for the purpose of this act, that there will be no pro-rating of compensation benefits because of other employment by a supernumerary policeman.

THE CHAIR:

Will you remark further on the passage of this bill. If not, as many who are in favor signify by saying aye, opposed. The bill is passed.

THE CLERK:

Clerk is ready with some appropriation bills on page 8. Calendar No. 1192, File No. 1440. Favorable report of the Joint Standing Committee on Appropriations on Substitute Senate Bill No. 419. An Act concerning the Preservation of Tidal Wetlands.

SENATOR CALDWELL:

Mr. President, I move for acceptance of the Committees favorable report and passage of the bill.

THE CHAIR:

Question is on passage of this bill. Will you remark.

SENATOR CALDWELL:

Mr. President, the purpose of this bill is to preserve the remaining tidal wetlands in Connecticut by defining their extent and regulating their use. It carries an appropriation of three hundred thousand dollars in the budget act.

It is a very deserving bill and there is a great deal of interest in it and I urge its passage.

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THE CHAIR:

Will you remark further on the passage of this bill. Senator
SENATOR GUNTER:

Mr. President, I rise to support this bill. I think that it is an excellent bill. Unfortunately, I wish it had gone through this legislature some twenty years ago. It sort of does my middle age conservation heart good, to see that people are finding out we are no longer for the birds but are for people and I certainly think that there has been a lot of interest in this. Some ten years ago when we come up here and talk about wetlands, people thought we were a little kooky on it.

I think that we have finally gotten to the people and they now realize that these wetlands are something that should be preserved in the public interest. I am very happy to support this bill and see it go through so we can really make some steps into the acquisition and preservation of our wetlands.

THE CHAIR:

Are there further remarks on this bill. Senator Buckley from the 17th District.

SENATOR BUCKLEY:

Mr. President, this bill is a monumental step in preserving one of Connecticut's greatest natural resources. It will help conversationist, it will help conversation generally. It will help the shell-fish industry and I am pleast to stand and support it.

THE CHAIR:

Further remarks. Senator Lupton from the 26th District.
SENATOR LUPTON:

In supporting this bill, I just want to say that it is only the beginning. It carries only a three hundred thousand dollars appropriation, which is not going to preserve many wetlands. It need a substantial amount of money for proper indemnification of people who have already spent a great deal of money to acquire these wetlands and had other purposes in mind than there neutralization when they bought them.

THE CHAIR:

Senator Stanley from the 19th District.

SENATOR STANLEY:

Mr. President, the hour is very late and I will be very brief but I think this is a step forward as the Senator said. It maybe a small one but we are headed in the right direction and I'm very proud that we are.

THE CHAIR:

Further remarks on the bill. If not, as many who are in favor signify by saying aye, opposed. The bill is passed.

THE CLERK:

Calendar No. 1193, File No. 1445. Favorable report of the Joint Standing Committee on Appropriations on Senate Bill No. 430 An Act concerning a Grant-in-Aid to Municipalities for Payments in Lieu of Taxes of Housing Authorities.

SENATOR CALDWELL:

Mr. President, I move for acceptance of the Committees favorable report and passage of the bill.
HEP. COHEN - 41st D.

I move acceptance and passage in conjunction with the Senate No. Bill No. 53.

MR. SPEAKER:

Questions on acceptance on Committees Favorable Report, passage of the bill in concurrence with the Senate. Will you remark.

HEP. COHEN - 41st D.

Mr. speaker, this bill would create a Commission of Medical Legal Investigators. An office of Medical Legal Investigators office, with his duties to be absorbed by the office of Medical Legal Investigation. This bill, if you read it consist of sixteen pages, and 32 sections. It's a beautiful bill, and I hope it passes.

HEP. MCKINNEX - 141st D.

Mr. speaker, I've just been advised that there is an amendment. Mr. speaker if there is an amendment I'll yield back.

HER. KENNEDY - 1st D.

Mr. speaker, I'm surprised there is an amendment being prepared at this time, and I request this matter be passed temporarily.

MR. SPEAKER:

Any objections to being passed temporarily? So ordered.

THE CLERK:

Cal. No. 1512, Sub. for Senate Bill No. 419. An Act con-
Monday, June 2, 1969

concerning the Preservation of Tidal Wetlands.

REP. TULAN - 42nd D.

I move acceptance of the Joint Committees Favorable Report, and passage of the bill in concurrence with the Senate.

REP. TULAN - 42nd D.

Mr. Speaker, this bill sets forth the rules and regulations of the Department of Agriculture, and Natural resources pertaining to the Preservation of Wetlands, and Tidal marks, and nesting systems. If you can recall the other evening, we passed a bill for three hundred thousand dollars for this measure. It's a good bill, and it should pass.

REP. ORCUTT - 100th D.

I rise to support the bill. I think that this will certainly be a new program that will help the State to preserve the Tidal Wetlands. But in passing on this bill, I think that it should be crystal clear, that this bill does involve after the wetlands have been duly mapped, and designated, and hearings have been held in the local community's. This bill will involve a type of State Zoning, where permits will be required from the State, in order to change the nature of many of our wetlands. It's an important bill, it does involve however, anew State Control. I think that the House should know this, when they are passing on the bill.
I rise to support this bill. I think that all of us are well aware of the expression of concern on the parts of the citizens of the State for the rapidly diminishing vanishing Wetlands in the State of Connecticut. I would again remind the body, that there is not one dime in this bill to purchase any of this property, and this is the thing that really concerns me. I think that what's being planned here is a step in the right direction, but having watched the State of Conn. for the last 30 years, I really wonder how much there is going to be left to buy in two more years.

I rise to support the bill, from a Town that has, the largest area of marsh land in the State, I think its a good bill, and I urge its passage.

I can assure Mr. McKinney and others here in the General Assembly, that the next Session of the General Assembly will give high priority for acquisition of many of these properties.

In Connecticut nearly half of original Coastal marshes have been destroyed, had been destroyed by 1955 at the present rate of destruction, all the marshed will be gone by the year 2000 mostly by careless rilling, dredging, and the dumping of waste, and some by an action and State Government. The Chairman of the Conn. Shell Fish Commissions says the State has lost
just about two-thirds of its wetlands since 1900, when measured by today's prices, the State produced 40 million dollars in shell fish, now at today's prices, it produces 2 million. Any bill which can help preserve the wetland should be passed. Thank you.

REP. DONELLY - 46th D.

Mr. Speaker, through a question to Mr. Tudan, if he cares to answer, is the Conn. River tidal water or any of its length, and if so, how far to the North?

REP. TUDAN - 42nd D.

Not part of this bill.

REP. FOX - 152nd D.

Mr. Speaker, I'd like to ask, there be a roll call on this when the vote is taken.

MR. SPEAKER:

Motion is for a roll call vote. All those in favor say aye. According to the chair 20 percent is called. I'll make an announcement.

REP. NEWMAN - 146th D.

Connecticut's most vulnerable, and irreplaceable natural resources are its wetlands, and Conn. happens to be the only shoreline New England which does not have effective legislation to protect its tidal marshes. Our vanishing shorelines are a matter of serious concern to all of us. Economically, education wise, and pollution wise, conservation wise. Dredging and filling of tidal marshes creates, so-called instant real estate at
the expense or future generations. Mr. Speaker, time is run-
ning out on us and we must pass some legislation immediately
in order to save the remains of our tidal marshes. I favor this
bill.

MR. SPEAKER:

Will you remark further on this bill? All members kindly
return to their seats. All members please be seated. Lock the
machine. All members please return to their seats.

REP. TUDAN - 42nd D.

Now that these folks gradually return to their seats. Truth-
fully I don't understand the purpose of this roll call vote. I
would like to add that everyone vote for this bill unani-
ously.

MR. SPEAKER:

All members please be seated. I will now unlock the machine.
I will unlock the machine and ask the Clerk to take a tally.

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<td>Those voting Yea</td>
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<td>Those absent and not voting</td>
<td>35</td>
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MR. SPEAKER:

Bill is passed.

THE CLERK:

Cal. 1513, S.B. No. 430. An Act concerning a Grant-in-Aid
Municipalities for Payments in Lieu of Taxes Housing Authorities.

REP. METTLE - 96th D.

Mr. Speaker, I move acceptance of the Joint committee's
geese that are there. It wouldn't cost the state any money, and it would preserve an area that the people in the town of Preston consider most highly. If the Committee would look favorably upon this, I am sure that the town of Preston would look favorably upon the Committee. Thank you.

Rep. Mondani, 73rd District: I am appearing in support of those bills which would preserve, and also provide monies for state acquisition of the tidal water lands. I am assuming that all of you have read in newspapers and journals the many articles on the value of the wetlands, and I would hope that this Committee would bring about something that would not only preserve, but help the state acquire the wetlands and do whatever development necessary to assist in the growth of the wetlands, and the preservation of the fishing, etc. Thank you.

Sen. Rudolph, 28th District: I am here offering testimony in behalf of Senate Bill 199 and Senate Bill 195. Senator Buckley's bill 199 relating to preservation of tidal wetlands, and Senator Jackson's bill 196, also relating to the preservation of tidal wetlands. I want you to note that they are both Democratic sponsored, and I support it whole-heartedly, that the necessity of preserving our wetlands must be and should be provided in this legislature. I hope that these bills will pass.


Rep. Calchera, 49th District: I would like to speak in favor of House Bill 564 sponsored by Representative Holdridge and myself. This bill would establish a bird sanctuary in one of the small coves that abound in the Thames River. The adjoining property is owned by the state, most of it, and there is an elderly lady there who owns 140 acres of land. I have a map here which I would like the Committee to look at. It is just wild land now and she is going to give it as a bird sanctuary.

Rep. Mettler: Thank you, Representative. Are there any other representatives who wish to speak at this time? If not, we will terminate that portion of this hearing, and the hearing will move to Room 108.
Sen. Buckley: Did you want to say anything more, Mr. Andrews, other than what you have said in response to questions?

Mr. Andrews: I was here to answer questions.

Sen. Buckley: All right. Thank you, gentlemen. Anybody else on Q.V.D.C.? I think we are through with this part of the hearing anyway. Rep. Carlson was downstairs looking for us and didn't see us prior to 2 o'clock, so we will give him the courtesy of making a statement.

Rep. Carlson, 72nd District: Thank you, Mr. Chairman, for this opportunity to briefly speak on some of the bills that are before you this afternoon. I am here in particular to speak in favor of Senate Bill 196 and Senate Bill 119. They are both acts concerning the preservation of tidal wetlands. As representative from the 72nd District, I represent three towns that are on Long Island Sound - Madison, Clinton, and Westbrook, and we people down in that area realize the very great importance of passing legislation this session to preserve our wetlands. These are very important to the state; they are fast disappearing; and I am hopeful that the Committee will see fit to pass some real meaningful legislation this session which will preserve this great resource of the state. These two bills that I mention, Senate Bill 196, a combination of these two bills, would be ideal in putting forth this legislation. There are others here who are knowledgeable on this subject, particularly from Madison, who will speak on it later. While I am here, I would also like to speak in favor of it, and I hope you will give favorable consideration to House Bill 5210, An Act making an Appropriation for Improvements at Saybrook Fort Site. This is a very historic area in our state down in Saybrook, and I think this is a very worthwhile project and will be very meaningful to the State of Connecticut. I thank you again for this opportunity to speak.

Sen. Buckley: Thank you. Anybody else on Q.V.D.C.? The hearing will be closed on that subject. As previously announced, we will now move to the category which we have grouped together as State Parks, and that includes Senate Bill 1, S.B. 363, S.B. 583, House Bill 5156, H.B. 5158, H.B. 5215, H.B. 5339, S.B. 60, 5649, 5698, 5760, 5764, and 5765 and 5766. Anybody who chooses to speak on any or all of those bills will please come forward,
kept many people away. In fairness to these people who might have wanted to express an opinion on the subjects already considered, and also on wetlands, we will keep the transcript open for two weeks for additional statements that are sent to us with the request that they be included, so that those people who might have been here will not be deprived of their opportunity to express their opinions on any of the legislation we are considering today. I think this is in fairness to those people and to those others who came here, but could not today. Despite the weather, we could not cancel the hearing because we couldn't reach all of you people who knew it was going to be here today, but yet we can give those other people an opportunity to submit their opinions. There will be other bills on wetlands, and each bill will be given a public hearing, so that those people who were not able to get here today may come the next time we have our public hearing on that subject, the wetlands subject, again, they may come. I will assure those people who are here today, who are going to speak on wetlands, that their opinions will be considered, not only on those bills listed on the calendar today, but on other bills that may come before us on the same subject.

Mr. F. G. Jewett, Lyme, President of the Save the Wetlands Committee, Inc.: Sen. Buckley, members of the Committee, if you wish me to, when I am through, I can call on a number of our cooperating organizations, or, if you would rather do it some other way, whatever you wish.

Chr. Buckley: If they are here, I would prefer that they come along as they get to the table so that we will give everybody a fair chance.

Mr. Jewett: Right. Well, as I said, I am President of the Save the Wetlands Committee. Our purpose is to alert the citizens of Connecticut to the value of our wetlands and the courses of actions open to them to conserve them. At our recent wetlands conference in New Haven, Governor Dempsey said in part: "Until very recently a lack of understanding of the importance of our wetlands has resulted in their steady attrition. I know that the Department of Agriculture and Natural Resources will continue to give tidal wetlands preservation the highest priority." It is our hope today to help implement this priority. The reasons that Governor Dempsey is interested and concerned about the steady loss of our tidal
marshes is largely concerned with the ecological significance of the marshes, and you are going to hear later today from Professor Niering on that subject, so I will skip that. I find that they are a very vital part of our natural resources and very important to all of us. Many of us are also beginning to realize that we are losing our marshes that we used to look at and enjoy, or hunt on. They are no longer there. In their place are dumps, roads, and parking lots. The marshes are gone and can never be replaced. The solution to this problem is not easy, but we should respect and weigh the great value of our coastal resources before we destroy them. They should be regarded for their value as habitat for fish and wildlife and as food producing areas. They are important for their recreational value, for hunting and fishing, as places just to enjoy because they enrich the landscape, are a part of our New England heritage, and protect and set the character of our shore towns. The danger is that we tend to overlook the little bits that are taken here and there, the small parking lot, the small dump, the small fill until all of a sudden the whole marsh is gone. These are among the reasons we must declare it to be the clear and unmistakable public policy of Connecticut to preserve and protect all the state's coastal wetlands now. We must do this while there are still tidal marshes to preserve. This public policy should require that no person or group of persons may dredge or fill any portion of any Connecticut coastal wetland without first obtaining a permit to do so from the public agency designated to enforce such a regulation. The basis for granting or refusing dredge and fill permits must be governed by sound constitutional process which would consider all the factors, including essential environmental protection and damage to marine fisheries. We have come a long way since the last meeting of the General Assembly in understanding the problems and in reconciling our viewpoints. Commissioner Gill has been just as interested as we have been in arriving at a solution and today, happily, we agree in principle on two bills which are up for consideration, Senator Jackson's Bill No. 196, and Senator Buckley's Bill No. 191. Rep. Orcutt's Bill 6145 is a duplicate of 196. Bill 196 represents the basic recommendation of our committee. This bill was sent in draft form to the Department of Agriculture and Natural Resources, and Commissioner Gill suggested that it was inadvisable to allo-
cate responsibility for this bill to the Water Resources Commission as they are overburdened with terribly important matters, such as the Clean Water Act, and he directed that a bill be prepared allocating this responsibility to the Department of Agriculture and Natural Resources. The Wetlands Committee supports any legislative measure which would regulate the dredging and filling of all wetlands now. In our judgment, 196 accomplishes this objective if the effective date is amended. Another amendment to this bill, substituting the Commissioner of Agriculture and Natural Resources for the Water Resources Commission, would be welcomed. The Committee also supports 196, if it is amended so that all wetlands are subject to regulation now, rather than only those which are delineated on a map to be prepared later. We recognize that the administration of any such bill imposes additional burdens upon the administrator; therefore an appropriation, estimated at $300,000 for the biennium, would be necessary to fund these further activities. We intend to support Commissioner Gill in his request for this amount, if a wetlands bill which embodies the foregoing principles is enacted. We can no longer afford to ignore these wetland resources. State action is both necessary and appropriate and urgent. Thank you.

Chr. Buckley: Mr. Jewett, I now reserve what is sometimes known as only a lady’s prerogative, or changing my mind. It is also a legislative prerogative. Would you proceed with the people you wanted to introduce so that there will be order. You mentioned that there were technical people you had here now. I think it would make a more coordinated presentation by your group. I thought they might be just individuals, but if you would just introduce them.

Mr. Jewett: This is Mr. Ellsworth Grant, representing the Connecticut River Watershed Council.

Mr. Ellsworth Grant, President, Connecticut River Watershed Council: Sen. Buckley, members of the Committee, I am President of the Connecticut River Watershed Council, which is a private conservation organization composed of over 600 private citizens and business in the Connecticut valley, and we wish to go on record as endorsing Senate Bill 196 or Senate Bill 196, as Mr. Jewett has suggested that it be amended. We would like to also be on record in favor of an appropriation
of $300,000 for the biennium to carry out the intent of this bill, and we would like to make one further suggestion — that the act, if it is passed, take effect on July 1, 1969, rather than July 1, 1970. We would like to see this business of saving the wetlands get started just as soon as possible. Thank you.

Rep. Tudan: This gentleman has been very instrumental in making a movie on the Connecticut River, weren't you, sir?

Mr. Grant: Yes, sir.

Rep. Tudan: Yes, with his sister-in-law, Katherine Hepburn, who narrated it. As a matter of fact, the people in the Greater Hartford area on Channel 3 requested to have it shown at least one more time, if not more than that. Sir, it was a marvelous job.

Mr. Grant: Thank you very much. I'll leave this with you.

Chr. Buckley: Mr. Jewett, your next person. Would you give us a couple of names so these people might be ready?

Mr. Jewett: Yes, Mr. William Niering, Professor Niering. Gordon Loery.

William Niering, Connecticut College: I'd first like to speak to Rep. Holdridge's Bill on the bird sanctuary at Poquetanuck Cove. I happen to know that wetlands, and I think it is an extremely important bill and be given high priority.

Sen. Lupton: I notice that the Board of Fisheries and Game think that this land is already sufficiently protected and that what you are really asking them to do is put in extra enforcement of the already existing law. In other words, there isn't any shooting of the swans, as I understand it, in that cove, and people are not free to hunt and fish there. Isn't that true as of today? What is the extra protection that you want there?

Mr. Niering: Well, in many cases I think it is extremely important that some of these areas be designated as sanctuaries per se, and not under any particular state department that may, at some other future time, designate this area for some other use. I think the present purpose here is to think in terms of this as a designated sanctuary where no further encroachment will occur. In other words, a kind of natural area.
Sen. Stanley, 19th District: In the absence of Representative Holdridge, who is probably at another committee meeting, as I understood it, there was some 500 acres of land that would be given to the State of Connecticut dependent upon the establishment of this sanctuary, so that it would be this addition of land to the State. That's just my understanding, as a result of passage of this legislation, so that there is some real benefit to consider.

Mr. Niering: I think this would occur. Now, on behalf of a new committee that has recently been established in the state called a Committee of Scientists for a Quality Environment, I would like to present the following statement. Members of this committee include three professors from Yale University, Professors Bormann, Smith, and Miller; from Southern Connecticut State College, Professor Collins; from Connecticut College, Professor Goodwin; and from the University of Connecticut, Professor Rankin. Seven of us compose this committee. Dr. Bormann and myself are co-chairmen. This committee has recently been established, and its major concern is for a quality environment for Connecticut, and, as scientists, we are attempting to come out of the ivory tower and present a scientific statement on some of the major environmental issues that are facing us in Connecticut. And one of the first ones that we have chosen is the coastal wetlands, because we think it is a very urgent problem and a very pressing one. We have already had a meeting with the State Highway Department, where they are tentatively planning to encroach upon a wetland which we feel should not be encroached upon. The meeting has been very productive, and further meetings are planned as recommended by Commissioner Ives. So this is the beginning of a committee that we hope will be very effective in the state. I have a statement which I'll hand in, and I will try, in five minutes, to succinctly summarize some of the important aspects, as we see it from a scientific point of view, of this tidal marsh estuarine ecosystem. First, referring to the two bills that are at stake, and a few problems that we see in them as ecologists. First, in 196, it indicates the 50-yard strip. This is a little bit confusing to us, in that we recognize this area as a tidal marsh estuarine system which can extend further back than 50 yards, and we feel that this probably a misprint on the distance or the area which will be encompassed along the shore line. Secondly, the other bill
Ij.19 points out that these areas should be mapped first. In our opinion, this is only to delay protecting them, because the State Department of Fish and Game have, essentially, location of all of these important wetlands. The other ambiguous quality in Ij.19 is the statement "valuable wetlands". Who determines what is valuable? This is a very ambiguous statement, and, until we find out a wetland is not valuable, it should not be destroyed. Now, in trying to quickly comment on the ecological values of the tidal marsh estuarine ecosystem. This particular area extends along our coastal line as a very narrow fringing belt. In fact, it is extremely limited, for, throughout the nation, it probably comprises less than 3/100,000 of the acreage of our entire country. Although it looks sweeping because it fringes, it is actually very limited. The impact of man upon this coastal resource now has national concern, in that a national estuarine inventory is now under way in Washington in order to evaluate these particular areas from a federal point of view. In our state, it is common knowledge that of the marshes has been destroyed and the rate of destruction is now at about the rate of 200 acres per year, the remaining 11,837 acres still remaining. It is only within the last decade that ecologists and geologists have really begun to reveal the significant aspects of this coastal resource. I would like to cover just four major aspects. First, marine productivity. This is a system. It includes the tidal marshes and the adjacent estuarine waters that interdigitate with these marshes, and thus one cannot talk about "Let's not fill in marshes, let's not fill in estuaries". This is a system. They interact, and we must keep in mind this is a system along the coast including the surrounding waters that are brackish and the adjacent marshes. They cannot be divorced in any kind of bill. These marshes, or this estuarine complex, has been known now to be four times more productive than the best corn fields in Iowa, surpassed only by the yield of sugar canes in the agroecosystems of Hawaii. Remember that the cultivation of corn and sugar cane fields require heavy applications of fertilizer and constant maintenance, while this marsh-estuarine complex is self-sustaining. It produces its own nutrients from the marsh grasses which are swept into the surrounding waters. The high fertility of these estuaries is related to three major units of production: (1) the marsh grasses, (2) the mud algae which coat the marsh flats and also the adjacent estuarine flats,
and (3) the phytoplankton, these very small microscopic free floating plants. These particular plants, these particular marsh grasses, make up about 3/4 ton per acre per year. In other words, half the marsh grasses that you see floating on the marsh flow off into the surrounding estuaries. Well, when it flows off, you might actually think it is finished. It no longer has any nutrient. But marine ecologists have now found that it is this partly broken down plant material known as detritus which is really feeding the oysters, clams, and scallops. And you might well remember that, when you have them on the half-shell, there is a little black spot there - that's the stomach; and that is filled with detritus; and this is where these particular bi-valves are getting their energy. In other words, not all of it has been broken down yet. In fact, when the bacteria start to attack these grasses, the bacteria die themselves and add their protein, so that we have now found that the bacteria can actually double the vegetal protein of these marsh grasses before they actually feed to the scallops and oysters. We have also found that the marshes are extremely important in the synthesis of vitamin B12, essential to the growth and development of marine organisms. Now, covering the marsh flats, we have this second group of organisms, the mud algae, and any of you who have looked at the bottom of a mud flat when the tide is out, you will notice that there is a slight greenish-yellow tinge. These are the mud algae, and they contribute heavily to the basic primary productivity, you see, of this marine environment. In other words, here is the beginning of the food chain. Every time the tide goes in or out, you get a flushing of a little bit of these diatoms and other kinds of algae on the marsh bottom, flushing out, and also serving as food for small fish and the shell fish. In other words, the beginning of the food chain starts here. Now there is another unique feature of this estuarine system, and that is it serves as a nutrient trap. In other words, the mixing of salt and fresh water brings together waters of different density, and, in the process, the nutrients are moving up and down and recycled in this system, rather than being rapidly washed out into sea. One interesting study has revealed that actually the amount of phosphorus, which is an extremely basic material, both in, or as energy currency for us and also as an important part of DNA within the cells, this material is actually more abundant below a marsh than above a marsh.
In other words, even with agricultural lands contributing a certain amount of phosphorus, studies have found that the phosphorus level is highest below the marsh. So here is further documentation that these nutrients are moving off the marsh. And, then, to give the ribbed mussels a little bit of credit, these are very abundant organisms, and they siphon tremendous quantities of water each day; something like four quarts per hour go through each of these little mussels. In the process, they take out very, very fine detrital material. In fact they take out so much that they can't use it all, and they accumulate it inside their gills and every once in a while they give a big spurt, and shoot out the excess, called pseudofeces, and this material is very nutritious, you see, and stays right within the system. So these are the kinds of things that recent studies are beginning to reveal. From the standpoint of fisheries, 90% of the total harvest of seafood taken by the American fishermen, in one way or the other, is dependent upon the estuaries. Sixty species of fish are dependent upon the estuaries at some stage in their life history. Now you can see the beginning of the food chain then, a literally starting in the estuary environment. This is the place where founders and various other kinds of fish actually find their refuging during the very early part of their life history. The New England fleet landed 800,000,000 pounds of fish worth $60,000,000 in 1960. So fishing can be big business, if we can continue to preserve this particular coastal resource. From the standpoint of wildlife, second point, we well know that wetlands are producers of wildlife. Coastal wetlands not only act as feeding and resting grounds, but they are also important for the migrating birds as they move along the Atlantic flyway and other flyways. The eastern coastal marshes produce an estimated 200,000 ducks, and the southern marshes another 700,000 ducks during the best years. These are ducks that are actually breeding and producing young on the marsh, in addition to the feeding and resting qualities that these marshes afford. In other words, for those migrating organisms, they act as kind of a motel along the Atlantic flyway. In addition, those of you who have visited these areas know that we have a tremendous number of spectacular wading birds, the great blue heron, the American egret, the birds of prey like the marsh hawk and osprey, and fifty other species comprising the diverse avifauna of this particular habitat. And, then, there are some
very interesting mammals, the muskrat, raccoon, skunk, fox, opossum, and others. Thirdly, the unique vegetation. Here, due to the salinity, the diurnal tidal fluctuations, and severe storms, we develop an extremely unique flora and vegetation. In fact, no other place in Connecticut, do you find the distinctive plants and the vegetation as you find it in the coastal environment. In other words, it is unique, and we have found that there is a very interesting zonal arrangement that tends to fall out as you walk from the upland to the lower parts of the marsh. That has been documented by the classic studies of Miller and Egler on the Barn Island tidal marshes of our own Connecticut marshes. Thirdly, geological role. The marsh formation results from the interaction of a gradually rising sea level and the deposition of sediments by tidal action. In other words, as the sea level rises, the sediments keep accumulating and depositing behind off-shore bar or spits, and eventually bury the sand, build up first the salt water cordgrass peat, and eventually the salt meadow cordgrass peat. And these are the two kinds of dominant grasses that occupy the marsh, but, because the coastline is submerging or the ocean is rising, we're not sure which, there is a constant interaction here, an interplay, with the deposition of silt, and the significance of marshes as sediment accretors is correlated with the fact that, if destroyed, the silt which would normally be deposited in marsh development would be available for deposition elsewhere. And where would it go? It would either go into channels, harbors, or tidal creeks. So the marshes serve as an extremely important place for the sedition of all this silt that is produced. In fact, two Yale geologists have concluded "Small boat harbors at the mouths of marsh channels will be destroyed if marshes are converted to dry land". Therefore, marsh destruction can only accentuate silting problems elsewhere. They are also significant in erosion control. During severe storms, the extensive mats of marsh past exhibit great resiliency and therefore serve an important geological role in buffering the shoreline and protecting the upland with an added degree of protection. In conclusion, this paper has documented the role that the tidal marsh estuarine system serves in supporting coastal fisheries, waterfowl production, a unique flora and vegetation, and in sedimentation and erosion control. In the context of a rapidly rising population, where over half the inhabitants are
starving from malnutrition, and one person is dying every 8 seconds from starvation, it is essential that every effort be made to conserve the world food base, and, specifically, that component represented by this productive ecological system. Thank you very much.

Chr. Buckley: If you will leave the statement with us... Mr. Jewett, may I ask Mr. Gormley to take this gentleman's chair? I would like to explain the provision in Senate Bill 419 concerning mapping. You commented on it in your opening remarks. This is a necessity in the eyes of many, especially those who practice law, that, if there is a taking or restriction of people's rights, it is necessary to define upon what property this taking or restriction of right, namely the filling or dumping, is to take place with the other provisions in there for appeals to courts. Also, there would be no enforcement unless there was a line drawn on a map. Now, whether you agree or disagree with those two concepts, that's why those things are in there.

Mr. Niering: Well, it's very fine to hear this, because we are not versed in legal aspects, and this clarifies that issue. The other point that I would like to make in that connection is that somewhere in the bills there should be recognition of the kinds of vegetation that characterize the marsh estuarine complex that we are dealing with. I think that this would help a great deal, similar to what is in the water resources and flood control bill 6179, where we have a designation of the kind of species we are dealing with, so that there isn't any vagueness as to what the tidal marsh is. Let's define it by the species that grow there, and this can be done.

Chr. Buckley: Could your group give us a definition that you feel adequate for that purpose?

Mr. Niering: We sure can.

Chr. Buckley: Would you submit it to me? Just send me a letter, thank you. Senator Gunther?

Sen. Gunther: 21st District: I'm glad you clarified that, Professor. There is a bill coming in that has not showed up today, but sponsored by Representative Ervin and myself, that does have the floral classifications. Do you think that this could be a better classification, or would this satisfy the scientists, as far as the classification of marsh lands, as opposed to what has been appearing in these bills?
Mr. Niering: Well, anything similar to what I've read in 6179, and I think I submitted this list through Save the Wetlands Committee that somebody has gotten hold of, and this essentially summarizes the dominant species that would be involved, in my opinion, in the marsh or land phase of this district. But we also have to define, someway, the aquatic phase of this system. In other words, what do we mean by the estuary? How far out do we move at low tide from the edge of the marsh to include the rest of this productive zone? This is the thing that the federal government is trying to come to grips with in their estuarine study, and they are primarily concerned with this whole belt, this whole system; not just the marsh that you dump material into, but the estuary, the aquatic phase, that interdigitates with the marsh.

Sen. Gunther: If I might insert just one further remark here. The remark that has been made in rebutting the possibility of putting the floral classification of the wetlands in, is the fact that you can find some of these plant species up in back of East Jabro somewhere. Now, can you remark on that as far as it portends to this argument, that there are these plants found in other areas other than in tidal marshes?

Mr. Niering: Well, I think all of you are aware that, from the ocean or bay front where you have full salinity, as you move back up Connecticut River or any estuary, the salinity continues to drop, and you get a gradation of species, and eventually you'll move out of what we think of as true salt marsh plants, such as salt meadow grass, spike grass, black grass, salt marsh grass, etc., no problem on those. That's the only place you find them, in that saline environment. But then as you move up the river, and as the salinity goes down, you start to pick up cattails. First you get the narrow leaf cattail; well, that one likes brackish water. Then you move up a little further, and you get the broad leaf cattail, or you might find that in Podunk.

Sen. Gunther: I don't think that's a good argument against it.

Mr. Niering: I think that this can be relatively restrictive to the coastal zone with these species essentially determinous. You can always find exceptions to any of them.

Chr. Buckley: In addition to your fine presentation, I am
very pleased that you are here today because Senator Gunther is very familiar with these subjects and he sometimes pulls them on us, who know very little about it. With someone like you here, we have the ready answer for any of George's questions.

Rep. Gormley, 142nd District: Mr. Chairman, committee members, your committee has several bills on wetlands before you for consideration and action. I refer specifically to Senate Bill 196, and House Bills 6115 and 6177. Now there may be other bills on wetlands that you are considering, but these were the only three that the Bill Room had downstairs. The preservation of wetlands is of vital importance now to our state and to our people, and will become more important in future years. Action now is necessary to preserve our wetlands, and I wish to record my vote in favor of these bills dealing with this subject. That's the end of my statement, but I would like to inform the Committee that many people from both Fairfield and Fairfield County intended to come up here today to be heard, but, because of the weather and the problem of parking, they couldn't make it. Possibly this has already been taken into consideration.

Chr. Buckley: I'll save you a few words. I stated before when you were not here that the record will be held open for two weeks. If anybody chooses to submit a hopefully short and succinct statement and ask that it be put in the record, it will be put in.

Rep. Gormley: I will deliver that message. Thank you very much, Mr. Chairman.

Mr. Gordon Loery, President, Connecticut Audubon Council: Mr. Chairman, members of the Committee; the Council is a state-wide federation of local Audubon societies. I am here to support Senate Bill 196. It has been stated before salt marshes are among the most productive types of land and are an essential source of food for fish, shellfish and other aquatic animals highly valued by man. They are a particularly valuable form of open space whose vistas help give a unique character to many of our coastal towns. Despite the above values and others cited in Bill 196, it has been estimated that we have already destroyed over 50% of the tidal marshes existing along our Connecticut coastline as recently as 1914. At this rate only 10% will be left by the year 2000. Since marsh areas, once they are destroyed, cannot be reconstructed, we
must do everything we can to protect those still in existence. Every other New England state with coastal marshes, except Connecticut, has already enacted laws offering them protection. Connecticut must act now. For the above reasons, the Connecticut Audubon Council believes Senate Bill 196 will help protect an extremely valuable but threatened natural resource. I might add that we would also support Bill 119 with the amendment that it include all wetlands, rather than just those considered valuable. Thank you.

Mr. Robert Kunz, Connecticut Conservation Association: I have brought some copies of a publication that our Association recently published. It's entitled "Connecticut Coastal Wetlands Crisis", and I would guess that would be an appropriate title for today's discussion. It is six pages long, and I am sure that you don't want me to read it, but I would like to paraphrase the summary of this document which is entitled "What Must Be Done", which is our recommendations to you, our proposed program, and what we think is the best approach to preserving tidal wetlands in our State of Connecticut. Under (1) we suggested a policy statement by the Connecticut General Assembly recognizing Connecticut's tidal wetlands as a valuable and irreplaceable natural resource and providing for preservation of tidal wetlands should be a public policy. I think, in reading 196 and 119, the preamble to both of these bills, as far as we are concerned, in general satisfies the requirement for a public policy. Secondly, and what we have spoken about so far today mostly, is the area of a dredge and fill law, and we are in favor of a dredge and fill law, and I would like to speak to that in just a few moments a little more specifically; that is, the two bills that you have discussed thus far. Thirdly, and Senator Gunther and Representative Ervin have a bill in - I believe it's 6179 - which is a conservation zoning or a selective regulation of wetlands bill, which is essentially a legal restriction against dredging and filling. But our association feels that both of these approaches are necessary; that is, the dredge and fill which would be effective as immediately as possible, which would require a permit to dredge or fill in the wetlands, and the conservation zoning or selective regulation approach, which would probably take as much as two years before any of the tidal wetlands of our state were being adequately protected. At least it has taken that long in the State of Massachusetts which, in 1965 I be-
lieve, passed such a law. Fourthly, we feel that a legislative mandate should be given to the Connecticut State Board of Fisheries and Game which has over the past years been acquiring tidal wetlands, and that the Board of Fisheries and Game should initiate a new program of acquisition, and that the Legislature should appropriate the Fish and Game budget request devoted to tidal wetlands acquisition which this year is, I believe, $1,350,000. So, essentially, we think that it is going to take a two or three or four pronged approach to properly protect tidal wetlands in our state, and that is a policy by the State, by the Legislature, that this is an invaluable resource and must be protected. A dredge and fill law to be activated as immediately as possible so that we don’t have any more dredging and filling. A conservation zoning approach so that we can zone our wetlands permanently, and protect what we have left, which, as you have heard earlier, is less than half of what we started with; and it would seem to me very appropriate that Fish and Game should get their budget request to go ahead and continue buying tidal wetlands. They have done an excellent job in doing so in several places, in the Barn Island Game Management Area which is now 800 acres, about 250 of it tidal marshes, a very good example of that work. I would like to speak just a moment specifically to the two dredge and fill bills that have been discussed thus far, and they’re #19, and we have the following suggestions which would make us much happier about endorsing and supporting #19. We feel that any dredge and fill bill should be effective as soon as possible, hopefully October 1, 1969. We feel that we must not and do not need to wait for wetlands boundaries to be established before a dredge and fill bill can become effective. I think the mapping of our state’s wetlands certainly is a desirable thing, and should come along as quickly as possible, but the problem is, if it takes two years from now for a dredge and fill bill to be effective, that means that these tidal wetlands, these marshes, are going to be vulnerable for another two years. This I don’t think we can afford to allow to happen. Our Association recognizes that all wetlands are valuable, and therefore we recommend that the word "valuable" in section 2 of Bill #19 be deleted. It now reads "The Commissioner of Agriculture and Natural Resources shall direct the Board of Fisheries and Game and the State Shellfish Commission and such other agencies as are appropriate to establish the boundaries of all the valuable tidal wetlands which exist within
the state." We feel that all the wetlands are valuable; therefore the word valuable is unnecessary and perhaps a little misleading. Three, under Bill 196, we feel that a public hearing on an application to dredge or fill in Connecticut's tidal wetlands should be a mandatory provision. Four, we certainly would endorse an appropriation in the area of $300,000 to fund the staff and administer the requirements of a dredge and fill law protecting tidal wetlands. On Bill 196, again I reiterate, because the effective date of that bill is a long way off, we feel that the dredge and fill bill should be effective as soon as possible, and not later than October 1, 1969, and should not be put off until July 1, 1970 as indicated in Bill 196. Again under Bill 196, in section 2 under B, definition of wetlands, we recommend that the figure of 50 yards be increased to 300 yards. This we believe is especially important to prevent the destruction and polluting filling operations in these areas which might occur. In other words, if you get down to 50 yards and somebody puts a dump out there, and you get this drainage going into the marsh, you are going to as surely destroy the marsh as if you put a dredge in there. So, we think that 50 yards is too short a distance in this respect. Finally, I would like to emphasize that our Association feels that it is most important that the Legislature, this year, pass a selective regulation or wetlands zoning law along with a dredge and fill law, and along the lines of Bill 6179, which has been submitted by Representative Ervin and Senator Gunther and has been referred, I understand, to the Committee on Water Resources and Flood Control. At least two other New England states have passed a bill of this type, that is Massachusetts and Rhode Island, and I believe that Maine is now considering so, and it is our understanding that in Massachusetts and Rhode Island, this legislation is effectively and permanently protecting tidal wetlands in these states. Thank you very much.

Chr. Buckley: Thank you. Any questions? Sir?

Mr. Russell Brenneman, Glastonbury: Mr. Chairman, I am Chairman of the Subcommittee on Conservation Law of the Connecticut Bar Association, and I wish it to be clear on the record that I don't speak for the committee, I state that for the purpose of identification. During the last year the Save the Wetlands Committee asked me to prepare a report on the legal aspects of wetlands preserv-
ation which is lodged with the Legislative Commissioner's Office and the Legislative Council, among other places, and I am sure that it is available to this Committee. One of the things that this report developed, which rather shocked me, was that, of all of the New England states having a border on salt water, ours is the only state which doesn't have some kind of program to regulate its coastal wetlands. Partially as an outgrowth of this report, the Subcommittee on Conservation Law considered the appropriate legal approaches which might be used in this area, and some of our work was made available to Senator Jackson and is part of the background of Senate Bill 196, I believe. I would like to comment on just a few specific things about these bills, and I will leave with the Committee a written statement which will elaborate on these remarks. Speaking for myself, I believe that Senate Bill 196 represents the best approach to this problem that is presently before this Committee. However, I believe that some amendment is in order, and I'd like to mention three areas where perhaps this could be accomplished. First, this bill as drafted called for the Water Resources Commission to be the permit issuing agency. Subsequent to the time the bill was introduced, it had become evident that possibly it may impose upon the Commission an over-burden, particularly in the light of the excellent work which it is doing in water pollution and other areas. Therefore, I would suggest that SB 196 might be amended to provide that the Commissioner of Agriculture and Natural Resources himself might constitute the permit issuing agency with appropriate deputies as hearing agents. I would hope that the Committee would explore the feasibility of such an amendment. Secondly, I apparently agree with the earlier speakers in that I believe that the definition of wetlands contained in SB 196 could be amended to make it more effective and useful. Third, and I reiterate what has been said to some extent, I feel that an early effective date in SB 196 might be in order. I would suggest October 1, 1969. The bill, as you know, provides for July 1, 1970. With reference to SB 196, this, it seems to me, comes as a very constructive contribution but I think there is a deficiency in the bill of a sort of major nature, and perhaps some minor ones, and I think that these also can be cleared up by amendment. The major problem with the bill, in my judgment, is that it does not immediately bring under state regulation all of the state's wetlands. As you know, it brings the marshes into
the regulatory program only after designation. This means delay. It's the presumption of conservationists that all of these wetlands are valuable, as Dr. Niering has stated. The presumption of the bill seems to be that only those wetlands are valuable which the Commissioner says are valuable. The second problem with SB 14, and, as a lawyer, I find this even more of a difficulty perhaps, is that the administrative procedure in § 19 is very loose, and I think that by amendment the procedures could be spelled out so that we run into no danger of a constitutionally vague bill. Specifically, I think that appropriate notice and a public hearing should be required on the permit issuance, and I think that a very careful technical review of SB 14 will indicate other areas where some improvement can be noted. It is my understanding that the Commissioner of Agriculture and Natural Resources has estimated the cost for the biennium of the regulatory program to be $150,000 per year, and I certainly wish to be recorded as speaking in favor of that appropriation. Finally, and I am authorized by my committee to state this, I wish to assure you that I am available to consult with the Committee on the technical revision of any of these bills, and other members of my Sub committee on Conservation Law of the Bar Association are available and, of course, are willing to serve without any compensation. We will be glad to be of help.

Chr. Buckley: I would like to ask a question first. Addressing myself to the question of how this would be effective without mapping, do you have any comments on that - how a regulation of a use on people's lands could be effective without specific mapping or specific designation of which lands were covered, including the right of notice to members of the public who are buying property as to what limitations, controls, or restrictions are upon that property?

Mr. Brenneman: The question is really one of specificity, it seems to me, Mr. Chairman. I think you can be sufficiently specific by reference to the physical factors on the ground as well as the plant life that Dr. Niering has spoken of. I can cite committee case where this has been found a specific description, but, in my judgment, a map of every property to be regulated is not an absolute requirement constitutionally. Notice certainly would be forthcoming from the General Statutes themselves, with which all of us are charged with notice. I agree that this description has to be an adequate one, and it's a pro-
blem that everyone who has dealt with this legis-
lation, as I am sure the Chairman is aware, has
had difficulty with. I'm not saying that it is
not a hard problem, but I think it can be resolved
without mapping.

Chr. Buckley: Do you have copies of legislation of similar
import that now exist in other states?

Mr. Brenneman: Yes, sir, I do.

Chr. Buckley: Could you make those available to us?

Mr. Brenneman: Surely. I would suggest, with the permission
of the Save the Wetlands Committee, that a com-
plete copy of our report be made available to
this Committee. In appendices to that report are
all of the wetlands laws now in effect.

Chr. Buckley: Fine. Mr. Jewett agrees. Senator Lupton?

Sen. Lupton, 26th District: I've been waiting for the wet-
lands lawyer to come along to ask this question.
I'm very much a backer of this type of legisla-
tion, but how is it handled in other states when
reasonable loss of the value can be proven by
the owner of the wetlands which have been made
subject to state regulation. If a man has a mar-
ina across the estuary from him and has had bona
fide offers, who indemnifies him of his real loss,
and is there any precedent for such over-protec-
tion by the state in other areas than in the wet-
lands?

Mr. Brenneman: I think, first of all, we have the question,
Senator, of whether or not there is an entitle-
ment to compensation, and this depends, as you
know, on the fundamental question of whether or
not there has been a taking. If a taking has
occurred, the owner is entitled to compensation.
A regulation may be so comprehensive in its ap-
lication to particular land that it is a taking,
just as much as if the state exercised its power
of eminent domain. The states which have dealt
with this problem have done so in two ways. One
is simply to leave it to the courts to determine
under the appeal procedures which are in the
statutes whether or not the regulation is an
unreasonable one, and therefore constitutes a
taking. If it does constitute a taking, of

course, the court is authorized both under the
Constitution and the statutes to invalidate the
order, in this case to require the issuance of
the permit. The other, and perhaps more chal-
lenging, approach which some states have used is
to provide that, upon appeal, the Appeal Court must determine the degree of the regulatory inhibition on the land, and somehow place a value on that inhibition, and compensate the owner for that value, if the administrator wants the regulation to stand. In other words, he's got to decide at that moment whether he wants to pay for this or not. As you know, this is called compensatory regulation; it's a relatively new thing. It was the feeling of the Subcommittee on Conversation Law that this would be breaking more new ground for Connecticut, to have a provision like this in the statutes, and, after a good deal of discussion, we felt that it was not appropriate. However, this so-called compensatory regulation feature is in effect in Rhode Island, and it's on the books. I can't tell you how it is administered or what the expense of it has been.

Sen. Lupton: Well, you've given us a lot of study, and it seems to me that, from the testimony and from what we've been reading for several years, the most urgent regulation is needed in those areas where only a remainder of tidal wetlands exists, because so much of it has been destroyed for commercial purposes or other purposes, and isn't it in those cases where you're going to have the most difficulty legally, inasmuch as the owners could show that they are really being hurt.

Mr. Brenneman: This may be, Senator. If the Legislature had seen fit to do this ten years ago, we wouldn't be in as much of a bind as we are now.

Sen. Lupton: Well, hindsight is 20-20 vision.

Sen. Gunther, 21st District: Attorney, you seem to have some reservations as to the administration of the program under the Water Resources Commission because of their other commitments. Wasn't any thought given to - I know you recommended the Agricultural Department take over the permit issuance under these laws. Was any consideration given on expanding on a special board? As you know, the Water Resources now doesn't have all their commissioners sit on hearings. They usually delegate it to, I believe, two. Right now, under 2510 a designee of the Shellfish Commission is supposed to sit on this board, but I found out last Monday that they are trying to kick him off of there, and I think that this is somebody that should have been in there watching the store for us, but I find out that they haven't gone in there for two years. Now do you think that by
expanding on the membership by designee and giving a little more authority in the Fish and Game, who so far all we're talking about in calling them in more or less on consultation and that type of thing, but by broadening this and get a special board to take and hear these areas specifically, to get the expertise sitting on the inside rather than on the outside talking, was any consideration at all given to this type of a panel?

Mr. Brennemen: I may have spoken too comprehensively. I suggested that the Commissioner of Agriculture might be utilized for this purpose, simply as a layman I couldn't really visualize any other place to put the function, Senator, The State of Maine, for example, has created an entity known as the wetlands control board, specifically to administer their wetlands program, and this is, as you might imagine, a composite of people from Fish and Game and their own Water Resources program. I certainly would have no objection whatsoever to working out such an arrangement here, and I think perhaps my thinking was to some extent fiscal. Believe it or not, laymen are conscious of the burdens that you people are working under, and it seemed to be the simplest way to work this problem out.

Chr. Buckley: Any other questions? Thank you very much. Would you speak to Attorney Rotatori before you leave? Thank you. We received a statement from Mr. Stephen Hitchcock.

Mr. John E. Hibbard, Secretary-Forester, Connecticut Forest and Park Association: I am not going to add to the expert testimony that this Committee has received at this hearing. I do want to, however, indicate to you that the public is certainly ready and willing to accept an effective wetlands control and acquisition program in this state. You will recall that some two years there was a considerable interest in this subject, stimulated through the educational efforts of the state wetlands committee, and in the intervening two years, the Save the Wetlands Committee and many of their cooperating organizations have continued to try to instill interest in the public in the wetlands preservation program. I'm going to leave with you a statement on pollution of estuarine waters which we prepared for the August 19 hearing of the Federal Water Pollution Control Administration, which reviews in some detail the history of wetlands loss in this state.
We have listed the total wetlands acreage by towns, and this information may be of some value to the Committee. Certainly our organization would support any constructive wetlands preservation program. We realize that the administration of such a program would involve considerable funding, but we feel that it is imperative that we start on a program as soon as possible. If a bill is passed by this Legislature to regulate wetlands and to protect them, hopefully it would have an early date of enactment. Thank you very much.

Anne Conover (Mrs. Woolsey S.), Guilford: I am speaking as the Chairman of the Guilford Conservation Commission, although I happen to have the great honor of being a director of. I think, every one of the boards that have been up here so far, starting with Mr. Grant, Mr. Hibbard, etc. I have been appearing in the Legislature since the '40s when I was president of the Federation of Garden Clubs asking for a variety of conservation matters, and this one is the very, very most dear to my heart right now, and the most crisis kind of thing. Our town of Guilford has one of the early conservation commissions, 1963, which doesn't seem very long ago in point of time, but more than chronological order it was quite a while ago, and in our town we had a situation which has created a great deal of state, but also intra-state, interest of taking one of the large areas at the mouth of one of our tidal rivers, the banks of part of which were also an Audubon sanctuary, to become an additional 600 boat marina, and we have been successfully having a holding action at least to alert all the different interests, and we have succeeded in arousing a great deal of interest in this particular thing. I cannot urge upon you any more than an all-out interest and effort in protecting what we have here in Connecticut, and I do want to say, in defense of the Wetlands Committee and Mr. Brenneman's efforts, this has been researched for more than many years, for two or three years, in very, very concentrated form, and we have thrown roadblocks all the way up and down the line for him. So I do earnestly and sincerely and respectfully urge your participation in this, and, however it is done, I hope it will be done quickly. I think time is of great essence. Senator Hammer's bill, Mr. Orcutt's bill, Senator Buckley's bill, I think they all have great merit, and I am sure that with such a distinguished and far-sighted committee, you will be able to come forth with a catalytic effort which will produce the end we want.
Thank you very much.

William H. Smith, Chairman, Clinton Conservation Commission:
I will be more brief if I read this very brief statement. There are approximately two dozen Connecticut towns which are contiguous with the Long Island Sound. Each of these towns has an asset unshared by all inland Connecticut communities. This asset is shoreline character. Shoreline character or "coastal color", if you will, results from many factors. Primary among these, however, are beaches, boats, seafood and tidal marshes or wetlands. Beaches, of course, provide a salt-water bathing experience to town residents and visitors. Boats enable thousands to sail, motor-about, fish, crab and generally enjoy the characteristically calm waters of Long Island Sound. In addition to pleasure boating, many shoreline residents and visitors enjoy watching commercial fishing and lobster boats move to and from their ports. The number of eating establishments specializing in sea-food attests to the popularity of this epicurean experience. The tidal wetlands provide numerous observational opportunities. The characteristic grasses provide a unique vista which contrasts in openness with the surrounding forest or man-made facility, and in verdant fullness with the bordering beach or rock outcrop. Views of the numerous animal residents of the tidal marsh, most importantly, perhaps, the birds, provide aesthetic experiences of unexcelled character. In addition to these direct contributions of tidal wetlands to coastal color, it is interesting to note their considerable indirect importance to the other components of shoreline character. Beaches, for example, may depend on marshes to protect them from erosion and restrict undesirable silt accumulations. Boaters who fish seek many species which are critically dependent on the tidal marsh for regeneration or food supply. Restaurants that serve local seafood are similarly indirectly served. Coastal color has been the primary factor which has attracted numerous families and individuals to Clinton. Clinton's shoreline appeal has drawn the young as well as the retired. The common interest of all has been to enjoy one or more of the advantages of living on the shore previously mentioned. Coastal color is, however, not only an important social force in securing permanent Clinton residents, but it is also a fundamental economic force in attracting tourists and summer residents. The population of our town nearly doubles during the summer.
months. This influx is, in large measure, attributable to coastal color. The money spent by visitors and part-time residents comprises a significant portion of Clinton's economic base. I have received innumerable letters from summer "short-timers" expressing their sincere concern over the stresses now impinging on our tidal wetlands. A recent letter to our Planning and Zoning Commission from a summer resident implored them to plan such that a particular view of the Indian River and adjacent salt-water marshes would never be violated. The writer suggested that people travel to Maine and Nova Scotia and even farther to vacation in places with scenes similar to the one he detailed. Progressive state legislation, for example SB 196, designed to protect the vitally important tidal wetlands will insure the continuance of coastal color in Clinton and other Connecticut shoreline towns. Thank you.

Sen. Lupton, 26th District: This is a serious question, I haven't heard anybody suggesting where we're going to park the boats. In other words, boating is growing enormously in this state. Boating takes place, a large part of it, along the shoreline. If we're going to protect all the edges of the mouths of the rivers, etc., has any serious thought been given as to substitutes for all these mushrooming arenas? Are you suggesting that we're going to have to do without them? Or is there a serious research been done and is there an answer?

Mr. Smith: Well, I can't speak as to whether there has been any serious research in that regards, sir, but I might suggest that boats are very well represented currently in Clinton. We have many, and it seems to me that, at some point, the boaters and the non-boaters in our town enjoy a certain quality experience with their boats. Either they fish, or they like to look at the scenery, or something. Now, it seems to me that much of that which they enjoy right now will, in fact, be destroyed, if there are no more tidal wetlands; for example, the fish, and for example the aesthetic appeal of just looking at a marsh.

Sen. Lupton: I agree perfectly, but what are you going to do if you have another 1,000 boats in Clinton?

Mr. Smith: I am sure that we will have sufficient marinas coming up that will provide 1,000 berths.

Sen. Lupton: Where are they going to put them? Further up
the river? I'm serious, where are they going to go?

Mr. Smith: I don't know where they are going to go. It is my point hopefully that they won't go on the tidal marsh. I don't think this legislation necessarily inhibits future marina development. I think it tends to control future marina development.

Sen. Lupton: You say it does, but my question is, have you made a study of this? In other words, can you recommend to the same authorities in the government who are interested in regulating boating, for example, as to how we are going to live together happily? If you don't have the answer, that's fine, and I appreciate it, but I wondered if anyone in this wetlands program has been thinking of what we always have to think of, which is the other side of the coin.

Mr. Smith: Well, I think that if we are saying that "who's worried about the boats?", I think that the boats are very well represented right now, and will continue to be represented.

Sen. Lupton: Quite true, but destructive to wetlands. They are very well represented, and they have been very destructive to the preservation of the wetlands. I'm looking for some answers because...

Mr. Smith: Well, I think that people charged, like yourself, with the over-view of the state must try and maintain a certain amount of diversity, must try and maintain a certain balance. I repeat that the boating interests have been well represented in this state. There are many boats. I wouldn't be concerned about planning where the future boats are going to go. I would be concerned about what is going to happen to the tidal marsh which is under enormous stress. It seems to me that people in the government must view the total picture. This is their, in fact, responsibility.

Mrs. Benjamin Nangle, Woodbridge: I am speaking for the League of Women Voters of Connecticut in support of SB 119. League members continue to be concerned with the need for preservation of tidal wetlands. Two years ago we presented a detailed statement on this subject to the Committee on Fish and Game. Since this statement still persists, I will present it to your committee as part of our written statement, and this we hope to do within the two weeks' period. It was to have arrived today but didn't. There are several
facets of a complete program of wetlands preservation. SB 119, which would define the boundaries of our tidal wetlands and give to the Commissioner of Agriculture and Natural Resources the responsibility of regulating their use, is an important first step. The Commissioner would have the benefit of reports from various natural resource agencies as well as the local conservation commission. We do feel, however, that the bill should be strengthened in regard to administrative procedures as outlined by the Save the Wetlands Committee and therefore recommend that these be incorporated in SB 119. One of the most important considerations in this program is the appropriation needed to carry it out, currently estimated at $150,000 yearly. We strongly urge the authorization of this amount. Thank you for the opportunity to comment on a matter of such importance to the welfare of the state.

Now, I am reading this for Betty Brown. I would like to briefly say something for myself. I'm Chairman of the Woodbridge Conservation Commission, though not speaking for them. I'm in favor of SB 119. I think that a terminal date for the mapping would be an improvement. I like the provision to include the areas adjacent to the interface between fresh and saline water drainage, which is of course vital area, as Mr. Niering has so well said. I like having the applications go first before the Board of Fisheries and Game, Shellfish Commission, the Soil Conservation, the Department of Agriculture and Natural Resources, instead of to the Water Resources Committee which is more or less primarily concerned - well, the bill, as it says now, the dredging and filling bill, is navigable waters; that that is the area instead of the ecological approach in that area. Then I like very much the fine. Also added to the fine is that they should be liable for the cost of restoration of the wetlands, if anybody dredges or fills without a permit, because this is often the vital area that they dredge and fill, and then say, "well, isn't it too bad". I would like to say something, and this is for myself, Mr. Lupton, not for anybody else. You were asking about the - I'm afraid that the wetlands people, being one of them, who feel that everything should be saved. At the Federal Water Pollution Control Administration's hearing in August in Hartford, I raised the question whether, since some areas in the state were not already polluted by marinas - I was thinking of (I hate to mention it because I have friends here; I think I won't). But there are some areas which are already in a pretty desperate case, and of not tremendous
value ecologically speaking, that perhaps we could concentrate on some areas and say, "you are more marina oriented than you are marsh oriented". People drive so much now that driving fifteen miles more to the east or to the west wouldn't make all that difference, and I think we could set up the spoiled areas, perhaps.

Sen. Lupton: I want to thank you for that. I think that I was thinking specifically, since I don't mind mentioning places, of one in my own district, Westport Harbor, which has been badly hurt by both sanitary land-fill operations and marinas and yacht clubs, etc. And I believe, boating being so popular and growing so much in popularity, that we're going to have to find practical answers, so that the two can live together. Can we move farther upstream for our marinas? Is this practical, and isn't it possible that the wetlands people can tell us this than anybody else?

Mrs. Nangle: This seems to me, perhaps, an approach that can be tried. If the rivers could be purified again, marinas anchored out on an off-shore island, perhaps an man-made island, I'm just reaching for things.

Sen. Lupton: Well, at the Westport Municipal Dock Harbor, we have been finding that more and more mechanical equipment is being used; more and more boats are being parked up on public land. Possibly this is the answer. We'll have more mechanism and more of our boats will be on the Sound shore.

Mrs. Nangle: I would like to hear Mr. Niering and others informed speak on this. Thank you.

Rosell Hart, Sharon: Before I represent my organization, I have a suggestion and the answer to Senator Lupton's question. Assuming that the shore is a straight line, which it definitely is not, but at any rate it has only one dimension, I think, comparing that idea with the very elaborate marinas that you have in California and in Florida and in places like that, that we can go out into deeper water for storing some of our boats. It's just a thought, sir. I represent the Housatonic Audubon Society with a membership of over 700, which urges support of Senate Bill No. 196, The Preservation of Tidal Wetlands. Man is dependent on his environment, as is wild life on the same environment. As soon as we destroy or remove a sector of that environment, we break the ecological chain, affecting other segments
of our environment. Coastal wetlands are among the most productive areas on earth, producing as much as ten tons of plant bulk per acre per year. Yes, we can do better on our farms, but not without special see, fertilizer, and much sweat. Wetlands are essential to the food chain that nourishes life from the oyster to the whale, from the crustacean to the grizzly bear. Marshes produce oxygen in an era of air pollution, and are a part of the control of floods. Connecticut has already lost more than half of its tidal marsh lands, and the remaining acreage is threatened with destruction by private interests. Effective legislation for the protection of coastal wetlands is imperative now. Thank you.

J. Stanley Quickmire, Jr., Northeast Field Representative, National Audubon Society: I prefer to read my short statement, which would be faster than speaking. Dear Mr. Chairman, all of us in the conversation business know that, next to water pollution, the next greatest abuse of our natural resources in Connecticut is the destruction of our tidal wetlands. The National Audubon Society with over 5,000 Connecticut members are for any bill that will protect our remaining wetlands for future generations, whether it be Senate Bill 196 or House Bill 611. We are also for Senate Bill 149 introduced by you, Senator Buckley, if it is amended so that all wetlands are subject to protective regulation. There is enough scientific information, a lot of it given here today, to substantiate our position that the remaining wetlands are vital to our economy, recreational uses, wildlife values, and for aesthetic beauty. We must have laws this year. Two years from now when the Legislature meets again, it may be too late. Thank you very much. One comment concerned with boating - I think if there is more individual boat ramps, many of the interested boaters with small boats could bring them to and from the water each time, instead of parking them there at the water. It might help. Just have the large boats that can't be easily hauled. Thank you.

Kenneth Jansen, Chairman, Madison Conversation Commission: Mr. Chairman, members, I'd like to speak very briefly on behalf of all of the bills that I have heard so far with reference to saving wetlands. There is no question but what it needs to be done. The time is now, and all of the bills that I've seen so far hold some element that makes them satisfactory as bills in themselves, but a combination of all of these perhaps
would make a better bill. I also understand that there a number of other bills which have not been published, which are not yet available, and our Conservation Commission has decided that we would like to wait until these bills are available, and we will give you a detailed review of how we feel the bills should be constructed, which ones have strong points that are important to us, and which ones perhaps fail to meet the standards that we would like to see set. I think that the technical information that has been presented just makes it unthinkable that you would not be acting on behalf of legislation which would save our wetlands. I think that, if you saw yesterday's WALL STREET JOURNAL and read the column on the far right hand side of the journal, you'd see what happens when people fail to recognize the responsibility to preserve some of the natural things that they have been given. In fifty years, we have managed to destroy or virtually destroy Lake Erie. Let us not destroy the wetlands that border Long Island Sound. They're too important to us. Now, if I may just a moment, Senator Lupton, I suppose that it's inconceivable that somebody else would have thought of the boating aspect, especially when he is an ardent conservationist, but it seems that we have boaters in Madison, as well as conservationists, and sometimes they end up working in the lap of the Conservation Department, or the land trust. And, one of the things we've recognized is that there is a need for a study on behalf of the Commission, because at some point the boaters in our community who are not conservationists are going to say "what are you doing for us? You're trying to tie up all of the valuable marshes which we consider valuable for boating purposes." To date, the study hasn't gone very far, but we have concluded that there are many areas which are not marsh areas at present, but which are sheltered enough to permit, from an engineering standpoint, a good marina, and I think it becomes a matter of the quality of construction you're going to have. You can build a marina which is far better than that you can dredge out of a marsh land. You may do it off-shore; you may do it anchoring it to shoals that we have along the shore. You may find areas where there isn't any significant amount of tidal marsh, but there are high ridges and ledges, sharp areas that jut out into the water, and these are areas where the boater will find a haven, I'm sure of this; and there are other areas where, once we've had a chance to study the marsh situation and decide which one is im-
portant, perhaps we will be willing to forego this chunk of marsh for some other use. But, basically, to begin with we've got to save everything that is available at the moment. Urgency, as far as saving. Evaluate, we can take time. And I think, with respect to one of the bills, the one drawback we see, when you take time to map, is that you perhaps are not conserving during the meantime. We would like to have you conserve, then map, evaluate, and then go on and parcel out. Thank you very much.

George Milne, President, Woodbridge Conservation Trust: I have here a statement from our Board of Directors in support of Bill 419. Everything in it has been said before, so I won't repeat it. However, we are an inland town, our Trust consists of 326 members, and there is a very lively interest in this subject, and we're devoting our annual meeting to a town-wide program education on it in April of this year, and that meeting may well pass a resolution which will be forwarded to the Legislature in connection with this bill.

Chr. Buckley: Thank you very much. Sir?

Mr. Bowers; President, Connecticut Conservationists: Senator Buckley, members of the Committee, I am president of the Connecticut Conservationists, a group that worked for the bill that is now in operation requiring a permit for dredging in mud flats, and we definitely favor this extension of a permit power being required for dredging and filling on the marshes, and we certainly hope that, from the various deliberations that this Committee will do, that a bill will be forthcoming that will provide a stopgap measure. That is, that it will require somebody to come in and get a permit to fill the towns with their dumps or the individual making a house lot or other items that are much less needed for the long-range good of our citizens than preservation of the salt water marshes. I would like to just briefly indicate support for several things that have specifically been mentioned by several speakers here today. Certainly, I would have no hesitation about urging the $300,000 to provide for the staff to do the operation. It seems to me that 50 yards might very well be a typographical mistake, because anybody familiar with coastal marshes know that they extend in many places well beyond 150 feet, and to allow somebody to fill in to within 150 feet of the coastline would lose a great percentage of our salt water marshes. So, I think that must have been an oversight. The time for the bill to go into effect is quite crucial, the sooner the better, and I would think
perhaps July 1st would be excellent. If not, many other bills, most bills, as I understand the legislative process do go into effect on October 1st, and we would hope that this bill might go into effect on October 1st, 1969, rather than some later date. I'd like to respond very briefly also to Senator Gunther's question about composition of the board that would be issuing the permit. The Connecticut Conservationists, I might say, are not happy at all with the record of the Water Resources Commission. However, if that is the commission that is selected, we will do our best to present evidence to them as we have in the past, that permits should not be granted when we feel they should not be. I think that the idea of proposing a new group of individuals, particularly who might have some representatives from the conservation interests that have appeared here today, would be excellent protection for the general good. I think most of you probably realize that the people who come here today are not speaking for some vested interest, or for some individual viewpoint, but are speaking for the good of the entire citizenry of the state, as they go out with their boats and do their fishing or enjoy the scenic values. So, I would hope that you might give serious thought to a body that would have some representation of the broad spectrum type individual who is associated with conservation. I would also like to respond to Senator Lupton's question about what perhaps I might call private property rights. I think we are undergoing in the last thirty years a great encroachment upon traditional private property rights, with the concept of zoning at the local levels. What many of us are urging this commission and the other committees to seriously consider is a further encroachment upon private property rights, not for any light or flippant reason, but rather for one of the most basic reasons - that is, to preserve our basic resources which are not being preserved by the traditional private property rights that get into land owners of salt water marshes, as they now are. Along with Mr. Brennemen who spoke earlier, I am a member of the Conservation Committee of the State Bar Association, and, as he indicated, our group would be willing to work as a resource asset, if you might call it that, for this committee of the Legislature, to attempt as best as we can to give of our knowledge as lawyers who represent clients and have been familiar with land records and so forth, to work out the compromises that must be worked out, in order to
have the public interests, as well as the private interests, as well protected as possible. Thank you.

Chr. Buckley: Thank you. I would like to commend the Bar Association for their offer expressed through you and through Mr. Brennemen, and our counsel, Mr. Rotatari, has already been in contact with Mr. Brennemen outside the door. I am sure they both would appreciate your assistance. There will be continuing liaison between the two groups, and hopefully we'll work out a good bill. Thank you, sir.

Mr. Ronald McElheny, Conservation Committee Chairman, Natchaug Ornithological Society, Storrs: I've come here to read a very brief statement that the Society adopted at its last meeting this Friday. The citizens of Connecticut and indeed of this country are becoming increasingly concerned with the deteriorating quality and decreasing diversity of their environment. The problems of air and water pollution affect all aspects of our environment and are thus serious issues, but perhaps no problem is more immediate and critical than the direct and willful destruction of valuable and irreplaceable natural areas. The continuing loss of Connecticut's coastal marshes under the guise of progress and improvement is all too clear an example of this type of senseless destruction. The many direct and indirect benefits deriving from the existence of estuaries can be, and in fact have been in these hearings, enumerated in great detail, but it will suffice to note here that the fantastic productivity of fish and wildlife, the recreational and aesthetic value, and indeed the sheer economic usefulness of coastal marshes, have been well documented. There can be no question of the desirability or of the need to effectively protect this unique type of natural area. Thus the officers and membership of the Natchaug Ornithological Society strongly support Senate Bill 196, or House Bill 6185. The Preservation of Tidal Wetlands. We commend these bills to the State Development Committee, and we urge their prompt passage by both houses of the Legislature. In so doing, we are urging you to support the right of all Connecticut citizens to an environment of quality and diversity and to make this principle the public policy and law of this state.

Chr. Buckley: Thank you, sir. Anybody else? If the people don't choose to speak on these bills, of course
they may sign the registration statement here, signing their name and indicating for or against, and indicating the bill number. Now, any other bills that anybody did not have a chance to speak on before, they may do so now. Any of the bills that are on the list today...  Sir?

Mr. Robert Kunz, Connecticut Conservation Association: I just was stimulated by your remarks, Senator Lupton, and I would comment that it is perfectly obvious that our planet is finite, that we haven’t found a way to add any space to it, and a lot of our natural resources are coming under extraordinary pressure because of our growing population. Most often, you can’t put two pegs in the same hole, and some of our resources like tidal marshes do not lend themselves to multiple use, because there is no more tidal marsh if you dredge it. I think the time for any further compromise in tidal marsh lands has gone by, if you consider that we have already been, or our marshes have been compromised by more than 50%. Thirdly, and I would like to leave the Committee with this thought, that marinas are nice and beaches are nice, but these are not comparable values with tidal marsh lands, as I’m sure you understood from Dr. Niering’s testimony, and, if you have an opportunity to read our Coastal Wetlands Crisis, the productivity and other uses of marshes are described there. It’s just not a comparable value in our opinion. Thank you.

Chr. Buckley: We have a statement from Commissioner Joseph Gill which generally is in favor of the marsh lands Bills 196, 119, and 6115 that will also be included in the record. I thank the Save the Wetlands Committee for their orderly and informative presentation. I am now happy that I exercised the prerogative of changing my mind, rather than let things wander off. I think that your presentation answered many of the questions and saved us a lot of statements from people who were just as earnest and sincere, but less well informed possibly on this subject. So, we appreciate your being here, and we will be in touch as you heard me say before, through your counsel; since we’ve heard the substance, now comes the question of issues and drafting those issues in proper legislative form. If nobody else cares to say anything, this hearing will be adjourned.

STATEMENT of Elizabeth S. Wallace to Sen. Stanley, 19th District: The Democratic Town Committee of Sprague, Connecticut would like to express their support for the Bill concerning the authorization of
bonds of the State for the Acquisition of property on the Shetucket River in the Towns of Sprague, Franklin, Windham, and Scotland for recreation purposes. The Town Committee plans to have a delegation from Sprague present at the Committee Hearing on said Bill. We also plan to contact the Towns of Scotland, Windham, and Franklin and encourage them to send delegations to the Hearing. Thank you for sponsoring this legislation which would prove to be beneficial to the Town of Sprague, surrounding towns, Eastern Connecticut, and ultimately the State of Connecticut proper.

STATEMENT of Joseph N. Gill, Commissioner of Agriculture and Natural Resources: Protecting the remaining tidal wetlands of our state has the highest priority among the many areas of concern of the Connecticut Department of Agriculture and Natural Resources. There is an urgent need for quick and effective action to preserve the approximately 10,600 acres of coastal marshlands which are not owned by the state. I am sure that the value of these wetland areas will be thoroughly documented by other proponents of wetland preservation and therefore I will not duplicate this other than to say that we concur completely with the concept that wetlands are among the most productive areas on the earth; that they are irreplaceable and should be retained in the natural state without alteration whenever it is possible to do so.

There is only one foolproof method for preserving wetlands and that, of course, is by acquisition for that purpose. The Board of Fisheries and Game, a member agency of the Department of Agriculture and Natural Resources, has requested $1,350,000 in capital funds for the coming biennium to continue its program of acquisition of tidal wetlands for purposes of conservation and outdoor recreation. In addition to 4,200 acres presently owned by the state, the Board of Fisheries and Game would like to acquire another 7,100 acres of tidal wetlands which are now privately owned. This would leave only 3,500 acres of the total of 14,800 acres of tidal marshland remaining within our state. Hopefully, these 3,500 acres will be acquired by shore towns and private conservation organizations. There is strong pressure from many sources to utilize tidal wetlands for purposes completely inconsistent with their preservation as marshes. This pressure will continue to mount in the future, and demands for varying uses of privately-owned wetlands cannot be summarily dismissed without careful and judicious consideration. In a democracy, such as
The interests of the general public are extremely important and should be observed whenever possible. Conversely, however, the rights inherent in private ownership of land also deserve protection. Certainly a long chain of judicial decisions have supported the right of the owner of property to make profitable use of his land as long as that use is within reason. It is for this reason that we prefer outright acquisition of tidal wetlands over protection by regulation. It is more certain of attaining the desired result; it is not subject to adverse decisions by the courts, and it does not entail substantial and continuing administrative costs. On the other hand, we realize that we may not find it possible to acquire all of the wetlands which should be protected in the immediate future. In the interim, therefore, we should have a means of protection which will prevent the rapid and uncontrolled destruction of the tidal wetlands which remain in private ownership. Such protection is offered by the so-called dredge and fill bills which are under consideration by this honorable committee today. Senate Bill No. 196 and House Bill No. 6145 offer one proposal for the regulation and protection of marshlands and Senate Bill No. 419 provides a somewhat different means of accomplishing the same goal. We prefer Senate Bill No. 419 as the better of the two alternatives offered. We believe that it can be more effectively and economically administered than the structure contemplated by Senate Bill No. 196 and House Bill No. 6145. Nevertheless, we do not contend that either of these proposals is perfect and we are happy to leave the decision as to which method is best in your hands. I must lay stress on one point, however. And that is that no matter which version of dredge and fill law may be adopted, it will cost money to administer it properly. The best estimate which we were able to reach before enactment of one of these proposals into law is that it will cost in the neighborhood of $150,000 per year to provide the level of inspection and technical services which will be required. A dredge and fill law will only be as good as the quality of its administration and a poorly staffed and equipped enforcement division will not be able to accomplish the objectives which are the purpose of these bills to preserve our tidal wetlands.
STATEMENT of Myrtle P. Geis, 53 Sheahan Drive, Hamden, Conn.: As chairman of Conservation of the Hamden Garden Club in Hamden, Connecticut, I wish express my support of Bill SB #196, that is to be presented Feb. 11. The Garden Club, also, strongly backs this bill.

STATEMENT of Mr. and Mrs. Chester Parker, RFD #5, Norwich, Conn.: It has been brought to our attention that you are to introduce Bill #5631 designating Poquetanuck Cove area as a bird sanctuary. Our house is located on Route 2A on the opposite side of the road from Poquetanuck Cove. We have lived here for ten years and have been constant bird watchers in the surrounding area and the cove. A small area of wetlands and the cove is directly in front of our home and, when free of ice, is populated with several species of ducks, swans and young, and seagulls. Have seen blue heron and egrets on occasion and others. Muskrat and mink frequent the brook leading to this area from the Norwich Hospital reservoir, "so called". Any legislation to make Poquetanuck Cove a bird sanctuary will be a step in the right direction for the years ahead.

STATEMENT of Albert P. Steffenson, RFD #3, Preston City, Norwich, Conn.: I wish to express my support for HB No. 5634 "An Act Concerning the Establishment of Poquetanuck Cove in the Town of Preston as a Bird Sanctuary". Poquetanuck Cove in the Southern part of Preston is unique for several reasons. It is an inland brackish water marshland combined with open water over two miles in length as shown on the enclosed map. It is not only a nesting place and year round haven for ducks of various kinds, but also the summer and winter home, when not frozen, for dozens of Swans. These graceful birds must be allowed to live here without ever being disturbed by the shattering sound of gunshots. I have not read the bill, however, the heading refers only to Preston. As you will note by the map, half the cove is in Ledyard so that both towns should be included in the bill. This bill is a good beginning if we are to preserve anything of value for the future.

STATEMENT of Mrs. Chase Going Woodhouse, Chairman, Zoning and Planning Commission, Sprague: May I ask your favorable consideration for Senate Bill 581 introduced by Senator Stanley, an act concerning the authorization of bonds of the State for the acquisition of property on the Shetucket River in the towns of Sprague, Franklin, Windham and Scotland for recreational purposes. This park
on both banks of the Shetucket River is in the regional plan of the Southeast Regional Planning Agency which has been approved by the towns in New London County. It is also in the plan for the town of Sprague which was drawn up by the Rotival Associates in 1959. Currently the land is not expensive. One land owner has made provision for several hundred acres to go for a state park at her death. At least three other owners, of which I am one, would I am sure under certain circumstances donate land and I believe others could be persuaded to do so. This is a beautiful river valley, at present quite underdeveloped. Time, however, is important as already there is a proposal for a large sub-division in Sprague. In other words, within a relatively short time this property will be increasing in value and will be more difficult to obtain. It is needed for recreational purposes in this general area. I should be most grateful for your favorable consideration.

STATEMENT of Robert E. Pritchard, Attorney, Putnam, Conn.: Re Substitute Bill 5339. I have been informed that because of the weather conditions around Hartford I would be allowed to supplement the testimony of Charles R. Moore concerning the above bill before your committee today. The purpose of this bill is to allow the State Department of Fish and Game to quit-claim to certain abutting property owners a piece of land 40 feet wide crossing property of the Whiteheads. The parcel involved is shown on a certain map entitled "Relocation of Hall's Pond Road Eastford, Conn." which I enclose. The genesis of this problem is as follows: Back in the 1870's land was acquired by the Chaplin Paper Company for the purposes of raising a dam and creating what is now known as "Hall's Pond" in Eastford and Ashford. Subsequently a dam was raised and the property involved was flooded. This effort apparently exhausted the Chaplin Paper Company financially as they went bankrupt very soon afterward. The Chaplin Paper Company property was purchased by people named Hall. About this time the Town of Eastford discovered that in the process of raising the dam and flooding the property a town road had been inundated. The Town of Eastford then went to Hall the now owner of the dam and pond and demanded that he undertake to relocate the highway at no expense to the Town. Hall was unsuccessful in getting any abutting property owners to consent to the creation of an easement across their property for the new highway. He
was forced to purchase a 40 foot piece of land upon which the new highway was, in fact, located. The situation remained this way until 1946 at which time the Town of Eastford relocated the highway established by Mr. Hall. This relocation was illegally made in that none of the abutting property owners gave the Town permission to relocate on the new easement line. In the 1950's the State Fish and Game Department succeeded to all of the land that was originally owned by the Hall interest including the 40 foot roadbed. The property owners abutting in this area (who are various members of the Whitehead family) are now faced with the situation where there is no possible way to go from their homes to the highway without trespassing on property belonging to the Fish & Game Department. We have discussed this matter with Mr. George Hancock, Chief of Bureau of Land Acquisition in Fish & Game. He states that he will recommend that the land be quit-claimed if the Town of Eastford will agree to maintain the highway. Apparently another obligation that Hall assumed at the time he purchased this piece of roadway was the obligation of maintaining the highway. The Town has agreed to maintain the remainder of the road and free the Fish & Game Department from whatever obligation they might have in this capacity. In point of fact, the Town has been maintaining the road as a town road for a number of years. At Mr. Hancock's request the Town of Eastford plans to make this matter part of the call of the next town meeting which should be held during the month of April. For the above reasons we respectfully request your committee to report this bill favorably. I am counsel for the Town of Eastford and would state that the procurement of this bill is a joint effort on behalf of both the Town of Eastford and the Whiteheads and is apparently the only means of correcting a rather serious title problem.

STATEMENT of Sen. Jackson, 5th District: Senate Bill No. 196 dealing with the preservation of Tidal Wetlands is one of the most important bills your Committee will consider during this session of the General Assembly. Let us remember that wetlands cannot be created and that what we have left is all we shall ever have. Every acre dredged, filled and converted into a marina or other use is gone forever. We have already lost one-half of our original wetlands and we must act now to see that we do not lose the rest. Our wetlands supply nutrients to fin fish and shellfish and are vital to the preservation of the delicate balance nature has so painstakingly supplied. We must be
concerned because the rapid pollution and filling of marshlands is causing irreparable harm to the land-sea balance of wildlife. Our vanishing shorelines, our dying marshes and our fouled rivers and streams also create a severe burden on our fishing industry and its ability to supply the needs of our increasing population in the future. I don't believe we want our children to remember us as the generation that despoiled this natural treasure. The Tidal Wetlands Bill is designed to provide the Water Resources Commission with the tools to see that this does not happen. I trust that your Committee will take favorable action on this most worthwhile project.

STATEMENT of League of Women Voters of Conn., Hamden, Conn.: Re SB 149, wetlands preservation, excerpts from the League statement, dated 3/29/67, presented to the Fish and Game Committee, on the need for preservation of coastal wetlands. League members have just completed a year of study and evaluation of programs dealing with Connecticut's land and water use. We support state policies and programs which promote comprehensive long-range planning for conservation and development of land and water resources. Such planning should consider the interrelation of our natural resources with each other as well as their relation to the needs of our growing population. The Leagues gave priority to enforcement of regulations to improve water quality and establishment of a program for acquisition and preservation of open space land, including wetlands and tidal marshes, and have 57 local Leagues and over 6,000 members in Connecticut at present. Some typical comments by local Leagues in support of this position were:

Bloomfield--"We do not wish to see wildlife, wetlands and parks exploited without safeguards."

Branford--"Legislation similar to that in Rhode Island and Massachusetts should be enacted immediately to save our remaining wetlands."

Enfield--"Protection of marshlands is an economic investment for fish and shellfish protection and for recreation."

Fairfield--"There is a need for educating the community on the value of wetlands."

Greenwich--"Agreement was general that top priority must be given to the acquisition of wetlands, especially salt marshes before they disappear forever. Members would be delighted to see the state able to acquire these lands through conservation restrictions or through gifts, but would be strongly in favor of state purchase if necessary."

Hamden--"We believe that there must be absolute protection for wetlands and tidal marshes designated by the state and that existing regulations be strictly enforced."
The strong enforcement and fines found in Massachusetts and Rhode Island are urged for Connecticut. "Mansfield--"Connecticut should have wetlands protection, coastal and inland. Suggestions would be state ownership in some cases and authorization for the state to impose restrictions on dredging or filling coastal wetlands." Newington--"Acquire wetlands and open space or regulate their use." Southington--"Connecticut should have a long range policy and laws to prevent destruction of salt marshes." Westport--"Support of a state statute that would preserve the remaining Connecticut wetlands and allocation of necessary funds to implement the statute."

"Support of the extension of the eminent domain principle so that the state can be more influential in conservation efforts." The first inventory of Connecticut coastal wetlands in 1914 gave the area as 36.5 square miles or 23,360 acres. In 1951, only 17,018 acres remained. During the five-year period from 1954 to 1959, 1,091 acres were lost. In 1961, only 14,839 acres remained. In recent years, about 218 acres of tidal marsh have been destroyed each year and, thus, while the area lost per year was relatively constant, the rate of destruction in terms of percentage of the remainder has been rising steadily.

We are concerned about the rapid loss of our coastal wetlands because they have value as breeding ground for fin-fish and shellfish and contribute to the productivity of adjacent waters. From these marshes come the basic nutrients that start the food chain which ultimately support large numbers of fish and shellfish in the surrounding estuaries and bays. They are important for insuring survival of Connecticut's commercial fishing industry and to provide food for our expanding population. Nearly 60 percent of the national harvest of seafoods is estimated to be dependent upon estuaries and coastal marshes, which also have important recreational, aesthetic, and ecological values. They are excellent feeding and nesting areas of migratory birds and are of value in protecting life and property from loss in flood or hurricane because of their ability to act like sponges and absorb great quantities of excess water. Tidemarsh ecology is a new science and the importance of coastal marshes is rapidly gaining recognition by a large section of our population. It has been estimated that nature required up to 10,000 years to build some of our marshes. It is an unfortunate fact that we often reach an understanding of the value of a natural resource only after the resource has been damaged beyond repair or is gone completely.
The pressures for destruction of these valuable marshes is increasing. Our growing population needs more space for water-based recreation, more marinas, more beaches and larger parking areas near the beaches. Marshes and flats are filled for housing and industrial developments. In many places the fill is dredged from biologically rich shallow waters. Too often the value of the marsh lands for future generations is overlooked through ignorance or poor planning. We believe that a program for preservation of the coastal wetlands must be established immediately.
Complete Statement of Katharine R. Nangle: I am Mrs. Benjamin Nangle of Woodbridge and wish to speak in favor of HB 6179 on the regulation of Connecticut wetlands. This bill would supplement those previously introduced, SB 196 and SB 119. It seems to me imperative that some knowledgeable body, such as the Department of Agriculture and Natural Resources, make some judgment between the marina interests and those who wish to preserve the few remaining salt marshes. As soon as possible this body should identify all of the valuable areas and reserve them for protection while in the meantime there should be a moratorium on draining and dredging and filling. Marinas are needed and they must be in protected spots but this does not mean that they should preempt every estuary. They should be clustered in areas which are already so badly damaged ecologically that they are unfit for other purposes. Oil and gasoline in the water give shellfish an unpleasant taste and color and human waste is absorbed by them to the point where they can cause hepatitis. If there has been dredging and filling the chain of life for finfish and shellfish has been damaged. These areas are ecologically lost, their location should be determined, and they should not be permitted to multiply in such a haphazard fashion that the Connecticut shore represents a marine version of the Berlin Turnpike. This concept leads to the idea of zoning. Is it not high time that we had some kind of coastal zoning so that the shore areas would receive the highest and best use? Should the rich chain of life be lost forever so that someone can make a quick dollar? Should the thousands who wish to swim be denied the enjoyment of a clean beach? The idea of Town Zoning is increasingly accepted as the upsurge of property values following in its wake demonstrates its validity. Would it not be wise to apply it now to our whole shoreline so that we can preserve that quality environment which is such an asset to Connecticut and which we value so highly? I was interested in the desire for tourism. What worries me is we get the tourists here and then what do they see. That's why I think it's so important to have these areas set aside, that this is going to be the marsh lands. Coming from Indiana I appreciate the marshes of Connecticut perhaps more than those of you who see them frequently and this lovely irreplaceable sight is something to come to see and if it's just a marina here an estuary here a marina here as I said it's going to turn into a Berlin Turnpike. Thank you.

Chairman Buckley: Thank you very much. Anybody else on 6179?

Mrs. Harry Shore, Chairman, Mill River Wetland Committee: I'm just not speaking for 6179 itself but this bill as it comprises an important part of all the legislation including your