle about 95% of the material that comes out of these areas. Material larger than that can be hauled off in dump trucks or rollofs. The backhoe simply feeds it into the chipper.





When you have a situation where the water becomes too shallow for the barge to operate, you have two options.

1). Coffers Dams

- a). Hydro-Solutions Inc. out of Houston makes a plastic coffer dam that is acceptable with the Army Corp of Engineers. It simply fills with water creating a dam that will back up the water enough for the barge to operate.



2). Land base clearing operations which can be used under the same determination letter from the COE as the barge operation.

- a). This operation would require getting landowner right of ways to go down the top of the creek bank.
- b). The machine used is a long reach excavator that has a hydraulic chainsaw and grapple in place of a digging bucket.



- c). The COE requires that all stumps be left in the banks to prevent erosion. The grapple saw cuts the trees and leaves the stumps at about 6 in tall.



d). The long reach machine cuts the trees small enough and stacks them so a small backhoe can get them.



e). The backhoe gathers the trees and takes them down the right of way to where the chipper is staged.



f). We utilize the same 18 in Vermeer chipper as the barge operation.

