Allee, David J.

Working Paper

Public Hearings on Proposed Flood Plain Management Regulations

Staff Paper, No. SP 75-13

Provided in Cooperation with:
Charles H. Dyson School of Applied Economics and Management, Cornell University

Suggested Citation: Allee, David J. (1975) : Public Hearings on Proposed Flood Plain Management Regulations, Staff Paper, No. SP 75-13, Cornell University, Charles H. Dyson School of Applied Economics and Management, Ithaca, NY, https://doi.org/10.22004/ag.econ.184837

This Version is available at:
https://hdl.handle.net/10419/276441

PUBLIC HEARINGS ON PROPOSED FLOOD PLAIN MANAGEMENT REGULATIONS

Testimony of

David J. Allee

July 1975 No. 75-13

Public Hearings on Proposed Flood Plain Management Regulations
National Flood Insurance Program
Federal Insurance Administration
U. S. Department of Housing and Urban Development
(July 14, 1975)

Testimony of David J. Allee
Coordinator, Project Agnes
Cornell University Water Resources and Marine Sciences Center

"PROJECT AGNES" is a multi-disciplinary investigation of flood risk management funded by the U. S. Economic Development Administration; U. S. Office of Water Research and Technology; the N.Y.S. Agricultural Experiment Station; the N.Y.S. Cooperative Extension Service; and several of the Colleges of the University.

I am David Allee, Professor of Resource Economics, New York State College of Agriculture and Life Sciences at Cornell University, Ithaca, New York. For the past several years it has been my pleasure to coordinate Project Agnes, a multi-disciplinary examination of flood risk management. You have before you a copy of the summary report to the Economic Development Administration, U. S. Department of Commerce and several of the 26 appendices to that report. EDA provided a major part of the funding under its technical assistance program. Several projects are still underway under funding from the Office of Water Research and Technology, U. S. Department of Interior.

In the time allotted, I will only touch upon a few of our studies that are relevant to this hearing. In personal contacts with your staff I hope we will have a chance to go over the results of others.

The Politics of Flood Plain Regulation

By way of introduction let us be clear on one point about the conceptual basis of what we are discussing. Individual perceptions, whether by the developer, home owner or local government official, appear to be biased with respect to the frequency and severity of flood damage. Uncertain, negative events like floods tend to be discounted, and the more drastic the consequences the more likely that the probability of occurrence will be understated. At least this is the burden of the evidence of studies in psychology and those that have focused on the problem of flood perception. While public perception of flood risk was not directly addressed by any of our studies, no indirect evidence was found to contradict the position of a substantial bias. Recognize that this bias may exist either because there is a basic psychological drive to ignore catastrophic events to make decision making manageable, or there is an

expectation of community sharing of the burden or a bias in information, or a mix of all of these reasons and more.

The implication of this bias in perception -- if it is indeed as significant as it appears -- is that some acceptable form of coersion and/or subsidy is required to achieve an optimum level of insurance coverage. A social optimum in this case would be from the point of view of someone able to free himself from the perception bias in question, and concerned with lessening the existing inefficiencies and drains on the federal treasury. The situation in fire and automobile insurance may not be significantly different and note that in both cases substantial coersion by financial institutions and government is involved.

Regulatory programs, such as that being considered here, have a number of elements in common. They all share a gap in implementation between the goal as seen by the designers and actual accomplishment. The capacity of those to be regulated -- land owners and local officials -- for filibustering and delay, in response to their perception of the problem, is substantial. By and large, regulation can proceed only as far, and as effectively, as the consent of the regulated can be achieved. The regulated and the regulator are the only constants in the equation. Other participants come and go.

A loose coalition of opponents can be expected, seeking a gross undercutting of the capacity of the program to enforce its sanctions. While any one opposition interest may have a relatively small problem with the program, it will support a general cutting back of appropriation and responsibility. A counter to this is to identify the likely opponents and one-by-one accommodate them to the extent possible without undermining the basic program. Often it seems to be more important that the other participants agree that an interest has been fairly dealt with, than for that interest to be "happy," ie., quiet. A second counter is to seek the help of natural allies. Most water resources management professionals at the state level, the land use planning fraternity and environmental groups, among others, should have a natural interest in the success of this program.

Encouraging Appropriate Uses of the Flood Plain

At present, outdoor recreation and farming represent uses of the flood plain that should be encouraged rather than residences and many other commercial and public activities that are less flood resistant. Yet the present regulations and insurance approaches actually work to the disadvantage of these uses.

Consider the following from the report of David Tregaskis of a study supervised by Professor Howard Conklin.

> This study has shown that farmers' flood losses in an Agnes type storm consist principally of crop, equipment and livestock losses. Damages to buildings and contents are quite nominal by comparison.

The National Flood Insurance Act has the two-fold purpose of discouraging development on the flood plains and requiring that persons with property subject to flood damage buy insurance that can help them recover from floods rather than being so dependent as in the past on emergency government aid.

The Flood Insurance Act contains two requirements that impinge on farmers. The first provides that local governments, or New York State, must regulate building construction on flood plains to qualify residents thereon for subsidized flood insurance and the second requires that to obtain mortgage funds borrowers must purchase flood insurance on all buildings. 1/

The minimum requirements imposed on local governments in the regulation of construction do not differentiate between farm and nonfarm buildings, though the buildings are designed for very different purposes. This can be expected to considerably increase the cost of farm building construction, since barns, being designed for animals, machinery, and supplies, have been built to less rigorous specifications in the past.

The average value of farm buildings on commercial dairy farms in New York State approximates some $40,000 and the normal farm house would bring at least $15,000 if offered for sale separately. To insure these buildings for mortgage purposes will require $197.50 per year if the mortgage exceeds the value of the land as it often does. In addition, farmers may be forced to place insurance on contents. This means an annual payment of over $200 per year that will return the farmer very little.

It is recommended that the administration of the National Flood Insurance Act provide separate farm standards for the building codes local governments must impose in flood hazard areas and differentiate flood insurance rates to reflect the lower levels of loss to which farm buildings normally are subject in flooded areas. Rates also should be set separately for various types of farm buildings.

It is further recommended that the possibility be investigated of providing federal flood insurance for crops, livestock, and farm equipment at reasonable rates and on a voluntary basis. Insurance is not now required on these items since it is not available except in some instances in which they can be considered "contents" of a building that is insured. Farmers will continue to suffer severe flood losses unless this type of insurance is made available at realistic rates.

1/ This requirement does not apply to sources of credit not federally regulated, such as private individuals and Cooperative Farm Credit.

> Farming is the most feasible use for most flood plains. Crop yields usually are very high and the world today is in need of more food. Steps to facilitate farming on the flood plain while minimizing flood losses to farmers and society as a whole will be highly desirable. 2/

Farmers and their organizations have little reason to support the flood insurance program as it is presently constituted, yet they clearly have a need for coverage. Flood relief programs are now the main form of assistance available only when flooding is general enough to warrant disaster designation. Savings from such programs should be available to facilitate coverage that meets farmer needs. Some coverage on livestock and equipment is available privately but without accurate identification of risk areas, financial institutions have not developed the tradition of requiring it. Experimental crop insurance (emphasizing other hazards) has been offered by the U. S. Department of Agriculture, but without significant subsidy and/or encouragement by lenders, it has not found wide support. Linked to this program but with USDA cooperation it might fare differently. Encouraging farm operation and practices that are more adapted to flood risk would be easier if the available insurance met farmer needs. Differentiating a farm subprogram so that insurance is more attractive where there is a greater chance of urban development also should be considered. Growing houses instead of crops, even about the 100 year flood line, can mean more losses to the program through the subsidized insurance, especially where upstream development increases the size of the 100 year flood plain.

The case for recreational uses of the flood plain is similar. Encouraging such facilities in turn encourages the preservation of open space values of flood plains. Guidelines for construction and location are more likely to be administered if the insurance coverage is meaningful for recreation enterprise operators. But consider the following from our report by Tommy Brown.

> Flood insurance, until the establishment of the Federal Flood Insurance Program in 1968, was conspicuously absent from the list of various types of casualty insurance available to businesses. Indeed, the Federal Flood Insurance is available to businesses only through adherence by the community in which the business is located to specific federal requirements. None of the campgrounds studied, and only four of the marinas (all located on Lake Ontario) were aware of any type of flood insurance available to them. In each case of such knowledge, the Federal Flood Insurance Program was the one cited.
>
> The Federal Flood Insurance Program is woefully inadequate in meeting the needs of recreation firms, especially marinas. Even where communities have taken the steps to allow firms to

---

2/ Tregaskis, David W. Needed Changes in the National Flood Insurance Act to Reflect Farm Flood Loss Experience. Part of "Project Agnes" (see page 1 of this testimony); Department of Agricultural Economics A. E. Res. 75-5 (April 1975), Cornell University, Ithaca, New York, pp. 21-22.

purchase the insurance, the Program does not cover damages to outdoor swimming pools, piers, docks, breakwater facilities, or other structures located on or partially over the water. Nor has it covered losses due to soil erosion. In times of flooding it is precisely these items that are most susceptible to loss. In addition, there is no provision for insurance for loss of operating revenues resulting from floods.

Two marinas surveyed on Lake Ontario had purchased Federal Flood Insurance prior to Hurricane Agnes. These firms had physical damage from Agnes estimated at $25,000 each, and loss of business estimated at $8,000 and $75,000, respectively. Federal Flood Insurance covered $1,200 in damages to the store of one firm, and nothing in damages for the second firm. None of the firms contacted expressed enthusiasm that the Federal Program was noticeably lightening their flood-related economic risks. ... 3/

Our economy and political system function in a manner that assigns the risks of operating a business to the firm. However, it has generally provided within the private sector means for firms to purchase insurance against losses for which probability of occurrence have been measured. These probabilities have not been well established for flooding. Hence, the public sector has attempted to provide interim assurance via federal flood insurance. It seems that recreation firms located on flood plains have grounds for arguing that federal flood insurance coverage should be expanded to cover areas most susceptible to flood damage -- breakwalls, docks, etc.

Recreation is generally conceived to benefit human welfare; it is provided by the public as well as the private sector. To the extent that this is true of boating and camping, government has some obligation to insure a continued supply of these services and facilities, 75 to 80 percent of which are provided by the private sector. Not only does the strong private role of providing recreational services to the public provide justification for expanding federal flood insurance, it also suggests justification for low interest loans for flood preventive actions, and perhaps even tax incentives for taking preventive steps. If means are achieved to allow firms ample opportunity to take flood damage preventive measures, these could be accompanied by restrictions such that firms not taking minimum steps by a given date would have limited if any public assistance available. 4/

3/ Brown, Tommy L. Assessment of Damage and Evaluation of Recovery Measures Available to New York's Commercial Recreation Firms Following Hurricane Agnes. Part of "Project Agnes" (see page 1 of this testimony); Department of Natural Resources Research Series No. 6 (1975) and Cornell University Water Resources and Marine Sciences Center Technical Report No. 96, Cornell University, Ithaca, New York, pp. 8-9.

4/ Ibid., pp. 15-16.

Need for a State Role

State agencies differ widely in their capacity to complement the very limited assistance available from Federal Insurance Administration staff. Further, the states have significant advantages in dealing with units of local government. Constitutionally, they derive their authority from the states just as does the federal government. Politically, they have many advantages in the bargaining process of environmental regulation. Not the least of these is a greater capacity to relate policies from program to program. In one of the Project Agnes reports, I argued:

> Higher levels of government influence local actions by grants-in-aid, direct services and mandates. Mandating actions for local governments is constitutionally a state prerogative which obviously may be influenced in turn by various federal inducements. In the case of the flood insurance program it might appear that a formidable set of inducements had been organized to produce effective local flood plain management. However, there is a basis for expecting less than overwhelming results and an understanding of why and how a shortfall between results and expectations may come about should suggest how supplementation should be designed.
>
> In some communities the flood insurance program with its subsidized insurance for existing property, and its sanctions through community grants and individual loans supports a significant existing local interest in land use controls. Proponents of such techniques are reinforced by the requirements and can take advantage of the expertise offered, undercutting opposition by pointing out that the community now has no choice, at least for the flood plain. But what about the communities where no sympathetic local group is significant in local affairs. As others have observed there is reason enough to expect effective filibustering and bargained if not outright noncompliance (Holden, 1966; Derthick, 1970; Ingram, et. al., 1974; Hahn, 1974).
>
> Even with the best of intent most small, usually rural, communities have little expertise to put into a flood plain management effort. Others will not share the objectives of the program and have the capacity to frustrate the intent. This the program proposes to correct by providing all with the data and analysis needed. Rather than a grant to fund the work, the Department of Housing and Urban Development of which the Federal Insurance Administration is a part, will contract to have it done. In the Susquehanna this is being done through the basin commission relieving HUD's strained contract supervision resources. But what about the matching up of ordinance with data, both in the initial drafting of the regulations, their amendment and their enforcement? It remains to be seen how much the Congress will provide for follow-up; the agency resources are not in place at this point. Furthermore, HUD, like any agency dealing with local governments, must seek to

maintain good working relations, particularly with the more urban jurisdictions that are most apt to have the capacity needed to negotiate.

Much seems to depend upon the response of the bankers and other federally regulated loan agents. They must determine if a property is within a flood hazard zone and require it to be insured. This should be workable, but puts the pressure on the definition of that zone. Often there is considerable technical latitude in what constitutes a one-hundred year frequency flood zone. There is the problem of evaluating future improvements in channels, effects of dams and the like. But perhaps the greatest threat comes from the use of variances and permit exceptions by local governments where a series of developments, allowed to encroach on the flood plain, could cumulatively change the size of the hazard zone.

The denial of federal grant aid to the non-conforming community presents a most sensitive problem. These will be grants that both the local people and the granting agencies want consummated. At very least long hours of negotiation can be forecast. The likely intervention of the Congressional delegation will at least involve some awkward confrontations and may pose the threat of legislative modification of the program. And HUD needs to show success in its handling of the assigned responsibility. Substantial pressures exist to find ways to accommodate the recalcitrant communities at some cost to the rigor of the execution of the program. What constitutes an acceptable control ordinance? Must a residence always have its first floor above the 100 year flood elevation? What is acceptable flood proofing for the other uses that may be placed below this level? The scope for bargaining is there.

Compared to most regulatory programs this one would seem to have some features that should make it more successful. Existing property owners may not find the degree of subsidy (up to 90 percent) in the insurance attractive. They certainly didn't flock to their insurance agents in the few communities that became eligible under the sanctionless program. But it may be viewed by other participants in the decision-making process as a significant compensation for the burdens of the program. The water quality grants and enforcement programs would seem to reinforce each other in this way, although the failure to fund the grant side is probably hurting the support for the enforcement side. Also, the popular acceptance of avoiding high flood risk locations would seem to be high -- this is limited by the extent to which high risk is perceived as something less than the hydrologists' 100 year zone.

New York's Response to Flood Plain Regulation

Wisconsin has had a mandated flood plain regulation program since 1966. A few other states had followed suit prior to the late 1973 amendments to federal flood insurance program that raised the coverage and added the sanctions. New York had a governor's bill in its legislature in early 1973 that used the Wisconsin program as a model, adding to it features which students of the Wisconsin experience had found desirable (Yaangen, 1972). It essentially provided for a local zoning of the flood plain subject to state guidelines and technical assistance and local enforcement, with the threat of state assumption of either responsibility if not performed adequately. Reaction in the state assembly was to seek a county intervening role between local and state actors to further protect the home rule principle. Interestingly, when the federal amendments became known this was dropped in favor of limiting state intervention to only those communities to be designated by HUD as having flood hazards, and limiting the state to only constraints on flood plain use sufficient to qualify for the federal insurance.

New York has some 1550 local jurisdictions. Of these 960 are towns and the remainder divided between villages and cities. Over 1000 are expected to be designated by HUD as containing one or more flood hazard areas. How many of these will accept the state's offer to draw up the ordinances and/or enforce them once adopted? While some will find the threat of state intervention and offer of technical assistance a sufficient reinforcement to local interest for land use regulation, there will be those small, rural jurisdictions that will be quite happy to let the state take the heat from their constituents. And some communities which lack building permits and building inspectors now will find it much easier to let the state provide this service than to do it themselves or join with their neighbors or let the county do it.

Technical assistance from the state, however, should facilitate inter-municipal coordination and cooperation. It should provide expertise which can be used to bargain with HUD. Professional values in implementation, uniformity between jurisdictions, linkages to other flood risk and water management alternatives and plans should be enhanced. If adequate resources are forthcoming it should be possible to monitor the cumulative effects of exceptions and variances, and at least give the local land use regulators access to the knowledge of such effects, if not reinforcement in its application. It would seem that the likelihood of two agencies (HUD and the state) finding enough resources between them to do the needed follow-up would be greater than if only one of them were involved.

However, it should be noted that the greatest advantage in state involvement may be in the constitutional question of who has the authority to mandate a local government action.

It should be clear under the New York statute that local compliance is indeed mandated. This is an addition to the incentive of the federal sanctions.

Similarly, the use of the police power to achieve flood plain regulation should be enhanced at least insofar as any challenges based on the taking issue are usually not as important to the use of the police power as is the attitude of the enforcing officials, nonetheless it is not without significance. Now the state is more likely to be a party to the action. Also it is clearer to the courts that this is a socially sanctioned use of the police power; cause and effect should be more clearly identified; at least to the extent of the subsidy for insurance on existing buildings some compensation is provided, and although the cost is affected there is no particular prohibition on uses of land similar to those on surrounding parcels. While these are points that have sustained land use controls in the past, and exist technically under the federal program alone, they should be strengthened in the court's eyes by being reinforced by a state legislative act. 5/

Traditionally federal programs have encouraged allied state efforts through the cost-sharing route. Federal funds give state agencies a measure of independence and some discretion to respond to the more professionally or technically determined priorities. The Federal Insurance Administration should consider the development of an emergency state executed assistance and monitoring program. Requesting direct funding from the Congress is one route. Another would be to support the broadening of responsibility and funding under Title III of the Water Resources Planning Act of 1965 now being revieved by the Senate Interior Committee.

A long term role for the states exists in the problem of coordination between local jurisdictions. You have a problem of deciding what to accept as suitable coordination under these proposed rules. The state as an arbitor and in certifying that coordination in fact meant accommodation of legitimate interests would probably perform a most useful role. Likewise, the states may have some compelling advantages in dealing with the problem of upstream land use changes that can have such dramatic effects on the size and frequency of downstream flooding. In just a few years subdivisions upstream can double the effective size of the 100 year flood plain. When recognized in your five year update this could greatly increase the size of the subsidized portion of the program as the 100 year line is moved to include more property. At present, your regulations do not address this issue. In addition to a problem of authority in such inter-community arbitration, the state may have some political advantages as discussed above.

5/ Allee, David J. Flood Risk Management -- Lessons in Inter-Governmental Environment and Land Use Control. Part of "Project Agnes" (see page 1 of this testimony); Department of Agricultural Economics Staff Paper No. 74-28 (November 1974), Cornell University, Ithaca, New York.

Some Ongoing Research

In one of the studies cited in the Project Agnes summary report, Dan Moore provides a progress report on the linkage of community characteristics to acceptance of the program. James Preston, also of our Rural Sociology Department, is now conducting some interviews in communities of different characteristics that seem linked to acceptance. Hopefully, this work will provide some insight on how to tailor implementing approaches -- education, technical assistance, authority reinforcement, administrative services and the like. Communities are not alike. Failure to recognize this, especially if reinforced by unwarranted notions of the equity of equal procedural treatment can lead to most unequal results in the application of public programs and the provision of public services -- ie., result in the fact of unequal treatment under the law.

Other continuing studies are attempting to provide improved models for the evaluation of the impact of upstream land use on downstream flood risk, the general hydrology of small watersheds and the monitoring of changes in the configuration of the floodway and flood fringe. Besides considering the economics of land use in the flood plain, attention is being given to the problem of relocation of existing flood plain structures. Finally, a study just getting underway hopes to examine the full range of tools available to link recreation and park development to the flood plain.

As results become available from these studies they will be provided to you.

Thank you for this opportunity. You deserve to commended for seeking this wide involvement in your rule-making process.