

Information Education and Hunter Education Sessions

An Extreme Drawdown on a Heavily Populated Lake: The Public Relations Aspect

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Abstract: The various benefits from a correctly timed drawdown on reservoir fisheries have been well documented; however, little has been written on the public relations aspect. An extreme (2.7 m —9 foot) drawdown on the most heavily populated lake in Arkansas is discussed, focusing on the procedures and problems involved with “selling” such a management technique to the public. By discussing the public relations work involved with the project, the problems that can arise and recommendations based on this experience, it is hoped that other management biologists planning similar operations will receive some insight into situations they may encounter.

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Much has been written on the benefits from correctly timed water level manipulation on reservoir fisheries (Wood 1951, Brasch 1953, Lantz et al. 1964, Jenkins 1970, Groen 1977). While an abundance of information can be found on the effects of drawdowns on aquatic vegetation (Bonner 1978), terrestrial vegetation (Holcomb and Wegener 1971), release of bottom organic sediments (Hulsey 1958), increased black bass reproduction the following spawning season (Pierce et. al. 1963, Keith 1975) and increased predation on forage fish (Lewis 1967), little has been written on the public relations aspect. The Fisheries Division of the Arkansas Game and Fish Commission completed a 2.7 m-drawdown (approximate 20% reduction of lake surface area) on Lake Hamilton in West Central Arkansas, the most heavily populated lake in the state. The following information is related to demon-

strate some of the potential public relations problems associated with "selling" a fish management drawdown on a heavily populated lake. Perhaps this paper will assist fishery management biologists in early planning stages that go along with any major management program.

Study Area Description and History

Lake Hamilton, a 3,000 ha (7,400 acre) lake, is the second in a series of impoundments on the Ouachita River in West Central Arkansas. Built in 1931 by the Arkansas Power and Light Company (AP&L) primarily as a hydroelectric reservoir, Lake Hamilton soon became a popular recreational area and, as is often the case, intense land development around the lake soon began. Currently, approximately 75% of the 386 km (240 mi) of shoreline is residential or commercially developed, encompassing more than 7,000 lakefront homes (McClelland 1981). Within a 112 km (70 mi) radius of the lake are several large Arkansas cities including Hot Springs, Little Rock, Arkadelphia, Malvern and Benton. Because of its close proximity to populated areas and the intense development of the lake itself, heavy recreational usage of the lake occurs with fishing, boating, water skiing and swimming, the primary sports involved. To keep the fishery of Lake Hamilton in a quality state in the face of ever-increasing pressure and an undesirable upward trend in the adult gizzard shad (*Dorosoma cepedianum*) population, the state fisheries division went to work on a new management plan for the lake.

Lake Hamilton Drawdown Program

Since the late 1950's, an annual 1.5 m- (5 foot), fall-winter drawdown (from November–March) has been conducted on Lake Hamilton primarily to provide flood control storage for AP&L. Other benefits of the annual drawdown have been to lakefront landowners who used the drawdown to repair sea walls and docks, to provide aquatic vegetation control, and to allow concentration of forage and predatory fish species.

In August 1979, the annual cove rotenone sample on Lake Hamilton was conducted by district fishery personnel. Comparative analysis of data over a 5-year period indicated an increasing trend in gizzard shad and other undesirable fish.

Selective eradication of gizzard shad using rotenone at relatively low chemical concentrations had successfully been utilized in the past (Filipek 1981), but on a lake the size of Hamilton, this procedure may cost as much as \$15,000 to \$20,000. Another factor that precluded use of rotenone was the possible loss of fishes that had been stocked at a significant expense to

the Commission. These include, striped bass (*Morone saxatilis*) and walleye (*Stizostedion vitreum*).

A plan that was well established, had proven benefits, and would not destroy the relatively abundant populations of large stripers, walleye and largemouth bass (*Micropterus salmoides*) was selected. A 2.7 m-drawdown was recommended to use the lake's large predators to prey on the target species in the reduced water volume. The drawdown was to last from October 1980 to March 1981, with the extreme drawdown to last from 1 November 1980–1 January 1981.

Spreading the Word

As in late 1979, a request for a 2.7 m drawdown, which was an additional 1.5 m (5 feet) beyond the normal winter drawdown, was submitted to the AP&L Company for consideration. The 1980–81 drawdown schedule was to lower Lake Hamilton 1.2 m (4 feet) by 1 October and hold at that level through 1 November 1980. On 1 November, the lake would be lowered an additional 1.5 m by 15 November and remain there until 1 January 1981 when it would be raised 1.5 m until 1 March. After 1 March, the lake would be brought up to the normal lake level.

AP&L, as part of its contract with the Federal Energy Regulatory Commission to harness the hydroelectric potential of the lake, is required to cooperate with the Arkansas Game and Fish Commission in fishery management of Lake Hamilton. Several meetings with AP&L's management level personnel were attended to plan the specifics of the drawdown and answer any questions the staff might have.

A major task of the program was the education of the area public on what the Fisheries Division was proposing. The first step was to contact the key people in the community, explain the drawdown to them and obtain feedback. Key people included local politicians, lake marina operators, hotels and motels closely associated with the lake, lake property owners, and local sportsmen's groups. This was initiated early in 1980 and continued through the pre-drawdown period.

For the most part, the politicians, dock operators and resort owners were in favor of the drawdown after they realized it would benefit their businesses and the lake's fishery. Of particular interest was the support of the dock operators who would have to move their docks quite a distance to operate them and had the most to lose monetarily.

The first public meeting on the drawdown was in July in the Hot Springs Convention Center. Approximately 40 people attended and were addressed by the Regional Fisheries Supervisor, the District Fishery Biologist and an

AP&L representative on the benefits to the lake's fishery. Also present were the County Health Sanitarian and the State Pollution Control Area Inspector. These latter 2 agencies planned to take the opportunity afforded by the drawdown to conduct shoreline and open water surveys to locate any problems with domestic or commercial sewage outflows. After everyone gave their presentations on the drawdown, questions and comments were solicited from the audience. From the responses received, approximately 60–65% of those attending favored the drawdown, while 35–40% were against it. The majority of those opposed mentioned damage to their docks or uncovering of their lake water lines as the reasons they were against it. It was brought out by the agency panel that all docks on the lake were required to have a permit issued by AP&L. On this permit, it is stated that docks must be built to be able to stand significant water level fluctuations. Also, those having lake water lines were advised by the county health department to position them at least 3 m (10 feet) under the water surface.

After the news of the first public meeting spread, several property owners began writing the local newspaper concerning opposition to the drawdown. While there were a few letters supporting the drawdown, the opposition was the most vocal group heard.

After the Commission publicized a second public meeting (on the radio and in the newspaper) in August, a property owners' association was formed and placed notices in the paper advising those not wanting their lake drawn down to attend the second meeting. Anticipating a larger crowd for this meeting, a conference room in the Hot Springs Convention Center was reserved. About 200–250 people attended the meeting, which featured a panel of speakers representing the State Game and Fish Commission (Chief of Fisheries, Regional Supervisor, District Biologist), AP&L, the County Health Department, the State Pollution Control and Ecology and the Municipal Water Manager.

The fisheries representatives went over the need for the drawdown and discussed the benefits of it. The Fisheries Chief reviewed the history of Lake Hamilton, including past fishery problems that had developed and been dealt with. The other agencies reviewed their plans for monitoring the domestic and commercial sewage inflows during the drawdown and emphasized that cooperation with the lake's residents, not citations, was primary in their plans.

After the agency panel had presented their plans and schedules on the drawdown, participants from the audience who had earlier indicated their interest, asked questions or made statements to various members of the panel. A cassette recording and notes were taken of each person's response and later compiled. When the statements were tallied, about 50% of the people at the second meeting were for the drawdown and 50% against. It was becoming evident that a small group was opposed to the drawdown and were deter-

mined to fight it to the end. This vocal minority again contacted the media with news articles and letters. One of the more "colorful" sent a letter to the Governor of Arkansas, stressing the potential fire hazard that would occur. He claimed 100% of the lake's residents depended on volunteer fire departments, which in turn used the lake as their water source. The fire departments had small tank trucks and would have trouble watering their tanks. He also said 50-60% of the lake residents used lake water for drinking and, therefore, the drawdown would pose a serious health problem.

The Commission's District Fishery Biologist answered the so-called "fire problem" in the media. He had talked with the local fire chief and found the drawdown would be a slight inconvenience to them. They would set up portable pumps on the lake and were in the process of equipping their fire trucks with larger water tanks. The District Biologist also pointed out that people using lake water for drinking purposes had chosen that mode of procuring water as a convenient and inexpensive means instead of drilling a well or tying into municipal water lines. The lake lines were not approved by AP&L or the Health Department. There was no permit that allowed use of lake water lines instead of drilling a well. He also mentioned that extending their existing water lines would keep lake residents from going without water.

The Governor soon afterwards asked the Game and Fish Commission's Director to "manage the state's natural resources in a manner that creates the least possible danger to the public," although he acknowledged that the Commission operates independently of both the executive and legislative branches of state government.

The initial steps of the drawdown schedule proceeded on time. The lake was lowered 1.2 m (4 feet) and stabilized at 120.4 m (395 feet) mean sea level. After the initial decrease, the Lake Hamilton Property Owners' Association had a meeting in which they authorized their attorney to request the drawdown be postponed for 1 year. This would give them time to prepare for the drawdown, at which time they would support it.

After discussing the issue with several groups, the Commission Director decided to postpone the extreme drawdown for 1 year to give the inconvenienced parties additional time. This decision was accepted by the Property Owners' Association; it was not by the marina and resort owners, who had incurred expenses and guest reservation changes in their preparation for the drawdown. Legal action was brought up as possible against the Commission for not having the drawdown. The Commission was criticized for letting a vocal minority penalize the responsible citizens who took the proper precautions for the drawdown. The media now questioned the way the Commission "gave in to minority pressure and postponed the drawdown."

The issue soon cooled down and the waters stayed calm until the next summer when district fishery personnel began releasing news articles remind-

ing lake residents of the planned 1981-82 drawdown. One of the most ardent anti-drawdown residents was quoted as saying that he had plenty of time to prepare for the drawdown this year and thought the drawdown was necessary.

We were now receiving support even from some of the staunchest foes of the year before. Everything appeared to be proceeding well, although there were still a few against the drawdown.

Murphy's law then came into play! Newspaper headlines stated, "Draw-down Data Fabricated, Expert Says." A former District Fisheries Biologist who had supported the drawdown was saying he had manipulated and fabricated data to deceive the public. Commission personnel working on the 1981-82 drawdown were completely taken aback by this 180-degree turn of events. The fisheries biologist, who had recently resigned, drew up a list of reasons why the drawdown would not work. Biologists, who had worked closely with the ex-fishery biologist could not believe his totally different attitude. While his contentions were easily rebuked by anyone knowledgeable in current fisheries management practices, this did not matter to the anti-movement. The Commission's credibility appeared to be in jeopardy again and the new district fishery biologist and his men felt like they had proverbially "jumped from the frying pan into the fire." However, telephone calls soon began to come in from area people who solidly supported the Commission. The attorney from the Property Owners' Association then filed a lawsuit to temporarily restrain AP&L from drawing the lake down the additional 1.5 m (5 feet). A judicial hearing was to be held 2 days before the lake was to be drawn-down the 1.5 m. News articles stated that the former biologist would testify on behalf of the plaintiffs.

At this time, more and more people expressed their support for the Commission. On the day of the hearing, a news article interviewing fisheries administrators from 3 adjoining states was published disputing the former biologist's contentions. Each of his reasons against the drawdown were rebuffed by the out-of-state experts.

During the hearing, the plaintiffs founded their case on expenses of lengthening drinking water lines and fisheries data fabrication. Later, it was brought out in the testimony that, in fact, the former biologist had not fabricated any data. These results effectively ended the plaintiffs' arguments and the hearing soon ended.

When the judge reconvened the hearing, he dismissed the motion for temporarily restraining the drawdown. He ruled that the plaintiffs would not be irreparably damaged but only inconvenienced. Therefore, he had no alternative but to dismiss the motion.

After the hearing, additional correspondence supporting the Commission appeared in the local newspaper. With the Commission out of the controversy again, the pollution surveys being done on the lake made possible by

the project received more exposure. It was gratifying that after the controversial part of the drawdown was over, how cooperative the agencies, local businesses and area residents were to each other in getting the job done. Resort owners put up visiting health department sanitarians for free, free meals were dispensed to pollution survey crews, free boats were provided for the lake survey and free gas for the boat motors. Since much of the pollution survey data is still being analyzed, the number of domestic and commercial violations found in the lake has not been disclosed. However, several large commercial polluters were cited for water quality violations and given time to make improvements on their sewage systems.

During the drawdown, news articles were sent to the paper by district fisheries personnel on the work the Commission was doing during the drawdown. The drawdown evaluation process was the main thrust of the publicity with lake access area improvements also covered.

The 1981-82 extreme drawdown of Lake Hamilton is now over; the drawdown evaluation is not. District fisheries personnel have been conducting: 1) monthly gill netting samples to evaluate food habit trends in striped bass before, during and after an extreme drawdown, 2) age-growth analysis of striped bass in the above situation, 3) evaluation of gizzard shad standing crop (and other fish species) in Lake Hamilton, and 4) changes in reproductive success of various fish species in the lake. This process is not completed yet but will be reported on when all the data are analyzed.

Discussion

While the data should demonstrate if this type of extreme drawdown is effective in reducing the gizzard shad biomass in lakes with striped bass populations, there are other points to evaluate, particularly from a public relations standpoint.

Did we do a good job of selling the Lake Hamilton extreme drawdown to the people around the lake?

The immediate reaction to this question is to reply "no," since there were problems in the public relations portion of the drawdown program. Some people, particularly members of a vocal minority, cannot be anticipated as major obstacles to an effective management program. These, usually anonymous, people can become quite ardent and dedicated.

What could we have done that would have made the 1981-82 Lake Hamilton drawdown a smoother run operation?

1. From what happened, more time should have been allowed the people affected to prepare for a major management technique of this type. This means preparing well ahead of time and starting the public relations program approximately 1½ years before the drawdown. By initiating a program early,

and occasionally reminding the public of the schedule, people will have ample time for necessary preparations.

2. Do not schedule too many public meetings in advance. We stated there would be 3 public meetings. After 2 meetings, we felt we had heard similar comments at both meetings and that no additional information would be available on the subject by having a third meeting. This "backing down" did not sit well with some of the community. It is suggested to schedule 2 meetings, one to generate interest in the program and one to give those people who did not attend the first meeting another chance. If a third meeting is needed, it can always be scheduled at a later date.

3. One should realize that often a much publicized minority is just that, a minority. It is impossible to satisfy everyone and someone may always be against some portion of a fishery management plan. Conversely, do not be completely blind to public reaction just because it is an obstacle to your goals. Often a compromise, while not what a biologist may want, can be agreed upon without undue changes to a basic program, and still attain the desired outcome.

4. There may be some situations where accepted management techniques are not the *best* technique for that situation or one that should be used under certain conditions, such as a heavily developed reservoir. We believe we followed all the correct procedures in selling this important management program on Lake Hamilton.

Finally, while the biologist's preparation for a major management undertaking is critical, the public's preparation for an undertaking is just as critical to the overall success. A fishery biologist must deal with people management, especially as more of our lakes become densely populated. Certainly, the best prepared biological program can be ineffective if the sociological aspect is not also considered.

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