EFFLUENT NEIGHBORS: THE MEXICO—UNITED STATES WATER QUALITY DILEMMA

When a river becomes polluted, the contamination is not hindered by political demarcation but destroys the quality of the entire river to the detriment of all riparians and users of the water. The consequences of pollution have recently been recognized by European[1] and American officials[2] as well as by international tribunals[3] and conferences.[4] A solution for the problem, however, has not been generally agreed upon.[5]

The control and regulation of water quality is a major international environmental problem due to water pollution's irreparable nature and large scale effects. Rivers and lakes are the primary source of water for mankind's needs and, regrettably, they constitute only one-hundredth of one percent of the available water on earth.[6] With the increased demands that are being put upon our dwindling water resources, quality and usage controls must be established. The method of such quality control will have to be on the level of an entire river system's drainage basin, rather than on the basis of any political division.

The United States and Mexico share three international drainage basins, the Rio Grande, Colorado, and Tijuana river systems. The Rio Grande and Colorado basins are each divided

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1. S.F. Chronicle, July 30, 1970, at 13, col. 1.

2. *See, e.g.*, National Environmental Policy Act, 42 U.S.C. §§ 4321-47 (1970), *see specifically* § 4332(E).

3. *See* Lake Lanoux Arbitration (France v. Spain), 24 I.L.R. 101 (1957); The Trail Smelter Arbitral Decision (United States v. Canada), 33 AM. J. INT'L L. 182 (1939), 3 INT'L ARB. AWARDS 1905 (1949).

4. *See, e.g.*, United Nations Conference on the Human Environment, Stockholm, June 5-16, 1972; International Conference on Water for Peace, Washington, D.C., May 23-31, 1967; Report of the Fifty-Second Conference (Helsinki 1966) of the Int'l Law Ass'n (1967); Report of the Fifty-First Conference (Tokyo 1964) of the Int'l Law Ass'n (1965); Resolutions Adopted by the Institute of Int'l Law, Salzburg Sess., Sept. 3-12, 1961, reported in 56 AM. J. INT'L L. 737 (1962); Seventh Pan-American Conference on the Industrial and Agricultural Use of Inernational Rivers Held at Montevideo (1934).

5. THE LAW OF INTERNATIONAL DRAINAGE BASINS 11 (A.H. Garretson, R.D. Hayton, C.J. Olmstead ed. 1967).

6. *Id.* at 5.

into an upper and lower section. The three basins cover nearly all of the 1,950 miles of boundary line between the two countries[7] and collectively serve as the sole water supply for the entire Mexican-United States border population.[8] As of yet, there has been little bi-national cooperation in establishing water quality control in these river systems. The only current agreement providing water quality regulation for the three basins on an international scale is the Treaty of 1944[9] which, it shall be shown in this Comment, is inadequate at best.

Recognizing the contemporary problems of international water quality control, this Comment will consider the concepts and principles of international law as they apply to drainage basins. The discussion will then turn to the provisions that the United States and Mexico have made concerning water quality control of the three international drainage basins. A proposed solution to the Mexican-United States water quality dilemma will then be submitted.

I. THE CONCEPT OF POLLUTION

A definition of pollution within the context of international law must be established before pollution control can be discussed. Essentially, pollution lowers the quality or corrupts the natural state of the medium that it enters. The subjective concept of quality makes any definition of pollution difficult to grasp.[10]

The pollution concept as it involves water quality, has been couched in various terms.[11] In international disputes, the pollu-

7. D.H. JORDAN & J. FRIEDKIN, THE INTERNATIONAL BOUNDARY AND WATER COMMISSION, U.S. AND MEXICO part I, paper submitted by the Commissioners of the International Boundary and Water Commission to the Int'l Conference on Water for Peace, Washington, D.C., May 23-31, 1967.

8. *Id.* at part I.

9. Treaty with Mexico on Utilization of Waters of the Colorado and Tijuana Rivers and of the Rio Grande, Feb. 3, 1944, 59 Stat. 1219, T.S. No. 994 (1945) [hereinafter cited as Treaty of 1944].

10. It has been recognized that environmental indicators, much like price indexes that indicate societal values, should be established to determine what level of environmental quality is desired by the general public. With such findings, the appropriate quality standards could be ascertained. *See* 42 U.S.C. § 4332(B) (1970); J. BRECHER & M. NESTLE, ENVIRONMENTAL LAW HANDBOOK 3-49 (1970); U.S. DEPT. OF H.E.W., TOWARD A SOCIAL REPORT *passim* (1969).

11. For example, the Refuse Act of 1899 prohibits any discharge into navigable waters that would impede navigation. 33 U.S.C. § 407 (1970). Water quality has been protected by prohibiting certain kinds of uses as in the *Lake*

tion of a river has been discussed in relation to its effect on the use of the waters by riparians. The pollution regulated by international law is generally that which is the result of an injurious use. The use may cause either a substantial injury to a coriparian[12] or result in a material alteration of the river waters to the extent that they may no longer be utilized beneficially.[13] Thus, by diminishing quality, pollution of water by a non-consumptive use may have the same effect as that resulting from a consumptive use of the water.[14] Traditionally, the rights of coriparians to use an international stream included the right to pollute provided that the polluting use would not harm a coriparian or his use of the waters. A few current domestic laws have broken with tradition by characterizing pollution as an alteration of the nature of the water itself rather than as a use. Such laws as the Mexican Federal Anti-Contamination Law[15] and the United States Federal Water Quality Improvement Act of 1970[16] reflect this new attitude that liability is not based on harm to the riparian but rather on harm to the water.

Lanous Arbitration; for a general discussion of the case, *see* Laylin & Bianchi, *The Role of Adjudication in International River Disputes: The Lake Lanoux Case*, 53 AM. J. INT'L L. 30 (1959). For water quality control by prohibiting uses, *see also* Griffin, *The Use of Waters of International Drainage Basins Under Customary International Law*, 53 AM. J. INT'L L. 50 (1959); Shapiro-Libai, *Development of International River Basins: Regulation of Riparian Competition, Part I*, 45 IND. L. J. 20 (1969). Recently, water quality has been protected by legislation prohibiting any act that may change or lower the quality of the water either directly or indirectly, and not necessarily in terms of use of the water. *See* Federal Law for the Prevention and Control of Contamination of the Environment, art. 4, D.O., Mar. 23, 1971 [hereinafter cited as MEXICAN ANTI-CONTAMINATION LAW]; Water Quality Improvement Act of 1970, 33 U.S.C. §§ 1151-75 (1970) [hereinafter cited as WQIA].

12. *See, e.g.*, Lake Lanoux Arbitration, 24 I.L.R. 101 (1957); INT'L LAW ASS'N, HELSINKI RULES ON THE USES OF THE WATERS OF INTERNATIONAL RIVERS art. X (1967) [hereinafter cited as HELSINKI RULES]; also to be found with I.L.A. comments in THE LAW OF INTERNATIONAL DRAINAGE BASINS, *supra* note 5, at 780.

13. *See, e.g.*, The Trail Smelter Arbitral Decision, 33 AM. J. INT'L L. 182 (1939), 3 INT'L ARB. AWARDS 1905 (1949); Van Alstyne, *The Justiciability of International River Disputes: A Study in the Case Method*, 1964 DUKE L.J. 307, 314.

14. THE LAW OF INTERNATIONAL DRAINAGE BASINS, *supra* note 5, at 11, 17.

15. In Article 3 of the Mexican Anti-Contamination Law, D.O., Mar. 23, 1971, what is proposed to be controlled are "contaminants . . . which directly or indirectly are capable of producing contamination or degradation of ecological systems."

16. 33 U.S.C. §§ 1151-75 (1970).

II. RIGHTS AND OBLIGATIONS OF CORIPARIANS IN AN INTERNATIONAL DRAINAGE BASIN

A. The Basin Approach

To aid in the analysis, a foundation must be established upon which to apply the international principles of coriparian rights. Some authorities feel that the drainage basin approach is the strongest,[17] while others have determined that such an approach is no longer realistic.[18] The Helsinki Conference of the International Law Association in 1967, defined an international drainage basin as, "a geographical area extending over two or more states determined by the watershed limits of the system of waters, including surface and underground waters, flowing into a common terminus."[19]

A few authorities consider the determination of rights and obligations of coriparians on a strictly geographical basis unrealistic.[20] They maintain that such human factors as technology, economics, and politics play overpowering roles in determining the uses allowable in a given river system.[21] However, it is submitted that the more realistic and just determination of rights and obligations in a drainage basin is founded upon geographical factors. As the Helsinki Rules point out, to attain the most efficient use of international waters, the entire basin must be considered regardless of "human realities."[22] Water pollution and the environment are not restricted by political boundaries or other human variables; therefore, the primary consideration in

17. Report of the Fifty-Second Conference (Helsinki 1966) of the Int'l Law Ass'n 484-5 (1967); Shapiro-Libai, *supra* note 11, at 23; and *see* H.A. SMITH, THE ECONOMIC USE OF INTERNATIONAL RIVERS (1931). For a listing of other authorities supporting the unity of a river basin principle, see Bourne, *The Development of International Resources: The "Drainage Basin Approach"*, 47 CAN. B. REV. 62, 63 n.3 (1969).

18. Nebraska v. Wyoming, 298 U.S. 573 (1945); Lake Lanoux Arbitration, 24 I.L.R. 101, 124-5 (1957); S. REP. NO. 25, 90th Cong., 1st Sess. 2 (1967); Bourne, *supra* note 17, at 71.

19. HELSINKI RULES, *supra* note 12, art. II; for authority citing the *Helsinki* definition, as generally accepted, *see* THE LAW OF INTERNATIONAL DRAINAGE BASINS, *supra* note 5, at 4.

20. *See, e.g.*, note 18 *supra.*

21. In support of this view the tribunal in the *Lake Lanoux Arbitration* points out, ". . . the unity of a basin is sanctioned at the juridical level only to the extent that it corresponds to human reality." Lake Lanoux Arbitration, 24 I.L.R. 101, 125 (1957).

22. HELSINKI RULES, *supra* note 12, arts. II, V; and *see, e.g.*, note 17 *supra.*

the formulation of effective water usage laws must be geographical factors. The injury involved in pollution of a water supply will initially affect those within the basin. Thus, limitation by political demarcation of the area to which water usage principles may apply is both economically and environmentally unrealistic. The human realities point of view is a valid position in that such human variables as technology must be considered.[23] The overall effect of human and natural realities, however, is most strongly felt within the basin as a geographical area.[24] It is logical, then, to evaluate the human factors only after the natural realities of the basin as a unit have been considered.

B. The Principle to be Applied

Having established that effective international principles regarding water usage must be applied on a drainage basin level, a determination of the principles themselves must follow. Some writers deny the existence of a body of international legal principles upon which a tribunal may base its findings in a dispute involving an international drainage basin.[25] Others have ascertained that specific principles are applicable and that one concept has become predominant.[26]

Jerome Lipper, in *The Law of International Drainage Basins*, cites four basic legal concepts concerning the use of international drainage basins.[27] All of the principles are based on vary-

23. Bourne, *supra* note 17, at 71-83. For discussions of the technological aspects of inter-basin transfers of water, *see Hearings on H.R. 4671 and Similar Bills Before the Subcommittee on Irrigation and Reclamation of the House Committee on Interior and Insular Affairs*, 89th Cong., 1st Sess., ser. 89-17, pt. 2 (1966).

24. *See, e.g.*, International Commission of the River Oder Case, [1929] P.C.I.J., ser. A, No. 23 at 27; HELSINKI RULES, *supra* note 12, art. V; Resolutions Adopted by the Institute of Int'l Law, Salzburg Sess., Sept. 3-12, 1961, art. 2, reported in 56 AM. J. INT'L L. 737 (1962); J. BRECHER & M. NESTLE, *supra* note 10, at 3-11; H. SMITH, THE ECONOMIC USE OF INTERNATIONAL RIVERS 150 (1931); Roberts, *River Basin Authorities: A National Solution to Water Pollution*, 83 HARV. L. REV. 1527, 1544 (1970); Shapiro-Libai, *Development of International River Basins: Regulation of Riparian Competition, Part II*, 45 IND. L. J. 195, 252 (1970).

25. *See* F. BERBER, RIVERS IN INTERNATIONAL LAW 263 (1959); Smith, *The Waters of the Jordan: A Problem of International Water Control*, 25 INT'L AFF. 415, 420 (1949); Shapiro-Libai, *supra* note 24, at 249.

26. THE LAW OF INTERNATIONAL DRAINAGE BASINS, *supra* note 5, at 17. For citations to authorities supporting the principle of equitable utilization, see Van Alstyne, *supra* note 13, at 337 n.110.

27. The four concepts are: (1) Territorial integrity, (2) Absolute territorial sovereignty, (3) Community of coriparian states in the waters of an interna-

ing degrees of sovereignty which limit the rights of another nation to share the water as a resource. The principle under which the highest degree of sovereignty is maintained extends a right to the riparian to use waters to any extent but denies him the right to demand flow from upstream.[28] This principle was embraced by the Harmon Doctrine,[29] which has been used by both Mexico and the United States since 1895 to impede the rights of the other in use of the Rio Grande and Colorado rivers.[30] However, such a doctrine of absolute territorial sovereignty in the use of international waters has been all but abandoned.[31]

The current weight of authority apparently considers limited sovereignty (equitable utilization) the predominant use doctrine with respect to both contiguous and successive international rivers.[32] The principle has found support in the holdings of the *Lake Lanoux Arbitration*,[33] *Trail Smelter Arbitration*,[34] and *International Commission of the River Oder Case*.[35] Several writers have upheld its applicability[36] and numerous international conventions have endorsed its use.[37]

The overriding objective of the equitable utilization principle is to determine water usage rights that provide for the maxi-

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tional river and (4) Limited territorial sovereignty. THE LAW OF INTERNATIONAL DRAINAGE BASINS, *supra* note 5, at 18.

28. *Id.*

29. *Id.* at 20. For a brief historical sketch of the Harmon Doctrine, *see* N. HUNDLEY, DIVIDING THE WATERS 23 (1966).

30. Convention Between the United States and Mexico, May 21, 1906, 34 Stat. 2953, T.S. No. 455 (1907); Treaty of 1944, Feb. 3, 1944, 59 Stat. 1219, T.S. No. 994 (1945); N. HUNDLEY, *supra* note 29, at 39-40, 63-4; Press Release, U.S. Dep't of State, Dec. 21, 1961; News Release, U.S. Dep't of Int., Dec. 19, 1961, Jan. 24, 1962. The Treaty of 1944 is cited here because the U.S. maintains that the Treaty was negotiated and completed on the basis of comity and acknowledges no legal claims of Mexico.

31. Testimony of B.M. English, Ass't Legal Advisor of the Dept. of State in *Hearings Before Committee on Foreign Relations on Treaty With Mexico Relating to Utilization of Waters of Certain Rivers*, 79th Cong., 1st Sess., at 175 (1945) [hereinafter cited as *Treaty Hearings*]; THE LAW OF INTERNATIONAL DRAINAGE BASINS, *supra* note 5, at 35, 76 n.89, and 96.

32. THE LAW OF INTERNATIONAL DRAINAGE BASINS, *supra* note 5, at 63, 94; and, *see* note 26 *supra*. The equitable utilization principle has historically been known by the maxim: *sic utere tuo ut non alienum laedus*.

33. 24 I.L.R. 101 (1957).

34. 33 AM. J. INT'L L. 182 (1939), 3 INT'L ARB. AWARDS 1905 (1949).

35. International Commission of the River Oder Case, [1929] P.C.I.J., ser. A, No. 23 at 27.

36. *Supra* note 26.

37. *See, e.g.*, note 4 *supra*.

mum benefit and minimum detriment to each riparian in an international drainage basin.[38] Such a determination requires analysis of specific factors. Each riparian's need, based on social and economic factors, is the basic element of the principle.[39] Authorites differ as to the influence prior appropriation and existing use should have on the determination of riparian rights. It is apparent, however, that both elements have no more consequence than any other "relevant and pertinent circumstances" used to determine an equitable utilization of river waters.[40]

To analyze a pollution problem in terms of equitable utilization it is necessary to evaluate any water usage causing substantial injury to a coriparian's use of river water in light of all the riparians' needs. Such needs must be determined by social and economic factors, the riparians' prior appropriations, existing uses, and any other relevant circumstances. A coriparian's harmful use of the water will have to be restricted if the need of an injured riparian outweighs the coriparian's need of the harmful (polluting) use. Such restrictions would allow water usage for the maximum benefit and to the minimum detriment of all riparians.

C. Application of the Equitable Utilization Principle

The principle of equitable utilization may be applied on either an administrative or an adjudicative level. The level on which water quality control would be most effective is questionable.

Adjudication of an international river dispute is the last institutional step in solving a water quality problem. Some writers feel that tribunals lack the expertise to solve highly technical water disputes.[41] Additionally, to obtain an adjudicative determination of a water usage dispute, an injury must have occurred.[42] Considering the objective of water quality control and the lasting nature of pollution in a stream, this after the fact

38. THE LAW OF INTERNATIONAL DRAINAGE BASINS, *supra* note 5, at 48; *see* Colorado v. Kansas, 320 U.S. 383 (1943); Kansas v. Colorado, 206 U.S. 46 (1907).

39. *See, e.g.*, HELSINKI RULES, *supra* note 12, art. V; Resolutions Adopted by the Institute of Int'l Law, Salzburg Sess., *supra* note 4, art. 3; Shapiro-Libai, *supra* note 11, at 63.

40. THE LAW OF INTERNATIONAL DRAINAGE BASINS, *supra* note 5, at 39, 64-5.

41. *Id.* at 109; Shapiro-Libai, *supra* note 24, at 214.

42. THE LAW OF INTERNATIONAL DRAINAGE BASINS, *supra* note 5, at 102, 109, 113.

method is self defeating. The use of injunctive relief by a tribunal, however, would prohibit a harmful use by one riparian prior to any detrimental effect that may be suffered by a coriparian.[43] The possibility of the controversy evolving into a question of rights based on legal principles must also be recognized, and a tribunal of last resort in that case would assert the most influence.[44] The agreement to use a third party to settle water disputes has one other benefit; it tends to induce reconciliation when a problem arises and provides for more understanding in negotiating sessions.[45]

The most effective means of promulgating regulations for international drainage basin water quality would be on the administrative level. As the Helsinki Rules point out, future uses of an international drainage basin can be determined by joint agencies which have surveyed the basin and can "formulate plans or recommendations for the fullest and most efficient use thereof in the interests of all basin states."[46] Future uses can be considered at the adminstrative level in determining development of the basin, based on equitable utilization; while at the judicial level the principle prohibits such consideration.[47]

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43. *See* Trail Smelter Arbitral Decision, 33 AM. J. INT'L L. 182 (1939), 3 INT'L ARB. AWARDS 1905 (1949); THE LAW OF INTERNATIONAL DRAINAGE BASINS, *supra* note 5, at 114.

44. *See* Treaty with Great Britain, Jan. 11, 1909, art. X, 36 Stat. 2448, T.S. No. 548 (1910); HELSINKI RULES, *supra* note 12, art. XXXIV.

45. Laylin & Bianchi, *supra* note 11, at 34.

In a Dep't of State memorandum drawn up by W.L. Griffin in 1958, the use of a third party to settle international river disputes was developed. He maintained that if a riparian, in good faith, objected to a coriparian's use and agreed to submit the dispute to arbitration of judicial settlement as provided for in Article 33(1) of the Charter of the United Nations, then the coriparian "is under a duty to refrain from making, or allowing, such change in the existing regime of a system of international waters, pending agreement or other solution." W. GRIFFIN, LEGAL ASPECTS OF THE USE OF SYSTEMS OF INTERNATIONAL WATERS, S. Doc. No. 118, 85th Cong., 2nd Sess., 90-91 (1958).

46. HELSINKI RULES, *supra* note 12, art. XXXI; and, *see* H.A. SMITH, *supra* note 17; Int'l Law Ass'n Committee on the Uses of Waters of International Rivers, Report Submitted to the Fifty-First Conference (Tokyo 1964) of the Int'l Law Ass'n at 31 (1965).

47. *See* Arizona v. California, Special Master's Report, at 321, filed Jan. 16, 1961, 364 U.S. 940; Arizona v. California, 283 U.S 423, 463-64 (1931).

When considering unreasonableness of protecting future uses it must be remembered that, ". . . there might be changes in the volume of available water, the needs of riparians, the nature of the uses, or advances in technology, all before the future use comes into being." THE LAW OF INTERNATIONAL DRAINAGE BASINS, *supra* note 5, at 59.

The effective application of equitable utilization, therefore, must be accomplished by an intergovernmental commision operating on both the administrative and judicial levels. Such a commission would provide for both development of the basin and adjustment of riparian conflicts based on the principle.[48] However, to provide for such a commission, each country would have to relinquish some sovereignty over that portion of the basin lying within its territorial boundaries. This prospect would seem to be repulsive to most sovereigns. Preservation of sovereignty and denial of the equitable utilization principle might be justified if a riparian country were never affected by coriparian pollution. Few nations, however, occupy such an advantageous position. States that share international drainage basins can be either lower riparians or neighbors on contiguous rivers and be susceptible to coriparian pollution. Thus, in order to avoid inconsistency and international embarrassment, a country, sharing an international drainage basin and claiming applicability of the equitable utilization principle when its water usage rights are infringed upon by a coriparian, will have to abide by the principle when a claim is levied against it for violation of riparian rights.[49]

III. MEXICAN-UNITED STATES WATER QUALITY PROVISIONS

A. 1944 Utilization of Waters Treaty— United States and Mexico

The early development of nationalistic principles governing the use of the Rio Grande and Colorado rivers can be attributed to the lack of any comprehensive international water laws during the late 1800's.[50] The respective official positions taken by the United States and Mexico concerning their water rights in the border area were obviously influenced by the climate and the territorial control of the upper Rio Grande and Colorado river

48. *See* THE LAW OF INTERNATIONAL DRAINAGE BASINS, *supra* note 5, at 110; Shapiro-Libai, *supra* note 25, at 252.

49. For example, the U.S., as upper riparian, has ignored the application of the equitable utilization principle to Mexico's water rights as indicated in the 1906 and 1944 treaties, but as lower riparian to Canada, the U.S. has supported the principle's application to its own water rights in the Columbia River controversy. Delineation of the respective U.S. and Canadian views on the Columbia River controversy may be found in Johnson, *The Canada-United States Controversy over the Columbia River*, 41 WASH. L. REV. 676 (1966).

50. N. HUNDLEY, *supra* note 29, at 18; THE LAW OF INTERNATIONAL DRAINAGE BASINS, *supra* note 5, at 22, 94.

basins by the United States. Thus, until 1913, the Mexicans based their claim on the doctrine of prior appropriation due to their heritage in the area, while the United States considered the Harmon Doctrine the controlling mandate.[51] In 1906 the United States and Mexico drafted a convention allocating the upper Rio Grande waters based on existing uses.[52] The United States maintained that the Convention had no effect on water rights between the two nations since it was founded upon comity.[53] From 1913 to the early 1920's the internal strife of Mexico allowed the United States to control the development of the Colorado basin.[54] The Mexican development of uses in the Mexicali Valley during the late 1920's and 1930's prompted the Colorado Basin Conference of 1938, which represented an attempt by the Colorado basin states to determine some fixed allocation of the river waters before Mexico developed further uses.[55] Such factors as the basin states pressing for a fixed allocation, the Texans calling for a treaty to protect their rights to the lower Rio Grande waters,[56] the need to maintain harmonious hemispheric relations due to developments in Europe,[57] and the desire of the Mexicans for a guaranteed portion of the Colorado River waters,[58] forced the creation of the Treaty of 1944. The Treaty is based on then existing uses and provides for an International Boundary and Water Commission, flood control and water conservation works to be built on the Rio Grande and Colorado rivers, and specific annual allocations of waters, the extent of which determine each country's rights to use of the waters.[59]

The use of each river basin is individually provided for in the Treaty. It is significant that in article 16, which deals with the development of a distribution plan for the Tijuana River

51. N. HUNDLEY, *supra* note 29, at 40. It is interesting to note that the argument used by Mexico concerning the lower Rio Grande was based on the Harmon Doctrine, as most of the tributaries to that section of the river were in Mexico. Mexico later used its control of the lower Rio Grande to push U.S. recognition of Mexican rights to Colorado River water. *Id.* at 40, 94.

52. Convention Between the United States and Mexico, May 21, 1906, 34 Stat. 2953, T.S. No. 455 (1907).

53. *Id.*; N. HUNDLEY, *supra* note 29, at 66.

54. N. HUNDLEY, *supra* note 29, at 54.

55. *Id.* at 87.

56. *Id.* at 94.

57. *Id.* at 100.

58. S. Doc. No. 98, 79th Cong., 1st Sess., at 17 (1945); El Universal (Mexico, D.F.), Aug. 1, 1945.

59. Treaty of 1944, Feb. 3, 1944, 59 Stat. 1219, T.S. No. 994 (1945).

waters, the essence of equitable utilization is apparent. As a possible explanation, the protection of existing uses might have been eased in the article due to the fact that the United States is a lower riparian on the Tijuana River and, at the time of the Treaty negotiation, no influential existing uses were established on either side of the border. The provisions determining the rights of each country to Rio Grande waters (a contiguous river)[60] are more specific as existing uses were established at the time of the treaty negotiations. In article 9, relating to Rio Grande water utilization, the concept of noninjurious use of river water appears.[61] When the provisions for the use of the Colorado River were established, no provisions for distribution based on need, or for prevention of harmful utilization of the waters by a coriparian were made.[62] Thus, as the United States territorial dominance of each international river grew, so did its water usage rights under the Treaty. After such an appraisal, the veiled presence of the Harmon Doctrine in the Treaty of 1944 becomes apparent.

One of the major reasons for the United States Senate's ratification of the Treaty was its fear of arbitration under the 1929 Inter-American Arbitration Agreement. Due to the recognition of equitable utilization instead of the Harmon Doctrine, larger allocations of water for Mexico's use would have been the probable result of an arbitral award.[63] Mexico, on the other hand, would not have ratified the Treaty had it realized how the United States was going to interpret the words "from any and all sources"[64] or "wherever these waters may arise in the bed of the limitrophe section of the Colorado River"[65] in terms of water quality. These words were chosen to allow United States credit for return flow in calculating water delivery of Colorado River waters to Mexico.[66]

The United States has taken the position that the Treaty never provided for the quality of the water to be delivered to

60. *Id.* art. 4.
61. *Id.* art. 9.
62. *Id.* art. 10.
63. Laylin & Bianchi, *supra* note 11, at 39-41.
64. Treaty of 1944, Feb. 3, 1944, art. 10, 59 Stat. 1219 T.S. No. 994 (1945).
65. *Id.* art. 11.
66. S. Doc. No. 98, 79th Cong., 1st Sess., at 17 (1945).

Mexico.[67] The negotiators of the Treaty for Mexico were under the impression that the waters delivered to Mexico would be useable based on the uses delineated in article 3 of the Treaty.[68] As the Mexican Foreign Ministry stated:

> The Treaty, according to its text and spirit was concluded to arrive at the distribution, for beneficial uses, of international waters, among which the agricultural one is outstanding, which excludes definitively the possibility that waters of bad quality may be delivered to us.[69]

Superficially, the Treaty of 1944 was based on existing use and comity while its substance indirectly maintained application of the Harmon Doctrine. The Treaty in its contemporary application, therefore, is economically, socially, and environmentally inadequate, as well as violative of the equitable utilization principle of international water usage law.

The provisions for water quality control established under the auspices of the 1944 Treaty must be analyzed to fully understand the water quality dilemma involving the U.S. and Mexico. It is important to realize that the Treaty is the only existing vehicle through which either country may take any effective international action to regulate the quality of the Rio Grande, Colorado, or Tijuana rivers. All other water quality provisions affecting the international waters are promulgated and enforced on a domestic level thereby allowing the establishment of conflicting

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67. 3 WHITEMAN, DIGEST OF INT'L LAW 962-64 (1964); Press Release, U.S. Dep't of State, Dec. 21, 1961; News Release, U.S. Dep't of Int., Dec. 19, 1961, Jan. 24, 1962; *Treaty Hearings*, Tipton testimony, *supra* note 31, at 230.

68. The uses of the water are listed in order of preference:

1. Domestic and municipal uses.
2. Agriculture and stock-raising.
3. Electric power.
4. Other industrial uses.
5. Navigation.
6. Fishing and hunting.
7. Any other beneficial uses which may be determined by the Comission.

All the foregoing uses shall be subject to any sanitary measures or works which may be mutually agreed upon by the two governments, which hereby agree to give preferential attention to the solution of all border sanitation problems.

Treaty of 1944, Feb. 3, 1944, art. 3, 59 Stat. 1219, T.S. No. 994 (1945); and, *see* Adolfo Orive Alba's testimony in front of the Mexican Senate as printed in the Mexico City newspaper El Universal, Aug. 1, 1945, translation thereof in S. Doc. No. 98, 79th Cong., 1st Sess., at 16-17 (1945).

69. SECRETARIA DE RELACIONES EXTERIORES, EL TRATADO DE AGUAS INTERNACIONALES CELEBRADO ENTRE MEXICO Y LOS ESTADOS UNIDOS EL 3 DE FEBRERO DE 1944, OFICINA DE LIMITES Y AGUAS INTERNACIONALES, at 81 (1947).

standards, as well as economic and administrative inefficiencies which result in a lack of effective pollution control. The Treaty simply provides for the International Boundary and Water Commission (IBWC) to consider sanitary measures mutually agreed upon by the two governments.[70] Article 3 of the Treaty indicates that the two governments will give "preferential attention to the solution of all border sanitation problems."[71] Such nebulous provisions, combined with the delivery statements of articles 10 and 11, indicate the limited scope of this archaic utilization treaty. Its provisions deal ineffectively with the quality regulation of the water to be shared by the two countries, thereby proximately ignoring the water's use.[72] As pointed out earlier, while pollution may not be a use itself, it can diminish and ultimately stop the use of a river. Such "consumptive use" of the river by pollution is not considered by the Treaty.[73]

The International Boundary and Water Commission is the only intergovernmental agency involved with water quality control of the Rio Grande, Colorado, and Tijuana rivers. The Commission consists of two sections, one from each country, the head of each section being an "Engineer Commissioner."[74] As indicated by the Treaty, the basic concern of this bi-national agency involves the construction of flood control, water and sewage treatment works.[75] The Commission's function, in many respects, appears to be that of an international Army Corps of Engineers. The Commission has determined its functions as being

> limited to acts needed for coordination of the two Governments plans for works along the boundary to safeguard their respective rights, and to enable each to obtain benefits that could not be achieved by unilateral action. The purpose of this general principle is to protect each Government's sovereignty and freedom of action in the utilization of waters, both of its basins draining into the international rivers and those from the mainstreams allocated to it by treaties.[76]

This statement summarizes the effect the Commission has on the control of water quality in the international rivers. In its analy-

70. Treaty of 1944, Feb. 3, 1944, art. 3, 59 Stat. 1219, T.S. No. 994 (1945).
71. *Id.*
72. *Id.* arts. 20, 23, 24.
73. *Id.* art. 1(j).
74. *Id.* art. 2.
75. *Id.* arts. 5, 6, 7; D.H. JORDAN & J. FRIEDKIN, *supra* note 7, parts III, IV.
76. D.H. JORDAN & J. FRIEDKIN, *supra* note 7, part I.

sis and approach to problems the agency follows the equitable utilization principle.[77] However, the actual implementation and impact of its projects are limited by the protection of sovereign interests perpetuated by the 1944 Treaty.[78] Article 2 and subsection (d) of article 24 exemplify the maintenance of sovereign interests by providing that agreements or settlement of disputes between the two countries by the Commission are subject to the approval of the two governments.[79]

B. Domestic Water Quality Provisions

1. United States.—There are essentially three federal statutes now in force in the United States which influence the water quality of the Rio Grande, Colorado, and Tijuana rivers. The Water Quality Improvement Act of 1970 (WQIA)[80] and the Refuse Act of 1899[81] deal with water quality specifically, while the National Environmental Policy Act (NEPA)[82] indirectly influences water quality through regulation of federal agencies.

Section 1151 (a) of the WQIA gives one reason for the Act's existence, that being "to enhance the quality and value of our water resources and to establish a national policy for the prevention, control, and abatement of water pollution."[83] The Act, in essence, provides for the establishment of individual state water quality standards applicable to interstate waters flowing through or bordering the state.[84] The standards are generally

77. *Id.* parts II, V.

78. *See, e.g.*, Treaty of 1944, Feb. 3, 1944, arts. 5, 10, 59 Stat. 1219, T.S. No. 994 (1945).

79. *Id.* arts. 2, 24(d); *see also* San Lorenzo Title and Improvement Co. v. City Mortgage Co., Tex. Civ. App., 48 S.W.2d 310 (1932), and San Lorenzo Title and Improvement Co. v. Clardy, Tex. Civ. App., 48 S.W.2d 315 (1932), in which the courts defined the IBWC as having the power to make only finding of fact; and note the opinion of counsel for the U.S. Section of the IBWC in 1957:

> " 'there is no power conferred by treaty upon either of its IBWC Sections or upon the joint Commission to determine relative or correlative rights as between claimants in the respective countries to the allocations of water between the two countries made by treaty. Such powers could not be conferred except to a judicial tribunal, which the Commission is not.' "

3 WHITEMAN, *supra* note 67, at 977.

80. 33 U.S.C. §§ 1151-75 (1970).

81. *Id.* § 407.

82. 42 U.S.C. §§ 4321-47 (1970).

83. 33 U.S.C. § 1151(a) (1970).

84. *Id.* § 1160.

intended to protect health and welfare, enhance the quality of the water, and preserve the water's use for public water supplies, propagation of wildlife, recreational, industrial, agricultural, and other legitimate purposes.[85]

Section 1160 (d)(2) of WQIA provides for enforcement measures against pollution when an international claim is pressed. Under this section, an international agency (i.e. IBWC) must submit any claim to the Secretary of the Interior who determines if the pollution "endangers the health and welfare of persons in a foreign country." He may not, however, begin proceedings until the Secretary of State requests that such pollution be abated. If the Secretary of the Interior feels the harm is substantial, a conference is convened. The country that is adversely affected by the pollution is given the advisory status, during the conference, of a state water pollution control agency.[86] If, after the conference is held, abatement is not forthcoming, then a public hearing may follow,[87] and eventually a federal court may hear the case.[88]

The Refuse Act of 1899 prohibits any discharge by an on shore facility of refuse matter other than rain and natural runoff from streets and sewers into any navigable waters or tributaries thereof in the United States.[89] The responsibility for prosecution when a provision of the Act is violated is upon the United States Attorney's Office, when requested to do so by the proper authority.[90] A guilty offender is subject to a fine of $500 to $2,500 for each offense.[91] Section 407 requires anyone wishing to discharge wastes directly into navigable waters of the United States to obtain a permit from the Army Corps of Engineers.

The major provision of the National Environmental Policy Act is found in Section 4332.[92] This Section requires that an

85. *Id.* §§ 1153(c)(2), 1160(c)(3).

86. The right of a foreign country to bring the proceedings against a polluter in the U.S., it should be noted, is reciprocal under 33 U.S.C. § 1160 (1970).

87. 33 U.S.C. § 1160(d)(2) (1970).

88. *Id.* § 1160(g).

The courts, in determining the outcome of the alleged violation, are ordered by the statute to give "due consideration to the practicability, and to the physical and economic feasibility of complying with the standards. . . ." 33 U.S.C. § 1160(c)(5) (1970).

89. *Id.* § 407.

90. *Id.* § 413.

91. *Id.* § 411.

92. 42 U.S.C. §§ 4321-47 (1970).

environmental impact statement be attached to any proposal for federal legislation or action by a federal agency, such as the U.S. Section of the IBWC, which might have a significant effect on the environment.

Although these domestic provisions for water quality may be comprehensive, any significant international application is questionable. The WQIA is presently subject to application by the individual states and is dependent upon state action and funding. It is apparent, however, that reliance on state programs is insufficient and that the federal government must establish standards and utilize its own funds if there is to be a viable international drainage basin water quality program.[93] The WQIA enforcement procedure is exceedingly long and involved, as well as having force only after the harm has been done. The harm itself must be drastic, and the sanctions of the Act do nothing to protect a foreign country's beneficial utilization of river waters. Domestically, the Refuse Act has been inadequately enforced and used only as a supplement to the WQIA.[94] The guidelines for what must be included in an environmental impact statement under the NEPA are still vague. Furthermore, although threats to water quality may be pointed out by the environmental impact statements, no effective device is provided in the Act to prohibit the probable threats to the environment. The impact statement merely serves as a medium through which environmentalists and qualified governmental agencies may convey their opinions of proposed governmental projects in light of environmental considerations.

2. Mexico.—The predominant federal law of Mexico influencing the water quality of the Rio Grande, Colorado, and Tijuana rivers is entitled "Federal Law for the Prevention and

93. *See* C.E.Q., ANN. REP. 44 (1970); J. BRECHER & M. NESTLE, *supra* note 10, at 56; Long, *New Tasks for All Levels of Government*, ENVIRONMENTAL QUALITY IN A GROWING ECONOMY 145 (Jarrett ed. 1966); and note statement by W. Ruckelshaus, administrator of the Environmental Protection Agency [EPA], looking for a future merging of state and federal water quality control programs. BNA, ENVIRON. REP., CURRENT DEVELOPMENTS (July 2, 1971) at 253.

94. *See* J. BRECHER & M. NESTLE, *supra* note 10, at 227-8; and statement by J.R. Quales, Jr., EPA assistant administrator for enforcement, pointing out the overlap between the standards established under WQIA and the Refuse Act of 1899 thereby making the enforcement of the older act and its permit program extremely difficult. BNA, ENVIRON. REP., CURRENT DEVELOPMENTS (June 4, 1971) at 120.

Control of Contamination of the Environment."[95] The Law was put in force on March 23, 1971, and its provisions are more stringent than any current domestic pollution legislation in the United States.

Article 1 sets out the legislative purpose, that being to improve, conserve, and restore the environment. Generally, the Law prohibits any contamination which would "prejudice or disturb the life, health and well-being of man, flora and fauna, or which degrades the quality of the air, water and soil, or property of the resources of the nation in general or of individuals."[96] Application is based on the Federal Executive power which, in article 9, distinctly refers to the effective application of the various provisions.

Chapter Three of the Law specifically deals with water quality control. Within Chapter Three, article 14 provides for federal quality standards applicable to discharges into river basins and other bodies of water. Article 16 provides that works under construction or those in operation will be interdicted if the discharge of waste waters "might cause contamination." Determination of interdiction is to be made by the Secretariat of Hydraulic Resources and Secretariat of Health and Assistance. Article 17 establishes a permit system in which all applications to discharge waste waters into waters belonging to the nation are to be ruled upon by the Secretariat of Hydraulic Resources in concord with the Secretariat of Health and Assistance, "imposing in each case the conditions which are deemed to be necessary." Under article 20, the Secretariat of Hydraulic Resources is empowered to supervise any project that may cause contamination of waters; when deemed necessary by the Secretariat, the equivalent of an environmental impact statement may be required.

Sanctions in Chapter Five range from fines of 50 to 100,000 pesos ($44 to $8,000) to "[t]emporary or definite closure of factories or establishments which produce or emit contaminants and fines. . . ."[97] From article 32 it may be deduced that only the appropriate authority, that is, the Secretariat of Hydraulic Resources, may take action to regulate pollution and impose the sanctions provided in Chapter Five.

95. Mexican Anti-Contamination Law, D.O., Mar. 23, 1971.
96. *Id.* art. 4(b).
97. *Id.* art. 29.

Some problems become evident after analyzing the Mexican Anti-Contamination Law. Will Mexico, as a developing country, restrict industrialization and development where contamination will result? Realistically, the short range objective of increased productivity will more than likely take precedence over farsighted and relatively intangible environmental considerations. Does not the total control of water quality vested in the Secretariats of Hydraulic Resources and Health and Assistance centralize excessive power with no checks or balances? On an international scale, what provisions are there for claims of damages sustained by another country or its citizens due to contamination traceable to an entity in Mexico? Finally, the Law itself is representative of an ideal, and as such is admirable. Implementation and enforcement of the Law, however, will be the true test of the Mexican Government's desire to establish a quality environment and, more specifically, to improve the quality of the water it shares with the United States.

IV. PRESENT STATUS OF INTERNATIONAL WATER QUALITY PROVISIONS AND PROBLEMS

In a recent joint communique, United States President Nixon and Mexican President Echeverria expressed their concern over the Colorado River salinity and dedicated themselves to finding a definitive solution for the problem at the earliest possible time.[98] However, an effective solution to the water quality problem as it exists between the United States and Mexico is not foreseeable under present conditions. The present United States position that there is no provision in the Treaty of 1944 regulating the quality of the waters delivered to Mexico and that Mexico does not have an international right to obtain usable water from the Colorado River demonstrates the problem.[99] Conversely, Mexico is steadfastly

98. Joint Communique, President Richard Nixon and President Luis Echeverria, Washington, D.C., June 16, 1972. The Communique also included a four point proposal by President Nixon as follows: (1) undertake actions immediately to improve the quality of water going to Mexico; (2) designate a special representative to begin work immediately to find a solution to the problem; (3) instruct the special representative to submit a report by the end of 1972, and; (4) submit the special representative's findings and solutions, once the U.S. Government has approved them, to President Echeverria for his consideration and approval. Minute No. 241 has implimented these measures.

99. *See* IBWC, Minute No. 218, Mar. 22, 1965, Recommendation 11, T.I.A.S. 6988; Press Release, U.S. Dep't of State, Nov. 15, 1971 [extending for

demanding a water quality level based on its interpretation of the intent of the 1944 Treaty.[100] The quality standard expected by Mexico, however, is becoming more difficult to reach with continued development of the United States portion of the Colorado River basin. The canals constructed to drain the Morillo and Wellton-Mohawk salt wells, responsible for the salinity problems in the lower Rio Grande and lower Colorado rivers respectively, have proven to be merely temporary in nature.[101] Farming in the Mexicali Valley has been severely stifled due to the high alkaline content of the Colorado River waters.[102] An additional danger to the quality of the Colorado River is the Central Arizona Project which will further degrade the water quality due to agricultural runoff and reuse of the water supply before it reaches the Mexican border. The problems stemming from the Central Arizona Project are representative of the situations that are evolving in the other drainage basins. Because of continuing development within the

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one year the talks between the U.S. and Mexico over the resolution of the salinity problem of the Colorado and Rio Grande rivers]; Meyers & Noble, *The Colorado River: The Treaty with Mexico,* 19 STAN. L. REV. 367 (1967).

100. This position is evidenced by the lack of agreement to date over the salinity problem and Mexico's past interpretation of the intention of the Treaty of 1944. *See, e.g.,* notes 68, 69 *supra. See also* R. BERKAM AND K. VISCUSI, DAMNING THE WEST: THE NADER TASK FORCE REPORT ON THE BUREAU OF RECLAMATION 45 (1971), in which it is stated that Mexico will accept a salinity agreement with the U.S. specifying that the U.S. must deliver Colorado River water having a salinity content of not more than 1300 ppm or of a salinity level equal to that of the Colorado River prior to the opening of the Welton-Mowhawk drain into the Colorado River in 1961.

101. The talks between the U.S. and Mexico over the salinity problem attest to its continuing and increasingly severe nature. Recent studies have shown that the total dissolved solids in the Colorado River at Calexico-Mexicali are 851 mg/1 and sulfates 371 mg/1, the maximum acceptable standards established by the U.S. Public Health Service being 500 mg/1 for total dissolved solids and 250 mg/1 for sulfates. The Rio Grande River at Brownsville, Texas, has measurements, according to the same report, of 1070 mg/1 of total dissolved solids and 307 mg/1 of sulfates. U.S. DEP'T OF H.E.W., U.S. PUBLIC HEALTH SERVICE, INVENTORY OF WATER AND WASTEWATER FACILITIES, U.S.-MEXICO BORDER 39-48 (1971).

102. One reason for the high alkaline content of the Colorado River waters is the lack of a salinity standard by which regulation of the salinity might be accomplished. To date, there are no numerical salinity standards set by any of the Colorado basin states in the U.S. However, on Feb. 15-17, 1972, a conference was held in Las Vegas, Nevada, in which the Colorado basin states officially appointed the U.S. Bureau of Reclamation to establish a salinity control program with the assistance of the EPA. Telephone interview with Robert E. Farrer, Principal Staff Engineer, Arizona Interstate Stream Commission, Mar. 1, 1972.

basins, the diminished water supplies are undergoing increased use creating a proportionately higher degree of water pollution.

It is evident from a recent report compiled by the United States and Mexico studying the municipal water and waste treatment systems along the border that the principal Mexican cities situated on the Rio Grande have less efficient waste treatment facilities and add more untreated effluent to the river waters than their smaller "sister" cities on the United States side of the river.[103] It is also apparent in the report that there is a lack of cooperation between the sister municipalities along the Rio Grande in dealing with waste disposal and water quality maintenance.

Lack of a coordinated effort has been reflected in development of the Tijuana River basin.[104] One of the most glaring examples of the problem to date has been the misguided and haphazard manner in which flood control measures have been initiated in the basin.[105] United States efforts on the flood control project have been stalled periodically by environmentalist pressures (utilizing the NEPA) and concern for maintenance of a natural salt water estuary at the mouth of the Tijuana River.[106] Mexico has proceeded on an advanced schedule due to its desire to use the river waters for irrigation as well as to alleviate the threat of floods for land development.[107] Thus, in the event of extensive rains, the controlled flood waters in Mexico would be forced across the border onto the unprotected United States farm lands where the increased flow would wreak havoc far in excess of normal flood conditions.

The three basins, it may be concluded, have problems that are the result of uncoordinated, inefficient, and environmentally blind water usage (quality) projects and regulations. Further-

103. U.S. DEP'T OF H.E.W., *supra* note 101 *passim.*

104. *See* CALIFORNIA SENATE, JOINT COMMITTEE ON WATER PROBLEMS, FIFTH PARTIAL REPORT ON WATER PROBLEMS OF THE STATE OF CALIFORNIA: ALLOCATION OF THE WATERS OF THE TIJUANA RIVER UNDER THE TREATY BETWEEN UNITED STATES AND MEXICO OF 1944 (Sacramento, May, 1953).

105. The flood control project was authorized by Congress in the Act of Oct. 6, 1966, Pub. L. No. 89-640, 80 Stat. 25. For descriptions of the problems caused by the cost, binding agreements, and separate programs controlled by separate governments, see S.D. Union, Nov. 23, 1971, at B-1, col. 8; S.D. Union, Dec. 5, 1971, at B-1. col. 7.

106. *See* S.D. Union, Nov. 23, 1971, at B-1, col. 8.

107. *See, e.g.*, articles cited in notes 105, 106 *supra.*

more, the Treaty of 1944 and the applicable domestic water quality provisions have proven to be deficient in many ways.[108] It seems apparent that equitable usage and pollution control of the water supply for the U.S.-Mexican border area cannot be effectively applied until such deficiencies are alleviated.[109]

V. CONCLUSION

The United States and Mexican governments must officially recognize the geographic unity of an international drainage basin and the application to such basins of the principle of equitable utilization in order to solve their present international water quality dilemma.[110] The two nations, after accepting the above conditions, could establish an effective intergovernmental agency for each basin, either within or separate from the IBWC.[111] Each agency could supplement the IBWC by promulgating and enforc-

108. *See* remarks by Mexican Water Resources minister, Leandro Rovirosa Wade, calling for more U.S. cooperation in cleaning up "the contaminated waters that flow through both countries." S.D. Union, Mar. 13, 1972, at A-9, col. 1.

109. An effective analogy may be drawn at this point between the U.S. domestic water quality programs and the provisions for water quality control effecting the rivers that the U.S. and Mexico share. There is a recognized need for federal control of water quality in the U.S.; to implement a program on only a state by state basis ignores the interstate characteristics of the resource and the need for comprehensive planning involving all riparians affected. Thus, just as an efficient interstate water quality control program cannot be administered on a state by state level, so must an effective international water quality program be based on more than mere national domestic laws. *See* note 104 *supra*; C.E.Q., ANN. REP. (1970); J. BRECHER & M. NESTLE, *supra* note 10, at 56-7; and note E.P.A. objectives as revealed to the House Public Works Committee on June 17, 1971: (1) Federal water quality standards for all states. (2) Regulations for establishing effluent standards by Jan. 1972. (3) State adoption of effluent regulations by June 1972. (4) Operational monitoring system for assuring compliance with all water quality standards by Jan. 1976. BNA ENVIRON. REP., CURRENT DEVELOPMENTS (June 25, 1971) at 209.

110. Three factors exist at the present time that indicate unofficial recognition by the U.S. of the predominance of the equitable utilization principle:

(1) The U.S. position taken with Canada on the use of the Columbia River waters. W.L. GRIFFIN, *supra* note 45; Van Alstyne, *supra* note 13, at 332.

(2) Willingness of the U.S. to undertake solutions to the salinity problem rather than submit to arbitration. *Treaty Hearings*, *supra* note 31, at 1751; Meyers & Noble, *supra* note 99, at 409-10; Press Release, *supra* note 99.

(3) Statements by State Dep't officials in favor of equitable utilization. *Treaty Hearings*, *supra* note 31, at 1747-1751; W.L. GRIFFIN, *supra* note 45.

111. For proposed establishment and delineation of powers and duties of a river basin agency, see Roberts, *supra* note 24; and note the establishment of a Joint Water Quality Board within the framework of the International Joint Commission regulating the use of waters between the U.S. and Canada. BNA, ENVIRON. REP., CURRENT DEVELOPMENTS (Aug. 27, 1971) at 504.

ing water quality standards on a drainage basin level while the commission carries out the logistics of the water quality projects. In addition, the agencies could utilize the use priorities, cost provisions and work allocations established in the 1944 Treaty. Each basin agency could also develop and apply new systems by which water pollution would be regulated domestically through charging (taxing) and similar financial "incentives."[112] Such financial provisions might also establish funds for technologically advanced water quality control facilities. The incentives could finance basin water quality control studies which would determine environmentally "safe" systems for water usage and allocation.[113] On the judicial level, separate and independent bodies of the basin agencies could serve as suitably enlightened tribunals to render intelligent decisions based on the geographical, technological, social, and environmental factors involved in water disputes.[114] The basin agencies would provide for the realistic control of international drainage basin water quality and would serve as examples for possible future multinational environmental agencies.

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112. For a discussion of domestic financial charging and incentive systems see J. BRECHER & M. NESTLE, *supra* note 10, at 47-58.

113. *See* U.S. DEP'T OF INT., OFFICE OF SALINE WATER, SALINE WATER CONVERSION REPORT at iii (1970-71), "[D]esalting is feasible now and commercially available for municipal and industrial use in plants up to 10 million gallons per day. . . ." The cost of conversion of brackish waters, i.e. Colorado and Rio Grande rivers, according to the report at iii, can be as low as thirty-five cents per 1,000 gallons. Page 19 of the report indicates that the U.S./Mexico/I.A.E.A. study team has concluded that dual purpose nuclear power and desalting plants are entirely feasible and could provide the southwest U.S. and northwest Mexico with required quantities of water, but that further studies have been slowed due to lack of funding.

114. Membership of such tribunals could be made up of EPA regional officials and Secretariat de Recursos Hydraulicos officials.