

# CONNECTICUT CURRENTS

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## **MANAGING INSHORE OYSTER BEDS PRESENTS SPECIAL PROBLEMS**

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Much research has been done in recent years concerning the management of commercial offshore oyster beds, primarily by the Milford shellfish laboratory of the National Marine Fisheries Service (formerly the Bureau of Commercial Fisheries). This research has resulted in some very real changes: modified mechanical oyster dredges, new predator controls, and improved seed oyster bed management procedures, for example. These improvements and others have been enthusiastically accepted and developed by oyster growers.

But the management of inshore oyster beds – those in salt-water creeks and tidal rivers – has not been studied extensively since 1970. Little information is made available concerning the management or equipment necessary in working with tidal oyster beds or the preparation of tidal seed oyster beds for spatfalls.

The management of inshore oyster beds, though, requires different equipment and procedures than those used offshore. Inshore conditions differ significantly, primarily because of the often-detrimental effects of adjacent uplands. These include soil and sand runoffs, especially following storms, and phosphate – and nitrate-enhanced effluents from polluted ground water and sewer outfalls.

Since phosphates and nitrates are plant nutrients, inshore beds are subject to a high rate of eutrophication from the decaying organic matter that thrives in the rich environment. The goal of management and equipment is to keep inshore oyster beds clear of this organic matter, and to prepare seed beds by removing accumulated silt and shells from runoff.

Customized equipment and intense cultivation schedules must also cope with the high current velocities and relatively large tidal fluctuations common at tidal creek and riverbeds.

In addition to the added cultivation and transplant schedules, equipment for use in inshore beds must often be suitable for use in outboard-powered, shallow draft boats. Furthermore, for maximum efficiency, cultivation equipment should be compatible with small boat harvest operations.

The Sea Grant Marine Advisory Program is experimenting with three drag-type cultivators similar to those used with the Pacific oyster off the coast of Washington state. There, English pasture harrows are used to break apart clusters of oysters and prepare adult oysters for harvest by loosening them from the bottom and removing fouling organisms. The English pasture harrow has also been successful in preparing shell bases for spat falls.

The three types of cultivators are modifications of two cultivation devices currently employed in Connecticut, the open oyster dredge and starfish mop. These new cultivation devices can help to prepare and cultivate tidal oyster beds in creeks and rivers. They will be discussed in future newsletters; for those interested in the meantime, experimental plans and drawings are available on request.