THE WETLANDS:

Earth's Precious Reservoir of Life

How much do they weigh on Equities balance of economics v. ecology

David Favre

Virginia has 5,432 miles of shoreline, which includes 196 miles of sand, 472 miles of residential or industrial development, 2,045 miles of dry shore, and 2,719 miles of marsh. While almost everyone is familiar with the sand beaches and dry shores, few understand the role that marshes play in the coastal environment. The purpose of this article is to give the reader a broad understanding of what the marsh and wetlands are, their value, and to introduce some of the legal problems involved with protecting the marsh.

In both conversion of sunlight to plant food and support of a vast variety of animal life, the marshland is one of the most productive environments found in nature. It also forms buffer zones between saltwater tides, freshwater, and dry land. Although there is some dispute as to what legally and biologically constitutes a wetland, it is generally agreed to be that land found between the average high and low water marks of any tidal action. While this is certainly the heart of the marsh, there are also lands above and below this elevation which are an integral part of the ecology.

The marsh is normally a large flat area which receives a continuous daily wash of nutrients and sediment from the sea (which acts to suppress "algae bloom," such as red tides) and the fresh water streams. In this bed of nutrients, many plants unique to marshland provide food, shelter, and nesting grounds for thousands of birds and wild animals. It has been estimated by the Virginia Institute of Marine Science that the production of the Virginia Marsh varies from three to ten tons per acre per year (wheat yields 1.5 tons and the best hay lands 4 tons). The largest value of these plants is after they have been broken down into smaller, edible bits by the yeast and bacteria of the marsh. This forms a vast food base for insects, fish, shrimp, crab, oysters, clams, etc., which in turn form a food base for larger creatures, including man.

Value of the Wetlands

For many people, the value of the wetlands lies in their potential for a housing development or industrial site. In opposition to this school of thought there have been several attempts to give a monetary value to the marsh, but knowledge of the interaction of the living web is so primative that estimates have varied from $78 to $525 per acre per year.

Some of the products that come directly from the marsh include oysters, clams, shrimp, a variety of waterfowl and the pelts of mink, otter, muskrat, and raccoon. In Virginia alone, several million dollars were spent last year by people participating in saltwater fishing and the hunting of waterfowl. It has been estimated that 80% of the saltwater fish, caught either commercially or by sportsmen, spend some critical part of their lives in the marsh environment, and, of course, without the marsh, the waterfowl could not exist.

Over and above the actual dollar return of these lands, however, we must realize that it is impossible to give a monetary value for much of the marsh. It is difficult, for example, to put a price on peace and quiet, marred only now and then by the call of exotic birds. Who can say what it is worth to watch a white egret, not in a zoo, but stalking through its native habitat? Also, how does one put a dollar value on the role the marsh plays in keeping the salt water away from high ground or its ability to absorb flood waters?

Legal Problems

Perhaps the largest problem in protecting Virginia's wetlands lies in determining who owns them. In many other states this poses no problem as the state has consistently claimed control of waterways up to the high tide mark. This is also true of the Federal government which claims regulatory powers over navigable waterways up to the high tide mark. But in the beginning of Virginia's history there were a number of land grants from both the London Company and the Crown which made vague reference to the shore boundary and, in 1819, the Virginia Legislature passed a statute making the boundary of privately owned lands at the average low tide mark. In 1904, the Virginia courts declared that riparian land owners had several "rights," including: A) a "right of way" from their property to navigable water, B) the right to build private piers or wharfs subject to state regulation, C) the right to claim, in fee, land formed by accretion or alluvium, and D) to make reasonable use of water flowing past their land.

All of this amounted in reality to no limitation of a property owners use of his land. Recently the state has required that before a person can commercially develop property in tidal areas, he must acquire a permit from the Marine Resources Committee. However, this committee is not empowered to save the wetlands, only to control pollution of the waters by that which is built on the destroyed wetlands.

If it is conceded that Virginia land owners have a property interest in the wetlands (it could be argued

Perhaps the largest problem in protecting Virginia's Wetlands lies in determining what constitutes a Wetland.

that their interest is that of a mere licensee, revocable at will by the legislature), then how can the state control the private use of them? Inherent in the concept of the State is that of Police power, which would include the power to regulate the use of land for the good of the public. This has been practiced for many years by the use of zoning, but even where land is zoned the owner is allowed some type of development upon it. However, the wetlands can tolerate no commercial development. They must remain as nature built them. Thus, if a certain areas has been determined to be necessary for the ecological balance of the coastal estuary, the state will have to refuse the request of any owner therein for any type of commercial or private development; even a simple road may seriously harm a marsh area.

Now the question arises: does this constitute the taking of land by the state without just compensation? Since this is a strong possibility and most will admit that the brunt of burden of a wetlands statute will be born by the individual land owner, it would only seem fair that the state be capable of giving financial relief to the riparian owner. To accomplish this there are several possibilities: A) the agency charged with protection of the wetlands could also have the power to eminent domain, B) the state agency could be allowed to purchase easements of wetlands where purchase of the land is prohibitive, and C) there could be a reduction of property tax for those owners willing to retain their land in its natural state.

Conclusion

At this time, Virginia is the only state on the eastern seaboard without any type of protection for the wetlands. The Corps of Engineers is currently doing a much better job of protecting our wetlands than we are. The necessity exists. May the next session of the Legislature see a statute passed which will allow us to do the job properly.

There were three basic sources for this article, all of which I would highly recommend to anyone interested in the subject: CHESAPEAKE BAY IN LEGAL PERSPECTIVE, by Professor Garrett Power of the University of Maryland Law School (Dept. of the Interior, March, 1970), LIFE AND DEATH OF THE SALT MARSH, by John and Mildred Teal, Ballantine paperback, and finally, COASTAL WETLANDS OF VIRGINIA, a report put out by the Virginia Institute of Marine Science, (December, 1969).