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LEGAL ASPECTS OF A FEDERAL WATER QUALITY SURVEILLANCE SYSTEM

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ONE of the major problems in controlling water pollution is the collection of data to measure pollution and to identify polluters. Existing law is relatively silent on this important matter. For example, in abatement proceedings under the Federal Water Pollution Control Act,¹ it must be shown that the pollution has reduced water quality below the standards established under that Act.² But the Act is largely silent as to how specific evidence of such pollution is to be obtained. In many cases, that evidence may be gathered from the data that have been disclosed by the polluter in a report the preparation and filing of which have been requested by the Secretary of the Interior.³ In any case, however, initial detection of pollution and identification of the polluter must first have been accomplished either by state or local governments—by means that remain unspecified by the statute⁴—or, in certain cases, by the Sec-

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1. 62 Stat. 1155 (1948), *as amended*, 33 U.S.C. §§ 466-66k (1964), *as amended*, 33 U.S.C. §§ 466-66n (Supp. IV, 1965-1968), *as amended*, National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852, *as amended*, Water Quality Improvement Act of 1970, Pub. L. No. 91-224, 84 Stat. 91.

2. *See* 33 U.S.C. § 466g(c) (Supp. IV, 1965-1968), which provides for the states to establish standards for water quality.

3. 33 U.S.C. § 466g(k)(1) (Supp. IV, 1965-1968) provides that the Secretary, if so requested by a conference of state and interstate water pollution agencies, may require an alleged polluter to file a report "based on existing data, furnishing such information as may reasonably be requested as to the character, kind, and quantity of such discharges and the use of facilities or other means to prevent or reduce such discharges by the person filing such a report."

4. 33 U.S.C. § 466g(d) (Supp. IV, 1965-1968) requires the Secretary to convene a conference of pollution agencies when so requested by a state governor, but the statute is silent with respect to the means by which the governor is to have learned of the pollution and of suspected polluters. 33 U.S.C. § 466g(c) (Supp. IV, 1965-1968) provides for the development of water quality standards, but is similarly silent with respect to the means by which adherence to those standards is to be determined.

retary on the basis of "reports, surveys, or studies."⁵ Since such detection and identification are crucial to the effective enforcement of the water quality standards, adequate means for collecting data relating to water quality should be established.

Collection of water quality data is also important for the purpose of determining the present and future needs for water resources and for the purpose of determining the proper allocation of limited financial resources among those needs. In addition, such data are necessary in order to conduct research studies and in order to determine water quality trends for the purposes of long-range planning.

Perhaps the best way to collect such data would be to establish a national surveillance system designed to monitor the quality of the nation's water resources. Such a national system is currently under consideration by the Federal Water Quality Administration.⁶ That system would involve the use of contemporary scientific data-gathering devices and telemetering equipment. Essentially, the system would consist of a series of surveillance stations located at various points along rivers and streams and at the edges of lakes and reservoirs. These stations would utilize automatic sampling and data-gathering equipment to monitor water quality, and would transmit the resulting information by automatic telemetering devices to central data banks for observation and analysis. Much of the scientific equipment necessary for such a system is fully developed and would require only minor modifications in order to operate effectively in the surveillance system. Other equipment might require further development before reaching an acceptable level of reliability and accuracy; but the technology for that development is available, and there is little doubt that such a surveillance system can be developed if the Government is prepared to move in that direction. It is the purpose of this Article to examine the legal mechanisms necessary for the establishment of such a system, to determine the extent to which existing laws can be used to that end, and to point out the areas in which some congressional action may be necessary in order to complete the legal foundation for a national water quality surveillance program.

5. 33 U.S.C. § 466g(d) (Supp. IV, 1965-1968) permits the Secretary to initiate a conference even when not requested by a state government, but only when he has reason to believe, on the basis of reports, surveys, or studies, that pollution is occurring which is "endangering the health or welfare of persons in a State other than that in which the discharge or discharges originate . . ." or that substantial economic injury is resulting from the inability, due to the pollution, to market shellfish in interstate commerce.

6. A comprehensive study and proposal has been submitted by Cyrus Wm. Rice & Company, Pittsburgh, Pa.

I. CONSTITUTIONAL AND STATUTORY AUTHORITY FOR THE
ESTABLISHMENT OF A FEDERAL WATER QUALITY SURVEILLANCE
SYSTEM

The threshold question in the establishment of a federal water quality surveillance system is whether there is adequate authority for creation of such a system. The necessary authority must be found both in the Constitution and in statutes. An initial requirement, then, is that the rivers and streams which are to be monitored be of a type over which the United States is empowered by the Constitution to exercise its authority. In order to comply with the traditional requirements of the commerce clause, congressional power respecting rivers and streams may reach only those rivers and streams which are either "navigable" or "interstate."⁷

The judicial definition of "navigability" has not remained constant, although its general parameters were set out in the late nineteenth century in the case of *The Daniel Ball*.⁸ In that case the Court held that streams are "public navigable rivers in law which are navigable in fact. And they are navigable in fact when they are used, or are susceptible of being used, in their ordinary condition, as highways of commerce."⁹ According to subsequent interpretations of *Daniel Ball*, a stream is navigable in full if it is navigable in part,¹⁰ and it remains navigable even if no longer subject to commercial use.¹¹ In *United States v. Appalachian Power Company*,¹² decided in 1940, the definition of navigability was broadened to include those streams which are potentially susceptible of navigation. Finally, in *United States v. Grand River Dam Authority*,¹³ a 1960 case, the Supreme Court determined that nonnavigable tributaries

7. See *Gibbons v. Ogden*, 22 U.S. (9 Wheat.) 1 (1824); 33 U.S.C. § 466g(a) (Supp. IV, 1965-1968). On the other hand, it may not be necessary to limit constitutional authority to the "navigable" and "interstate" streams. If the question is simply whether there is constitutional authority to establish a surveillance system, the United States could actually establish stations even in streams that are not navigable or interstate, on the ground that polluters, wherever located, are subject to regulation under the commerce power, if their activities—that is, their products—affect commerce. Under this approach, it would not be necessary that pollution reach interstate or navigable waters, but only that products of polluters affect commerce. Such an effect upon commerce might arise from the fact that if polluters on intrastate, nonnavigable streams are not subject to regulation, their products in interstate commerce might gain a competitive advantage over those of companies which, by virtue of plant location, are subject to pollution standards. See generally *Wickard v. Filburn*, 317 U.S. 111 (1942); *Katzenbach v. McClung*, 379 U.S. 294 (1964).

8. 77 U.S. (10 Wall.) 557 (1870).

9. 77 U.S. (10 Wall.) at 563.

10. *United States v. Rio Grande Dam & Irrigation Co.*, 174 U.S. 690 (1899).

11. See *Arizona v. California*, 283 U.S. 423 (1931).

12. 311 U.S. 377.

13. 363 U.S. 299.

of navigable streams may be subject to the commerce power of Congress as long as the main stream is "navigable" under the traditional definitions.

With respect to the second constitutional criterion for federal authority—whether streams or rivers are "interstate" in nature¹⁴—the position of the Government as reflected in statute is that "interstate waters" consist of "all rivers, lakes, and other waters that flow across, or form a part of boundaries between two or more states."¹⁵ Thus, the Federal Water Pollution Control Act does not apply to waters which are wholly within a single state, nor does it apply directly to waters which are merely tributaries of interstate waters. But the term "interstate" has been construed by the Department of the Interior to mean that if a body of water is interstate at any point, the entire body of water is thereby interstate and subject to the federal statute.¹⁶ Moreover, although tributaries may not be directly subject to the Federal Act, nevertheless if any matter discharged into such tributaries reaches interstate waters and reduces the quality of such interstate waters below established standards, the pollution is subject to abatement under the Act.¹⁷

It is clear from the Supreme Court's decisions respecting navigable waters, and to a lesser extent, from the congressional and administrative declarations respecting interstate waters, that the number of streams over which the federal power may constitutionally extend is immense. Only on the smallest of streams in a river basin would the exercise of federal authority be questionable. Whether the potential authority will be exercised, however, is another question, since the implementation of that authority has been slow to develop, as may be seen in the history of the Federal Water Pollution Control Act.¹⁸ Hence, an evaluation of the possibilities for establishing a surveillance system requires an examination of the existing statutory framework relating to water pollution.

14. The "interstate" criterion for federal authority seems to stem from the "navigability" definition of *The Daniel Ball*, 77 U.S. (10 Wall.) 557 (1870), discussed in text accompanying notes 8-11 *supra*. Since "navigable" waters are those susceptible of use in "commerce," and since that case's reference to "commerce" is to interstate commerce, it seems that for federal authority to apply, waters must be "interstate" as well as "navigable." But for the contrary view—that federal authority need not be so limited—see note 7 *supra*.

15. 33 U.S.C. § 466j(e) (1964).

16. U.S. DEPT. OF THE INTERIOR, GUIDELINES FOR ESTABLISHING WATER QUALITY STANDARDS FOR INTERSTATE WATERS 10-11 (1966) [hereinafter GUIDELINES].

17. 33 U.S.C. § 466g(c)(5) (Supp. I, 1965); GUIDELINES 60.

18. See Barry, *The Evolution of the Enforcement Provisions of the Federal Water Pollution Control Act: A Study of the Difficulty in Developing Effective Legislation*, 68 MICH. L. REV. 1103 (1970).

That framework is provided by the Federal Water Pollution Control Act.¹⁹ That Act, a compendium of original and amendatory legislation, stems from legislation passed in 1948.²⁰ It has since been modified and strengthened by the Federal Water Pollution Control Act Amendments of 1956,²¹ the amendments of 1961,²² the Water Quality Act of 1965,²³ and the Clean Water Restoration Act of 1966.²⁴ Additional amendments were recently added by the Water Quality Improvement Act of 1970,²⁵ which was signed by President Nixon on April 3, 1970.

The Federal Water Pollution Control Act is a product both of the necessity to halt the destruction of the nation's water resources and of the reality of countervailing federal, state, and industrial powers. Like many pieces of legislation, its goals tend to outstrip its tools for implementation. The entire Act, but particularly its enforcement sections, provides only limited federal authority and often authorizes such authority solely as a last resort.²⁶ Instead, it encourages cooperation between federal and state authorities and in some instances requires such cooperation.²⁷ Because of this tangled thicket of compromise and accommodation, it is understandable that the lines of authority between federal and state governments are not clearly drawn in the Act.²⁸ Moreover, in view of the apparent congressional concern for reconciling the interests of conflicting parties,

19. 62 Stat. 1155 (1948), *as amended*, 33 U.S.C. §§ 466-66k (1964), *as amended*, 33 U.S.C. §§ 466-66n (Supp. IV, 1965-1968), *as amended*, National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852, *as amended*, Water Quality Improvement Act of 1970, Pub. L. No. 91-224, 84 Stat. 91.

20. 62 Stat. 1155.

21. 70 Stat. 498.

22. 75 Stat. 204.

23. 79 Stat. 903.

24. 80 Stat. 1247.

25. Pub. L. No. 91-224, 84 Stat. 91.

26. *See generally* Barry, *supra* note 18.

27. This tone of compromise is established in § 1 of the Act, 33 U.S.C. § 466 (1964), in which it is provided:

In connection with the exercise of jurisdiction over the waterways of the Nation and in consequence of the benefits resulting to the public health and welfare by the prevention and control of water pollution, it is hereby declared to be the policy of Congress to recognize, preserve, and protect the primary responsibilities and rights of the States in preventing and controlling water pollution, to support and aid technical research relating to the prevention and control of water pollution, and to provide Federal technical services and financial aid to State and interstate agencies and to municipalities in connection with the prevention and control of water pollution.

At face value, this policy statement tends to vest enforcement activities primarily in the states, while affording the federal government a role generally limited to research and assistance. *See also* 33 U.S.C. § 466a(c) (Supp. IV, 1965-1968); 33 U.S.C. §§ 466c(a), (c) (1964); 33 U.S.C. § 466g(b) (Supp. IV, 1965-1968).

28. Barry, *supra* note 18, at 1118.

rather than for halting pollution, it is not surprising that the Act fails to provide specifically for the establishment of a national water quality surveillance system. Since such a system is neither expressly prohibited nor expressly authorized by the Act. The following discussion will examine those aspects of the Act and its administration from which the authority for a surveillance system may be drawn.

Section 3(a) of the Act provides that the Secretary of the Interior shall

prepare or develop comprehensive programs for eliminating or reducing the pollution of interstate waters and tributaries thereof and improving the sanitary condition of surface and underground waters For the purpose of this section, the Secretary is authorized to make joint investigations with any [federal, state, or interstate] agencies of the condition of any waters in any State or States, and of the discharges of any sewage, industrial waters, or substance which may adversely affect such waters.²⁹

It appears reasonable to conclude that the "joint investigations" authorized by section 3(a) might comprehend the establishment of a water quality surveillance system. Furthermore, the "comprehensive programs" to be developed as a result of those "joint investigations" could likewise include the designated programs and purposes of a water quality surveillance system.

Several other provisions of the Act support this conclusion. Section 5(a), for example, provides that the Secretary of the Interior "shall conduct . . . research, investigations, experiments, demonstrations, and studies relating to the causes, control, and prevention of water pollution."³⁰ Section 5(b) allows the Secretary to conduct investigations, at the request of state or interstate agencies, on specific pollution problems.³¹ Section 10(d) contemplates that the Secretary may initiate enforcement procedures on the basis of "reports, surveys, or studies,"³² and section 5(c) requires that the Secretary, in cooperation with federal, state, and interstate agencies, "collect and disseminate basic data on chemical, physical, and biological water quality and other information insofar as such data or other information relate to water pollution and the prevention and control thereof."³³ Further support is gained from section 5(e), which authorizes the Secretary to establish, equip, and maintain field laboratory

29. 33 U.S.C. § 466a(a) (1964).

30. 33 U.S.C. § 466c(a) (1964).

31. 33 U.S.C. § 466c(b) (1964).

32. 33 U.S.C. § 466g(d) (Supp. IV, 1965-1968).

33. 33 U.S.C. § 466c(c) (1964).

and research facilities,³⁴ and from section 5(d)(B), which authorizes the Secretary to develop and demonstrate methods for identifying and measuring the effect of pollutants on water uses.³⁵ The 1970 Act bolsters the conclusion that there exists authority for the establishment of a water quality surveillance system; it authorizes the Secretary to acquire land for demonstration projects and for the development of field laboratories and research facilities.³⁶

On the basis of these representative provisions of the Act, it is reasonable to conclude that Congress has, however inexplicitly, authorized a national system for monitoring water quality. This conclusion is confirmed by the fact that the federal government is given a major responsibility for enforcing the water quality standards established under the Act; and without the necessary means for determining violations, such as a surveillance system, enforcement must rest on mere conjecture.³⁷

Executive orders issued by the Office of the President furnish additional support for the proposition that a surveillance system may be established under existing law. For example, section 3 of Executive Order 11,507 relating to pollution caused by federal facilities, requires agency heads to "[m]aintain review and surveillance to ensure that [water quality standards] are met on a continuing basis."³⁸ This executive order thus seems to contemplate the establishment of a continuing system for monitoring the discharge of pollutants from federal installations, although it fails to elaborate on the particulars of such a system. Without a system of surveillance, it would be impossible "to ensure that [pollution control] standards are met on a continuing basis."³⁹

The executive order's authorization seems to aim at surveillance of pollution only from federal or federally related activities. But pollution, unlike politics, does not abide by the federal system or adhere to the theories of states' rights. In many situations it would be impossible for a surveillance system to monitor only those pollutants that come from federal sources, and it would be irrational to attempt such an approach. It is likely, therefore, that any surveillance system established under Executive Order 11,507 to monitor pollution from

34. 33 U.S.C. § 466c(e) (1964).

35. 33 U.S.C. § 466c(d)(B) (Supp. IV, 1965-1968).

36. Federal Water Pollution Control Act § 5(k), Pub. L. No. 91-224, § 105(2), 84 Stat. 91 (1970). See note 118 *infra* and accompanying text.

37. See 33 U.S.C. § 466g(a) (1964), which provides for abatement, but makes no provision for detecting that which is to be abated.

38. Exec. Order No. 11,507, § 3(a)(1), 35 Fed. Reg. 2573 (1970).

39. *Id.*

federal sources could also be used successfully to monitor pollution from other sources, whether state, municipal, or private, particularly since the activities of the federal government are so extensive that even a system which sought to monitor only those activities would have to be a highly comprehensive one in order to be effective.

In view of the interplay among the Federal Water Pollution Control Act, the administrative regulations issued thereunder, and the provisions of Executive Order 11,507, and in light of the interrelated nature of the problems of water pollution, it seems probable that the federal government has the authority under existing law to proceed with the establishment of a federal water quality surveillance system. To the extent that such authority is not clear, however, it may be desirable to define it by means of a statute such as that set out in the Appendix to this Article.⁴⁰

If establishment of a surveillance system is to be sought under existing law, however, the question arises whether a comprehensive surveillance system could feasibly be established and operated exclusively by the federal government, or whether the participation of state and interstate agencies is imperative. The Federal Water Pollution Control Act is, in general, quite protective of the interests of the states. Section 1 of that Act declares it "to be the policy of Congress to recognize, preserve, and protect the primary responsibilities and rights of the States in preventing and controlling water pollution"⁴¹ In establishing water quality standards under the Act, primary responsibility again lies with the states; and it is only after a state has failed to establish standards that the Secretary may act affirmatively.⁴² Similarly, in investigation and enforcement proceedings, great respect is accorded to the interests of the states. Investigations are to be conducted jointly with state and interstate agencies,⁴³ and "state and interstate action to abate pollution of interstate or navigable waters shall be encouraged and shall not . . . be displaced by Federal enforcement action."⁴⁴

It is difficult to conclude that Congress intended by those provisions that the states, whether by lack of funds or by mere intransigence, could thwart the investigations and programs necessary for the fulfillment of the purposes of the Act. Indeed, a judgment that the

40. The proposed statute would not only explicitly authorize the establishment of a surveillance system, but would also provide an explicit means for acquiring the land for such a system. See pp. 1165-66 *infra*.

41. 33 U.S.C. § 466(b) (Supp. IV, 1965-1968). See also note 27 *supra*.

42. 33 U.S.C. § 466g(c)(2) (Supp. IV, 1965-1968).

43. 33 U.S.C. § 466g(d)(1) (Supp. IV, 1965-1968).

44. 33 U.S.C. § 466g(b) (Supp. IV, 1965-1968). See also 33 U.S.C. § 466g(c)(6) (Supp. IV, 1965-1968).

federal government is not so limited appears to underlie Secretary of the Interior Walter J. Hickel's establishment, in July 1969, of the Task Force on Pollution Enforcement. As a result of evidence gathered by federal monitoring activities,⁴⁵ that Task Force, in September 1969, recommended the convening of hearings and the possible initiation of litigation to halt excessive pollution in certain areas of Kansas, Oklahoma, Ohio, and the Lake Erie Basin. In light of the initiative taken by the Secretary in establishing such a task force, it seems probable that the concern for state and interstate agencies, which is exhibited in the statute, means essentially that the federal government is directed to seek the cooperation of those agencies, but may proceed independently if such cooperation is not offered. Consequently, it appears reasonable to conclude that the federal government may establish a surveillance system even without the joint participation of state and interstate agencies.

On the other hand, the political problems in such an independent course of action could be severe, particularly since Congress has manifested a great sensitivity to states' rights in the area of pollution control. Yet, it is unlikely that the establishment of a federal water quality surveillance system would encounter the same resistance as have some other federal water resource projects, notably projects initiated by the Army Corps of Engineers.⁴⁶ For one thing, unlike the reception that has been accorded to many federal water projects, there has been almost universal acceptance of the necessity for the control and abatement of water pollution and in light of the issue's current political popularity, political opposition is likely to be small. Second, a water quality surveillance system would not have the disruptive effect on local economies that large-scale resource projects often have. Finally, a federal system would alleviate the financial burden on the states in the area of surveillance activities. But, although the federal government may be able to proceed alone in establishing a surveillance system, the cooperation and joint participation of state and interstate agencies should still be sought to

45. Informal conversations with the Federal Water Quality Administration indicate that present monitoring activities are minimal. The Administration currently maintains approximately 400 surveillance sites, of which about 100 are fully automatic. The automatic sites, of course, maintain a continuous surveillance. At the manual sites, checking occurs from once every two weeks to once every month. The Federal Water Quality Administration also pays the Geological Survey to maintain approximately 460 sites, of which 60 are automatic.

46. An example is the Cross-Florida Barge Canal, a Corps project authorized in 1942 as a wartime defense measure and not yet completed. Much opposition to the canal has been aroused in recent years. *See, e.g., Environmental Defense Fund, Inc. v. Corps of Engrs.*, Civ. No. 2655-69 (D. D.C., second amended complaint filed April 9, 1970); Drew, *Dam Outrage: The Story of the Army Engineers*, ATLANTIC MONTHLY, April 1970, at 51.

the fullest extent. Particularly if the system is to be established largely under existing law, efforts should be made to adhere to the cooperative tone of present statutes; and if appropriations are likely to be a problem—as they invariably are—the costs of site acquisition and development may be significantly reduced through intergovernmental cooperation.⁴⁷

Particularly important with respect to any cooperative efforts in developing a surveillance system are the interstate pollution control agencies. The Federal Water Pollution Control Act contemplated the creation of such bodies,⁴⁸ and there now exist at least ten interstate compacts which deal directly with water pollution control problems. Of the compacts only two will be discussed in some detail here, since they are somewhat representative of the entire group. The Ohio River Valley Sanitation Compact (ORSANCO)⁴⁹ encompasses the states of Illinois, Indiana, Kentucky, New York, Ohio, Pennsylvania, Tennessee, and West Virginia. The Tennessee River Basin Water Pollution Control Compact⁵⁰ numbers among its signatories the states of Alabama, Georgia, Kentucky, Mississippi, North Carolina, Tennessee, and Virginia. Both compacts provide for the establishment of interstate commissions; and in both cases the commissions are vested with certain regulatory functions, including the establishment of water quality criteria. The federal government is represented by a delegate on the ORSANCO Commission, but not on the Tennessee Commission. Neither commission is authorized to issue enforcement orders without a majority vote of the compact's commissioners.

The jurisdiction of each commission in establishing water quality standards and issuing enforcement orders extends only to the waters in the interstate drainage basin with which the particular compact is concerned. Even that limited jurisdiction, however, enables the commissions, like the federal government, to establish water quality criteria for the entire breadth of a stream regardless of state boundaries.⁵¹ Were it not for this authority, and the similar authority vested in the federal government, it is conceivable, indeed likely, that different criteria would apply on each side of a river which

47. See text accompanying note 95 *infra*.

48. 33 U.S.C. § 466b(b) (1964) grants congressional consent for states to enter interstate compacts, and to establish implementing administrative agencies, for cooperative efforts in the control of pollution; but it requires further congressional approval before any such compact becomes binding upon a party state.

49. 54 Stat. 752 (1940).

50. 72 Stat. 823 (1958).

51. The standards will not, however, apply to the entire length of a stream unless the stream flows only through signatory states.

borders two states. Since both the federal government and the interstate-compact commissions may have authority over such interstate streams, any differences in criteria or standards which might otherwise arise between states can be resolved. Indeed, the Federal Water Quality Administration has already undertaken to reconcile conflicting criteria submitted by states bordering several of the Great Lakes.

The interstate-compact commissions seem to hold over their signatory states a power which is analogous to that of the federal government under the Federal Water Pollution Control Act. The ORSANCO Commission, for example, is authorized to investigate, study, and make recommendations concerning pollution problems within its jurisdiction, to advise local governments, to confer with other governments, and to draft and recommend remedial legislation.⁵² With respect to the enforcement of water quality standards adopted by the commission, both the ORSANCO Commission and the Tennessee River Basin Commission are authorized to issue administrative enforcement orders and to obtain in either the state or the federal courts orders for compliance. Finally, both compacts provide for mutual coordination in their operations. The Tennessee River Basin Commission Compact provides that it is not to conflict with the provisions of ORSANCO, but that the Commission is free to set more stringent standards for the signatory states than those provided by ORSANCO. The ORSANCO Compact has a similar provision.

If the federal government decides to establish a national water quality surveillance system, the compact commissions, as well as the states, should be consulted regarding the operation of such a system. They should be encouraged to coordinate their own surveillance activities with those of the United States and should also be invited to participate in the system's operations to the greatest possible extent.

II. ACQUISITION OF SITES FOR SURVEILLANCE STATIONS

The success of any surveillance system will depend in large measure upon the acquisition of suitable sites for monitoring water quality. Basically, there are three methods by which site acquisition may be accomplished. First, it may be possible in some instances for the Government to establish sites, without compensating the owners of riparian land, by exercising the "navigation servitude." Second, it may be possible, at little or no acquisition cost, to establish stations on federal lands. Third, the Government may seek to acquire sites

52. 3 WATER AND WATER RIGHTS 341 (R. Clark ed. 1967).

for surveillance stations from state and local governments and from private owners. Significant legal problems may be encountered in all of these approaches to site acquisition, and in some cases the resolution of those problems may require the amendment of the Federal Water Pollution Control Act. The following discussion examines the problems involved with each method of acquisition.

A. *Site Acquisition Under the Navigation Servitude*

Certain types of surveillance stations will probably not require the use of lands which are situated above the high-water mark of a river. This is particularly true in cases in which it may be advantageous to establish stations on pilings anchored below the high-water mark, and in cases in which it may be desirable to place sampling equipment—again anchored below the high-water mark—in such a manner as to transect the stream in order to obtain readings at various points of flow. In instances in which surveillance stations or equipment can be situated below the high-water marks on rivers or streams, it may be possible for the United States to exercise the “navigation servitude” vested in the federal government and thus to avoid incurring liability for the payment of compensation to the owners of private lands which are riparian to the streams. The navigation servitude, which is derived from the commerce clause of the United States Constitution, gives the federal government dominant control of the stream bed of navigable waters up to the ordinary high-water mark.⁵³ Title to any lands situated below that mark is thus subject to the dominant interest of the United States, and the land may be taken by the federal government without compensating the private landowners.⁵⁴

Under the traditional view, the right of the United States to take private lands without compensation seems to be limited to those situations in which the dominant interest is exercised in aid of navigation.⁵⁵ Courts have recognized, however, that, so long as the interests of navigation are served, other purposes may be advanced as well.⁵⁶ Thus, in order to justify site acquisition under this traditional view of the servitude, it is necessary to demonstrate that the establishment of surveillance stations would in fact aid navigation. Pollution, it may be argued, is a burden on navigation because it

53. See, e.g., *United States v. Chicago, M., St. P. & P.R.R.*, 312 U.S. 592 (1941).

54. *United States v. Willow River Power Co.*, 324 U.S. 499, 509 (1945).

55. See, e.g., *United States v. Chicago, M., St. P. & P.R.R.*, 312 U.S. 592 (1941); *United States v. Willow River Power Co.*, 324 U.S. 499 (1945); *United States v. Chandler-Dunbar Water Power Co.*, 229 U.S. 53 (1913).

56. See, e.g., *United States v. Twin City Power Co.*, 350 U.S. 222 (1956).

increases the corrosion rate of vessels and buoys, makes navigation more difficult as a result of water-clouding, damages dock facilities, and has numerous other deleterious effects on navigation. Since the surveillance stations would be part of a program designed to eliminate pollution, then, they would aid navigation and thus allow the servitude to be used for the traditional purpose of assisting navigation.

The major advantage of the argument based upon the traditional view of the servitude is the fact that the courts are not asked to change existing law in any manner. Rather, since the servitude is being used for its traditional purpose, the court is required merely to recognize that pollution is in fact a burden upon navigation and that surveillance stations will assist in eliminating that burden.

If a surveillance system is sought to be established under existing law, however, it will be difficult to demonstrate a legislative purpose to aid navigation, for the federal pollution control laws, although designed to eliminate water pollution, do not reflect an interest on the part of Congress to assist or advance navigation.⁵⁷ Consequently, those opposing an exercise of the servitude might reasonably argue that since the statutory authority for the surveillance system itself is not specifically designed to aid navigation, the servitude cannot validly be exercised in the acquisition of surveillance sites.

Because of the difficulty confronting an argument based on the traditional analysis, it may be preferable to base the argument for application of the servitude on some other analysis. It may be possible, for example, to use a unique application of the public-trust approach. Under that approach, the bed of a navigable stream is viewed as the corpus of a public trust, such that the Government, as trustee, may use lands situated within that stream bed without compensating private owners, so long as the use is for a public purpose which tends to benefit all the people of the country. The idea of

57. For example, neither the Federal Water Pollution Control Act, 62 Stat. 1155 (1948), *as amended*, 33 U.S.C. §§ 466-66k (1964), *as amended*, 33 U.S.C. §§ 466-66n (Supp. IV, 1965-1968), nor its legislative history contains anything indicating an intent to assist navigation. Nor does the Water Quality Improvement Act of 1970, Pub. L. No. 91-224, 84 Stat. 91, specifically mention navigation. The Oil Pollution Act of 1924, 33 U.S.C. §§ 43-37 (1964), originally did refer to oil dumping as a "menace to navigation" [43 Stat. 605, 33 U.S.C. § 433 (1964)], but when that Act was amended in 1966, the reference to navigation was omitted. 80 Stat. 1253, 33 U.S.C. § 433 (Supp. IV, 1965-1968). Section 108 of the Water Quality Improvement Act repeals the Oil Pollution Act of 1924 and substitutes in its place § 11 of the Federal Water Pollution Control Act. Both § 11, pertaining to oil, and § 12, pertaining to other hazardous polluting substances, state that the harmful or potentially harmful pollutants subject to removal are those elements or compounds, including oil, which "present an imminent and substantial danger to the public health and welfare, *including but not limited to*, fish, shellfish, wildlife, shorelines, and beaches." (Emphasis added.) Since the category of dangers is expressly left open, danger to navigation may or may not be included.

the public trust has been developed fairly extensively in some states,⁵⁸ but has received little attention under federal law. Because the federal government, at least in theory, exercises only delegated powers, the purposes for which it could exercise the public trust would perhaps be more limited than would the purposes for which a state could do so. Thus, in order to justify the exercise of its powers as trustee, it might be necessary for the federal government to demonstrate that the power was exercised for the purpose of aiding such federally protectible interests as navigation, commerce, and fisheries. Under such an approach, the land necessary for surveillance sites below high-water levels could be acquired without compensating private landowners, because the land would be intended for use in eliminating pollution—a public use in aid of commerce, navigation, and fisheries.

The development of the “common law of the public trust,” however, must be considered as being in a state of infancy, particularly with respect to the federal government. Moreover, the application suggested goes somewhat beyond the conventional public-trust theory.⁵⁹ Thus, because the doctrine is not sufficiently established to guarantee the validity of an argument based on such a view of the navigation servitude, it is necessary to examine other possible theories for the application of the navigation servitude.

One such approach would be to seek site acquisition on the basis of an expanded view of the “navigation servitude.” It has been suggested that because of the dominant interest of the United States in land situated within the bed of a navigable stream, such land should be viewed as a part of the public domain.⁶⁰ Therefore, at least when dealing with problems related to navigation, the authority exercised by the Government over such land is proprietary in nature—that is, it is similar to the authority which the Government exercises over federal public lands in general, pursuant to article IV, section 3, of the Constitution. Under this approach it may be argued that since all lands situated within the bed of a navigable stream are a part of the public domain, and are subject to the proprietary interest of

58. See generally *Colberg, Inc. v. State*, 67 Cal. 2d 408, 432 P.2d 3, 62 Cal. Rptr. 401 (1967); *Crary v. State Highway Commn.*, 219 Miss. 284, 68 S.2d 468 (1953). For a comprehensive discussion of the development of the idea of the public trust, see Sax, *The Public-Trust Doctrine in Natural Resource Law*, 68 MICH. L. REV. 471 (1970).

59. For the most part, the public-trust doctrine is not directed toward the acquisition of lands for public use; rather it consists of limitations upon what a state may do with the lands which it already owns. See generally Sax, *supra* note 58.

60. See, e.g., Bartke, *The Navigation Servitude and Just Compensation—Struggle for a Doctrine*, 48 ORE. L. REV. 1 (1968).

the United States, they may be utilized by the Government without compensation to adjoining private owners.

The difficulty with such an expanded view of the navigation servitude lies in the fact that, although it seems reasonable to view the dominant interest of the United States in the land in question as a segment of the public domain, the cases supporting this view of the servitude have all dealt solely with the question of navigation.⁶¹ Those cases tend to support the narrow view that lands below the high-water mark are public lands only when the navigation authority of Congress is being exercised with regard to these lands. It appears, then, that if the lands are sought to be used by the Government through an exercise of some authority other than that of navigation, those lands cannot be considered public lands, and the taking is therefore subject to the compensation provisions of the fifth amendment.

The fourth and probably most reasonable theory which can be used in arguing that site acquisition could properly be achieved under the navigation servitude is based on the proposition that the traditional view of the navigation servitude is unnecessarily restrictive and has been made obsolete by subsequent developments in the very precepts of constitutional law upon which it was based. The concept of the navigation servitude grew out of the early case of *Gibbons v. Ogden*,⁶² in which it was held that, by virtue of the commerce clause, the United States has exclusive and absolute control over certain waterways. Subsequent cases recognized that because of this exclusive and absolute control, the United States has an interest in the beds of navigable waterways—"the navigation servitude"—which is superior to the rights of private owners.⁶³ According to those early cases, the servitude exists to serve and make effective the power of the United States to regulate interstate and foreign commerce; thus the servitude exists to serve commerce. That concept, however, reflected the relatively narrow view which those cases had of the scope of the commerce power of the United States. Beyond those transactions which were unquestionably interstate or foreign commerce, the commerce power extended within state lines only tentatively; and the reach of that power was limited to com-

61. *United States v. Twin City Power Co.*, 350 U.S. 222 (1956); *United States v. River Rouge Improvement Co.*, 296 U.S. 411 (1926).

62. 22 U.S. (9 Wheat.) 1 (1824).

63. *United States v. Chandler-Dunbar Water Power Co.*, 229 U.S. 53, 62 (1913). See also *United States v. Twin City Power Co.*, 350 U.S. 222 (1956); *United States v. River Rouge Improvement Co.*, 296 U.S. 411 (1926).

merce on navigable waters. The rationale for this limitation was that since only navigable waters could support commerce, the commerce power was limited to navigable waterways.⁶⁴ Water was thus viewed merely as a conduit of commerce rather than as an article of commerce. It was in this context that the navigation servitude was developed. Because that servitude derived its character and limitations from the commerce power which it was intended to effectuate, it was, like the commerce power, limited in its exercise to purposes in aid of navigation. Since the time when the navigation servitude was developed, however, the scope of the commerce power has been greatly expanded. Moreover, it is unquestionable that water itself has become an article of commerce rather than a mere "navigation conduit" and should be considered in that light.⁶⁵ However sound its original basis, then, the historical equation of "commerce" with "navigation" is no longer valid; and the commerce power should now encompass not only navigable streams, but also all other streams in which the water itself may be said to be an article of interstate commerce. And since "commerce" and "navigation" can no longer be equated, the servitude cannot remain limited in its exercise to purposes in aid of navigation, but must expand with the commerce power from which it is derived. For these reasons, the navigation servitude should be available for use in helping to control pollution. The conclusion follows that the navigation servitude may be used to acquire surveillance sites, because those sites will be used in a program designed to eliminate pollution and consequently to aid interstate commerce by removing a burden on interstate waters.

It seems likely that at least one of the foregoing approaches would permit the United States to acquire surveillance sites by means of exercising its navigation servitude. Although a substantial number of the necessary sites can probably be acquired in this manner, it may be necessary or desirable in some instances to establish surveillance stations on sites which cannot be obtained through the navigation servitude. For example, sites below the high-water level on waters which are neither navigable nor interstate may be beyond the reach of the servitude, as may be sites for stations which must be established above the high-water level. In those cases, other means for acquisition must be sought.

64. *Gibbons v. Ogden*, 22 U.S. (9 Wheat.) 1 (1824).

65. Water is now used for public water supply, irrigation, and electrical generation and is an article of commerce in the market place no less than guns or butter.

B. *Establishment of Surveillance Stations on Federal Lands*

One possible way to acquire sites for surveillance stations other than by the exercise of the navigation servitude is to place such stations on lands which are already owned by the federal government. When this course is feasible, problems and costs of site acquisition may be greatly eased. A threshold question, however, with respect to whether federal lands can be used for surveillance stations, and indeed, with respect to whether a surveillance system as contemplated may be established at all, is whether the Federal Water Quality Administration is authorized to be a land-administering agency. Nothing in the applicable statutes appears to prohibit that responsibility; and in certain situations, such as those involving research stations,⁶⁶ that agency already exercises such authority. Nonetheless, it would be advisable to establish the land-administering authority of the agency through an opinion either by the Solicitor of the Department of the Interior or by the Attorney General of the United States.

Assuming that there is such a land-administering authority, it will still be necessary, as a general procedural matter in the acquisition of federal lands for surveillance station sites, that the Federal Water Quality Administration secure the authorization for such use from the agency responsible for the administration of the lands involved. While special permits may not often be required as a matter of law, some type of formal arrangement may nonetheless be desirable, because it is important that the sites be segregated from other uses. That segregation could be accomplished by a special permit, or by executive withdrawal, or by a suitable declaration prohibiting conflicting uses.

There is considerable potential for using federal lands as sites for surveillance stations, since many of the river basins of the United States drain federal lands upon which stations might be located. The southeastern river basins, for example, encompass a number of national forests, including the Apalachicola and Conecuh National Forests. The Ohio River basin drains the Allegheny, Wayne, Hoosier, and Shawnee National Forests. The lower Missouri River basin drains a wide variety of federal lands, including public lands in Colorado and Wyoming, national forests in Colorado, Wyoming, and Nebraska,

66. See Water Quality Improvement Act of 1970, § 105(k), Pub. L. No. 91-224, § 105(k), 84 Stat. 91, amending Federal Water Pollution Control Act § 5, 33 U.S.C. § 466c (1964), as amended (Supp. IV, 1965-1968), which gives the Secretary authority to acquire land for demonstration projects, field laboratories, and research facilities.

and Indian reservations in Nebraska. Indeed, nearly all of the rivers of the West drain federal lands of every description. In addition, probably all of the river basins of the United States drain federal water-project sites which are under the jurisdiction of either the Army Corps of Engineers or the Bureau of Reclamation. Thus, since the federal government owns a great deal of land in the United States, it is possible that a substantial number of the necessary surveillance stations may ultimately be located on federal lands. But significant legal problems may be encountered in an attempt to establish surveillance stations on the various types of federal lands, and each category of federal landownership has its own peculiar problems which must be overcome. The following discussion examines the problems encountered in some of the more important areas of federal landownership.

1. *Public-Domain Lands*

The term "public-domain lands" as used in this analysis refers to that portion of the public domain which is under the jurisdiction of the Secretary of the Interior and which is administered and managed by the Director of the Bureau of Land Management. The extent of these lands, particularly in the western states, is vast; and in the absence of previous withdrawals or reservations, chances are good that such lands could be made available for surveillance stations. In order to establish surveillance sites on public lands, it would be necessary for the Secretary to withdraw the sites from entry. Such withdrawal may be accomplished pursuant to the Pickett Act⁶⁷ or through the exercise of the Secretary's general authority to withdraw and reserve lands from entry and settlement.⁶⁸ The Pickett Act grants the President the authority to withdraw any public lands of the United States and to reserve those lands for water-power sites, irrigation, classification of lands, "or other public purposes to be specified in the orders of withdrawals"⁶⁹ The President has since delegated that authority to the Secretary of the Interior.⁷⁰

There is little doubt that the establishment of surveillance stations is a "public purpose" as contemplated by the Pickett Act, and could therefore be the subject of a valid withdrawal. A withdrawal of lands pursuant to the Pickett Act, however, has one potential

67. 36 Stat. 847 (1910), 43 U.S.C. §§ 141-42 (1964).

68. *United States v. Midwest Oil Co.*, 326 U.S. 459 (1915).

69. 43 U.S.C. § 141 (1964).

70. Exec. Order No. 10,355, 3 C.F.R. 873 (1949-1953 comp.).

pitfall which should not be overlooked. Section 2 of the Act provides that any lands so withdrawn "shall at all times be open to exploration, discovery, occupation, and purchase under the mining laws of the United States, so far as the same apply to metalliferous minerals"⁷¹ In many cases, such a wide range of potential entry may not be deemed desirable by the Secretary, and in those cases limited segregation of lands may be accomplished by means other than by use of the Pickett Act. For example, if acquisition of the land is preceded by a retention classification by the Secretary under the Classification and Multiple Use Act,⁷² the Secretary may provide in that classification that the lands be segregated from uses such as mineral entry.⁷³ Alternatively, it may be possible to insulate the surveillance station site from mining claims simply by seeking a withdrawal by the Secretary pursuant to his general withdrawal authority.⁷⁴ In order to initiate the withdrawal either under the Pickett Act or under general withdrawal powers, the Federal Water Quality Administration would submit an application to the Bureau of Land Management.⁷⁵ Upon application, the lands would become segregated and no longer open to entry.⁷⁶ If the Bureau of Land Management approved the application, it would issue a final withdrawal order.⁷⁷

2. *National-Forest Lands*

Another group of federally owned lands which are attractive for water pollution surveillance station sites are the national forests. Indeed, forest lands may prove more important than public-domain lands as possible sites, because, unlike the public-domain lands, the national forests are also found in the eastern states, where both the problems of pollution and the cost of any private land which must be acquired for sites are likely to be much greater than they are in the western states.

The national-forest lands are administered by the Secretary of Agriculture, and their availability for use in a surveillance system

71. 43 U.S.C. § 142 (1964).

72. 43 U.S.C. §§ 1411-18 (1964).

73. 43 C.F.R. § 2411.2(e)(1) (1969). See generally Comment, *The Conservationists and the Public Lands: Administrative and Judicial Remedies Relating to the Use and Disposition of Public Lands Administered by the Department of the Interior*, 68 MICH. L. REV. 1200 (1970).

74. See, e.g., 43 U.S.C. § 141 (1964); Exec. Order No. 10,355, 3 C.F.R. 873 (1949-1953 comp.). See also *United States v. Midwest Oil Co.*, 236 U.S. 459 (1915).

75. 43 C.F.R. § 2311.0-6 (1969).

76. 43 C.F.R. § 2311.1-2 (1969).

77. 43 C.F.R. § 2311.1-4 (1969).

is less clear than is that of the public-domain lands administered by the Secretary of the Interior. Research has not disclosed any congressional authorization for an interdepartmental transfer or exchange of such lands. It still may be possible to utilize forest lands for surveillance sites, however, since the Secretary of Agriculture is authorized, within certain limits, to permit any public agency to use and occupy land within the national forests for the purpose of constructing or maintaining any buildings, structures, or facilities necessary or desirable for any public use.⁷⁸

It seems clear that this authorization embraces federal agencies, such as the Federal Water Quality Administration, in addition to state and local agencies. Moreover, the language seems broad enough to authorize the establishment of surveillance stations within the national forests upon the approval of the Secretary of Agriculture. As with the public-domain lands⁷⁹ the possibility of mining entry may pose some problem, since, absent withdrawal, the national forest lands are open to mining entry.⁸⁰ It is unclear, however, in the case of forests, whether the Secretary of Agriculture can condition the permits so as to insulate the location from mining claims after the establishment of the stations, for it is uncertain that he has the power to order that the lands be withdrawn from entry. Perhaps the Secretary of the Interior could order such withdrawal.⁸¹ But whatever the case, such withdrawals should, if possible, be effected immediately upon the issuance of the permits.

3. Bureau of Reclamation Project Sites

It is also possible that project sites of the Bureau of Reclamation could be used as sites for water quality surveillance stations. The Bureau of Reclamation has acquired jurisdiction over certain potential reclamation project sites in the western part of the United States. In most instances, the reclamation project sites have been established by withdrawals from the public lands by the Secretary of the Interior, pursuant to his authority under section 3 of the Reclamation Act

78. 38 Stat. 1101 (1915), 16 U.S.C. § 497 (1964). The area to be occupied may not exceed eighty acres, and the period of occupation may not exceed thirty years. In addition, "[t]he authority provided by this section shall be exercised in such a manner as not to preclude the general public from full enjoyment of the natural, scenic, recreational, and other aspects of the national forests."

79. See text accompanying notes 71-77 *supra*.

80. See 16 U.S.C. § 482 (1964).

81. The Secretary of the Interior does have that authority with respect to lands under his administration. See text accompanying notes 71-77 *supra* with respect to the national-forest lands. 43 U.S.C. § 482 (1964) permits the Secretary to restore mineral lands to the public domain.

of 1902.⁸² If any such sites are to be used for surveillance stations, it would appear advisable to transfer administrative jurisdiction over a portion of the sites to the Federal Water Quality Administration. Such an intradepartmental transfer of jurisdiction could be accomplished by a modification of the reclamation withdrawal order,⁸³ followed by a new withdrawal order issued under the Secretary's general authority to withdraw public lands.⁸⁴ If such a formal transfer is not thought to be feasible, an alternative might be for the Bureau of Reclamation and the Federal Water Quality Administration to make an agreement allowing portions of the reclamation sites to be used for surveillance purposes.⁸⁵

4. *Corps of Engineers Project Sites*

Another category of federal lands which may prove extremely useful as sites for surveillance stations are the lands administered by the Army Corps of Engineers. These lands are particularly attractive in that they are located on rivers and are found throughout the country. Furthermore, the authority for a transfer of rights in these lands to the Federal Water Quality Administration is clear. The Secretary of the Army has broad authority to grant licenses or leases of water resource development lands to public agencies, without monetary consideration, whenever he determines such action to be in the public interest. In addition, he has the general power to lease nonexcess property within his jurisdiction.⁸⁶ Consequently, few legal problems, if any, should be anticipated in acquiring surveillance sites on property under the jurisdiction of the Corps of Engineers. The possibility of interdepartmental administrative difficulties still exists, however, and may be more troublesome than the legal questions involved.⁸⁷

5. *General Problems with Establishing Surveillance Stations on Federal Lands*

In some instances, federal lands may be devoted by statute to a single purpose which is incompatible with the establishment and

82. 32 Stat. 388, 43 U.S.C. § 416 (1964).

83. 43 U.S.C. § 416 (1964).

84. See text accompanying notes 67-77 *supra*.

85. 43 U.S.C. § 387 (1964).

86. 70A Stat. 150 (1956), 10 U.S.C. § 2667 (1964). "Nonexcess property" is property under the control of the Secretary of the Army other than that which he has determined is not required for the needs and the discharge of the duties of the Army. See 40 U.S.C. § 472(e) (1964).

87. The internecine warfare between federal agencies, particularly in the annual appropriations battle, is legendary.

operation of surveillance stations on them. Examples of such single-purpose federal areas are national parks⁸⁸ and monuments,⁸⁹ and defense or military installations.⁹⁰ In such cases, unless suitable alternative sites are available for surveillance activities, legislation may be needed to broaden the purposes for which the lands may be used. Of course, in adopting such legislation, Congress would have to balance the compatibility of surveillance stations with the purposes for which the lands were originally set aside.

Without advance knowledge of the potential sites for surveillance stations on federal lands, it is impossible to predict the individual problems which may arise in each case. As a general proposition, however, it should be realized that mere federal ownership of a potential site does not guarantee that, as a practical matter, that site will be available for surveillance purposes; many interdepartmental and intradepartmental obstacles may make the acquisition of appropriate sites on federal lands no more feasible than is the acquisition of similar sites on state or private lands. Even if the land is available, the economic savings which may be achieved through use of a federal site may be offset by the costs involved in proceeding through the intricacies of an intragovernmental land transfer. Nevertheless, federal lands will frequently offer many advantages over state or private lands and should be considered carefully in site selection. Indeed, if their attractiveness for technological or scientific purposes is equal to that of alternative sites on state or private lands, the federal sites would probably be preferable in most instances, simply because they would not require funding for their initial acquisition.

C. *Acquisition of Surveillance Sites from States, Municipalities, or Private Owners*

Although a substantial portion of the necessary surveillance sites may be obtained either through an exercise of the navigation servitude or through the use of federal lands, some acquisition of interests in state, local, or private lands will probably be necessary for the establishment of a comprehensive water quality surveillance system. The following discussion explores the legal problems which may arise in connection with the acquisition and use of such lands.

88. 16 U.S.C. §§ 1-3 (1964). See also National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852.

89. 16 U.S.C. §§ 1-3 (1964). See also National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852.

90. See, e.g., 16 U.S.C. §§ 670a, 670c (Supp. IV, 1965-1968).

1. *Authority of States and Municipalities To Transfer Interests in Land*

An initial problem in acquiring sites from states or municipalities concerns the authority of those states or municipalities to transfer to the United States the real property for the sites. Rights which the federal government might acquire in that property include fee-simple title, lease, permanent or temporary easement, or license. Because it is essential, if the station is to operate indefinitely, that the interest which is to be acquired for the establishment of that station be a relatively substantial and permanent one, the authority to grant licenses, which are generally revocable at will, need not be considered. Instead, the real question concerns the authority of states and municipalities to transfer legal interests which are at least as substantial as a temporary easement.

Because the authority held by the states and municipalities which own potential surveillance sites is certain to be subject to a multiplicity of local laws, a universally applicable answer to that question is not possible. Moreover, because of the sheer number of states and municipalities owning land in the river basins of the United States, a definitive answer for each particular situation is impossible. For present purposes, however, it will suffice to state that, as a general rule, states and municipalities do possess the authority to grant legal interests in the real property which they own.⁹¹

Initially, the acquisition of sites from state or local governments will require that federal officials consult with the officials responsible for the management of those areas. In the case of state governments, the state water pollution control agency or the park commission is

91. The following provisions are representative of state statutes granting authority to the federal government for the acquisition of state or private lands: *Colorado*: The State of Colorado authorizes the State Board of Land Commissioners to sell any state land in such parcels as the Board shall deem for the best interests of the state. COLO. REV. STAT. § 112-3-25 (1963). *See also* COLO. REV. STAT. § 66-28-3 (Supp. 1967). *Florida*: FLA. STAT. ANN. § 6.02 (1961) (emphasis added) provides:

The United States may purchase, acquire, hold, own, occupy and possess such lands within the limits of this state as they shall seek to occupy and hold as sites on which to erect and maintain forts, magazines, arsenals, dockyards, and other needful buildings, or any of them, as contemplated and provided in the constitution of the United States; such land to be acquired either by contract with owners, or in the manner hereinafter provided.

See also FLA. STAT. ANN. § 6.03 (1961); FLA. STAT. ANN. § 589.10 (1962). *Tennessee*: The State of Tennessee authorizes the United States to acquire such lands as in the opinion of the federal government, the State Forester, and the Governor may be necessary for such projects as the improvement and development of the Tennessee River Basin. TENN. CODE ANN. § 11-1001 (1955). *See also* TENN. CODE ANN. §§ 11-1401, 12-201 (1955); TENN. CODE ANN. § 11-1416 (Supp. 1969). *West Virginia*: The State of West Virginia authorizes the United States to acquire lands in the state by purchase, lease, or condemnation for such purposes as constructing public improvements, or for any other purpose for which the United States may need the land. W. VA. CODE § 1-1-3 (1966). *See also* W. VA. CODE § 20-5A-5 (Supp. 1969).

often the responsible agency. Other possibilities include the state highway department, the state planning commission, and the state public utilities commission. As is the situation with respect to federal parklands,⁹² cases of potential incompatibility of uses may arise when surveillance sites are sought on state or municipal parklands.⁹³ Unless political accommodations can be made to permit the establishment of the stations in such areas,⁹⁴ alternative sites must be chosen. In all cases involving the acquisition of state-owned sites, the state water pollution control agency should be consulted regarding the site selection and acquisition process in order to ensure the most efficient use of state resources.⁹⁵

2. *Authority of the United States To Acquire Lands for the Establishment of a Surveillance System*

Assuming that there is the requisite statutory authority to establish water quality surveillance systems,⁹⁶ it will be necessary for the Secretary of the Interior or the Federal Water Quality Administration to acquire lands on which to locate such stations. There are at least four potential methods which can be used for that acquisition. These methods include the acceptance of sites by donation and the acquisition of lands by purchase, condemnation, or exchange. Yet the statutory authority to utilize these methods is not entirely clear.

a. *Acceptance of sites by donation.* Existing law apparently does provide for the acceptance of donations of sites for water quality surveillance. There is a general statutory authority for the Secretary of the Interior to "accept contributions or donations of . . . property, real, personal, or mixed, for the improvement, management, use, and protection of the public lands and their resources under his jurisdic-

92. See text accompanying note 88 *supra*.

93. There may be statutory restrictions on the uses which may be made of those lands. See, e.g., ARIZ. REV. STAT. ANN. § 41-511.03 (1957); VA. CODE ANN. § 10-21.4 (Supp. 1968).

94. Accommodations must be made with the state agencies responsible for parklands, and, if statutory restrictions are involved, with the state legislators as well. In some instances, even the state legislature may be restricted in what it can do with the state parklands. See, e.g., *Gould v. Greylock Reservation Commn.*, 350 Mass. 410, 215 N.E.2d 114 (1966). See generally Sax, *supra* note 58, at 493-502.

95. Such consultation with state pollution control officials is desirable and perhaps necessary even when the lands are sought to be acquired from municipalities. Although municipalities generally have sufficient authority to grant easements and permits respecting municipally owned land, in some instances state control may restrict local authority. For example, if a state pollution control agency holds powers respecting the use of state waterways, a municipality may be subject to those restrictions. In any event, because of the need for cooperation in pollution control with state officials, it is desirable to consult the state pollution control agency in any such land acquisition.

96. See text accompanying notes 19-37 *supra*.

tion”⁹⁷ That statute has been administratively interpreted to authorize the Secretary to accept sites for water research laboratories which are provided for in the Federal Water Pollution Control Act.⁹⁸ Under this administrative interpretation, it is not necessary that the acquisition become part of the public lands, “but only that it will be beneficial in the ‘improvement, management, use, and protection of the public lands’ ”;⁹⁹ and since the conservation and development of water resources is directly related to the development and use of the public lands, “it is within the jurisdiction of the Secretary of the Interior to accept the donation of land.”¹⁰⁰

Since establishment of a water pollution research facility has thus been found to have enough impact upon the “improvement, management, use, and protection of the public lands and their resources . . .” to permit the Secretary to accept donations of land for that purpose, it seems to follow, although there has been no specific administrative ruling on the question, that the Secretary should similarly be permitted to accept donations for water quality surveillance stations for monitoring the flow of waters arising on, or related to, the public lands. At the very least, then, there seems to be adequate authority for the Secretary to accept donations of sites for surveillance stations which would monitor pollution directly affecting the public lands.

In addition, a strong argument can be made that the Secretary of the Interior is empowered to accept donations of sites which are not on waters directly affecting the public lands. The research developments generated by surveillance stations and equipment, wherever located, will be of ultimate benefit to all the water resources of the nation, including those on the public lands. Moreover, to the extent that adequate enforcement of water quality standards depends upon the existence of a comprehensive system of monitoring stations, it can be argued that the benefit which will accrue to the public lands from the control of water pollution will be much greater if such a comprehensive system of stations is established than if stations are established only in direct proximity to public lands.

97. 74 Stat. 506 (1960), 43 U.S.C. § 1364(a) (1964).

98. Memorandum from Associate Solicitor for Water Resources and Procurement, Department of the Interior, to the Assistant Commissioner for Administration, Federal Water Pollution Control Administration, Nov. 5, 1968. 33 U.S.C. § 466c(e) (1964) authorizes “research, investigations, experiments, field demonstrations and studies, and training relating to the prevention and control of water pollution.”

99. Memorandum from Associate Solicitor for Water Resources and Procurement, Department of the Interior, to the Assistant Commissioner for Administration, Federal Water Pollution Control Administration, Nov. 5, 1968.

100. *Id.*

It might be objected that such a position stretches the authority vested by the statute beyond its contemplated limits. However, unlike earlier statutory provisions authorizing the Secretary to accept donations,¹⁰¹ the provision in question here was enacted as a general authorizing provision, and a broad interpretation is supported by the other provisions of the same Act.¹⁰² Hence, it does not appear that further specific legislative authority is necessary to empower the Secretary of the Interior to accept donations of property for general purposes relating to the control of water pollution. Nevertheless, if for other reasons legislative action is necessary in order to establish a surveillance system,¹⁰³ whatever uncertainty does exist with respect to the Secretary's authority to accept donations could be alleviated by the inclusion of specific authority in such legislation.

b. *Acquisition of sites by exchange.* Another means by which possible surveillance sites could be acquired is exchange. It appears that it would be possible, particularly in the western states, for the Secretary to acquire surveillance sites by exchanging public lands under his jurisdiction. The Taylor Grazing Act¹⁰⁴ confers broad authority upon the Secretary to make such transfers when he finds that the "public interests will be benefited."¹⁰⁵ Presumably, if the Secretary were to find that the public interest would be benefited by the establishment of surveillance stations on certain tracts of private land, his authority to acquire those private lands through exchange would be clear. The statute, and others of similar effect,¹⁰⁶ are of

101. See, e.g., 43 U.S.C. § 36b (1964) (acceptance of lands by Geological Survey); 43 U.S.C. § 315h (1964) (acceptance of lands for grazing districts); 43 U.S.C. § 1102e (1964) (acceptance of property to further management of reconveyed Indian lands in Oklahoma).

102. Pub. L. No. 86-649, 74 Stat. 506 (1960), of which the provision referred to is a part, also grants to the Secretary the general authority to conduct studies, investigations, and experiments with respect to the improvement, management, use, and protection of public lands and their resources and to enter into cooperative agreements for those purposes, so long as such agreements are not expressly prohibited. See 43 U.S.C. §§ 1362-63 (1964). A broad interpretation of the Secretary's authority to accept donations is also supported by the express provision that the statute is not meant to limit or repeal any previously existing statutory authority empowering the Secretary to accept contributions or donations. 43 U.S.C. § 1364(b) (1964).

103. See note 40 *supra* and accompanying text.

104. 43 U.S.C. §§ 315-15g, 315h-15m, 315n, 315o-1 (1964).

105. 48 Stat. 1272 (1934), as amended, 43 U.S.C. § 315g (1964).

106. See generally 43 U.S.C. §§ 315m-1 to 315m-4 (1964) (Taylor Grazing Act of 1938); 16 U.S.C. § 668dd(b) (Supp. IV, 1965-1968) (National Wildlife Refuge System); 16 U.S.C. § 555a (1964) (exchange of lands under the jurisdiction of the Forest Service); 7 U.S.C. § 1011(f) (1964) (authority of Secretary of Agriculture to deal with lands acquired for land conservation and land utilization); 16 U.S.C. § 485 (1964) (exchange of lands in national forests); 16 U.S.C. § 569 (1964) (donations of lands to the United States for timber purposes); 16 U.S.C. §§ 513-19 (1964) (purchase and exchange of lands for national forests); 16 U.S.C. § 663(c) (1964) (acquisition of lands for the conservation of wildlife resources).

somewhat limited application, however, since they are applicable only under certain statutory conditions. Moreover, because of the restrictions upon the types of lands which may be exchanged,¹⁰⁷ and because the lands which may be desirable for an exchange may have already been committed to a particular use for the immediate future,¹⁰⁸ the practical availability of this power of the Secretary may be further diminished.

c. *Acquisition of sites by purchase or condemnation.* The statutory authority for the purchase or condemnation of property for surveillance sites is much more tenuous than is that for the exchange of property or for the acceptance of donated property. The Secretary of the Interior does not have general legislative authority for the purchase of real property; instead, such authority must be set out by statute for each specific purchase.¹⁰⁹ Thus, although the Federal Water Pollution Control Act¹¹⁰ authorizes the Secretary to "establish, equip, and maintain field laboratory and research facilities" in certain designated areas of the country and in other areas as he may see fit,¹¹¹ and although such authority may subsume the authority to purchase lands for the specific facilities enumerated in the section,¹¹² it is unlikely that the authority would extend to the purchase of sites for surveillance stations, because such stations are not mentioned in the statute.¹¹³

A second possibility for the requisite authority is found in the statute authorizing the Secretary to acquire lands for "gaging streams

107. See, e.g., 43 U.S.C. § 315g(b) (1964), which provides that the Secretary in exchange for the private lands acquired, may "issue patent for not to exceed an equal value of surveyed grazing district land or of unreserved surveyed public land in the same State or within a distance of not more than fifty miles within the adjoining State nearest the base lands."

108. There may be some question, for example, whether the Secretary may transfer a fee interest in grazing land if that land is currently being used under a grazing permit. Grazing permits have been held to create actionable rights in the holder, and some statutes confer preferential rights to such permits on owners of contiguous land. Moreover, if the land has been classified under 43 U.S.C. § 1411 (1964) for retention in public ownership for a use which is not consistent with private ownership (such as wilderness preservation), there may be an additional impediment to effecting site acquisition by the transfer method.

109. See 41 U.S.C. § 14 (1964).

110. 62 Stat. 1155 (1948), as amended, 33 U.S.C. §§ 466-66k (1964), as amended, 33 U.S.C. §§ 466-66n (Supp. IV, 1965-1968), as amended, National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852, as amended, Water Quality Improvement Act of 1970, Pub. L. No. 91-224, 84 Stat. 91.

111. 33 U.S.C. § 466c(e) (1964).

112. See 22 Op. Atty. Gen. 665 (1889).

113. Indeed, the Office of Solicitor concluded that "[t]he Secretary of the Interior does not have authority to acquire real property for purpose of his functions and responsibilities under the Federal Water Pollution Control Act" Memorandum of Assistant Solicitor, Water Pollution Control, Department of the Interior, March 10, 1967. However, the Water Quality Improvement Act of 1970 has removed that restriction. See text accompanying note 118 *infra*.

and underground water resources.”¹¹⁴ Under that statute, the Secretary may acquire lands for use by the Geological Survey by donation, purchase, or by condemnation; but he may do so only when funds have been specifically appropriated by Congress. Whether that statute can be construed to permit the acquisition of sites for water quality surveillance depends initially upon whether “gaging” used in the statute includes the measurement of water quality or whether it is limited to the determination of the amount of water volume and flow. The legislative history of the statute clearly indicates that the sites are to be used by the Geological Survey in its activities relating to the measurement of streamflow and water supply.¹¹⁵ Nothing in the language of the statute or in its legislative history, however, indicates that the authority is broad enough to empower the Secretary to acquire lands for water quality surveillance sites. Even if the statute does envisage measurement of water quality as well as quantity, the question remains whether the language “for use by the Geological Survey” precludes the acquisition of sites for use in a surveillance system to be administered by the Federal Water Quality Administration. The answer appears to be that such acquisition is precluded. Serious problems would inevitably arise in the appropriations process in Congress if the Federal Water Quality Administration were to acquire lands under the statute authorizing acquisition for the Geological Survey. It is not likely that Congress would appropriate funds for site acquisition by the Geological Survey, if it knew that the sites would in fact be used by, or transferred to, the Federal Water Quality Administration. Furthermore, it is unlikely that the Geological Survey itself would be willing to seek and disburse appropriated funds in order to provide surveillance sites for another federal agency in the Department of the Interior. The foregoing considerations suggest that it would not be possible for the Secretary to acquire lands under the Geological Survey Statute for use as surveillance sites; indeed, the Office of the Solicitor has held that in general “[t]he Secretary of the Interior does not have authority to acquire real property for purpose of his functional responsibilities under the Federal Water Pollution Control Act”¹¹⁶ It is less clear, however, whether the statute precludes the concurrent use of the lands by the Geological Survey and the Water Quality Administration.

114. 56 Stat. 1086 (1942), 43 U.S.C. § 36b (1964).

115. See H.R. REP. No. 1847, 77th Cong., 2d Sess. (1942), and the transmittal letter of the Department of the Interior contained in that report.

116. Memorandum of Assistant Solicitor, Water Pollution Control, Department of the Interior, March 10, 1967.

Surely sites acquired under this statute and used by the Geological Survey could not be used concurrently for such federal purposes as military activities by the Department of Defense or housing by the Department of Housing and Urban Development. But, the same logic does not necessarily apply to a joint use by the Federal Water Quality Administration, since the use of the sites by that Administration would be similar to the stream-gaging functions performed by the Geological Survey. Moreover, although Congress' specific requirement that the sites be used by the Geological Survey appears to preclude an intradepartmental transfer of jurisdiction to the Federal Water Quality Administration, Congress has not precluded interagency cooperation not involving an intradepartmental transfer of functions; and even though it may not be possible for the Secretary to acquire surveillance sites under the Geological Survey statute, it may well be possible to utilize existing Geological Survey sites within a general system of water quality surveillance. Apparently some steps in this direction have already been taken, for the Geological Survey has offered to increase its gaging activities to include the collection of water quality data for the Federal Water Quality Administration. Such an activity is merely informal and involves no intradepartmental transfer of functions. If this effort should prove to be successful, it will be a healthy initial step toward interagency cooperation in the establishment of a comprehensive water quality surveillance system.

Nevertheless, it is clear that even well-developed cooperative efforts within the Department of the Interior will not be sufficient to establish a complete surveillance system. Furthermore, even if it is possible to make full utilization of the possibilities for site acquisition by the use of the navigation servitude, by the utilization of federal lands, by donations, and by exchanges, it will probably not be possible to establish a complete system without some additional provision by Congress.

D. *Site Acquisition Under the Water Quality Improvement Act of 1970 and Recommended Legislation*

Legislation which has been enacted in the current session of Congress does not appear to provide the necessary specific authority for the acquisition of surveillance sites. The Water Quality Improvement Act of 1970,¹¹⁷ which was signed by the President on April 3, 1970, is an amendment to the Federal Water Pollution Control Act. It permits the Secretary of the Interior to acquire land for certain

117. Pub. L. No. 91-224, 84 Stat. 91.

limited purposes by purchase with appropriated or donated funds, by donation, or by exchange for public lands under his jurisdiction. The language of the Act granting the Secretary the authority to acquire lands is prefaced by the words: "In carrying out the provisions of this section relating to the conduct by the Secretary of demonstration projects and the development of field laboratories and research facilities, the Secretary may acquire land"¹¹⁸

As discussed previously, the authority to acquire sites for "field laboratory and research facilities" is probably not sufficient to encompass the acquisition of sites for surveillance stations.¹¹⁹ Indeed, at least arguably, the Secretary has for some time possessed that authority.¹²⁰ On the other hand, the Secretary's authority to acquire lands for "demonstration projects,"¹²¹ might seem to offer some assistance in this regard. The Federal Water Pollution Control Act had previously authorized demonstration projects relating to the development of "[i]mproved methods and procedures to identify and measure the effects of pollutants on water uses, including those pollutants created by new technological developments"¹²² If that language is broad enough to include surveillance stations, the conclusion then follows that the Water Quality Improvement Act, by expressly authorizing the acquisition of land "[i]n carrying out . . . demonstration projects . . . ,"¹²³ thereby authorizes the acquisition of land for the stations. It is unlikely, however, that this language is sufficiently encompassing, because the authorization relates to "demonstration projects" rather than to a complete system for surveillance and for the enforcement of water quality standards. Furthermore, the language of the Act relates to the identification and measurement of "the effects of pollutants on water uses" rather than the continuous surveillance and monitoring of water quality itself.

Consequently, notwithstanding the judgment of some staff members who have worked closely with the legislation, it appears that the Water Quality Improvement Act does not provide the necessary authority for the acquisition of sites for water quality surveillance facilities. This conclusion is reinforced by the fact that the confer-

118. Federal Water Pollution Control Act § 5(k), Pub. L. No. 91-224, § 105(2), 84 Stat. 91.

119. See text accompanying note 110 *supra*.

120. See text accompanying notes 110-12 *supra*.

121. Federal Water Pollution Control Act § 5(k), Pub. L. No. 91-224, § 105(2), 84 Stat. 91 (1970).

122. 43 U.S.C. § 466c(d)(B) (Supp. IV, 1965-1968).

123. Federal Water Pollution Control Act § 5(k), Pub. L. No. 91-224, § 105(2), 84 Stat. 91 (1970).

ence report which accompanies the House and Conferees' version of the Act makes no reference to land acquisition for purposes of surveillance activities. It is therefore necessary that additional legislation be enacted not only to authorize the establishment of a water quality surveillance system,¹²⁴ but also to provide for the acquisition of the necessary sites for surveillance stations. A draft of proposed legislation designed to achieve these objectives is set forth in the Appendix to this Article.¹²⁵

III. THE APPLICATION OF A WATER QUALITY SURVEILLANCE SYSTEM: THE EVIDENTIARY VALUE OF DATA COLLECTED

An important purpose of an efficient water quality surveillance system would be to assist federal and state officials in determining compliance and noncompliance with water quality standards. But if the data are to be used directly in judicial enforcement of such standards by means of the abatement proceedings authorized under the Federal Water Pollution Control Act,¹²⁶ the data must be sufficient to meet requisite evidentiary standards. Just what those standards are in this area is not entirely clear. The Federal Water Pollution Control Act provides that if the preliminary-conference and hearing-board procedures have been used,¹²⁷ the Court shall receive into evidence a transcript of both of those proceedings.¹²⁸ In addition, the Act provides in section 10(c)(5) that the Court shall receive "such additional evidence, including that relating to the alleged violation of the [water quality] standards, as it deems necessary to a complete review of the standards and to a determination of all other issues relating to the alleged violation."¹²⁹ In another section, the Act provides that the court shall receive "such further evidence as the court in its discretion deems proper."¹³⁰ Unless the language of those latter

124. See note 40 *supra* and accompanying text.

125. See pp. 1165-66 *infra*.

126. 62 Stat. 1155 (1948), as amended, 33 U.S.C. §§ 466-66k (1964), as amended, 33 U.S.C. §§ 466-66n (Supp. IV, 1965-1968), as amended, National Environmental Policy Act of 1969, Pub. L. No. 91-190, 83 Stat. 852, as amended, Water Quality Improvement Act of 1970, Pub. L. No. 91-224, 84 Stat. 91.

127. The conference and hearing board procedures need not always be utilized in abatement proceedings. Under 33 U.S.C. § 466g(c)(5) (Supp. IV, 1965-1968), for example, the only requirement for the abatement of a violation of water quality standards is six-months notice; the conference and hearing-board requirements are waived.

128. 33 U.S.C. § 466g(c)(5) (Supp. IV, 1965-1968).

129. 33 U.S.C. § 466g(c)(5) (Supp. IV, 1965-1968).

130. 33 U.S.C. § 466g(h) (Supp. IV, 1965-1968).

two sections granting discretion to the court can be construed as meaning that the court may apply whatever evidentiary requirements it pleases—an unlikely interpretation—it would appear that the standards applied to such further evidence must be those of the usual rules of evidence. Thus it seems clear that any surveillance data introduced in the judicial proceeding must meet generally established requirements for the competency of evidence produced by scientific instruments.

In order to meet that burden, three requirements must be met: (1) the type of apparatus must be accepted as dependable for the purpose for which it has been used by the profession concerned in that branch of science or art; (2) the particular apparatus used must be one constructed according to an accepted type and must be in good condition for accurate work; and (3) the person using the apparatus must be qualified by training and experience for its use.¹³¹ To satisfy the first requirement, the offering party must show that the device or method used has gained general acceptance in its field as a trustworthy and reliable procedure.¹³² If the accuracy and reliability of the device are notorious and well established, the judge may take judicial notice of this fact and no further proof is necessary.¹³³ But, if the equipment's accuracy and reliability are not generally known, it is necessary to qualify the equipment as dependable by the testimony of witnesses who are experts in the particular field. Because the proposed monitoring and transmission system will be novel in many respects, it is likely that general scientific acceptance cannot be shown and that qualification by expert testimony will therefore be necessary. Second, it is necessary to show by expert testimony that the particular apparatus is constructed according to an accepted type and that at the time at which the data in question were collected, the apparatus was in good condition to perform accurate work. To show that the equipment was accurate at the time of use, it is generally necessary that the system have been tested for accuracy on the date of the charged violation.¹³⁴ The third requirement—that the person interpreting the data be qualified for the job by training and experience—can be met simply by testimony demonstrating the training and experience of the witness.

131. J. WIGMORE, *THE SCIENCE OF JUDICIAL PROOF* 450 (3d ed. 1937).

132. *Lindsay v. United States*, 237 F.2d 893, 896 (9th Cir. 1956).

133. *See State v. Dantonio*, 18 N.J. 570, 115 A.2d 35 (1955).

134. *See State v. Dantonio*, 18 N.J. 570, 115 A.2d 35 (1955); *State v. Moffitt*, 100 A.2d 778 (Del. Sup. Ct. 1953); *Carrier v. Commonwealth*, 242 S.W.2d 633 (Ky. Ct. App. 1951).

With respect to the proposed monitoring and transmission system, the qualification of the equipment and of its operator probably can be met fairly easily. However, the need to show that the equipment was accurate at the time at which the data were collected poses more difficult problems. Indeed, since the surveillance system would be composed of remote, unattended monitoring stations, that testing requirement may be difficult, if not impossible, to meet. Therefore, unless specific statutory authority is enacted to make surveillance data admissible as evidence in abatement proceedings, it may not be possible under the traditional rules of evidence to use the data collected as direct evidence in judicial abatement proceedings.

Nevertheless, even if such statutory authorization is not forthcoming, a surveillance system can still be a crucial element in the control of water pollution. The important research and planning functions served by a surveillance system would not be affected by the inability to use the data as direct evidence in abatement proceedings. Even with respect to abatement proceedings, the use of surveillance data as direct evidence is not essential. In fact, under the present structure of the Act, such use of the data may not be necessary, at least in cases in which a conference and a hearing board are called prior to the initiation of abatement proceedings,¹³⁵ because in such cases the bulk of the evidence used in the proceedings consists of the record developed at the administrative level¹³⁶—in the investigatory conference¹³⁷ and before the hearing board.¹³⁸ The inability to use the surveillance data directly in a judicial proceeding does not mean that this evidence cannot be used in the administrative proceeding, for the evidentiary requirements of the administrative proceeding are not necessarily the same as those of a judicial proceeding for abatement. Under the Administrative Procedure Act,¹³⁹ it is clear that the evidentiary requirements are far less strict than they are in a judicial proceeding, particularly with respect to questions of hearsay and of competency of evidence.¹⁴⁰ Thus, since the evidence

135. *But see* note 127 *supra*.

136. *See* 33 U.S.C. §§ 466g(c)(5), (h) (Supp. IV, 1965-1968).

137. 33 U.S.C. § 466g(d) (Supp. IV, 1965-1968).

138. 33 U.S.C. § 446g(f) (Supp. IV, 1965-1968).

139. 5 U.S.C. §§ 551-59, 701-06 (Supp. IV, 1965-1968).

140. Section 7(d), 5 U.S.C. § 556(d) (Supp. IV, 1965-1968), provides in part:

Any oral or documentary evidence may be received, but every agency shall as a matter of policy provide for the exclusion of irrelevant, immaterial, or unduly repetitious evidence. A sanction may not be imposed or rule or order be issued except on consideration of the whole record or those parts thereof cited by a party

used by the court in an abatement proceeding consists largely of the record of the administrative proceedings, and of the Secretary's recommendations made on the basis of the evidence received in the administrative proceedings, it is clear that data from a surveillance system may still play an important role in the enforcement of the water pollution control laws, at least in those cases which undergo administrative scrutiny prior to abatement.¹⁴¹

Moreover, probably the greatest contribution which a surveillance system will make toward the effective enforcement of pollution control laws is not in the role of providing direct evidence in either administrative or judicial proceedings. Rather, its greatest contribution lies in the area of the detection of pollution and polluters. Undoubtedly it is in the area of detection that present law and practice are most lacking, for there simply are no systematic procedures for detection. Once the Secretary has reason to suspect that a person is violating water quality standards, he has authority under the Act to require that person to disclose in a report the extent of polluting substances which he has discharged.¹⁴² Certainly, that procedure may help to gather probative evidence for an abatement proceeding, but its operation is predicated upon the Secretary having first detected the polluter and called a conference. If a surveillance system can fulfill the function of the initial detection, a major step will have been taken toward the control of water pollution.

IV. CONCLUSION

In light of the foregoing considerations, it may be concluded that the establishment of a federal water quality surveillance system is a necessary prerequisite to the effective implementation of the Federal Water Pollution Control Act. Moreover, although there is no specific authorization in the existing laws for the establishment of a surveillance system, such authorization seems to be implicit in the

and supported by and in accordance with the reliable, probative, and substantial evidence.

Congress, in enacting the Administrative Procedure Act, omitted from the final bill the requirement that evidence in administrative proceedings be "competent," although earlier drafts of the bill had made "competency" a requirement. Evidence may be "reliable, probative, and substantial" for purposes of an administrative determination even though that evidence would not be "competent" in a judicial proceeding. *United States ex rel. Dong Wing Ott v. Shaughnessy*, 116 F. Supp. 745, 750 (S.D.N.Y. 1953). See K. DAVIS, ADMINISTRATIVE LAW TEXT § 14.05 (1959).

141. See note 127 *supra*.

142. 33 U.S.C. § 466g(f) (Supp. IV, 1965-1968).

general context of the Act. At the same time, however, the caveat should be offered that the Act is deficient in that it lacks specific authority for site acquisition and for the procurement of equipment. Consequently, the Act should be augmented by supplemental legislation.

Furthermore, in view of the fact that the existing law places upon state water pollution control agencies much of the initial responsibility for the enforcement of water quality standards, the federal water pollution surveillance system should be developed in close cooperation with relevant state agencies and officials in order to minimize any duplication of facilities and surveillance activities. In this connection, it is suggested that any new legislation should clarify the relative roles of federal and state officials in the enforcement and abatement process and should specifically assign responsibility or provide for the coordination of activities in the operation of surveillance facilities.

APPENDIX

Suggested Amendment

Section 10. Section 10 of the Federal Water Pollution Control Act, as amended (33 U.S.C. § 466g [(1964), *as amended*, (Supp. IV, 1965-1968)]), is amended:

- (a) by redesignating sub-subsections (6) and (7) of subsection (c) as (8) and (9);
- (b) by inserting after sub-subsection (5) of subsection (c) two new sub-subsections to read as follows:

“(6) In carrying out his duties under this section, the Secretary is authorized to establish, equip, and maintain a water quality surveillance system for the purpose of monitoring the water quality of interstate waters or portions thereof and detecting the existence and nature of pollutants therein.

“(7) The Secretary is authorized, on behalf of the United States and for use by the Federal Water Quality Administration in carrying out the duties under this section, to acquire land or interests therein and necessary access rights by purchase, with appropriated or donated funds, by condemnation, by donation, or by exchange for ac-

quired or public lands under his jurisdiction which he classified as suitable for disposition. The values of the properties so exchanged either shall be approximately equal, or if they are not approximately equal, the values shall be equalized by the payment of cash to the grantor or to the Secretary as the circumstances require."