EXISTING AND POTENTIAL CONFLICTS OVER LAND AND WATER USES IN THE NEW HAMPSHIRE COASTAL ZONE

Prepared by
Strafford Rockingham Regional Council

This report was financed in part by the Coastal Zone Management Act of 1972, administered by the Office of Coastal Zone Management, National Oceanic and Atmospheric Administration.

December 30, 1975
Amended September 30, 1976

Conflicts between land and water uses in the New Hampshire coastal zone take many forms. A matrix, listing the major land and water use categories was prepared to illustrate major and minor conflicts. Note that almost any land use conflicts with another for the same piece of geography. This kind of conflict is assumed, not charted, and discussed no further. Unless the kind of land or water necessary is in such short supply that alternative sites are not available a use is only deemed in conflict with another when its side effects are, or potentially are, great enough to cause problems.

Conflicts are categorized into four divisions.

1) Those which are local in nature and do not have a direct and significant impact in coastal waters (blank on matrix).

2) Those where minor conflicts, larger than local in nature, or having a direct and significant impact on coastal waters, are possible, but where suitable controls can prevent or reduce such conflicts (-).

3) Those where major conflicts are possible, but where suitable controls can prevent or reduce such conflicts (M-).

4) Those where major conflicts are inevitable (M).

As might be expected, the major conflicts are between industrial and environmental concerns. As might not be expected, the major conflicts are few in number given the range of potential uses of New Hampshire's coastal area.

Territorial Conflicts

Many conflicts are merely territorial. If you build a house on a saltmarsh you don't have a saltmarsh any more. These are obvious and are not discussed at length except to note that shorefront property is in great demand for the whole range of uses.

Almost all of the barrier dunes and saltmarshes, as well as the rocky shores are in demand for residential uses, commercial uses, and recreational uses. These resources also have a significant constituency which wants them preserved in their natural state for important ecological reasons. Since the amount of coastal land owned by any one individual is small (tens of acres at most), most conflicts, although major in principal, involve few people and little land and so have excited little public controversy.

Conflicts Resolved

Many areas of coastal water are used by one use to the exclusion of another, a result of the previous resolution of a conflict. Most such resource allocations

	Commercial Fishing	Sport Fishing	Shipping	Recreation	Research & Education	Waste Disposal	Deepwater Port	Offshore Mining	Aquaculture	Residential	Commercial	Industrial	Extractive	Waste Disposal	Recreation	Transportation	Communication & Utilities	Agriculture	Woodlands	Wetlands	Institutional	Public Water Supply	Wildlife & Forestry Manage.
Commercial Fishing		-	-	-		M	M	M	-			M					M	-					
Sport Fishing	-		-			M	M	M	-			M					M						
Shipping	-	-		-			-	-	-														
Recreation	-		-			M	M	M				-											
Research & Education	-					M	M	M				-											
Waste Disposal																							
Deepwater Port																							
Offshore Mining																							
Aquaculture	-	-	-	-		M	M	M				-	-										
Residential												M		-		-	-				-		
Commercial												-	-	-									
Industrial																							
Extractive																							
Waste Disposal																							
Recreation						M	-	-				M	M	M		-	-							
Transportation																							
Communication & Utilities																							
Agriculture												-	-	-									
Woodland														-			-						
Wetland						M	-	-		-	-	-	-	M		-	-				-		
Institutional												-	-	-		-	-						
Public Water Supply Land										-	-	M	M	M	-	-	-	-			-		
Wildlife & Forest Manage.												-	-	-	-	-	-				-		

Read the matrix across, i.e. Recreation, is affected adversely by Offshore Mining, but not affected by Aquaculture.

MATRIX OF LAND AND WATER USES

Conflicts involving uses of greatern than local significance, or having a direct and significant impact on coastal waters.

Blank = No such conflict
- = Minor conflicts in limited area
M- = Major conflict possible, could be limited in extent by regulatory action
M = Major conflict probable

have taken place gradually, over a long period of time, and many took place at a time when the needs of the military, industry and/or commerce took unquestioned precedence over recreation, fishing, or environmental interests. Future conflicts will occur if attempts are made to restore these areas to their pre-development status so as to permit recreation, fishing, or unfettered use by the natural biota. The only major attempts in this direction to date have been the orders to municipalities, industries and individuals to abate pollution caused by waste water discharges.

The conflicts that attended the initial orders to abate centered around economics, and have been resolved in favor of pollution abatement.

Economic Conflicts

Some conflicts are easily readable in economic terms and can be resolved with proper economic adjustments. The recent conflicts over expansion of the Port Authority's state pier in Portsmouth is an example of this. No one objected to the state pier, per se. No environmental objections were voiced. The conflicts were economic in nature. City of Portsmouth objected to supplying municipal services to the state pier without receiving any tax revenue from it. Some Portsmouth officials suspected that a city-owned urban renewal project in close proximity was less saleable since the major commodity being handled at the state pier at the time was junked cars. The conflict was entirely in terms of dollars spent and value received.

Crowding

One rather general conflict can best be characterized as "crowding". The resources of the Seacoast are finite. Population growth, and growth of all other incidents of life is occuring and is expected to continue for the forseeable future. More activity trying to take place in the same space leads to more crowding and crowding usually leads to minor conflicts, and occasionally to major ones.

SPECIFIC CONFLICTS - FROM LAND AND WATER USE MATRIX

Fishing, Commercial and Sport

Fishing, commercial or sport, provokes no major conflicts. Commercial fishing occasions minor conflicts with sport fishing, shipping, and recreational boating, primarily by fishing and lobstering gear fouling in the propellers of other craft. To date such conflicts have been resolved by the parties involved through customary divisions of territory and prudent navigation. Sport fishing occasions some minor conflict with commercial fishing, in the fin and shellfish categories currently, especially in the harvesting of lobster, as there are territorial conflicts between recreational and commercial lobstermen. Historically conflicts have been

resolved between the parties (a modified version of old law of the West) and by the New Hampshire Department of Fish and Game. Overharvesting is a problem for a few species. Commercial gathering of clams is now forbidden, and lobstering regulations contain restrictions oriented toward preventing harvesting of undersized specimens.

Conflicts are possible, but easily resolvable between fishing and research and education projects.

Some sport fishermen without adequate marine navigation training are the occasion of occasional conflicts with shipping due to their interference with navigation.

Shipping

Shipping causes no major conflicts at present. Minor conflicts with commercial and recreational fishermen are possible but have traditionally been resolved by the parties. Discharge of pollutants from ships using New Hampshire waters provokes minor conflicts with recreation and sport fishing users. There are federal controls over such discharges, which tend to greatly reduce the magnitude of the conflicts compared with the situation of a decade ago. No major conflicts in New Hampshire at the present time. Potential conflicts involve the shipping of hazardous cargoes and the eventual saturation of the ship channel potential of the Piscataqua, presenting scheduling problems.

Research and Education

Research and education activities pose no conflicts, major or minor, with other activities.

Water Borne Recreation

Water borne recreation poses no major conflicts and provides only minor ones with commercial fishing and shipping, due to occasional incompetent navigation by recreational boaters. Recreational boating has secondary effects that can cause conflicts, since more boats usually mean more marinas and more pressure to dredge and fill marshes. There are minor conflicts now over the use of mooring space, which will undoubtedly increase as the coastal boating population rises.

Waste Disposal (Into Coastal Waters)

Waste disposal into coastal waters poses several major conflicts.

A) Commercial and recreational fishing. Discharge of toxic wastes can result in fish mortality, thereby reducing fishing opportunities. Discharge of wastes which remain suspended in the water, such as fine clay particles, results in turbidity which deters some species from entering the area or which can cause

mortality in some non-mobile species such as clams. Discharge of wastes high in nutrients (sewage for example) into a partially enclosed body of water (Great Bay for example) can result in algal blooms that reduce light transmission to the bottom, resulting in death of plant life and fish life, and increasing the demand for oxygen in the water. Discharge of large quantities of wastes high in nutrients into coastal waters, in combination of other factors, may cause the "red tide" phenomonon, an aigal bloom which is poisionous to humans when concentrated in certain shellfish such as clams. Depending on frequency and severity of wastes discharged they may significantly alter bottom habitat and eliminate or reduce the diversity of species located there. Thermal discharge may result in mortality of certain species or in different species being attracted to the area. If thermal discharges are variable, they can result in fish kills. Water pollution abatement projects now underway ought to reduce the dimensions of the existing conflicts over time. The thermal effluent issue is, however, one of the major conflicts surrounding the Seabrook power plant proposal.

B) Recreation. Discharge of various kinds of wastes into coastal waters can have a major adverse effect on recreation. Boating can be made unpleasant. Swimming can be made both unpleasant and unhealthy. Skin diving can be made dangerous by an increase in turbidity. Most of the cause/effect relationships are obvious but it should be noted that wastes dumped into coastal waters do not always remain where dumped, but, in fact are often moved by coastal currents from dumping grounds. Such movement can bring them into recreational waters, such as off beaches. No major conflicts of this type are known to exist in New Hampshire at the present time.

C) Research and Education. Much of the research and education performed in New Hampshire coastal waters is done here because of the reasonably clean state of Great Bay and the offshore waters. The dumping of wastes, in large quantities, could greatly diminish the current advantage of these waters for research and education. No major conflicts of this type now exist in New Hampshire.

D) Aquaculture. Of all the other water borne activities, the one potentially most susceptable to conflict with waste disposal is aquaculture -- which culture usually relies on pure water for its success. No major conflicts of this type have been observed in New Hampshire, because no one has attempted major aquacultural installations in the waters of the state. A possible exception to the "conflict" is the waste heat from thermal discharges which may in fact be beneficial to certain aquacultural activities, such as the raising of lobster in confined pools.

E) Wetlands. To the extent that waste disposal affects wetlands,

either because of disposal in estuaries, or on wetlands, or because moving waters carry various waste products, there can be a conflict between waste disposal and wetlands. No major conflicts of this type are known to exist in New Hampshire although many instances of minor conflict can be seen where marshes are polluted by septic wastes.

Deepwater Ports

Deepwater ports pose several major conflicts. The assumption here is that a deepwater port is constructed primarily to handle petroleum and related products. The characteristics of such a facility that pose the problem are 1) sheer size of area preempted from other uses; 2) probability of oil spills; and 3) destruction caused by construction process (blasting and dredging).

The port structure itself, be it a fixed pier or a monobuoy, is compatable with almost all other offshore uses, except to the extent it occupies space (including a large exclusionary zone), and thus preempts other uses. Depending upon the distance offshore, such facilities may have an adverse impact on the aesthetics of the coastline.

The operation of the facility, however, poses the major conflicts.

Oil spills are endemic to such facilities and can have devastating and far ranging effects on the marine environment. Major conflicts exist with commercial and sport fishing, recreation, research and education, and aquaculture. In a coastal area as small as New Hampshire's, a large spill could adversely affect tidal wetlands and pose a major conflict to their maintenance. Secondary effects include the attraction of raw material processing industries, themselves with adverse side effects on many coastal land and water uses.

Offshore Mining

Offshore mining poses several conflicts due to resultant short run turbidity of coastal waters and destruction of bottom habitat, and, due to alteration of sand transport patterns which can cause erosion of beaches and developed areas on the barrier dunes.

Offshore mining can be conducted in certain places with no ill effects on the beaches or shoreline but careful studies must be completed on a site-specific basis before such can be permitted.

Conflicts with commercial and sport fishing, recreation, research and education, and aquaculture are likely, as are conflicts with any development on the barrier beaches.

Onshore conflicts with residential and recreation uses are likely if the material is dumped or transported on land.

Aquaculture

Aquaculture would pose no major conflicts with other activities, though some relatively minor ones can be postulated such as obstructions to navigation from fixed facilities such as piers. The legal problems surrounding aquaculture have not been addressed in current state law, however, and may need remedial attention.

Residential and Commercial Land Uses

Residential and commercial land uses pose only minor conflicts with wetlands and public water supply lands. These conflicts are largely confined to problems of runoff and waste disposal.

Industrial Land Uses

Industrial land uses can pose major conflicts to commercial and sport fishing, public water supply lands, and wildlife and forestry areas. The conflict does not generally arise from the industry, per se, but from the side effects, usually the disposal of waste in the air and water. Siting of industries in areas traditionally used for other activities, such as recreation, can have detrimental effects, however.

Extractive Uses On Land

Extractive uses on land conflict with residential and recreational uses to the extent air borne dust and truck traffic interfere with the peaceful enjoyment of these areas, and interfere with public water supply lands and wetlands to the extent that siltation occurs.

Land Based Waste Disposal

Land based waste disposal poses major conflicts with land based recreation and residential uses to the extent that it is visible and unsightly, or creates offensive odors. Land based waste disposal poses minor conflicts to wetlands, water supply lands, and wildlife and forestry lands to the extent that pollutants escape and affect these resources.

Extensive and Intensive Land Based Recreation Uses

Extensive and intensive land based recreation uses can pose minor conflicts with public water supply lands, wetlands, forest and wildlife lands - although many recreational uses are entirely compatible.

Land Based Transportation Uses

Land based transportation uses pose minor conflicts to public water supply lands due to runoff of oils and lead into the water supply.

Communication and Utilities

Communication and utilities pose major conflicts to many uses but because of

waste discharge. Rights-of-way pose minor conflicts with recreation and residential uses to the extent that they are unsightly, but also enhance recreational uses, forestry and wildlife, since they provide a different environment in otherwise heavily forested areas.

Agriculture

Agriculture poses no conflicts except to public water supply lands, where runoff of excess fertilizers can affect water quality.

Woodlands, Forestry and Wildlife Lands and Public Water Supply Lands

Woodlands, forestry and wildlife lands and public water supply lands pose no conflicts.

MAJOR CURRENT CONFLICTS

Seabrook Power Plant

1975: The major conflict of longest standing involves the proposed Seabrook Nuclear Power Plant. Although billed as a conflict between industry and environmentalists it is not at all that simple a case.

At least two commercial interests oppose it -- the local tourist industry and the fishing industry -- as represented by the Hampton Beach Chamber of Commerce and a Gloucester, Massachusetts commercial fishermen's group; one because of an expected adverse effect on tourism, the other because of an expected adverse impact of fishing. One group of environmentalists oppose it because of its potential damage to oceanic life, another because of the damage the powerlines from it will do to the state's land areas, and another because of potential dangers from radiation.

The opponents of the power plant, therefore, could well find themselves opposite each other on other development issues as they arrise.

1976: The Seabrook Power Plant continues to be the center of the largest and most notable conflict over the use of the coastline. The major focus of the conflict, however, has shifted from "environmental" issues, concerning the fish, shellfish, and terestrial wildlife of this area, to concerns over nuclear safety in general, of which this plant is only one example. Construction of the plant is bringing the anticipated side effects of noise and an inmigrating labor force. It has been the cause of another conflict, discussed below - "solid waste disposal" and is a contributing factor in the "Hampton winter occupancy permit" problem,reported below.

Oil

1975: The second major conflict between the "environmentalists" and the "industrialists" involved the proposed Olympic oil refinery. Major conflicts involved air and water quality, and the effect of reduced quality of both on residential and

recreational, and institutional land uses, and the effect of water discharge and oil spills on almost all other water uses. The credibility of the oil companies in general is so low, that to this day, it is unclear just how much pollution there would have been. If indeed an oil refinery could be "clean as a clinic and spill-proof as current operations are," the conflict would have been much less than supposed. For further information see "Potential Conflict - Oil."

Hampton Winter Occupancy Permits

1976: Hampton is in the midst of much conflict over enforcement of its "winter occupancy permit" system. Much of the beach area was constructed for summer occupancy. In 1972 the town, wishing to prevent summer rentals from being used in the winter, if they were not equipped for winter use, (heating, plumbing, and wiring in particular) began requiring an inspection and permit for such use. Two house fires last winter, in which children perished, has led the town to try to rigorously enforce its codes. Enforcement, coupled with an increased rental potential from an increased local population (the two of the major rental groups appear to be UNH students and Seabrook construction workers) have led to major conflict. It is of interest to the coastal zone program because much of the area is subject to flooding in winter storms and part is protected by a sea wall in danger of collapse in several places, (North Beach). It illustrates the problems of temporary housing that will face the area as the Seabrook construction project grows from its 200 man level (Sept '76) to a 3,000 man level (summer of '78 -'79).

Port Authority Expansion

1976: Expansion of the facilities of the New Hampshire Port Authority by filling some 30 acres of mud flat adjacent to the North Mill Pond in Portsmouth has occasioned some conflict. The area appears not to be of great ecological value, the fill is expected to be available from the proposed dredging of Portsmouth Harbor by the Corps of Engineers for the Portsmouth Navy Yard. Disposition of the spoil there would probably occasion less conflict than disposal at the former dredge spoil site easterly of the Isles of Shoals. Much of the conflict seemed centered on the Port Authority's admission that "it was doing it on speculation," i.e. it had no prior plans for its use. The City of Portsmouth is concerned that the use be compatible with its downtown area, be taxable, and not depend heavily on city services. Others are concerned that it be done so that the flushing rate of the North Mill Pond area not be impaired. Others fear it is a masked attempt to attract the offshore oil industry's support facilities here.

It has been temporarily resolved by a denial of a permit to fill, by the Special Board. Application will probably be made again.

Re-use of Fort Stark, New Castle

1976: A conflict is probable over the use of Fort Stark in New Castle. Consisting of about 11 acres, 9 acres has been declared surplus by the Navy. DRED has asked that it be given the opportunity to acquire it. The town of New Castle is divided about their preferences for it. Some want the state to own it. Others want the town to (and use a portion as a cemetary), and a large number would like it to revert to private ownership and have perhaps three homes on it. The Portsmouth school district has also applied for use of it as an adjunct to a vocational school (marine trades as has New England College.)

Access to it is by one narrow residential street. New Castle has plenty of oceanfront land of its own already. The probable increase in traffic due to a state park or a school has some townspeople upset. It has been suggested that it could be treated as an island, by the state, and access could be confined to small boats launched at Odiorne's Point State Park about 1,000 feet across the water.

The Fort is a very interesting piece of concrete bunkers and gun emplacements and has value as a piece of US Military History. It juts out into the ocean and offers a marvelous situation for looking at the sea and sky, and quiet recreation as well as a potential school site.

Growth

1977: The issue of growth in general has hit the Seacoast of New Hampshire while most of New England is worrying that growth is over, and that the South and West are capturing the new industry and new residents.

The New Hampshire coastal towns are experiencing a building boom. Realization of the effect on school costs, among others, has led to a real concern about controlling growth. About half of the towns have had serious discussions with Planning Boards, Town Attorneys, and others, about the legalities of placing limits on growth. This issue will be of increasing importance in the months to come.

Small Boats

1977: Access - A conflict which in only about to develop publically for the first time is over access for small boats to coastal waters. There are very few places where one can launch a small, trailerable boat. There is a demand for such facilities. The only controversy to date has centered on uses of Odiorne's Point State Park for such use, the Division of Parks having prohibited it, and some citizens of New Castle and Rye having proposed it.

Most municipalities have a "town landing." (None are capable of accommodating parking for as many cars and boat trailers as would like to use them).

There are town landings in:

1) Durham - Jackson's Landing - parking at skating rink.
2) Newmarket - some parking
3) Newfields - some parking
4) Exeter - no public parking
5) Stratham - no public parking
6) Greenland - no parking
7) Newington - residents only
8) Portsmouth - Pierce Island - Limited parking
9) Seabrook - limited parking

There are three state operated public launching areas:

1) Dover - Hilton Park - adequate parking
2) Durham - Adams Point - parking inadequate
3) Hampton - parking adequate but inconvenient (at state beach)

1977: Mooring Space - There is not enough mooring space in the state's harbors for all who wish to tie up. Capacity can be increased, by dredging, or by fixing pier moorings, or by both. To do the latter may result in conflicts over dumping of dredge spoil and obstruction of navigable waters.

All public mooring permits are taken at Portsmouth, Rye, Hampton and Seabrook harbors.

	# moorings	# on waiting list
Portsmouth/New Castle Gosport (Isles of Shoals)	332	78
Seabrook	62	31
Rye	160	91
Hampton	264	60
Great Bay	200	13

Solid Waste

1976: Disposal of solid waste, a problem everywhere in the state, is of even more serious dimensions in the Seacoast due to the higher density of population and the relative unavailability of land suitable for sanitary landfills. Several towns, notably Portsmouth, New Castle, and Seabrook have no land, in public or private ownership, with the necessary characteristics to operate a sanitary landfill.

The current crisis is the town of Seabrook. Even though it has known for at least four years that it would have to find an alternative to its open burning dump, acquired by the Public Service Company for its power plant site, it has, to date, not found an alternative. Several surrounding towns have the capacity to absorb Seabrook's solid waste but negotiations so far have not been particularly successful.

POTENTIAL MAJOR CONFLICTS

Oil

1976: Sprague's proposal for a refinery involved the same conflicts as did Olympic's. Unfortunately for Sprague it followed Olympic by a few months, and, although it did not appear to engender the same major conflicts as Olympic it was opposed as though it did and was defeated by vote of the town of Newington.

Whether Sprague's "Eco separator" is, in fact, a refinery and subject to the state's laws on such was the subject of a court challenge this year. It was determined, in an out of court settlement, that it was not. Sprague recently announced (Oct '76) that it really is a refinery after all and that they wish to alter it. If it is to be no more offensive than the current operation, it may well be permitted by Newington residents.

The citizen groups organized to fight the Onassis refinery are dormant but akin to sleeping giants and are probably easily roused by a similar proposal.

Other potential conflicts are:

1) oil refineries to the extent that they cause dirty air and water, compete for land area and water supply, raise probability of oil spills on coastal waters (reducing value for fishing, recreation, research and education)

2) a deep water port for petroleum transfer -- to the extent it engenders oil spills and preempts a large area from other uses such as lobstering

3) other major raw materials processing to the extent they cause air and water pollution

4) a Pease Air Force Base abandonment would probably result in a series of conflicts between potential users, ranging from a Logan Airport alternate, to an oil refinery, to a cluster of small non-polluting industries, to a housing project, to a little of each.

RELATIONSHIP OF CONFLICTS TO RECOMMENDED PRIORITIES FOR LAND AND WATER USES DEVELOPED UNDER FIRST-YEAR CONTRACT

Resolution of conflict before the fact was the guiding principle behind permissible uses and priority of uses designation. This includes potential conflict between uses on water and/or land and also between man-induced uses and natural uses (nutrient production areas, valuable habitats, etc.). Priority designations, then were a measure of compatibility of uses with each other and with nature.

The following uses have been designated not permissible for one or more of the water resource capability areas because of the conflicts they occasion:

Not permissible - reason

Anchorage - conflict with natural environment, physical restrictions (IV)

Cable Areas - conflict with natural environment (IV)

Deep Water Port - conflict with natural environment; conflict with (II,III,IV) adjacent land use; necessity of removal of physical obstructions with severe impact on natural environment

Ocean Dumping - conflict with natural environment; conflict with recreational (II,III,IV) and commercial fishing use of water areas; conflict with water quality (severe degradation possible)

Pipeline - conflict with natural environment (IV)

Sand and Gravel Mining - conflict with natural environment; conflicts with (II,III,IV) commercial/recreational fishing and lobstering; other uses of water surface

Shipping - conflicts with physical obstructions; conflicts with environment (III,IV) (severe alteration necessary to accomodate shipping)

Priorities (high, medium, low) have been assigned to permissible uses in each of the four resource capability areas. (Refer to "Permissible Uses - Priority of Uses in the Coastal Zone" for methodology relating to assessment of priority for water uses.)

Priority assignments were made, in each case, on the basis of:

i) displaceability of use

ii) pre-emptory characteristics (were conflicts with other uses insignificant?)

iii) multiple use characteristics (were conflicts with other uses insignificant?)

iv) a. conflicts with natural environment

b. conflicts with adjacent land use

c. degree of dependence on resources used