

The Challenge of a Vital Resource

Along the



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Atchafalaya

By Martin Reuss

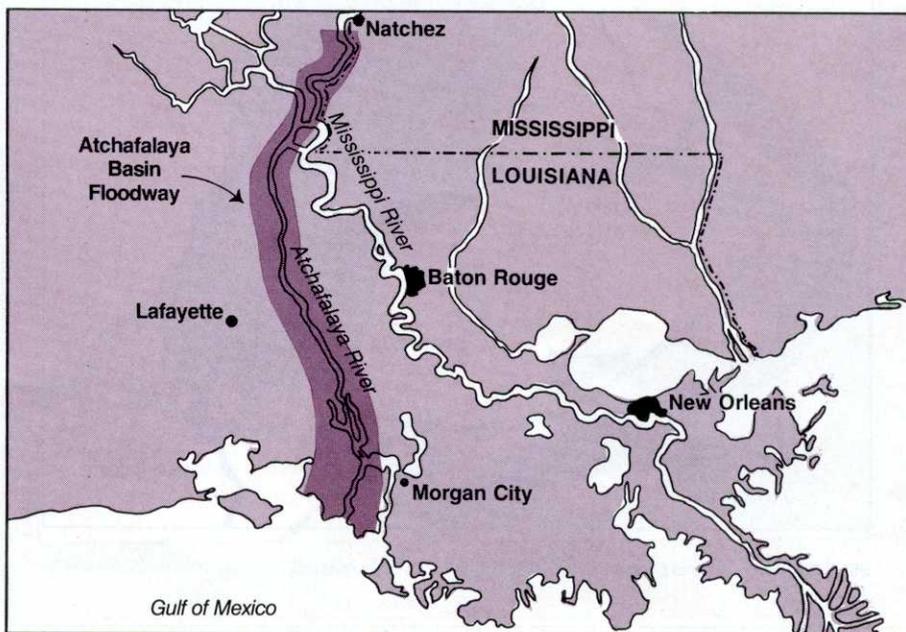
Determining environmental quality involves values and public choice. Therefore, it invariably becomes a political issue. Engineers and scientists may help define the limits of the inquiry, but rarely do they have the last word. Instead, when employed in administrative positions of public trust, they must involve competing forces in the decision making. Their own professional judgment becomes just one element of the consensus built—often slowly and laboriously—from conflicting public and private interests. In short, rational planning often yields to the needs of our pluralist system.¹ At the federal level, this has become increasingly true in the era of the public review process and the environmental impact statement. Nowhere has this been more evident than in the water resources field.

The history of the Atchafalaya basin in southern Louisiana offers an especially instructive example. The Atchafalaya River is a 135-mile-long natural distributary of the Mississippi River that empties into the Gulf of Mexico and is the center of one of the most hydrologically dynamic areas in

the world (see Figure 1 on page 8). Few areas of the country have had to face so many social and environmental needs at once: flood control, navigation, fish and wildlife conservation, endangered species, recreation, and, finally, the preservation of timberland, farm fields, and mining and mineral rights. The difficulty of reconciling these requirements might have taxed the wisdom of Solomon. It certainly has taxed the patience and collective wisdom of the U.S. Army Corps of Engineers and other private and public agencies.

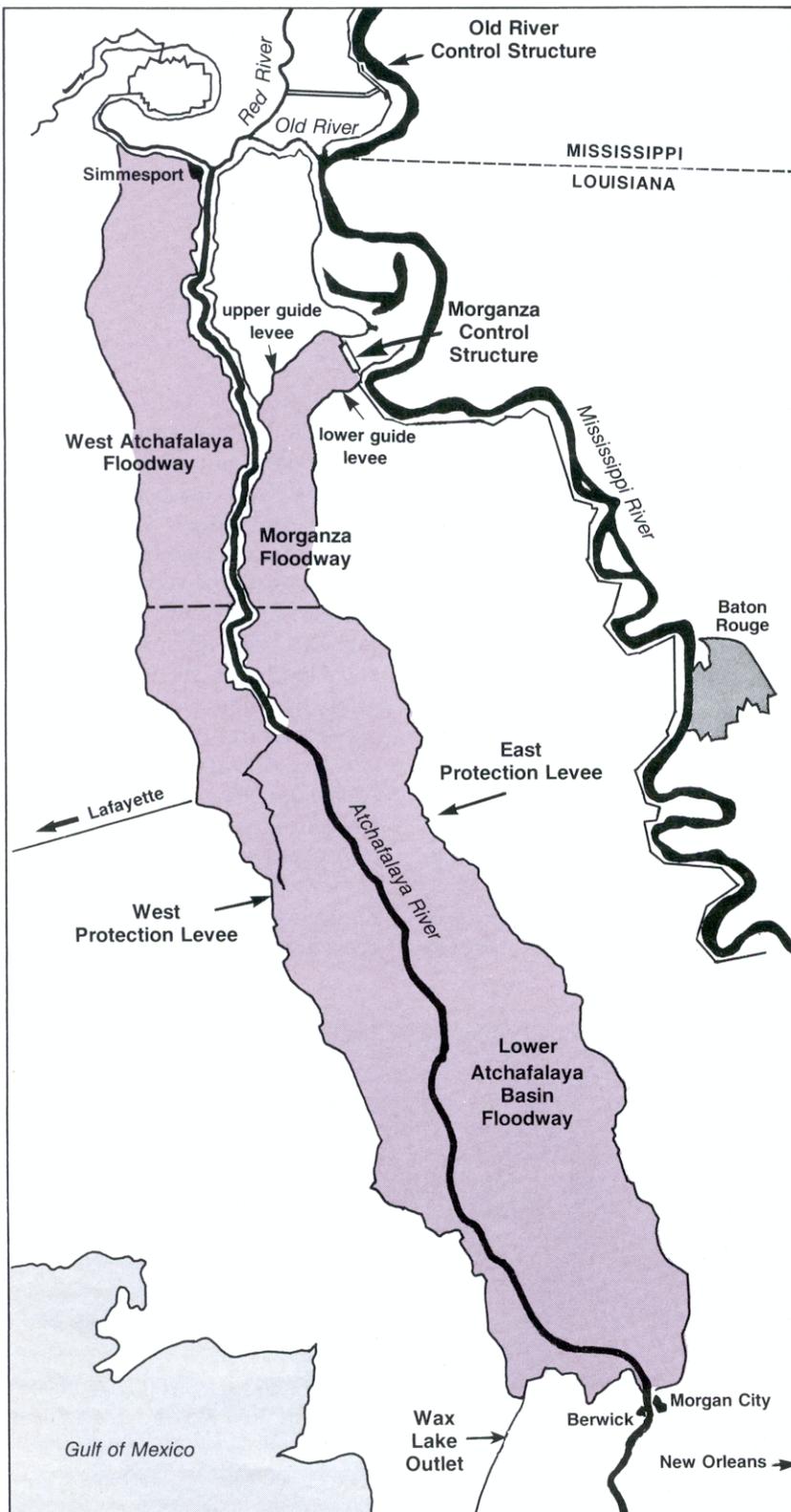
The Corps' involvement in the Atchafalaya basin began in earnest in 1928, after a disastrous flood along the lower Mississippi River, when Congress

passed a flood control act authorizing the agency to administer and implement a general flood control plan for the lower Mississippi valley. The Atchafalaya basin project, a key element of the plan, was designed to divert up to half of the "project flood"—the largest flow to be expected when all upstream reservoirs and floodways are in operation—or some 1.5 million cubic feet of water per second from the Mississippi River into the Atchafalaya basin using the Atchafalaya River and, when necessary, a system of constructed floodways. The project promised substantial flood protection to New Orleans and Baton Rouge. More generally, there would be benefits to both urban and rural areas



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FIGURE 1. The Atchafalaya basin and its environs.



SOURCE: New Orleans District of the U.S. Army Corps of Engineers.

south of Old River—a seven-mile channel some 40 miles above Baton Rouge that allowed Mississippi River water to enter the Atchafalaya River. (For more on Old River, see box on page 9.)

Initially the New Orleans District of the Corps concentrated on construction of guide or protection levees in the basin, but it also commenced extensive dredging in the 1930s. By 1940 the Corps had completed most of the work on the levees for the floodways. Three floodways were created: west Atchafalaya, Morganza, and the lower floodway. The west Atchafalaya floodway, 35 miles long and 7 miles wide, extends from the west bank of the Atchafalaya River to the west Atchafalaya basin protection levee and has never been used. The Morganza floodway to the east, 20 miles long and 5.5 miles wide, is connected to the Mississippi River via a gated control structure some 25 miles above Baton Rouge. Flood waters coming down the west Atchafalaya or Morganza floodways flow into the 15-mile-wide lower floodway, which stretches 65 miles to Morgan City. South of Morgan City, the flood waters are discharged into the Atchafalaya Bay and the Gulf of Mexico through one natural and one constructed outlet.

However, by the mid-1950s it was apparent that the Corps' flood control plans for the Atchafalaya basin required modification. The levees continuously subsided because of swampy land underneath them, while the heavily braided middle and lower reaches of the Atchafalaya River had become laden with silt received from the Mississippi River. The silt raised ground elevations in the floodways, and this in turn necessitated higher levees. In 1963 the Corps formally proposed substantially enlarging the Atchafalaya's lower main channel in order to alleviate the sedimentation problem and increase the river's flow capacity. At the same time, the agency proposed closing certain distributary channels and extending the levee on the east bank of the river farther downstream. By confining the water in a relatively closed system, the Corps would hasten the development of natural banks and in the end reduce the

CONTROLLING THE RUSH OF THE RIVER

Controversy over the Atchafalaya basin is hardly new to the Corps, for it has been involved in the basin's history since the 1830s. In 1831 Henry M. Shreve, a riverboat captain then working for the Corps, cut off a Mississippi River meander loop that had joined the Mississippi, Red, and Atchafalaya rivers. He thought that he would not only eliminate river mileage but increase the current enough to eliminate silting at the mouth of the Red River. Shreve's cutoff was made across the neck of Turnbull bend (see figure on this page). The Red River flowed into the bend and, two or three miles farther south, the Atchafalaya River flowed out—except at low water, when it occasionally flowed into the Mississippi. After Shreve made his cutoff, the discharge from the Red River flowed through the upper part of Turnbull bend, which became known as the upper Old River, although the channel had deteriorated considerably. The lower part of the bend, connecting the Atchafalaya to the Mississippi, deteriorated even more rapidly. Dubbed the lower Old River, this channel was effectively choked off by timber within 35 years of Shreve's river "improvement."¹

Shreve's cutoff quickly affected the Atchafalaya River. First, it prevented further build-up of the 40-mile-long jumble of branches, tree trunks, and vegetative debris—known as a river raft—that had effectively obstructed river flow since at least the 1770s. This positive impact was negated by the fact that the cutoff also prevented Mississippi River water from entering the Atchafalaya River, except at high water, thereby causing a steady diminishment of the Atchafalaya's flow. The river became smaller and smaller. In 1838 Engineer Captain William H. Chase optimistically reported that the raft could be removed, thereby increasing the ability of the Atchafalaya to take water from the Mississippi. Such a consequence would reduce flood levels and promised the reclamation of approximately 500,000 acres of land. However, in the wake of the 1837 financial panic and some disappointing experiences with costly river improvements, Congress refused to support the project.²

What the federal government would not do was left to Louisiana state engineers, who evidently did not share the apprehension—expressed as early as 1812—that the Atchafalaya might actually

capture the Mississippi should the raft be removed.³ Successive state engineers, working with local interests, began to clear out the raft, and by the beginning of the Civil War some semblance of a water course had been restored. Dredging and snagging operations continued intermittently thereafter. The Atchafalaya became a major distributary of the Mississippi, and the flow of Mississippi River water—and the silt it contained—into the Atchafalaya steadily increased.

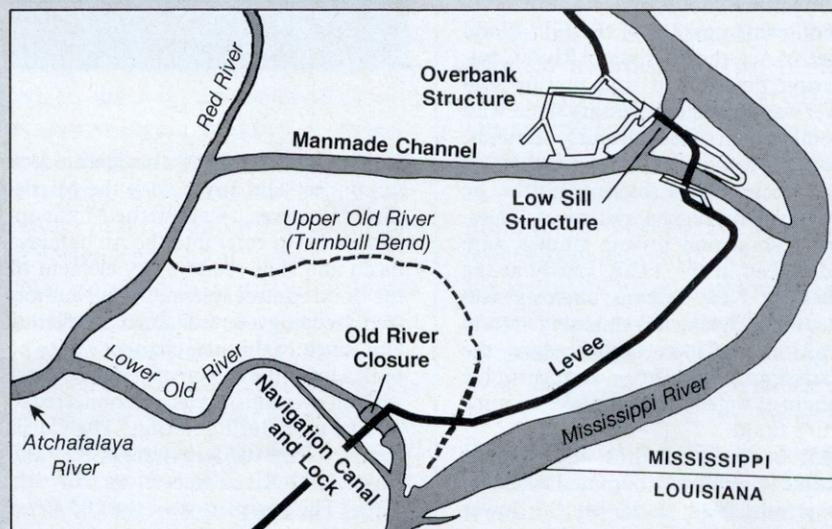
By 1950 the Atchafalaya's discharge had increased to over 15 times what it had been before removal of the raft, and observations about the Mississippi's finding a new route to the sea no longer seemed so theoretical. In 1950 the Corps undertook a major study of the problem. The conclusions were ominous and indisputable: left alone, the Atchafalaya would definitely become the new channel for the Mississippi. Some hydrologists thought it would happen no later than 1975.⁴ Baton Rouge and New Orleans would be on salt water estuaries, and the resulting problems would be enormous for navigation interests and for municipal and industrial water supply.

Had preventing this shift of the Mississippi's channel been the Corps' only concern, the solution would have been obvious for a long time: construct a dam that would permanently sever the

Atchafalaya from the Mississippi. Unfortunately for both the Corps and local interests, this concern had to be balanced with two others, flood control and navigation. Captain Andrew A. Humphreys and Lieutenant Henry L. Abbot had published a very influential study in 1861⁵ in which they had argued that the Atchafalaya was a "waste-weir" of the Mississippi, and that separating Old River from the Atchafalaya would be disastrous since it would sacrifice an important natural outlet for the Mississippi's flood waters. Instead, anticipating later developments, they stressed that it was necessary to enlarge the carrying capacity of the lower Atchafalaya so that the discharge capacity equaled the amount of water coming into the river. However, they underestimated the possibility of the Mississippi's actually choosing a new route down the Atchafalaya's channel.

The Humphreys-Abbot report heavily influenced the Mississippi River Commission, a seven-member body of civilian and military engineers created by Congress in 1879 to oversee the regulation of the lower Mississippi River. In 1889 the commission did decide to dam Old River, but only because that channel was constantly silting up. The commission wished to use dredge boats to create an entirely new channel between the Atchafalaya and Mississippi rivers—of special concern to navigation interests,

The Old River.



SOURCE: New Orleans District of the U.S. Army Corps of Engineers.

but also important for lower Mississippi flood control. This attempt failed because the dredge boats were neither big nor powerful enough. Four years later, when the commission began using a new hydraulic cutterhead dredge, it became clear that there would be no need for a new dam and channel, for the hydraulic dredges could keep the original Old River channel open without much problem.⁶ The navigation question thereupon became moot until 1909, when Bayou Plaquemine, an old connection between the Atchafalaya and Mississippi rivers, closed since just after the Civil War, was reopened with a new Corps-constructed lock. Thereupon, the question was again raised: Should a permanent dam be constructed in Old River?

In 1910 Congress directed the Corps to study the issue again. The Corps discovered that planters and landowners along the Atchafalaya and Red rivers generally desired closure, as did the Louisiana State Board of Engineers. Major opposition came from cities and landowners south of Old River who feared increased flood heights, from the Louisiana state legislature, and from various navigation interests on the Red and Atchafalaya rivers. The 1913 Mississippi River Commission report advised that closure was "practicable but not urgent." The Board of Engineers for Rivers and Harbors, a Corps organization created by Congress to review all project reports, concluded that the United States should not undertake the project at that time because the "interests threatened by the proposed work, including the city of New Orleans, are of greater importance than those to be benefited thereby." The chief of engineers concurred.⁷

Following passage of the 1917 Flood Control Act, the Mississippi River Commission determined that closing Old River was no longer necessary since, with a combination of federal and local funds, adequate flood protection for the Red and Atchafalaya basins could be developed through a system of levees. New federal and private studies were undertaken in the 1920s, partly at the behest of New Orleans interests who feared that closing all remaining natural breaks in the levee system along the Mississippi would throw a catastrophic amount of water on New Orleans in some future flood.

All of these studies and reports became immediately outdated when the disastrous 1927 flood hit the lower Mississippi, and the resulting new Mississippi River and Tributaries Project

made the Atchafalaya basin floodway a vital part of the flood control scheme to protect New Orleans, Baton Rouge, and neighboring communities from inundation. Temporarily forgotten was the possibility that New Orleans and Baton Rouge might one day not even be on the Mississippi should the Atchafalaya River continue to increase its capacity.

In the early 1950s, when little doubt remained about the deterioration of the Mississippi's main channel and the ever-increasing flows into the Atchafalaya, lower Mississippi valley politicians quickly supported the Corps' proposal for a control structure at Old River. The 1954 Flood Control Act authorized the project. It included damming Old



River and constructing a navigation lock to connect Old River with the Mississippi. However, to allow the Mississippi's waters to enter into the Atchafalaya basin and thus retain a key element of the flood control system, the act authorized dredging a new channel paralleling Old River. In this new channel was to be built a low sill structure to regulate water with an overbank structure connected to it to be used during floods.⁸ The Corps completed the two structures in 1959 and closed Old River forever on July 12, 1963.⁹ The completion of the Old River control structure allowed the Corps to regulate the amount of Mississippi River

water flowing into the Atchafalaya River, while the accompanying navigation lock provided the transportation link desired by inland waterway interests. Experts still argue over whether the Old River control structure has postponed—rather than eliminated—the capture of the Mississippi by the Atchafalaya.¹⁰

1. Malcolm L. Comeaux, "The Atchafalaya River Raft," *Louisiana Studies* (1970):249; D. O. Elliott, *The Improvement of the Lower Mississippi River for Flood Control and Navigation*, 3 vols. (Vicksburg, Miss.: U.S. Waterways Experiment Station, 1932), I:51.

2. U.S. House of Representatives, Committee on Commerce, War Department Document No. 253, "Atchafalaya River," 25th Cong., 2d sess., 19 March 1838, report of Captain William Chase to Brigadier Charles Gratiot, chief engineer, Washington, D.C.

3. Amos Stoddard, *Sketches, Historical and Descriptive of Louisiana*, reprint of 1812 edition (New York City: AMS Press, 1973), 167.

4. Martin Reuss, "The Army Corps of Engineers and Flood-Control Politics on the Lower Mississippi," *Louisiana History* 23, no. 2 (Spring 1982):137.

5. A. A. Humphreys and H. L. Abbot, *Report upon the Physics and Hydraulics of the Mississippi River; upon the Protection of the Alluvial Region against Overflow; and upon the Deepening of the Mouths: Based upon Surveys and Investigations Made under the Acts of Congress Directing the Topographical and Hydrographical Survey of the Delta of the Mississippi River, with Such Investigations as Might Lead to Determine the Most Practicable Plan for Securing It from Inundation, and the Best Mode of Deepening the Channels at the Mouths of the River*, professional papers of the Corps of Topographical Engineers, U.S. Army, no. 4 (Washington, D.C., 1861), 405, 458, 461.

6. *Annual Report of the Chief of Engineers*, 1885, part 4, 2560-63, 2296-97 (hereafter cited as *ARCE*); *ARCE*, 1897, 3772-73; Elliott, see note 1, II:314; Rodney A. Latimer and Charles W. Schweizer, *The Atchafalaya River Study*, 3 vols. (Vicksburg: Mississippi River Commission, 1951), I:10-11.

7. *Laws of the United States Relating to the Improvement of Rivers and Harbors*, II:3002, 25 June 1910. A summary memorandum of the various petitions, resolutions, and letters is in a file, "Separation of Waters of Red River from Miss. River. River Engineering. Floods. 1896-1916," available in the technical records, Mississippi River Commission, Vicksburg; U.S. House of Representatives, *Separation of Red and Atchafalaya Rivers from Mississippi River*, H. Doc. 341, 63d Cong., 2d sess., 19 March 1914, 1-7; the Mississippi River Commission to the chief of engineers, 21 November 1913; report of the Board of Engineers for Rivers and Harbors, 24 February 1914; chief of engineers to the secretary of war, Washington, D.C., 18 March 1914.

8. Albert E. Cowdrey, *Land's End: A History of the New Orleans District, U.S. Army Corps of Engineers, and Its Lifelong Battle with the Lower Mississippi and Other Rivers Wending Their Way to the Sea* (New Orleans: U.S. Army Corps of Engineers, 1977), 52.

9. Colonel Edward B. Jennings, "The Life and Death of Old River," *The Military Engineer* 56, no. 371 (July-August 1964):257.

10. Reuss, note 4 above, 138.

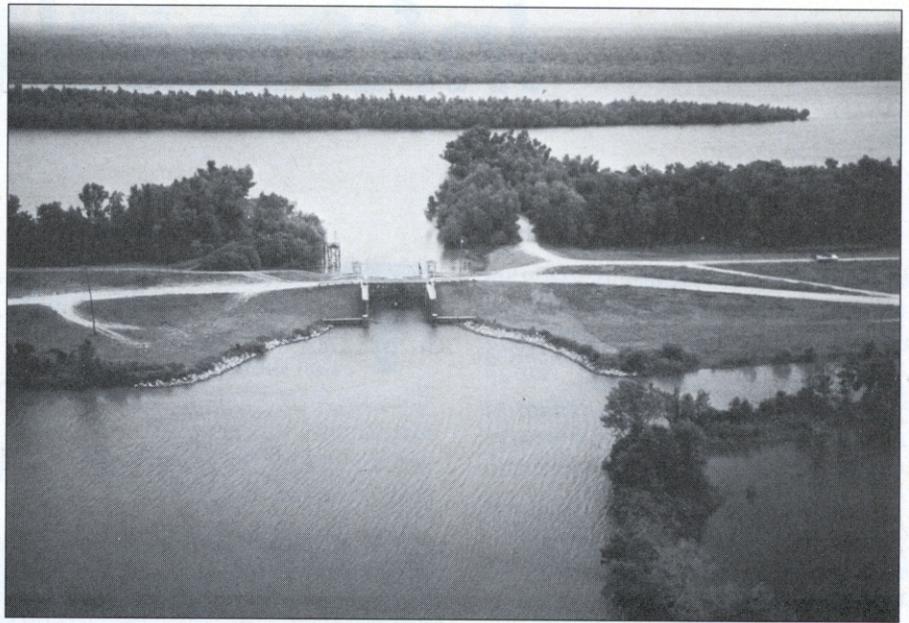
required heights of the levees. The Corps also planned an energetic bank stabilization program to prevent the levees from sinking. All these measures would make the flood control project far more efficient. The problem was that for different reasons environmentalists, sportsmen, and various commercial firms joined in opposing all or part of this program.

The Corps was unprepared for the controversy its actions generated, which required two decades to resolve. However, it is worthwhile to note that even those who stridently questioned the Corps' new plans for the basin conceded that flood control was a major concern. This was not a controversy over initiating an entirely new activity that would substantively change an ecosystem. Rather, the issue was how to minimize the impact of an authorized project on a fragile environment and important recreational and economic asset. If anything, in an age of growing environmental sensitivity, this difference made the process of consensus building even more difficult.

Competing Interests

On the evening of August 12, 1963, an overflow crowd came to the Lafayette Parish War Memorial Building in Lafayette, Louisiana, to hear New Orleans District Engineer Colonel Edward B. Jennings explain the proposed work of the Corps in the lower floodway. Three hundred people, including several state senators and representatives, filled the auditorium to capacity. In an hour-long presentation, Colonel Jennings explained the importance of the Atchafalaya floodway and how the combination of weakened levees whose foundations sank in the swampy soil and increasing sedimentation in the lower Atchafalaya basin threatened the floodway's effectiveness. As Jennings explained, if you fill a 30-gallon bathtub with 15 gallons of sediment, the tub will only hold 15 gallons of water. The Atchafalaya "bathtub" was filling up.²

Many of the people who attended the Lafayette meeting were sportsmen concerned that the Corps' attempts to



develop an adequate flood control project, especially its proposal to close various channels, would dry out the basin by making it even more difficult for the annual overflows to reach the backswamp areas behind the levees. The Corps already had closed two east-west channels across the basin and had plans to close a third. Additionally, the Corps' intention to dredge 60 miles of the Atchafalaya River's channel in order to enlarge the cross-sectional area to 60,000 square feet, and eventually to 100,000 square feet in the river's middle and lower reaches, conjured up pictures of hydraulic dredges spewing black, clay-laden effluent into the swampland behind the levees. There the dredged material would raise ground elevations—again making it difficult for the annual high water to rejuvenate the swampland—and threaten lakes, streams, and fish and wildlife far from the designated "spoil" areas.

Not only did recreational activities seem threatened, but also the livelihood of commercial fishermen. The Corps had been periodically dredging in the basin since 1934 and had been systematically attempting to enlarge the channel since the mid-1950s. Consequently, some areas had already been devastated. People returned to their favorite fishing holes to find either no lake or dead fish that had been killed when their gills

The Charenton floodgate, located in the west Atchafalaya basin protection levee, regulates the flows between the Atchafalaya basin floodway and Bayou Teche.

were covered with effluent.³ Sometimes they found that dredging activity blocked access routes, making it impossible even to reach fishing holes and hunting spots.

Jennings did much to assuage the audience. The Corps' plan retained one cross-basin navigation channel and one freshwater diversion canal on each side of the basin. Additionally, the Corps planned to construct two freshwater diversion structures to help offset environmental damage. The structures would allow fresh water to enter parts of the basin that no longer received normal overflows because of dredging and levee construction on the Atchafalaya River and its many distributaries. The freshwater canals would reduce environmental losses by distributing water from the enlarged main channel of the Atchafalaya River to the lower basin; they could also serve as navigation channels. The Corps even included two recreation areas and additional roads on top of levees to provide better access in the lower basin.⁴

(continued on page 36)

The Atchafalaya Basin

(continued from page 11)

However, the conservation community remained worried, and understandably so. The basin includes some 1.4 million acres, but its major attraction—and the part largely confined within the floodway protection levees—is an 800,000-acre swampland that is North America's largest river basin swamp, larger even than the vast Okefenokee Swamp of Georgia and Florida. The basin supports half of America's migratory waterfowl and yields 23 million pounds of crayfish annually. Home to 300 species of birds, including egrets, ibises, bald eagles, and anhingas, the basin is thought to be a refuge for such endangered species as the peregrine falcon, Florida panther, and Bachman's warbler. Fur-bearing animals, some of which are hunted commercially, include nutria, fox, muskrat, and mink. Over 90 species of fish, crayfish, crabs, and shrimp support both sport and commercial fishing. Few who have traveled in this forested wetland have not been impressed with its primeval beauty.⁵ No wonder, then, that fish and wildlife officials nervously eyed the Corps' hydrologic manipulation of the basin.

As early as 1956 Louisiana fish and game officials had asked whether the Corps wanted to purchase the swampland to ensure that private encroachments would not impair hunting and fishing. A 1959 report of the U.S. Department of the Interior Fish and Wildlife Service (FWS) likewise urged the Corps to purchase the land rather than depend on easements. FWS stopped short of making a formal proposal, but it did recommend that the Atchafalaya project become multipurpose, with fish and wildlife conservation joining flood control as authorized functions. Three years later Charles W. Bosch, executive secretary of the Louisiana Wildlife Federation, urged that the basin be made into a national park or wilderness area under the National Park Service. And only two weeks

before the Lafayette meeting, L. D. Young, director of the Louisiana Wild Life and Fisheries Commission, had recommended to Secretary of the Interior Stewart L. Udall that the Atchafalaya basin be made into a National Recreation Area managed by federal and state fish and wildlife agencies.⁶ Clearly, the conservation community, both public and private, was intent on minimizing the damage the Corps did to the basin. In the words of the alliterative battle cry of the following decade, the basin was to be kept “wet and wild.”

Not everyone at the Lafayette meeting was so concerned about preserving the swampland. Petroleum company representatives—there had been oil and natural gas operations in the basin since the beginning of the century—were concerned only about the Corps’ closing of access channels, which would impair water routes to the sea.⁷ The seven land companies and four landowners who owned a little over half of the lower floodway, not to mention the citizens of Morgan City and Berwick—cities that lay in the pathway of any Atchafalaya River flood—were primarily concerned about adequate flood control.⁸ Politically, socially, and economically, the problems facing the Corps in the Atchafalaya basin were tremendous.

Coordination or Confrontation?

Split Responsibilities

At the center of the controversy was not only the Corps, but also FWS. Indeed, one of the most important themes of the Atchafalaya story is that of a relatively young, understaffed FWS striving for leadership in the conservation community while seeking the cooperation and respect of larger, more powerful federal agencies such as the Corps.⁹ Although FWS had often expressed its belief that fish and wildlife conservation should be made an official purpose of the Atchafalaya basin project, as of early 1963 it had not made any formal recommendations to the Corps that would have required any project modifications within the floodway itself. This was in part because the Corps, in a congressionally directed



review of the entire Mississippi River and Tributaries Project, had indicated that various proposals of local interests for fish and wildlife conservation were incompatible with flood control. Beyond that, FWS studies dealing with water stages and regimen were incomplete, precluding any definitive FWS conclusions about the possible mitigation measures.¹⁰

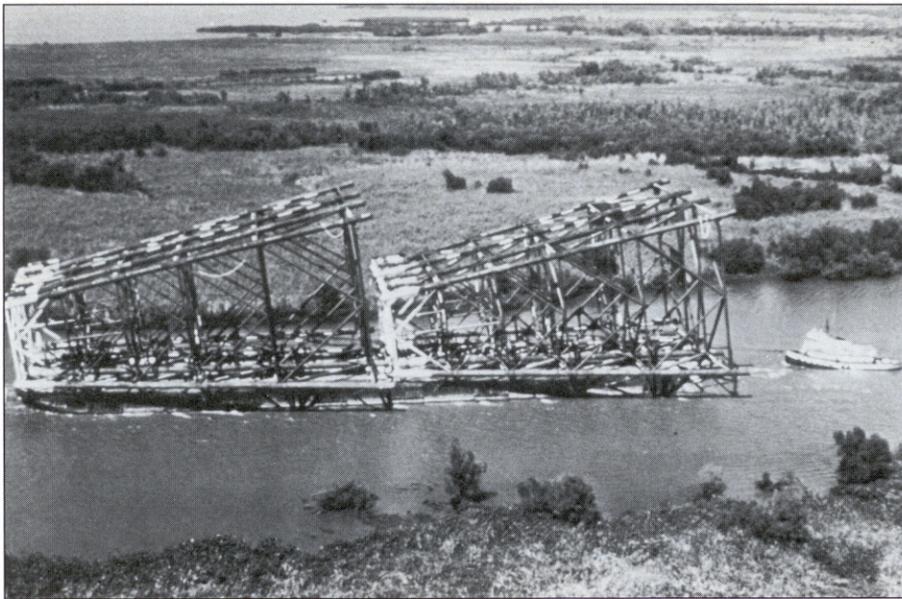
In Louisiana there was always the hope that the Atchafalaya basin could be an effective flood control system without denigrating its commercial and recreational uses. In 1961 the Louisiana state legislature petitioned the Corps, “without in any wise impairing the flood control program,” to allow the introduction of fresh water from the Atchafalaya River into the eastern part of the Atchafalaya floodway and to ensure navigational access between the floodway and river, “both of which are vital to the fishing and oil industries.” The following year, bowing to fish and wildlife interests, the legislature expressed its “deep concern about the Corps of Engineers Atchafalaya project” and requested FWS to study what damage would be done by the Corps project. The legislature even insisted that the Corps “accept and implement the findings of the Louisiana Wild Life and Fisheries Commission and the U.S. Department of the Interior, Fish and Wildlife Service as to how to alleviate

The east Atchafalaya basin protection levee was built as part of the original Mississippi River and Tributaries Project to prevent high waters in the Atchafalaya River from flooding the adjacent countryside.

damages in the area.”¹¹

These state resolutions, as well as other expressions of concern, were transmitted to the Louisiana congressional delegation. On March 16, 1962, Louisiana Senator Russell B. Long persuaded the Senate Public Works Committee to authorize the Corps to study the question of access between the east and west Atchafalaya basin protection levees and the main channel of the Atchafalaya River. According to Long’s press release, the aim of the study was to “provide some restitution” to the people whose livelihood had been impaired by the flood control project, but the form of restitution was not clearly defined.¹²

The various state and congressional resolutions complicated life for the Corps personnel in the New Orleans District, who were expected to respond to the numerous requests for information from the fish and wildlife agencies.¹³ State and federal fish and wildlife officials clearly considered the resolutions as mandates to ensure that the



final plans for the Atchafalaya basin adequately addressed environmental issues. After considering four options submitted by the Corps regarding closures, FWS decided that the least harmful option involved closing two small bayous (although even in this case FWS identified harmful ecological consequences resulting from reduced backwater).

As these comments wended their way through the FWS bureaucracy, they were considerably strengthened, perhaps partly in deference to the powerful National Wildlife Federation, which for the first time registered its concern over protecting the basin.¹⁴ Moreover, FWS decided that the Atchafalaya floodway should be designated a "Fish and Wildlife Area of National Significance." Thus, while in January 1963 an early draft of FWS comments had opposed only the extension of the west Atchafalaya levee, the final version, published about eight months later, objected to levee extension on either side of the river because of the "severe long-term effect on fish and wildlife habitat of the middle and upper reaches of the floodway."¹⁵

By the time FWS had completed its final report, the New Orleans District office of the Corps had finished a general design memorandum (GDM), in which the district specified what

Petroleum company representatives have frowned on the Corps of Engineers' closing of access channels, which impairs water routes to the sea.

engineering modifications it wished to make in the Atchafalaya basin. (Colonel Jennings briefed the Lafayette audience on these proposals several weeks later.) The two documents revealed basic differences on the questions of lengthening levees and closing certain channels. Meetings between the Corps and FWS failed to reconcile the approaches, and the two agencies agreed to continue the discussion at the Washington level. Nevertheless, in accordance with Corps procedures, the New Orleans District sent the GDM to higher authorities for endorsement. The chief of engineers approved a slightly modified GDM in January 1964, subject to the need for revised cost estimates—the cost was increasing dramatically—based on various tests that remained to be done in order to determine the exact channel size and levee grade.¹⁶

Both federal and state fish and wildlife personnel were distraught that the GDM had reached the chief's office without fish and wildlife plans being incorporated. The regional director of FWS detailed the series of Corps-FWS meetings that had occurred without

results and concluded that "the District and Division Offices have deliberately forwarded their recommendations without finalizing coordination of fish and wildlife needs."¹⁷ Director Young of the Louisiana Wild Life and Fisheries Commission complained that Corps procedures reflected "a lack of all consideration to both the resources need and the Senate Concurrent Resolution of the [Louisiana] Legislature on this matter."¹⁸ After the chief's office had approved the GDM at the end of January, Young wrote Senator Long, "It is apparent now, as pointed out in previous correspondence, that the Corps of Engineers is proceeding with plans that will be detrimental to this resource."¹⁹

In early February Joseph Califano, Jr., the Army general counsel, informed the Department of the Interior that the Corps had agreed to hold fish and wildlife aspects in abeyance.²⁰ At about the same time, Jennings explained to Long that, although full consideration was being given by the Corps to fish and wildlife concerns, "unfortunately, it was not possible to devise a plan having the full approval of the fish and wildlife agencies."²¹ Nor, he wrote, was it practicable to delay action on the entire GDM, since "such action would adversely affect the very urgent work of raising the floodway guide levees to grade and dredging the main channel to its ultimate dimensions." Nevertheless, it would be possible to delay completion of the "more controversial features relating to fish and wildlife pending further coordination with the wildlife agencies." The same message was delivered to Congress by Major General Jackson Graham, the director of civil works.²²

This sizable offensive by the Corps had the desired results. The entire Louisiana congressional delegation wrote Young, "under no conditions should we attempt to slow down the report that the Engineers have sent to Washington on the Atchafalaya Basin." The delegates saw no reason why fish and wildlife concerns should delay work on necessary flood protection.²³ FWS had failed to convince Louisiana legislators, and one

unhappy FWS field supervisor concluded that "a good portion of the fish and wildlife resources will be lost regardless of what fish and wildlife measures are included."²⁴

Seeking Coordination

Meanwhile, construction continued on the floodway project, and the Corps and FWS exchanged information and views on water diversion structures, spoil areas, and other items. In cases not significantly affecting the project, the Corps acceded to FWS desires. For instance, the Corps agreed to use dragline methods wherever possible, rather than hydraulic dredging, to minimize damages to fish and wildlife, even though employing draglines increased expenses. Furthermore, no spoil would be permitted within 100 feet of the top of any existing channel or other waterway.²⁵

Colonel Thomas J. Bowen, the new New Orleans District engineer, insisted that the Corps was "acutely aware of its responsibility" in the fish and wildlife area but also admitted that a number of small lakes, including some excellent fishing spots, would have to be sacrificed in order to enlarge the main channel cross section even to 60,000 square feet, let alone the 100,000 square feet then being contemplated; either channel encroachment or dredge spoil would effectively eliminate these lakes.²⁶ Private groups desired three additional "navigable gaps" along the left bank to allow fishing and recreational activity, but Bowen initially agreed to only one gap, maintaining that the other two gaps would interfere with flood control.²⁷

In June 1966 FWS submitted a report on main channel dredging to the Corps in which it recommended that all spoil be put behind retaining dikes and, in line with well-known local interests, that three additional channels be maintained, both for navigation access and freshwater distribution.²⁸ But the political environment was changing. FWS made certain that a copy of its dredging report reached the office of Louisiana Senator Allen J. Ellender, who had already been contacted by local groups and had expressed his interest in

minimizing harm to fish and wildlife.²⁹ Consequently, at a press conference held in Lafayette in July during his re-election campaign, Ellender urged the Corps to do everything possible to abide by the suggestions made in the FWS report.³⁰

It is difficult to evaluate Ellender's influence, but when the Corps first publicly responded to the FWS report at a public meeting in Morgan City in September 1966, former skeptics were both surprised and impressed. One newspaper reporter concluded that the Corps had "turned over a new leaf and now stands ready to work hand-in-hand for the preservation of what's left of the Atchafalaya Basin."³¹ While agreeing to maintain one additional channel, the Corps decided to adopt a wait-and-see attitude on the other two; but it did not completely rule them out, as Bowen had earlier (both gaps were later closed). The New Orleans District also agreed to construct retaining dikes at many locations but believed it was impossible to confine the spoil completely because gaps were necessary in some dikes for oil pipeline crossings and canals or for a properly working flood control project.³²

Aside from these changes, obviously important to the overflow crowd at the Morgan City meeting, the district concluded that no substantial modifications should be made in the GDM in response to the March 1962 Senate resolution. All contemplated or ongoing improvements were judged to be within the existing authority of the chief of engineers and additional congressional legislation was not required.³³

By fall 1967 substantial progress had been made on the floodway project. Both the east and west access channels were completed, and most of the levees on both sides of the Atchafalaya River had been brought up to adequate grade and cross section. As far as the channel size was concerned, from the head of the Atchafalaya River to mile 55, the cross section was approximately between 90,000 square feet and 100,000 square feet, primarily the result of natural enlargement. Dredging had enlarged the channel between mile 55 and mile 96

(Grand Lake) to 60,000 square feet. Below that point to Berwick City, the channel size declined to 40,000 square feet. Bowen thought that within a year the flood-carrying capacity of the Atchafalaya River would reach 1.2 million cubic feet per second. Work in the following years would bring the capacity to the 1.5 million cubic feet per second contemplated in the original plan for the project.³⁴

However, Bowen's predictions were overly optimistic. In fall 1968 dredging was stopped because of a lack of funds. Then, when President Richard Nixon signed the National Environmental Policy Act on January 1, 1970, he gave environmentalists an important new method of stopping projects—the environmental impact statement. By this time the future of the Atchafalaya basin had become a controversial and highly publicized issue statewide, and no one group could be sure its view would prevail.

The Recreation Issue

No Atchafalaya issue divided the citizenry of Louisiana more than the question of recreation development. The Corps' modest plans to build parking areas, access roads, and boat ramps paled in comparison with the ideas of some state politicians. The 1968 Louisiana legislature had "authorized and requested" the Register of State Lands to "take any and all steps which are necessary to execute the leasing and/or purchasing of the lands which lie within the Atchafalaya Spillway Basin" for use as either a state or national park. That same legislature authorized either state or federal purchase of land for wildlife management and recreational purposes. The act requested the Corps to provide at least 50,000 acres of land for wildlife management areas to be managed by the Louisiana Wild Life and Fisheries Commission.³⁵

Finally, the 1968 legislature also established a goals committee, which aimed to make the Atchafalaya basin a National Recreation Area in order to stimulate tourism. This was not a new idea; it went back at least to Young's



in-depth study involving money and manpower. No agency of the Interior Department, including BOR, had been authorized to conduct such an investigation.³⁹

Both the state legislature and Governor McKeithen were becoming impatient. The 1970 legislature endorsed the creation of an Atchafalaya National Recreation Area. At the end of the year, McKeithen directed Ronald Katz, director of the state planning office, to coordinate the state's efforts to have the basin declared a National Recreation Area.⁴⁰ He and Katz sought the assistance of the Louisiana congressional delegation and the Department of the Interior.⁴¹ In their efforts they received the active support of the Louisiana Wildlife Federation and the Louisiana Outdoor Writers Association.⁴²

It was clear that not everyone in Louisiana approved the governor's position. By May 1971 he was being subjected to growing criticism from basin landowners and oil and timber interests, who objected to a National Recreation Area because they feared it would hinder exploitation of the basin's natural resources.⁴³ Therefore, at the end of the month, in a time-honored political maneuver, McKeithen established the Governor's Commission on the Atchafalaya Basin to tackle the issue. The commission consisted of 26 people, including Skerrett, Bosch, and Glasgow.⁴⁴ McKeithen appointed Wade O. Martin, Jr., his supporter and long-time Louisiana secretary of state (an elected position), to head the new commission. While the commission worked, the governor could retreat to the sidelines.

Already, on May 17, the Land and Royalty Owners of Louisiana Association, a nonprofit organization of Atchafalaya basin landowners, had passed a resolution opposing "federal encroachment into the Atchafalaya Basin in the form of federally administered recreation areas."⁴⁵ And on May 31, five days after the governor's commission had been established, both basin landowners and state sportsmen appeared before a Louisiana House committee to protest the lack of consultation with

proposal to Secretary Udall in 1963. However, the idea did not receive widespread support and publicity until the end of the 1960s, when Governor John McKeithen led efforts to spur Louisiana's economic development. In the words of the task force's preliminary report, the basin "should become a multiple purpose recreational area which exceeds in attractiveness the Everglades National Park in Florida." Establishing a National Recreation Area was "Louisiana's last chance to save an unspoiled area for future generations. [The basin's] natural beauty would provide the state with an unparalleled tourist attraction."³⁶

Taking Positions

The sentiment reflected the ambivalence and contradictions characteristic of many public statements about the Atchafalaya basin. How was one to reconcile tourist and sporting activities with keeping the basin in an "unspoiled" condition? And how would the creation of a National Recreation Area affect the commercial fishing industry? The preliminary report lacked specific details, but evidently the framers envisioned the state administering the National Recreation Area with the aid of private capital.³⁷

The Greater Atchafalaya Basin

In Louisiana it was always hoped that the Atchafalaya basin could be an effective flood control system without denigrating its multiple commercial and recreational uses.

Council, an organization established in 1963 by the Greater Lafayette Chamber of Commerce as a forum for local leaders to discuss common basin problems, wanted to accelerate recreational development. The council invited Leslie Glasgow, a former Louisiana State University professor who was then assistant secretary of the Interior for fish and wildlife and parks, to send National Park Service officials to the basin to explore possibilities. However, whatever report the team submitted to Glasgow, it was neither published nor sent to B. E. M. Skerrett III, the council's president.³⁸ Indeed, there appeared to be some confusion among state and local officials as to what the Interior Department's position was. Neither the National Park Service nor FWS had made a comprehensive study of the area. As G. Douglas Hofe, director of the federal Bureau of Outdoor Recreation (BOR), explained to Senator Ellender in June 1971, firm recommendations could be made only after an

them and to seek a resolution objecting to the creation of any sort of "federal recreation district" in the Atchafalaya basin. An uneasy truce resulted when one legislator successfully argued that the commission should be allowed to write its report before any decisions were reached.⁴⁶ In the following weeks, commission members investigated problems associated with the establishment of a National Recreation Area, while landowners focused on potential loss of mineral rights should the federal government take over the basin.⁴⁷ Director Hofe of BOR indicated to Senator Ellender that oil, gas, and timber production, as well as commercial fishing, crayfishing, and hunting, might be permitted in a National Recreation Area if such activities were subordinated to outdoor recreation. Furthermore, should Congress resolve that such activities continue without constraints, the Interior Department would be compelled to oblige.⁴⁸ Still, the debate—and the fears—continued.

Reaching a Compromise

Throughout the summer, the governor's commission was not able to mollify the landowners, even though a number of them were themselves members of the commission. Finally, at the end of October, commission members reached a compromise. Conservationists agreed to the formation of a committee to study a proposal for a state-administered recreation area and to drop further consideration of a federal recreation area. In response, the landowners acquiesced to an in-depth study of the basin by BOR. While establishment of a state-administered area would have limited the utility of the BOR study, the landowners appeared to present to promoters of a National Recreation Area a deal they could not refuse. Already, 12 basin landowners had promised to make over 150,000 acres of land available for recreation use

and one landowner spokesman envisioned a state-managed recreation area of some 286,000 acres.

The final compromise called for most of the land, some 200,000 acres, to be leased to the state for game management at an indeterminate amount of compensation. About 21,000 acres would be offered for purchase for boat ramps, trailer parks, wildlife lands, and an interpretive center. A "scenic easement" would be put over 1,500 acres.⁴⁹

The only person who seemed especially upset by this agreement was Leslie Glasgow, who had been energetically promoting a National *Wildlife* Recreation Area, which would require congressional clarification and authorization.⁵⁰

The compromise was outlined to the commission by Skerrett, whom the landowners had privately courted. They knew that Skerrett wanted a water-management study of the basin that



This concrete floodwall serves the function of an earth levee to protect a highly populated area from an Atchafalaya River flood.



Fish and wildlife officials in the 1960s questioned the Corps' dredging activities, which had already devastated some prime fishing areas.

various fish and wildlife features, required congressional authorization. This was done in the Water Resources Development Act of 1986.

Lessons Learned

Even before the 1970s, when new environmental legislation forced the Corps to change its planning procedures, it was becoming clear that public (and other governmental agen-

cies') trust in the Corps would depend heavily on its ability to be a catalyst for compromise. The Corps' credibility as a public agency rested increasingly on its administrative skills, especially at the local level, rather than on its engineering capabilities. It was an awkward period for the Corps. Having over a century and a half achieved a reputation for its engineering management and expertise, the Corps now had to obtain legitimacy as a neutral consensus builder. As a result, engineers in the Corps increasingly saw their project design substantially modified to accommodate diverse public and private organizations.

In the case of the Atchafalaya basin, the new role was especially difficult. The project had been authorized for over 30 years, and no one denied its importance to flood control. The Corps was not only professionally inclined, but legally charged to ensure the implementation of the flood control plan. Nevertheless, the events of the 1960s clearly demonstrated that any solution to the Atchafalaya basin issue would require consensus building. Success depended on joint federal-state efforts and substantial involvement by both landowners and environmentalists. Relations between the Corps and FWS suggested profound differences in approach that could not be easily resolved through congressional mandates. Of course, it was not just the Corps that had to change. Other state and federal agencies needed to establish procedures—and values—that ensured that all parties were heard on a subject.

The environmental historian Samuel P. Hays has recently noted that the events of the 1960s have not received adequate attention in tracing the "roots and meaning" of the environmental controversies of the 1970s.⁶¹ This article supports that observation. The disputes over flood control in the Atchafalaya basin of the 1960s are not as well known as the disputes of the next decade, but they are equally critical for an understanding of the Atchafalaya basin's development. The lesson of the 1960s was simple to learn, but difficult to implement: The most enduring environmental plan would involve the good faith efforts of all interests, public and private, and all levels of government. In the era of the environmental impact statement, that lesson was to be learned again and again.

NOTES

1. See Ralph Clark Chandler, ed., *A Centennial History of the American Administrative State* (New York: The Free Press, 1987), 163; in the same volume, William L. Morrow, "The Pluralist Legacy in American Public Administration," 165.

2. B. E. M. Skerrett III, interview with author, Lafayette, La., 9 March 1983; Victor W. Lambou and Max W. Summers, Louisiana Wild Life and Fisheries Commission (LWLFC), to L. D. Young, Jr., director,

LWLFC, 15 August 1963, copy in U.S. Fish and Wildlife Service (FWS) files, Lafayette (hereafter cited as FWS records). Copies of all correspondence and interview transcripts cited in this article are located in the Office of History, headquarters of the U.S. Army Corps of Engineers, Fort Belvoir, Va.

3. Lambou and Summers, note 2 above; U.S. Army Corps of Engineers, "Flood Control, Mississippi River and Tributaries, Atchafalaya Basin Floodway, Louisiana," general design memorandum (GDM), 31 July 1963, copy in New Orleans District records (hereafter cited as NOD records); Skerrett, note 2 above.

4. Army Corps of Engineers, note 3 above; Lambou and Summers, note 2 above.

5. Norah Deakin Davis, *The Father of Waters: A Mississippi River Chronicle* (San Francisco: Sierra Club Books, 1982), 152-53; Louisiana Office of Tourism, *River Trails, Bayous and Back Roads* (Baton Rouge, 1984), 75; FWS, *The Atchafalaya: America's Greatest River Swamp: A Proposal To Establish The Atchafalaya Fish, Wildlife, and Multi-Use Area* (FWS, October 1978), 1; Jack and Anne Rudloe, "Trouble in Bayou Country," *National Geographic*, September 1979, 376-97.

6. Theodore B. Ford, assistant office chief, Louisiana Fish and Game Division, to F. J. Brown, Mississippi River Commission, 28 September 1956, FWS records; W. L. Towns, acting regional director, Bureau of Sport Fisheries and Wildlife (BSFW), and Seton Thompson, regional director, Bureau of Commercial Fisheries (FWS), to the district engineer, New Orleans, 1 June 1959, in U.S. House of Representatives, *Mississippi River and Tributaries Project*, vol. 6, annex 10, 88th Cong., 2d sess., 1964, H. Doc. 308; W. L. Towns, acting regional director, BSFW, to Charley Bosch, 1 March 1962, FWS records; L. D. Young, Jr., to Stewart L. Udall, 29 July 1963, copy in Office of History files, headquarters of the Army Corps of Engineers. Bosch had long advocated land purchase as the preferred means of preventing land encroachment. He also had testified previously about the importance of giving fish and wildlife resources equal consideration to other purposes in any land or water resources program. See his testimony in Monroe, La., 19 April 1955, before the Vicksburg District engineer in a hearing dealing with a review of the Mississippi River and Tributaries Project (hearing proceedings on microfilm reel 3.109, Vicksburg District office, Vicksburg, Miss.).

7. Joseph Hotard, Jr., New Orleans District, file 1501-07, Atchafalaya Cross Channels, study working papers, 1962, NOD records.

8. Figures on real estate were compiled by the New Orleans District of the Corps of Engineers in 1976. There is no reason to believe that the figures had changed significantly since the early 1960s. See "Resume of Real Estate Interest in the Lower Atchafalaya Basin," general correspondence with other agencies, 1976, NOD records.

9. After its reorganization in 1956, FWS existed as "a kind of phantom agency" at the assistant secretarial level while it was divided into two separate bureaus at the operating level: the Bureau of Commercial Fisheries and the Bureau of Sport Fisheries and Wildlife (BSFW)—all field FWS personnel mentioned in this article belonged to the latter bureau. See Jeanne Nienaber Clarke and Daniel McCool, *Staking Out the Terrain: Power Differentials Among Natural Resource Management Agencies* (Albany: State University of New York Press, 1985), 83.

10. U.S. House of Representatives, *Mississippi River and Tributaries Project*, vol. 6, annex 5; *ibid.*, 88th Cong., 2d sess., 1964, H. Doc. 308, appendix 1; F. C. Gillet, acting regional director, BSFW, FWS, to the district engineer, New Orleans, 22 December 1958; Walter Gresh, regional director, BSFW, to director, BSFW, 9 May 1962, FWS records.

11. Louisiana H. Con. Res. 5, 24 May 1961, box 644, file 8, Allen J. Ellender Papers, Nichols State University, Thibodaux, La. (hereafter cited as Ellender Papers); S. Con. Res. 62, 1962 session, FWS records.

12. Press release, 23 March 1962, Office of Senator Russell B. Long, Washington, D.C., box 644, file 8, Ellender Papers.

13. Trip report of Charles E. Crowther of visit to New Orleans District, 17 October 1962, FWS records.

14. Thomas Kimball, executive director, National Wildlife Federation, to Frank P. Briggs, assistant secretary of the Interior, 5 February 1963, FWS records.

15. Regional director, FWS, to district engineer, New Orleans (draft), 11 January 1963; U.S. Department of the Interior, FWS, "Fish and Wildlife Report on Atchafalaya Basin Floodway," 2 August 1963, 14, FWS records.

16. Corps of Engineers, note 3 above. GDMs were required under Corps regulations so that higher authorities—the division engineer and the chief of engineers—could approve plans prior to actual construction or modification of a project. The documents discussed not only engineering plans but project costs (both federal and local), real estate requirements, and environmental impacts.

17. Walter A. Gresh to director, BSFW, 13 December 1963, FWS records.

18. L. A. Young, Jr., to Allen J. Ellender, 15 January 1964, box 642, file 14, Ellender Papers.

19. L. A. Young, Jr., to Sen. Russell B. Long, 27 January 1964, box 642, file 14, Ellender Papers.

20. Joseph R. Califano, Jr., to Frank P. Briggs, assistant secretary of the Interior, 5 February 1964, FWS records.

21. Col. Edward B. Jennings to Sen. Russell B. Long, 6 February 1964, box 642, file 14, Ellender Papers.

22. Maj. Gen. Jackson Graham to Rep. James H. Morrison, 12 February 1964, box 642, file 14, Ellender Papers.

23. Louisiana congressional delegation to L. A. Young, Jr., 19 February 1964, box 642, file 14, Ellender Papers.

24. Charles Harris to Walter A. Gresh, 25 February 1964, FWS records.

25. Walter Gresh to district engineer, New Orleans, 8 July 1965; district engineer to Walter Gresh, 27 July 1965, FWS records.

26. Col. Thomas J. Bowen to R. D. Lowe, president, General Excavation Company, 23 August 1965, copy in box 642, file 14, Ellender Papers.

27. Col. Thomas J. Bowen to B. E. M. Skerrett III, 10 December 1965, copy in box 642, file 14, Ellender Papers.

28. U.S. Department of the Interior, FWS, *Report on Main Channel Dredging: Atchafalaya Basin Floodway, Louisiana*, 14 June 1966, FWS records.

29. Skerrett, note 2 above; Allen J. Ellender to Col. Thomas J. Bowen, 10 March 1966; Col. Thomas J. Bowen to Allen J. Ellender, 16 March 1966; Maj. Gen. Ellsworth I. Davis to Allen J. Ellender, 30 March 1966, box 642, file 14, Ellender Papers.

30. Skerrett, note 2 above.

31. Mike Cook, "Big Change Noted in Corps' Attitude," *State-Times* (Baton Rouge), 29 September 1966, Office of History, headquarters of the U. S. Army Corps of Engineers.

32. Minutes of public meeting, Morgan City, La., 28 September 1966, NOD records.

33. Col. Thomas J. Bowen, district engineer, to Maj. Gen. Robert G. MacDonnell, president, Mississippi River Commission, 10 April 1967, review of reports, Mississippi River and Tributaries Project, NOD records.

34. Col. Thomas J. Bowen to Allen J. Ellender, 5 October 1967, box 642, file 11, Ellender Papers.

35. See H. Con. Res. 67 and Act 612, both passed by the 1968 Louisiana legislature.

36. Cited in Mike Cook, "Task Force Urges Establishment of Atchafalaya Recreation Area," *Morning Advocate* (Baton Rouge), 26 August 1969, Cook files.

37. *Ibid.*

38. Skerrett, note 2 above.

39. G. Douglas Hofe, Jr., director, Bureau of Outdoor Recreation (BOR), Department of the Interior, 14 June 1971, FWS records.

40. S. Con. Res. 53; Governor's Executive Order 79. A summary of these early resolutions and executive orders is given in the preface to the *Report to the Governor and Legislature Presented by Governor's Commission on the Atchafalaya Basin*, 24 April 1972.

41. Ronald Katz to Allen J. Ellender, 1 April 1971; Gov. John McKeithen to Allen J. Ellender, 21 April 1971. Atchafalaya basin (water and land resources) Louisiana study, general correspondence, 1972 [*sic*], NOD records; Gov. John McKeithen to Rogers C. B. Morton, secretary of the Interior, 21 April 1971, FWS records.

42. Charley Bosch to "friend" (long distribution list), 6 May 1971, FWS records.

43. Skerrett suggests as much in his interview; see also Mike Cook, "Opinions Vary Greatly on Atchafalaya Basin," *State-Times* (Baton Rouge), 30 March 1972.

44. Mike Cook, interview with author, Baton Rouge, 19 January 1984; *Report to the Governor and Legislature*, note 40 above.

45. The resolution is attached to a letter from Malcolm L. Monroe to Rogers C. B. Morton, 3 June 1971, FWS records.

46. Ed Price, "Atchafalaya Basin Fight Gets Hotter," *Morning Advocate* (Baton Rouge), 1 June 1971.

47. B. E. M. Skerrett III to Secretary Rogers C. B. Morton, 19 July 1987, FWS records; "Mineral Rights Question Raised," and Bucky Allen, "Sportsmen Criticize Commission," both in the *Daily Advertiser* (Lafayette), 13 July 1971.

48. G. Douglas Hofe to Allen J. Ellender, 14 June 1971, FWS records.

49. G. Michael Harmon, "Atchafalaya Compromise Said Major Breakthrough," *The Times-Picayune* (New Orleans), 28 October 1971; *Report to the Governor and Legislature*, note 40 above.

50. Leslie Glasgow to Spencer Smith, 19 July 1971; M. A. Marston, assistant to the director, FWS, to Leslie Glasgow, 24 August 1971, FWS records; Skerrett, note 2 above.

51. Skerrett, note 2 above.

52. Copies of letters are in the FWS records.

53. Press release from Sen. Allen J. Ellender's office, 15 March 1972, box 642, file 13, Ellender Papers.

54. Sen. Jennings Randolph, chairman, Committee on Public Works, U.S. Senate, to Lt. Gen. Frederick J. Clarke, chief of engineers, 23 March 1971, Atchafalaya basin general correspondence, 1972, NOD records.

55. B. E. M. Skerrett III to Allen J. Ellender, 14 April 1972, box 642, file 13, Ellender Papers.

56. Cook, note 43 above.

57. *Report to the Governor and Legislature*, note 40 above.

58. Sandra Thompson, interview with author, Baton Rouge, 18 March 1983, Office of History, U.S. Army Corps of Engineers.

59. Mike Cook, "Conservationists Suffer Setbacks in Legislature," *State-Times* (Baton Rouge), 8 June 1972.

60. *Ibid.*; Louisiana H. R. 802, Act 365, 2 July 1972.

61. Samuel P. Hays, *Beauty, Health, and Permanence: Environmental Politics in the United States, 1955-1985* (Cambridge: Cambridge University Press, 1987), 53.

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