

# PUCKUM BRANCH



## Stream and Floodplain Enhancement Project



*Channelized portion of Puckum Branch*



*Installing coir fiber logs along stream bank*

Puckum Branch is a 2nd order stream which flows through the northern portion of Dorchester County into Marshy Hope Creek. The stream drains hundreds of acres of agricultural land and then descends into Chesapeake Forest property which is characterized by a very well established forested floodplain. Puckum Branch (and many of the headwater tributaries) was ditched and channelized in the early to mid 1900's. The channelization essentially widened and deepened the stream and reduced the frequency of overbank flooding. This resulted in diminishing the function of the floodplain wetlands and therefore reduced opportunities for improving water quality. In addition, the instream habitat for fish and other aquatic organisms was diminished.

In order to increase out-of-bank events and decrease the capacity of the existing channel, coir fibre logs (shredded coconut husks wrapped in twine) were installed along the streambanks (to reduce channel capacity) and installed as

instream cross weirs (to increase surface water elevation). In addition, tree trunks were strategically placed in the stream channel to encourage scour and deposition and improve stream bottom habitat.

The purpose of the project was to:

- ◆ Restore the frequency of out of bank flows;
- ◆ Restore hydrology to adjacent floodplain wetlands; and
- ◆ Restore instream habitat conditions.

Chemical and biological analysis of the stream was performed prior to enhancement activities. Post enhancement monitoring is being conducted to measure changes in water quality, presence of aquatic organisms (fish and benthos) and changes in instream physical condition. Early monitoring has shown physical changes in the streambed (pools and depositional areas) but have not yet shown any changes in chemical or biological conditions.



*Installing coir fiber logs cross weirs*



*Completed installation showing weir and streambank fiber logs*