

U B L I C      H E A R I N G

before

ASSEMBLY MUNICIPAL GOVERNMENT COMMITTEE

on

Assembly Bill 1819  
(Storm Water Management)

Held:  
May 18, 1979  
Freeholders Meeting Room  
Bergen County Administration Building  
Hackensack, New Jersey

COMMITTEE MEMBERS PRESENT:

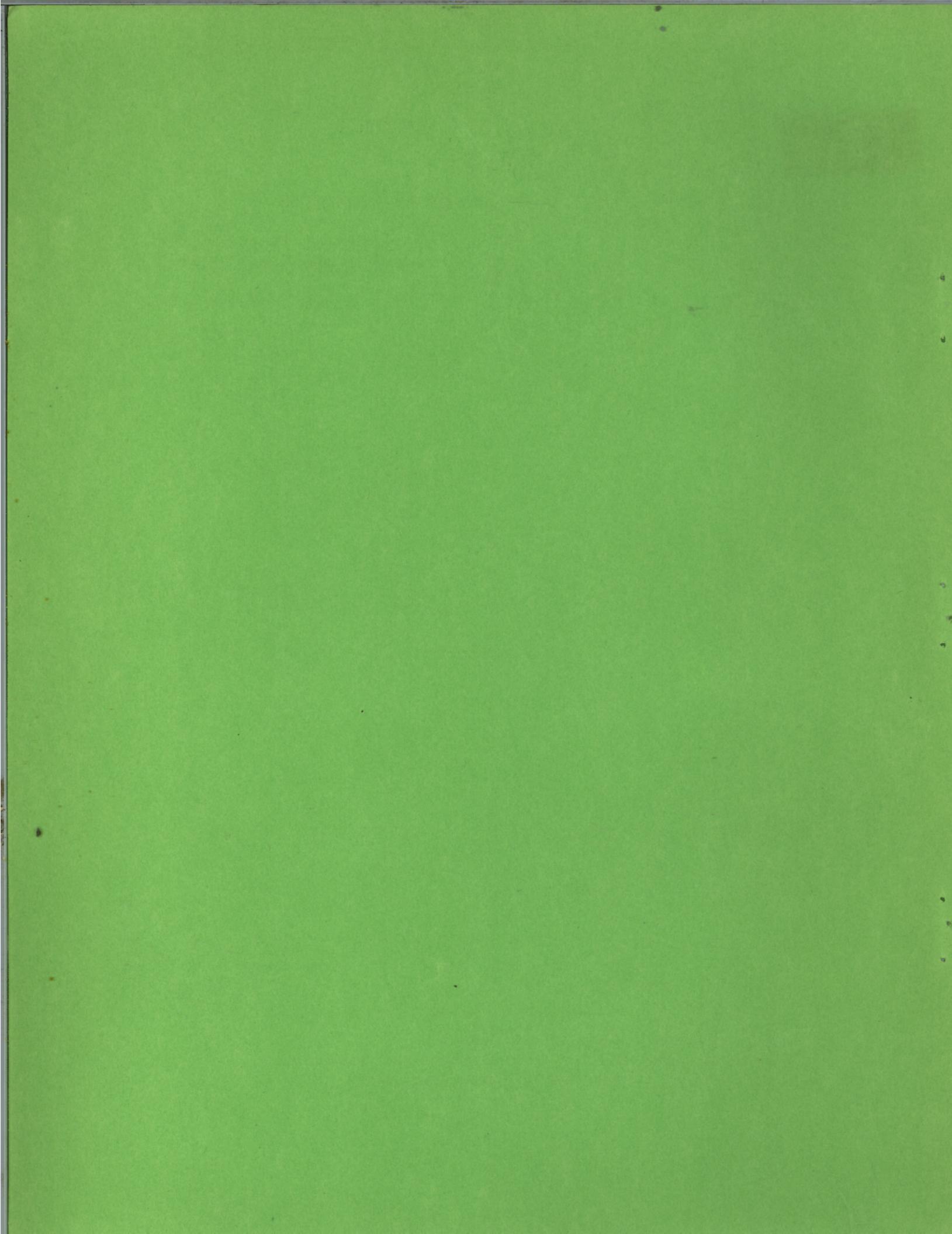
Assemblyman Vincent O. Pellecchia (Chairman)  
Assemblyman W. Cary Edwards

ALSO:

Assemblyman John A. Girgenti  
District # 35

James L. Wunsch, Research Associate  
Division of Legislative Information and Research  
Aide, Assembly County Government Committee

\* \* \* \*



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**ASSEMBLY, No. 1819**

**STATE OF NEW JERSEY**

INTRODUCED NOVEMBER 22, 1978

By Assemblymen EDWARDS and KERN

Referred to Committee on Agriculture and Environment

AN ACT concerning the development and enforcement of storm water management plans by every municipality in the State, creating a State aid program, supplementing the "Municipal Land Use Law," approved January 14, 1976, P. L. 1975, c. 291 (C. 40:55D-1 et seq.)\*\*[], and making an appropriation.]\*\*.

1     BE IT ENACTED by the Senate and General Assembly of the State  
2     of New Jersey:

1         1. Every municipality in the State shall prepare a storm water  
2     management plan and a storm water control ordinance or ordi-  
3     nances to implement said plan. Such a storm water management  
4     plan shall be completed within 2 years of the effective date of this  
5     act and shall be \*【revised at least once every 5 years thereafter】\*  
6     \*reeexamined at each scheduled reexamination of the master plan  
7     pursuant to section 76 of P. L. 1975, c. 291\*. Such a storm water  
8     control ordinance or ordinances shall be adopted within 1 year of  
9     the completion of the storm water management plan and shall be  
10    revised thereafter as needed.

1         2. Such a storm water management plan shall be an integral part  
2     of any master plan prepared by that municipality pursuant to  
3     section 19 of P. L. 1975, c. 291 (C. 40:55D-28). Each municipality  
4     shall coordinate such plan with any storm water management plans  
5     prepared by any other municipality or any county, areawide agency  
6     or the State relating to the river basins located in that municipality.

1         3. A storm water management plan and a storm water  
2     \*【maange-】\* \*manage\*ment ordinance or ordinances shall be  
3     designed: a. to reduce flood damage, including damage to life and  
4     property; b. to \*【prevent any increase in】\* \*minimize\* storm  
5     water runoff from any new land development \*where such runoff  
6     will increase flood damage\*; c. to reduce soil erosion from any

**EXPLANATION**—Matter enclosed in bold-faced brackets [thus] in the above bill  
is not enacted and is intended to be omitted in the law.

7 construction project; d. to assure the adequacy of existing and  
8 proposed culverts and bridges; e. to induce water recharge into the  
9 ground where practical; f. to lessen nonpoint pollution; and g. to  
10 maintain the integrity of stream channels for their biological  
11 functions, as well as for drainage. A storm water management  
12 plan shall also include such structural changes and such additional  
13 nonstructural changes as may be necessary to manage storm water.  
14 For purposes of this act "nonpoint pollution" means pollution  
15 from any source other than from any discernible, confined and dis-  
16 crete conveyance, and shall include, but not be limited to, pollutants  
17 from agricultural, silvicultural, mining, construction, subsurface  
18 disposal and urban runoff sources.

1     *\*4. The Commissioner of the Department of Environmental  
2 Protection may upon application by any municipality grant an  
3 exception from the requirements of section 3 of this supplementary  
4 act provided that the commissioner shall determine that such ex-  
5 ception will not increase flood damage or nonpoint pollution within  
6 or without the municipality.*

1     *5. Every municipality shall submit a storm water management  
2 plan and implementing ordinances adopted pursuant to this act  
3 to the county planning agency or county water resources associa-  
4 tion, as appropriate. No plan or ordinances shall take effect  
5 without approval by said agency or association. Said agency or  
6 association shall approve, conditionally approve, or disapprove  
7 said plan or ordinances in regard to their compatibility with  
8 applicable municipal, county, regional or State storm water man-  
9 agement plans. No storm water management plan or ordinances  
10 shall be approved which are contrary to recognized storm water  
11 management principles. The agency or association shall set forth  
12 in writing its reasons for disapproval of any plan or ordinance,  
13 or in the case of the issuance of a conditional approval, the agency  
14 or association shall specify the necessary amendments to the plan  
15 or ordinances. Any plan or ordinance approved pursuant to this  
16 section shall take effect immediately. Any plan or ordinance con-  
17 ditionally approved according to this section shall take effect upon  
18 the adoption by the governing body of the amendments proposed  
19 by the agency or association. Where the agency or association  
20 fails to approve, conditionally approve, or disapprove a plan or  
21 ordinance within 60 days of receipt of the plan or ordinance, the  
22 plan or ordinance shall be considered approved.\**

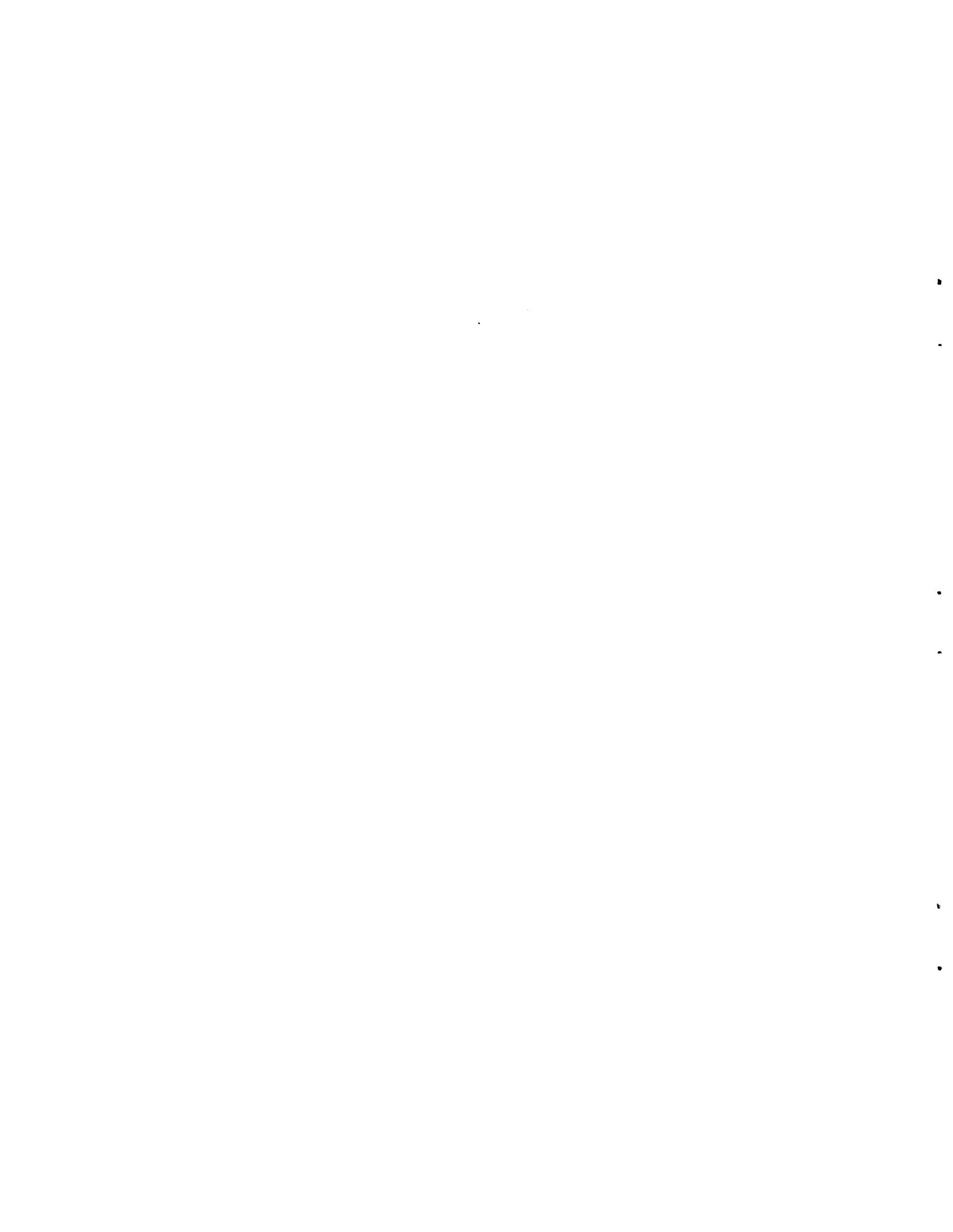
1     *\*[4.]\* \*6.\* The Commissioner of Environmental Protection,  
2 subject to available appropriations and grants from other sources,  
3 is authorized to make grants to any municipality, county\*, county*

4 *planning agency or county water resources agency\** or other  
5 regional agency authorized to prepare storm water management  
6 plans. The commissioner shall prescribe and promulgate, pursuant  
7 to law, procedures for applying for the grant and terms and con-  
8 ditions for receiving the grant. \*\*[The State's contribution shall  
9 not exceed 50% of the cost of preparing any such storm water  
10 management plan.]\*\*

1     *\*7. Counties, county planning agencies and county water re-*  
2 *sources associations shall be authorized to provide technical assist-*  
3 *ance and planning grants to municipalities to assist in the prepara-*  
4 *tion and revision of municipal storm water management plans and*  
5 *implementing ordinances pursuant to section 1 of this supplemen-*  
6 *tary act.\**

1     \*5.]\* \*\*[\*8.\* There is hereby appropriated \$1,000,000.00 to the  
2 Department of Environmental Protection from the Flood Control  
3 Fund created pursuant to the "Emergency Flood Control Bond  
4 Act," (P. L. 1978, c. 78) for the purpose of providing planning  
5 grants to \*municipalities,] counties \*[and other regional agen-  
6 cies]\*, county planning agencies or county water resources  
7 agencies\* as authorized herein.]\*\*

1     \*6.]\* \*\*[\*9.\*]\*\*\*8.\*\* This act shall take effect immediately.



ASSEMBLY MUNICIPAL GOVERNMENT COMMITTEE

STATEMENT TO

**ASSEMBLY, No. 1819**

with Assembly committee amendments

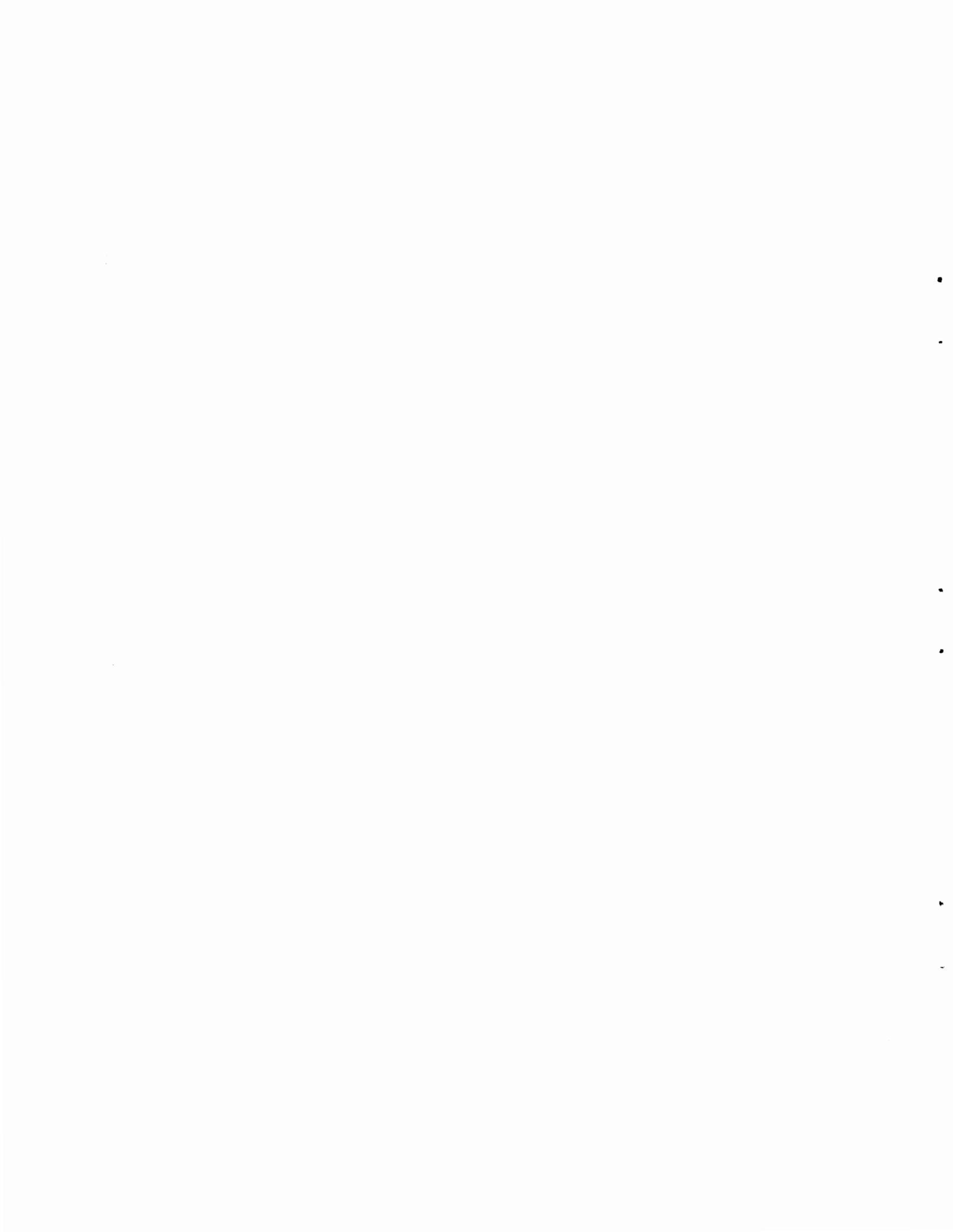
**STATE OF NEW JERSEY**

DATED: JUNE 11, 1979

This bill, as amended by the committee, requires every municipality to formulate a storm water management plan to reduce flood damage, to minimize the increase of runoff from new land development, assure the safety of bridges and culverts, induce water recharge into the ground, lessen nonpoint pollution, and maintain the integrity of stream channels. The municipality would be given 2 years from the effective date of the act to complete a plan and an additional year to adopt ordinances implementing its provisions. No plan or ordinances would become effective without the approval of the appropriate county planning board or agency. The Commissioner of the Department of Environmental Protection would be authorized to grant exceptions to storm water plan requirements where the commissioner determined that such exceptions would not increase flood damage or nonpoint pollution. Storm water management plans would be revised along with the municipal master plan.

This bill appropriates \$1 million from the "Emergency Flood Control Bond Act" to assist county planning boards in providing technical assistance and grants to municipalities adopting plans and ordinances pursuant to this act. In addition, the State is authorized to contribute up to 50% of the cost of preparing storm water management plans.

The committee recognizes that notwithstanding generous provision for planning grants, this bill imposes new expenses on municipalities. Ordinarily the committee would not report such legislation at the time of considerable financial distress. It is the opinion of the committee, however, that failure to adopt this legislation will result in additional flooding costs far in excess of the costs of implementing this bill.



ASSEMBLYMAN VINCENT PELLECCHIA (Chairman): Good morning. This hearing is called to order. I am Ozzie Pellecchia, Assemblyman from the 35th District, Passaic County, and Chairman of the Assembly Municipal Government Committee.

I want to thank the Bergen County Freeholders for permitting us to meet in their elegant chamber.

We are here to consider Assembly Bill 1819 which deals with one of the major problems of this State, flooding. Although we have other flood control bills pending in the Legislature, this bill is the only one which puts direct responsibility for flood control planning on the municipalities themselves. This bill mandates such planning for all New Jersey municipalities. It will naturally stir debate. The Committee, in its deliberations, will be obliged to weigh the municipal responsibility for flood planning against State, county and regional efforts.

This hearing will provide the Committee with the kind of information it will need in considering whether to report the bill next week.

Assemblyman W. Cary Edwards of our Committee is the sponsor of Assembly Bill 1819 and it is both appropriate and customary for me at this time to permit him to chair the hearing. Assemblyman Edwards.

Before I turn the chair over to Assemblyman Edwards, I'd like the record to show that my own colleague, John Grgenti, from Passaic County, who is not a member of this Committee, has seen fit to come here and sit in on the meeting and give his support or whatever information he can to help this Committee to make a determination. I appreciate your coming, John.

Now I would like to turn the chair over to Assemblyman Edwards who would probably be more apt to present the facts as they really are and ask the questions that are necessary to give us this information.

ASSEMBLYMAN W. CARY EDWARDS: Thank you, Ozzie.

We meet today to consider an audacious idea: that municipal master plans, as a matter of course, should make provision for the control of storm water runoff to prevent flooding.

Audacious? Of course, I am joking. What I do find audacious is that an allegedly sophisticated master plan, conforming to all manner of State and even federal regulations, can be signed, sealed and delivered while making absolutely no provision to prevent or to minimize the disastrous consequences of that most commonplace of natural disasters--the flood. Let me remind you of what we have been through in this State over the last 11 years. In May, 1968, floods caused \$130 million in damages from Middlesex County northward through Bergen County; Hurricane Doria in 1971 cost the State \$140 million; relatively minor flooding in May 1972 caused at least \$20 million in damages and late summer storms that year cost another \$70 million; two sudden storms in July 1975 were responsible for damages in excess of \$70 million. On November 7th and 8th, 1977 a nine-inch rainfall cost \$94.1 million in property damage. Those statistics come from the "County and Municipal Study Commission. Flood Control Management: An Overview of Issues and Responses." It was printed in 1977.

May I suggest that Assembly Bill 1819 is long overdue?

This bill requires every municipality in the State to formulate, as part of its master plan, a storm water management plan, to reduce flood damage, prevent increase of runoff from new land development, assure the safety of bridges and culverts, lessen pollution and maintain the integrity of stream channels. The municipality would be given two years from the effective date of the act to complete such a plan and an additional year to adopt ordinances implementing its provisions. Storm

water management plans would be revised at least once every five years. The State would pay up to 50% of the municipal cost for formulating the plan and to that end, the bill carries a \$1 million appropriation.

I know that sounds like a lot of money, but what is a million dollars compared to the half billion in losses which we have sustained over the last decade?

Let me anticipate a few objections to this bill. We will be told, I believe, that municipalities ought to wait, hold back on their storm water runoff planning until the State Department of Environmental Protection and the counties formulate their own coordinated flood control plans. I have no quarrel with the State and county planning efforts in this area. It is absolutely necessary. What I fail to understand is why planning at the municipal level should be held up. The master plan is the perfect mechanism for immediate planning action to prevent storm water runoff. And how indeed can a planning board even pretend to conduct a thorough site plan review without considering water runoff problems? Planning boards do discuss drainage problems, but rarely within the context of any water runoff plan. Municipalities ought to have formulated such plans ten or fifteen years ago. Since most do not have plans now, they had better get started and the sooner the better. If the municipal master plan and ordinances must be revised to conform to State and county rules, this can also be done. But why wait around two, three, or four years until the State and the counties get their act together?

It should be pointed out that thanks to the foresight of men like Ken Marsh in Union County certain municipalities, on their own initiative, have adopted storm water control and zero runoff ordinances. Unfortunately, these will probably be challenged in the courts as unfounded, arbitrary, and capricious precisely because we have no Assembly Bill 1819 on the books.

In conclusion, let me say that this bill is not written in stone. This hearing is being held to help us improve it. I welcome any and all suggestions and promise that they will be seriously considered. The bill will be on the agenda for the Municipal Government Committee meeting on May 24th in Trenton.

I think the most appropriate thing at this time would be to call the first witness that we have and it is Mr. Hugo Munzer, the Secretary of Bergen County Planning Board.

H U G O M U N Z E R: Assemblyman Pellecchia, Assemblyman Edwards, Assemblyman Girgenti, Mr. Wunsch, thank you for holding this hearing and giving us the opportunity to be here before you today to speak on behalf of this piece of legislation. My name is Hugo Munzer. I reside at 10 Pequot Path in Oakland, Bergen County. I am here today representing the Bergen County Planning Board of which I am a member and a secretary. I am also a member of the Oakland Planning Board, past chairman, and present secretary. In my remarks to you gentlemen--since I am wearing two hats--I will intermix between my municipal planning board and the county planning board.

As Assemblyman Edwards said, "This bill is long overdue." For many years, storm water management was "get it off the property into the nearest stream or channel" and "get it away from us and let it go." Of course, there is always somebody down stream. No matter where you are there is somebody down stream and they were getting it. I don't think I should have to go into the problems. I think you are all aware of them in your districts. I'm from Passaic County and I think I know as well as you two gentlemen what problems lie in the Mollyann Brook, in Prospect Park, in Haledon, in Paterson, North Haledon, in fact, in the whole county. Of course, in Bergen County, Assemblyman Edwards, you are very aware of it--Oakland is the home of floods. I'm

pleased to state that Oakland is one of the few towns in Bergen County which has adopted ordinances in the implementation of its new master plan which is based on a zero runoff retention-detention system. They are in effect and so far they are working. They were just put in a few months back. Already we have had before us an incident in which the developer is going to comply with our rather strict and stringent ordinances.

The Bergen County Planning Board by resolution has supported A-1819. We are in favor of it. Presently the Bergen County Planning Board has adopted a resolution on a test basis for six months on retention-detention. I feel it does not go far enough; it is not strong enough. But I endorse the concept of it and it certainly is a step forward. We can no longer permit just putting it into the nearest channel, taking care of your problem, maybe worrying about the next problem, and moving on to the next development. The concept of this legislation is good. Both boards do endorse it. If you have any questions, I would be glad to respond

ASSEMBLYMAN EDWARDS: Mr. Munzer, I have one. There have been some significant concerns raised with reference to the capacity to absolutely retard additional runoff in all circumstances surrounding future development and that we should be more realistic--both on the Committee and myself as a sponsor--in dealing with not an absolute runoff but a limitation based on the results of the storm water management plan developed in each municipality to the extent that that municipality feels as a result of its plan it is capable of doing that. Do you have any reaction on behalf of the County Planning Board? I know you did sit in on hearings on your detention-retention regulations that you are adopting. And the capacity to absolutely limit all additional runoff in all circumstances is one that I have gotten a lot of criticism about.

MR. MUNZER: On the County Board I believe the wording in our resolution is "where possible." Obviously there will be more situations where it is impossible to--because of geology or geography, whatever--impossible to mandate flatly that you will. We do recognize that there will be situations that cannot be handled and we are prepared to address ourselves to that. There are many ways of handling zero runoff. Many people think the answer is on a retention basis. Well that is only one device. There are dry wells; there is roof storage on commercial buildings. There are many ways of addressing it. Of course, there are many places. You don't have to go too far. A development immediately adjacent to the Hackensack River here, across the street, cannot be treated--should not be treated--the same way as someone in a residential town not on a major stream. We do recognize this and make exceptions on the county level.

ASSEMBLYMAN EDWARDS: Is the County Planning Board prepared to do a storm water management plan or consider the possibilities of storm water management plans in conjunction with the enactment of this legislation--that would compliment this legislation?

MR. MUNZER: Right now we are commencing a study of the Saddle River basin with this in mind, selecting that as one of the basins within the county that does have serious drainage. We are going through a study on that with all of the ramifications which I think would be what we are looking for in this bill.

ASSEMBLYMAN EDWARDS: This gets to one of the other, not criticisms, but one of the other things that I think has to be resolved within the context of this bill or supportive legislation: The engineering methods used from municipality to municipality in developing the storm water plan should be uniform. Very often municipalities

intercross various basins, drainage basins, or significant drainage basins. We are looking for the potential of whether or not: (a) The county planning agencies can complement municipal storm water management plans themselves or whether we should turn to the State and have the State do it by a drainage basin method and coordinate their area plans on a drainage basin to help the local municipalities who are developing storm water management plans to complete it and to complete it using uniform standards. In dealing with hydraulics from an engineering standpoint, I have been told that hydraulics is more of an art than a science. Different artists will paint a hydrological picture with a different paint brush because they use different colors. We are trying to get them to attempt to coordinate if they can. Do you feel that the members of the County Planning Board are prepared to move ahead as a coordinating agency among the several municipalities in Bergen as an example to develop the uniform standards that could be used if this bill were enacted?

MR. MUNZER: I think we would be, yes. You do recognize that drainage basins have no respect for political subdivisions and they cross not alone municipal lines, county lines, but even state lines similar to northwest Bergen where there is an impact on our area by New York State, by Pennsylvania along the Delaware, and so forth. I think there should be some sort of a thing. To draw somewhat of an analogy: there was a problem statewide with building codes. Every municipality had its own little set of regulations which may or may not have been in conformity with each other. Obviously, I don't think we should have each municipality going its own little way with its own requirements. This would be a burden upon people having to deal with them and regional problems.

ASSEMBLYMAN EDWARDS: Would you admit that even if each municipality went its own way, it is better than no planning at all?

MR. MUNZER: Oh, absolutely. That's why I say in Oakland we went ahead. We are one of the few towns in the county that has ordinances on this because we just felt we could not wait. We are doing our ordinances from our master plan--our new master plan--and we did it.

ASSEMBLYMAN PELLECCHIA: Hugo, I have had several problems with this and I'd like to get some answers. The first problem that I feel strong about is the fact that we are now tampering with the mandated expenses on the municipalities and the fact that we have a 5% cap in many of the municipalities that cannot even match those caps let alone put additional expenses on them. Have you any ideas or any suggestions to this Committee on how best we can handle that matter?

MR. MUNZER: My personal opinion is that State mandated programs should be exempt from the caps. I think it is unfair for the State to say, "You shall do such with pensions. You shall do such with courts. You shall do such with this." And then putting the burden on the local county governmental agencies. You can just spread that 5% so far. There is a problem and I think there should be an exemption. That's my personal opinion.

ASSEMBLYMAN EDWARDS: I might add that any mandated expenses that are pushed forth are exempt from the cap. It doesn't change the question that Ozzie had which revolves around what is that expense and how will they meet it.

ASSEMBLYMAN PELLECCHIA: Many municipalities have no need to prepare a storm water management plan as part of their municipal land use ordinance. The present law does not preclude such a plan if it is desirable, however, because of the cost or lack of necessity for such a storm water plan for all municipalities. I am reading a statement from the League of Municipalities. How would you cope with that?

MR. MUNZER: Obviously there are municipalities probably in the southern end of the State--down along the shore and probably in some other places--who are very fortunate and do not have the problems that I would say 95% of the State does. I can see that reasoning if they could demonstrate to the proper agency--the Department of Environmental Protection or whoever--that there is no need and can demonstrate to these people that they should be exempted, I can see nothing wrong with that as the determination does not lie within the municipality itself--trying to duck its responsibilities or save money.

ASSEMBLYMAN PELLECCHIA: You would agree with me that this doesn't apply to urban areas, that the same necessity isn't there that suburbia has.

MR. MUNZER: I do think there are problems in urban areas. They may be different. They may be of such a magnitude because of the built-up condition. Being from Paterson, as you are, the tide comes in there too.

ASSEMBLYMAN PELLECCHIA: We probably have more floods than any other town in the State. Of course, right now we are right in the middle of a serious problem up in Haledon. The overflow of the reservoir is located geographically in North Haledon and there is Prospect Park and several other towns that are involved. There it happens to be that there is a coordinated effort. How about where the same situation exists in one town that's really not involved and they become involved in a large expense. Do you think that we should mandate on them?

MR. MUNZER: Let me say this. Assemblyman Edwards mentioned regional things. Perhaps here may be an area where the county board could step in and address itself to a fair share. I know that in Bergen several problems may originate in one town and the problem is in the other town. The originating town says that it can't spend the money to correct the problem that you are getting across the border. They don't have it and it is really not a problem in their community. There should be something for that.

ASSEMBLYMAN EDWARDS: Hugo, would you favor an amendment to the bill that would provide--or would you have any comment on an amendment to the bill--that would provide the Commissioner of the Department of Environmental Protection the right to waive the degree of mandatory participation by certain municipalities under certain circumstances? They would apply for some kind of waiver of an absolute zero runoff requirement on all new development depending on the unique characters that that municipality may have.

MR. MUNZER: I think that might be wise. As Assemblyman Pellecchia pointed out, there are municipalities that don't have a problem. Why should they spend the money if they don't have a problem? As I said earlier, there are exceptions. Even the towns that do have problems may have areas that have exceptions. I think that would be equitable.

ASSEMBLYMAN GIRGENTI: Hugo, first of all I want to say to you that I appreciate the fact that you came out today too. This has been a tremendous problem, I think, as you mentioned earlier, in both districts--our district especially with Ozzie and myself. And I know Cary has been working with us on different concepts for this type of flood control or to alleviate the flood problems. Basically, I am in agreement with Cary's bill. I think it is one step in the right direction. It is one way of trying to alleviate this type of a problem. My only involvement with the overall bill--and I mentioned it to Cary, maybe he can get some suggestions or input from you--is how do we coordinate this type of arrangement? I find that many times in government you have many different levels of government. Everybody is acting on

his own. It is very difficult to get anything achieved. I understand that in our own particular situation we have had a problem that we have been working on for a couple of years that just took care of two counties--two boards of freeholders. We have had a hard time sitting down and handling this type of arrangement. How would you suggest we could coordinate this type of effort because I certainly agree with it? I think we do have to plan. I think that we have to start having some kind of goals we have to try to fit within our master plan and then try to implement that. But how best do you think we can coordinate this thing or maybe give it some teeth? Sometimes it is difficult because--- I'm a believer in home rule like everybody else but the point of the matter is to work these programs out successfully you have to have some type of coordination. Maybe you could---

MR. MUNZER: I think that if there is coordination it should be on the lowest level feasible. I would not want to see it be way up there. Those of us who know how difficult it is to get permits and applications and whatever through the various Trenton agencies--it's six months, it's eight months, you are constantly prodding and pushing. I would like to see something on a lower level which is perhaps more responsive and more available. You wouldn't have to run to Trenton. It would be easier to run to Hackensack or to Paterson. Dealing with basins, I don't know. Dealing with counties, that might be the answer. I wouldn't want to see everything come out of Trenton because of the remoteness and they are busy.

ASSEMBLYMAN GIRGENTI: I agree with you in that sense. I don't feel that Trenton always necessarily has the best answers for everything. I think we should protect the idea that we want the local input--keep it as close to the people as possible. The only thing that comes to my mind is, if you have been aware and you probably have of the flood problems we have had, one of the solutions in the past has been dredging. One of the problems with dredging has been that you cross different borders, municipalities, counties, even to the extent that you couldn't go into people's back yards really. It was that type of situation. So how can we sometimes really accomplish these types of things if we don't have that unified coordinated effort? Maybe there is no real answer.

MR. MUNZER: I'm not prepared to give an answer to that. It is one, definitely. I know that we in Oakland have a very serious problem, the Ramapo River. This touches not only Mahwah but with Pompton Lakes, Wayne, down into Little Falls, and Morris County. There are meetings going on right now with people from all these municipalities to try to address the problem in a unified way to the best interests of the four or five towns in three counties--Morris, Passaic, and Bergen. This might be the way. Sometimes these things fall apart because there isn't the godfather looking down on them and prodding and uniting them. Perhaps something of that nature where a regional body could be set up like a Solid Waste Management Authority which covered a region might be an answer to that.

ASSEMBLYMAN PELLECCHIA: At this time, I'd like to introduce Jim Wunsch who is the Aide to the Committee. He has a few questions he'd like to ask.

MR. WUNSCH: Mr. Munzer, you pointed out that Oakland was an exception in Bergen County, that most municipalities in this county don't have storm water runoff ordinances. Is that right?

MR. MUNZER: Zero based. I think there are only three in the county, maybe four.

MR. WUNSCH: Doesn't this contrast unfavorably to Union County which has most of its municipalities, if not with zero based runoff, with something approaching

that? And, if so, why is Union so far ahead of Bergen when Bergen has a more serious flooding problem?

MR. MUNZER: I don't know how many municipalities there are in Union County but there are seventy in Bergen. I think that may be part of your problem. I think we have more municipalities than any other county which does work for a disadvantage at times. Union has done a marvelous job; there is no question about it. We are trying to catch up with them.

MR. WUNSCH: O.K. Thank you.

ASSEMBLYMAN EDWARDS: I don't have any more questions. I want to thank you very much for coming down. I know you had to take time off from work to do this. I really appreciate it. I know your interest in it. I thank the County Planning Board for its support of this legislation. I look forward to any additional comments that the board might have.

Shirley Lally, Principal Environmental Planner for the county of Bergen.

S H I R L E Y    L A L L Y: Assemblyman Pellecchia, Assemblyman Edwards, and Assemblyman Grgenti, and Mr. Wunsch, my name is Shirley Lally and I am the Principal Environmental Planner for the Bergen County Planning Board. I am very pleased to have the opportunity to testify on this important proposed legislation on behalf of the Bergen County Planning Board. A resolution was passed by the Board, as Mr. Munzer mentioned, on February 5, 1979 in support of Assembly Bill 1819.

Flooding, as we all know, is becoming one of Bergen County's greatest problems. It is also one of the State's biggest problems. The incidence and magnitude of flooding events is increased yearly due to alteration of natural drainage patterns, increased impervious ground cover and stream encroachments. Resulting larger peak storm flows, shortened concentration times and increased volumes of storm water runoff are straining and often exceeding the capacity of existing drains, channels and culverts. Repair and replacement of these facilities cost the taxpayers of Bergen County millions of dollars each year. That can be said probably for many of the counties in New Jersey.

Clearly, we are ready for a fresh approach to the problems of stormwater management. Measures must be taken to contain stormwater runoff at its source. The agency most able to accomplish this is the municipality--through planning and implementation.

We support the purposes of Assembly Bill 1819. This bill is badly needed to reinforce existing municipal stormwater ordinances. Municipal stormwater management plans can best address localized drainage problems. Only a municipality has powers of enforcement through land development ordinances. As we all know, counties cannot pass ordinances. Stormwater management should be an integral part of site plan and subdivision review at the municipal level. We support the concept of inclusion of storm water management plans into master plans pursuant to section 19 of P. L. 1975, c. 291. (The Municipal Land Use Law).

I would like to add, however, that emphasis should be given to coordination of stormwater management plans with adjacent municipalities and county or regional agencies, such as the Watershed Association. Stream-related flooding problems must be addressed at the basin or sub-basin level. To this end, some incentives should be given in the form of funding preferences to those municipalities who enter joint planning agreements with other municipalities and/or county or regional agencies to solve common problems.

Counties, as well as the Department of Environmental Protection should have powers of review of all stormwater management plans in order to better coordinate

their own effort and avoid unnecessary duplication and expense on the part of municipalities. Thank you.

ASSEMBLYMAN EDWARDS: I asked Mr. Munzer earlier about the potential of the County Planning Board's acting as a coordinating agency for all the municipalities in the county. Do you have any comments about how we might accomplish that or how that might be addressed in the confines of a piece of legislation or how, in fact, it might be implemented at the county level?

MRS. LALLY: I think in the form of review as I mentioned in my statement. I think it is necessary that at least the county level has its review powers for municipal stormwater plans so that the municipalities don't have to duplicate the effort. These plans do cost money and the subject of caps was mentioned. They are needed so we can better coordinate our plans. Mr. Munzer mentioned that we had commenced the Saddle River Basin Study. We haven't actually commenced it yet. We do want to approach stormwater management from basin level; this makes more sense, naturally, and possibly to form some loosely-held regional basin association to get the municipalities together so that they can agree and are not, in fact, acting independently in preparing these plans.

ASSEMBLYMAN EDWARDS: If I'm not mistaken, the master plan of a municipality must be delivered to the County Planning Board in advance of its adoption and a copy must be filed with the County Planning Board before that is an effective document. The same thing, I think, exists with ordinance implementing, for any sections, especially the zoning and land use sections of the master plan. Notice must be served on the county, the County Planning Board in particular, that the public hearing will take place on the ordinance and then the ordinance copy must be delivered to them. Would that procedure--the notice procedure given to a county planning board--be sufficient for them to return back to the municipality who is in the process of adopting the stormwater management plan and suggest that there are changes or changes in direction which they are not taking into consideration, such as their drainage basin or not considering uniform coefficients that would be used from a hydraulic standpoint with a neighboring municipality that has also filed a plan, or some standards developed by the Board? Would the Board be in a position to do that and, in fact, would they do that on a regular basis? Now, Bergen County I know, is one of the most difficult ones to do anything with because of their 70 municipalities. Most of our counties don't. If Bergen can do it, I know any county can do it.

MRS. LALLY: We probably, quite frankly, would have to take on at least one additional staff member who had the expertise to do this. I don't see any problem with a county planning board having this power--or duty shall we say.

ASSEMBLYMAN EDWARDS: They have the power right now. It is a question of whether they will exercise any additional duty with reference to it.

MRS. LALLY: I'm convinced of the fact that someone on the regional level has to do some review of these things because they have to coordinate. They have to mesh otherwise we will find plans that are in direct conflict with each other.

ASSEMBLYMAN EDWARDS: Are you aware of any State or federal studies--basin studies in particular? I met with some individuals yesterday from FIA which is now part of the FDAA, another part of HUD they told me. They are talking about using Passaic Basin as a major model for stormwater management planning. Do you know any more about that? I wasn't able to get much out of them.

MRS. LALLY: Yes. As a matter of fact, when I started to mention the Saddle River Basin, we are not commencing a basin study at this time. We are in the pre-proposal

stage for a feasibility study for regional retention-detention on site. In the Saddle River Basin, the reason that we are not going forward with a full-fledged basin study at this time is because the Army Corps is in the later stages of their own Passaic River Basin Study of which the Saddle River is a sub-basin. Also the FIA studies could be of great help. So what we want to do is what I mentioned that the municipalities should do and that is to coordinate our efforts with those of higher levels of government. It would be wasteful, I would think, to have someone go out and study the things that have already been studied. It is a matter of gleaning the information into one document perhaps.

ASSEMBLYMAN EDWARDS: Then you feel that the county planning boards and the county planning agencies could, in fact, act as that coordinating agent from a practical standpoint for local municipalities.

MRS. LALLY: They could. I'm sure we would need the assistance of some of our engineers in the Public Works Department, but this is still at county level of government.

ASSEMBLYMAN EDWARDS: There is a need for coordination.

MRS. LALLY: Definitely.

ASSEMBLYMAN EDWARDS: And to form that coordinating unit, you have the same people in the Department of Environmental Protection in Trenton. From Rochelle Park, it just doesn't seem to work. It hasn't in the past at least. But if the county is going to coordinate it, I have seen them do it on the HUD grants and the community development block grants.

MRS. LALLY: The other possibility, of course, is the formation of watershed associations. I'm sure you are familiar with the other bill that mentions the Water Resources Association. That's a possibility too in terms of review. Either way it would be useful. Perhaps in a county like Bergen where we have three large basins, it might be a smaller group which would be more effective.

ASSEMBLYMAN EDWARDS: Do you think that would be preferable to the County Planning Board's doing it on political jurisdiction lists?

MRS. LALLY: Well, it depends on how these associations would function, because you need a professional staff in order to do this kind of review work. And if there were funds available to duplicate this sort of thing then that would be fine, but I think it depends very much on personnel and funding. That's the way it would work.

ASSEMBLYMAN EDWARDS: In reference to absolute retardation of additional stormwater runoff--which you refer to as zero runoff--do you think that is a possible and a feasible requirement to put into a piece of legislation?

MRS. LALLY: I think you'd have to put "where reasonably applicable." We have done this in our own standards because there are instances where you simply cannot do this; you cannot have zero runoff.

ASSEMBLYMAN EDWARDS: Who would determine "where reasonably applicable?"

MRS. LALLY: That would have to be an engineering---

ASSEMBLYMAN EDWARDS: Would the local planning board do it or, in your case, would the County Planning Board do it?

MRS. LALLY: I would think that should be a local determination. That's why I think this municipal legislation is very important because too often the localities like to say, "Well, it's not our job." It's a copout in some cases.

ASSEMBLYMAN EDWARDS: In reality, the local planning boards are the focal point of all construction control. The planning boards do plan review or site plans.

They are the ones who check to make sure the County Planning Board is getting its two cents in the Soil Conservation District, the Department of Environmental Protection, or the State agencies. Then they also have the inspection staffs on hand to see implementation through either their engineering departments or their Building Uniform Construction Code Official Department. That's the only place we have with power of enforcement in any kind of construction or building that takes place in the State.

ASSEMBLYMAN PELLECCHIA: Passaic County only has 16 municipalities and maybe we are better off than with the 71 that you people have. I do know that with the Passaic County master plan the Planning Board Director has a direct hold on what is going on with the planning there. We do have a problem, as I mentioned when Mr. Munzer was testifying, that we are working on right now. The municipality is carrying the burden--especially the Township of Haledon is carrying most of the burden of the planning. So the thing that crosses my mind is a question I asked Mr. Hugo Munzer: Have you any suggestions for the Committee in regard to the cap situation that we have?

MRS. LALLY: I would agree with Hugo, with Mr. Munzer. We all know the municipalities have caps and that certainly is going to come up when we review this legislation. I think it should be exempt. I would also hope that there would be another bond issue in November from which money would come for this purpose.

ASSEMBLYMAN PELLECCHIA: Maybe I'm not getting my point across. I am completely aware of the fact that Mr. Munzer said that he thought they should be exempt. I'm concerned about where we raise the money and can we go to other places other than the municipality or the State. Is there any way we can get federal money involved in any of these things? For instance, the Passaic Valley system which was supposed to be surveyed years and years ago, Plan C is still on the record. The Army Corps of Engineers is supposed to come in. There was a pilot program established by the federal government sometime during the Nixon administration. What happened was that at the very last minute that pilot program was taken from the Passaic area--it was supposed to start up in Ramapo Valley and come all the way down into Paterson and continue on--that was taken away from Passaic County and given to another area in the states, I think it was Georgia or one of your other southern states. What I am thinking in terms of, if you will, is the idea of federal funding being brought into this picture or getting our congressional people from the State together to see if we can't do something in terms of federal money. This would not put the burden on the State or the municipality.

MRS. LALLY: I agree with you wholeheartedly. If federal funds could be appropriated, certainly we should do it. The question is which agency would it come from. HUD has a Community Development Program. Perhaps some of these funds could be used. It depends very much on the municipality whether they would be available or not. And the FIA Program too--- EPA perhaps even might make funds available.

ASSEMBLYMAN PELLECCHIA: Isn't it a fact that we can't do anything at all without the Army Corps of Engineers having their say in exactly what we do with any of these streams or runoffs or whatever?

MRS. LALLY: Tidal waters, yes, they do have jurisdiction there.

ASSEMBLYMAN EDWARDS: Is there a possibility that through the FIA and the FDA--now that they are under that agency--that the counties and/or municipalities could be contracting agents through the Army Corps of Engineers to get funds to implement plans of this nature on a local level where they might mandate coordination? Is that a possibility? I know they do that on a limited basis already.

MRS. LALLY: It's a possibility if they were willing to take the responsibility. I assume you mean the same kind of setup where the county is the agent for the Community Development Fund.

ASSEMBLYMAN EDWARDS: Exactly.

MRS. LALLY: I don't see any reason why it couldn't come to pass as long as they are amenable.

ASSEMBLYMAN EDWARDS: I understood from my discussions that they are looking for stormwater management to be done--the FIA is--and they are anxious to see coordination and some kind of uniformity. You cannot have coordination without uniformity of standards. There is a possibility that they might get involved at that particular level which was along the same lines that the Assemblyman was concerned with.

ASSEMBLYMAN GIRGENTI: Do you know how long it has been that the Army Corps of Engineers has been talking about doing something on this project?

MRS. LALLY: A long time--like twenty years or maybe longer.

ASSEMBLYMAN GIRGENTI: And part of the problem is, I believe I have been told since I have been doing some research in it, is that many municipalities, counties, people's backyards even don't want them coming in and digging up the land. There are so many obstacles of that nature. So I'd love to say that tomorrow we are going to have the Army Corps of Engineers coming down and doing something, but I think it is a far cry from what we are really going to see.

One thing that I thought we should have is stricter stream encroachment laws. I came up with that because in my and Ozzie's district we have a lot of building out onto the rivers and streams. Now these are supposed to be regulated by the DEP. I don't know if anybody is here from the DEP today and I am not here to chastize them but I don't think they have done the job in that case and I have told them that at a few meetings. I feel that this has been permitted; it is continued. In a lot of areas years ago you could barely see across the river and now you can throw a stone across it. They are laying down macadam; they are laying down parking lots. We have certain areas in our district where they built behind businesses that they developed on the river. They have parking lots where there never were any before. So obviously, the water has to go somewhere. So where is it going to go? You are going to have flooding. I think your board even endorsed that concept when I brought it up before the committee. It is still bottled up. It's not in this Committee; it's stuck in the Agriculture Committee, I believe. I think that a lot of the people in the southern part of the State really can't relate to us. They don't understand our problems up here. We're more urbanized. We've got more development. That is a definite problem. Do you see this happening--this encroachment? The laws haven't been enforced. When I told the DEP, they said that they were trying to do the best job they could. But they are not really doing a good job. They don't have enough inspectors maybe. That's part of the problem but I think this area has to be regulated too. I don't know if it is effective in Bergen County.

MRS. LALLY: No. We very often have to really urge the State to enforce the stream encroachment laws. It's not a question of making the law more stringent; it's a question of enforcing the law. I understand that they only have so many inspectors and it's a problem. Having laws doesn't do you any good unless you enforce them. I would like to see the State set up regional offices where you could have a permitting function as well as an inspection of surveillance and enforcement function maybe for the areas of the State that need them and to increase their inspectors, and to make the whole permit procedure a little easier.

ASSEMBLYMAN GIRGENTI: In conjunction with that bill that I put in, we put the onus not only on the State but, I felt, on the county and the municipality making them be involved in the enforcement area. For instance, if the county got involved and there were violations, the county could pick up half the fine or whatever for enforcing it. It gives them an incentive to go out and enforce the regulations. Obviously, the State hasn't done it or at least it hasn't done it up here. This isn't the whole situation but it is definitely part of it. I feel that if we continue to do this, we are going to continue to have the same problems and they will get greater. So, I'm getting off the bill but I was just (laughter) putting a plug in for my bill.

ASSEMBLYMAN PELLECCHIA: That's what happens when you allow somebody not on the Committee to come on. (laughter)

ASSEMBLYMAN GIRGENTI: I just wanted to know because I know Cary is interested too and I know Ozzie is. I feel that you are people that are involved in the area. You are here before me right now so I felt I wanted to know your feelings on this too and if we are on the right track.

MRS. LALLY: I agree with you. When you see a violation and nothing is done about it after numerous phone calls, it is very discouraging.

ASSEMBLYMAN EDWARDS: That's one of the purposes, I think, of this bill. The enforcement exists at the local level in every municipality almost throughout the State and we don't need to hire inspectors. They are sitting there with a vested interest. They do enforce their own ordinances which is why this concept has developed. I recognize the DEP does have its limitations because of funding and we're partly to blame for that I guess. But the dollars will only stretch so far. And where you have an existing structure that can do inspections, and does have a vested interest, they should be the ones doing it. I have found over the years that we are lucky if we get one out of four that should apply, applying. And then getting them to conform to what they have actually been required to do is a whole different problem.

Let me mention one other thing as I want to move on to some of the other people who are here. I would like to get this in for the record more than anything else. There is a companion bill that I had in with this, Shirley, that was A-1465. Also, at the last election a \$25 million bond issue was passed. The two bills deal with two areas of flood control. The bond issue was the construction of flood control, flood constraint, facilities, dams, dikes, bridge culverts, etc. A-1465 is what we refer to as a green acre bond issue which is designed to provide funds for municipalities to purchase flood plain property. I know that the County Planning Board endorsed both of those bills. Do you concur with my opinion that we can't get into any meaningful expenditures of dollars for either construction to protect flood plain properties or to purchase flood plain properties unless we do something with A-1819 or some similar legislation that would reduce the growth of flood plains or limit the growth of them? Because as long as we permit water to be brought to the river as quickly and in as much volume as we can get them off the higher elevations, the flood plains will continue to expand and much of those dollars will be literally dollars down the drain because our flooding will continue as the flood plain expands. Is that an actual characterization?

MRS. LALLY: I would say you need both bills. Yes, you need both approaches, both acquisition and structural and non-structural.

ASSEMBLYMAN EDWARDS: Should we go into that or should we spend the money for those without an A-1819 to limit the growth of flood plains?

MRS. LALLY: I don't think so, no. I think you definitely need both approaches.

ASSEMBLYMAN PELLECCHIA: Next we have Mr. Robert Marshall, Ridgewood, New Jersey.

ROBERT MARSHALL: For the record, my address is 131 North Maple Avenue, Ridgewood. I am a member of the Planning Board in Ridgewood, its secretary. I am the engineer and Director of Public Works for the municipality of Ridgewood. I appreciate this opportunity to testify.

I believe that in past time each municipality in trying to cope with this problem found that the law was lacking, that their resources were lacking, the fact that there had to be some larger body, even larger than the county, possibly the State, and even on to the federal government because water flows not only from municipality to municipality, from county to county, but also from state to state. To control this we do need the guidance of the State. I think that in this particular case, it is a good step forward. The fact that the State is now taking the lead in this is something that each municipality will allow them to do. When we review subdivision site plans, we attempt to gain a dry well system on each particular piece of property in spite of the fact that a storm sewer may be available. Although it is connected with the storm sewer, we also have each one of the structures, catch basins, manholes, that are porous on the bottom at least a couple of feet from the invert of the overflow pipe so that this limits the amount of water that gets into the streams.

I'm speaking for myself and for the village of Ridgewood. We support this bill 100%.

ASSEMBLYMAN EDWARDS: Specifically with reference to the capacity of the local planning board to develop a meaningful stormwater management plan and to come up with a meaningful ordinance to actually implement the results of that planning study, do you feel that you have the resources within the village of Ridgewood to do that? I'm not talking about economically. I'm talking about the talent and the capacity. Are we asking you to do something that is beyond your capacity to do?

MR. MARSHALL: Not necessarily capacity but staff would be the problem. The workload that we have right now would probably prohibit us from doing that. The knowledge would be there but we would need some assistance because of the present workload.

ASSEMBLYMAN EDWARDS: Can you describe, very briefly, some of the problems? I'm familiar with them but for the record tell us of some of the problems that Ridgewood has that have developed over the last five or ten years with reference to flooding as a result of upstream construction. Maybe you could describe some of that. I think it might be helpful for the record.

MR. MARSHALL: The storms that you might consider to be one, five, ten, fifteen, twenty year storms as the upstream communities develop--- I have been keeping a record more or less on possibly one sore subject which would be the flooding of Great Pool as a barometer. Over the period of years where it might have flooded once every three years, 20 or 30 years ago, it is now flooding two times a year. I don't believe that there is any more rain, I just believe that the runoff has increased that much more to cause flooding at least twice a year.

I might comment a little bit on the bill's wording and that is the amount of runoff from a specific property being limited to zero additional. The possibility exists of the rate. In other words, you are not so much concerned about the fact that additional runoff may not be allowed from the site but at a later time once the storm

has passed. So that would be a possible consideration, that you wouldn't have to retain it but detain it. That's a possibility.

ASSEMBLYMAN EDWARDS: I see.

ASSEMBLYMAN PELLECCHIA: The only thing that I am getting out of these hearings is that there is no question that the problem is there. It's the question of solutions that I am concerned with. Money always gets in front of us. I'm sure you aren't going to be able to give us any further answers than we have already received. If you do have further answers, please give them to us. I have no further questions.

ASSEMBLYMAN EDWARDS: Thank you very much.

Mr. Goodell.

D O U G L A S     G O O D E L L: I am Doug Goodell. I live in the village of Ridgewood. I am speaking both as a private citizen and as a representative of the fledgling organization, the Citizens League of Unified Taxpayers for Flood Controls, sometimes known as CLOUD. What I want to do is not so much go into some of the technical details with which I'm really not qualified to talk or answer questions about, but to communicate some of the sentiments of the citizens with whom I have been in contact and in our organization who have been involved in one way or another in flooding problems.

I'd like to stress three areas, really, (1) the need for the bill, (2) the consequences of not adopting a bill like this, and (3) some comments on implementation. The stormwater management is a very important problem and it is becoming more so all the time, as we have been hearing especially with respect to flooding and groundwater recharging. We haven't heard so much about that today and I'm not prepared to talk about that. But in regard to flooding: the issue is not one that can be dismissed glibly simply by noting that people shouldn't live in areas that flood. Historically, our streams and rivers have always been the focus of development due to the fertile land, power, transportation, or combinations of these. Moreover, some areas have only encountered severe frequent flooding as the uplands were developed, thus, living areas that have been approved by responsible levels of government have become unsafe. I emphasize the relation between frequency and severity of flooding. In Ridgewood, for example, as Mr. Marshall was just commenting, we have had severe flooding in 1886, 1903, 1945, 1955, 1968, 1971, 1975, 1977, 1978. The frequency is increasing. In some cases this may be due to changing rainfall patterns, but it is certainly also due in significant part to runoff changes with increased urbanization. Now, no one living near a waterway should expect to have zero water problems. What should be expected is that control will be sought and that the problems will not be made worse by the neglect, ignorance, or profit of others. In a State with as much flatland as New Jersey, development without runoff control to save a few dollars amounts to a subsidy. And one group of people should not, by their hardship or loss, be expected to subsidize another, especially to have it further institutionalized by government. The problem is made even worse by the usual treatment of flooding only in terms of the waterways--the final stage of a complex waterflow system. At this point, flood control can be very costly, often prohibitively so, and is often ecologically very damaging. Moreover, even any more adequate maintenance of natural streams is becoming costly and, in some cases, misguidedly regulated. Therefore, we must pay much more attention to what should have been obvious long ago--the input to the waterways, the runoff flow. Some areas of New Jersey have already moved in this direction but not enough. Rational coordinated study and communication between communities must receive more than lip service. This is why we feel that bill 1819 is so very important and very farsighted.

Some comments on the consequences of inaction: First of all, inaction on runoff control will certainly result in further increases in cost for eventual flood control systems. Stream clearance costs will increase and maintenance costs will increase. Ultimately, of course, this increase in cost is borne by everyone. Secondly, it would lead to a loss in ratable land as the floodway boundaries must increase if runoff is not controlled. Thirdly, it would lead to delay in blocking of new developments. Now why is this? Precisely as I outlined previously, increasing runoff will worsen flooding and create new and further hardship and loss for many people. It is a threat to the health and safety. This type of abuse is unacceptable. The alternative is to take the issue to the courts to stop the offending developments in communities that do not seek to minimize stormwater runoff. This would be costly, wasteful of time and talent, and not the real objective. But it may be necessary if other avenues are closed. Hopefully, a bill such as 1819 will obviate the need for that type of action.

Finally, on implementation: Technically, there are a number of approaches to the problem of runoff control, including dry wells, holding basins of many shapes, sizes, and locations, porous paving materials, openings through less permeable geological structures into more permeable geological structures also, retention of critical forest areas, and probably many others. But, it is unlikely that any one of these will work in all cases. Therefore, the objective, rather than specifying specific technique should be to specify the objective. And this is precisely what this legislation has done. However, to help the municipalities choose among technical alternatives, the alternatives must be known, defined, and studied so that recommendations can be made to satisfy the objectives. I think this will involve some additional cost and dissemination and coordination of information to provide the kind of technical information that will make this bill work.

Also in the area of implementation, this bill would involve DEP in at least some connection with the runoff activity. The emphasis is on municipalities' building the control themselves and I think this is admirable. But I think it is also good to involve DEP in this connection because it has been our experience that DEP has a preoccupation with solving the flooding problem by getting people out of the floodway, almost to the exclusion of all other approaches. Possibly there are some jurisdictional problems, as runoff, I have been told, seems not to be their jurisdiction but the jurisdiction of the Soil Conservation Agency and, therefore, they seem to pay very little attention to it. I think this will add emphasis to the total water management problem and provide better focus for it. I think if some oversight of the agencies involved in coordinating and eventually regulating this type of legislation is put in, it will be a very fine bill and we will all benefit in the future from this legislation. Thank you.

ASSEMBLYMAN EDWARDS: How would you recommend that that coordination take place?

MR. GOODELL: I have been listening to some of the comments made myself this morning and that seems to be the main area of concern--how this coordination will take place. Certainly, in the past, trying to voluntarily get people in municipalities to coordinate even within the county runoff control has been all but impossible. This, in effect, mandates it but where the teeth are in doing it remains to be seen. Funding is being provided to help put together the runoff control basis by this legislation. That in itself may provide the extra impetus to work on the problem. Previously, just attacking or looking at this problem required redirection of resources from something else which may have been felt to be more critical or was better funded.

So the existence of some State support to look at these problems, I think, will certainly help. Possibly, I think someone mentioned earlier, some preferential funding where cooperation between municipalities or within basins is demonstrated to be a further tool. Beyond that, I don't feel that I am in any position to make a recommendation.

ASSEMBLYMAN EDWARDS: I have one more quick question that I have been asking everyone who came along. We have what constitutes an absolute prohibition against additional runoff in the bill after the stormwater management plans have been completed. The criticism that I have gotten, which I think is a valuable one, is that's an unrealistic demand. You cannot have zero runoff at every site throughout the entire State of New Jersey. I recognize that. Do you concur that that is an unrealistic requirement, maybe not a goal, but a requirement? And would you have any comments on changing that either dealing with the question of individual waivers or with words that would mean "where possible," "where reasonably applicable," or something along those lines?

MR. GOODELL: Yes. I would concur that I think you would want to include something like that. An absolute prohibition of runoff on any basis, I think, is an impossibility. It is an admirable goal. Bob Marshall mentioned the inclusion of the word "rate" of runoff as at least a part of what might be controlled rather than runoff on an absolute basis. That might help overcome some types of problems. Beyond that it seems likely that there will be some areas--- Some areas, possibly, shouldn't be further developed if runoff cannot be controlled. That is unlikely to be true of all areas and waivers may indeed be required where some specific criterion can be spelled out to be the foundation of such waivers. Yes, I think that is realistic and that it is a problem that you have to approach realistically.

ASSEMBLYMAN EDWARDS: Ozzie, do you have any questions?

ASSEMBLYMAN PELLECCHIA: No, thanks for coming.

ASSEMBLYMAN GIRGENTI: I just want to say first of all that I was glad to hear your summation because those were some of the ideas that I thought about when I read the bill. Obviously, the coordination is the main problem. I was thinking along the lines that Cary could embellish upon it a little bit. Is there going to be within this bill some sort of reporting mechanism to the State? Is that innate within the law that this applies to? I haven't had an opportunity to check that out. Maybe there will be some type of reporting mechanism set up which will be able to tell them what is developed in terms of the plan and so forth. Maybe through that that would be a way of getting the State involved to a greater extent through the DEP or whatever. Maybe that will help coordinate it on a State level and maybe that will help the whole system move along. The thing that came to my mind, as he mentioned, how are we going to give this thing teeth? Maybe by setting up some reporting mechanism.

ASSEMBLYMAN PELLECCHIA: John, maybe we could put a limit on it to have oversight on the entire program for a two year or three year time period.

ASSEMBLYMAN GIRGENTI: That would be fine. But also have some centralized area where all this information would have to come in so people would be aware that they have to develop a plan so that it would be coordinated on a different level. Maybe that would be an answer. I don't know.

MR. GOODELL: Let me make one comment in that regard. I don't mean to seem radical but tone it down a little bit. In some of the existing flood plain legislation there are very strong pronouncements regarding not doing things. You can't build things. There are very strong prohibitions if certain things aren't complied with.

ASSEMBLYMAN PELLECCHIA: Too many wouldn't you say?

MR. GOODELL: Yes, quite possibly and some misdirected even. But, suppose that in the initial course of a piece of legislation like this in two or three years there is not compliance? Certainly the authority has already been given to exert very strong pressure to people owning property or living within a flood plain as to what they can and can't do with regard to making flooding worse. Would it be conceivable to put some kind of prohibition on what can be done in areas outside the flood plain if they don't start complying with the intent of this legislation?

ASSEMBLYMAN GIRGENTI: That's a good point.

MR. GOODELL: It's already being done in the one connection. And the people you talk to that are affected by it keep wondering, "If you can do it to us why can't you do it to the guy who is making the problem worse?"

ASSEMBLYMAN PELLECCHIA: I'd like to go a step further on that. I would like to apply to the State too because I think many, many times the State is delinquent and that holds up other projects.

ASSEMBLYMAN EDWARDS: You are saying that we need some way to mandate that within two years they complete their stormwater management plan and within one year thereafter they enact their ordinances that go along with it. Yes, that is a problem. But oversight, I think, has a more meaningful role in this. It has to do with how well it has been implemented and are there additional things that we should be doing to further this goal that we are aiming at in this legislation. But to get municipalities to actually conform is a much more difficult problem and I don't know exactly how we are going to do it. To put a building ban on in the municipality is one. We did it in the Land Use Law by indicating that the zoning ordinances would no longer exist and they would have an unzoned town if they wouldn't comply. So that's why they ran around and why we ran around. We gave them another three months to do it as a matter of fact. But, I think that kind of thing is necessary and I would look to anyone who had a suggestion along those lines to give me some kind of hammer that we can use to see that the municipalities start their planning process when the bill is enacted and then adopt their appropriate ordinances within the timeframes prescribed.

ASSEMBLYMAN GIRGENTI: And I would think that you would want to have a provision saying where the centrally located place is that they are to report this data to. It is not saying that big government down in Trenton has a better perspective on these things. I don't agree with that. But somehow we have all come up with the same problem of coordination. We also have the problem of who will oversee this whole situation in terms of reporting this information. I think it would enhance the chances of the bill if we do put that in there somehow. When I read it over, that was the first thing that struck me. I like the bill; I think it is good. But if we put something like that in there it will even enhance its chances.

ASSEMBLYMAN EDWARDS: That mechanism really exists, John, more than the one of mandated conformance. That was what I wrestled with for about a year. Where do I put this? Whose responsibility is it? I put it under the Land Use Law and I put it as part of the master plan because there was a built-in reporting procedure to the county planning agencies of both the plan and the ordinance after it is adopted. And they could become essentially the clearing house for at least their parochial jurisdiction. And then it would be up to us to maybe mandate at some later date through oversight how we can bring all this together with maybe the State or with basins. A basin commission maybe could be established at some future date. But for now, the mechanism exists where they've got to deliver that master plan prior to adoption of

the ordinance. They do have the capacity for central clearing and coordination. We may want to spell that out.

ASSEMBLYMAN GIRGENTI: And putting some teeth into it too...

ASSEMBLYMAN EDWARDS: Yes.

ASSEMBLYMAN GIRENTI: (continuing) ...to make them comply. Now, that's a sticky area but I think we have to address it.

ASSEMBLYMAN PELLECCHIA: I want to announce the fact that in fifteen minutes I will have to be leaving. Cary Edwards will carry on with the hearing. In an effort to get some input from the State before we adjourn for lunch, I would like to deviate from the agenda and call John Wilford to the stand.

J O H N W I L F O R D: I am John Wilford, Assistant Director in the Division of Water Resources, New Jersey Department of Environmental Protection, in Trenton. My assigned duties include jurisdiction over the Bureau of Flood Plain Management of the Division of Water Resources which, inter-alia, discharges statutory responsibilities for minimizing floods and the prevention of flood damage. I have been authorized to present the position of the Department of Environmental Protection relative to the provisions of Assembly Bill No. 1819.

The Department supports the concept of municipal planning for the purpose of stormwater management, particularly to reduce runoff from new subdivisions, so has no objection to the development of such plans and the enactment of appropriate ordinances. It is essential, however, that such planning be carefully coordinated in a regional context to assure compatibility with a plan that deals with the entire watershed. Although this is required by Section 2 of A-1819, it will be extremely difficult to develop and implement local plans before the State and regional plans have been developed. In accordance with the provisions of the Emergency Flood Control Bond Act, (P.L. 1978, Ch. 78) which was approved by the voters in referendum in November 1978, the Department of Environmental Protection is in process of developing a contract with consultants for the production of a statewide Flood Control Master Plan, but the completed plan is not expected to be ready for at least one year. For these reasons, A-1819 which seeks to require mandatory development of municipal stormwater management plans, seems to be premature. The Department would much prefer that if such planning is to take place at the present time, it should be on a voluntary basis rather than mandatory, and that the mandatory requirement be delayed until the State and regional plans are in place.

Section 5 of A-1819 seeks to appropriate to the Department of Environmental Protection \$1 million from the Flood Control Fund created pursuant to the Emergency Flood Control Bond Act for the purpose of providing grants to municipalities, counties, and other regional agencies for the development of stormwater management plans. The inclusion of the words "counties and other regional agencies" is not consistent with the language of Section 1 of A-1819 which requires only municipalities to prepare stormwater management plans. Of greater overriding concern, however, is the proposal to appropriate money from the Flood Control Fund. Section 4(b) of the Emergency Flood Control Bond Act reserves to the Department \$3 million from the Bond funds "for the preparation, development and maintenance of a comprehensive statewide flood control master plan and for the purpose of grants to counties and other regional agencies for the preparation, development and maintenance of comprehensive regional flood control master plans." By omission, municipalities are not eligible for such grants.

Section 1 of A-1819 requires revision of municipal stormwater management plans at least once every five years. It would be more logical to require such

revisions every six years, so as to be consistent with the corresponding requirement in the Municipal Land Use Act, (N.J.S.A. 40:55D-1 et seq.). Incidentally, except for the \$1 million funding provision, the requirements of A-1819 appear to be already covered by the Municipal Land Use Act, which gives municipalities the power to plan and zone for stormwater management.

The Department of Environmental Protection supports the aims of the storm-water management plan and appropriate ordinances as listed in Section 2 of A-1819, which will further support the authorities already being exercised in accordance with other statutes which include:

- a) Soil erosion control pursuant to the Soil Erosion and Sediment Control Act;
- b) Review of culverts and bridges for hydraulic adequacy pursuant to the Stream Encroachment Law;
- c) Delineation of flood plains pursuant to the Flood Plain Delineation Law;
- d) Preparation and distribution of flood hazard maps by the Federal Flood Insurance Administration;
- e) Areawide plans produced pursuant to Section 208 of the Federal Water Pollution Control Act Amendments which cover many aspects of the proposed Bill.

In conclusion, we are in accord with the basic concept of A-1819, but cannot unequivocally support it as presently drafted. We shall be able to give it appropriate support if it is redrafted to meet the objections listed in this statement.

ASSEMBLYMAN EDWARDS: Thank you, Mr. Wilford. I appreciate the comments that you have made here and I recognize some of the problems that exist. I have spoken with Mr. Mattek, who works at the agency and who assisted me in drafting the bill in the first instance. I recognize the six year provision in conformance with the Land Use Law. Does the Department of Environmental Protection have any information dealing with any voluntary actions taken by various municipalities to, in fact, enact a storm-water management plan with reference to their master plan or in conformance with the Land Use Law to date?

MR. WILFORD: I personally don't know because I'm not on the operating level. However, I am aware of the fact some municipalities have done that but I don't list them here.

ASSEMBLYMAN EDWARDS: Do you know if the Department has any statistics or information on the degree to which voluntary compliance has been forthcoming in the last four years?

MR. WILFORD: No, I don't, sir.

ASSEMBLYMAN EDWARDS: I say that because it is my understanding that very few of the municipalities have gotten involved in the actual stormwater management plan elements of a master plan. A lot of them have gotten involved in the drafting of what we would call zero runoff ordinances or storm control ordinances but have not done the appropriate planning that supports those particular ordinances in a specifically detailed delineated and coordinated fashion with other municipalities.

MR. WILFORD: I think that is true. However, I would point out that under Section 208 of the Federal Water Pollution Control Act Amendments that this is being addressed.

ASSEMBLYMAN EDWARDS: Could you elaborate on that a little?

MR. WILFORD: Well, the 208 planning agencies are to prepare plans for the management of water in its widest sense within a planning area. One of the matters that has to be addressed in those plans is stormwater management.

ASSEMBLYMAN EDWARDS: I'm assuming it's the Department's position that municipalities would not be eligible for direct grants for planning purposes but that counties and other regional agencies would be.

MR. WILFORD: Yes, that's correct.

ASSEMBLYMAN EDWARDS: And that counties and other regional agencies are already included in the bill. Would you find any prohibition if the counties or regional agencies were to act as the coordinators of this stormwater management planning function? That they could not be given grants from this Act?

MR. WILFORD: I think that the Act, as written, would permit that.

ASSEMBLYMAN EDWARDS: So they could then assist the local municipalities in arriving at these plans?

MR. WILFORD: Yes.

ASSEMBLYMAN EDWARDS: Is the Department prepared within the next week or so to work with the Committee to deal with language changes that might necessitate a more unequivocal support of the bill?

MR. WILFORD: Yes. I'm sure such assistance would be given if requested.

ASSEMBLYMAN PELLECCHIA: Concerning the bill, what the statement from the Department is: "The operation was a success but the patient is going to die." I'm glad to hear that you are volunteering to support the Committee to try to amend it so the patient doesn't die. Is that a true statement?

MR. WILFORD: Yes, sir.

ASSEMBLYMAN PELLECCHIA: Some of the questions that are bothering me maybe you can answer. Paterson is an old city and we are right in the middle of trying to revitalize it. There is a lot of open space where buildings have been torn down. We are going to be--we hope--building in those spaces. It's not like it is in suburbia where we would have something other than the drain system that we presently have for runoff. Have you any suggestions? There are no such things as dry wells in the city of Paterson. So do you have any suggestions as to what we can do other than sewer system that we have?

MR. WILFORD: I don't think there is any solution, not for those areas.

ASSEMBLYMAN PELLECCHIA: So there will be continuous increases in overrun in those areas, right?

MR. WILFORD: Not necessarily an increase, it may remain as it is currently from the urban area. I think that there is an opportunity to reduce the flow of stormwater in suburban areas particularly.

ASSEMBLYMAN PELLECCHIA: There is one thing that really bothers me. Of all the statewide flood control master plan and all of the plans that I have heard off--and I've been around the State House for 8 years now and long, long before I arrived there we were talking about trying to do something about the Passaic River survey and the plans that were made for that going way back to before Plan C--nothing ever happened. Why do we continually have plans and operations to study but nothing--- Wouldn't all that money that is put into doing something about it be put to better use somewhere else?

MR. WILFORD: Well, that's a problem not created by the State itself but primarily by the Army Corps of Engineers in conjunction with the local people. They haven't come up with an acceptable plan. The Passaic River is a specific problem which is being studied by the Corps.

ASSEMBLYMAN PELLECCHIA: Another study! They're making a study; the State will be making a study; all we are doing is studying. When are we going to get to do something about these problems? That's what I'm asking the State and with all due respect to you, I'm asking through your department. Because I know of several projects that are being held up in your department--in the department where plans are to be rendered to them for building. They are being held up and the entrepreneurs are, in some cases, really in trouble.

MR. WILFORD: Are you speaking, sir, of flood control plans or are you speaking of normal development?

ASSEMBLYMAN PELLECCHIA: At this point, I may be a bit astray from the bill. I'm talking about some of the things that happen in that department that cause some of these problems to pile up on us especially in a town like Paterson or other places where there are intentions of development.

MR. WILFORD: We're not holding up the development if that is the subject you are discussing. We are bound by the ninety day bill and despite an increasing number of applications for stream encroachment permits and a very limited staff, we have been able to comply with that.

ASSEMBLYMAN PELLECCHIA: I'm inclined to agree with you that you are limited with your staff.

ASSEMBLYMAN GIRGENTI: Going along with what Ozzie was saying, it appears that we are very critical of your department. I think in a way it is a frustration. I have only been in office a year and a half now but since I've gotten there we have heard about problems. Flooding is a major problem. Every time there is a solution offered or some sort of an idea brought forth, we find that your department feels that it is covering it already. Yet we still have the problems. Now, the flooding is still there. I go into my district and every time the rain comes down, we have another flood in my town of Hawthorne. In Paterson, the flooding continues. Going back to my own thing--which is off the bill--the stream encroachment area, they said, "Well, we do have the inspectors and we do the job." But, I can take you to places in our district where they have developed and gone into the river. This, in my opinion and in a lot of others' opinions, causes a lot of this flooding. There is nowhere for the water to go so it floods out onto the land. And you say a lot of this is covered by existing law. Well, maybe you can answer this: "Why, if we have covered all this and done all of these studies, do we continue to have these problems and what can we do to alleviate it? Or what can your department suggest as a cure?" We're here; we're working on it. It's not that we are just trying to take shots at your agency. We understand the problems your agency has as Cary brought out, you have a limited amount of resources and so forth. What can we do? It is a frustrating experience every time you come down the line. They have been talking about dredging by the Army Corps of Engineers for years. Then, all of a sudden, nothing can be done. Then we talked about the Sisco Bill that had money for dredging and for doing things and I don't know what happened to that. That just died. We never used the expenditures.

ASSEMBLYMAN PELLECCHIA: That was bottled up with the Sinsimer Bill.

ASSEMBLYMAN GIRGENTI: And this has gone on and on. I'm not so much criticizing. I'm just saying, "What can we do at this point?" A bill like this seems like a constructive approach to try to find a solution. Then I read in here that a lot of this is covered already by other legislation. Why do we still face these problems?

MR. WILFORD: Part of the problems are due to the cumulative effect

of unwise development in the past to which could be added violations of the Stream Encroachment Law in the present. It is a most difficult task for the Department to fully exercise its controls certainly, of course, as you have mentioned where we are short of staff. And the Legislature, in its wisdom, keeps adding to our burden with such as the Dam Law and the Flood Control Bond Issue. But it doesn't give the wherewithal to enable us to take on additional staff to deal with these problems. I do feel that A-1819, if amended, would be a very great step forward in helping minimize future problems but it won't necessarily take care of present problems.

ASSEMBLYMAN EDWARDS: It has been my understanding--and I'm saying this more in the line of a comment--that most of the studies that have come out to attempt to control and prevent flooding and protect property that floods--and that's what we are ultimately talking about--have such exorbitant price tags attached to them that no level of government has been in a position to be able to afford them. The example I constantly use happens to be from my home town which is Oakland where we have a low-lying section on the Ramapo River that is constantly flooded once, twice a year. We take the rowboats down. We take people out and put them back in. Those were summer bungalows that were constructed at a time when most of that land did not flood. In order to protect that land it would cost somewhere in the vicinity of \$25 million. Now that involves a coordinated effort dealing with the Pompton Dam, some upstream work and dredging and channelization and some dams and dikes and various other things, bridge replacements and culvert changes. The land that we are attempting to protect is worth approximately \$3 million. To spend \$25 million to protect \$3 million is not a prudent investment of money. However, to spend either the \$25 million or the \$3 million to buy the land over a period of time as it may come on the market is a useless expenditure of those dollars if we are not going to do something to control off-site development with reference to the runoff that it constantly generates as organization continues and growth and development takes place. This is not within the confines of the flood plain areas. It usually does not take place in those municipalities, in those geographic locations where there is a real flooding problem. It takes place in an upstream and an upmountain area. I'm as concerned about the existing problems as Ozzie and John are. But I'm even more concerned with our own developed counties of Sussex, Warren, some of our southern counties. If we don't now plan to prevent this from happening, the flood areas will continue to grow. Any flood control work that we attempt to do, the expenditure of that \$3 million or the \$25 million will be a useless expenditure because the flood plain will expand and we will have another \$3 million or \$25 million bill that the taxpayer will be asked to absorb. Unless we do something like the intent of A-1819 we are not going to ever be really addressing the problem and we're not going to be spending those particular dollars. With reference to the urbanized areas: I don't think we have much choice but to try to spend some of that money. But we really can't do that until the upstream areas are also controlled with reference to the runoff that continues to inundate Paterson. With Paterson itself, new construction is not going to create additional runoff. So, this bill will not have a significant effect on it. But it will have an effect on Mahwah; it will have an effect on the upstream areas which are causing the flooding in Paterson, which are causing the flooding in Lodi. Lodi didn't flood the way that it does now, fifteen or twenty years ago. It is only troubled since various construction upstream has taken place.

So, that's why I think this bill is important. I do not happen to feel--I don't think you meant in your statement--that the existing legislation really directs

itself to the runoff problem being created by new development outside of the flood plain areas, except the Soil Conservation Act maybe has certain powers in it, from my understanding, to do that. The Flood Plain Delineation Law doesn't do it; the Stream Encroachment Law doesn't do it because we are not dealing with construction in those particular areas. The FIA program does not do it at this particular time. They would like to get into that business but they're not in it yet. I don't know about the Federal Water Pollution Control Act Amendments except to the extent that they do deal with the quality of water that is being delivered to stream. So we are not really in any legislative way, or in any regulatory way, addressing the volume and velocity of runoff away from the stream and river areas of the State. I see this as a prerequisite, this kind of activity whether it is A-1819, whether the federal government does it, whether the Department of Environmental Protection does it, or whether the county agencies, or regional basin agencies are created to deal with increased runoff, any efforts that we make are duplicated and basically unresponsive to the real need of control of the expansion of growth of flood plains. I also know that the Department of Environmental Protection factors in, in determining existing flood plains, a factor that would increase the area of flood plain growth by about 25% of its existing area and elevation and mandates it when they are reviewing their own delineation law that they plan a growth of the flood plain area in it. To me, that is an acknowledgement of the existence of it and a failure to address it is a chief responsibility of both the Department and the Legislature which is what I hope this bill will do in at least one part.

In conjunction with that now that I have made my little speech, I would like to ask you about your comments on the prematurity of this bill with reference to the work that is being done by the Department of Environmental Protection. Why do you feel it is a premature Act and, in fact, is the \$3 million that is being proposed for this master plan really going to address the issues raised in A-1819 or is it going to address the potential of the construction of flood control facilities, reservoirs, dams, dikes, in areas that presently flood? That was my understanding of what that \$3 million was going to be used for--a big part of it.

MR. WILFORD: I'm sure it wasn't intended, sir, that our statement be interpreted to say that the bill was premature. We said that mandatory requirements may be premature because of the difficulty of coordinating local plans with regional plans before the regional plans had been developed.

I would like to make a comment on an earlier statement you made relative to the provisions of the Flood Control Bond Act. The monies are available not only for the structural control of flood control works, but also for acquisitions of properties to prevent flooding. That was included in that particular Act. Relative to the master plan, it is correct that this will be directed primarily towards rectifying existing problems and showing where further detailed studies are necessary for specific flood control works. It is very true, as you say, that A-1819 will be supplementary to the master plan and also to the other statutes to which you made reference. We didn't say it would be duplicated, we said it would be supplementary and would support those.

ASSEMBLYMAN EDWARDS: Let me ask you about the \$3 million and a little bit more. Taking into consideration the statement that I made just prior to this, the diversion of \$1 million of that \$3 million to county and regional agencies to develop an Act as coordinators for the development of stormwater management plans on the local and regional basis, would the Department support the use of the funds for that?

MR. WILFORD: Yes, we would under the provisions of the Act which earmarked that \$3 million for planning purposes. However, it should be recognized that \$3 million does not go very far. We have to pay for the statewide master plan and we must also meet administrative expenses from the \$3 million. So, in all likelihood, we have a relatively small amount left to give to regional agencies for planning purposes.

ASSEMBLYMAN EDWARDS: I don't want to ask you to comment on that right now. But perhaps you could comment back to the Committee by the time of its Committee Meeting on the 24th as to the potential availability of funds that the Department might be in a position to support for county and regional agencies to act as coordinators for planning in conjunction with the goals established in A-1819. I would appreciate it very much.

MR. WILFORD: I'll do that, sir.

ASSEMBLYMAN PELLECCHIA: Mr. Wilford, you, or your department were present at the meeting that we had in Haledon in reference to the reservoir in North Haledon?

MR. WILFORD: No, I was not there.

ASSEMBLYMAN PELLECCHIA: Someone from your department was there and we talked about monies that may be used for the problem that exists between Haledon and North Haledon and Prospect Park at the reservoir. I heard you refer to \$3 million from the bond issue and I believe that a request was made to use some of that money for planning up in the Passaic County area. Are you familiar with that at all?

MR. WILFORD: No. I wasn't aware that has been done.

MR. WUNSCH: Mr. Wilford, on the bill, as I understand it your Department will not support this bill unless--one of the first conditions that you made--instead of it reading every municipality in the State "shall" prepare a stormwater management plan, your department would have it: Every municipality in the State "may" prepare... Am I correct in that assumption? Is that what you want?

MR. WILFORD: We haven't discussed the specific language. We recognize that it may not be necessary for every municipality to have a mandatory requirement to prepare such plans simply because they have very little flooding problems and their potential flooding problems are very minimal. There was some merit in the suggestion made earlier by an individual that maybe it could be worded: every municipality shall "unless waiver is given". We feel that the mandatory requirement at this time is perhaps premature because of the extreme difficulty which a municipality would have in coordinating those plans with other plans which haven't been prepared to date.

MR. WUNSCH: Let me ask you about that. There are municipalities which have pursuant to their master plans enacted ordinances dealing with water runoff. Is that not true?

MR. WILFORD: I understand that is correct.

MR. WUNSCH: Have you in your experience ever encountered an instance, a single instance, where those plans did damage to a regional plan or to an adjacent municipality?

MR. WILFORD: In relation to structural damage, I'm not aware of any result of that type from such ordinances. In relation to compatibility with regional plans, that's a very difficult question to answer simply because relatively few regional plans to date have been prepared.

MR. WUNSCH: But, you are not aware then of any particular instance where one of these plans did damage. Regardless of whether regional planning existed, you might have heard if these ordinances enacted voluntarily by a municipality had done damage to an adjacent or another municipality. You haven't heard that?

MR. WILFORD: No. And I would point out in favor of A-1819 that it is quite specific in relation to its applicability. It doesn't deal with flood control works as such, or for acquisitions for flood control purposes. It deals with a very specific subject of controlling runoff from developments.

MR. WUNSCH: Can you only see good coming out of this bill then even if it isn't coordinated? Let's forget about the coordinations. Suppose every municipality goes ahead and just does it. Can you really envision problems arising from that in the absence of coordination? And can you describe those kinds of problems?

MR. WILFORD: I can't see any problems.

MR. WUNSCH: You can't see any problems even though they weren't coordinating at all?

MR. WILFORD: It depends what the approach is. Zero runoff is not really a practical solution. The water has to go somewhere at some time. The aim should be to retard that runoff so that it doesn't exceed the assimilative capacity of the stream. The greatest potential for conflict would be if municipalities developed their own structural flood control programs which could conceivably create problems downstream. But A-1819 doesn't cover that particular aspect. Therefore, we have no real objection to the aims of A-1819, our objections are primarily to the specific language and also particularly to the language that seeks to earmark \$1 million for grants to municipalities which is not allowed by the statute which created the bond fund.

MR. WUNSCH: Suppose we took that section--five, I believe--knocked out the word "municipalities", then it would be in accord and then just authorize those larger units, counties and regional agencies, to disperse funds pursuant to this Act to defer municipal costs.

MR. WILFORD: I have already answered that in the affirmative to Assemblyman Edwards.

MR. WUNSCH: So we could take care of that in that way.

MR. WILFORD: Yes.

ASSEMBLYMAN EDWARDS: Thank you very much. I appreciate the Department's concern with the bill and efforts on the bill to date. I look forward to working some more with you.

MR. WILFORD: Thank you, sir.

ASSEMBLYMAN EDWARDS: Is Mayor Chris Paci here?

ASSEMBLYMAN PELLECCHIA: Before you start, I think Assemblyman Grgenti and I are going to excuse ourselves. Cary Edwards will continue as Chairman of this meeting. I hope that we get enough information so that on the 24th we can amend it. KENNETH JOB: Mayor Paci was unable to come but he asked me to appear. I am the Borough Engineer.

My name is Kenneth Job. I am the Engineer and Director of Public Works for the borough of Lodi.

To begin with, the borough of Lodi agrees in principle with the bill. But we have problems similar to Paterson in that our borough is almost totally developed. The significance of the management plan would be much less for us than it would be for Mahwah or one of the other municipalities. Probably our present zoning requirements will, in essence, give us zero or less runoff for pieces of property that are redeveloped. In the commercial areas we have buildings that were built long before zoning was even introduced in New Jersey and we have almost 100% coverage. So anything that comes in now has to abide by our new zoning so that we will have more open spaces. That is one thing.

We also were worried about the fact that this was a mandatory bill in certain

respects as far as our own discretion as to where and when to apply these rules and regulations of the plan. Again, this stuff was brought up. But, primarily we are worried about a small-home owner on a small piece of property or who owns a small piece of property trying to restrict the runoff on a new home to zero to make it equal to what it was prior to the development. There are areas where you can't put a seepage pit in because if you put a seepage pit in, you will run the water into the basement. So, those are the problems then. The implementation of this bill is a problem. Another problem that we possibly anticipate is what process we will have to go through with the higher agencies. They have their time limits in which to review plans presently. But they can circumvent those requirements by coming along and saying that an application is incomplete and kick it back. And it goes on for months and months and months where you have a 90-day or 45-day limit supposedly. These are things that are a problem to us. Another problem is the extent that we would have to go to in order to prepare a plan--what the guidelines of a plan are. We are talking about money. We have a town that really is buffeted by the floods today. Whatever we do without a plan, generally speaking, will be in the same direction as what you want to do. We are concerned about how intensively we will have to go into a plan, how elaborate a plan we have to provide, because of the cost. We are not an affluent municipality. All these things cost us money. Basically, that's it.

ASSEMBLYMAN EDWARDS: Let me ask you a couple questions. The intent of the bill is not to, in my opinion, put an onerous burden on municipalities like Lodi. But, some of the problems that Lodi is suffering from are upstream problems. They are not being created by the runoff that comes out of the municipality of Lodi, they are coming from other municipalities upstream or other construction that is taking place in the vicinity of Lodi that has created excessive runoffs--excessive volumes and velocity of runoff really--that have caused Lodi's problems. A bill such as this that would deal with future construction upstream from Lodi and put the responsibility on those municipalities to retard additional runoff would, in fact, benefit Lodi.

MR. JOB: Absolutely.

ASSEMBLYMAN EDWARDS: Lodi being a developed municipality, having gone through the processes of studying the stormwater runoff within the confines of your political jurisdiction would probably result in any new construction not having very many constraints because you are already a developed municipality. It has maximum runoff coming off now. So, in light of your redevelopment area, the volume and velocity of water that was running off prior to redevelopment was probably in excess of what it will be after the Redevelopment Authority completes its job.

MR. JOB: That's correct.

ASSEMBLYMAN EDWARDS: So really, there are no owners' responsibilities placed on Lodi in particular other than to have studied the consequences of the hydrologies of their own runoff.

MR. JOB: That's correct.

ASSEMBLYMAN EDWARDS: So the benefit of a bill like this would be far greater to Lodi than it would be to say an upstream municipality that has no flooding. They would be the ones, in my opinion, who would really be objecting to the bill. Because they don't have flooding but they are going to have to go through the expense of really doing a much more comprehensive plan and then the implementation of that plan would be far more difficult and probably onerous to them than it would be for Lodi.

MR. JOB: Well, that's correct. That's why we say in principle that we absolutely agree with this totally. The only thing is that there is no indication

as to the guidelines that we would have to follow to implement this plan within the municipality. If those discretionary phrases that we are speaking about are allowable under this well then our objections reduce. I say "objections" but that's the wrong word--our "reservations" reduce. Because if we can fit the plan to the circumstances, then the problem, of course, is much less than it would be if we had to go with the same type of a plan that a municipality such as Mahwah, which is open for the most part, would have to go through. That's basically the gist of our statement.

ASSEMBLYMAN EDWARDS: Can you relate to any degree the history of Lodi and how the flooding has increased? And have you been able to trace, specifically or even generally, the cause of that increased flooding that you have suffered?

MR. JOB: We have two types of flooding in the municipality: One is stream borne flooding which is really what we are speaking about here. I think, in modern times, the first heavy impact of that flooding was in 1968, I believe. That was that day before Memorial Day, almost at this time we had that first rainfall. Then we have had periodic ones since then. There were two in 1971 in close proximity--in August and September I believe thinking back. And they have progressed from there. Those were severe ones. We had a severe one on Election Day two years ago and it has been increasing because, as we all know, the runoff is increasing upstream from the river. We have other problems with closed conduits within the municipality that are also regional in nature that drain from remote municipalities, somewhat the same character as Lodi as far as development is concerned. These, of course, all discharge into the Saddle River or some other creek that goes into it. And we do have small areas that flood because of the inadequacy of that storm drainage system as such. But, basically, it is just on the rise the same as it is everywhere else. It's getting greater and greater. As you know probably a lot better than I do, there have been studies on the Saddle River by the Corps of Engineers. There have been studies on the Passaic River starting back in 1936. But, there really hasn't been any implementation other than de-snagging, trying to get some small obstructions out of the stream. Larger ones seem to be--what would I say--they seem to have the weight of history on them. Nothing seems to move them. Basically, that's the history of it--it is just a progression of flooding, just as in your own municipality.

ASSEMBLYMAN EDWARDS: In your opinion, does the implementation of the goals and objectives of this bill constitute not just another study but a real addressing of the problem at its roots?

MR. JOB: I think it is closer to it because it addresses itself to the municipalities. I think that you are getting down to the source of the problem, the people who are most responsive to their officials, if nothing else. In other words, you can always get ahold of a mayor if you are a taxpayer. It is difficult to get ahold of an Assemblyman, let's say, on the same basis. I'm serious. Every few weeks you can get your hands on the mayor. I think that if it is developed at that level, it will move.

MR. WUNSCH: Does your municipality have a plan now for this?

MR. JOB: Not really, the only plans would be something that would be the basis of logic, not a basis of written---

MR. WUNSCH: What kind of cost would it impose on your municipality?

MR. JOB: It depends on how deeply we would have to go into it. There is no full time engineering staff in Lodi. I am a consultant. I am the Borough Engineer but it is a four year appointment. Everything that I do is on a consulting basis. So, it would cost them some money. It depends on the depth to which we have to go.

MR. WUNSCH: Is there any adjoining municipality or a municipality nearby with whom they can share the costs?

MR. JOB: That's a question I can't answer because I don't know what the machinery of doing that would be--the legal machinery.

MR. WUNSCH: The statute is there.

MR. JOB: About sharing?

MR. WUNSCH: Yes.

MR. JOB: Well, there are municipalities upstream and downstream on the Saddle River that experience exactly the same difficulty. There is Wallington below; there's a little piece of South Hackensack; and there is Rochelle Park above. I think they all have mutual interests, so it is possible if there are funds that they could corral for this.

ASSEMBLYMAN EDWARDS: I'm sure you are aware, but maybe you are not, there is a philosophy of intermunicipal cooperation. And there has been statutory authority given to municipalities to join together to accomplish matters of mutual concerns to help reduce the cost, but also in areas where coordination is necessary because of some regional problem. I think that the capacity exists to do that and I think eventually municipalities will probably--if this bill is enacted and implemented--would be wise to pursue those areas.

MR. JOB: Yes, I think it would be a good idea. I'm involved with other of those municipalities that I mentioned and they are all most concerned about it and I'm sure they would cooperate with each other.

ASSEMBLYMAN EDWARDS: We have one more witness, I think, and then we can break for lunch.

J E N N I E G A I T S K I L L: I am Jennie Gaitskill, 206 Park Road, Franklin Lakes, New Jersey. I am the chairman of the Land Use Committee of the Policy Advisory Committee of the Northeast 208 Water Quality Management Planning, which was established under Public Law 92-500. This covers the Passaic River Basin.

The Northeast 208 Policy Advisory Committee and its subcommittees have wrestled with the issue of stormwater management as it relates to water quality for almost two years. Early in our deliberations the PAC endorsed the need for stormwater management practices that would provide for the protection of water quality and for recharge into aquifers.

The Draft Northeast New Jersey Water Quality Management Plan addresses the necessity to develop stormwater management policies to cover urban, suburban and rural areas--policies to 1) minimize non-point sources of water pollution, 2) to promote ground water recharge and 3) to reduce flood damage.

The Land Use Committee reviewed A-1819, formulated a statement on the bill which was approved by the Policy Advisory Committee on May 3, 1979. I shall read the statement into the record.

"The Land Use Committee of the Northeast 208 Water Quality Planning Program has reviewed A-1819 in light of the general principles of stormwater management. In evaluating the potential effectiveness of the bill, the Land Use Committee supports the preparation and implementation of stormwater management plans for the purposes expressed in the bill.

"However, we recommend that the bill:

1. Emphasize the need for stormwater management planning at the watershed level and require that municipalities implement stormwater management ordinances which are consistent with county and/or regional stormwater management plans.

"2. State that a designated purpose of the plan shall be the maintenance of the integrity of floodplains as well as natural stream channels.

"3. Define structural and non-structural "methods" rather than "changes" as is written on page 2, line 11.

"4. Funding at \$1,000,000 is inadequate. Funding should be either increased or eliminated, should be matching and should be made available only to county or regional agencies where the major responsibility for planning and coordinating exists.

"5. Clarify the explanatory statement to indicate that the bill is designed to minimize the impact of growth and redevelopment on flooding within the State. Emphasize the preparation of regional plans and of municipal ordinances."

ASSEMBLYMAN EDWARDS: I'll be happy to take your recommendations under consideration. I'd like to have a chance to absorb them a little bit more. I might be developing some questions on them after I have had the opportunity to absorb them. I hope you will make yourself available and I can find you.

MS. GAITSKILL: I would suggest that if your Committee can get a copy of this draft which is not finalized at this point--public hearings will be held on it; there will be final comments on the draft plan as of June first; revisions will be incorporated in July; public hearings will be held in August on the plan--it does address the subject of stormwater management at length both as a flooding problem and recharge and the non-point pollution as a result of stormwater runoff and recognizes the complexity of the problem as far as coordinating various groups which have been mentioned here today--the Corps of Army Engineers and the Department of Water Resources.

ASSEMBLYMAN EDWARDS: In dealing with the issue of coordination, would you have any concrete recommendations on how to coordinate something like this? Should it be the county? Should we create more regional basin groups with all the municipalities as participants? Have you any ideas?

MS. GAITSKILL: Not another bureaucracy. We have tools, we have the tools of the county which don't necessarily cover the basins. However, it would seem that the most logical way to go about it would be that at least some portion of the coordination be done on a basin level. I think we are particularly fortunate in this area that we do have the 208 Plan which does cover the Passaic River Basin and perhaps that might, indeed, be the tool to use for coordinating agencies.

ASSEMBLYMAN EDWARDS: But you think the counties, rather than create another bureaucracy, would have the existing resources within the counties to do interbasin work.

MS. GAITSKILL: I think we do. I think the County Planning Boards certainly are capable of increasing their staff as the need requires to do the coordinating.

ASSEMBLYMAN EDWARDS: For the municipalities.

MS. GAITSKILL: For the municipalities, yes.

ASSEMBLYMAN EDWARDS: Number five in your comments: "Clarify the explanatory statement to indicate that the bill is designed to minimize the impact of growth and redevelopment on flooding within the State." Can you elaborate on that a little? I'm a little confused as to exactly what you are talking about. I know you are talking about the statement to the bill. But it was your number five on your position.

MS. GAITSKILL: I'm, of course, speaking for the Land Use Committee. They didn't necessarily reflect all of my beliefs on this. I think you will notice in our whole statement that our emphasis has been to continuously work on the regional level rather than the local municipal level. We want it clearly understood that the function

of the bill is to minimize and/or prevent the increase in flooding by growth and redevelopment. If I may, address a point that might answer part of that question: Mr. Pellecchia raised the issue of how to handle this type of a problem in an urban area. I'm familiar with Paterson, myself. They are in the process of redevelopment in the downtown area of Paterson. It seems to me that it would be very easy, in that process, to incorporate stormwater detention plans--detention-retention park, playgrounds that would remove some of the stormwater runoff.

ASSEMBLYMAN EDWARDS: You acknowledge though that we are not dealing--in an urban area like Paterson--with new development creating additional runoff to what is already there. You are saying that they should attempt to make an additional effort to hold back whenever possible existing runoff.

MS. GAITSKILL: That's correct. I don't think the urban areas are probably adding any more at this point.

ASSEMBLYMAN EDWARDS: But every effort should be made to reduce and perhaps their development of a local stormwater management plan might have a positive influence on their accomplishing that.

MS. GAITSKILL: Yes.

ASSEMBLYMAN EDWARDS: That would also hold true for Lodi. If they were to develop such a plan, they'd be able to say, "We might be able to help a little if we do this or that."

MS. GAITSKILL: That's right.

ASSEMBLYMAN EDWARDS: I see. Thank you very much. I appreciate your appearing here. I think we should break for lunch. Try to get back here by one thirty as we have been running late all day. Thank you all for being with us.

(Lunch break)

#### AFTERNOON SESSION

ASSEMBLYMAN EDWARDS: For the benefit of those people who weren't here for the morning session, Assemblyman Pellecchia and Assemblyman Girgenti were here for that session. They both had appointments back in Passaic County this afternoon and wanted me to explain that they would have liked to have continued but they were not able to. This morning we had some opening remarks that Assemblyman Pellecchia gave. He then turned the chair over to myself and I made some remarks. We have had a number of interesting witnesses who have testified already and we have about four speakers scheduled for this afternoon. I'd like to move right into that. I think the first one on the list is Dot Mackay.

D O R O T H Y   M A C K A Y: My name is Dorothy Mackay, I'm Chairman of the Oakland Flood Control Committee. My address is 72 Hemlock Street, in Oakland.

The concept of zero stormwater runoff through the development and enforcement of stormwater management plans by every municipality in the State is, I believe, an ideal solution to the ever-increasing problem of flood damage and, I believe, should be adopted immediately.

During the past 35 years, I have watched the flood plain of the Ramapo River in Oakland expand in direct proportion to the magnitude of development on higher ground. For example, several years ago a relatively small office/industrial

area was constructed on Spruce Street in Oakland--out of the flood plain. The storm-water runoff was piped into a brook on an adjacent street. Homes near that brook which never before experienced flooding problems, now, since the construction of the industrial area, have water in their homes during heavy storms and as a result have submitted claims for thousands of federal flood insurance dollars. Their property also, of course, has been devalued because it now lies in a flood hazard area.

Spending taxpayers money for flood control and prevention and the adoption of flood control legislation, I realize is often an emotional issue, however, I believe the public in general as well as developers and builders can be educated to understand the necessity for, advantages of, and their responsibility in flood prevention.

Many developers are opposed to zero increase in runoff and storm water retention because they feel it will devalue their properties when, in fact, the existence of ponds might enhance the construction site and the excavated material might be of value for fill purposes.

There have been court cases in New Jersey where developers have been assessed for a percentage of the cost for installation of downstream channel improvements. The zero runoff concept precludes the necessity for any such assessment which is a savings for the developer.

Developers may also oppose this concept because of the maintenance of retention basins. Any maintenance problem should be borne by the municipality or the County Mosquito Commission as opposed to the developer or the homeowner. Once the area has been stabilized and no additional silt from upstream is produced, the maintenance would be minimal.

Many municipalities in New Jersey depend upon wells for their potable water supply. The potable water supply is directly tied into surface water conditions wherein the ground water is recharged from above by virtue of normal runoff and the greater the time surface water stands, the greater percentage of that surface water will percolate into the ground to recharge the ground water supply. The retention basins are thereby increasing that recharge.

A number of developers have already begun retaining stormwater runoff on construction sites as a matter of economics. Ten years ago a large retention basin, West Pond, was created at the site of the Oakland-McBride Industrial Park and, according to local engineers, it has proven extremely effective.

Without the adoption of this type of legislation, municipalities will lose more and more tax dollars as properties are devalued due to ever increasing flood-prone areas. In addition, the federal government will be required to satisfy ever increasing flood damage claims.

The responsibility, I believe, must lie with each municipality to adopt storm-water management plans in order to protect lives, property and the ecology.

ASSEMBLYMAN EDWARDS: Thank you, Dot. You have read the bill and I think you understand the concepts that we are talking about. We touched upon this with many individuals this morning: There is a realistic problem in developing what we refer to as true zero runoff. The bill actually has a statement in it that requires the adoption of an ordinance following the completion of a stormwater management plan that reads: "... to prevent any increase in stormwater runoff for any new land development..." Most of the testimony this morning revolved around the impracticality of that language and that some modification of the language is necessary so that we maximize the reduction of additional runoff without mandating something that our

technology is not capable of producing. Do you have any objections to that being changed and do you have any suggestions of how we might arrive at a meaningful language that would maximize it with reference to existing data information and engineering capabilities?

MRS. MACKAY: From my discussions with engineers, I don't see any problem with the language as it stands. I realize there are other methods of retention other than retention basins--roof leaders piping into cisterns, into dry wells. I don't see the problem with mandating no additional runoff.

ASSEMBLYMAN EDWARDS: How do we answer the complaints that we get when you talk about dry well cisterns, retention basins, detention ponds especially on private property that no longer become functional after a period of years. How do we deal with the maintenance issue--this involvement. Because what we are doing is: if we require that for a period of ten years, ten years from that point they all become clogged up and we now have the additional runoff back again even though at first blush it looked as though we had dealt with the problem. In ten years hence, we would now be dumping a significant amount of water.

MRS. MACKAY: I'm not familiar enough with engineering work to know what you would do with underground systems. I think there are government agencies now that would be capable of dealing with--and are dealing with--retention basins and those problems. Other than that, I'm not familiar with the engineering work.

ASSEMBLYMAN EDWARDS: The second area that has been of some concern deals with actual stormwater management plans themselves and the necessity for coordinating the activities of various municipalities that would be required to deal with and implement a stormwater management plan. Do you have any suggestions on how that kind of coordination and uniformity of standards can be accomplished? For instance, we talked about having the County Planning Boards do it or the county agencies actually deal as the coordinating arm. Since we are requiring this to be done as part of the master plan that they have to receive a copy of anyway under the Land Use Law, an ordinance is adopted--which they also have to receive copies of--and they seem to be the best agency. Another suggestion that was put forth was the creation of more regionalized agencies directly related to the various basins that are involved--the drainage basins. But that has been criticized for creating an additional bureaucratic level that really has no direct relationship to the actual construction and the actual control, which is why we are trying to hang in at the municipal level because that is where all of the control exists on construction. Should we be coordinating that through regional agencies, the County Planning Board, or existing county agencies?

MRS. MACKAY: I think we have too many regional agencies already. I would prefer to see it left at the municipal level. In flood control, this type of bill is projected beginning with the present and moving into the future. You are not trying to correct problems that exist, you are trying to prevent future problems. We already have regional agencies, county agencies, federal agencies that are dealing with the problems that exist now. In talking about retention basins and zero runoff, no additional runoff, I definitely feel that should be left at the municipal level.

ASSEMBLYMAN EDWARDS: Why do you feel it should be left at the municipal level?

MRS. MACKAY: Because nothing gets done when it moves higher. It takes too long and you have too many different interests, you have too many problems. In trying to correct some of the problems that exist now I have been working with not only other communities but then you get into other counties. It just takes too long. The red tape

is just too much. In the Passaic River Basin there are agencies to come up with plans and then there are agencies to decide how to present these plans to the public and it never comes.

ASSEMBLYMAN EDWARDS: It never happens.

MRS. MACKAY: It never happens. It just simply never happens.

ASSEMBLYMAN EDWARDS: I don't have any more, Dot, if you have any other comments. You had a statement there. Perhaps if you'd give it to Joan, she could make some copies and we could make it available for the record and for the members of the Committee. If you would do that for me, I would appreciate it. Thank you for coming down.

Mr. Esko Koskinen.

E S K O      K O S K I N E N: My name is Esko Koskinen. My address is 79 Locust Lane, Upper Saddle River. I am the President of Greenway Construction Company of Montvale, we are a residential firm. I am appearing before you today as a representative of the New Jersey Builders Association, an organization for which I served as President in 1970.

The New Jersey Builders Association represents over 1,800 firms directly involved with the construction industry in New Jersey. For the most part, the Association represents residential builders. However, we also represent commercial and industrial builders throughout the State. All of our members, residential builders, commercial builders, and industrial builders, are concerned about Assembly Bill 1819.

Flooding problems must be dealt with in an expeditious manner. We are already plagued with flooding problems in some, but not all, areas of the State. Obviously, the first step to take in alleviating the threat of flooding is to take remedial action to upgrade and improve the adequacy and capacity of our streams, culverts, and other drainage facilities. With no additional stormwater runoff or soil erosion, we will still have a flooding problem. Rather than appropriating monies from the Emergency Flood Control Bond Act for municipal planning, as is proposed in A-1819, monies should be immediately allocated for physical improvement projects.

Assembly Bill 1819 supplements and amends the Municipal Land Use Law. However, it is inconsistent with that law. Under the Municipal Land Use Law, municipalities may adopt a municipal master plan, adoption of that development master plan is not mandatory, as provided in Article 3, Section 19 of that law. Assembly Bill 1819 mandates that a stormwater management plan be developed and that it become an integral part of the municipal master plan. Certainly development of a stormwater management plan should be optional. By making the stormwater management plan optional, this Act would become partially consistent with the Municipal Land Use Law. Further, making the adoption of a stormwater management plan optional would save many municipalities throughout the State that do not have, and have not had, flooding problems the unnecessary and uncalled for expenses and aggravation involved with developing a stormwater management plan that they don't need or want. Assembly Bill 1819 is inconsistent with the Municipal Land Use Law in the appropriation granted in Section 5. As I already mentioned, we feel that the monies appropriated under this bill would be better spent on physical improvements than for planning grants. At any rate, the Department of Community Affairs administers the Municipal Land Use Law, therefore, to be consistent with the Municipal Land Use Law, we suggest if any monies are appropriated for planning, that appropriation should be administered by the Department

of Community Affairs.

Flooding problems are quite often the result of occurrences or inadequacies existing substantially upstream from the point at which disaster is realized. Assembly Bill 1819 attempts to address this problem by requiring that all municipalities coordinate their plan with other municipal, county, or regional plans. This certainly is a laudable goal, however, ample coordination between municipalities located ten or more miles up or downstream is a pipe dream at best.

Coordination of flood prevention efforts is being very successfully achieved by the Bureau of Flood Plain Management in the Division of Water Resources of the Department of Environmental Protection. Municipal duplication of the Bureau's efforts will result in not nearly as uniform or professional standards as those promulgated by the State. Unless the standards throughout a flood plain are drawn up by one professional body, the result will be an ineffective, uncoordinated patchwork of regulations. Among the goals mentioned in Section 3 is the aim to "reduce soil erosion from any construction project." Again, this is already being done by the State.

The Department of Agriculture, under the State Soil Erosion and Sediment Control Act empowers the State Soil Conservation Committee, in that Department, to promulgate, formulate, amend and repeal standards for soil erosion and sedimentation. Those standards include criteria for the control of erosion and sedimentation resulting from land disturbing activities. Additionally, runoff of stormwater is also addressed by this Committee and some of their regulations.

The Stream Encroachment Act already addresses and controls pollution by controlling effluent discharge into any stream in the State.

The point I am trying to emphasize is that uniform State regulations already adequately address growth and expansion in the flood plains. For the most part, these rules and regulations are designed to accomplish the aims of A-1819. State rules and regulations are certainly more reasonable and professional than those that would be developed by counties or municipalities. It is inappropriate to now require municipalities to promulgate the same type of regulations.

We urge the Committee to oppose this legislation not because its aims are wrong, but because it will cost municipalities additional sums to promulgate regulations that are already in place by State Departments. The result of municipal regulations will be a hodgepodge of unneeded regulations. The additional cost to construct required by municipal regulations with no additional benefit will ultimately be passed on to the consumers. Most importantly, we don't think that A-1819 poses a solution to this problem. Before any new regulatory programs are undertaken, we suggest that a full scale effort be made to improve the streams, culverts and other storm water vehicles whose present condition of disrepair is the present cause of flooding. Again, I must emphasize this point. Flooding is taking place right now. All the regulations in the world will not alleviate the problem. Obviously, the answer to the flood problem is to upgrade our present facilities; then, and only then, will we be able to reasonably assess our future problems.

ASSEMBLYMAN EDWARDS: There are a couple of things that I would like to ask you a few questions on, if you don't mind. In particular, you refer to the fact that Uniform State Regulations already adequately address growth and expansion in flood plains. What regulations?

MR. KOSKINEN: Their stream encroachment regulations.

ASSEMBLYMAN EDWARDS: What stream encroachment regulations deal with the expansion or growth in the flood plain?

MR. KOSKINEN: By their calculations. In other words, when we are developing property along any brook or any stream, we must calculate the areas that that stream will flood during a hundred year's storm. That property along that stream, along that brook, river, pond, lake, whatever it is, must be now delineated from the development and it becomes a part of the flood plain. I have processed many of these through the State, and I know exactly how they work.

ASSEMBLYMAN EDWARDS: I understand what you mean.

MR. KOSKINEN: They are very complicated and very exactly done. That is, their regulations are very precise as to the criteria you must meet. We surveyed upstream and downstream from that particular point, so that we do encompass a large area of ground, and it does encompass in some cases a half a square mile of drainage area.

ASSEMBLYMAN EDWARDS: You are talking about the Stream Encroachment Regulations; is that right?

MR. KOSKINEN: Right.

ASSEMBLYMAN EDWARDS: And I am familiar with the Stream Encroachment Regulations and Rules. I apply for them myself. I process them. I have challenged them in court. I have done all those things, but to my knowledge, Stream Encroachment Regulations don't deal with the growth and expansion of flood plains. They only deal with construction within the existing flood plain areas, and it is a duly recognized fact that the growth and expansion of flood plains is not the cause of anything going wrong within those flood plains, but it is caused by the growth and expansion of those lands outside of the flood plains, and I am aware of no rules, no regulations that exist in the State of New Jersey or in the Federal Government that deal with the growth and expansion and development or deal with drainage facilities and what is outside the flood plain area. The Stream Encroachment Law specifically limits the activities of the Department of Environmental protection and stream encroachment or any other regulations within that delineated flood plain area, and no other. So, I am not aware of any regulations that inhibit or address the growth or expansion of flood plains. I know there are those that deal with building and construction within them, but not growth of them.

MR. KOSKINEN: Well, let's put the horse before the cart. In most areas there is no flood plain designation. As a matter of fact, most of Bergen County has never been delineated.

ASSEMBLYMAN EDWARDS: Yes, I know that.

MR. KOSKINEN: So, what the regulation is doing for the flood plains right now is creating the flood plains by a developer or by the use of land which is near, on or in a stream. So, you are only taking the problem a little bit further from when a stream was delineated. I am taking the problem to the point when the stream does get delineated. That is creating a flood plain. And, this is the regulation I am speaking of right here.

Now, the flood plain is created according to the criteria set up by the State of New Jersey.

ASSEMBLYMAN EDWARDS: Well, the flood plain is something that exists.

MR. KOSKINEN: It does not exist until it is delineated.

ASSEMBLYMAN EDWARDS: The flood plain is something that exists right now, and the determination of what its boundaries are is a matter of measurement. But, its physical existence is still there. There are lands that do flood under certain conditions, and that go underwater. That land is determined to be flood

plain. What the boundaries of that are is a measurement question, or delineation question. The State of New Jersey has not - and you are absolutely correct - delineated Bergen County. The Federal Government, however, has delineated Bergen County, and has delineated flood plains in most of those areas.

MR. KOSKINEN: You are talking about your HUD maps which show the different types of insurance programs. They are not very accurate to say the least. I am sure you are well aware of that. I think the only place that we do get accurate flood plains established is when land is being utilized and used, because now a study is being made of that particular culvert or stream or drainage facility. Up until that point, the flood plain does not exist, even though you say it does, because theoretically it could be buildable, even though you say it is in a flood plain. But, until this regulation came into effect, there was nothing which said I could not build on the flood plain. So, now, this is the regulation we are now speaking of which the State endeavors to handle by establishing all these stream encroachment lines throughout the State.

ASSEMBLYMAN EDWARDS: I guess I will get back to my question. What, in any of those regulations, limits the growth of that flood plain area that has been delineated?

MR. KOSKINEN: There is nothing that I know of that limits the growth over and above the delineated area, nothing that I know of, unless something upstream would be created to increase the flow of water beyond the hundred year flood level.

ASSEMBLYMAN EDWARDS: Let me ask you one more question along those same areas. Do you understand that this bill is not designed to address the problem of existing flooding?

MR. KOSKINEN: Yes, I understand that.

ASSEMBLYMAN EDWARDS: And, the bill addresses itself to trying to prevent the increase or expansion of land that is subject to flooding?

MR. KOSKINEN: That is correct.

ASSEMBLYMAN EDWARDS: Are you aware of any regulations or rules or statutes that address that issue right now?

MR. KOSKINEN: On the State level, no. I am well aware of them on some municipal levels and on the county level.

ASSEMBLYMAN EDWARDS: Okay, are you satisfied with the adequacy and propriety of those regulations that have been adopted locally, and the county detention/retention regulations that have been put forth here in Bergen.

MR. KOSKINEN: I am satisfied with the county retention/detention regulations. I am satisfied with some of the municipal ones, that is true.

ASSEMBLYMAN EDWARDS: Which ones in particular?

MR. KOSKINEN: I am satisfied with the Mahwah one. I am familiar with the Oakland one. I have never built with it, but they tell me that it can be lived with.

ASSEMBLYMAN EDWARDS: What is it that satisfies you about the Mahwah one in particular?

MR. KOSKINEN: I think they are being reasonable in the sense that we can negotiate with them, for instance the size of the parcel that is to be developed, and even though the ordinance is a very brief ordinance, most of the things have been left out, so that becomes a matter of negotiations with the borough as to what a retention basin should be, whether it is for recharge, or for

retaining or detaining or whatever. This may not be very well written, as far as you are concerned, but we have been able to work it out. And, when you get specifications drawn up from the State, then I have a good idea what they are going to come out as, and I am sure you do too.

ASSEMBLYMAN EDWARDS: Yes.

MR. KOSKINEN: It will be a high spot. I am sure it will be something that we will not be able to work with.

ASSEMBLYMAN EDWARDS: That is one of the reasons I am kind of anxious to have this bill go into place, because I can see the municipal governments being more realistic and working with it from a realistic standpoint, and that leads me to another area that I think you have particular expertise in, and I am particularly interested in hearing what you have to say. I think you heard the question I asked the prior witness, Dorothy Mackay, with reference to the language in the bill as it presently stands, more specifically to prevent any increase in storm water runoff, and I emphasize the word "any." I have been told by engineers, and people have admitted during this particular testimony, that to accomplish absolute zero runoff in many, many cases it is a practical impossibility. Can you shed any light for the benefit of the Committee and the record, as to the propriety of actually installing runoff controllers that would constitute zero runoff in various kinds of examples, if you can think of any.

MR. KOSKINEN: Well, I think you have to take into consideration the magnitude of the project and of the job, and the size of the land. I mean, if you are working on steep slopes, for instance, and you are putting up one single commercial building, then it becomes almost an impossible situation. If you are on rock, it becomes an impossible situation. It depends on the soil conditions that you are working with.

If you are working on a large parcel of property, 25, 50, 100 acres or more, all these things can be accomplished very easily and without much expense, like the lady before me said. But, when you are talking about a piece of property in the middle of Hackensack on a half acre, this becomes impossible. It becomes costly, and like the engineers who have talked this over with you, probably in most cases retention is only going to work for a short period of time, and detention is very, very expensive and impractical. So, I mean, until you establish a criteria for having this kind of regulation, would I be in a position to say to you, yes, it is practical and we can work it out. But, without having this in front of me, or anything else, I can tell you that we are opposed to it, because we must be opposed to it, because there are no criteria or standards set up.

ASSEMBLYMAN EDWARDS: Can you give me any examples of any municipalities that have adopted inappropriate local regulations and ordinances?

MR. KOSKINEN: Anything I would say would be hearsay.

ASSEMBLYMAN EDWARDS: You don't know of any specifically, and you don't have any on record?

MR. KOSKINEN: No.

ASSEMBLYMAN EDWARDS: I read some of the testimony that was made by the North Jersey builders, I am not sure, who testified before the county planning board on their detention/retention regulations, and their statements indicated that the proliferation of local regulations dealing with detention/retention was zero runoff, and the proposed regulations that were coming out of the county of Bergen were

too rigid, onerous and impossible to deal with. Basically, they were arbitrary, capricious and unreasonable, and the developers and builders of the State were prepared to contest those regulations as they went into effect, and I was getting to some examples that you may know or may be able to put into this record that would substantiate that particular position that you are talking about with reference to their regulations. In Union County, does Union County have---

MR. KOSKINEN: No, I have not read the other counties. I have read Bergen County, which I am familiar with.

ASSEMBLYMAN EDWARDS: How do you feel about that one in particular?

MR. KOSKINEN: Well, I said before, we are not very happy with it, and we are negotiating with the county at the present time to either have it abolished or changed in some workable manner. The way it is set up right at the moment, it is an impossible situation. The small lots, half acre site plans must abide by zero runoff regulations. It just can't be worked out. It becomes very expensive, and in some cases, it becomes uneconomically feasible for even a small parcel of land to work it out.

ASSEMBLYMAN EDWARDS: You are saying that each piece of land has to be judged on its own merits.

MR. KOSKINEN: That's correct.

ASSEMBLYMAN EDWARDS: And a system established where there is the flexibility to make that judgement.

MR. KOSKINEN: That's right. The county resolution does use the word "reasonable," but it has been our experience that they have not been very reasonable. I think you are aware of that.

ASSEMBLYMAN EDWARDS: Yes. If you had to choose an agency or level of government that you would rather deal with, which one would you choose, local, county or state?

MR. KOSKINEN: Local.

ASSEMBLYMAN EDWARDS: Thank you very much. Bob Hodwan, Franklin Lakes Environmental Commission.

ROBERT HODWAN: My name is Robert Hodwan. I am the Chairman of the Franklin Lakes Environmental Commission. I live at 716 Colonial Road in Franklin Lakes. I appreciate this opportunity to address you on the subject of storm water management. We in the Borough of Franklin Lakes have been concerned with this issue for quite some time. As our name suggests we are a community of many lakes, ponds and streams. We are also a community that is growing rapidly with new housing construction going on continuously. For Franklin Lakes and many other communities in New Jersey, an effective storm water management plan is a must. Not only must we keep our own water pure, but also the water of those living downstream from our many waterways.

Methods to control storm water runoff are much less expensive than flood prevention construction, or flood clean-up. As it stands now, the Franklin Lakes Environmental Commission and other municipal agencies often find themselves dealing with construction projects that have caused siltation in streams and ponds due to storm water runoff, non-point pollution, and soil erosion. Development without storm water control can increase the volume of water, the velocity of water, and the peak flow of floods by from 2% to 6%. Increased velocity causes in-stream carving, which makes channels deeper and deeper, grinds away at the

stream bed, thus depleting the food supply and causing the stream to become sterile.

The concept of storm water management must be pursued, and Bill 1819 is a step in the right direction. We do, however, have some comments on those bills as written. The bill requires every municipality in the State to prepare a storm water management plan and a storm water control ordinance. This may work well in some areas of the State. However, we also feel that the implementation of such plans on a regional basis might work better in other areas. Municipalities located within the same river basin, for example, must work together rather than individually. If this suggestion is followed, the bill should also spell out how such a regional system would be set up and administered. In order to save money and duplication of work efforts, perhaps the State would consider utilizing those organizations already in existence in the area, such as conservation districts, or 208 water quality planning districts. We also feel that the bill should state who should establish the criteria for storm water management plans and the issuing of grant money. Is this money cited in the bill presently available and will all communities in the State be eligible to apply for these funds?

As I said earlier, we must take steps now to control storm water runoff so that we can then mandate zero increased runoff, control and reduce non-point pollution, decrease incidence of soil erosion, enhance ground water resources through aquifer recharge and in general maintain or improve our water quality.

In closing, I wish to thank you for scheduling this public hearing and allowing those interested in the subject, the opportunity to speak.

ASSEMBLYMAN EDWARDS: Thank you, Bob. You indicated some examples of regionalization. I think I and the members of the Committee and the people involved in this all understand the need to coordinate efforts on a basin-wide basis. It is difficult to determine what those areas and regions should be on a statewide basis. Do you have any suggestions as to how that might be accomplished, whether it be within the confines of this bill or a separate bill designed to create those? How can we effectuate that?

MR. HODWAN: Well, I think the most important thing, or one area that should be looked at is towns that lie within a specific river basin or that are drained by a specific river should definitely coordinate their activities.

We will take as an example, the Ramapo River Basin, with which we are both familiar. If you have a town like Mahwah that is going off in one direction with its storm water management plans and a town downstream like Pompton Lakes going off in another direction with its storm water plans, they may both have very good plans, but if they are not compatible, Mahwah's plan may compound the problem for Pompton Lakes if they are not coordinated properly so that the water doesn't keep increasing as it is going downstream and causing more problems for those downstream.

We are also concerned with water purity. We in Franklin Lakes have a lot of head waters and a lot of streams and ponds that drain into the Ramapo River particularly and the Environmental Commission has always taken the position that the water purity of those streams and ponds and lakes must be preserved, not only for Franklin Lakes but for the people in Oakland and the other towns that are downstream from us.

As I said, I think it is fine to let the municipalities have their plans and maybe even enforce their own plans, but if these plans conflict with other communities in the same area, I think you are going to be defeating your own purpose.

ASSEMBLYMAN EDWARDS: Within the existing structures that we have from a legislative standpoint, do you think it is feasible that the county planning agency's work is that coordinated of activities? I understand that it reaches over jurisdictional boundaries, but I know of no other existing structure that exists. There is not a regionalized basin network or organizations, at least, in the State of New Jersey. The Department of Environmental Protection has not addressed this yet. We have some pilot programs being done by the FIA in this direction right now. But, looking at what we have to deal with today, is there anything we can do to improve the coordination requirements within this particular bill, keeping within the municipalities?

MR. HODWAN: Well, I realize it is very difficult to set up a regional system where perhaps a regional system isn't already in existence without creating more government agencies and more bureaucracy. Maybe I am being a little idealistic to think that the towns in the various river basins should get together and form their own type of non-governmental or semi-governmental agency. For example, you have the Passaic River Coalition which, granted, is not a government agency. It is an independent agency. It is an independent organization. Something like this, I think, may be looked into, as we said in the statement, the soil conservation districts, but I don't know about the county. You could possibly have a problem such as the Ramapo River. For example, the Ramapo River runs through two counties. I mean, if you leave it up to county jurisdiction, well, they may be able to coordinate the towns in Bergen County, but when the river flows over into Passaic County, what is going to happen? Are you going to have Passaic County picking up the ball from there? If that is the case, then you will have to have those two county agencies at least somewhat coordinated, so that they know what each other is doing.

I think in many cases where there is not this type of system, river basin system, or if towns do not lie within any specific river basin, I think it would be perfectly acceptable for the municipalities to go on their own and establish their own type of storm water management program. But, again, I feel very strongly. I think there has to be at least some attempt to coordinate a regional activity amongst those towns that share a common river, or a common river basin, or a common drainage area.

ASSEMBLYMAN EDWARDS: Are you aware right now that one of the reasons I included this in the master plan procedures was because the master plan procedure itself is inter-related, at least under the land use law, with the county planning organizations, and copies of it have to be delivered to the county in advance for their review. If we mandated a review and recommendation of the storm water management plan, for instance, in conjunction with its effect upstream and downstream - and they have the same requirements with reference to ordinances if we were to mandate that they also make firm recommendations with reference to and ordinance adoption, there would be an implementation of their local plans, but that would be a step in the right direction, at least.

Do you think we are better off with that kind of mechanism in place rather than no local storm water management plans at all?

MR. HODWAN: Definitely. I think you have to have some type of storm water management. And, as I said, this particular bill is a step in the right direction. If this is the way the state goes, obviously, it is better than what we have now, which is nothing. I see continuous problems ahead in Franklin Lakes with soil erosion and siltation and storm water runoff. We are having a big problem with it. The local municipalities right now - at least in the case of Franklin

Lakes where we have so much construction going on, it is very difficult for our own municipal officials to keep on top of all the construction that is going on in the community and make sure that everybody is following the State laws that are in effect now. We have had cases in Franklin Lakes wherein State laws have been violated, and although we have called them to task on them, and we notify the State in some cases they have not been fined at all. They have been told, "Well, you are not supposed to do that," or corrected and that is it. We have had stream encroachment violations several times in Franklin Lakes that have gone completely by the wayside without any penalty being imposed against those who have violated the law. It is after the fact, we go in, and they dig the thing up, and then the State comes back and finds out about it, and then they apply for the stream encroachment, after it has already been done.

ASSEMBLYMAN EDWARDS: We had a representative from the DEP here this morning, and it was pretty clear, I think, to everyone involved that the stream encroachment act is not being very diligently enforced. Some of that is our fault in the Legislature, or it is a budgetary problem, at least. There is a question of priority of dollars, and how many dollars can you spread around. The soil conservation districts have very little direct enforcement capacities. They rely very heavily on the local government's inspectors to enforce their plans. I happen to believe that is the right way to go, at the site of the construction. That is where the people have a vested interest and you probably have much better enforcement at the local level. The problem is, it is not being addressed, and yet the rules and regulations in some cases - especially in soil erosion - are in place, and it does get to be a question of enforcement.

I don't have any further questions for you at this time. I thank you very much.

MR. HODWAN: Okay, thank you.

ASSEMBLYMAN EDWARDS: Aldo Servilio, President of the Builder's Association of Northern New Jersey.

A L D O S E R V I L I O: Good afternoon. My name is Aldo Servilio. I have been a builder and developer for over twenty years in New Jersey. I am also the President of the Builder's Association of Northern New Jersey consisting of over 550 members in Sussex, Bergen, Passaic, and Hudson Counties.

This past Tuesday I served as a panelist on a forum for affordable housing. The crux of the meeting, as I got it, turned out that only with heavy government subsidies can there be affordable homes, mainly because of the lack of affordable land. I feel the main reason for this situation is the over-regulation and requirements imposed by no growth and delay policies of most municipalities that create a short supply of land. There is now pending or recently passed - according to the New Jersey Legislative Index - 19 flood control bills, 9 water pollution bills, and 61 environmental, conservation and ecology bills. I see this last piece of legislation just as another tool in wrong hands, the hands of those proponents who want to curtail construction further on any scale.

Besides the restrictions that will follow, there will be many problems, especially in the maintenance of retention basins. If you go to Bergen County, you can see a half dozen of them right in my area alone that are filled with silt that will be costly to maintain. You can see this throughout the whole eastern part of the county in pond after pond.

There is also the problem of insect control, and lastly - God forbid - the danger to small children being attracted to such nuisances as a pond. Should one of them drowned, I would not want that on my conscience. No, sir, the retention and detention legislation cannot achieve your goal, but only add to the mounting cost to the home owner. In the end, it is the home owner that will pay.

I think with the legislation we have available, flooding problems can be corrected. It is just a matter of coordinating what you have on the books already.

ASSEMBLYMAN EDWARDS: How would you propose to solve - not the existing problem - but assuming the construction around the State of New Jersey continues at the same rate, and I am not talking about Bergen County as much as I am counties like Sussex and Warren, and some of your undeveloped counties that are now not unlike Bergen County maybe twenty or thirty years ago - that problem? How do we stop or prevent them from having the flooding problems when they become developed?

The solutions that are before us is a Disney World circus in dollars. I always throw out the example of the Borough of Oakland, and I know people have heard me say this many times, and are getting tired of hearing it, but we have three million dollar's worth of land, or four million dollar's worth of land that has houses on it that didn't flood at one time, but now does, and the town couldn't go out and buy a flood control plan for four million dollars, one that would contain a stream channelization, increasing culverts, and all of the other dams and dikes and the kind of construction projects that are needed to protect that land. It would cost about twenty-five million dollars. And, that is one town out of 567 in the State.

No matter how you look at it, you are looking at a dollar cost that is beyond the capacity of either those municipalities, the State of New Jersey or the Federal Government on a national level to really deal with this. That being the case, how do we prevent, or how do we as a government address the problem of storm water and flooding problems in developable areas?

MR. SERVILIO: Well, to begin with, I don't believe detention or retention is a solution to those flooding problems. For instance, past officials permitted their people to develop home sites that were always flooding prior to building on them. When they filled in the land on these rivers, and restricted the flow of the water, I always was a believer, that if I had a problem with water, I didn't hold it back, I let it run out. And by stopping it down below, of course, the water from up above is going to flood your land. There is no doubt about that, and if you take all these developing counties, I think there is enough legislation on the books now that if enforced and put together properly would lend itself to proper growth.

We cannot curtail construction. You may think that as a builder I am a land grabbing, money hungry person. Some people will accuse us of that. We are not. Our concern is to provide adequate housing for the cheapest price to the people, and we are going no where but up. We are going higher and higher with our costs, and every day I turn around and look at the price of land, and look at the price of homes, it worries me. I have senior citizens living in my apartments and I am afraid to raise their rents any higher, because of restrictions. They don't have any place to go. What is the reason for that? There is no growth, and these are policies that are mandated by local officials that don't want any growth in their towns, and they are using every tool they can, and this would be another tool that they could use to stop growth. I am sorry to say this, but that

is the way politicians are, or borough officials. We must have planned water control policies. There is no question about it. We must have ecology and we must have conservation. There is no question about this, but we must have it in a workable manner. By just passing one piece of legislation, we will not get anywhere.

Like I said before, my concern is housing people in this United States, and by restricting the growth and development of usable land - and this is all this bill will do, if it is in the wrong hands; I have subdivided for many years, and I know what it is to go before a planning board, or a board of adjustment that says, "We do this and we do that." Assemblyman Edwards, I am afraid this is just going to be another tool, but this is no solution. Retention basins don't work.

ASSEMBLYMAN EDWARDS: All right, let's take a step back. You indicated that you have no objection to us promoting a storm water and management plan, or the planning of storm water control.

MR. SERVILIO: Yes.

ASSEMBLYMAN EDWARDS: Then I take it your objection to the bill is that they mandate an ordinance that follows the storm water management plan, which in your mind would mandate detention and retention and things that are from an engineering standpoint not workable, and won't really address the problem. You don't really object to the planning board; you object to the mandatory implementation of a zero runoff concept.

MR. SERVILIO: That is it, but primarily I don't believe this will work. Plus the bill, I think you have soil erosion and you have a body that addresses itself to that, and of course non-point pollution, you have agencies that can address themselves to that.

So, the only part of your whole bill is the retention and detention part, and it is not water control that is my problem. It is the detention and zero runoff. I cannot conceivably see how it happens, especially when you go to some towns--- All the laws I have ever known wanted to get the water off the property and into the streams and everything is built that way.

ASSEMBLYMAN EDWARDS: What does that do? The consequence of getting the water off the property and on to the streets is one that we have used historically and is, in my opinion, and you can correct me if I am wrong, the cause of the flooding problems that we are suffering with now. If we put more water into those streams than those streams can handle, then we have gotten it there too fast.

MR. SERVILIO: Perhaps also it is a little neck at the bottom. You know, it is like drinking a glass of water, if you don't pass it on, you could get awful swollen kidneys.

ASSEMBLYMAN EDWARDS: Yes, I think everyone agrees with that, too. But the problem we have - and it seems like a Catch 22 situation - is that we get to that point and in order to create the streams in sufficient size and quantity to be able to take that velocity and volume of water that is being delivered. Are they Disney World type projects, like that \$25 million for Oakland, in particular, or the flood plain 2B, which requires that four townships become a massive lake and the cost is in the vicinity of billions and billions of dollars---

MR. SERVILIO: There are nine bills right in this last report on water control and water management that are pending in the Legislature.

ASSEMBLYMAN EDWARDS: Yes, I know that.

MR. SERVILIO: You know, I am not against the bill that exists, but I don't think this is the solution to the problems we now have.

ASSEMBLYMAN EDWARDS: What is, if that is not?

MR. SERVILIO: Well, there was a study made in 1972 that said all these culverts and pipes and everything are inadequate, that they were only built for fifteen year storms. I don't go along with dumping all the water on the lower towns, but I think that problem should be addressed at the bottom and work your way up. Here we are worried about retention in Mahwah, when right across the river you have Ramapo and that's dumping the water in with no reservations.

Perhaps, maybe the Federal Government should get involved and start from the basin up above and figure out a way to control the water on its way down with proper lakes and reservoirs. They are talking about reservoirs. I really don't know, but as a retention basin on the small sites, and especially in my county, Bergen County where you only have subdivisions of 25 or 30 homes, there is a builder in Norwood that is required to put in three retention basins. I guarantee you they won't work, but that cost is \$30,000 - \$10,000 apiece. They will not work. Now, that is \$30,000 and there are 30 homes. That is \$1,000 additional to the homeowner. The builder is not going to pick up that cost. I guarantee you that five years from now that will not work the way it is designed. Who is going to maintain that, the homeowner who buys that piece of land where the retention basin is located, the town who will have to send it the public works department, and then the taxpayer will have to pay that cost?

I recognize the problem. I am not an engineer. I cannot resolve it for you. I certainly can see in certain instances where there is a large area, you could put a pond, and it could be maintained by an industry, so that it could be used for their air conditioning and things like that. Fine. I have seen that work successfully. But, overall, I don't think this is the solution.

ASSEMBLYMAN EDWARDS: What you are saying is, you have no objection to what can be done, being done, you know, to take care of drainage on-site or in the general vicinity without dumping it into the river, but don't make it something that is unreasonable or unworkable.

MR. SERVILIO: Unworkable, sure. Here you make people put curbs in on sites or by elimination of curbs, you could have some of the water circulate back into the ground. Little things like that could be helpful. But, I am sure this zero runoff or no additional runoff concept is not the answer.

ASSEMBLYMAN EDWARDS: Okay, thank you very much. Next we have Ray Fox on behalf of the Bergen and Passaic Engineers.

R A Y F O X: Mr. Edwards, my name is Ray Fox. I am a professional engineer in the State of New Jersey, and I am a partner in a firm located in Fairlawn, New Jersey. I have many problems with your bill.

The basic problem I have is that it conflicts with Chapter 58, which I understand is the problem of obstruction of growth. And, I think that that program is being administered to the State of New Jersey through the Department of Environmental Protection. I think retention is misunderstood. I think your bill should appropriate monies to study how the water management program is currently being administered in the State of New Jersey. I think it is very misunderstood on a local level. I don't think there are enough personnel on the local level to administer the program you propose. I don't think there is enough talent. And, I think the program violates the decisions of the court, namely, that all discharge,

and all flow be unobstructed, and that the obstructor remove the obstructions. Your program is paid lip service by county officials and local officials who agree with retention. However, one municipality or one county level wants to only administer maintain, or function in the area of retention, so the question becomes, who owns these facilities? From the hydrology standpoint, retention can be very detrimental. Retention has to consider the overall timing of the stream, and detention can become very damaging in terms of cresting out. You could have a stream where the retention pond failed and emptied at a time when the stream was cresting, whereas, that river would have long passed through the stream and through the system.

I think there is a big area for storm water management studies. Putting it in the hands of local people at this point in time is just chaos, because I think if you studied the program today you would find it already in chaos, and a program that cannot be administered as it currently exists.

ASSEMBLYMAN EDWARDS: I know you do a lot of work appearing before a lot of planning boards, and I know you deal with a number of municipalities that have ostensibly zero runoff ordinances. Can you give me any insight into the practicality of those ordinances?

MR. FOX: Yes. I think they violate the basic premise of an owner of land. I think each owner is entitled to the reasonable use of his land, and the courts have upheld that. Reasonable use, I would assume, is as the property is currently zoned, and to deny a man the use of his land and require him to provide retention, many times imposes a burden upon that property or renders that property useless. Now, there are instances where applicants are putting pipes in the ground and storing water to the tune of \$100,000 below grade, where retention facilities are being constructed that are nothing more than mosquito pits and hazards to children, that their effects have never been studied, and they are negligible and they would not deter flooding in major areas along major streams.

I think flooding has to be defined. I think all storm drainage designed is merely coping with the problem. We never solve the problem. Many culverts that were designed in the 1800's were designed for five and ten year storm criteria. It is not that developers have paved Bergen County over, and that these structures are now inadequate. If you were to study the soil conservation service booklet 55, you would find that an area developed at the rate of about 1/4 acre lots contributes less runoff than fallow open fields, which Bergen County was. It was all farmed property. If you go back, you will find that in the '30's that many of these areas that are subject to flooding today were subject to flooding then. So, it is not the building boom of the '40's and the '50's that has created the problem.

I don't think anyone at any time could ever build structures large enough to pass every flood. We had a program, the HUD program, where they placed 500 year storms on half of New Jersey only to find out that there wasn't any land left, and that the oceans merged and these programs were thrown to the wolves.

I think it should be real, and I think you have to talk about compatibility of drainage and you have to define flooding. I think when water reaches the first floor level and threatens the dwellings of people, that is considered flood level. I know of a case in Bergen County today where the obstructor who has the pipe in that causes that back water has in fact made a court case out of the fact that that is storm water management and opening up that pipe and letting the water out is just sending it downstream.

I think when people call and complain to the county engineer that their backyards are flooded with water that the county engineer should say, "Ma'am, that is the way we want it and designed it, and that is very desirable, and that is the criteria that we are using here in the future," and level with them and tell them that we expect 18 inches of water in their backyard. We designed it that way, and we think that is a good policy.

ASSEMBLYMAN EDWARDS: You don't think, then, that the construction upstream affects downstream construction?

MR. FOX: No, I do not. I think flooding at any particular area is a function of a particular rainfall and a particular duration, and given each storm is a different set of conditions, there is no justification for these 100-year storm criterias are. They are purely statistical. The rainfall data to date, the best stations are probably somewhere near to 35 or 40 years of danger, so that the 100-year storm is merely a statistic, and I would dare say that there was nothing that we design for 100 years. If everyone who walked into their home turned their air conditioner on, Public Service would be out of business, and yet this is a condition that you are trying to impose on all the waterways in the State of New Jersey, and I don't think it is real. I think people have to come to understand what water is, what it is that we live with. It is like traffic, when it jams up, we widen and expand. You have to spend some money.

I think the county and the planning agencies should acquire the rights along all major streams to prohibit any encroachments on those streams, so that those waterways are left open. I don't think when we talk flooding we are talking about a creek rising above its banks into someone's backyard. I think we have to address ourselves to exactly what flooding is. If flooding is over Main Street in Lodi, then I think the agencies and governments that are involved should take a hard look at the problem and storing 700 gallons in Mahwah is in no way going to diminish that flood level, and we ought to get with it.

ASSEMBLYMAN EDWARDS: What you are saying is, you would prohibit any more construction in those areas that do flood, so that they do flood according to your definition of flooding, where they are causing property damage.

MR. FOX: No, that is not correct. I think if there are particular basins that require special study, that those particular basins should be studied and evaluated. Flooding, I believe, is always with us. It has always been here and it always will be here, and people who live along the water derive benefit from the water, as well as the losses associated with water. And, you know that better than I through the courts. To turn around and to legislate that on the local level and to put it in the hands of a politician is just chaos. I think the bill should develop funds to study the water management policies that are now in effect, and how the program is administered. I think upon finding that, you may come to different conclusions with regard to this whole problem. I do believe there is a storm water management problem in the State of New Jersey, and I think it should be addressed. But, I think it should be studied and given definitions legally as to water rights that come into the picture here. Retention is an obstruction to flow, and whether I have the right to deny that flow to my downstream owner, and whether or not I have the right to create that hazard in my neighborhood, all those things, I think, should be considered, especially in view of the fact that the various governments do want to maintain and operate these facilities. Who is going to be left to function,

certainly not the builder. He is off the bond and gone, so some home owner winds up as an owner of some pit in his backyard that serves no purpose.

ASSEMBLYMAN EDWARDS: For the last eleven years, I think, we have in New Jersey paid out over a half a billion dollars in flood damage funds to people who have been damaged as a result of - and this is property damage, not lawn damage, or running over somebody's lawn - flooding. How do we stop that particular problem from happening in areas throughout the rest of the State, where they are not yet developed, and how do we stop government and taxpayers from paying that half a billion dollar bill in Sussex and Warren Counties over the next twenty years?

MR. FOX: I think, Bergen County being 80% developed, you are only talking about the increase of runoff, so the 20% already have a runoff, and you are talking about the paved areas which increase the runoff, so the net effect of that is, if there is a doubling of runoff, it might be a 10% effect.

I think you can plan for retention if properly done in county parks along main bodies of water - I think Van Saun is a similar type thing, and Saddle River, where that was deepened and widened, that is a good project. But, I think it should be done on a regional level. I do not feel that it should be done in someone's backyard in the foothills of some subdivision somewhere. I think there is a public interest involved. I think there should be public funds involved. Much of this runoff is through the creation of public streets. Where you are on a county road, the county requires you to widen, and the county requires you to pay, and the county says, "We will not accept leaching basins. We want you to put in 100-year pipes, but now that you want to use your property, you take part of it and you store your water on your own property." So, the question is, who did you build the pavement for, and who did you build this 100-year pipe for, and now you are not permitted to put your own water in that system. I think that whole compatibility business of designing for 100-year storms that are tributary to 15 pipes that were constructed with 15-year designs is just chasing water downstream with the net result being that now we are at a point where we are looking for another solution and then the other solution is retention.

ASSEMBLYMAN EDWARDS: Let's take away the mandatory requirements, and take away the issue of retention, assuming that retention is not the answer, and assuming that your contentions are right, that the requirement for the construction of retention onsite by a property owner amounts to an unconstitutional taking of his property, and assume that this bill does not contain within its confines those mandatory requirements, which it doesn't say right now, but it deals with a runoff question. If you had been here earlier, you would have heard the problems we have with the mandatory language to prevent any increase in storm water runoff as being from the engineering standpoint and practical standpoint unrealistic. But, let me deal with the storm water management plan as a requirement for every municipality to implement with reference to its master plan. You indicated there was a lack of talent available. We also heard testimony earlier today that there was an absolute need for coordination, so that the criteria being used by each municipality is at least uniform. I have stated that hydrology is an art as much as it is a science, and the artists have to use the same colors and brushes to draw a picture. Assuming that we have coordination, do you find an inherent value in each municipality preparing a storm water management plan, which is what master planning is all about in many cases?

MR. FOX: I think the municipalities should plan in the way of water resources and the management of storm water program. I do not think they have the talent or the resources to administer such a program. I think it should be done in conjunction with the State of New Jersey who has long been at it, and who is having problems administering that particular program and the issuance of any permit for stream encroachment. It is a disaster, with the net result being, they are having problems hiring people, and they are having problems administering the policies and the legal ramifications of ownership and rights to water, and I can't see that on a local level that that could be speeded up or accelerated. I would like to see more input into the program and probably there should be planning for management independent of political and party politics on the local level. I can just see this being used by a Mayor who decides that this year the flood level is something different than it was last year, and next year it will be something lower, and it is just too arbitrary. We have enough obstacles, and I think the power within the planning board today is too powerful and too strong. I really think we need more good data and more input, and good administration of a program independent of political parties.

ASSEMBLYMAN EDWARDS: You mean politicians.

MR. FOX: Yes.

ASSEMBLYMAN EDWARDS: But, you do see some value or a value in each local municipality as part of the master plan procedures. They always take a look at their drainage master plan and storm water plan, but you see the need to have that coordinated on a much larger basis with much more uniformity.

MR. FOX: Yes, I think they should do it. They need outside help. I don't think they have enough help at home to do it, and then I don't think they should be the administrators of that program. I think they should generate the input and the desires and the opinions and the wishes of the public, but I can't see how a local government in New Jersey--- And, on the State level the DEP is having problems with one program.

ASSEMBLYMAN EDWARDS: It seems to me that I have come to that conclusion also. I have come to the conclusion that the DEP can't administer the program, that the problem is far too complex, and that you need hundreds of law enforcement agencies, and I see the municipalities as having, contrary to how you feel, the capacity and the resources and the available manpower to do the implementation. One of the problems we have is we are asking somebody in Trenton to implement a stream encroachment program for Mahwah, and it takes them two hours just to get there, and two hours to get back. We are not doing a heck of a lot of good for stream encroachment or inspection. The local government has a building inspector and it has a planning board, and a public works department and inspectors in many cases for construction projects that we are not using as a resource, and as a training resource it is not being actively used, which is why I came to the conclusion that the local level is probably the only one that in fact will look at this realistically, as existing resources. We are not about to appropriate a half a billion dollars to the Department of Environmental Protection to set up a whole network just to enforce encroachment.

I don't think anybody in government thinks that is possible. I don't have any further questions. Do you have anything else to say?

MR. FOX: Well, I think with regard to soil, there is the soil conservation district in each area who issued the certification to do the review, and they do

have teeth insofar as they can withhold CO's and they do levy fines for violations. So, I really don't think we need more regulation with regard to soil erosion.

ASSEMBLYMAN EDWARDS: Let me ask you a question on that. The soil districts have been brought up a number of times. Do you think that they have the capacity to be a coordinated unit for our storm water management plan and implementation.

MR. FOX: They do. That is just another agency that does review, but doesn't to my experience have the capacity to handle the problem. They do ask for runoff, and they do ask for calculations. However, many of those people are not technical people and I don't see any net result administering that program at that level, either

ASSEMBLYMAN EDWARDS: Or putting this program into that jurisdiction.

MR. FOX: No, I don't think they are set up for it.

ASSEMBLYMAN EDWARDS: Thanks for coming here today. Our next witness is Mr. Reid.

CHARLES E. REID: I find myself in a unique position here, having served as a public official for twenty-five years and having faced a lot of the drainage problems that many of the towns face here in Bergen County and being very conscious of the concerns of the town's citizens, and also having been a sponsor of some of the major drainage legislation now in effect when I was in the Assembly, and also being the Mayor of my town, I have established some of the environmental measures and a storm water management program which was established in 1972.

There is no question in my mind that the coordination of storm water management is an essential ingredient that we need at this time, and that the concept of this bill is a very viable one. I have some real concerns about it. I am going to express those concerns and will be glad to answer any questions you may have.

My first concern is the one you just touched on very lightly, that is, there are many laws already in effect. This just seems to be another layer of bureaucracy on top of laws and regulations which are already implemented or may be implemented. There is nothing in the bill that says this law shall supersede or should be worked in coordination with, or who has the ultimate responsibility. And, as a result there is going to be a lot of confusion as to who really controls this and at what point. I think the need for uniform standards is a very important one, and realistic standards. I have been involved professionally as a builder and each one works on a different basis in many cases, and this is true of municipal engineers, as well as those engineers serving the public, and I should have said the private builders.

One of the concerns you brought up regarding this bill is that you want to reduce flood damage, including damage to life and property, and to prevent any increase of storm water runoff on any new land developed. Again, it is really like saying that the last guy over the bridge should pay the tab, which may or may not have any effect upon the flooding on that particular area.

There are numerous ways to approach storm water management. We have traditionally used the means of channelization, for example, which has created many problems, particularly in the down stream area, because the down stream area was not designed to receive it in all cases, but the ultimate solution to that is not necessarily a zero retention on any new land development. There are many things that affect water and its impact on flooding. We are talking about the volume of water involved and the site of that water, and the time of concentration, as to

when it hits a certain pipe, which may or may not be a detention or retention and the velocity and so on and so forth. There are many elements that go into that, other than just the sheer volume itself. This is taking a single concept and making it mandatory and not doing that to other concepts, which I think is wrong. There is no question that the retention/detention are viable methods to include in storm water management. However, in reaching the ultimate storm water management in any drainage district, or any stream, it may well be that by coming to that plan it may allow increased runoff from an individual parcel.

For example, in a recent drainage problem right here in Bergen County, there were at least three solutions to that drainage problem. Two were done by channelization, and one which was ultimately about one million and a half dollars, and the same problem could have been resolved by another form of channelization which would have cost about three hundred thousand dollars, or it could have been resolved by a detention area which probably would have cost a half a million to seven hundred and fifty thousand dollars. The community has a choice in this case. The choice had to be made on the ability of the downstream to carry that. So, it need not be an arbitrary decision. Once it was decided that downstream piping could carry it through its extensions, then when the time of concentration had been changed, there could be no need to allow zero runoff, because you are capable of carrying that water, and this does not allow for that type of provision.

There is no question that when you come to a town like Lodi, there are many ways to resolve that problem, upstream retention or detention, or through some additional channelization, or a combination of them all, but the ultimate problem is a regional problem. It is a watershed problem. It is not an individual property owner's problem. That person should pay his or her fair share of any such concern, and make whatever reasonable contribution to that storm water management plan that is realistic. But, we are still spending millions of dollars in this county right now for channelization programs which have no relativity to the storm water management programs, and I think if that same money were spent in the overall review and in the total planning concept of that watershed area, that is really where it is needed. And, to put the onus on a no-go situation to a specific property owner which may or may not have any impact on the total flooding, to me, is erroneous and improper.

ASSEMBLYMAN EDWARDS: You are saying two or three things are necessary with reference to this problem. First, yes, there needs to be storm water management plans developed, but they have to be developed on a regional basin basis and that they have to be coordinated in a uniform manner, and then any and all restrictions that are ultimately imposed have to be imposed in light of the individual circumstances of that piece of land that affects that drainage basin. Is that an accurate characterization of what you have said?

MR. REID: I will say it is a pro-rata share. That is what it is.

ASSEMBLYMAN EDWARDS: But you have to judge each piece of property as to decisions that are made with reference to developing that piece of property on an individual basis as it affects the drainage basin area.

MR. REID: That's correct.

ASSEMBLYMAN EDWARDS: And in order to implement any meaningful program, you have to have all of those ingredients together.

MR. REID: Right.

ASSEMBLYMAN EDWARDS: The planning stages have to be important to this particular bill, and the word "coordination" will have to be more definitively spelled out, and coordinated on a county basis, based on a drainage basin, as opposed to counties that happen to be an existing agency that may have the capacity to do that, but that must be done on a drainage basin basis.

MR. REID: Basin and sub-basin areas, because obviously when you talk about large basins, our Passaic River basin and the Saddle River basin, you are talking about many sub-basins that go into that tributary.

ASSEMBLYMAN EDWARDS: And, also the implementation of it has to be flexible because you can't write one rule for the State of New Jersey that says every area will have a retention basin and will have zero runoff, because necessarily zero runoff of twenty-four hours a day for every rain storm is not the answer. That is why I am talking about the individual judgements with regard to each piece of property. So, it is impossible for us to draw standards, specific standards at the State level that would in fact apply in all of the wide variety of circumstances we have throughout the State.

MR. REID: Basically, there is no single rule that applies to each and every case.

ASSEMBLYMAN EDWARDS: So, there has to be some local capacity, whether that be a basin, municipality, or county. Somebody has to sit down and judge the merits of that based on some general criteria and have the discretion to deal with it more realistically than trying to have specific standards, like a rule that says you will have retention/detention is not a workable rule.

MR. REID: That is correct.

ASSEMBLYMAN EDWARDS: Earlier this morning we dealt with the question of providing expertise and funding to do this coordination. I think everybody, whether for the bill or against the bill, has come to the conclusion that there is a key coordinating responsibility that this bill should address, and we also have to deal with the realistic world of dollars and funding, and where the dollars are going to come from and who is going to do that coordination. The money that is being appropriated under the bill comes from the recent bond issue that we adopted in the November election and it has been pointed out to us by the Department of Environmental Protection, who is responsible for administering those funds, that the \$3 million planning and study section of that bond issue is limited to county and regional funding and not to municipal funding, although there could be a pass through and this gives us - or me, at least - the Committee an opportunity to deal with the question of coordination and the supplying of dollars to ~~whomever~~, the region or county --- I am talking about storm water management planning. I am not talking at all about the retention. It gives us an opportunity to use some agency, whether it be a regional agency or a county agency, to have the planning grant money delivered to do the work. You have extensive experience in government at all levels.

Do you have any suggestions as to who in fact should be coordinating that planning operation? Should it be a new agency that we create, a new drainage basin agency, a new bureaucracy, a county agency, should it be a multi-county agency that we create, should it be the Department of Environmental Protection at the State level? Who should be doing it?

MR. REID: I think it varies according to the individual problem. We know there is a funding problem in government. Obviously, it is not too difficult

for us to prioritize certain areas where you have known flooding; it is a priority as far as available funding, if that is the case. Obviously, your small subdivisions of government are more familiar with their individual problems, but one of the problems you have in storm water management, of course, is this over-observance or opportunity for subdivisions when they decide which way the water is going to flow. So, that in certain areas, once you define the basin and sub-basin areas, I think there has to be some forced marriages between governmental agencies and subdivisions to make sure they work together on some items. The Passaic River is a good example of that where both Passaic and Bergen County would have a common goal in the storm water management plan.

I think wherever possible, it is best to build on existing agencies and existing units of government. There obviously has to be a State structure - as pointed out by Mr. Fox and perhaps this is as a part of an existing agency, or perhaps the elimination of that agency and replacement by another, but certainly not to maintain the two of them. But, I think it would be a good position to put it in the area of the county where there are basins and sub-basins totally within that county and that would be fine. Where it went into other counties, then you would have to write some structure where these counties would have a joint commission to work on that type of thing. In the small sub-basin, that realm could be within the municipality once the plan was adopted, because then you would have the criteria. You see, you could use your existing governmental structures in most cases, and the sophistication of hydrology would be somewhat relative to the size of the basins and of detention impact, and wherever possible, I think you should enlarge on existing agencies or give them the adequate staff to handle it, or insure that there is proper coordination between the storm water management systems and the soil conservation programs and so on and so forth. And, you should take some of this existing legislation off the books, and replace them with a more comprehensive piece, and I think that is important.

I think the one problem here is that you do have to look at the economics of the situation. Also, as I explained to you, sometimes retention or detention might be the most economic way to go. It is not the most accepted way on the part of the Committee and many of our citizens. Obviously, people don't want their backyards to flood. They expect the house and the property to hold. But, if it is going to be defined, it ought to be defined in large areas. Right now, according to some people's philosophy there would be a pond in everyone's yard. That is not environmentally sound when it comes to safety and when it comes to our tree structure, and I can go on and on, or even to the surcharge of existing water areas, sub-surface water areas. So, that is a good way to demonstrate how things are misused. I think there ought to be other standards.

We have traditionally in the past twenty years been building roads that service maybe five houses, but you still are building thirty and forty-foot roads, and so on and so forth, which add to not only the amount of water, but the pollution of the water, which is an environmental concern, and we are building many roads on a sub-standard basis which should be forty-feet wide, but they end up being sixty feet wide, and so on and so forth. So, we have to look at a lot of things that contribute to not only storm water management, but the pollutants that go into that storm water system. So, it is a very complex thing. There can't be a simplistic answer to what I am trying to say. And, it can't be a zero growth concept, because

some politicians will misuse that concept, for their own jealous interests and I think that is wrong. I think we have to recognize the rights of each individual, and recognize a responsibility to total community and let everybody share in the responsibility.

ASSEMBLYMAN EDWARDS: Thank you very much. Ken Marsh.

K E N M A R S H: I have to apologize for coming here late today. I appreciate your putting me on. My name is Ken Marsh. I am the Director of Environmental Engineering with the new Department of Engineering and Planning in Union County. I am also referred to as the Principal Hydraulic Engineer. That is my Civil Service title with the County. I did receive a copy of the bill being addressed here, yesterday. Fortunately, it was short enough that I did have time to review it.

I have several comments here which I hope will be helpful. First of all, I would like to say that I fully support the concept of storm water management as embodied in the bill. In fact, Union County has been doing this since 1974, and 19 out of the 21 municipalities in the county since that time have adopted storm water control and flood plain ordinances embodying the principles of on-site storm water detention and flood plain management. Since that time it is based on a model ordinance which we drafted and circulated to the municipalities and the program has been successful. We are preparing to do a follow-up survey on any problems that may have surfaced, but to date, we have not had too many problems with it. But, I would like to find out more about things like maintenance and so forth, and detention facilities.

So, we have been rather successful. We, of course, support this type of program. I would suggest perhaps the requirement that each municipality prepare a plan may be a little too stringent. You know, we have 567 municipalities in this State. That might create an excessive burden on the reviewing agency if everybody has to do it in a two-year period. There might be some sort of staging provided for and there might also be a difference to county plans or plans prepared by regional agencies whereby, if the county plan or regional plan is acceptable, then the municipalities need only address that in their master plan or indicate conformance to the storm water management plan in their master plans, and perhaps this could avoid the problem of each municipality having to do their own plan and the preparation of this type of plan gives a lot of duplication when adjacent municipalities do that type of thing.

For example, you have to consider what the previous gentleman said about watersheds and streams going through several municipalities. Adjacent municipalities consider many of the same factors in preparation of the storm water management plans. So, perhaps, in deference to the next regional level, that might be provided for in the bill. Union County, while we don't have any one plan on paper, we have a program which could very easily constitute such a plan, and municipalities are participating with us in that.

ASSEMBLYMAN EDWARDS: How does that work?

MR. MARSH: Well, through our offices, we provide technical assistance. We have a very close working relationship with the municipalities, and we have a flood control funding program in Union County, a matching grants program, and one of the requirements of the matching grants program is that municipalities must have storm water control regulations that are acceptable according to our standards. Needless to say, that has been part of the reason for our success,

and we have managed to allocate over \$10 million in flood control funds into that program. So, it has been fairly successful.

The other aspect with regard to the municipal level--- First of all, I understand that it is best to work with the existing governmental structures. I went through the whole gamut with the flood control authority a few years back, and I just don't think that concept is ready to fly yet. I think if we want to do something, get something established, we have to work with existing institutional arrangements, and again, I would suggest the county. In some cases, there are regional watershed agencies, but their jurisdiction is questionable with respect to something like this.

Now, as far as the cost of preparing the municipal master plans, the \$1 million allocation which would multiply into \$2 million with the matching grant which really isn't enough if every municipality has to do such a plan. So, that really should be considered. I would suggest possibly the State now is getting ready to come out with a storm water management program. They are going to use funds from the emergency flood control bond act to prepare a State storm water management program. I don't know the details of it yet. I don't think they have been published, but there is a meeting that will be held on that two weeks from Tuesday. Perhaps, maybe the results of that study will provide more information for developing a program like this.

ASSEMBLYMAN EDWARDS: I should point out that this bill comes out of that particular act. It is \$1 million of the \$3 million that is appropriated for their planning purposes. And, it was my understanding that their overall planning doesn't deal with storm water management planning as much as it deals with flood control planning. It deals with existing flood control problems and trying to identify, isolate and develop a realistic solution. I am sure they have to get into extensive storm water management planning in some instances to correct existing problems, but it is my understanding that that is going to be available for the storm water management planning, and that that is the thrust of the Department of Environmental Protection's use of those funds now.

MR. MARSH: I see. You probably know more than I do. I just didn't know how that was going to be handled. I would then suggest that the two programs be closely coordinated.

If we are to defer to the county level on planning like this, that is really not enough, because counties don't necessarily always get along, either, and there are situations where one county may have a storm water management plan which in fact might funnel water out faster into the next county and who is going to say that is wrong, other than a court action. So, I would suggest in the event that the county plan is the adopted plan to be the umbrella plan for all the related municipalities that the State coordinate the plans of adjacent counties to avoid that type of situation. That is really all the problems I have.

Again, I do support the concepts here, and I hope my suggestions have been helpful.

ASSEMBLYMAN EDWARDS: I might ask you to answer a couple questions for me. I know I first met you on a panel we were on, and I think that a number of suggestions that came out of that panel have developed themselves into this particular bill. The engineer from Mahwah, I think, was on the panel at the same time, and it was his and some of your input that generated some of the

ideas in this bill. The Department of Environmental Protection was here this morning and the individual who testified, John Wilford, said he was in charge of flood management control. How would you envision, or how much of a role do you think the Department of Environmental Protection, or some subdivision of them would need to exercise, in other words, to guarantee inter-county cooperation?

In other words, the counties would guarantee municipal cooperation. That is the one thing that was suggested. They have to deliver management plans before the board can implement the amendments. We could write into the bill the various regulations that would cover that. The funding is also going to be limited to the counties or regional agencies, and municipalities can't directly get them. They can only get them through a pass through, which even more directly requires the county to become that agency of coordination.

To what extent do you think, working for a county agency, will it be necessary for the DEP to get involved? You know, are we talking about one or two people dealing with coordination, or giving them a general review power? Maybe you can comment on that.

MR. MARSH: Yes, the first role, of course, would be if the bill is passed into law, the DEP would have to be the agency to promulgate the standards and develop the standards for administrating the act, and when I say standards, I mean, exactly what constitutes storm water management plan. That would have to be identified both the structural and non-structural aspects, and it would have to provide for existing programs - for example, projects that are underway or proposed would have to be incorporated into the plan. So, that would be a job in itself, setting the standards, under which they are going to review the plans. The same thing would have to be done for the ordinances. There would have to be some sort of standards for the ordinance, although that would have to be much more flexible because of the variance situations from area to area, but there should be some general guidelines prepared there. Having done that, the DEP would then have a framework within which to review the various storm water management plans submitted.

As you know, the same flood control bond act has provided \$22 million for construction. While they are going to be getting a lot of plans in for private structural lands. We are preparing one right now. I believe the regulations are scheduled for adoption in June of this year, so they will be ready to begin receiving applications. So, concurrent with the master plan, they will have to be also integrating the structural plans being submitted into the storm water management plans for conformance.

Beyond that, the State has to be the agency to set the standards for planning efforts by adjacent counties whereby you have the watershed situation. They have all the information down there. They know where the watersheds are, and they pretty well know what the problems are. They have to be the catalyst to form agreements between counties where you have the drainage basin spilling over between counties. Now, I see it as any new law. It will be an additional burden on the Water Resources staff, so that would have to be accounted for somehow. But, there would be a definite additional burden. So, again, that was one of the reasons I made the comment about perhaps staging it over a longer period. Obviously, not all municipalities have a problem right now, and perhaps at this point, ordinances will be required at this point---

Perhaps at this point, not necessarily zero runoff. Zero runoff increased ordinances. I think that as a minimum really should be required for all municipalities, because I think it is feasible and practical. The storm water management plan itself could come as needs dictate. So, again, perhaps a staging in time might solve part of that problem and give Water Resources time to gear up to handle the administrative situation.

ASSEMBLYMAN EDWARDS: You indicated that there were some municipalities, not just dealing with your staging suggestion but dealing with the municipalities that are going to be prepared, should not be required to enact storm water management plans, for various reasons, but those along the coast, for instance, I don't know that Beach Haven needs a storm water management plan. Would you favor a waiver procedure for various municipalities administered by the Department of Environmental Protection whereby they could obtain waivers from the requirements.

MR. MARSH: Yes, that might be a possibility. What you just cited is, basically, there are critical areas that can be defined in the State where we know there is not going to be much future development or the future development is very closely controlled, such as the pinelands, and the coastal areas that are covered under CAFRA and riparian laws. In these areas to a large degree future development is controlled, and at least in the coastal areas, the flooding problem is not a fluvial one, it is a tidal problem. So, storm water management really may not be the answer there. So, yes, that is a possibility where we can delineate certain critical areas where it may not be particularly appropriate to require them.

MR. WUNSCH: I wanted to ask you about the Union County experience. It has been done there without this particular legislation on the books. Why is Union County so much farther advanced then, say, Bergen County or other counties in this area? How did you happen to get started in that?

MR. MARSH: I guess it goes back before my time. I started with the county in '73, and in 1971--- Well, of course, everybody dealt with the floods in the late sixties after the end of the drought. There was a lot of pressure on Union County by the municipalities to do something. Union County responded by preparing a storm water - not a management plan - but a drainage flood control plan it was called, which is basically an inventory of the existing situation relative to drainage and flooding that identified the problems from a general standpoint and recommended certain general policies to adopt. This was done in 1971, and Union County was the first county in the State to do this type of plan. There are not too many others who have done it since then. I think there have been two or three. One of the possible recommendations of that plan was to create my position, a county hydrologist, or hydraulic engineer, what have you, to create the expertise on the county level necessary to develop and implement a program to coordinate the storm water management situation, and that recommendation became a reality in 1973, when I started with the county.

The freeholders in Union County were very responsive to developing the programs in flood control, and that was a big help. I never really had any problems with the freeholders in getting programs approved. And, many of the municipalities within the State were desperate. They needed help anywhere they could find it, and they were receptive. So, fortunately, we had a lot of cooperation. I don't know why that didn't occur in other areas,

but we did have it in Union County, and we managed to establish some important programs, and we worked basically on two fronts, one front was structural, and the other front was non-structural, the structural being several large regional detention basin projects which are in various stages. Our largest we are getting ready now to take construction bids on, and that will deal with the flooding problems in five municipalities, and several other small projects which handle a particular problem in each watershed, and coupled with that, we developed the model regulations which municipalities have adopted, and to the freeholders, to put the money where their mouth is, they created the flood control funding program. Because one of the most serious problems was the gap between federal and local funding in flood control projects. There were no state flood control funds until the recent bond act, and the only available flood control funds were through the federal government, and you had to live with the corps of engineers to get that. So, most of the municipalities were not willing to live with those timetables and the plans that we have developed were started after many of the corps programs were perceived, and we were going to build them before it gets out of the preliminary design stage. So, with the flood control funding program, that could help fill that gap, and as a result, we are building a lot smaller projects. They are not the grandiose corps of engineers' projects, but they are dealing with the flooding problems that occur almost on an annual basis and some of the large ones, too. I think this is important, because these are some of the serious maintenance problems that municipalities have to deal with on a regular basis in their budgets.

ASSEMBLYMAN EDWARDS: What about your non-structural?

MR. MARSH: The non-structural is the regulations we developed requiring on-site storm water detention in effect which would limit runoff to existing conditions on new development, and flood plain and management regulations which were basically patterned after the state regulations, and we worked with HUD in their flood insurance program to develop a subsequent ordinance which was kind of a combination of our original guidelines - the State flood plain management guidelines - and HUD requirements, so that when the municipalities had to update their HUD regulations, which they had to do recently, and they are probably going around the municipalities here also, we had one ordinance which all the counties could work with, and it would satisfy HUD requirements, State requirements, and our requirements.

The detention aspect, a lot of people mention the fact that Union County is 95% developed, so why would this be appropriate? You are not going to control much. I understood that, and I felt that at the very least, we will at least hold the situation at existing conditions. But, you know, it is funny, since that ordinance has been passed - and this is why I want to do a follow-up survey - we get in hundreds of site plans and subdivisions for new development and the vacant land situation is a funny thing, because a lot of land may be owned or developed for a given use, but there is nothing to say that it can't be redeveloped, subdivided, intensified. And, we are getting a lot of that in Union County, so I tend to think we are controlling a lot more than what might be indicated by the percentage of the developed land. And, they keep coming in. That is based on our structural.

MR. WUNSCH: Have you done any good? Is there any evidence that you have reduced flooding?

MR. MARSH: That is very hard to predict, because since that time we have not had--- Of course, that was subsequent to the '71 flood, and the '73 flood which were disastrous in Union County -- And subsequent to that we have had two fairly large floods both in '75 and we had one in '77, the election day flood. None of those floods caused serious damage in Union County, but again it is difficult to predict, because they didn't have the magnitude of the previous floods either. Several of our projects that the county funded or participated in the funding of, did work. Neighborhoods that previously were underwater were dry during those floods, so we have some projects that are working.

Again, the follow-up survey I plan to do, I hope will bring out much of this information.

MR. WUNSCH: We heard a lot about the problem of coordinating one municipality with another. Have you had much problem in that area in Union County?

MR. MARSH: Not really, not really. Again, I guess I am lucky. I have had a fairly receptive environment to work in, and municipalities have been fairly cooperative - just short of agreeing to formally join together as an authority, or something. I mean, you know, home rule is still the overriding factor in the State, but we have formed several flood control commissions. There is existing State enabling legislation which allows municipalities and counties to join together to form regional flood control commissions which are planning agencies and we have several of these in Union County which meet on a monthly basis and at least provide a forum for discussing the problems there are in cooperating, and these commissions are small, and we are only dealing with six municipalities in one and five in another, so it may not be indicative of a statewide situation, but they have been very useful in providing a forum for exchange of ideas and planning efforts.

One of the projects I cited grew out of one of those commissions, and we are getting ready to award an engineering contract for that now to actually design a project.

MR. WUNSCH: One more question. Has the cost of putting up buildings in these municipalities which have these ordinances and plans increased as a result of such plans?

MR. MARSH: If it has, it has been immeasurable. I have not seen or heard anything at the municipal level to indicate that. You see in developing land there is a cost attached to providing drainage to begin with, and it is not necessarily true that storm water detention costs more than conventional drainage. In some cases it costs less, and it may not necessarily be the facility. It might be the lack of a facility that would meet the requirement. For example, is it necessary to have a paved parking lot when gravel surface might be sufficient? So, again, it doesn't necessarily follow that increased storm water detention will have increased costs attendant to it.

ASSEMBLYMAN EDWARDS: Thank you very much for taking the time to come up here today.

MR. MARSH: Thank you for the opportunity.

ASSEMBLYMAN EDWARDS: Mr. Jerry Weinstein.

J E R R Y      W E I N S T E I N: As both a taxpayer and as a property owner and as a former construction superintendent in the City of New York, and as

a science teacher teaching earth science, I think I have a little bit of area to cover, but I will do it very briefly.

I live right next to the Ho Ho Kus Brook in Ridgewood, and I have lived there for about six years. In that period of time the flooding has increased, not only in frequency but also in consistency and also in volume. I would just like to say there is a need for coordination of flood control in many areas, not just in the area of what to do about building, or runoff, but also in the area of communities working together. I found it in our community where I have addressed a panel of our borough, the Mayor and the Councilmen, and they talked about what they would like to do, but they can't get the cooperation of the neighboring communities, or that it is not easy to get. I think that we need more in the way of a community effort, and the county effort and a statewide effort. From what I read in this proposed legislation, this meets the need in the area of stopping or at least controlling the additional construction which does not take into consideration the fact that more rain, or the same amount of rain does not have a place to go, therefore, where is the water going to go?

My notes are in my head. I don't have anything written down, so this is just off the top of my head. I compare the problem to an analogy, if you would bear with me. If you have an overloaded circuit in your home, for instance if you have 100 amp circuits, and you continue to buy more and more utilities and more air conditioners, T. V.'s, you are going to reach the point where you can't manage them and you are going to overload the circuit. That is where we are right now. Our circuits, which are our streams, are overloaded. They tend to take care of themselves by flooding, but flooding results in homes getting damaged, and property both public and private getting devalued and getting less and less valued.

I don't want to belabor the point, but I do support the bill, and I don't like to see government get more and more involved in communities, but I think in this area we do need more involvement. Are there any questions you might want to ask?

ASSEMBLYMAN EDWARDS: You support it on the basis that it is community oriented and it requires each and every community along the base of most of the streams to start addressing the issue through the planning process within the confines of their own community?

MR. WEINSTEIN: Yes, very much so. I thank you.

ASSEMBLYMAN EDWARDS: Okay, thank you very much. We have one more witness. You have been sitting here all day, so please come forward.

W Y O N E T T E S C A N L A N: My name is Wyonette Scanlan. I live at 415 Hasbrouck Boulevard, Oradell, New Jersey.

With your kind permission, may I make just an aside comment here to correct earlier statements? The New Jersey Department of Environmental Protection has mapped and delineated their floodway and flood plain areas in the great portion of Bergen County. Last month in the New Jersey Register, which was April, there was a hearing in Westwood concerning the Hackensack River and from the Oradell Reservoir Dam north to the New York border concerning the Hackensack River and its tributaries. In this month's issue of the New Jersey Register are proposed amendments to the Passaic River Basin, Raritan

River Basin and Saddle River Basin and hearings will be within the next month, month and a half. So, I thought this might be informative.

ASSEMBLYMAN EDWARDS: Yes, I was aware of that. I didn't want to get involved in any bit discussion on flood plain delineation, because there wasn't an issue in the bill. What the DEP has been doing is taking the data that has been developed by the FIA and transposing and imposing its own reviews on their data and then using that amended information for delineation purposes. The people from FIA I met with yesterday indicated that the majority of Bergen County should be completed within the next two to four months, and they are hoping before the end of this year that the entire State will be completed.

MS. SCANLAN: But these particular areas will be adopted. These maps will be adopted within the next sixty days.

ASSEMBLYMAN EDWARDS: The water policy supplies is hitting very large portions of it at a very rapid pace now.

MS. SCANLAN: Yes, I think so. First of all, Assemblyman Edwards, I wish to thank you as sponsor of bill 1819. My husband and I are property owners. We have a "Mom and Pop" business and it is located in the flood plain. I don't agree with Mr. Wilford from the DEP when he said that municipal land use act gives the municipalities the power to plan and zone for storm water management. This may be so, however, they have failed to do so, and because they have failed, we property owners in the flood plains are socked with the consequences.

In the town where our property is located, I have gone to council meetings. At the time I attended these council meetings, they were promulgating their master plan land use ordinance, and I called to their attention that the municipal complex was being built adjacent to the Saddle River, and adjacent to the flood plain area a very large area was being developed into a retail section. Now, this retail section is on high ground. There has been no provision made for water retention and water runoff. I call to your attention that this is the time to put into their master plan provisions for this, since they are one of the primary towns involved in receiving other municipality's waters. They turned a deaf ear on me, and naturally nothing was done. So, this is why I feel that your bill 1819 is essential to mandate municipalities to adopt a storm water management plan. If left to their own devices, nothing will occur, and we in the flood plain will only suffer. We do not have full use of our properties. The builder's association spokesman said, people who would be purchasing new homes built in the future would not be provided full use of their lands if your bill became law. We do not have full use of our land now, because the DEP has regulated it to such an extent that we can't enlarge or extend, and we thank you for bill 1819.

I would like to suggest that coordination of this management plan should be at a basin-wide level, because it is a common problem along a basin. Now, there are other people who are more familiar. Their municipalities will be adjacent to one another and who would be more receptive to this type of coordination. Probably at some point in time we have to get the DEP involved in this, however, I don't have much confidence or faith in them, and I would like to point out an example of my lack of faith in their work.

I attended that public hearing on April 30th, and at that hearing they passed out their flood plain regulations. Those flood plain regulations

are no longer in force, because in February of '78 Governor Byrne signed into law the right to rebuild in the flood plains, that they were passing out regulations which are one year behind times, saying that you cannot rebuild. Now, if they are that far behind in keeping up with their own regulations, what are they going to do with these studies that they want to conduct?

ASSEMBLYMAN EDWARDS: It is a problem. Yes, we have to deal with it on a regular basis too. We have to deal with it on a regular basis, too, and we understand what some of these problems are on the State level, but we also understand that a number of regulations either are not being enforced or administratively they are not organized properly to keep track of what they are supposed to be doing. We don't know what the answers to those problems are.

MS. SCANLAN: I don't like to say this, but perhaps another agency.

ASSEMBLYMAN EDWARDS: We don't like to say that either.

MS. SCANLAN: I just can't see the army corps of engineers has gone through about a forty year study of the Passaic River Basin. I can just see them continuing on for another forty years, and as a career job, the DEP going along with it and nothing every being accomplished.

So, I think that this bill of yours 1819 is really essential to do something now and at the local level. Thank you.

ASSEMBLYMAN EDWARDS: Thank you so much. There being no one else to testify, I would like to thank those people who did come down. We have gotten some excellent input and some meaningful suggestions. I think Jim and myself and the rest of the Committee will be working on some amendments to the bill to try to make it as workable as possible. We are here addressing this issue trying to solve a realistic problem and not create more problems, and I think some of the input will be very supportive in accomplishing that.

I thank everyone who did come down for coming and I will try to give everyone who has come down a copy of any redrafts or amendments that we put into the bill. Thank you very much.

(Hearing Adjourned)



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