Regional Water Quality Control

I. INTRODUCTION

Since 1949, control of water quality in California has been administered under the organizational concept of a state board and nine regional boards each representing a major watershed of the state.[1] The regional boards have primary responsibility for pollution control within their territory, while the state board acts primarily in an overseeing, coordinating, and general policy formulating capacity.

In adopting the Porter-Cologne Water Quality Control Act of 1970 the legislature realized, "...that the statewide program for water quality control can be most effectively administered regionally, within a framework of statewide coordination and policy."[2] The supervising State Board resolves difficulties that arise when attempting to control the quality of waters which are not confined to a single region.[3]

Throughout the United States it has become increasingly clear that municipalities, working alone, are not effective in controlling sewage and solid waste disposal problems due to the inefficiency of city government and the secondary concern most

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[1] CAL. WAT. CODE § 13200 (West 1971).

[2] *Id.* § 13000; see FINAL REPORT OF THE STUDY PANEL TO THE CALIFORNIA STATE WATER RESOURCES CONTROL BOARD, March, 1969 (hereinafter cited as FINAL REPORT) at 7, noting the California legislature conclusion that the state's water pollution problems are primarily regional and that they depend on factors of climate, topography, population, and recreational, agricultural, and industrial development which vary greatly from region to region.

[3] CAL. WAT. CODE § 13001 (West 1971).

municipalities hold for water quality control.[4] A similar argument has been made against giving this responsibility to county agencies.[5] On the other hand, the regional form of control has obvious advantages insofar as more effective water quality planning and the realization of economics of scale inherent in positing in one regional agency the responsibility for performing functions formerly delegated to a number of local governments.[6] A basic tenet of governmental organization is that the area served by a particular governing body should be congruent with whatever functions it is required to perform.[7] It has been argued that regional basinwide authority is a necessary vehicle for the coordination of many waste management techniques.[8]

In analyzing whether regional organization is the most efficient means of water quality control, the scope of this article will concern a study of its implementation in California, the major problems it has encountered, and the most practical solutions presently available to solve these problems. While the scope of this article will concentrate primarily on specific application of regional principles in California, most of the considerations will apply equally to other states' water quality control problems and programs.

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[4]Contemporary Studies Project: *Impact of Local Governmental Units on Water Quality Control*, 56 IOWA L. REV. 804, 929 (1971) (hereinafter cited as Contemporary Studies Project). Additional problems with local units of government include the existence of local partialities, financial limitations, and the multiplicity of governmental units handling only limited aspects of the pollution control issue.

[5]Maloney and Ausness, *Water Quality Control: A Modern Approach to State Regulation*, 35 ALBANY L. REV. 28, 46 (1970) (hereinafter cited as Maloney and Ausness).

[6]Jacks, *Local and Regional Water Pollution Control in Texas*, 48 TEXAS L. REV. 1286, 1373 (1970) (hereinafter cited as Jacks).

[7]R. MORTON, G. BURKHEAD, J. BURKHEAD, F. MUNGER, RIVER BASIN ADMINISTRATION AND THE DELAWARE 95 (1960).

[8]Jacks, *supra* note 6, at 1374. For example, the regional board may require more intensive treatment by a particular discharger either because its treatment costs are much lower per volume than that of a neighboring plant, or because the assimilative capacity of the stream is less at its outfall than at any other location. See, ABT ASSOCIATES, INCENTIVES TO INDUSTRY FOR WATER POLLUTION CONTROL: POLICY CONSIDERATIONS 75-93 (1967) (hereinafter cited as ABT ASSOCIATES); A. KNEESE & B. BOWER, MANAGING WATER QUALITY: ECONOMICS, TECHNOLOGY, AND INSTITUTIONS 181 (1968); L. TECLAFF, THE RIVER BASIN IN HISTORY AND LAW (1967).

II. THE STATUTORY BASIS OF REGIONALISM IN CALIFORNIA – THE PORTER-COLOGNE WATER QUALITY CONTROL ACT.

A. ORGANIZATIONAL STRUCTURE OF REGIONAL CONTROL IN CALIFORNIA.

As mentioned earlier, the state is divided into nine regions each representing a major watershed of the state.[9] The State Board supervises, coordinates, and resolves interregional conflict; allocates funds to the regional boards; and has general policy, procedural, and appellate jurisdiction over actions of the regional board.[10]

The regional boards are each composed of nine members[11] appointed by the governor for a four year term,[12] and are required to represent all the people within the region.[13]

The members of the regional board do not serve full time, are required to meet only six times a year,[14] and are compensated only for expenses actually incurred.[15] The day to day work of each regional board is carried on by a technical and administrative staff, whose size varies from board to board, with assistance in legal matters from the legal section of the state board.[16] The staff is supervised by the board's executive officer who is a full time employee serving at the pleasure of the board.[17] There is a specific statutory provision intended to prevent board member conflict of interest with those regulated.[18]

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[9]CAL. WAT. CODE § 13200 (West 1971).

[10]Robie, *Water Pollution: An Affirmative Response by the California Legislature*, 1 PAC. L. J. 2, 7 (1970) (hereinafter cited as Robie).

[11]CAL. WAT. CODE § 13201 (West 1971). One person each should be associated with: water supply, conservation, and production; irrigated agriculture; industrial water use; municipal government; county government; and one from a responsible non governmental organization associated with recreation, fish, or wildlife. The three remaining members are to be persons not specifically associated with any of the foregoing categories, two of whom shall have special competence in areas relating to water quality problems.

[12]*Id.* § 13202.

[13]*Id.* § 13201 (a).

[14]*Id.* § 13204. However, boards with heavy workloads meet as frequently as monthly.

[15]*Id.* § 13205.

[16]*Id.* § 13220 (d).

[17]*Id.* § 13220 (c).

[18]*Id.* § 13207.

B. REGIONAL WATER QUALITY CONTROL POLICIES AND PLANS.

Regional planning is based on the philosophy that it costs less in the long run and is more certain, to formulate water quality control plans in advance and initiate corrective action before a problem becomes acute, rather than merely trying to salvage water resources that have been allowed to become unreasonably and often almost irreversibly degraded.[19] Consequently, in order to obtain coordinated action as required,[20] a major function of the regional board is to ensure the reasonable protection of beneficial uses and the prevention of nuisance through establishment of appropriate water quality objectives in water quality control plans for all areas in a region.[21]

The Act includes a specific subchapter on definitions[22] whose primary effect is to broadly define "waste,"[23] add new scope to the idea of the "beneficial uses" to be preserved,[24] base control of "pollution" not as a standard of harm shown but upon the "reasonableness" of regional board action,[25] define "contamination" as to include a threatened as well as existing hazard,[26] and include a broader "nuisance" action than ever before for the purposes of water quality control.[27] The principal effect of this

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[19]FINAL REPORT, *supra* note 2, at 1, 3.

[20]CAL. WAT. CODE § 13225 (a) (West 1971).

[21]*Id.* §§ 13240, 13241.

[22]*Id.* § 13050. For a detailed study of the effects of these definitions, see Robie, *supra* note 10, at 7-12.

[23]CAL. WAT. CODE § 13050 (d) (West 1971). "Waste includes sewage and any and all other waste substances, liquid, solid, gaseous, or radioactive, associated with human habitation, or of human or animal origin, or from any producing, manufacturing, or processing operation of whatever nature, including such waste placed within containers of whatever nature prior to, and for purposes of, disposal."

[24]*Id.* § 13050 (f). ". . . include, but are not necessarily limited to domestic, municipal, agricultural, and industrial supply; power generation; recreation; esthetic enjoyment; navigation; and preservation and enhancement of fish, wildlife, and other aquatic resources or preserves."

[25]*Id.* § 13050(1).

[26]*Id.* § 13050(k).

[27]*Id.* § 13050(m). ". . . means anything which: (1) is injurious to health or is indecent or offensive to the senses, or an obstruction to the free use of property, so as to interfere with the comfortable enjoyment of life or property, and (2) affects at the same time an entire community or neighborhood, or any considerable number of persons, although the extent of the annoyance or damage inflicted upon individuals may be unequal, and (3) occurs during or as a result of the treatment or disposal of wastes."

broad definitional terminology is to pass the responsibility of water quality control from the legislator to the enforcer.

Each regional board must formulate and adopt a water quality control plan for all areas within its region[28] which becomes effective after a hearing[29] and approval by the State Board.[30] Such plans must be consistent with state and legislative water quality policy.[31] The plans are designed to protect beneficial uses of waters and prevent nuisance,[32] and are implemented when regional boards adopt waste discharge requirements for individual dischargers.[33] The water quality plan includes a method for reaching a given state of water quality, a description of the desired state in physical and biological parameters expressed in terms of water quality objectives, and an enumeration of the criteria for establishing the desired state of water quality.[34]

C. POWERS AND DUTIES OF THE REGIONAL BOARDS IN IMPLEMENTING AND ENFORCING THE REGIONAL WATER QUALITY CONTROL PLAN.

1. GENERAL POWERS AND DUTIES.

In addition to adopting water quality control plans and waste discharge requirements, each regional board is granted certain general powers which enable it to engage in planning and coordination with other state and local agencies to control water quality.[35]

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[28] *Id.* § 13240.
[29] *Id.* § 13244.
[30] *Id.* § 13245.
[31] *Id.* § 13240.
[32] *Id.* § 13241.
[33] *Id.* § 13263(a).
[34] *Id.* § 13050(j). These plans must analyze the possible effects of discharges in contiguous areas so as to be compatible with plans for other areas.
[35] *Id.* § 13225. Each regional board is directed to obtain coordinated action in water quality control including: the prevention and abatement of water pollution and nuisance; encouragement and assistance for self-policing waste disposal programs; requiring investigations and reports from other state agencies concerning water quality control; requesting enforcement of water quality laws; reporting cases of contaminations; recommending to the state board projects for financial assistance; and encouraging regional planning and action.

The problem here, as will be discussed later, is that many of the general powers of the regional boards (i.e., "requesting," "coordinating," or "encouraging" action by others) are not directly enforceable.

Implementation of the quality control plan involves a two step process. The regional board first establishes waste discharge requirements for each discharger. Second, if the discharger fails to conform to the established requirements, the board may then force compliance by utilizing the legal sanctions provided.

2. IMPLEMENTATION OF THE PLAN—WASTE DISCHARGE REQUIREMENTS.

Water quality control plans are directly implemented when the regional boards adopts waste discharge requirements for individual dischargers which are to be consistent with the recognized beneficial uses of the waters affected.[36] These requirements are based on the reports of the waste dischargers themselves, and supplemented by staff inspections, as required by statute.[37] Waste discharge requirements may place specific numerical limits on constituents of the discharge or may be phrased in general terms. The law provides for review and appeal from these requirements.[38] A critical section permits discharger compliance in any lawful manner.[39]

3. ENFORCEMENT OF THE WATER QUALITY CONTROL PLAN

a. Preventive and Abatement Procedures

The Porter-Cologne Act provides the regional boards with

[36] *Id.* § 13263(a).

[37] *Id.* § 13260(a). The reports are required from any person who is discharging or proposing to discharge waste that could affect the quality of the waters of the state (other than into a community sewer system). Section 13266 assists the board in obtaining information on those dischargers who do not report to the regional boards on a voluntary basis. Section 13269 allows waiver of the reports by a regional board if not adverse to the public interest. There is special mention that discharge requirements need not authorize the use of the full assimilative capacity of the receiving waters (§ 13263(b)), and that the requirements are not in the nature of a permit to discharge or a vested right, but rather are in the nature of a privilege (§ 13263(g)).

[38] *Id.* § 13320, § 13330.

[39] *Id.* § 13360. Moreover, the regional boards are prohibited from specifying the design, location, type of construction, or particular manner in which compliance may be had.

broader and more far-reaching enforcement powers than had previously existed in California water quality control.[40] The discharge requirements are enforceable directly and, if reasonable, will be judicially upheld – there being no need for a regional board to prove pollution or nuisance resulting from the violation.[41]

Special procedures are available to assist regional board enforcement of their plan: (1) civil actions brought under Porter-Cologne upon regional board request by the state Attorney General,[42] foremost being suit to enjoin pollution or nuisance;[43] (2) emergency summary judicial abatement of pollution and nuisance;[44] (3) delegation of authority from the regional board to its executive officer to act in emergency situations;[45] and (4) enforcement of property liens to repay the costs of waste abatement.[46]

There are extensive regular preventive and abatement procedures available. The regional boards may: (1) issue and request enforcement of waste discharge requirements[47] based on the reports received from the dischargers[48] and which may take a time or non-time schedule form,[49] (2) issue cease and desist orders upon failure of the discharger to comply with the requirements,[50] (3) ban all new sewer connections pending compliance,[51]

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[40] *Id.* § 13260(a) provides that waste discharging state agencies are subject to all provisions of the act. § 13050(c) includes the United States within its jurisdiction to the extent authorized by federal law; see, Presidential Executive Order No. 11288, 3 C.F.R. 423 (169) requiring federal installations to comply with state pollution laws.

[41] Robie and Hume, *Practice Under California's New Porter-Cologne Water Quality Control Act*, 45 L.A. BAR J. 177, 210 (1970) (hereinafter cited as Robie and Hume).

[42] CAL. WAT. CODE § 13361(a) (West 1971).

[43] *Id.* § 13331(a), and see § 13002(c) permitting the state Attorney General to bring an action in the name of the people on his own motion.

[44] *Id.* § 13340.

[45] Id. § 13223.

[46] *Id.* § 13305(f).

[47] *Id.* §§ 13260-13265.

[48] *Id.* § 13260(b).

[49] *Id.* § 13300.

[50] *Id.* § 13301.

[51] *Id.* § 13301(c). This gives the regional board some degree of control over the municipal community since its effect is to delay pending construction which had intended to hook up to the community sewer system.

(4) investigate the quality of any waters of the state within its region,[52] and (6) require technical reports from dischargers.[53] There is available general State Board review of regional enforcement and implementation actions.[54]

At the judicial level, additional injunctive relief is available requiring submission of waste discharge reports[55] for waste discharge in violation of requirements begun either prior to filing of reports or after the issuance of waste discharge requirements,[56] and also for the enforcement of board cease and desist orders.[57]

b. Remedial Proceedings and Criminal Misdemeanor Penalties.

Once the damage has been done, the California law provides for remedial and criminal proceedings so as to abate the present discharge and discourage future violations.

Any person who discharges waste in violation of waste discharge requirements (including accidental violations) must, upon the order of the board, clean up or pay for the cost of cleaning up the spill. If discharge is by one not under requirements, cleanup is required if the discharge is intentional or negligent and creates a condition of pollution or nuisance.[58] There is also present, as amended, a provision allowing for a maximum six thousand dollar per day fine for intentional or negligent violation of board cease and desist orders.[59]

In addition to injunctive relief and civil fines, a discharger may be guilty of a misdemeanor if he: (1) fails to furnish a report of discharge when requested to do so by a regional board or when false information is given in a report that is furnished;[60]

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[52] *Id.* § 13267.
[53] *Id.* § 13267(b); § 13268.
[54] *Id.* § 13320.
[55] *Id.* § 13262.
[56] *Id.* § 13264.
[57] *Id.* § 13331; see § 13361 regarding general provisions relating to the nature of available injunctive relief.
[58] *Id.* § 13304, § § 13440-13442.
[59] *Id.* § 13350. This frequently publicized, though rarely employed code section was amended in August, 1971 (Senate Bill No. 225; Chapter 668) to cover all discharges not in accordance with waste discharge or other requirements. The civil remedies permitted do not limit other civil or criminal remedies, and fines are to be applied retroactively to the day on which such violation commenced.
[60] *Id.* § 13261.

(2) discharges waste prior to the issuance of a discharge requirement for a period of 120 days subsequent to the filing of the report or waiver of the report by the board;[61] or (3) fails to furnish technical or monitoring programs or falsifies information within same.[62]

III. THE REGIONAL BOARD AT WORK IN CALIFORNIA AND A STUDY OF THE ACTIVITIES OF THE CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD.

A. CALIFORNIA GENERALLY

California is currently implementing the regional water quality plans through a rather inefficient case-by-case surveillance and enforcement approach. An estimated 650 additional dischargers are placed under discharge requirements each year,[63] though many still remain unrestricted.[64] Due primarily to monetary and staff shortages, California has emphasized persuasion and education rather than enforcement. The rationale behind such an approach is that if a solution is reached on a cooperative basis, the violator will continue to comply once the staff has curtailed strict surveillance.[65] This is not to say that there has been no enforcement. Request for the highly publicized mandatory fines have, though rare, been made.[66] The State Board Enforcement Bulletins list frequent examples of use of the ban on

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[61] *Id.* § 13265. This provision was intended to discourage a discharger from commencing operations prior to getting his requirements, and to encourage early reports on discharge to the boards. The 120 day period provides incentive to regional boards to act promptly since after expiration of this time period a discharge is permitted without requirements.

[62] *Id.* § 13268.

[63] FINAL REPORT, *supra* note 2, at 17.

[64] CALIFORNIA STATE WATER RESOURCES CONTROL BOARD, QUARTERLY REPORT OF ACTIONS, Table 2 (for the quarter ending Sept. 30, 1971) (hereinafter cited as QUARTERLY REPORT). It was estimated that though there are 7,945 waste discharge requirements currently in force, another 10,141 remain to be prescribed.

[65] Symposium, *Water Pollution Control in Texas*, *48* TEXAS L. REV. 1029, 1074 (1970) herinafter cited as Symposium).

[66] Letter from Ron Robie, member of the State Water Resources Control Board, December 6, 1971, stating that the state legal staff may request civil monetary remedies in five pending court cases.

new sewage connections[67] and the prompt response it usually draws from municipalities. Action has been successfully taken against a federal institution over claims of sovereign immunity.[68] The state has generally abstained from the use of publicity and public opinion as an enforcement tool against recalcitrant industry.[69] To meet a particularly pressing California problem, every county and city planning commission in the Central Valley area has been notified that tentative subdivision maps are to be submitted to regional control boards for review to ensure that provision has been made for the safe disposal of their wastes.[70]

The state has placed most of its enforcement emphasis on the utilization of state and federal grant money as a persuasive reward for local government compliance with board requirements and requests. This has been especially effective since no federal grant can be made unless a project is included in "an effective current basinwide plan for pollution abatement consistent with applicable water quality standards."[71] Moreover, the state grant program contains similar prerequisites as a condition to gaining the necessary state and regional board certification of compliance with water quality requirements.[72] The state appears to have placed most of its present hopes for efficient wastewater management upon a careful utilization and allocation of these funds and has not done too much in the area of publicity and civil monetary fines. Finally, the State Board has undertaken to deal with the special problem of agricultural waste discharge through the organization of the Agricultural Advisory Committee.[73]

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[67]CAL. WAT. CODE § 13301(c) (West 1971).

[68]People v. Major General Phillip Davidson, Commanding General, Fort Ord (unreported) U.S. Dist. Ct. for the Northern District of California, case No. C-70, 487 SAM, January, 1971.

[69]Interview with Ron Robie, member of State Water Resources Control Board, November 23, 1971 (hereinafter cited as Robie interview).

[70]State of California Resources Agency, Enforcement Bulletin #1, February 20, 1970.

[71]18 C.F.R. § 601.32 (1971).

[72]CAL. ADMIN. CODE tit. 23, § 2100 *et seq.* (1971) which implements The Clean Water Bond Law (CAL. WAT. CODE, Division 7, Chapter 12, § § 13970-13983 (West 1971) and Section 8 of the Federal Water Pollution Control Act (33 U.S.C. 1171, *et seq.* (1970)).

[73]State Water Resources Control Board, News Release, March 30, 1971. As of the beginning of 1972 the Agricultural Committee had not taken any concrete steps in dealing with California's tremendous agricultural waste problem.

B. ACTION ON THE REGIONAL LEVEL—THE CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD.

While there have been repeated statements concerning the scope and toughness of California's water quality control law and its enforcement,[74] one can not really know its effect in practice without studying the activity at the regional board level. The State Board's primary function appears to be one of being an appellate and advisory tribunal. Accordingly, this writer studied the activities of a single regional board—the Central Valley Regional Water Quality Control Board in Sacramento (CVRB)—so as to better understand the actual implementation of regional water quality control.

As required by statute,[75] the CVRB formulated an Interim Water Quality Plan.[76] The plan was prepared primarily to satisfy federal and state requirements for construction grant programs.[77] It is to serve as a guide for water quality management and waste treatment plant construction in the next two years pending completion of a more fully developed plan by July 1, 1973, which has already been contracted out to private contractors. The Interim Plan sets forth a definitive program establishing priorities and time schedules for actions required to meet water quality and environmental objectives during the next two years for the four sub-basins within the CVRB. The policy guidelines make clear that the central goal of the plan is to maximize use of waste treatment systems as part of an integrated and coordinated system so as to assure effective treatment and adequate capacity at all times.[78]

In implementing this and other goals, the board has decided that: (1) waste discharges to receiving waters which are intermittent or have limited dilution capacity, will not be considered as permanent solutions; (2) whenever feasible, water quality control systems must provide for eventual wastewater reclamation; (3) waste sources and independent treatment facilities are to be consolidated where practical and with maximization of

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[74] See generally, Robie, *supra* note 10; Robie and Hume, *supra* note 41.

[75] CAL. WAT. CODE § 13240 (West 1971).

[76] CALIFORNIA REGIONAL WATER QUALITY CONTROL BOARD, CENTRAL VALLEY REGION, INTERIM WATER QUALITY CONTROL PLAN, CENTRAL VALLEY BASIN (4 Volumes) June, 1971 (hereinafter cited as INTERIM PLAN).

[77] Up to 80% of local government treatment plant construction costs can be financed through utilization of existing federal (55%) and state (25%) funding.

[78] INTERIM PLAN, *supra* note 76, at V-1.

their capacities; (4) land use practices must assure protection of beneficial water uses and environmental values; and (5) both source control and pretreatment are to be required.[79]

Most of the decisions of the regional board are based on information gained from staff individual treatment plant monitoring and the surveillance of the larger waste dischargers. From these, the staff makes recommendations to the nine-man regional board which acts at monthly public hearings. The purpose of the public hearing is to enable the "...board to obtain testimony and information from concerned and affected parties so as to make decisions after considering the recommendations made by the executive officer."[80]

Due to the problems caused by the size of the Central Valley Region and its very large number of dischargers,[81] the CVRB has concentrated on persuasion instead of undertaking a crushing policy of enforcement. This is their most practical alternative since they have found the enforcement problem is not one of discharger recalcitrance; rather it is one of inability due primarily to the lack of adequate funding.[82] The most effective persuasive device, which also serves to alleviate the funding problem, is careful utilization of their authority to certify discharger treatment plant proposals which is a precondition to federal and state grants. Careful performance of this function offers advantages of planning, treatment plant consolidation, and intra-regional coordination not found in a strict and purely remedial enforcement approach.[83]

Another persuasive device, as yet rarely utilized, is the accelerated amortization of federal and state treatment plant facilities for tax purposes available to industry upon receiving

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[79] *Id.* at V-2.

[80] Agenda of the Central Valley Regional Board meeting in Sacramento, November 19, 1971.

[81] QUARTERLY REPORT, *supra* note 64 at Table 2, which estimates 11,000 total dischargers in the region of which there remain 8,558 waste discharge requirements yet to be prescribed (compared to a statewide total of 17,900 and 10,141 respectively).

[82] Interview with J. Robertson, executive officer of the Central Valley Regional Board, November 18, 1971 (hereinafter cited as Robertson interview).

[83] *Id.* There is no provision in the grant fund program similar to the CAL. WAT. CODE § 13360 prohibition of the board's requiring the manner of compliance.

board certification that their proposed treatment facilities are in compliance with board policy and requirements.[84]

A final possibility, though also seldom utilized, is the use of publicity to motivate water quality control compliance. The CVRB does not utilize public opinion as a persuasive tool for a variety of reasons.[85]

Regarding actual enforcement proceedings, the CVRB has concentrated on setting as many waste discharge requirements as possible while cracking down on the major long-term violators as much as is feasible within limits of staff capabilities.[86] The effect of the Porter-Cologne Act can be seen most dramatically in the near three-fold increase of yearly cease and desist orders adopted after its inception.[87]

However, though the regional board is very active, there are several major impediments to performance anywhere near optimal capacity.

IV. THE MAJOR PROBLEMS FACING REGIONAL WATER QUALITY CONTROL.

Most studies on regional water quality control have repeatedly emphasized several inherent enforcement and implementation problems. However, this writer found a considerable disparity

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[84]CAL. REV. & TAX CODE § 17226, *et seq.*, § 24372 *et seq.* (West 1970); Federal Tax Reform Act 1969, § 704 (INT. REV. CODE OF 1954, § 169).

[85]Interviews: Robertson interview, supra note 82; and B. Crooks, supervising engineer of the Central Valley Board, November 22, 1971 (hereinafter cited as Crooks interview). The board once had a full time staff member whose sole task was to publicize violations and board activity. However, they had to reallocate his talents to more pressing staff needs. Both of the men interviewed questioned the beneficial effect of publicity either on the regulated discharger or on the board itself.

[86]QUARTERLY REPORT, *supra* note 64, at Table 3, indicated the Central Valley Board's leading position regarding enforcement (first in new waste discharge requirements issued, second in staff inspections, and first in corrections obtained by staff action and cease and desist orders issued). However, this is minimized by figures showing both the second largest number of discharges in violation of W.D.R. and second largest number of long term violators.

[87]Central Valley Regional Water Quality Control Board, Status of Cease and Desist Orders (as of September 25, 1971). During the two years preceding Porter-Cologne there were but twelve cease and desist orders adopted; however, during the first year and nine months after the act, this number had increased to 28.

[88]Hines, *Nor any Drop to Drink: Public Regulation of Water Quality*, 52 IOWA L.

between the problems noted in such theoretical approaches and those actually facing a typical regional control board in practice. The latter must be added to the former in understanding regional control and as a prerequisite to formulating affirmative solutions.

A. THEORETICAL NATIONAL AND STATEWIDE PROBLEMS.

Commentators have long recognized that enforcement has consistently been a major weakness of state pollution regulation even when the agency doesn't suffer from any deficiency in powers.[88]

Total enforcement coverage has generally been regarded as an impossibility because of inadequate power to provide financing and due to staff limitations which only permit a case-by-case enforcement approach reaching but the gross violators.[89] Often there have been greater problems with municipal pollution since the threat of adverse publicity is not usually as effective in motivating compliance as it is with industry. Treatment of pollution can place a substantial burden on municipalities, which would in many instances cause a tax increase of well over 100%. If there is absent any incentive or tendency for voluntary compliance, enforcement can only be had through long and costly individual court proceedings.[90]

California has faced similar problems. More specifically, the law permits, and the municipalities often demand, too great a degree of localism to permit efficient treatment plant coordination and consolidation. As mentioned, the regional boards are only empowered to request, coordinate, and encourage action by others in certain situations.[91] Since only the result of waste disposal, and not the method, can be regulated, the practical effect is to restrict the regional boards to sampling water in

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REV. 186, 227 (1966) (hereinafter cited as Hines).

[89] E. MURPHY, WATER PURITY: A STUDY IN LEGAL CONTROL OF NATURAL RESOURCES 143 (1961) (hereinafter cited as MURPHY).

[90] Maloney and Ausness, *supra* note 5, at 36.

[91] See discussion of CAL. WAT. CODE § 13225, *supra* note 35, as limited by § 13360 discussion, *supra* note 39, prohibiting regional board specification of the manner of compliance.

every case to determine its quality. Thus, only a case-by-case enforcement of discharge limits approach involving complicated questions of the extent of violation of water quality requirements is made; rather than the preferred across-the-board mass enforcement relying on the requirement of minimal pollution treatment facilities for established norms of pollution under specified conditions.[92]

The law does not permit the regional boards to require coordination of local plans and systems on a regional level. This task is usually not undertaken voluntarily since many times there are issues within local government that will cause a city, county, or district to avoid or frustrate a cooperative sewage plan in order to achieve other governmental objectives.[93] There have been repeated examples of such reticence.[94] The result has been that the functional role of the regional board is primarily prohibitory (abating pollution problems as they occur), rather than a preventative approach based on long range planning and inter-community program coordination. A unified regional system of water quality control is unlikely when dependent solely on waste discharge requirements and the legal sanctions behind their enforcement.[95]

Often this results in a proliferation of small ineffective treatment systems throughout the regions because dischargers in compliance with their waste discharge requirements are permitted to frustrate the development of integrated inter-community programs of corrective action by sitting idly by and refusing to allow intrusion into the sovereignty of their local jurisdictions.[96] This problem is greatest when comprehensive control is sought

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[92]R. NADER, POWER AND LAND IN CALIFORNIA III 65-66 (1971) (hereinafter cited as NADER).

[93]FINAL REPORT, *supra* note 2, at 39.

[94]See, in Del Mar, Schwartz, *Water Quality Control in California: A Regional Approach*, 7 CAL. WEST. L. REV. 138, 148 (1970) (hereinafter cited as Schwartz); in Livermore, Symposium: *The San Francisco Bay Area – Regional Problems and Solutions*, 55 CAL. L. REV. 695, 720 (1967) (hereinafter cited as Calif. Symposium) and, in the Monterey Peninsula – Updegraff, *The Economics of Sewage Disposal in a Coastal Urban Area – a Case Study of the Monterey Peninsula, California*, 11 NATURAL RESOURCES J. 373, 377, (1971) (hereinafter cited as Updegraff).

[95]Schwartz, *supra* note 94, at 156.

[96]*Id.* at 151.

over numerous sources of pollution in areas of intensive and competitive water use. If the regional board had been granted the authority to issue permits whereby it could dictate the specifications of treatment facilities, a regional system could have been effectively established in California. Instead, where an autonomy seeking local unit doesn't have the facilities to meet waste discharge requirements, it will either have to violate them or allow sewage to accumulate.[97] Absent regional coordination, there are even times when it is in the best interests of local communities as separate entities to maintain low levels of treatment and let the other communities bear the cost burden by having to treat their discharges at a relatively higher level and/or reducing their volume.[98] Inefficiency is inherent in any system based on local government decisions often formulated on their short range economic needs, and which the regional boards must accommodate after-the-fact through enforcement.[99]

A second major problem facing effective regional water quality control is the lack of sufficient finances for the construction of the larger facilities demanded by coordination and consolidation.[100] State loans and federal funds available to local agencies will meet an extremely small part of the planning and construction needs which, for the five year period 1968-72, have been estimated to be over $1.1 billion.[101]

A major criticism of the California law is that the effect of the regional board representation system[102] has been to "institutionalize conflict of interest."[103] It is claimed that a waste discharger not only will find someone with his own interests on the board, but that, through his trade association, he will also have

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[97]Calif. Symposium, *supra* note 94, at 720.

[98]Updegraff, *supra* note 94, at 377.

[99]Robie interview, *supra* note 69.

[100]Robie, *supra* note 10, at 29.

[101]STATE WATER RESOURCES CONTROL BOARD, AN ESTIMATE OF SEWAGE FACILITY NEEDS FOR CALIFORNIA PUBLIC AGENCIES 1968-72 (1968).

[102]CAL. WAT. CODE § 13201 (West 1971) requires regional board member representation for persons associated with irrigated agriculture, industrial water use, municipal government, and county government. The NADER report, *supra* note 92, at III 63 contends that all of these bodies are powerful political and economic interests involved in pollution.

[103]NADER, *supra* note 92, at III 62. It is argued that the result is a board replete in expertise in water pollution rather than water quality control since the law requires actual association with such specific interest groups.

played a major role in selecting that member.[104] A regional authority over-responsive to local pressures will probably be unable to make the difficult decisions necessary to effectively regulate basin development.[105] For reasons that will be discussed in the final section of this article, the possibility of conflict of interest should not be viewed as a major problem in practice.

A more practical problem facing effective regional control is the unique system of appeals from regional board sanctions which requires full hearing of every issue, and amounts to a *de novo* review of a regional board's actions at the state board and judicial levels.[106] Similarly, there is a recognized problem of judicial delay and the "lag time" problem between the issuance of a cease and desist order and the judicial granting of a requested injunction.[107] For the discharger who won't comply until compelled, such a delay may enable him to continue his unwarranted discharge for an additional length of time—especially in light of the failure of the $6,000 per diem fine to be a practical deterrent.

A controversial study has criticized existing California law and its enforcement in that it permits "reasonable" filth through repeated definitional qualifications in the law;[108] its impact is compromised upon discovering the much more lax legislative intent behind it;[109] the public is mislead by rhetorical newspeak

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[104]*Id.* at III 63.

[105]S. SCOTT AND J. BOLENS, GOVERNMENT: A REGIONAL ORGANIZATION FOR BAY CONSERVATION AND DEVELOPMENT 731 (1967) (background study for the San Francisco Bay Plan).

[106]NADER, *supra* note 92, at III 66-67; also, see CAL. WAT. CODE § § 13320-331 (West 1971).

[107]Interview with J. Anderson, State Water Resources Control Board Attorney, October 14, 1971.

[108]NADER, *supra* note 92, at III 67-68. This report notes that reasonable quality water isn't as good as good quality water and draws attention to the insertion of 'reasonable' into the law in a great many places, i.e. CAL. WAT. CODE § 13050(1) (limiting the definition of pollution); § 13241 (relating to the power of the board to plan the water quality of its region); § 13263(a) (the board's ability to prescribe limits on dischargers); and § 13000 (the quality of the water to be sought in the state).

[109]*Id.* at III 70. For example, there is the Assembly Water Committee Report (CAL. ASSEMBLY J. at 2682, May 5, 1969) qualifying the intent of the highly touted fines, "it is not expected that this section will be used except with discretion, and when administrative remedies have been ineffective."

and definitionalism;[110] and the enforcement approach used is a weak one.[111] The framers of the current law recognized a problem with enforcement in that it is is quite unlikely that a court would enjoin a municipal waste discharger (even if in serious violation of requirements) because of the practical difficulties of reducing or eliminating entirely discharge from community sewer systems.[112] There is also fear that courts will be unlikely even to impose fines on violators.[113] The force of the widely used additional connections ban[114] has been criticized because its deterrent impact is not directly felt by those responsible for the pollution, but is upon developers, construction workers, and others who seek new connections to the already polluted sewer system, while specifically preventing the boards from restricting the discharge of persons already dumping into the system.[115]

B. THE PRACTICAL PROBLEMS OF REGIONAL WATER QUALITY CONTROL AT THE BOARD LEVEL.

Theoretical discussion of the problems of regional water quality control centers on the problems of funding, localism, possible conflict of interest on the board level, and slowness of the legal process. However, when viewed from the regional board level in practice, these problems must be seen in a different light.

The financial problem is felt on the regional level, but in a different way than merely inhibiting the construction of needed treatment facilities. It affects the very practical matter of how large and how well-paid a staff each regional board can employ.[116] Only recently have the boards been able to compete with industry and other fields so as to attract engineering personnel sufficiently qualified to attack the difficult problems faced in modern water quality control surveillance, monitoring, and basic data collection, and integrate this knowledge into coordinated regional planning and enforcement.[117] This is cru-

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[110]NADER, *supra* note 92, at III 71-72.
[111]*Id.* at III 79-83.
[112]FINAL REPORT, *supra* note 2, at 37.
[113]Symposium, *supra* note 65, at 1074-1075.
[114]CAL. WAT. CODE § 13301 (West 1971).
[115]NADER, *supra* note 92, at III 82-83.
[116]Crooks interview, *supra* note 85.
[117]FINAL REPORT, *supra* note 2, at 17; Robertson interview, *supra* note 82.

cial[118] since adequate, frequent, and up-dated basic data concerning hydrology, biological characteristics, water quality, and other matters is a necessary prerequisite to the establishment of reasonable and preventative water quality objectives and waste discharge requirements.[119]

The problem of slowness of legal action is also a problem at the regional level. The Central Valley Board has been frustrated several times by delayed action, or even inaction, on cases referred to the state Attorney General for injunctive relief. The executive officer of the CVRB complained in a memorandum to the State Board[120] that such delays make the Porter-Cologne Act "toothless" and inhibit protecting the general public from pollution and contamination;[121] are discouraging and wasteful to the regional board which has made a significant investment of time and effort to provide the Department of Justice with extensive documentation of the problems only to yield no return; and is an indication that the Department of Justice is failing to uphold its end of the pollution control partnership so necessary to effectively carry out the enforcement program.[122] This problem is ironic since one of the reasons the Attorney General was chosen to enforce the civil provisions of the California water act was because he was believed to have available more expertise than a district attorney who deals with water cases only infrequently. It was hoped that earlier and more agressive action was to be possible since the Attorney General need prove only that the boards' beneficial uses and waste discharge requirements are "reasonable."[123] Requests made and legislative action taken concerning this "lagtime" problem will be discussed in the next section of this article.

A related problem the regional board faces is that it is un-

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[118] FINAL REPORT, *supra* note 2, at 17.

[119] *Id.*

[120] Memorandum, *Slowness of Legal Action*, from J. Robertson to the State Board, November 1, 1971.

[121] *Id.* In a specific case referred to in his memorandum, the executive officer noted the danger involved since an inspection had shown a person with hepatitis was being served by a septic tank discharging in violation of board requirements.

[122] *Id.* At the Central Valley Regional Board meeting in Sacramento, November 19, 1971, this problem again came up. The board moved to send a letter to the Attorney General requesting an explanation of his lack of action.

[123] CAL. WAT. CODE § § 13330-13331, 13361 (West 1971).

likely that a local judge would close down desperately needed local industry unless there is clear visible evidence of present damage from discharge.[124] This is most often true with long-standing industries whose treatment facilities only recently became in violation of stricter updated discharge requirements. Such an attitude discourages the taking of preventative action where there is only a possible future danger since the necessary judicial enforcement is unlikely to be forthcoming.

The often claimed inherent problems of localism and conflict of interest are not critical in practice. While there may be a few isolated instances of municipality recalcitrance or local managerial jealousies of interference, the CVRB has not found localism to be very inhibiting problem. In fact, the board feels most local officials are often more qualified and experienced in dealing with their particular local problems. The regional boards don't yet have adequate staffing possessing sufficient expertise to manage each local or coordinated inter-municipality plant.[125] Moreover, it has been felt on the State Board level that even if capable, it would be preferable not to mix regulation with management since enforcement would inevitably be more lax.[126] The problem of coordinating local treatment facilities is no longer considered as great since regional board control of desperately desired grant funds (paying over 80% of construction costs) is more than enough to prevail over local pride and jealousies in most situations.[127]

Similarly, the conflict of interest problem, so vociferously pointed out in the Nader report on California,[128] has not manifested itself on the Central Valley Regional Board level in an affirmative matter. During a one year span involving twelve meetings,[129] and more than 150 motions, the interests specifically signalled out in the Nader report[130] voted against board en-

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[124]Crooks interview, *supra* note 85.

[125]Robertson interview, *supra* note 82. Interview with E. Schroeder, member of the Central Valley Regional Board, October 21, 1971 (hereinafter cited as Schroeder interview).

[126]Robie interview, *supra* note 69.

[127]Robertson interview, *supra* note 85.

[128]NADER, *supra* note 92, at III 62-64.

[129]November 23, 1970 to October 22, 1971.

[130]The board members representing the counties, cities, irrigated agriculture, and industry.

forcement action on less than half a dozen occasions. Criticism of the board system should be directed not at its inherent special interest favoritism, but rather at the fact that the entire board, including both those supposedly biased for and those against water quality control, is acting as little more than a "rubber stamp" of staff recommendations. The non-unanimous adoption of staff recommendations is clearly the exception.[131] This result is probably inevitable in any board which acts on a voluntary, non-salaried basis and is confronted with the problem of peer group pressures at the meetings.

The problems which do trouble the regional board most include: (1) the need to have continuously higher levels of waste treatment to maintain water quality and public health protection in the light of population increases and economic development;[132] (2) the lack of sufficient specific knowledge of all the factors involved when setting discharge requirements so as to assure certainty of effect;[133] (3) the mentioned lack of adequate staffing which affects the totality of regional action or lack of action;[134] (4) the time-consuming effect that the increase of public interest in water pollution has had on board member and staff time;[135] and (5) the related problem that the public's definition of water pollution (usually meaning anything in the water) is different from that defined by California law.[136] The CVRB and much of California is also faced with the specific problem of agricultural pollution which has yet to be thoroughly understood or attacked.[137]

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[131]In the twelve meetings studied there were only eleven "no" votes restricted to six motions.

[132]INTERIM PLAN, *supra* note 76, at V-5.

[133]Robertson interview, *supra* note 82.

[134]CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD, ANNUAL REVIEW 14 (1969-1970) (hereinafter cited as ANNUAL REVIEW).

[135]Crooks interview, *supra* note 85.

[136]Robertson interview, *supra* note 82.

[137]See generally, NADER, *supra* note 92, at III 94-121; INTERIM PLAN, *supra* note 76, at III 6-10; L. D. DONEEN, CONFERENCE ON QUALITY OF WATER FOR IRRIGATION, Univ. of California, Davis, Report No. 10 (1958). The agricultural waste discharge problem is beyond the scope of this article but it should be noted that upon completion of sufficient study it will probably become recognized as one of the state's foremost water quality control priorities.

[138]FINAL REPORT, *supra* note 2, at 35.

V. WORKING TOWARD A SOLUTION TO THE PROBLEMS OF REGIONAL WATER QUALITY CONTROL.

Any system facing such a number of problems will naturally have many available possibilities for improvement. A considerable number of these possibilities overlap and some are even in conflict with each other. The problem facing the regional water board in assessing these possibilities becomes how to apply the most practical solution to its problems as determined by what the law permits, what the public will support, and the capabilities of each respective board.

A. ADMINISTRATIVE REORGANIZATION AND A NEW METHODOLOGICAL ORIENTATION.

The traditionally most urgent need of regional water quality control is manpower adequate to carry on increased surveillance and monitoring programs, and sufficient to make more thorough investigations for the establishment of discharge requirements so as to account for the tremendous increase in the number and complexity of waste discharges taking place throughout the state.[138] With increased manpower, the regional board will be able to monitor more adequately not only the individual treatment plants, but also the receiving waters and the general effect on state water quality.[139] The purpose of such a comprehensive surveillance and monitoring program of water quality is to identify: compliance or non-compliance with water quality criteria; the water quality baselines and trends; improvements in water quality produced by abatement measures undertaken; and emerging water quality problems; in sufficient time to effect adequate preventive measures.[140] Should staff needs not be met, the surveillance program must utilize, to the extent necessary, discharger self-monitoring and data acquisition from other state agencies so as to supplement periodic regional board sampling. The idea of a comprehensive state wide surveillance program encompassing the requirements of all state agencies must be implemented. So far, the need has been recognized by the State Board,[141] while little action has been taken. An in-

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[139] INTERIM PLAN, *supra* note 76, at VII-28.
[140] *Id.* at VII-28.
[141] *Id.* at VII-30.

crease in staff manpower is also a necessary prerequisite to the establishment of fully developed water quality control plans for all the individual watersheds within the region.

Should the needed manpower not be forthcoming, the existing staff must make full use of the new surveillance techniques constantly being discovered. These include new approaches to pesticide water quality monitoring[142] and low altitude aerial surveillance programs conducted by the board staff.[143]

Should self-monitoring prove inadequate, the legislature should re-consider the once-rejected idea[144] of monitoring waste dischargers by the regional boards on a contractual basis with the waste dischargers paying the boards to employ specialists to conduct the monitoring services.

A new methodological orientation requires greater use of the stream quality standards approach. The stream standards approach allows response to changing river conditions through seasonal operation of treatment facilities and seasonal storage of wastes, while permitting different levels of treatment at different locations where the cost of treatment varies.[145] The discharger may have to vary the volume of the pollutants in his effluent according to change in the river's assimilative capacity as measured by a number of characteristics. This approach has been criticized as overly complex, non-self-executing, requiring considerable staff enforcement, and as likely to stabilize a set standard.[146] While it will be seen later that there are more desirable approaches to the problem, California law does permit requirements as to the nature of any discharge, except discharges into community sewer systems, which take into account the conditions existing from time to time in the disposal area or receiving waters upon or into which the discharge is made or proposed.[147]

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[142]STATE WATER RESOURCES CONTROL BOARD, A REVIEW OF PESTICIDE MONITORING PROGRAMS IN CALIFORNIA (1971).

[143]INTERIM PLAN, *supra* note 76, at VII-31; State Water Resources Control Board, Study to Evaluate the Utility of Aerial Surveillance Methods No. 41 (1971).

[144]FINAL REPORT, *supra* note 2, at 18.

[145]ABT ASSOCIATES, *supra* note 8, at 16.

[146]Haskins, *Towards Better Administration of Water Quality Control*, 49 ORE. L. REV. 373, 377 (1969-70) (hereinafter cited as Haskins).

[147]Robie and Hume, *supra* note 41, at 207; CAL. WAT. CODE § 13263(a) (West 1971); Haskins, *supra* note 146, at 380, noted that the stream standards approach is

Aside from increased staff manpower, there are other administrative reorganizational changes that should be made at the board level. The board, as mentioned, does not serve an irreplaceable function in practice. In addition, the category structure of board membership has been continually criticized as inviting conflict of interest. While these charges have yet to be substantiated, they provide an opportunity for the legislature to amend the board structure and its authority. A smaller board has been recommended[148] as being less unwieldly. With such a change, the board could become full-time, salaried, and possess greater expertise so as to supplement, not merely "rubber-stamp" staff proposals. It would probably be advisable to prohibit representation on this smaller board of the interests regulated. Their representation should be in the legislature or by counsel before the agency, rather than within the agency itself. Such a system would keep the regional board small and decrease the possibility of differences among the board due to the representation of interests hostile to regulation.[149]

A proposal has been made by the State Board which would solve part of this problem. That board recommends increasing the authority of the executive officer to issue waste discharge requirements without a board meeting unless one is requested by the waste discharger.[150] Such a proposal recognizes the fact that staff recommendations are generally unanimously adopted by the board, and would be useful in saving time and increasing

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basic to any comprehensive system of water quality control although it involves problems with enforcement since it favors a court oriented system where the board issues and overall plans involving parties other than those before the court cannot be initiated or considered. It will work better where the expert administrative body has greater police power enabling it to proceed according to a larger plan. This, in turn, necessitates statutes requiring the discharger to carry a greater burden of proving his non-violation and, at the same time, which limit court review in recognition of administrative discretion.

[148]Robie interview, *supra* note 69.

[149]MURPHY, *supra* note 89, at 145-146. The author states that experience in Wisconsin has proved that the interests need not be officially represented within the regulating agency board.

[150]Oct. 21, 1971, State Water Resources Control Board, Request for Proposed Departmental Legislation (for 1972 Legislature) to amend § 13223 and § 13263 of the CAL. WAT. CODE (hereinafter cited as Request). Apparently there is opposition to this proposal and it is unlikely to pass.

flexibility that is currently lacking during formal board action.

The regional board should also begin to encourage dischargers to engage in process changes which can drastically lower their waste loads. A process change is merely the reduction of the amount of pollution generated, through different processes for manufacturing the same product.[151]

B. TOWARD A NEW ATTITUDE CONCERNING REGIONAL ENFORCEMENT PRACTICES.

California water quality control law must be more strictly and efficiently enforced where applicable. Since there are manpower limits to what the board can do, it must establish rational priorities for enforcement, while at the same time be careful that any resulting rating system does not incure any "right" to pollute for those lowest on a priority list.[152] In order to show dischargers that the regional boards desire total compliance, there should be cease and desist orders for every violation unless public notice of reasons for refusing to issue same is given. As will be discussed later, the effect of tighter enforcement policies is dependent on immediate Attorney General action against proven violators upon board request. These changes are necessary prerequisites to reaching the ultimate goal of regionwide planning and enforcement as opposed to the time consuming present case-by-case enforcement process. The goal should be to have a voluntary self-monitoring compliance system where individual discharger enforcement action will rarely be necessary since the discharger will realize he will gain more by following the comprehensive regional plan.

Stronger enforcement is most probable when the boards adopt and act upon a policy orientation emphasizing that waste discharges to receiving waters which are intermittent or have a limited dilution capacity, will not be considered permanent solu-

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[151] ABT ASSOCIATES, *supra* note 8, at 69. For example, in pulp manufacturing, the change from sulfite to sulfate pulping will ordinally reduce the waste load. Similar reductions can be gained by product recovery and recycling.

[152] Rating lists have been used by the San Francisco Bay Regional Board but they have experienced difficulties with lack of compliance from dischargers below the top of the enforcement priority list.

[153] INTERIM PLAN, *supra* note 76, at V-2. See the PLAN at V-5 for their specific recommendations regarding discharge limits.

tions; that waste sources and independent treatment facilities are to be consolidated where practical; and that where ever feasible, water quality control systems will provide for eventual maximum wastewater reclamation.[153]

But once again, stronger enforcement will eventually depend on the speed and extent of judicial action, Recognizing this need, the State Board has requested[154] the legislature to amend the water code[155] so that court review procedures will be fully consistent with the basic code section governing the review of administrative actions. It is believed that the impact of this proposal would be to make court proceedings of a shorter duration and save expenses for all parties involved.[156] Aside from this procedural proposal, it is hoped that the Attorney General and the judiciary will soon recognize that water quality control should not be given a secondary priority in California. The only alternative left would be to ask the legislature to amend the law so as to give the boards independent enforcement powers outside the Attorney General's office,[157] an unlikely amendment.[158]

The regional board, even without judicial and legislative support, does have available an approach whose effect probably would be to strengthen the overall enforcement process. This would be to immediately take one major discharger and, after a short warning period, crack down with every enforcement tool at the board's disposal—immediate meetings, a fair hearing, a forthwith compliance cease and desist order with a determined effort to have speedy judicial enforcement and new connection ban if applicable, and a similar effort to collect the six thousand dollar per day fine if the orders are violated.[159] The idea of

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[154]October 21, 1971, the State Water Resources Control Board, Request for Approval of Proposed Departmental Legislation.

[155]Request to amend CAL. WAT. CODE sections 13330 and 13331 to allow court review as provided under the CAL. CODE OF CIV. PROC. § 1094.5 (West 1954).

[156]*Id.* The present Water Code sections authorize the court to consider not only the administrative record, but also any other evidence considered relevant by the court. It then authorizes the court to exercise its independent judgment on the evidence. The result is time consuming consideration by the courts of matters which require specialized expertise and usually are fully delegated to administrative agencies for that purpose.

[157]See also, Contemporary Studies Project, *supra* note 4, at 908.

[158]NADER, *supra* note 92, at III 70. This report argues that there is hidden compromising legislative intent behind the existing law. Under such circumstances, it would be unlikely that the basically same legislature would enact stronger enforcement powers.

[159]*Id.* at III 117.

a major enforcement crack down found support on several administrative[160] levels and would certainly have a greater deterrent effect on violators—especially since there has yet to be a single maximum fine imposed in California. It has been said that however expert the staff personnel, there is an occasional necessity for an external challenge to administrative routine, and that, without such a challenge, an administrative agency seems unable to provide a continuing flow of ideas essential to their progressive development.[161]

C. DIFFERING INSTITUTIONAL TREATMENT OF THE WATER QUALITY CONTROL PROBLEM AVAILABLE TO THE REGIONAL BOARD.

There are other approaches to regional water quality control that have been supported in recent years. Since most are based on a similar policy orientation, they can often be found useful in supplementing existing regional control methods.

First is the idea of effluent charges or taxes as a means to perfect pollution control. Because of imperfections in the market system, those who generate detrimental environmental effects are not required to pay for them and thus may lack any incentive to abate them.[162] To alleviate this, effluent charges or taxes can be placed on firms based on their discharge. The result is to put on the individual waste discharger the responsibility for complicated decisions as to abatement method and speed, while raising revenues which can be available for use in collective facilities.[163] The regional authority will place charges based upon the total damages that a discharger causes downstream users so as to pay the cost of the resources he uses or abuses. This, of course, requires an authority with basinwide jurisdiction and the power to lay such charges. The regional authority could then use the effluent charge as a sanction, e.g., the tax can be adjusted according to toxicity, permanence, and volume of discharge.[164] The problem with this approach, in addition to acquiring such statutory taxing power, involves the high

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[160]Crooks interview, *supra* note 85; Schroeder interview, *supra* note 125.
[161]MURPHY, *supra* note 89, at 148.
[162]J. BRECHER, ENVIRONMENTAL LAW HANDBOOK 95 (1970).
[163]Haskins, *supra* note 146, at 392.
[164]NADER, *supra* note 92, at III 121.

sampling and administrative costs of any charge system sophisticated enough to respond to stream hydrology and other aspects of efficient abatement.[165] It does not offer the advantages of economics of scale, central coordination, efficient operation, and relief for dischargers from the burden of capital expenditures which exist in several other approaches to be discussed.[166]

A second approach, related to the effluent charge idea, is to control water quality by means of a permit system under which permission is required for construction of sewage treatment plants and the act of waste disposal itself. This system can either prohibit discharges altogether or condition permit approval on treatment adequate to protect beneficial water uses. Since the agency must first examine plans, specifications, and other data prior to issuance of the permit, the permit system has the advantage of being more preventative than remedial.[167] The permit may then be modified, suspended, or revoked as a punitive measure for discharger violations. Once again there is a manpower problem. The permit system, to be effective, requires a continual adjustment of allowable discharges based on the condition of the water source, the existence of new users, or new state water plan policies. Part of such problem could be solved by charging permit fees proportionate to the volume and strength of the effluent discharged so that the fees contribute significantly to the financing of the water quality program.[168] Another inhibition appears when the board is faced with using this system to prohibit a discharge from a municipal system or revoke their permit. Enforcement in such a situation is unlikely.

A third source of differing institutional treatment of the water quality problem can be found in other state statutory approaches. In some states, district water management boards serve a supporting function to the state agency.[169] To solve the special

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[165] ABT ASSOCIATES, *supra* note 8, at 14.

[166] *Id.* The State Board is currently undertaking a study of the effluent charge system.

[167] Maloney, *A Model Water Use Act for a Riparian State—The Florida Experience*, CONTEMPORARY DEVELOPMENTS IN WATER LAW, WATER RESOURCES SYMPOSIUM 1, 18 (1970).

[168] Maloney and Ausness, *supra* note 5, at 52; FLA. MODEL WAT. CODE § 5.11.

[169] MINN. STAT. ANN. § 115.18-115.37 (West 1964); N.J. STAT. ANN. § 58:12-7–58:12-40 (West 1966); VA. CODE § 21 (Michie 1960).

problem of municipal pollution, Minnesota has taken a severe approach. When a municipality fails to comply with pollution abatement orders, state legislation[170] authorizes the control agency to assume the powers of administrative officers of the muncipality relating to construction, installation, or operation of treatment facilities. The agency may also compel cooperation between two or more municipalities if such cooperation is determined to be necessary.[171] Rhode Island authorize the agency to order specific alternatives in the polluter's waste disposal or treatment methods.[172] The possibility of court imposed mandatory injunctions ordering municipalities to construct needed sewage disposal facilities is unlikely as the courts are reluctant to intrude on the policy making and legislative functions of cities.[173] Thus, the alternative of placing the city under guidance of a receiver may be the only effective sanction against municipalities and would make voluntary cooperation and negotiation more predictive.[174] It is up to the legislatures to provide such statutory authority currently lacking in California and most other states. Other state proposals include giving the regional authority itself the general authority to seek judicial enforcement of its orders[175] and allowing the board to assess the costs itself or institute a civil suit for damages against the polluter to pay the costs of restoring a water course.[176]

A final approach would be to decrease regional authority while increasing either local or federal control. It is contended that since all sources of water pollution are local in nature, their control is and should be within the jurisdiction of some local unit.[177] Advocates contend that there are significant advantages to enforcement at a local rather than a state level in that the local unit is closer to the immediate problem and frequently more responsive than a state agency; the local unit overcomes the image of a distant state or regional agency; there are short-

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[170]MINN. STAT. ANN. § 115.48 (West 1964).
[171]*Id.* § 115.49.
[172]R.I.GEN. LAWS § 46-12-8 (Bobbs-Merrill 1956); see, Hines, *supra* note 88, at 229.
[173]Symposium, *supra* note 65, at 1078.
[174]*Id.* at 1079. There is little data as to the effect of such an approach as it appears to have been rarely, if ever, invoked.
[175]FLA. MODEL WAT. CODE § 5.14.
[176]*Id.* § 5.15.
[177]Contemporary Studies Project, *supra* note 4, at 806-807.

cuts in bureaucratic processing; and the analysis facilities are local and immediate.[178] These local districts could impose local land use controls which restrict uses with direct or indirect pollution potential through the devices of sanitary codes, subdivision controls, or zoning.[179] But it is unlikely that even the local unit which does all of the above can overcome the inherent problems of localism—local partialities, disputes between local units, and especially, financial limitations. However, there is no reason why the local municipalities could not implement comprehensive industrial waste ordinances in support of regional agency planning.

Similarly, it is too early to conclude that weaknesses of current state pollution abatement efforts require abandonment of the area in favor of a federally conceived and directed program[180] other than in areas involving interstate water basin control. The arguments favoring local control mentioned above work against federal control.

This entire field is too untested as yet to eliminate any particular approach. However, states should study the benefits offered by each for possible adoption of the most helpful into their programs.

D. THE UTILIZATION OF FISCAL INCENTIVES FOR WATER QUALITY CONTROL.

Throughout this article the financing of more efficient pollution facilities has been mentioned as a major stumbling block. This can be partially alleviated through the subsidies approach whereby government subsidies in the form of special tax incentives, grants, and loans are given for pollution abatement investments. The grants are especially effective when dealing with a municipality because, for reasons discussed, shutting down a municipal sewer system is not a realistic alternative. In addition, greater use should be made of special tax incentives to

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[178]Maloney and Ausness, *supra* note 5, at 45; FLA. STAT. ANN. § 403.182 (West Supp. 1971) authorizing the state pollution control agency to create local pollution control agencies which may enact their own water quality standards.

[179]Kusler, *Water Quality Protection for Inland Lakes in Wisconsin: A Comprehensive Approach to Water Pollution*, WISC. L. REV. 35, 47 (1970).

[180]See generally, Hines, *supra* note 88, at 234-235 and Maloney and Ausness, *supra* note 5, at 58, for a discussion of the question of federal control.

industries with their own treatment facilities. It is through control over these financial aids that the regional authority can gain the necessary power to institute their comprehensive and coordinated regional plans.

Thus, in California the five year Clean Water Grant Program is designed to give local governments immediate financial relief and, more important, the lead time necessary to implement sound basinwide coordinated plans and efficient wastewater service pricing and revenue policies.[181] Applicants for state and federal grants for waste treatment facility construction must submit proof of implementation of adequate source control measures and industrial waste ordinances.[182] It is required that industries discharging into public grant sewage systems will provide any pre-treatment necessary to prevent adverse effects on the community waste collection systems, as well as paying for their share of treatment costs.[183] Other possible municipal fiscal incentives are removal of the local government debt limitation for the purpose of constructing municipal treatment facilities and increased use of sewer service charges[184] so as to distribute costs among the producers of waste causing the problem not local property taxpayers.[185]

Industrial waste dischargers, currently ineligible for grant funds, also need substantial financial assistance in order to make the expenditures necessary to meet present and future needs. There are several possibilities.

First is the utilization of tax incentives giving accelerated amortization benefits to industry upon certification by the regional board that facilities conform with approved policies and plans for water quality control and that there is a reasonable assurance that the facilities are, or upon completion will be, in compliance with applicable waste discharge requirements. This tax write-off is available concerning both federal and state

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[181]STATE WATER RESOURCES CONTROL BOARD, REVENUE PROGRAM GUIDELINES FOR WASTEWATER AGENCIES (Aug. 1971).
[182]INTERIM PLAN, *supra* note 76, at V-3.
[183]*Id.* at V-7.
[184]CAL. WAT. CODE § 13606 (West 1971).
[185]FINAL REPORT, *supra* note 2, at 38.

taxes,[186] but has been rarely utilized primarily due to its relatively small impact and lack of knowledge of its existence.[187]

Considerations whether to encourage use of the tax incentive approach must take into account the severe criticism of its extended use: (1) it reduces incentive for a firm to make changes in production equipment or operating processes that would lower waste loads since such programs don't give tax breaks to all general (as opposed to pollution control) investment in new productive capacity which also happens to lower the amount of pollution produced as a side effect; (2) operating expenditures and spending on land, which are important in some abatement techniques, are typically not included in tax incentive plans—thus leading industry to more inefficient control approaches that do offer tax breaks; (3) the tax incentive is not very great in that such incentives usually affect the cost of abatement by only 5-10% of the capital cost of treatment facilities and affect the total cost (including operating costs) much less; (4) the amount of such aid is inflexible and unpredictable and difficult to gauge according to budgetary needs; (5) tax incentives work contrary to the argument that firms shouldn't be relieved of the costs of abatement by tax incentives or other means in that if the firms do not pay these costs, prices of pollution-intensive goods will tend to rise less; and finally, (6) firms, in difficulty, which need assistance most, get no aid if there are not high enough profits to be able to utilize the write-offs to lower their tax liability.[188]

Another fiscal incentive to industry is the possibility of direct industrial grants and use of general loan programs. But, there should be an underlying assumption that industry financed process changes are a preferable means of reducing pollution than mere subsidized construction of larger and larger facilities. Moreover, the grants are currently unavailable and have the disadvantage of decreasing the savings a firm can make by engaging in the aforementioned pollution reducing process changes

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[186]CAL. REV. AND TAX. CODE § 17266 *et seq.*, § 24372 *et seq.* (West 1970); Federal Tax Reform Act of 1969 § 704 (INT. REV. CODE OF 1954, § 169). Both programs provide for a deduction with respect to the amortization of the amortizable basis of any certified pollution control facility based on a 60 month period.

[187]Interview with John Nelsen of the Resources Agency October 26, 1971.

[188]ABT ASSOCIATES, *supra* note 8, at 10-11.

and thus making it less likely that they will engage in such changes.[189] General loans are less likely to reduce incentive to process changes than direct grants or tax breaks, but have the disadvantage of necessitating a very large loan affecting a very high percentage of costs in order to alter firm behavior significantly. The loan program should be limited to firms having great difficulty raising capital for pollution control investments, or to plants which otherwise might close rather than assume the costs of pollution abatement.[190] An advantage should be given to previously existing plants since directives to invest in abatement devices were not known or in existence when they were built. Municipalities should not be given federal or state grants for that portion of their facilities which are intended for the treatment of water from industrial plants since the lower the charges a municipality sets for a firm, the less waste it is economical for the firm to remove itself through process changes, and the more wastes that end up in regional waters.[191]

The problem of industrial pollution is therefore a difficult problem to attack. Limited fiscal incentives should be adopted in proportion to the ability of the industrial polluter to comply and the local need for the particular industry. If an industry can have high abatement costs reflected in the price of their products, they will have strong incentive to adopt process changes.

E. PUBLICITY AND THE UTILITY OF PUBLIC OPINION AS A DEVICE TO CONTROL INDUSTRIAL VIOLATION.

As seen in the preceeding section, the problem of fostering sufficient incentive to industry to improve their waste disposal methods is a very great one. Discretionary use of publicity may intimidate the industrial violator into compliance as industry will go to great lengths to prevent adverse publicity because of the possible ramification of an unfavorable public image—especially if the firm sells to the public consumer. A hostile community atmosphere will also be felt indirectly by the violator's

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[189] *Id.* at 11.
[190] *Id.* at 12.
[191] *Id.*

owners, managers, and employees as residents of the community.[192] The most efficient philosophy of the control agency is control through persuasion. Initially, there should be use of informal conferences to protect the public image of a polluter and to encourage settlement by voluntary means. Should this fail to achieve results, there is no more effective way to assure compliance than by embarassing the polluters with a public recital of the problems they have created for the community.[193] There is a general pattern that most polluters will sign a stipulation to stop before their cases go to final adjudication.[194]

In California, publicity is acknowledged at the State Board level as the best means of enforcing state water quality[195] and effort should be made to harness the present tide of public concern about the environment.[196] There is a tendency for industry to think of pollution as a public relations problem. For example, once they have cleaned up waste discharges an industry usually appeals decisions to the State Board anyway so as to clear their name.[197] At the least, the boards should increase efforts to publish the identities of polluters and properly educate the public about the causes and present distribution of the cost of pollution.

Yet California, on both the state and regional board levels, while paying lip service to the value of publicity has utilized media opportunities far less than is possible.[198] Some argue that it may impede action as once one is publicly accused of polluting, he may not respond to further cooperative approaches believing that the damage to his image has already been done.[199]

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[192]Symposium, *supra* note 65, at 1077.

[193]Hines, *supra* note 88, at 227.

[194]Maloney and Ausness, *supra* note 5, at 54.

[195]J. Webb, interview with Ron Robie, Santa Monica Evening Outlook, June 28, 1971.

[196]See generally, Dolezel and Warren, *Saving San Francisco Bay: A Case Study in Environmental Legislation*, 23 STAN. L. REV. 349 (1971), for the importance of public participation in the campaign to pass the bill which established the Bay Area Control District.

[197]Robie interview, *supra* note 69.

[198]There are available opportunities to publish the names of violators and their compliance progress in newspapers, on television, and in periodicals with greater circulation to the public at large than the present Enforcement Bulletins.

[199]Symposium, *supra* note 65, at 1077.

At the State Board level, there is criticism of the use of publicity because it is better to concentrate on enforcement; it makes it look as if the board is not doing their job; and the use of a ranking system unfairly lets off those violators not high on the list.[200] But the ranking system is not a necessary prerequisite to publicity. There was considerable regional board level reluctance to the use of publicity, probably because it seems in conflict with an approach based on persuasion. But this should be reconsidered and publicity should be timely used to supplement persuasion when the latter does not gain the desired results.

F. THE PRACTICALITY OF THE TOTAL CONSOLIDATION GOAL.

The existence of many sources of waste increases the difficulty and cost of collection, treatment, and disposal. In some instances a small district will insist on continuing to operate and expand its own treatment plant although connection to an efficient regional system may be close at hand.[201] Consolidation and coordination of inter-community waste systems and independent treatment facilities has long been recognized as one of the most important ways to reduce the cost of sewage facilities and at the same time, increase the effectiveness of waste treatment.[202] Clear advantage is gained in that downstream users may be considered and protected in any plan and there is ability to coordinate the activities of an entire river basin depending on the flow of the river. Also, increased efficiency lowers costs and alleviates the burden which construction of treatment plant facilities places on the bonding capacity of cities and the capital raising capacity of industry.[203] But, as mentioned, California does not give the regional board the power to compel consolidation of waste treatment facilities and the board is specifically prohibited by law from ordering the particular manner in which compliance may be made with waste discharge requirements.[204] If the regional board had been granted the authority to issue

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[200]Robie interview, *supra* note 69.
[201]FINAL REPORT, *supra* note 2, at 40.
[202]*Id.* at 39.
[203]Contemporary Studies Project, *supra* note 4, at 928.
[204]CAL. WAT. CODE § 13360 (West 1971).

permits whereby it could dictate the specifications of treatment facilities, a regional system could have been established. But there has been no master plan to replace low-cost small overladen facilities with large, efficient plants to serve wide areas. The result is that "the public has had to pay for the initial facilities, for their expensive (and usually faulty) operation, and finally for the annexation of the area to a larger system, abandoning the initial system."[205] The interests of economy and public health demand the consolidation of treatment facilities. Large plants are more efficient than smaller plants and can be more cheaply operated.[206] Consolidation also reduces the number of sources of waste discharge, decreases the chance of plant failure, is helpful for wastewater reclamation in that large quantities of water are continuously used,[207] attains efficiency by minimizing duplication of service, and improves achievement by sharing information and experience.[208]

What can be done in California is the consolidation of all grant fund projects as a prerequisite to certification. This has been and will continue to be the best means available for attaining a goal almost everyone agrees is a basic necessity to success, but which the legislature has failed to authorize the regional boards to compel.

An extension of this idea is for the regional board to take over existing treatment plants and their debts and finance the latter by charging for sewage treatment. Advantages include: (1) relieving cities and industry of having to raise the capital needed to construct treatment facilities; (2) relieving management of the headache of maintaining their own treatment facilities and complying with water quality standards; (3) cheap-

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[205]W. ZION, ALTERNATIVES FOR THE GOVERNMENTAL ORGANIZATION OF SEWAGE FACILITIES IN THE PLEASANTON-LIVERMORE AREA 11 (1960).

[206]*Id.* at 11; see, Thawen, Jenkins and Howells, *Estimating Sewage Treatment Plant Operation and Maintenance Costs*, JOURNAL OF THE WATER POLLUTION CONTROL FEDERATION 111-121 (1961), which showed that the annual per capita operating cost in a plant serving 1,000 was $2.61, while a plant serving 1,000,000 it was only $0.67. A study made in 1969 by the City of Fort Worth Water Department recounted that cost per million gallons for primary treatment was $225,800 in a 2.5 M.G.P.D. plant and only $109,100 when the plant processed 50 M.G.P.D. (see Jacks, *supra* note 6, at 1301 n.67).

[207]California State Water Resources Control Board, News and Views (Nov. 1970).

[208]ANNUAL REVIEW, *supra* note 134, at 18.

ening treatment costs due to the ability to take advantage of economics of scale and new techniques of river hydrology; (4) ability to manage the river system in an emergency; and (5) use of service charges levied by such consolidated treatment plants to maintain the incentives for a firm to engage in process changes to lower its waste load since lower waste loads would mean lower service charges.[209] However, though logical, such takeover is unlikely due to lack of statutory support, lack of agency willingness,[210] and lack of anything near agency ability at present.

VI. CONCLUSION

The activities, problems, and available improvement possibilities of regional water quality control have been discussed. While there are many problems involved with regionalism, there has not as yet appeared a more viable approach to the problems of water quality. It must be remembered that enforcement of pollution abatement is merely one aspect of the broader problem of water quality control. The regional board system is potentially very adept for managing the more important aspects of water quality—comprehensive planning and an emphasis on the preventative rather than the remedial.

Rob Disharoon

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[209] ABT ASSOCIATES, *supra* note 8, at 13.
[210] Robie interview, *supra* note 69.