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HB 1999-82
RELATING TO WATER RESOURCES

Statement for
House Committee on
Water, Land Use, Development and Hawaiian Affairs
Public Hearing - 11 February 1982

By
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HB 1999 would add, to HRS Chapter 176 concerning "Water Resources," a new part concerned with Water Resources Impact Statements. This statement on the bill has been prepared in consultation with staff of the Water Resources Research Center of the University of Hawaii and has been submitted for review to the Legislative Subcommittee of the Environmental Center of the University. However, it does not represent an institutional position of the University.

The bill, if passed, would require the preparation of Water Resources Impact Statements for proposed development projects involving buildings to have more than a certain but yet to be specified floor area. Depending on the area specified, it might be possible that individual home owners wishing to add rooms or persons planning to contract one or two houses would have to prepare such Statements.

Environmental Impact Statements are now required for some developments that will result in increased demands on water resources. However, the requirement does not apply to most urban developments. The combination of water-resource limitations and the water-demand implications of urban developments may, especially in some areas justify what is essentially a selective expansion of the Environmental Impact Statement System. However, as now drafted, the bill would not serve what seems to be its intended purpose.

It would require, in the Water Resources Impact Statement on a proposed development, discussion of five topics. It is not clear to what water-resource problems some of these topics relate, and some of them seem to relate to water problems other than resource problems.

The first topic, the water usage of the development, relates, of course, to the increment of additional demand that the development will place on the water supply system. However, in water-supply systems drawing from a number of different sources and serving a number of different developments, specific allocation of the impacts of the draft necessary to satisfy the demand of a single development to particular sources would be arbitrary.

The second topic is phrased as the "impact of the discharge" caused by the development. It is not clear whether this refers to surfacewater discharges or wastewater discharges. A development may have significant surfacewater discharge impacts, for example those associated with increases in the rate or concentration of stormwater discharge. However, these would have no significant bearing on water resources, especially in Hawaii where little use is made of urban runoff. Waste water discharge impacts are already thoroughly considered in the NPDES permit system administered by the Department of Health.

The third topic is the impact of the development on the groundwater immediately below it. Such an impact would, of course, be a water-resource impact. However, for reasons indicated on the discussion of the first topic it would be impossible in most cases to attribute the impacts of the development's water demand specifically to the underlying groundwater body or bodies even if some part of the impact of the demand affected them. The topic intended may be impacts on the recharge of groundwater resources rather than those of the draft from the resources necessary to satisfy the demand. Reduction in rates of infiltration and hence reductions of groundwater recharge result from covering soil areas with roofs and pavements in development projects, and the reductions are of concern if the groundwater bodies whose recharge is affected are used for water supply. The topic should be redefined so as to clarify the intent with prescribing its discussion.

The fourth topic is the impact of the development of nearby watersheds. The intent here is not clear. Although a development may have significant surface-water impacts in downstream portions of the same watershed, these cannot be considered impacts in other watersheds.

The last topic is the impact of "runoff due to soil erosion, reduced percolation capability, or damaged dike storage capacity". As indicated in the discussion of the second and third topics, the construction of a development may result in an increase in runoff and hence a decrease in infiltration and groundwater recharge. Ordinarily in Hawaii, the increase in runoff is not a water-resource impact. The increases in runoff result from reduced infiltration capacity. The reduction is accomplished most effectively by covering the soil by pavements or roofs, but it may result indirectly from removals of topsoil with higher water retention and infiltration capacities than the subsoil. Such removals may result from soil erosion, but in urban developments result more extensively from grading. It is difficult to see how damages in dike storage capacity might result from urban developments, and even more difficult to see how such damages would affect surface runoff. The topic should at least be redefined to indicate the intent as prescribing its discussion.

To summarize, considerable revision of the technical aspects of its requirement for Water Resource Impact Statements would be necessary for the bill to be effective. It should be noted that the bill would require the preparation of Water Resources Impact Statements even for developments that would rely entirely on rain catch for water supply and thus would make no demands on groundwater or surfacewater resources.

In addition to requiring the Water Resources Impact Statements, the bill would require that, in addition to all approvals now necessary, any development project exceeding the minimum size to be prescribed would have to be approved by the Board of Land and Natural Resources. Under the proposed provision, the approval could be given by the Board only if the development project would not cause substandard damage in the water resources of the State. "Substantial damage" is defined in the bill as damage that is "caused by exhaustion, depletion, waste, pollution, or deterioration," and is "irreparable, or reparable by natural processes or after the passage of not less than __ years". The number of years is yet to be specified.

Any development that will rely on surface water or groundwater resources for water supply will cause some depletion of the resources; the depletion will be continuous as long as the demand continues; and even if the demand could somehow be stopped, restoration of pre-development conditions could not occur at any instant but would continue at an exponentially reducing rate. Hence the requirement for approval and the prescription of the basis for approval are now phrased in such a way that no development except one depending on rain catch alone could be approved.

It may be noted that even if the basis for approval were somewhat liberalized, the bill would place in the Department of Land and Natural Resources a power to control development that might exceed all of the powers now resting with the counties.

A possible alternative to the provisions of the bill worthy of consideration is an enlargement of the coverage of the State Environmental Impact Statement (EIS) system so that its requirements would apply to development projects of more than a certain size even if the requirements would not apply under present EIS law.