In an early form the Act also granted the Commission control over the issuance of securities—a power presumably essential to the improvement of economic conditions within the industry. Deletion of this provision seems especially regrettable in view of the recent Intercoastal Rate Structure Investigation which revealed serious imprudence in the financial management of intercoastal carriers. Such financial abuses in parts of the industry might well justify supervision, not only over the issuance of securities, but also over the more detailed financial operations of the carriers.

Lack of control over private carriage and the great number of absolute exemptions under the Act present the Commission with its two most immediate regulatory problems. If the Commission fixes minimum rate levels too high or by other means makes for-hire carriage too costly, large industrial shippers may turn to private carriage; if the Commission's standards are lax, private carriers and for-hire carriers specifically exempted by the Act may be able to encroach upon the business of the regulated carriers. Either result would jeopardize two of the policies Congress intended the Commission to effectuate: an adequate common carrier service and sound economic conditions within the industry.

In the long run, however, the major task for the Commission will be the reconciliation of the interests of the water carrier, the railroad, and the motor carrier. Despite several omissions the new Transportation Act provides the basic instruments with which to perform this task. The performance rests with the Commission.

FEDERAL EMINENT DOMAIN POWER IN THE DEVELOPMENT OF WATER PROJECTS

Federal control over the development and utilization of the nation's water resources has grown substantially since the beginning of the conservation movement in the first decade of the century. The principal economic motive for this important assumption of responsibility lies in a long delayed recognition that unified development of entire drainage basins is the only means of effectively controlling and using the water within a river system. With

113. See Eastman, supra note 9, at 43.

development on such a large scale, it becomes necessary to make extensive readjustments of land use and to relocate inhabitants in the river valleys. It is the purpose of this Comment to consider the adequacy of the eminent domain power of the Federal Government as a method of efficiently accomplishing these readjustments.

The effects of water control development on private land use in the river valleys have been sufficiently extensive to give rise to a larger volume of litigation than in any other field of federal eminent domain law. Sites for dam structures constitute only a small part of the total land area to be retired from private use. Waters impounded in large reservoirs may inundate several hundred thousand acres, even requiring the relocation of town sites. "Protective strips" of dry land bordering the inundated tracts, and sometimes equal to them in area, are acquired to prevent deterioration of the reservoir by the accumulation of silt. Extensive areas, particularly in the lower Mississippi, have been exposed to increased flood damage by the development of "floodways." In using this major engineering device for flood control, riverside levees at particular points along the stream are lowered to allow the escape of excess flood waters into designated valley lands; the waters are confined in artificial channels by means of set-back levees and, after the flood subsides, are returned to the main stream at downstream points. In the development of river improvements for navigation and flood control, the construction of dykes, levees, and revetments and the recoursing of channels by the elimination of bends may permanently or during periods of high water inundate large adjacent areas. Where lands are not actually inundated by

2. The Tennessee Valley Authority has acquired approximately 150,000 acres for the Norris dam and reservoir project. It is estimated that the Kentucky Project, largest of the TVA developments, will require the acquisition of 375,000 acres, necessitating the removal of 3,500 families. See 6 Rep. TVA (1939) 7-22. See Crossman, Determining the Purchase Boundaries and the Use of Reservoir Properties (1939) 15 Ec. Geo. 260; Gray, Land Use Aspects of Reservoir Problems (1939) 15 Ec. Geo. 238.


navigation or flood control or multiple-purpose projects, changes in stream behavior may so impair natural drainage as to require the substitution of artificial methods.

Inasmuch as the damage to land resulting from the development of water projects ordinarily takes the form of overflow or inundation, the Government rarely finds it necessary to oust the owner from possession and assume control of the premises before beginning construction. Consequently, an aggrieved owner can generally rely on the Government's instituting a condemnation suit only in those cases where the liability of the United States is obvious. Even then, actions to condemn follow only after unsuccessful negotiation for purchase, or discovery of doubtful links in the chain of title. The major body of eminent domain law relevant to water projects has therefore grown out of another type of proceeding: the landowner's action against the United States. As in the condemnation suit, the substantive right of recovery, where one exists, has almost invariably been found in the provision of the Fifth Amendment limiting the power of the Federal Government to take private property for a public use without the payment of just compensation.

The constitutional prohibition embodied in the Fifth Amendment, however, has by no means operated to insure landowners against all injuries to their holdings sustained as a result of Government action. Two ancient legal principles—only apparently unrelated—have combined to render the plaintiff's claim in an action against the Government highly uncertain. The first of these, growing out of the primitive concept of property as the physical object of ownership rather than as beneficial economic relations with others, defines the "property" to be "taken," within the meaning of the Fifth Amendment, as the land itself. The second legal principle, derived from the medieval maxim that "the King can do no wrong," holds the sovereign immune from

7. A "multiple purpose" dam and reservoir may operate to retard the water flow for the reduction of flood levels, increase it for the maintenance of navigable channel depths, concentrate it for the production of hydroelectric power, and accumulate it for distribution into irrigation canals.


9. Out of 10,415 tracts of land acquired by the Tennessee Valley Authority in the period 1933-39, only 6.91% were condemned because of refusal to sell. 6 Rep. TVA (1939) 114.

10. "... nor shall private property be taken for public use, without just compensation." U. S. Const. Amend. V. Congress may exercise the power of eminent domain in conjunction with any of the enumerated powers. Kohl v. United States, 91 U. S. 367 (1875). For a history of the development of the constitutional doctrine defining the extent of federal power over water resources, see Fly, loc. cit. supra note 1.

11. For an application of Hohfeld's distinction between "relational" and "physical" concepts to the "property" concept in eminent domain cases, both state and federal, see Cormack, Legal Concepts in Cases of Eminent Domain (1931) 41 YALE L. J. 221. See also Hohfeld, Some Fundamental Legal Conceptions As Applied in Judicial Reasoning (1913) 23 YALE L. J. 16, 20.
suit where its consent has not been given. Out of these two principles have emerged a series of doctrinal barriers to recovery rendering the suit against the United States a grossly inadequate means of shifting the individual's loss to the public.

The plaintiff's initial problem of invoking the jurisdiction of the court depends on the applicability of the Tucker Act which authorizes suits against the United States founded upon the Constitution. Under the apparently unnecessary but well-established construction of the Act, the sovereign consents to be sued only in cases "not sounding in tort." Nevertheless, for the purpose of clothing the action for injuries with at least the semblance of one in contract, courts have asserted jurisdiction on the theory of a promise by the United States "implied" by the Fifth Amendment. The juristic concept of an implied promise to compensate has not been expanded, however, to permit the claim in the absence of other vaguely defined "contractual" elements. Not only must it be shown that the Government official taking the plaintiff's property acted within the scope of his authority, but a "consensual relationship" between the plaintiff and the United States must be established. Thus, the owner's consent, or at least his tacit acquiescence in the taking, is a prerequisite to recovery. The intention of the Government to appropriate the property may be implied from the circumstances, but a denial of the intent to pay or an assertion of title will leave the court without jurisdiction of the cause. In Temple v. United States, for example, the plaintiff sought recovery against the Government for dredging the shore line of his riparian

13. 24 STAT. 505 (1887), 28 U. S. C. §41 (20) (1934), 28 U. S. C. §250 (1) (1934). The act confers jurisdiction on the federal district courts "... Concurrent with the Court of Claims, of all claims not exceeding $10,000 founded upon the Constitution of the United States or any law of Congress, or upon any regulation of an executive department, or upon any contract, express or implied, with the Government of the United States, or for damages, liquidated or unliquidated, in cases not sounding in tort, in respect to which claims the party would be entitled to redress against the United States ... if the United States were suable." It confers similar jurisdiction on the Court of Claims, without the limitation on the jurisdictional amount.
19. 248 U. S. 121 (1918).
lot. It appeared, however, that the Government was unaware that the plaintiff owned the area because a lessee of the plaintiff, contrary to express directions, had excavated and submerged that part of the land later dredged by the Government. The Supreme Court held that the Government's claim to the property right in question, at the time of the taking and during the suit, prevented the lower court from rightfully assuming jurisdiction of the controversy. The Court recognized that a "property right" of the plaintiff was violated, if the claim of the Government was unfounded, but, paradoxically, held that no procedural device for recovery was available. Apparently, the incaution of the taking agency in ascertaining ownership provides the Government with an effective means of escaping liability.

Where the elements of the controversy are sufficient for the court to make out the artificial contractual relationship and thus assume jurisdiction, the plaintiff has satisfied the initial requirement for recovery, but his cause may nevertheless be defeated on substantive grounds. The argument frequently invoked by the Government, that private property is subject to a "servitude" in favor of the federal power over navigation, has been generally rejected by the courts under the constitutional theory that the Fifth Amendment operates as a limitation on all of the enumerated powers. But the servitude doctrine has consistently been recognized as a barrier to recovery where the plaintiff is one of the large group of owners whose holdings are located "in the bed of the stream." The concept that plaintiff's title to the bed is qualified by a servitude in favor of the federal power over navigation forecloses, of course, any further issues as to whether his "property" has been "taken." On the basis of this doctrine, privately owned wharves, bridges, and oyster beds have been damaged or destroyed without governmental liability. The defini-

21. Legislation has been passed making it unlawful to construct bridges or other structures across or in navigable streams until the consent of Congress and the approval of the Chief of Engineers and Secretary of War has been obtained. 30 STAT. 1151 (1899), 33 U. S. C. § 401 (1934). Alteration or removal may be required, however, whether or not the permit or statute of consent reserves the power to make such requirements. Hannibal Bridge Co. v. United States, 221 U. S. 194 (1911); Louisville Bridge Co. v. United States, 242 U. S. 409 (1917). State legislation is also insufficient to confer a vested right. Monongahela Bridge Co. v. United States, 216 U. S. 177 (1910).
22. Injuries to privately owned structures and developments in the stream, however closely approaching a destruction, are distinguished, however, from an appropriation for use by the Government, as, for example, a dam. The servitude doctrine does not permit confiscation for beneficial use. See, as a leading case, Monongahela Navig. Co. v. United States, 148 U. S. 312 (1893).
23. Greenleaf Lumber Co. v. Garrison, 237 U. S. 251 (1915). Plaintiff's wharf was within a harbor line approved by the Secretary of War.
25. Lewis Bluepoint Oyster Cultivation Co. v. Briggs, 229 U. S. 82 (1913). Under the holding, it is immaterial that state law vests title to the bed in the plaintiff.
tion of the "bed of the stream" has generally been extended to include all lands below "mean high water mark." 26

Where changes in stream behavior, resulting from project developments, impair the use of riparian or non-riparian land beyond the "natural bed," the courts no longer apply the servitude doctrine. But in actions against the United States, the landowner bears the major burden of showing that, under the Fifth Amendment, his property has been "taken," within the meaning of the term as technically construed. Rooted in the concept of property as the physical object of ownership, a narrow but ill-defined legal principle has developed distinguishing between a "mere damaging" and a "taking." If the impairment of use falls in the damaging category, recovery is precluded because the plaintiff's cause can no longer be classified as a contract action, even though in similar suits between private parties a tort remedy is available. But this theory of "consequential damages" has not been carried to such a logical extreme as to require a complete appropriation and a taking of possession by the Government. In a leading eminent domain case, *Pumpelly v. Green Bay Company*, 27 where land was totally submerged by overflow as the result of the construction of a dam in aid of navigation, the Supreme Court permitted recovery by refusing to "pervert the constitutional provision" to require that the land be taken "in the narrowest sense of the word." 28

Under the authority of the *Pumpelly* case, compensation has sometimes been awarded even where the plaintiff is able to continue beneficial use of the land damaged. 29

But, as a limitation on the *Pumpelly* case, the physical concept of property has survived to the extent that later holdings require an actual invasion of the real estate and such an impairment of land use as to amount to "a practical ouster of possession." 30 A minority line of state decisions, 31 in interpreting state constitutional provisions similar to the Fifth Amendment, pointed out the absurdity of this requirement, by recognizing that the failure to liberalize the property concept might lead to the undesirable construction that


27. 23 Wall. 166 (U. S. 1871). Actually the Court construed a provision in the Constitution of Wisconsin substantially identical with that of the Fifth amendment, but the case has been long regarded as authority for similar holdings under the federal provision.

28. For similar holdings see United States v. Cress, 243 U. S. 316 (1917); United States v. Lynah, 188 U. S. 445 (1903); Rose Island Co. v. United States, 46 F. (2d) 802 (W. D. Ky. 1930); Tompkins v. United States, 45 Ct. Cl. 66 (1910).


“No person shall be divested of the formal title to property without compensation, but he may, without compensation, be deprived of all that makes the title valuable.” 32 Nevertheless, federal courts continued to develop and apply this property concept. Thus, the Supreme Court, on the grounds of the absence of an actual invasion, has denied recovery to riparian owners of land used principally as shipping points where access to the stream is cut off by the construction of Government dykes or piers, reducing property values by half. 33 Likewise, the impairment of drainage, however vital to the particular land use, is insufficient for a successful suit. 34

Furthermore, even where the character of the injury appears to have all the qualities of an actual invasion, and the plaintiff's land is completely washed away, permanently or intermittently overflowed, or converted into the channel bed of the stream, several other conceptual devices emerge to render his claim uncertain. The court may find that the Government did not proximately cause the injury 35 or it may simply declare the damage “consequential” rather than “direct.” 36 In ascertaining proximate cause, the absence of temporal or spacial remoteness has been emphasized. Where the washing away was gradual, though complete, or where the tract was several miles distant from the Government project, the necessary elements of a taking have been found lacking. 37 Intervening forces, such as freshets, have proved fatal although the damage would not have occurred but for governmentally raised water levels. 38 The injury must also be reasonably predictable as a consequence of Government action. The Supreme Court, in John Horstman Company v. United States, 39 assumed causal relation but defeated the action on the grounds that the Government could not foresee the damage. This vague requirement, that the damage be “direct” rather than “consequential,” has sometimes led to extreme holdings. The Sixth Circuit Court of Appeals, in a recent decision difficult to reconcile with the decisions in several other federal cases involving similar facts, stressed the point that there was no direct encroachment on private property because the structure erected by the Government did “at no point touch upon appellants’ land,” although the deflected current of the

33. Scranton v. Wheeler, 179 U. S. 141 (1900); Gibson v. United States, 166 U. S. 269 (1897).
39. 257 U. S. 138 (1921). The requirement of foreseeability appears to be closely related to the requirement of intention to take as an element of the fictitious contract on which the claim is founded.
Mississippi had changed their tract into the channel bed. It has also been frequently pointed out that recovery will be defeated where plaintiff's loss can be mitigated by expenditures for protective engineering, as, for example, the erection of a private levee or revetment.

Apart from the deeply rooted conceptual difficulties confronting the individual in suits against the Government, another factor militating against recovery may be found, either expressly or by implication, in the utilitarian philosophy of the courts in lending judicial aid to large scale social undertakings. The flood control developments in the lower Mississippi, for example, have given rise to litigation complicated with abundant political and social implications. For the benefit of other owners, large areas of rich alluvial farm lands in the river valley have been exposed to increased destructive floodwaters, but the fear of the prohibitive costs of acquiring flowage easements led early to the legislative policy of avoiding all liability for damages, within constitutional limitations. In *Jackson v. United States*, the Mississippi River Commission, pursuant to the Eads plan, had completed a broken line of levees erected by the state and private individuals in order to confine flood waters to the channel bed. A large class of owners were excluded from levee protection, however, because the estimated construction costs for the particular area exceeded the value of the flood damage to be averted. Although it was necessary for inhabitants to abandon the area because of the increased flood heights resulting from the construction of the completed levee system, the Court excused the United States from liability on the Government's argument that it had no duty to raise the plaintiff's levee. The Court


44. The Mississippi River Committee has pointed out that the total cost to the United States for flood damage in some of the floodways would probably nearly equal the present value of the lands themselves amounting to many millions of dollars. *Fed. Emerg. Adm. of Public Works, Report of the Mississippi Valley Committee* (1934) 204.

45. See note 73 infra.

46. 230 U. S. 1 (1913).

47. The Flood Control Act of 1928, for the first time in the history of flood control legislation, provided for the condemnation of lands along the banks of the Mississippi excluded from levee protection. 45 Stat. 536 (1928) 33 U. S. C. § 702c (1934).
assigned the cause of the injury to other levee builders as well as the United States and, additionally, asserted the unqualified privilege of all riparian owners, including the Government, to protect themselves from a *vis major*.

The passage of the Flood Control Act of 1928, providing for the diversion of excess floodwaters into designated floodways, has created a yet unsolved problem resulting from the fact that inhabitants in the paths of the diversion channels are exposed to excess floodwaters for the benefit of the protected areas. In the recent *Sponenbarger* case, where an owner of land in Boeuf Floodway sought compensation under the Tucker Act, the Supreme Court reversed the Eighth Circuit Court of Appeals and denied recovery principally because the record failed to show that the Government improvements had increased the "immemorial danger of unpredictable major floods to which respondent's land had always been subject." Although vast agricultural areas were adequately protected from floods by the continued exposure of the floodway lands, the Court pointed out that the project as a whole increased plaintiff's protection against minor floods. The increased damages from excessive floodwaters were held remote and speculative, although plaintiff contended that the market value of his land had been seriously reduced. The flood control cases, generally, pointedly illustrate the insufficiency of the landowner's action as a means of effecting economic adjustments of land use in the floodways, particularly since the related problem of preventing further settlement of the areas and forestalling the necessity of increased expenditures for flood relief is involved.

In landowners' actions against the Government where the plaintiff has satisfied all the requirements for recovery the final problem of ascertaining the amount of compensation remains. The issue of valuation, although frequently decided favorably to the landowner, is nevertheless open to objection because of its uncertainty. It becomes of greater significance because present in condemnation suits as well as actions against the Government. In

49. See *FED. EMERG. ADM. OF PUBLIC WORKS, REPORT OF THE MISSISSIPPI VALLEY COMMITTEE (1934)* 203-7.
51. The Flood Control Act of 1928 conferred discretion on the Secretary of War and Chief of Engineers to acquire title to or flowage easements over floodway lands where "needed in carrying out this project." 45 STAT. 536 (1928) 33 U. S. C. § 702d (1934). Under the administrative policy adopted, flowage rights were acquired in only two of the floodways where pre-existing protection was being reduced or eliminated by the United States. In other floodway areas the excessive total cost of acquisition to the Government led to a contrary policy, and inhabitants were compelled to rely on actions against the Government for compensation. See *FED. EMERG. ADM. OF PUBLIC WORKS, REPORT OF THE MISSISSIPPI VALLEY COMMITTEE (1934)* 204.
52. See also Matthews v. United States, 113 F. (2d) 452 (C. C. A. 8th, 1940); Matthews v. United States, 87 Ct. Cl. 662 (1938).
53. See *ORGEL, VALUATION UNDER EMINENT DOMAIN (1936)* § 237.
arriving at a standard for determining the amount of an award the courts have repeatedly defined "just compensation" as equal to the "value of the property at the time of the taking."54 Any application of the concept of value to specific parcels, however, necessarily has the triple aspect of value to the taker, value to the owner, and value in the market.55 As between the Government and the landowner it has been settled, at least in theory, that the measure of compensation is "what has the owner lost, not what has the taker gained."56 The peculiar adaptability of the land for the taker's uses has been declared irrelevant to the principle of indemnification for loss embodied in the Fifth Amendment.57 But the difficulty of translating into monetary terms the special worth of a piece of land to a single individual has led the courts to substitute for the indemnity principle the "market value" or "fair market value" test,58 notwithstanding the fact that value to the owner may often exceed materially the amount obtainable from prospective purchasers in the community.

An objective application even of the market value test, however, is substantially precluded by the additional requirement that value be determined as of "the time of the taking."59 At or immediately prior to the time of actual taking, and often for a considerable period beforehand, actual market value necessarily equals the estimated amount of the owner's claim against the taker for a cash award. Frequently, the fact that an agency vested with the power of eminent domain contemplates the appropriation of large areas for the development of reservoirs has led to speculative trading in the local real estate market.60 And, of course, where the water project is sufficiently complete to threaten adjacent holdings with substantial damage, measures of present market value are materially influenced by the owner's chances of recovering compensation.61 In order to minimize circular reasoning, it is apparent that the valuation standard established by the courts must be assumed to mean the conjectural value of the property in a hypothetical market wherein the prospects of an appropriation by the Government are eliminated. This highly abstract criterion of appraisal has necessarily served as no more than an inspiration for "fairness" to the tribunal making an actual determination of the amount of an award. Frequently, the final figure is reached by taking

55. See Orgel, op. cit. supra note 53, §§ 12, 13, 14.
58. Olson v. United States, 292 U. S. 246 (1934); Mississippi & Rum River Boom Co. v. Patterson, 98 U. S. 403 (1878). The distinction between market value and value to the owner, however, is not expressly recognized.
59. See cases cited supra notes 57 and 58.
60. See I Bonbright, VALUATION OF PROPERTY (1937) 414-5.
61. See Orgel, op. cit. supra note 53, § 237.
an arbitrary mean of the divergent estimates of several expert witnesses. Other admissible evidence, however, includes cost value, rental value, sales of similar lands, and, more rarely, bids and offers. Estimated profits derivable from continued use of the land are generally excluded as speculative.

In the condemnation suit, as distinguished from the landowner's action against the Government, the owner's prospects of obtaining compensation for property injuries are substantially increased. The procedural difference in the two types of suit has materially influenced the courts in finding substantive grounds of recovery. The Eighth Circuit Court of Appeals has expressly held that in condemnation suits the Fifth Amendment affords relief for lands "damaged" as well as those "taken." The fact that the Government institutes suit pursuant to the power expressly or impliedly conferred by the statute authorizing the particular project has proved especially valuable to owners who hold damaged lands other than the site which the Government seeks to condemn. In a recent case decided by the Seventh Circuit Court of Appeals, the Government sought to condemn a small plot for part of a dam site in the upper Mississippi. The defendant counterclaimed and obtained compensation under the Tucker Act for overflow damage to large upstream holdings. The court relied on the fact that the defendant would be barred from recovery in a separate action and, under the authority of United States v. Grizzard, allowed compensation because the use to which the Government put the condemned parcel proximately caused the damage to the other property. Although it is not difficult to agree with the court's conclusion, the constitutional right to compensation would seem to be unrelated to the extent of holdings or the likelihood that the Government may condemn another piece of land owned by the same party. Nevertheless, in ascertaining the amount of compensation where only a part of a single tract is condemned, the courts have similarly permitted recovery not only for damages resulting from the separation, but also for injury to the remaining parcel caused by overflow or drainage impairment. In so doing, the rigid

62. See 1 Bonbright, op. cit. supra note 60, 426-7.
63. See Hanson Lumber Co. v. United States, 261 U. S. 581 (1923); Loughran v. United States, 64 F. (2d) 555 (App. D. C. 1933). See also Orgel, op. cit. supra note 53, § 134 et seq.
64. United States v. Meyer, 113 F. (2d) 387 (C. C. A. 7th, 1940).
67. 219 U. S. 180 (1911).
68. For a holding that recoverable damages for the remaining parcel are exclusively those resulting from its severance from the condemned parcel, see High Bridge Lumber Co. v. United States, 69 Fed. 320 (C. C. A. 6th, 1895).
requirements for a "taking" present in the landowner's action against the Government are relaxed. Compensation for damages to the land not taken are included in the award when the present value of the remaining part is subtracted from the former value of the entire land to determine the total amount of the judgment. Thus, the defendant recovers for a type of damage unobtainable in independent proceedings.

In this light, it is clear that adequate compensation awards are more likely to be obtained when the Government institutes the action. This means, of course, that the ultimate responsibility for effecting the policy of distributing the individual's loss among the public must rest with the legislative and administrative authorities. In the development of water projects, the predominant legislative and administrative policy has in the past, been directed toward avoiding federal responsibility for the acquisition of interests in land. Fear of the "prohibitive costs" of acquisition and doubts of the federal power to condemn land without state consent led to statutory provisions denying federal liability for "damages" and requiring the approval of state legislatures for federal purchase of construction sites. Frequently, state and local agencies were delegated the burden of providing all necessary lands, easements, and rights of way without cost and of saving the United States from damages due to construction. Negotiations for purchase by local authorities familiar with land values were expected to secure property interests at lower prices. But the Flood Control Act of 1938 providing for the extensive construction of navigation, flood control, and power projects throughout the nation marked a reversal of federal policy both with respect to the acquisition of property interests and the operation and maintenance of engineering units. In preliminary debate on the bill, Congress recognized that the interstate character of multiple-purpose projects substantially precludes reliance on local initiative. A dam and reservoir located in one state

70. See United States v. Grizzard, 219 U. S. 180 (1911).
73. The Flood Control Act of 1936, for example, required as a condition precedent to the appropriation of funds for the development of flood control, navigation and multiple-purpose projects assurances from states or local agencies that they would (a) provide without cost to the United States all necessary lands, easements, and rights of way; (b) save the United States free from damages due to the construction works; (c) maintain and operate all the works after completion. 49 STAT. 1571 (1936), 33 U. S. C. §701c (Supp. 1939).
74. See note 71 supra.
75. 52 STAT. 1215, 33 U. S. C. §701c (Supp. 1939).
77. See 83 Cong. Rec. 9289 et seq. (1938).
may be chiefly of benefit to downstream inhabitants beyond its jurisdiction. Consequently, the responsibility of acquiring property rights and supervising the operation of completed projects was vested in federal authorities.

A federal eminent domain policy disposed toward the making of compensation awards is not, however, a final solution to the problem of readjusting private interests affected by the development of water projects. The condemnation suit completes only half the process when it is necessary to regulate the use of land not retired from private ownership or when displaced inhabitants do not have the resources to make an effective readjustment. As forecast by scattered pieces of legislation, the criterion of fair compensation may in the future appropriately be abandoned for the more economically sound and financially expedient principle of substitution or "convenient reinstatement." Where entire towns are threatened with inundation by a Government reservoir, it is obvious that relocation of the town site and removal or reconstruction of the buildings more adequately preserves private interests at less cost than individual compensation awards. For several reasons, in many less rare situations relocation programs adopted by the authority and executed in conjunction with the development of the project may more satisfactorily accomplish a readjustment of private interests than the condemnation suit. First, the necessity for employing the uncertain methods of evaluation present in eminent domain proceedings may be avoided. In flood control legislation, Congress has provided that highway, railway, and utility structures be relocated rather than condemned, thus eliminating the difficult problem of appraising their value in monetary terms.

Secondly, in rural areas the compensation award, though unrelated in the past to resettlement and rehabilitation, has now become an aspect of such problems. A large proportion of the population affected by project developments are tenant farmers without financial means of relocation. Where they have the status of lessees, the amount of compensation, based on the value of their leasehold, is frequently reduced to a minimum because of short term leases and prevailing low incomes; where lesser interests are held, as in the case of the "sharecropper" of the South, no legal right to compensation exists. In the already overcrowded agricultural regions of the Tennessee


79. See note 3 supra.


Valley, for example, local assistance through state agricultural agencies, and federal aid, through the Resettlement Administration, have been necessary to meet the significant problem of rehabilitating the large numbers of farm families displaced from the reservoir areas of the Tennessee Valley Authority. Whether the source of aid is state or federal, some form is desirable in order to prevent increases in relief rolls.

Finally, relocation programs may be integrated into broader programs of regional land-use planning. The intimate relationship between agricultural practices and the conservation of water resources has been widely recognized. Legislative measures to prevent soil erosion and retard water run-off have been adopted as part of the national flood control program. Where it is necessary for farmers to resettle through governmentally extended "rehabilitation loans" the region-wide benefits from proper agricultural practices may be secured through terms in the loan agreement. Areas purchased by the Government for the protection of reservoirs from the accumulation of silt have been and may, more extensively, be leased under controlled conditions of agriculture. The Mississippi River Committee, in suggesting methods of meeting the problem of flood damages in the floodways, has recommended as feasible a plan by which the Government purchases all lands in the areas and leases them for agricultural or forestry uses compatible with flood conditions. From these diverse methods, and the possibilities they suggest, of coordinating land use with water control developments, it becomes apparent that the social problem of protecting the individual from loss may become an opportunity for constructive planning of the use of land in the river valleys.

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82. See Satterfield, Removal of Families from Tennessee Valley Authority Reservoir Areas (1937) 16 Social Forces 258.
86. See 6 Rep. TVA (1939) 89-91.