STATE WATER POLLUTION CONTROL PROGRAM PLAN

Statement for Department of Health Public Hearing

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This statement has been prepared in consultation with Hiroshi Yamauchi, Acting Director, U.H. Water Resources Research Center. It does not, however, reflect the institutional position of the University of Hawaii.

The proposed state water pollution control program plan is essentially an attempt to outline means for establishing priorities among water pollution control projects, and particularly those projects that require public funding, and the display of the priorities established.

The means for establishing priorities are not entirely clear. Established are a set of Water Quality Segments and "Effluent Limitation Segments". A priority scheme is outlined for establishing "Pollution Abatement Needs", but the calculations in this scheme involve pre-assignment to "Water Quality Segments" or to one of two categories of "Effluent Limitation Segments" and thus appears not intended for use in the segment designations themselves.

Although the scheme is otherwise intended to be as objective as possible, some subjective weightings are essentially involved.

"Environmental impact" is given a weighting of 23/41 in the determination of pollution abatement needs. "Enforcement Actions" are weighted 10/41, and "Project justification" 8/41. In the evaluation of "Environmental Impact", violation of water quality standards is given equal weight (5/23) to actual interference with water uses, although the questionable nature of the standards is recognized in the strategy document. Intensity of treatment is given a weight of 5/8 in the "Project Justification" regardless of how intense the optimum treatment might be. No weight at all is given to ecological...
effects in progress that might be stopped if pollution controls were instituted early, as distinct from ecological effects already in equilibrium. The extent to which a particular project would result in abatement of pollution abatement seems not to be examined. No weight is given to legislative expressions of priority.

A single example will suffice to indicate the effects of these subjective decisions. The major ecological change in progress in Kaneohe Bay has received widespread attention as the result of the activities of the Hawaii Institute of Marine Biology, the Kaneohe Bay Task Force, the Windward Regional Council and other groups. In no other coastal water segment has a current ecological change of such a magnitude been publicly demonstrated. The Legislature in its last session considered the priority of attention to Kaneohe Bay pollution sufficiently high to make a special appropriation for the diversion of sewage effluents from the Bay. Yet the Kaneohe Bay segment is ranked fourth in order of priority of Water Quality segments, behind Mamala Bay (actually the Sand Island part of Mamala Bay), Pearl Harbor, and Kahului Bay; and the proposed construction grant project list places the Kaneohe improvement project 11th, behind the Sand Island project; a Kauai project of negligible impact; four projects affecting Pearl Harbor; two projects on Maui, and two projects on Hawaii. It would appear that the ranking would be different if weight had been given to non-equilibrium in ecological processes, the effectiveness of the proposed projects in controlling undesirable ecological effects, and legislative determinations of priority.

Some detailed comments on various parts of the proposed plan follow:
1) Hawaii State Water Strategy

This document does not describe an overall water strategy. It should be titled: "Hawaii State Water Pollution Control Strategy", or "Hawaii State Water Quality Management Strategy".

p. 3, para. 2. 1.6. Positive impacts could be bad as well as good. Rewording is suggested: "obtain maximum beneficial impact for the dollar spent . . ." p. 4, para. 3. 1s. 9-12. Not all changes in standards can be made in 1973-1974. Rewording of beginning of sentence is suggested: "As many as possible of the necessary changes will be made . . ." p. 4, para. 4. "Dischargers" in points 2, 3, § 4 of para. c. should read "discharges".

2) Water Segment Classification

Needed is an explanation of the basis for identifying and classifying the segments mapped. It appears that all "segments" are segments of coastal waters. The rationale for the focus on coastal waters is explained in the "strategy" document (1), but it is questionable that this rationale is sufficient to justify complete restriction of focus to these waters. It appears from subsequent documents that "Water Quality Segments" are those coastal waters identified as having "substantial water quality control problems" "as a result of urban-industrial concentrations or other factors" under PL92-500 Sec 208 a.2. The "Effluent Limitation Segments" appear to be simply the remaining coastal waters. The two categories of "Effluent Limitation Segments" appear to be distinguished on the basis of priority of attention, but the basis for establishment of priorities is not indicated. Perhaps the distinctions between the 3 categories of "Segments" is based on the point system for "Pollution Abatement Needs" discussed in the "State Construction Grant Priority System" (7). If so reference should be made to that. It should be noted, however, that the priority ranking in (7) includes the Water Segment Classification in I. B. 5, suggesting that the latter must be established before the priority ranking can be determined. The distinction in table between "Water Quality Segments" and "Effluent Limitation Segments" appears illogical. Both appear to reflect concerns with water quality which can be met only be limitation of effluents. Are the three categories not merely three priority rankings of water pollution control needs?

The boundaries between the various segments seem in some cases arbitrary and not reflections of either optimal geographic grouping of effluents or logical subdivisions of the receiving waters, and the geographic titles assigned to some of the segments do not seem well chosen. The "Mamala Bay" segment and "Pearl Harbor" segment, for example, represent receiving waters in which particular problems exist, but Mamala Bay is the name of the entire bight between Barbers Point and Diamond Head, inclusive of the waters off Pearl Harbor as well as the waters in what is identified as the Mamala Bay segment. The abatement of the problems in Pearl Harbor will probably involve construction of an ocean outfall in what is identified as the "Waianae" segment.

3) Statewide Ranking of Water Segments

The same explanation of the basis for identifying and classifying the segments is needed as is needed for (2). In addition the basis for ranking waters in each category of segments is needed. If the basis is the "Pollution Abatement Needs" from (6), this should be stated.
4) **Statewide Ranking of Discharges**

The same explanation of the basis for identifying and classifying the segments is needed as is needed for (2). In addition the basis for ranking within each category of segment is needed. In this case, there is need to indicate whether it is the "Pollution Abatement Needs" alone that establish the ranking, or that plus "Financial Needs" plus "Project Status".

5) **Statewide Municipal Facilities List**

This, like (4) and (6), appears to be a priority ranking. See comments on (4).

6) **Statewide Ranking of Industrial Discharge**

This should refer to "Discharges" in the plural. See also comments on (4).

7) **State Construction Grants Priority System**

The introductory paragraph indicates that priorities will be established primarily on the basis of category I, "Pollution Abatement Needs", and that categories II and III, "Financial Needs" and "Project Status" will be used only in the case of projects having category I ratings where "the difference [of category I ratings] is equal [to] or less than one point". (The word to should be inserted). The paragraph does not indicate whether equal weight will be given to category II and category III or to each point in category II and category III.

**Pollution Abatement Needs**

The inclusion of "Aquatic Life" in "Public Health Hazards (I.B.2) appears illogical. The equal weight given to "Water Quality standards violation" (I.B.3) and "Interference with water uses..." (I.B.4) is questionable considering the doubtful significance of the present standards. The inclusion of "Water Segment Classification" (I.B.5) in the calculation of Pollution Abatement Needs appears to preclude use of the Pollution Abatement Needs in establishing the Water Segment Classification. Water Segment Classification appears to have a 3-point maximum. The Project Classification (I.C.1) appears to give treatment for the sake of treatments sake undue weight (5 points out of a total of 41). Effluent Disposal Classification appears by subtraction to have a 3-point maximum).

**Financial Needs**

The "Cost of Project" section (II.A.) appears mistitled - the title appears to refer to population. The number under population served appear to be thousands, not units. The factors identified as assessed valuation in Indebtedness (II.B.) need further explanation.
Project Status

The infiltration/inflow analysis and waste treatment management plan under "Compliance..." (III.A.) seem to need further explanation.

8) Hawaii State Construction Grant Priority List

Because the "Rule" p.2. is an incomplete draft, no comments are offered.