BEFORE THE
ARKANSAS POLLUTION CONTROL AND ECOLOGY COMMISSION

IN THE MATTER OF:

WASTE WATER MANAGEMENT, INC. –
WOODSLAND EDGE SUBDIVISION
P.O. Box 524
Vilonia, AR 72173

NPDES PERMIT NO. AR0052621 and **DOCKET NO. 16-____-P**
STATE CONSTRUCTION PERMIT NO. AR0052621C

REQUEST FOR ADJUDICATORY HEARING & COMMISSION REVIEW

Comes the Arkansas State Game and Fish Commission ("AGFC"), by and through its undersigned attorneys, and in accordance with Ark. Code Ann. § 8-4-205 and APC&EC Regulation No. 8, Reg.8.603 hereby requests an adjudicatory hearing and the opportunity to present evidence and oral argument before the Arkansas Pollution Control and Ecology Commission regarding the decision by the Arkansas Department of Environmental Quality ("ADEQ" or "the Department") to issue NPDES Permit No. AR0052621 and State Construction Permit No. AR0052621C to Waste Water Management, Inc. - Woodsland Edge Subdivision ("Woodsland Edge") on August 18, 2016. In support of this Request, AGFC states as follows:

1. AGFC is a state agency organized and existing under Amendment 35 to the Constitution of the State of Arkansas. Amendment 35 vests in the AGFC authority for "[t]he control, management, restoration, conservation and regulation of birds, fish, game and wildlife resources of the State, including hatcheries, sanctuaries, refuges, reservations, and all property now owned, or used for said purposes and … the administration of the laws … pertaining thereto…." Ark. Const., Amend. 35, § 1. The mission of the Arkansas Game and Fish Commission is to conserve and enhance

Arkansas's fish and wildlife and their habitats while promoting sustainable use, public understanding and support.

2. AGFC is the owner of real property commonly known as Lake Conway (a/k/a Craig D. Campbell Lake Conway Reservoir) situated in Faulkner County along Interstate 40 just east of the City of Mayflower and several miles south of the City of Conway. The 6,700-acre lake is the largest owned by AGFC and the largest lake ever constructed by a state wildlife agency in the United States. Because of its large size, central location and excellent fishing, Lake Conway has been one of the most popular fishing locations in the state since it was constructed on Palarm Creek in 1948. Major sportfish pursued by anglers in Lake Conway include blue catfish, bluegill, channel catfish, crappie, flathead catfish, largemouth bass, and redear sunfish.

3. Both AGFC (pursuant to Amendment 35 and consistent with the State Water Plan) and ADEQ (under the Arkansas Water & Air Pollution Control Act, Ark. Code Ann. §§ 8-4-101 *et seq.*, APC&EC Regulation No. 2, and the State Water Plan) are charged with protecting various waters of the State of Arkansas -- such as Lake Conway, and that includes specifically providing for the "protection and propagation of fish and wildlife" and for "recreation in and on the water."

4. AGFC Land Use Policy applicable to Lake Conway and other AGFC lakes specifically prohibits any discharges into the lake, including septic discharge, gray water, and discharge from individual sewage treatment systems. *See* AGFC Code Book, Chapter K1.01 - Policies on Land Use Around Arkansas Game and Fish Commission Lakes, 6.0 and 6.4.

5. APC&EC Regulation No. 2.402 concerning "Nuisance Species" states:

"All waters shall be free from substances attributed to man-caused point or nonpoint source discharges in concentrations that produce undesirable aquatic biota or result in the dominance of nuisance species."

6. Waterborne nutrients, especially phosphorus and nitrogen, can directly stimulate the growth of undesirable aquatic biota, such as alligatorweed (*Alternanthera philoxeroides*), in lakes and streams. Alligatorweed is listed as an invasive aquatic nuisance species by the USDA National Invasive Species Information Center. Alligatorweed commonly can choke substantial areas of waterbodies, preventing angling, reducing boat and bank access by the public, shrinking shoreline spawning habitat for sportfish species, and decreasing available dissolved oxygen and lowering pH as it begins to decay.

7. It is the professional judgment of AGFC and its biologists that wastewater discharges into Lake Conway can be directly attributed to the growth of undesirable aquatic biota, such as alligatorweed. AGFC is aware that, in 1997, ADEQ conducted a study that concluded that elevated nutrient concentrations (i.e. nitrates and phosphates) have existed in Stone Dam Creek, which drains into Lake Conway, and were stimulating increased plant growth which, in turn, caused significant daily fluctuations in pH and dissolved oxygen. At the time of the study, the City of Conway wastewater treatment plant (WWTP) was discharging into Stone Dam Creek and was considered a major source for the increased plant growth. Alligatorweed is now found throughout major parts of Lake Conway and also is prevalent in Little Creek (another tributary of Lake Conway), but is particularly bad at the confluence of Little Creek and Lake Conway. *See* Photographs attached hereto as Exhibit "A." (AGFC owns along both sides of Little

Creek for several hundred yards before it drains into Lake Conway). AGFC spends a considerable amount of taxpayers' dollars annually to control alligatorweed and other nuisance aquatic plants in Lake Conway.

8. In February 2016, staff with the ADEQ Water Division informed AGFC Fisheries biologists that representatives of one or more proposed subdivision developments had expressed interest to ADEQ in possibly discharging treated municipal sewage wastewater into Lake Conway or a creek draining into the lake. Shortly after, on or about February 23, 2016, staff from both agencies met in Mayflower, AR to address potential impacts from any such wastewater discharge into Lake Conway, and discussed concerns about degrading the existing water quality, increasing the presence of aquatic macrophytes, and causing additional adverse effects upon the populations of fish and other aquatic species in the lake.

9. On or about March 4, 2016, AGFC submitted a letter to ADEQ outlining additional concerns about any potential sewage wastewater discharge into Lake Conway. Included with that letter was a copy of a Lake Conway Water Quality and Sediment Study Report prepared for AGFC in May 2015 by FTN Associates, Ltd. As a result of the study findings, FTN characterized water conditions in Lake Conway as "eutrophic to hyper-eutrophic" based upon high concentrations of chlorophyll-*a* and total phosphorus, and recommended that sewage wastewater discharge into the lake be restricted.

10. More specifically, according to FTN's 2015 Study Report, the arm of Lake Conway where Little Creek enters the lake had the highest chlorophyll-a and total phosphorus measurements. This Little Creek Arm of the lake (designated in the report as the Stone Dam Creek sample site) had a nitrogen/phosphorus (N/P) ratio of 7.6 and was

classified as hyper-eutrophic based on chlorophyll-a and total phosphorus. The N/P ratio of 7.6 observed in the Little Creek Arm of the lake indicates that part of the lake is likely marginally nitrogen-limited. According to FTN, while overall primary productivity is light-limited, borderline nitrogen-limitation conditions may exist, especially in the upper lake, which can affect algal species composition. If nitrogen limitation were to become more pronounced, it could result in selection for algal communities that cause water quality problems associated with noxious forms of algae. Although N/P values near 10 (average throughout the entire lake) indicated that phosphorus is the limiting nutrient, these values are near the range at which nitrogen limitation may also occur. Little Creek had one of the highest base flows of all 5 major tributaries into Lake Conway and, if a WWTP were to discharge sewage wastewater into Little Creek, it would yield a high potential for additional nutrients being flushed into Lake Conway.

11. On or about April 29, 2016, AGFC received from ADEQ a Public Notice of a Draft NPDES Permit No. AR0052621 and State Construction Permit No. AR0052621C to Woodsland Edge. The notice stated that the proposed treatment plant was being designed to discharge up to 30,000 gallons per day of municipal wastewater into an unnamed tributary of Little Creek, which drains directly into Lake Conway. Given serious concern that such discharge would be detrimental to Lake Conway, AGFC submitted to ADEQ written comments dated May 26, 2016, which once again included a copy of the 2015 Lake Conway Water Quality and Sediment Study Report prepared by FTN. In its comments, AGFC emphasized that the addition of nutrients through Woodsland Edge's proposed wastewater discharge potentially would accelerate Harmful Algal Blooms (HABs) in Lake Conway, which would negatively impact the lake's

primary productivity and fish populations. (HABs can have poisonous effects on fish, humans, and anything else they come in contact with). AGFC also explained that nuisance aquatic vegetation has become a major concern for continued management of Lake Conway and the agency has been having to expend substantial state funds annually to control the spread of vegetation within the lake. The areas most impacted by nuisance aquatic vegetation include Palarm Creek and the Little Creek Arm of the lake. At certain times, spatterdock (lily pads) and alligatorweed have covered hundreds of acres in these areas and have severely limited public boating access to those portions of the lake. AGFC also warned that additional nutrient contributions from Woodsland Edge's proposed wastewater discharge would only accelerate the growth and spread of alligatorweed and thereby cause increased financial burden for AGFC and, overall, negatively impact public access and enjoyment for that area of Lake Conway. In conclusion, AGFC urged ADEQ not to allow Woodsland Edge's proposed sewage wastewater discharge and to direct the subdivision developer to secure an alternate means for wastewater disposal.

12. On July 11, 2016, biologists with AGFC attended the public meeting and hearing hosted by ADEQ regarding Draft NPDES Permit No. AR0052621 and State Construction Permit No. AR0052621C requested by Woodsland Edge. During those proceedings, which took place at the Faulkner County Natural Resources Center, numerous individuals, including state legislators, members of the Lake Conway Home Owners Association and the Lake Conway – Point Remove Watershed Alliance, sport fishermen, and others, spoke in support of AGFC's position that the proposed wastewater discharge and treatment plant construction permits should be denied to avoid adversely

impacting water conditions in Lake Conway and interfering with its primary purpose for wildlife conservation and recreational sportfishing. Additionally, AGFC Fisheries biologists submitted additional written, as well as oral, comments on behalf of AGFC at the public hearing.

13. Various commenters to the permits requested by Woodsland Edge also pointed out to ADEQ that a viable alternative to Woodsland Edge discharging into Little Creek and Lake Conway was for the project developer to connect to the existing permitted sewer-collection system operated by Conway Corporation.

14. On or about August 23, 2016, AGFC Fisheries Division Chief Chris Racey received written notice dated August 19, 2016 that, despite AGFC's urging, ADEQ had issued Final NPDES Permit No. AR0052621 and State Construction Permit No. AR0052621C to Woodsland Edge, which permitted construction of the proposed WWTP and discharge into Lake Conway. In response to AGFC's comments opposing issuance of the permits, ADEQ indicated simply that it acknowledged and understood AGFC's position, but it was granting the permits anyway and "[t]o assess the nutrient contribution of the proposed facility, the Department has included monitoring and reporting requirements for Total Phosphorus and Nitrate + Nitrite Nitrogen [and the] data collected would be utilized in any future analysis of the nutrient loading of the Lake Conway watershed." Elsewhere in its Response to Comments, ADEQ did not identify a maximum nutrient loading capacity for the receiving waters and readily admitted that "it is uncertain exactly how many comparative discharges Lake Conway can accept before eutrophic conditions are reached."

15. AGFC now seeks Commission review of ADEQ's permitting decision,

which conflicts with legal authority vested in AGFC and accords insufficient weight to the evidence provided by AGFC and other commenters who expressly endorsed and/or supported AGFC's position.

16. ADEQ's permitting decision was made in contravention of the legal jurisdictional authority AGFC exercises pursuant to Amendment 35 for the control, management, restoration, conservation and regulation of the fish and wildlife resources of the State, including for Lake Conway, which is owned and operated by AGFC in trust for the citizens of the State of Arkansas. AGFC Land Use Policy applicable to Lake Conway prohibits discharges into the lake, such as this proposed one. The permitting decision also contradicts the professional judgment of AGFC and its biologists that the proposed wastewater discharge into an unnamed tributary of Little Creek, which drains directly into Lake Conway, poses an unacceptable risk of harm to the viability of Lake Conway and interferes with its primary purpose for wildlife conservation and recreational sportfishing.

17. Additionally, ADEQ's decision, which will allow municipal wastewater discharge by Woodsland Edge of up to 30,000 gallons per day into the lake and adopts a "wait and see" approach as to the effects of the nutrient loading of the Lake Conway watershed, conflicts with the credible findings and recommendations detailed in the 2015 Lake Conway Water Quality and Sediment Study Report by FTN. While acknowledging uncertainty about the lake's capability to accept additional nutrient loading, ADEQ failed to accept FTN's assessment, based upon findings of high concentrations of chlorophyll-*a* and total phosphorus, that "eutrophic to hyper-eutrophic" conditions already exist in the lake. ADEQ apparently chose to disregard FTN's findings because the City of Conway's

WWTP ceased discharge into Stone Dam Creek in 2014 and the Water Quality and Sediment Study was conducted mostly in 2013 while that WWTP was still in operation. However, despite the discontinuation of the Conway WWTP discharge, the damage from that nutrient loading already has occurred and the real threat of further loading to the water and sediments that can exacerbate HABs remains. At a minimum, ADEQ should have required additional study and analysis of nutrient loading from the proposed sewage wastewater discharge before finally deciding whether to issue the permits.

18. It is noteworthy that AGFC hired Byran Winston, with the University of Arkansas Department of Crop, Soil and Environmental Services, to conduct a paleolimnological study of Lake Conway from January 2014 through January 2015. The study, entitled "Paleolimnological Study of Lake Conway, Arkansas," focused on the existing nutrient concentrations in the lake's sediments. The 2015 Winston / University of Arkansas Study Report backs up the evidence collected by FTN in 2013. Winston reported specifically that the Little Creek Arm of Lake Conway has potential to produce greater HABs if more phosphorus continues to be introduced into the system. He noted that excess nutrients in reservoirs (particularly phosphorus) can stimulate toxic algal growth with negative consequences for both humans and animals that rely on those reservoirs as their source of drinking water, recreation and habitat. He also pointed out that there has been an increasing trend in sediment phosphorus concentrations in Lake Conway over time. Equilibrium Phosphorus Concentration (EPC_0) measures the potential for sediment to either release or absorb phosphorus from the water column. Winston found that the Stone Dam Creek / Little Creek Arm of Lake Conway (where Little Creek empties into the lake) had the highest EPC_0 of all samples taken throughout

the lake, suggesting that particular arm of the lake has the lowest capacity to absorb phosphorus from the water column. The inability for the lake sediments to absorb phosphorus creates greater potential for nitrogen limitation in the water column, making conditions even more favorable for growth of harmful algae species. Because this condition exists in the Little Creek Arm of the lake that is intended to receive sewage wastewater water discharge from the Woodsland Edge WWTP, the addition of more phosphorus clearly has the potential to exacerbate HAB production in Lake Conway.

19. Given the known water quality conditions existing for Lake Conway (as described in the 2015 Lake Conway Water Quality and Sediment Study Report by FTN and the 2015 Paleolimnological Study of Lake Conway, Arkansas by Byran Winston with the University of Arkansas), ADEQ's issuance of the Final NPDES Permit No. AR0052621 without limitations for total phosphorus and nitrate + nitrite nitrogen is a significant error. In the absence of specific water quality standards being established for these receiving waters and given the known potential for the production of harmful aquatic biota in Lake Conway and Little Creek, the NPDES permit should not have been issued. Also, the Final NPDES Permit No. AR0052621 contains no limitation for discharge of ammonia-nitrogen into the receiving waters. ADEQ's own study in 1997 for Stone Dam Creek into Lake Conway concluded that "ammonia toxicity had resulted in adverse impacts to the fish community in Stone Dam Creek." That ammonia was considered to be a product of the City of Conway's WWTP sewage wastewater effluent. Unlimited ammonia-nitrogen discharge from the Woodsland Edge WWTP could very likely create the same harmful effects on fish species present in Little Creek and Lake Conway.

20. According to ADEQ's Response to Comment for Comments #75 and #76: ADEQ indicates: "If an analysis of the lake is done prior to first discharge and it is determined that the facility needs nutrient limits, the permit may be reopened in accordance with PartII.2 of the proposed permit." However, AGFC already has commissioned two extensive water quality and sediment studies for Lake Conway (i.e. FTN in 2013 - 2015 and Winston / University of Arkansas in 2015), which included sample sites where Little Creek drains into Lake Conway. Both studies concluded that Lake Conway's water either is on the verge of being, or already is, nitrogen limited due to excessive phosphorus inputs and loading into the lake's sediment. AGFC should not have to spend additional taxpayers' money to monitor nutrient loading in Lake Conway to further prove that total phosphorus levels are indeed increasing in Little Creek or Lake Conway and will only worsen if Woodsland Edge is permitted to discharge up to 30,000 gallons per day of municipal wastewater. According to the Final NPDES Permit, Woodsland Edge will be able to discharge unlimited amounts of phosphorus into the stream that empties into Lake Conway. It already is well documented with credible scientific evidence that this particular area of Lake Conway should receive no more phosphorus because of the potential to produce HABs and multiply growth of existing nuisance and invasive aquatic macrophytes.

21. Furthermore, ADEQ gave inadequate consideration to a reasonable discharge alternative that Woodsland Edge could connect to the existing permitted sewer-collection system operated by Conway Corporation and apparently accepted the project developer's claim that the cost of "hooking into the city sewer ... was not feasible" without requiring any cost-benefit analysis or other reliable evidence.

22. Accordingly, under the circumstances, the final permitting decision is erroneous for both factual and legal reasons and, therefore, should be reversed.

WHEREFORE, Arkansas State Game and Fish Commission prays that this Request for Adjudicatory Hearing and Commission Review be granted and that the Commission enter an order that (i) reverses the Department's decision to issue NPDES Permit No. AR0052621C and State Construction Permit No. AR0052621C to Waste Water Management, Inc. - Woodsland Edge Subdivision, (ii) directs the Department to deny those permits, and (iii) grants such further relief as to which AGFC is entitled.

Respectfully submitted,

ARKANSAS STATE GAME AND FISH COMMISSION

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CERTIFICATE OF SERVICE

I hereby certify that on this 16th day of September, 2016, I served a copy of the foregoing Request for Adjudicatory Hearing and Commission Review by electronic delivery and U.S. Mail on the following:

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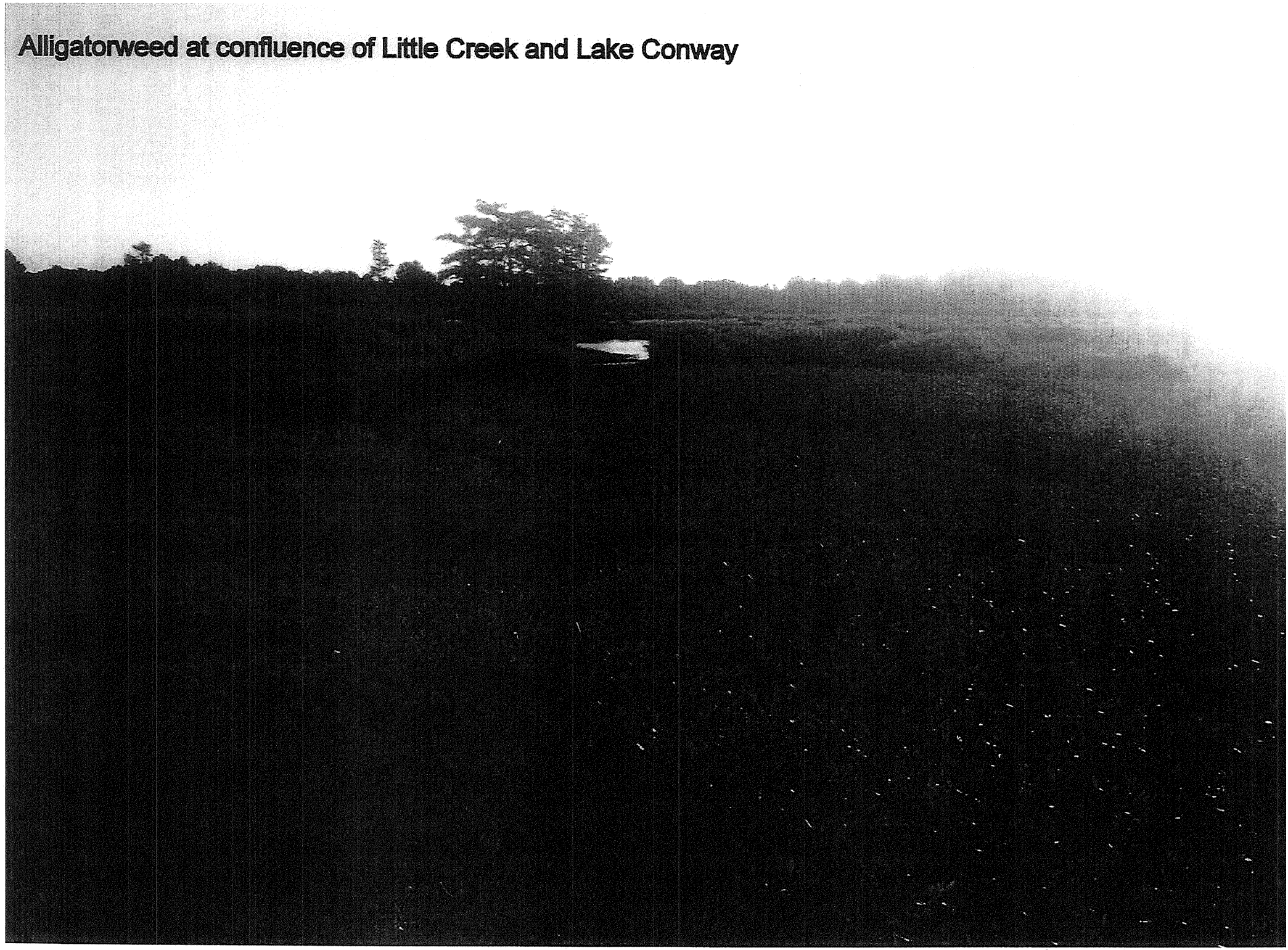
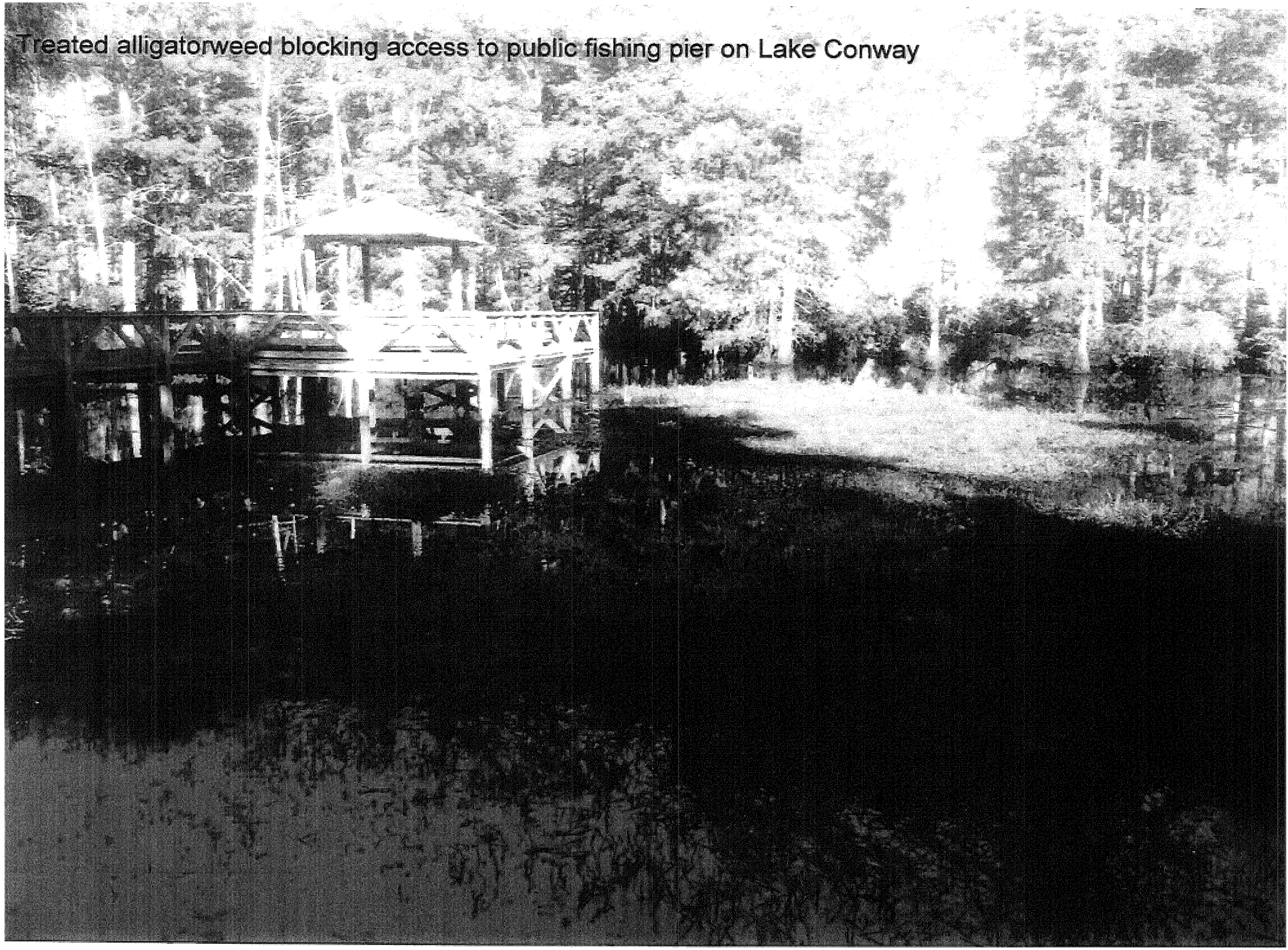
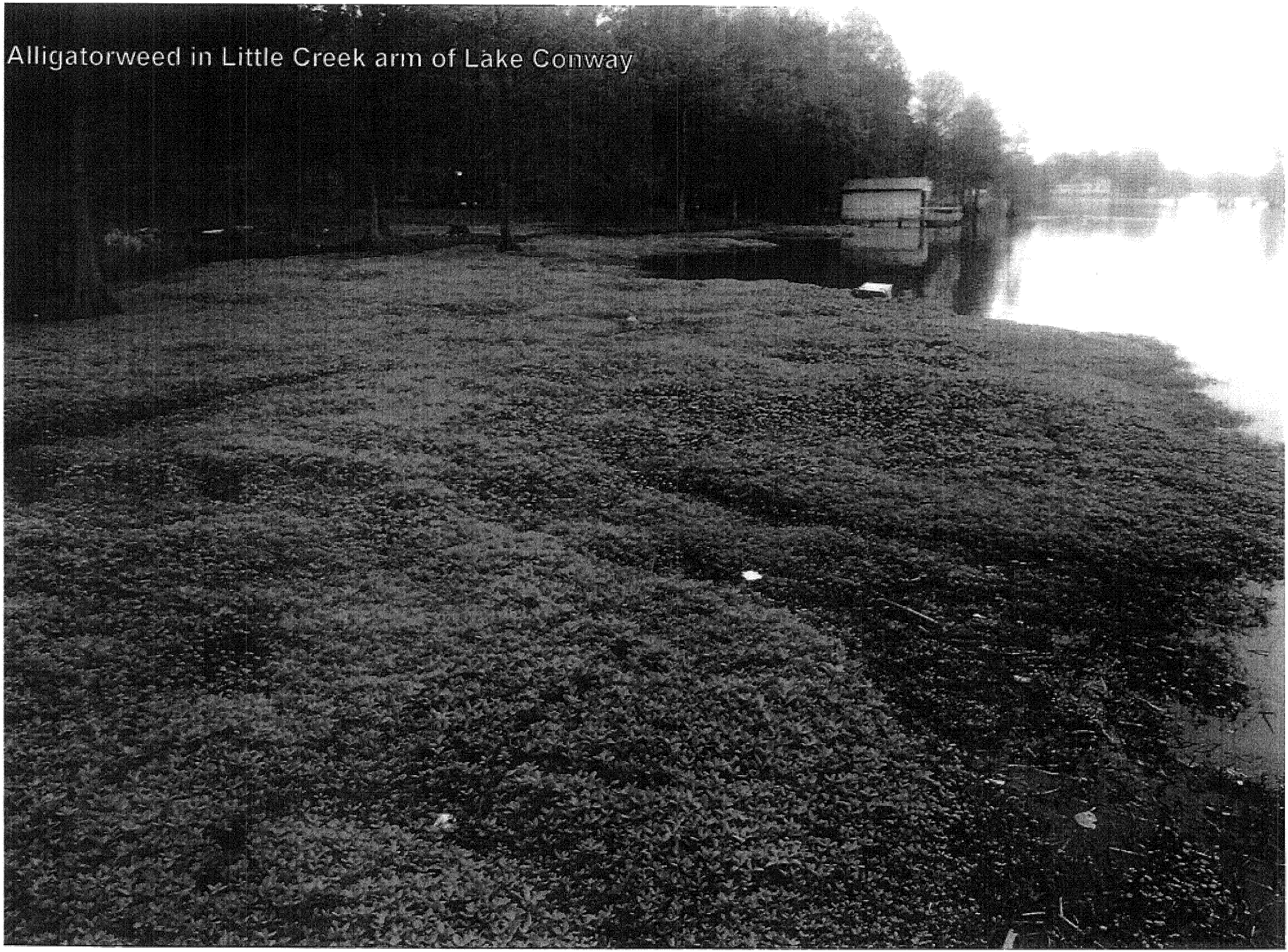
Alligatorweed at confluence of Little Creek and Lake Conway

Alligatorweed at confluence of Little Creek and Lake Conway





Treated alligatorweed blocking access to public fishing pier on Lake Conway



Alligatorweed in Little Creek arm of Lake Conway


Alligatorweed blocking access to pier and boathouse on the