Opposition to Reservoir Construction

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Introduction

For decades the American public apparently assumed that those in charge of reservoir construction were well informed, intellectually honest and were constructing the man-made lakes for the improvement of society. In recent years however especially since World War II ended, it seems to be increasingly clear that some promoters were influenced by their own financial interest and the betterment of their allied associates. Now years and decades after the construction of some reservoirs, evidence has accumulated to indicate that too many of these have been built in the wrong places at the wrong times for the wrong purposes. Construction was too often poor and sometimes maintenance careless or almost non-existent.

Some conservations and environmentalists are stressing that reservoir sites are as subject to exploitation and misuse as forests, soils and other natural resources. The public is becoming increasingly aware that proposed reservoir construction should be questioned and that both economic and environmental impact statements and assessments should be prepared before finalizing the decisions to build reservoirs.

Opposition to Construction

Multiple use. The term "multiple use" is about as ambiguous as the term "miscellaneous use". Consequently it is often intentionally or unintentionally misused to confuse. Multiple use is indefinite unless the user of the term designates primary, secondary and perhaps tertiary uses. Too many promoters use the term in such a loose way that it reminds one of the tent salesman's medicine claim that the bottle of stuff would cure all ailments from toeache to headache and all pains in-between. Promoters seeking general public support often tell anyone who asks about a certain use that the reservoir is for the inquirer's desired use whether the uses are as incompatible as irrigation and flood control.

At no time during the promotion for the construction of the largest man-made lake in Indiana, Lake Monroe, were the primary and secondary uses of the potential reservoir identified by local newspapers although the state did publish Report of Investigation Monroe Reservoir Salt Creek near Harrodsburg, Indiana For Flood Control, Increasing Low Flow and Allied Purposes (1). One may notice that neither recreation or water supply are listed as primary uses in preceding title, but are assigned to the catch-all term, "allied purposes". But today some people still try to claim that recreation and domestic water supply are primary uses. During the time the Monroe Reservoir was under construction some farmers and students believed and argued that the reservoir would provide

water for irrigation unitl they were challenged to locate the outlet from the reservoir through which the irrigation water would flow.

False information. There seems to be a natural tendency for many promoters of reservoirs to exaggerate and for the media to repeat the exaggerations without adequately checking to learn the facts. It was said and repeatedly announced that the Monroe Reservoir was to create a 20,000 acre lake and that it was to protect local farmers from flooding. Even a local man representing a state agency made the false claim about its size. After the "balleyhooing" was over and the lake put into operation for one of the two primary purposes of flood control, the water level is now maintained near the 538 foot elevation above sea level. When the water stands at the 538 foot level Lake Monroe covers 10,750 acres (2).

As for local flood control in the Salt Creek watershed, 7,800 acres of cultivated land in the Salt Creek valley below the dam receives flood protection. But 10,750 acres are permanently flooded by Lake Monroe. Furthermore an additional 7,700 acres were taken out of farm production because the lake might reach spillway level (556 feet above sea level) when water storage needs become critical.

The public by sad experience has correctly learned to be wary of promoter's claims. Reservoir promoter statements should always be checked and double checked because far too many reservoir promoter's creditability is low.

Loss of cultivated land. Most reservoirs are built in valleys by placing dams across creeks and rivers. Often, if not usually, the richest soil is on the valley floors and flood plains. The farm owners who live on the land view it as a place to earn a living and as a home. They and their ancestors may have resided in the area for decades if not a century. In contrast, some urban people may view a valley as a good reservoir site and believe the construction of a reservoir will improve their economic income and raise their standard of living. Unless an economic impact statement is prepared, the importance of farming in a valley is underrated especially in relation to the local governmental units such as townships and counties. Monroe County has a low rating as an agricultural county because to much of the surface is covered with hills, ridges and slopes with little if any top soil. But reservoirs are not built on hills and ridges; the smaller the amount of good farmland in a township or county, the more critical the loss of the better soils for farming becomes to the smaller governmental units.

Unearned increments. Undoubtedly there is a large residue of bad feeling which lingers on for decades after a reservoir has been constructed because people who lost their farm and homes—some due to fear of having their land submerged and others forcefully by eminent domain. In addition sharpie land buying practices have galled many landowners, their relatives and friends. Many farmowners live comparatively isolated lives and do not have as ready accessibility to valuable information as do land speculators. The latter upon receiving inside information as to whether a reservoir is to be built or not and where, comb the countryside to get control of huge acreages at relatively low prices. Later the displaced farmers see their former land holdings being sold for

five, ten, twenty or a hundred times more than they received. The speculators have contributed nothing to the value of the land. And if the reservoir is being built with tax money, the tax payers have also been rooked.

A high percent of reservoir construction costs could be paid for if governments would take additional land adjacent to the land where the water is to be stored at the same price as that of the reservoir storage land, and retain profits from rising land values and sales due to the construction of the lake. There is no justification for constructing a reservoir with tax dollars unless it is to benefit society. The benefits should result from both making water available and gaining the increment from the raising price of land within a fifth, or quarter or half a mile of the reservoir depending on its size.

Helping pay for the cost of building public reservoirs from rising land values is not a new idea, but one which is not practiced in most states (because it would benefit the taxpayers rather than the speculators). This type of management was put into operation nearly 50 years ago in the 1930's by the Tennessee Valley Authority. Also this type of management was demonstrated over a decade ago by a privately-operated Beech River Development Authority which constructed a series of dams on the Beech River located roughly midway between Nashville and Memphis, Tennessee (3).

It is surprising how uninformed or misinformed some otherwise well informed people are about the distance the Army Corp of Engineers may acquire in fee land around the reservoirs they build with alert, dedicated state and local leaders and with community support. The minimum to be acquired is 300 feet horizontal freeboard allowance above the top pool elevation for storing water for flood control, navigation, power, irrigation and other purposes. In addition to requiring land for the full control pool, the Corps is authorized to acquire lands for fish and wildlife, for recreation, for operation and maintenance, and then the 300 foot strip (4). Planners for the reservoirs have considerable latitude in taking more land which is relatively easy to justify if the taking is desired by state officials and if local opposition is slight. But speculators can be very alert, vocal and influential. Too often the farmers and tax payers are not happy and become leary of reservoir construction and promoters.

Quick profits. Why is reservoir construction called an economic stimulant or generator? Who quickly gains from the construction of a public reservoir by money being pumped into the community? There are relatively quick returns to land speculators, those engaged in transfer of land titles such as lawyers and real estate recorders, bankers, construction contractors, equipment and material suppliers, transporters and construction employees. Often the community "movers and doers" are engaged openly or behind-the-scenes in these economic activities. The income from reservoir construction for these persons (perhaps less than one percent of the population) will far exceed what they will pay in taxes, therefore construction will greatly benefit them even if the construction does not have a benefit cost-ratio of 25 cents benefit on a dollar. Some of those who will gain quick lucrative benefits, attempt to divert attention from their windfalls by promoting the idea that the reservoirs are being built by tax dollars

brought home from Washington D.C. which would otherwise be wasted on something else.

If for no other reason economic impact statements and scientific truthful cost-benefit ratios need be prepared and subject to public scrutinity and discussion in order to hold the "fast buck" element in society in check.

Cost-benefit ratios. The creditability of at least two U.S. governmental agencies that build most of the federally-constructed reservoirs is so low (whether justified or not) that the public has begun to distrust the term cost-benefit ratio. Statistics can be rigged to indicate less than actual costs and drastically overrate unrealistic benefits. Overruns in project costs once construction is underway are often enormous thus making a farce out of cost-benefit ratios.

The intellectual honesty of proponents of reservoir construction and the cost-benefit ratios they prepare are often rightfully questioned. Some people believe that some governmental agencies will prepare cost-benefit ratios to indicate favorably whatever the greatest pressure group wants. If a state's two U.S. Senators and enough of the state's leaders and the public (as indicated by the media) are lobbying for a reservoir construction, statistics can be provided, for example, to build a 9-foot channel in the Wabash River. When one of the two former Indiana senators is defeated by an opponent who is opposed to the reservoirs and waterway construction, the cost-benefit ratio can be refigured and the cost-benefit ratio can show that the reservoirs should not be built. But don't be too sure that the first batch of statistics will be discarded. They may well be carefully filed to be revised later to indicate that the project is again beneficial when the political situation changes. There are numerous examples of overestimating the benefits and under estimating the costs. Enormous overruns over budgets for reservoir construction have been a continuous, monotonous disgrace. Then, often attempts have been made to make inflation the scapegoat. Too often a too low an inflation rate had been considered in the cost-benefit ratio computation, although inflation is nothing new. Cost-benefit ratios unless evaluated by an independent honest private agency cannot be trusted and are too often a smoke screen.

Ensuing problems. Where a public reservoir is to be constructed fully or partially with federal tax dollars, some people (if not most) at first may be made to think that reservoir construction is something of a Christmas gift. But often after reservoirs are built reality suddenly strikes like a thunderbolt. There the reservoir sits without adequate roads for people to get to and from it. Developers rush in and start construction of houses and commercial buildings where there are inadequate building codes and no available running water, sewers or solid waste disposal. Population shifts disturb the school sytems, the sheriff's program and other county public services. Too often there is economic disruption bordering on chaos. Costs soar and tempers flare. Some people wish the reservoir had never been built, or if it had, in some other county.

Failure to plan and zone. Economic and social disruption could have been held to a minimum if the county or counties in which the reservoir is to be

located had area or county planning and zoning agencies, and if the administrators of these agencies had anticipated and cooperated in problem solving. However, some if not many reservoirs are built in counties that do not have county or area planning. Or in other counties planning and zoning exists in name only and have no professional planners and/or only small inadequate staffs with meagre budgets. It is difficult enough to get cooperation within a county, but to secure intercounty cooperation is more difficult. Official intercounty regional planning does not exist throughout all states. Too often the need for intercounty planning is not understood or supported (5). As a result, often reservoirs are constructed before post World War II soil surveys, water, sewage, roads, schools and other surveys are made. So often economic impact studies have not been made to justify the project.

Upstream-downstream benefits. Too often the upstream-downstream benefits of a potential reservoir are not presented to the public before the decision to build it is reached. To protect some people's land in the floodplain below the dam from flooding, it is necessary to flood permenently other people's land above the dam. People upstream from the dam usually have better access to the reservoir's water and also greater opportunities to sell land at a profit for non-agricultural purposes than do the downstream landowners. However, the latter have a better location if the reservoir water is destined primarily for irrigation. These two types of benefits, upstream and downstream should be clearly discussed before construction, but too often are neglected. Consequently, dissention develops later during construction and filling of the reservoir or after the reservoir is filled.

Construction destruction. Beauty is in the eye and mind of the beholder. Many urban people see no beauty in continuous stretches of corn or soybean fields in the U.S. corn belt. Nor did many pioneers see the beauty of vast stretches of prairie which spread from central Ohio to eastern Nebraska where the beans and corn now grow. Some people do not want the habitat of nature's population of fauna and flora destroyed. Other persons could not care less. Those promoting reservoirs see beauty in bulldozers and other twentieth century machinery that tear up trees and forests, move across fields gouging and destroying soils, piling up rock and earth and pouring enormous piles of concrete to construct reservoirs. They find pleasure in visualizing the reservoir's waters being used for recreation, irrigation, navigation, domestic and industrial water supplies, flood control, electricity, restoration of wildlife and other uses. Consequently, there is a conflict in the destruction and the creation of beauty.

Lake deterioration. Perhaps two decades should pass before attempts are made to judge whether the after construction beauty exceeds that of pre-construction. Unfortunately too often in a few years it becomes obvious that the public is misusing and abusing the man-made lake. Some evidence of rapid deterioration are 1. excessively littered and cluttered lake shorelines and adjacent areas, 2. excessive growth of weeds encouraged by silting and pollution, 3. badly eroded shorelines and 4. the rapid aging of the lake by the eutrophication.

Cost-benefit ratios become a farce if a reservoir's projected life is cut in half or more by poor management and abuse use. Both small and relatively large lakes constructed with city, state and public funds have had their storage capacity cut from 50 to meanly 100 percent in a few decades.

Where stormwater runoff carries large quantities of silt and minerals in the form of human wastes, industrial wastes and from agricultural operations, these materials settle at the bottom of reservoirs creating an ideal growing habitat for water weeds. Most of the reservoirs and natural lakes in the eastern United States are having their viability seriously threatened by a vascular aquatic plant known as *Myriophyllum Spicatum* (6). The plant is known for its explosive local growth and its regional spreading rate. It started from a single beachhead on Chesapeake Bay only 15 years ago.

Inadequat dams. The inadequacy of many dams as to site, design, materials used, construction, maintenance and other factors are well recorded. But each disaster involves a limited area and the impact is not great in other regions. Natural floods are so common that a man-made flood due to bursting of a dam is just another flood. But these disasters have happened so often in so many different geographic regions that more and more people are concerned. Consequently when the huge Teton dam in the West crumbled in 1976 and soon thereafter the Toccoa Dam collapsed killing 38 people of a small northeast Georgia Bible College in November 1977, a storm of criticism arose, questions were asked and a shocking situation revealed. In 1972 Congress approved an inspection program aimed at preventing such disasters as the Teton and Toccoa dams but as of November 7, 1977 not one dam had been inspected (7). Loche Mouton, a spokesman for the Army Corps of Engineers, attributes this failure to a lack of funds and explains that Congress authorized just enough mney to make an inventory of the nation's dams. David Conrad of the American Rivers Conservation Council believes "Congress is more interested in getting new dams built than it is in the safety of dams already constructed." After the Teton disaster the Bureau of Reclamation reviewed all its 330 dams and found several to be endangered. The Army Engineers inspects the approximately 400 dams it built "all the time." However, a civil engineering professor in 1977 told Congress that at least 14,000 United States dams have been built without control over their design or construction. The Coalition for Water Project Review (which includes 21 environmental groups) have opposed the construction of some dams as has President Jimmy Carter but Congress apparently is not influenced. In 1977 Congress appropriated more than $3 billion for federal development agencies, but just $15 million for their safety.

Some groups concerned with dam safety maintain that dam construction should stop until the safety questions are answered and such measures implemented. According to Sport Fishing Institute there are about 1,500 reservoirs larger than 500 surface acres in area existing in the United States in 1978 (8).

Restricted dam use. Apparently dams are not always designed so that the public will gain the greatest benefits. It is difficult for citizens in the Ohio River

watershed and some throughout the country to understand the failure to install electrical generating equipment in many of the permanent dams now in operation and some under construction across the Ohio River. It is still an engineering mystery as to how it was economically feasible to built a special structure adjacent to the Markland dam near Vevay, Indiana to generate hydro-electric power, but not feasible to place the penstocks in Markland dam when it was constructed. Some persons believe that penstocks were not placed in the Ohio River dams because the Eisenhower Administration was opposed to federally-developed waterpower. The Eisenhower Administration gave the privately-owned company the right to build the additional structure to generate electricity after the Markland dam construction started and after John F. Kennedy was elected president.

Fortunately the Markland dam was so constructed that it formed the foundation for a potential bridge. Years later in 1978 a bridge was completed and opened to traffic. Why have not more dams across the Ohio River been designed so as to provide the foundation for a bridge when the dam is being built or so a bridge could be added later?

Cesspool reservoirs. Following World War II the tempo of developers building housing areas around large ponds or reservoirs increased. Small intermittant or permanent streams were dammed and the houses cited in the adjoining wooded areas. Sometimes the man-made lake was to provide domestic water as well as fishing, swimming and boating. A home in the country side with *a view* through a picture window and from a porch and patioes became the slogan to sell property to those who enjoyed the outdoor scenes and living, and knew little if anything about the physical environment. Too often the soils around the reservoirs were not suitable for septic tank and fields sytems, or these were improperly built and used. Often these septics, built to accomodate a limited amount of water from wells, cisterns and ponds, proved too small when the countryside homes were connected to rural waterlines. In about 10 years or less depending on quality of construction and misuse by the owner, the septics start draining into adjacent lakes. The odor from both the septics and the lake often becomes so strong that patio and other outdoor living becomes impossible. Now the owners in addition to having a lake view have a lake smell as the reservoir in reality becomes an uncovered cesspool.

Fleecing. Not only have the property owners seen their house settings deteriorate and their property values decline but they also learn that their tax dollars have been misused or squandered on water projects in another state. For example, environmentalists have criticized a number of federal projects such as: "... a dam built in Colorado at federal taxpayer's expense which benefits only a handful of farmers to the tune of $1 million each" (9).

Other objections. There are other objections to reservoir construction both major and minor such as misrepresenting the reasons for building it or attempting to justify the reason(s) for construction after the dam is started or completed. Country people often object strenuously to the lifestyle of people attracted to reservoir areas for recreation. Regardless of why people have taken

a position against reservoir construction, in recent decades their numbers have increased and so has their influence.

Author's Position

In no way does the author wish to leave the impression that he is against all reservoir construction nor would he attempt to refute so many of the just criticisms of such constructions in the past. The demands for both economic and environmental impact studies are justified and are trends in the right direction regardless of the opposition of the speculators, developers and "fast buck" manipulators. Cost-benefit ratio statistics and statements need to be published, critically evaluated and there should be ample time for the opposition to study and refute, if possible, the studies made by the proponents.

Public hearings should be conducted in such a way that they are not shams and farces. People are too alert today not to recognize deception of public agencies. One of the unfair public hearing gimicks is to provide proponents with hours of time and then when everyone is physically tired, if not mentally, and need to go home, or some have left the hearing, the opponents are provided only limited time. This practice has been engaged in repeatedly. Often another type of deception is to keep potential opponents from seeing the material, prepared by the proponents with tax dollars, early enough before the public hearings so that they could have carefully examined and possibly refute some of the content and conclusions and/or suggest alternatives or additional alternatives.

There is often ample justification for building a reservoir but the "bulldozing" tactics often used to push through the decisions before the opposition can get a word in has left part of the public dissatisfied and has contributed to the increase of those opposing reservoirs.

Why should not states prepare published surveys of major potential reservoir sites? If such information were available and the sites characterized, it might seem reasonable to pass legislation to protect some of the sites from irretrievable development for some other purposes.

Practicing democracy, intellectual honesty and just business practices, and Christian ethics could eliminate much of the opposition to reservoir construction. There will always be opposition to changes in the use of land and usually a few will always be unconvinced and hurt. However, the changes should be made for the good of society as a whole. The public and the landowners should not be deceived by the few.

But as long as Congress and the public do not support Republican or Democratic presidents (10) in their attempt to curtail expenditures for questionable reclamation projects and the projects of the Army Corp of Engineers in the Public Works Bill there seems to be little hope for federal improvement (11).

Whether the 95th Congressional support of President Carter's 1978 veto of the Public Works Bill will start a trend to a more responsible fiscal attitude or not only the future can reveal.

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