STATE OF FLORIDA

Department of Administration

Office of The Secretary

ROOM 530, CARLTON BLDG.

TALLAHASSEE

32304

(904) 488-9290

Reubin O'D. Askew
GOVERNOR

Wallace W. Henderson
ASSISTANT SECRETARY

Lt. Gov. J. H. "Jim" William
SECRETARY OF ADMINISTRATION

December 3, 1975

M E M O R A N D U M

TO: Earl Frye, Jack Maloy, Jay Landers, Harmon Shields, Randy Whittle, and All Special Project Participants

FROM: Wallace W. Henderson

SUBJECT: Upper Kissimmee Chain of Lakes Water Level Regulation

As you know, the Special Project to Prevent the Eutrophication of Lake Okeechobee is developing management plans for the drainage basin tributary to Lake Okeechobee. As discussed at the November 20 Principals' Committee Meeting, one task necessary to this end is development of a lake level regulation schedule that will optimize water quality, water quantity, fish and wildlife, and flood control benefits in the Kissimmee Upper Chain of Lakes. To reach this end the Special Project is:

1. Reviewing available information and data pertaining to the analytical construction of an informational model that describes the functional interactions that integrate with the hydrologic driving force or hydro-period.

2. Preparing a draft information model.

3. Distributing draft information model for review.

4. Developing final model and recommendations for management that optimizes ecosystem function and resultant free services to man.

In conjunction with appropriate staff of your agency, please perform the following analysis:

1. Review the information and data available on the problem of developing optimum lake regulation schedules in the Kissimmee Upper Chain of Lakes.

2. Develop a short synopsis of available data and information and, insofar as time frames permit, attempt to describe the structural and functional aspects of the Upper Kissimmee Chain of Lakes ecosystem, incorporating all of the major interactions and forcing functions as they relate to the lake level regulation schedule.

3. Include management recommendations and supporting documentation including precise regulation schedule, if time permits.

Time frames for this intensive but short-term effort are:

1. January 5. Development of information models, recommendation and regulation schedule (GFC).

2. January 23. Dissemination of draft recommendations for technical review by participating agencies (DSP).

3. February 6. Development of comments on the draft statement.

4. February 10. Management Planning Committee meeting to review and begin the process of finalizing the management plan.

5. February --- Draft management plan is forwarded from Management Planning Committee to the Technical and Principals' Committees. In turn, the draft goes to the Review Committee and is then published as the Special Project's Management Plan for the Upper Kissimmee River Valley.

WWH/Swd

REPORT TO THE GOVERNING BOARD ON REGULATORY LEVELS FOR THE LAKES OF THE UPPER KISSIMMEE BASIN

By
CENTRAL AND SOUTHERN FLORIDA
FLOOD CONTROL DISTRICT
RESOURCE PLANNING DEPARTMENT

February 20, 1975
(Rev. Feb. 28, 1975)

TABLE OF CONTENTS

FIGURES

APPENDICES

Following Page 37

SUMMARY

After review and evaluation of present and approved regulation schedules for the Kissimmee Basin lakes by District engineers, biologists, and hydrologists in the period June - November, 1974, public hearings on these schedules and possible alternates were held by direction of the Governing Board.

Hearings were held on December 18 and 19, 1974, at Kissimmee and Lake Wales, respectively. Extensive testimony was presented at these hearings and additional written statements were subsequently received, the hearing record having been kept open until January 20, 1975.

One Governing Board member (B. L. Pratt) attended both hearings, as did the Directors of the Department of Field Services (Z. C. Grant) and the Resource Planning Department (W. V. Storch), and the District's Chief Biologist (J. W. Dineen) and Chief Hydrologist (R. L. Taylor).

The hearing transcripts and written statements were reviewed and evaluated by the appropriate District staff members in the light of personal knowledge of the area, operational experience over the past ten years, pertinent hydrologic and environmental data, and other documentation in the District's files. The staff's recommended regulation schedules are shown on Figures 1, 2, and 3, immediately following.

The staff's recommendations in general represent a compromise among the sometimes conflicting, but nevertheless valid, views and needs expressed by the varied interests concerned with lake levels and their fluctuation. In all cases these recommendations represent a change from the approved GDM schedules. But in no case are the flood control requirements compromised, and in no case are the upper regulatory stages increased. On the other hand, in all cases but one (Lakes Hart and Mary Jane), the present low regulatory limit is reduced. In most instances, the staff recommendation provides that these lower levels be reached on a periodic, cyclical basis.

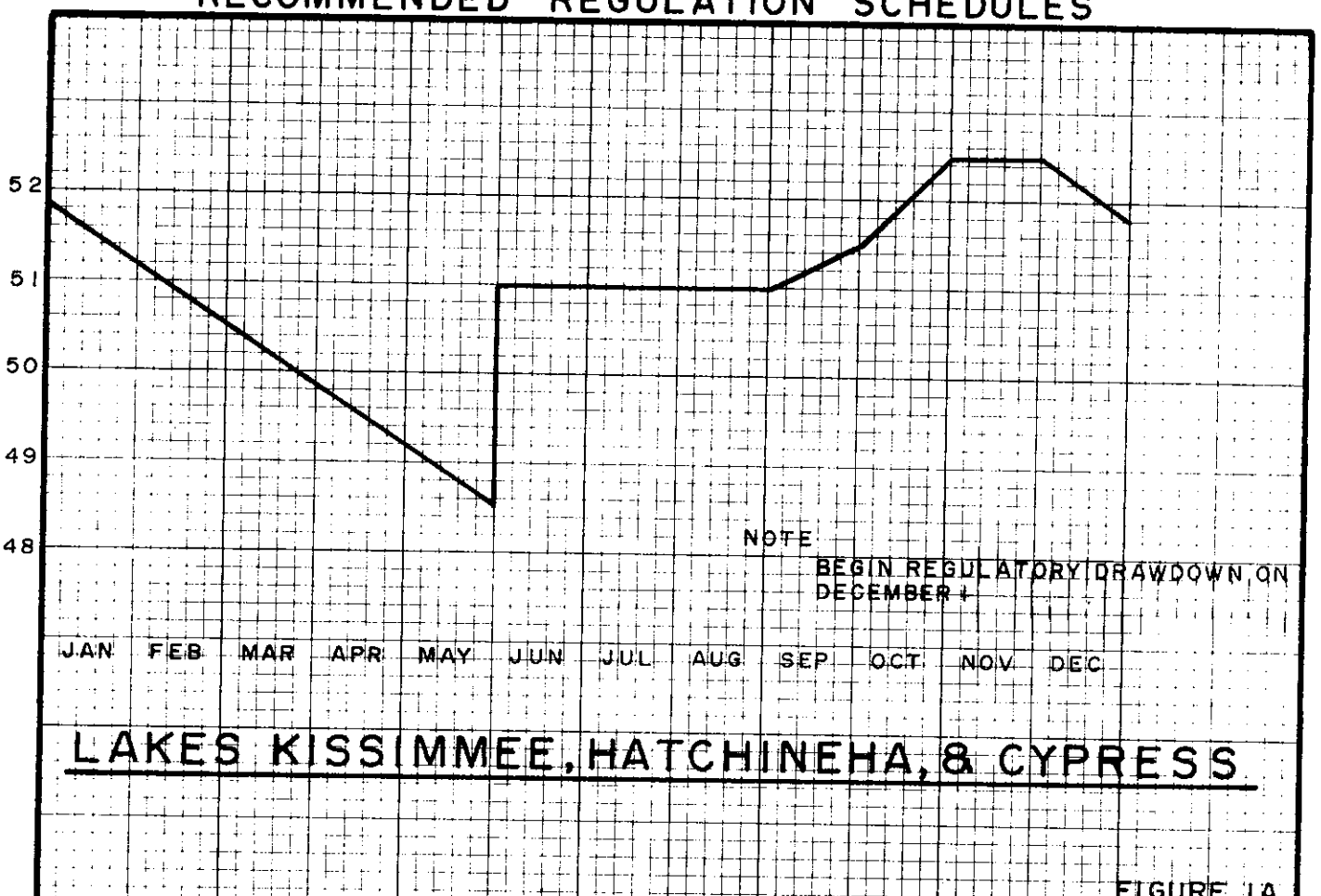
The District staff recommends the Governing Board's acceptance of the regulation schedules shown on Figures 1, 2, and 3, and that evidence of Board acceptance together with a copy of this report be forwarded to the Jacksonville District Engineer, Corps of Engineers.

The acceptance of these schedules by the Governing Board and the approval and adoption of them (or any other schedule) by the Secretary of the Army should be made with the understanding that periodic review and evaluation is required. In this sense these schedules are not permanent, but are "interim" in nature. Assurance must be sought and obtained that the mechanism for such review, and possible further modification as a result, continues to be available to the District and the citizens of Florida.

It is further recommended that the District Governing Board give its full support in the processing and approval of dredging permits to those interests and individuals whose navigational access to these lakes from the upland may be adversely affected by lower stages. In this connection it is recommended the Board solicit the active support and cooperation of the Game & Fresh Water Fish Commission.

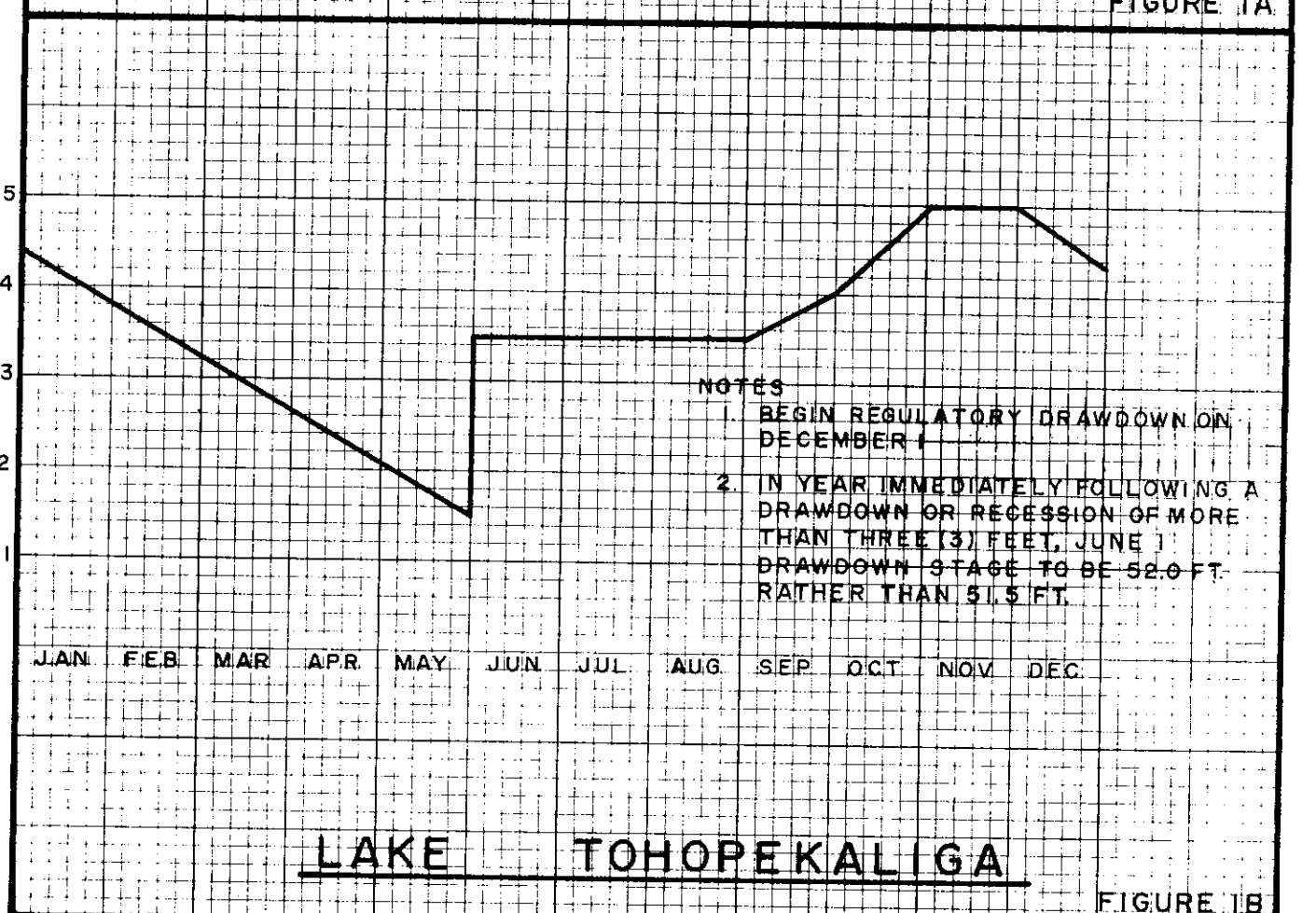
Finally, it may become necessary from time to time to undertake a radical drawdown of one or more of these lakes for reasons of environmental quality. The staff recommends that, when this becomes necessary, the same procedure of public information, public hearings, and drawdown under District supervision be followed as in the case of the Lake Tohopekaliga drawdown.

RECOMMENDED REGULATION SCHEDULES



LAKES KISSIMMEE, HATCHINEHA, & CYPRESS

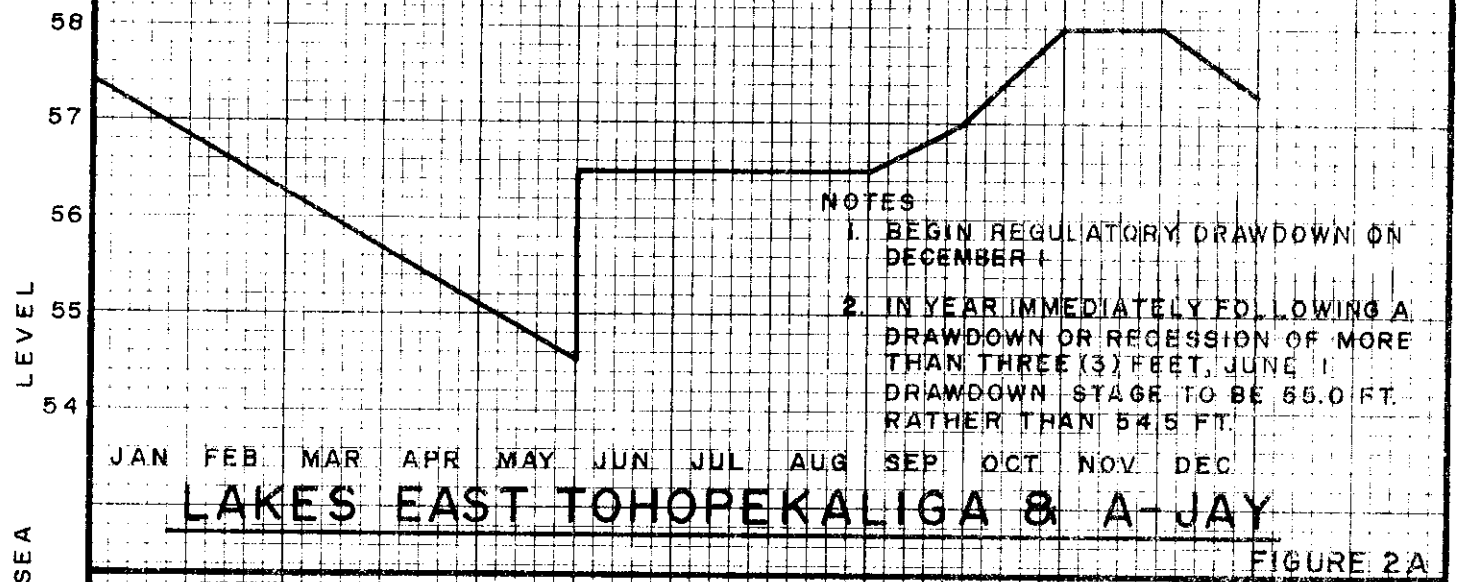
FIGURE IA



LAKE TOHOPEKALIGA

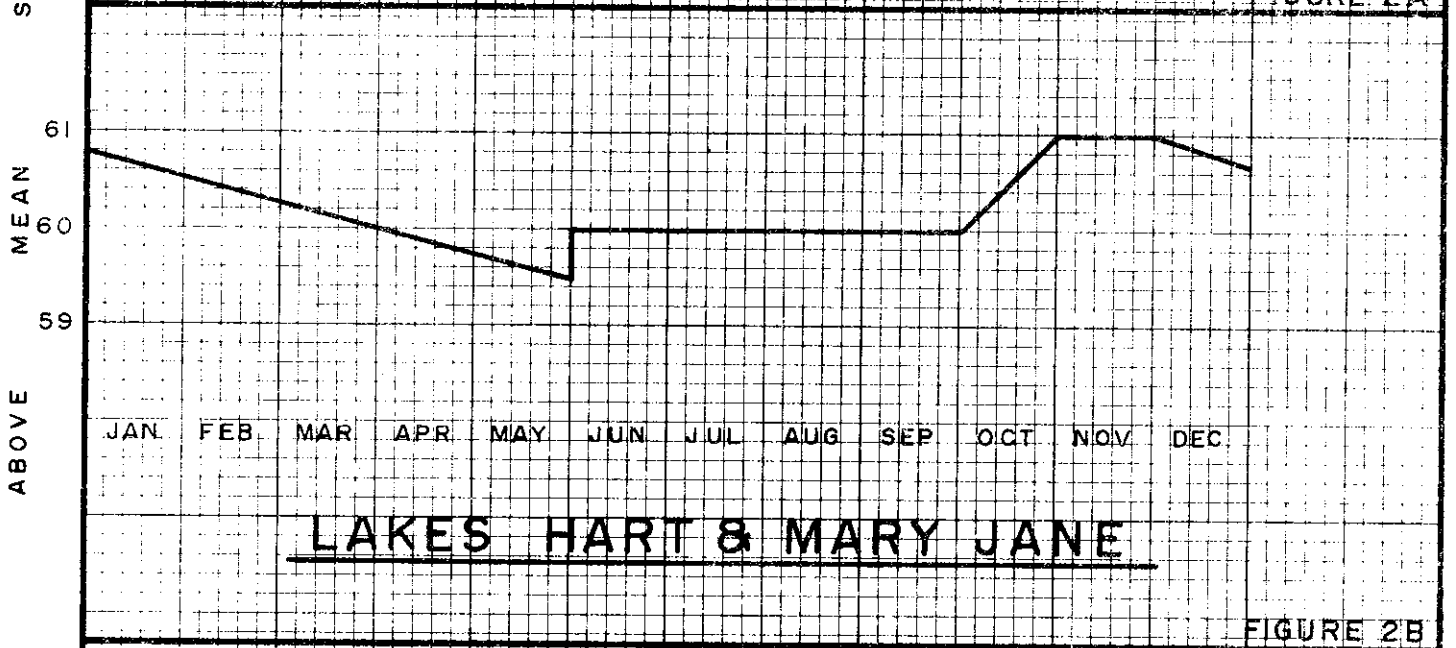
FIGURE IB

RECOMMENDED REGULATION SCHEDULES



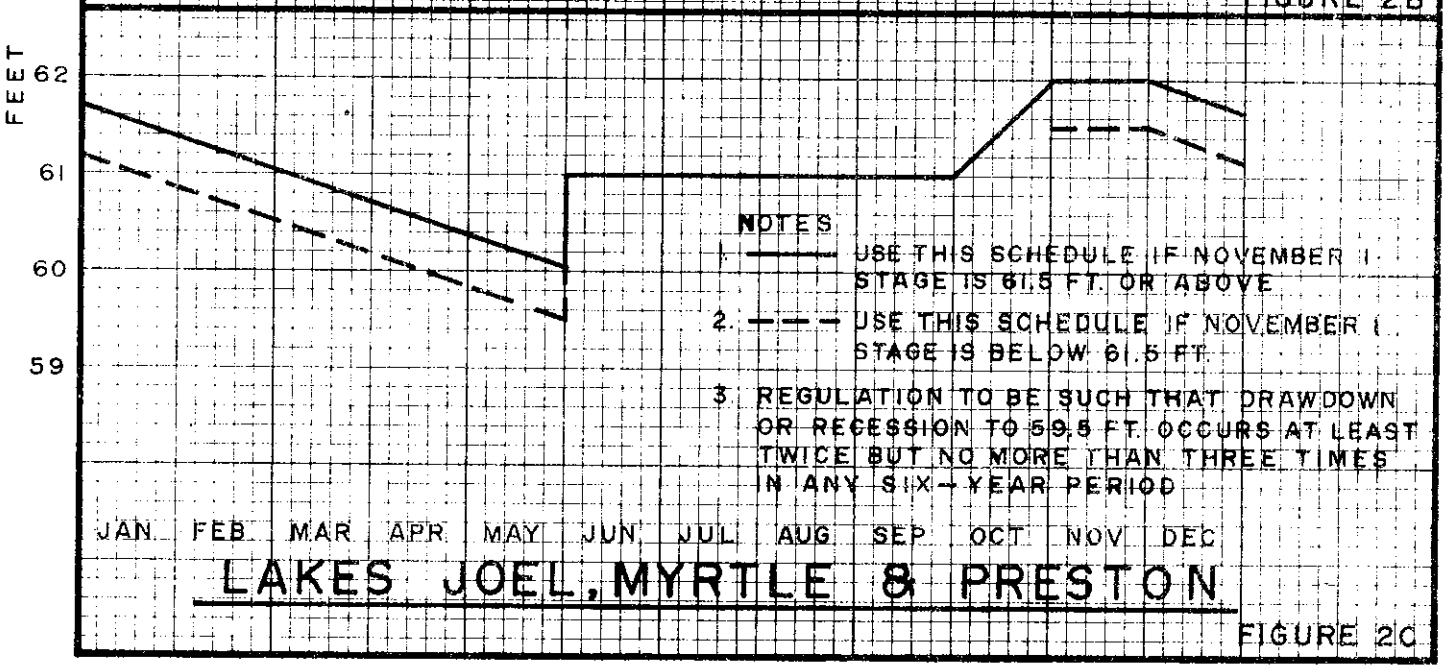
LAKES EAST TOHOPEKALIGA & A-JAY

FIGURE 2A



LAKES HART & MARY JANE

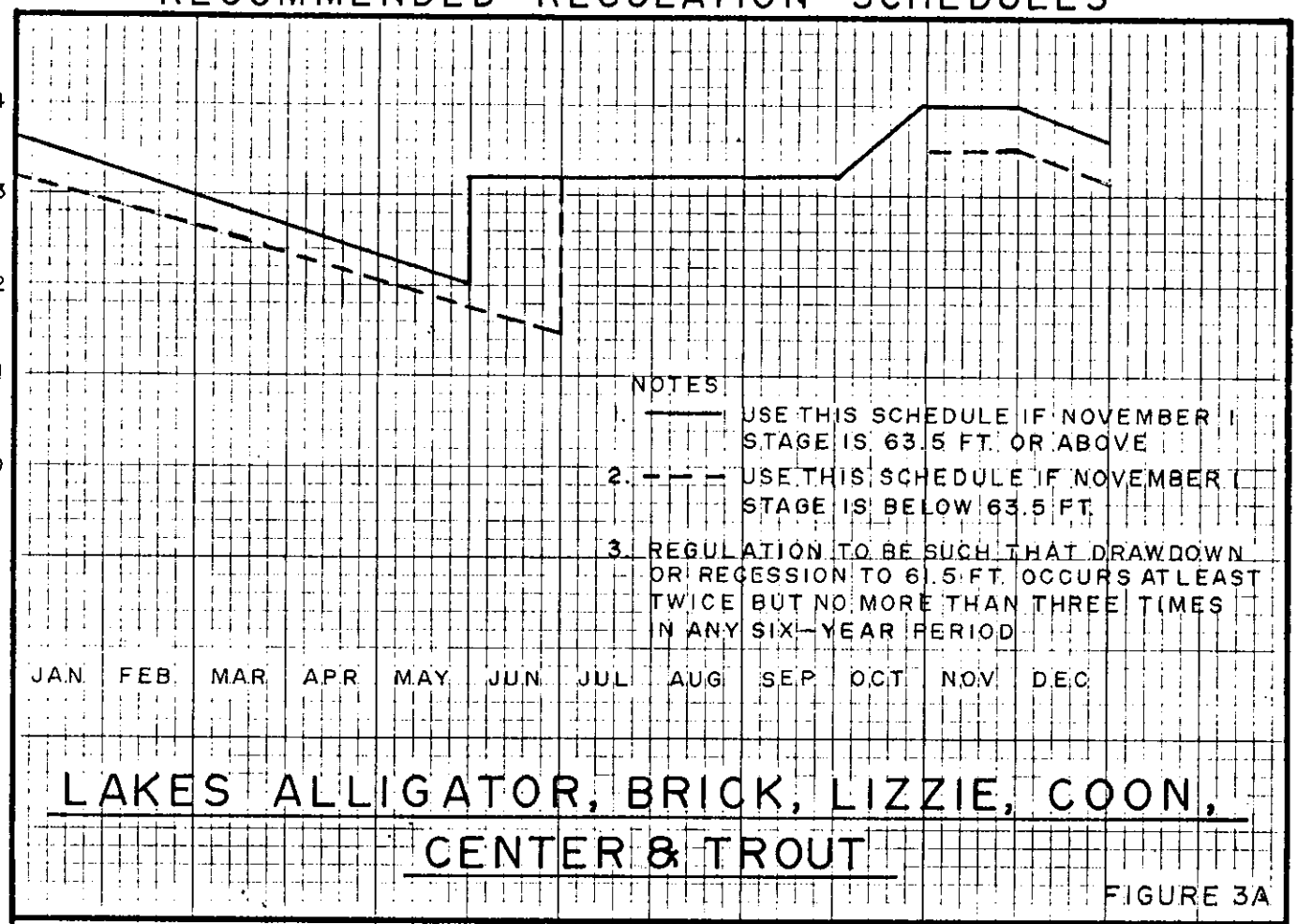
FIGURE 2B



LAKES JOEL, MYRTLE & PRESTON

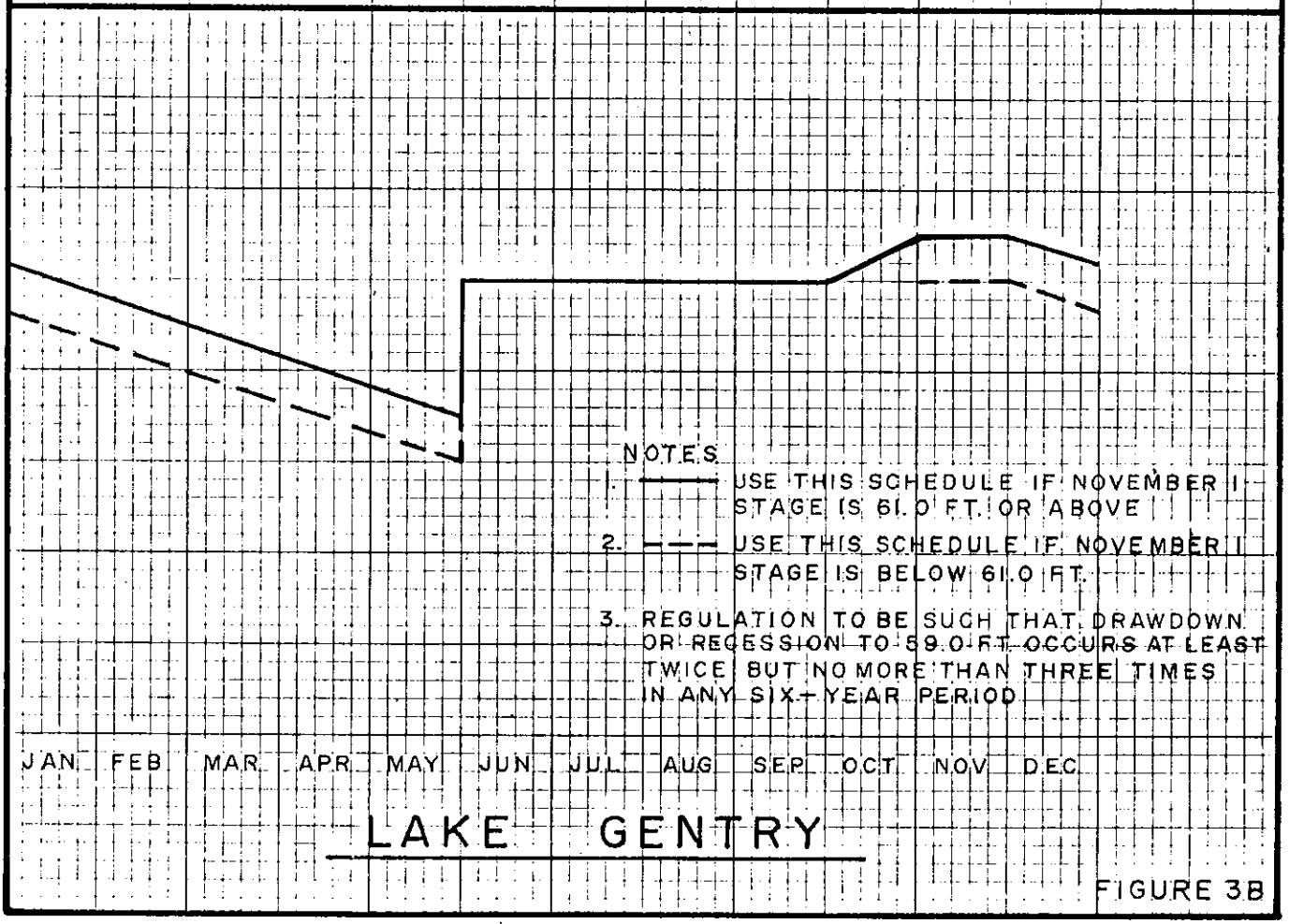
FIGURE 2C

RECOMMENDED REGULATION SCHEDULES



LAKES ALLIGATOR, BRICK, LIZZIE, COON, CENTER & TROUT

FIGURE 3A



LAKE GENTRY

FIGURE 3B

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REPORT TO THE GOVERNING BOARD ON REGULATORY LEVELS FOR THE LAKES OF THE UPPER KISSIMMEE BASIN

INTRODUCTION

On December 18 and 19, 1974, public hearings were held by the District at Kissimmee and Lake Wales, respectively, for the purpose of receiving information from, and the views of, interested persons concerning regulatory levels for the lakes of the Upper Kissimmee Basin.

The "Notice of Public Hearing" document is attached as Appendix A to this report. All basic background and informational material pertinent to the purposes of and basis for the hearings is contained in that document and will not be repeated in the text of this report. Additional information pertaining to the hydrology of the lakes involved was presented at the hearings by the District staff and will be used and amplified upon, as necessary, in the following discussion sections of this report.

Two copies of the transcripts of each of the two public hearings are available for examination in the Executive Offices. References will be made to certain pages of those transcripts, as necessary, in the following text.

The public hearing record was held open until January 20, 1975, to permit the submission of written statements, amplifications and clarifications of oral statements made, and other materials or information pertinent to the subject matter of the hearings. Copies of all such documents submitted after the hearings together with those pertinent to the hearings which were received prior to the hearings are attached as Appendix B.

Lists of the names, addresses and associations of those making oral statements at the hearings are attached as Appendix C. Also included in this appendix is information concerning land ownership in those cases wherein the staff believed this type of information would be helpful in evaluating the statements made.

Documents from the District's files pertinent to specific lake regulation questions are attached as Appendix D.

Both public hearings were well-attended; that at Kissimmee drawing both more attendees and more participants. At neither hearing were statements made by elected officials (or their representatives) at the national, state or local level; nor were statements made by representatives of any national, state or local agency except for the Game and Fresh Water Fish Commission. Mr. Wegener represented the Game and Fresh Water Fish Commission at both hearings and either read or paraphrased the recommendations contained in Director Frye's letter of December 9, 1974. (See Appendix B.)

At the Kissimmee hearing discussion and participation included all of the Upper Basin system whereas at the Lake Wales hearing discussion and

participation was limited to the Lakes Kissimmee-Hatchineha-Cypress group, with no interest being expressed by the attendees in the other lakes of the system. A much wider range of interests (including cattlemen, grove owners, sportsmen's groups, home owners, water resource associations) was represented at the Kissimmee hearing. Attendees and participants at the Lake Wales hearing were predominantly fish camp owners or operators on Lake Kissimmee.

The discussion, commentary, and recommendations contained in the main body of this report will be organized by lake or groups of lakes regulated by each regulatory structure of the upper Kissimmeee Basin system. Those structures and lakes are identified on page 1 of the "Notice of Public Hearing" document, attached as Appendix A. A map showing structure and lake locations is included as Figure 1 of that document.

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GENERAL RECOMMENDATIONS

The District staff's specific recommendations for each group of lakes subject to regulation are contained in the following sections. However, there are several matters which were brought to the attention of the hearing officers which dealt with the entire system or with procedures, and which should, in turn, be brought separately to the attention of the Governing Board. That is the purpose of this section of the report.

All of these matters of more general interest and concern were most clearly presented by Mr. Bill Morse, Chairman of the Osceola County Waterways Committee, although they were touched on by others who made verbal statements or who submitted written statements. Mr. Morse's complete statement is recorded on pages 35-47 of the Kissimmee Hearing Transcript; of particular interest being the resolution of that Committee recorded on page 37 of the transcript.

First, it is recommended by that Committee that any schedules adopted as a result of the Governing Board's actions be considered "interim" rather than "permanent" schedules.

Second, that Committee resolves "that should proper scientific evaluation determine the need for extreme drawdown for ecological purposes that provisions be made to permit such drawdown under strict Flood Control District control."

Third, Mr. Morse recommends "that it would be most helpful if the District - - - - - would then hold one last meeting with us and say - - - - - this is what we recommend for your lakes."

The District staff's comments in regard to these three recommendations are:

1. The staff believes that the recommendations it is making to the Board are in fact "interim" in the sense that they will be periodically evaluated in terms of their effects. The staff believes it absolutely necessary that lake regulation be subject to review and to such modification as is found necessary and justifiable in the overall public interest. It is recommended that assurrances be sought and obtained that the means for accomplishing such review and necessary modification will remain available to the District.

2. The staff is of the opinion that from time to time in the future it will probably become necessary to institute a radical drawdown of one or more of the lakes in this system. It is recommended that the procedure to be followed in that event be the same as that followed for the Lake Tohopekaliga drawdown in 1970; the elements of that procedure to be:

(a) Sound documentation of the necessity for such drawdown;

(b) Preparation of a drawdown plan;

(c) Program of public information with respect to the drawdown;

(d) Public hearings held by the District on the drawdown; and

(e) Physical operation of the drawdown by the District.

3. This report is to be presented to the Governing Board at its scheduled meeting at Kissimmee on February 28, 1975. This will provide the opportunity for all interests in the area to make themselves aware of the staff recommendations. The decision whether to adopt a set of recommendations on February 28 or to defer action until further public comment is received on the specific set of staff recommendations rests with the Governing Board.

LAKES KISSIMMEE, HATCHINEHA AND CYPRESS

General: Levels of these three lakes are regulated by a single structure, S-65, located at the outlet of Lake Kissimmee and at the head of C-38. The lakes are connected by canals excavated or enlarged under the Project. Lakes Tiger, Rosalie and Weohyakapka lie to the west and southwest of Lake Kissimmee; Lakes Jackson and Marian lie to the east of Lake Kissimmee, and Lake Marion to the northwest of Lake Hatchineha. All these lakes were originally planned to be regulated under the Project, with excavated channels connecting them with the main stem lakes. Upon the recommendation of the District the control works for these lakes (structures and connecting channels) were placed in a deferred status.

Lake Tiger connects to Lake Kissimmee by a shallow meandering channel (Tiger Creek) in a wide floodway. A man-made canal (the Zipprer Canal) extends west from Lake Kissimmee toward Lake Rosalie. In high water, boat access is possible between Rosalie and Kissimmee. Frequently, an earth plug is placed in the canal to prevent excessive stage reduction. (See Mr. H. Monroe's statement on pages 67 to 71, Lake Wales Transcript.)

This group of lakes receives inflow from three creeks. Reedy Creek, a major natural stream and floodway, discharges both into Lake Cypress on the west shore and into Hatchineha at its northeast side. Marion Creek, Canoe Creek and the Jackson-Kissimmee canal discharge to this group of lakes.

The original GDM plan called for Lakes Hatchineha and Cypress to be regulated together, but independently of Lake Kissimmee, by a control structure (S-64) located in the connecting canal between Lakes Hatchineha and Kissimmee. Regulatory levels for Hatchineha and Cypress were to be one foot higher than those for Lake Kissimmee; all lakes to have a four foot fluctuation range. Upon the recommendation of the District, S-64 was eliminated and a regulation schedule one-half foot higher for Lake Kissimmee and one-half foot lower for Hatchineha and Cypress was adopted for the three lakes. At 1956 prices the estimated cost saving was in excess of $700,000.

Lake Kissimmee is surrounded primarily by a fresh water marsh. Brahma Island, in the southwest portion of the lake, consists of dry forest type vegetation and also is surrounded by fresh water marshes.

Two tracts of land bordering on Lake Kissimmee have been acquired by the State; the Zipprer tract on the northwest shore in 1972, and the Three Lakes Ranch tract on the southeast shore in 1973. There is considerable recreational use of, and access to, the lake. There are a number of fish camps concentrated in the area just north of S. R. 60 on the west side of the lake, and several camps are located on the canal connecting Lake Hatchineha with Lake Kissimmee. Aside from the fish camps there is little or no residential development. Agricultural land use is principally unimproved pasture.

The northern boundary of Lake Hatchineha is almost entirely fresh water marsh, approximately 1/4 to 1 mile in width, backed up by unimproved pasture and dry forests. With the exception of a small urban area in the northwestern corner of the lake, the land use along the western and southern shorelines is unimproved pasture with scattered pockets of fresh water swamps. The eastern side is approximately one-third unimproved pasture with fresh water marshes in the remaining areas. There are fish camps on the southerly shore, and groves on the upland on the southeast.

On Lake Cypress unimproved pasture occupies the complete eastern boundary and approximately a quarter of the southern shoreline, the remainder being improved pasture and fresh water marshes. A fresh water marsh dominates the northern and western portions.

Lakes Kissimmee and Hatchineha are meandered lakes; Cypress Lake is unmeandered.

In connection with right-of-way acquisition for Canals 35 and 36 the District entered into agreements with two of the major owners of upland adjacent to Cypress Lake (Irlo Bronson and M.M.Overstreet). One of the provisions of both those agreements dealt with regulation schedules for Cypress Lake. Copies of those agreements are attached as Appendix D.

Hydrology: The 15 percentile, 50 percentile (median) and 85 percentile stages for the three lakes based on 24 years of record prior to institution of regulation by the District are tabulated below:

	Cypress	Hatchineha	Kissimmee
15 percentile	54.2 ft.msl.	53.2 ft.msl.	52.6 ft.msl.
median	52.5 ft.msl.	51.3 ft.msl.	50.4 ft.msl.
85 percentile	50.3 ft.msl.	49.1 ft.msl.	47.7 ft.msl.

This tabulation shows that under pre-Project conditions Cypress Lake stage was normally about one foot higher than Lake Hatchineha stage which, in turn, was normally about one foot higher than Lake Kissimmee stage.

For the same period of record, maximum and minimum daily stages for the three lakes, and differences between the recorded extremes, are tabulated below:

Maximum	57.2 ft.msl.(1960)	56.8 ft.msl.(1953)	56.6 ft.msl.(1953
Minimum	48.0 ft.msl.(1962)	47.3 ft.msl.(1962)	44.2 ft.msl.(1962)
Difference	9.2 ft.	9.5 ft.	12.6 ft.

This tabulation shows a large range for extreme stages on all three lakes.

However, despite these extremes, the first tabulation above shows that 70% of the time Cypress and Hatchineha stages fluctuated within a four foot range and Lake Kissimmee within a five foot range. A four foot range for all these lakes was established under the original regulation schedules set out in the General Design Memorandum.

The following tabulation lists the actual recessions from the fall high to the spring low which occurred on Lake Kissimmee in the period 1949 through 1963 (pre-Project):

Season	Recession (ft.)	Season	Recession (ft.)
1949-50	7.3	1956-57	0.8
1950-51	2.4	1957-58	4.2
1951-52	2.5	1958-59	stage increased
1952-53	2.8	1959-60	3.6
1953-54	6.2	1960-61	8.4
1954-55	3.6	1961-62	3.7
1955-56	3.0	1962-63	0.8

The median recession for the 13 seasons in which a fall-spring recession occurred was 3.6 feet. The average recession was 3.8 feet.

The stage-frequency data, the actual recession data together with examination of the stage hydrographs indicate, for Lake Kissimmee, a normal seasonal stage fluctuation of 3.5-4.0 ft. within a usual cyclically varying range of 6.5-7.0 ft.

Extensive examination by the District staff of the shorelines of these lakes involving observation of tree-line and escarpment locations and procurement of ground elevations related to these features, together with examination of lake level data, has led to the following conclusions with respect to natural ordinary high water levels:

Lake	Ordinary High Water Level
Kissimmee	55.0 ft.msl. ±
Hatchineha	55.0 ft.msl. ±
Cypress	56.8 ft.msl. ±

It should be noted that these are District staff conclusions based on available physical evidence and do not represent either an official District position or TIITF position with respect to the line of demarcation between private and sovereign land ownership.

Discussion: The GDM schedule, as modified as a result of deletion of S-64, is shown as Schedule 1 on Figure 4 of Appendix A. The 15 and 85 percentile stages can be taken to reasonably represent "normal" high and low water conditions. On

this basis the Schedule 1 ranges and stages reasonably reflect these conditions on Lake Kissimmee (compare with 15 and 85 percentile stages given above) except that the regulated minimum (48.5 ft.) is about 9" higher than the pre-Project 85 percentile stage (47.7 ft.).

On this same basis the Schedule 1 range (four feet) for Lake Hatchineha is satisfactory but the regulated maximum and minimum are both about 7" to 8" lower than the pre-Project "normal" maximum and minimum.

For Cypress Lake, although the regulated range of four feet conforms with the pre-Project "normal" range of fluctuation, the effect of regulation has been to shift the entire lake stage regime downward nearly two feet.

For these three lakes the Game Commission recommends:

(a) A range of fluctuation between 48.5 ft. msl. and 53.5 ft. msl.;

(b) A flexible operation within these limits with the extremes to be reached at least once every three years, as determined by local climatic conditions; and

(c) The extreme stages be maintained for a minimum of two months.

The Game Commission recommendations were endorsed by the majority of the fish camp owners and operators on Lake Kissimmee (see the Lake Wales Transcript), the Osceola County Sportsman's Club, Inc. (see pages 33 and 34 of the Lake Wales Transcript, page 88 of the Kissimmee Transcript, and letter dated December 17, 1974, Appendix B), and Mr. Don Williams representing the Lake Wales Chamber of Commerce. (See pages 35 and 36 of Lake Wales Transcript.) Mr. Don Williams also represented Camp Lester.

Mr. J. Raymer objected to a 48.5 ft. stage on Lake Kissimmee (see page 46-48 Lake Wales Transcript) due to inability to obtain adequate water pressure for fire-fighting. He stated he had problems at a 49.5 ft. stage.

Mr. R. L. Sawyer objected to a stage of 49.5 ft. citing this as too low for his boat access to the lake. (See pages 72 and 73 Lakes Wales Transcript.)

Mr. Simms objected to lower water elevation for navigational reasons. (See page 96 Kissimmee Transcript.)

Mr. H. A. Monroe expressed concern about the effect on Lake Rosalie of lower lake stages in Lake Kissimmee. (See pages 67-71 Lake Wales Transcript.)

Revisions to the present 49.5 ft. - 52.5 ft. regulation schedule for Lake Kissimmee, with particular reference to a 53.0 ft. or higher maximum, were objected to by Attorney J. P. Brandon representing Mr. Paul Keen, rancher, (see pages 42 and 43 of Lake Wales Transcript) and Messrs. Johnston, ranchers. (See pages 61-64 of Kissimmee Transcript.) Mr. F. D. Speight, fish camp operator on Lake Kissimmee, expressed satisfaction with present regulation schedule. (See pages 84-88 of Lake Wales Transcript.) Mr. Coleman, representing the Polk County Coalition, endorsed the Game Commission recommendation (see pages 38-41 Lake Wales Transcript) as did Mr. K. Morrison, representing the Ridge Audubon Society. (See page 90-92 Lake Wales Transcript.)

Objection to change of the upper limit with respect to Cypress Lake was expressed by Mr. M. M. Overstreet, rancher. (See pages 75-82 of Kissimmee Transcript.)

No statements were made at either hearing by interests specifically involved or concerned with Lake Hatchineha levels alone.

The Game Commission also recommended that a water control structure with navigation lock be constructed between Lakes Kissimmee and Hatchineha. It is assumed that those who endorsed the Game Commission's recommendations with respect to water levels also endorsed this recommendation.

By letter dated January 14, 1975, the Tohopekaliga Yacht Club "endorsed the concept of maximum fluctuation" but states "at least 3 feet of water must be maintained for safe boating." For this group of lakes the Club recommended a maximum of 53.0 ft. and a minimum of 50.0 ft. Two critical shallow areas in Lake Cypress were specifically identified. (See Appendix B.)

The Osceola County Cattlemen's Association and the Osceola County Farm Bureau recommended a 49.5 ft. to 52.5 ft. schedule (the present schedule) for these lakes. (See Appendix B.)

Bronson's, Inc., by letter dated January 15, 1975, signed by Irlo Bronson, Jr., stated adverse effects would occur on some 4,500 acres by increasing upper limit from 52.5 ft., to 53.0 ft. (See Appendix B.)

The Kissimmee Boat-A-Cade, although recognizing the necessity for increased fluctuation, recommended a minimum stage of 51.0 ft. for Lake Cypress, with no mention of minimum stage on either Hatchineha or Kissimmee. (See Appendix B.) Note the difference between this minimum (51.0 ft.) and that recommended by the Tohopekaliga Yacht Club (50.0 ft.).

Southern Lakes, Inc., by letter dated and postmarked January 20, 1975, asked a series of questions concerning a 53.0 ft. regulatory stage for the Lake Kissimmee group, related to effects on its lands adjacent to Tiger Lake, Lake Rosalie and Reedy Creek. The nature of the questions implies concern over possible adverse affects of a 53.0 ft. stage. (See Appendix B.)

GAC Properties, Inc., by letter dated January 20, 1975, requested postponement of any decision in regard to changing lake schedules (raising existing levels), citing the Reedy Creek and Shingle Creek areas. (See Appendix B.)

Commentary: The Game Commission's recommended minimum of 48.5 ft. conforms with the present approved GDM schedule and is the pre-Project 76 percentile stage on Lake Kissimmee and 92 percentile stage on Lake Hatchineha. In 8 of 15 pre-Project years (1949-1963) a stage of 48.5 ft. or below was reached on Lake Kissimmee; four of these years being related to two drought incidents, 1955-56 and 1961-62. On Lake Hatchineha the 48.5 ft. or below stage was reached during the two drought events. Based on pre-Project stage-frequency and stage incidence

data, justification exists for a 48.5 ft. lower limiting stage, while still recognizing its incompatibility with the historical data for Lake Cypress. Accordingly, the District staff concurs in the Game Commission's recommenued lower limiting stage.

The District staff is also in agreement with the desirability of introducing a more flexible operation, within established limits. However, the 53.5 ft. stage proposed by the Game Commission is, in the opinion of the staff, too high for Lake Kissimmee; this stage having been exceeded only 8% of the time based on the available 26 years of pre-Project record.

The Game Commission's proposed upper limiting stage of 53.5 ft. might be acceptable for Lake Hatchineha, being the 13 percentile pre-Project stage in comparison with the 25 percentile for the present 52.5 ft. top. By way of further comparison, a stage of 53.0 ft. msl. was exceeded 18% of the time in the pre-Project record period. It is the District staff's opinion that a 53.5 ft. top limit for Hatchineha is somewhat high.

In terms of pre-Project stages on Cypress Lake an upper limit of 53.5 ft. msl. is not too high; this representing the 30 percentile stage. It should be noted that adoption of any schedule calling for an upper regulatory limit higher than the present 52.5 ft.msl. would require the discharge by the District of its obligations under its agreement with M. M. Overstreet. (See Appendix D.)

The preceding discussion and commentary indicate that if control structure S-64 is to be provided, as recommended by the Game Commission, a better location for it might be in C-36 between Cypress and Hatchineha, rather than between Hatchineha and Kissimmee. Any present recommendations to be made concerning regulation schedules must be predicated, however, on regulating these three lakes as a unit.

Concerning the maintenance of the extreme stages for a minimum period of two months, as recommended by the Game Commission, operating in such fashion is not desirable in most instances, in the opinion of the District staff. District biologists believe a gradual winter-spring stage recession to be highly desirable. Extending the upper stage limit one more month, through December (see Schedule 1, Figure 4, Appendix A) could occasionally result in a more rapid rate of stage recession in the spring.

Extending the minimum stage over a two month period in the early summer could have more serious consequences. The vertical line on June 1, shown on Schedules 1, 3 and 4, Figure 4, Appendix A, indicates an operation which will accumulate water in these lakes during the heaviest rainfall months for this area (June, July and August). The staff's analysis of Schedule 4, which calls for a minimum stage of 48.5 ft.msl., shows that in only half of the years analyzed was the "plateau" stage of 51.5 ft. reached by September 15 and in only one of those years was that stage reached before September 1. This means that in those years when stage is drawn down to 48.5 ft.msl. there is at best

a 50% chance (under Schedule 4) that a stage of 52.5 ft. to 53.0 ft. will be reached by November 1. With a two-month low stage period (June and July) the prospect of reaching a 52.5 ft. stage, much less a 53.5 ft. stage, on November 1 becomes minimal. It is the staff's opinion that this requirement will actually work against what the Game Commission is attempting to accomplish in terms of a greater flexibility in stage fluctuation operations. The District staff does not agree with this recommendation of the Game Commission.

The District staff cannot endorse an upper regulatory limit of 53.5 ft. for these three lakes, based primarily on the effect on privately owned lands adjacent to Lake Kissimmee as indicated by the pre-Project occurrence of stages above this elevation of only 8%.

A stage of 53.0 ft. msl. for Lake Kissimmee could be supported based on pre-Project frequency of occurrence (18 percentile). However, it is the staff's opinion that a stage of 53.0 ft. msl. in the period November 1 to December 1 could be achieved only infrequently. This stage was reached or exceeded on Lake Kissimmee in only four of 15 pre-Project years; 1949-1963. Such high stages are dependent on seasonal water availability from precipitation and runoff. The frequency of water availability cannot be expected to be different under post-Project conditions. The indicated frequency of achieving this stage of about once every four years when considered in conjunction with the numerous objections to a stage increase above 52.5 ft. do not appear to warrant any upward adjustment of the maximum regulatory limit.

Recommendation: It is the recommendation of the District staff that a regulation schedule, operating within the 48.5 ft. to 52.5 ft. msl. range be adopted for these three lakes. This schedule is shown on the attached Figure 1A.

The normal operation will be in accordance with this schedule with the exception that the winter-spring drawdown will begin on December 1 regardless of the stage which exists on that date. This means that, in effect, each year there will be a different drawdown regulation line between December 1 and June 1. This feature will provide a degree of flexibility by varying the regulated recession rates dependent upon climatic conditions as reflected by the December 1 stage. If, during the drawdown period, stage should rise above the drawdown line shown on the regulation schedule (Figure 1A) due to heavy rainfall and inflows, then regulatory operations for the remainder of the drawdown period will be governed by the basic regulation schedule.

This schedule does not have the degree of flexibility which the Game Commission's recommendation appears to have. However, that flexibility is believed to exist only on paper and cannot be attained in practice (except rarely) due to the Game Commission's recommendation which requires maintenance of the low regulatory stage for a two-month period. It is the staff's opinion that such a schedule, in practice, would produce very nearly the same actual stages as that recommended herein.

This schedule satisfies the recommendations of the Game Commission in terms of: (a) flexibility of operations based on local climatic conditions, and (b) a drawdown to a 48.5 ft. msl. stage. It does not satisfy those recommendations with respect to: (a) length of period for maintenance of minimum and maximum stages, and (b) upper limit of range: 53.5 ft. msl.

This schedule also only partially satisfies those who stated their satisfaction with the present schedule (49.5 ft. - 52.5 ft.), since it provides for drawdown to a 48.5 ft. stage. It does not satisfy those who objected to a minimum stage lower than 50.0 ft. or 49.5 ft.

It is apparent from the transcripts and written statements that the objection to stages lower than 49.5 ft. or 50.0 ft. derive principally from two causes:

1. Navigational access through Cypress Lake, particularly at the points of entry and exit to the Lake; and

2. Navigational access from the upland to Lake Kissimmee.

In regard to item 2, only upland owners on Lake Kissimmee made their views known, but the staff is aware of the fact that this situation exists on Lake Hatchineha as well. The matter of navigational access from the upland is not a factor on Cypress Lake.

If a stage of 50.0 ft. is considered to be "minimum low water" stage on Cypress Lake, stages below this elevation can be expected for about 4 to 4½ months under the schedule recommended. This condition can be accommodated by: (a) acceptance of a yearly restriction on through navigation by craft requiring this draft; (b) dredging of adequate navigation channels in Cypress Lake; or (c) maintenance of higher levels in Cypress Lake by provision of a control structure and a navigation lock. The most practicable solution for this problem has not been determined by the staff, but the matter definitely requires attention. The staff is of the opinion, however, that lack of a specific solution should not preclude adoption of the schedule recommended herein even though it is recognized that its adoption also forces adoption of alternative (a), above.

Concerning the matter of navigational access from the upland, the District should adopt a policy of supporting those who may be adversely affected, in their applications for the necessary dredging permits from the State regulatory agencies involved.

LAKE TOHOPEKALIGA

General: This lake is regulated by S-61, located in the Southport Canal (C-35) at the south shoreline of the lake. The Southport Canal originally excavated by Disston as an outlet for Lake Tohopekaliga was enlarged, as Canal 35, under the Project. Shingle Creek, a well-defined natural stream, enters the lake on the northwest shore just west of the City of Kissimmee.

The City of Kissimmee is located on the north shore of Lake Tohopekaliga and there are residential developments at the mouth of Shingle Creek. The north, west, and eastern boundaries are fresh water marshes. Improved pasture is found along the south and southeastern shorelines and backs up to the majority of the marsh around the lake. Small pockets of orange groves will be found scattered throughout the southeast and northwest shores. Isolated urban areas will also be found on the eastern side.

Paradise and Makinson Islands in the northern portion of the lake support groves.

Treated wastewater from the Cities of Orlando, Kissimmee and St. Cloud, and from Orange County enter the lake via Shingle Creek and the St. Cloud Canal (C-31), and on the north shore.

A deterioration in the lake's environment, documented by the Game and Fresh Water Fish Commission, led to the institution of a radical drawdown of lake levels to a stage of 48.0 ft. msl. in the spring of 1970. A report on this drawdown, entitled, "Extreme Lake Drawdown, A Working Fish Management Technique", dated October 1974, was completed by the Game and Fresh Water Fish Commission and is available in the District library for review. The drawdown was successful, as attested to by the universally agreed-upon spectacular increase in sports fish availability.

Considerable recreational use is made of this lake. The "Boat-A-Cade" originates at the City of Kissimmee. This event was originally held in October, normal high water time, but several years ago was switched to June, normally a period of low lake stages.

Lake Tohopekaliga is a meandered lake.

Hydrology: District regulation of this lake started early in 1964. Pre-Project stages for Lake Tohopekaliga, based on 23 years of record, are as follows:

15 percentile	50 percentile (median)	85 percentile
55.4 ft. msl.	53.5 ft. msl.	51.3 ft. msl.

Pre-Project daily recorded extremes are 48.9 ft. msl. (1962) and 59.4 ft. msl. (1960), for an extreme range of 10.5 ft. Assuming the 15 and 85 percentile values to represent the range of "normal" stage fluctuation, the record indicates a normal range of about four feet. In contrast, the General Design Memorandum established a two-foot range. (See Schedule 1, Figure 5, Appendix A.)

The following tabulation lists the actual fall-spring recessions on Lake Tohopekaliga in the pre-Project period 1944-1963:

Season	Recession (ft.)	Season	Recession (ft.)
1944-45	4.9	1954-55	2.5
1945-46	6.2	1955-56	2.1
1946-47	2.6	1956-57	2.6
1947-48	6.3	1957-58	2.1
1948-49	5.9	1958-59	3.9
1949-50	5.8	1959-60	3.3
1950-51	2.9	1960-61	8.6
1951-52	3.7	1961-62	1.8
1952-53	0.4	1962-63	stage increased
1953-54	5.7		

The median recession for the 18 seasons in which recessions occurred was 3.5 feet. The average recession was 3.9 feet. These recessions occurred over a usual range of about 5.5-6.0 feet.

Lake shore examination by the District staff, similar to that described previously herein for Lakes Kissimmee, Hatchineha, and Cypress has resulted in a staff conclusion that the natural ordinary high water level (pre-Disston) for Lake Tohopekaliga was at least 56.0 feet msl., and possibly higher.

Discussion: The two-foot range proposed by the General Design Memorandum schedule is too narrow in terms of the historical "normal" range of stage fluctuation (about 4.0 feet) and the actual median and average seasonal recessions for the 19 years immediately preceding the inception of the Project (3.5 and 3.9 ft.). The maximum regulatory stage proposed in the General Design Memorandum (55.0 ft. msl.) is approximately the 20 percentile stage; but the minimum regulatory stage (53.0 ft. msl.) is unquestionably too high, being the 56 percentile stage. Note that the pre-Project median stage is 53.4 ft. msl., only 0.4 ft. higher than the GDM minimum. The GDM schedule can be considered satisfactory with respect to the upper limiting stage, but is not acceptable with respect to the lower limiting stage and the range of fluctuation.

The Game and Fresh Water Fish Commission recommendations for this lake call for a maximum of 56.0 ft. and a minimum of 51.0 ft. As for Lakes Kissimmee, Hatchineha and Cypress, the Game Commission recommends a flexible operation within these limits dependent upon local climatic conditions, and maintenance of the extreme stages for a minimum period of two months. (These latter two recommendations apply as well to the other lakes of the regulated system).

The Games Commission recommendations for Lake Tohopekaliga were endorsed by the Osceola County Sportsmen's Club, Inc. (See Mr. Mason's statement on page 88 of the Kissimmee Transcript and letter dated December 17, 1974, in Appendix B.) It is assumed that Mr. Don Williams' endorsement of the Game

Commission recommendations (see pages 35 and 36, Lake Wales Transcript) is a blanket endorsement and applies to Lake Tohopekaliga and the other lakes of the system as well as to Lakes Kissimmee, Hatchineha and Cypress.

Mr. Bill Morse made a statement on behalf of the Osceola Waterways Committee, (see pages 35 to 47, Kissimmee Transcript). A resolution adopted by that Committee is set forth on page 37 of the Transcript. No specific recommendations were made with respect to Lake Tohopekaliga stages by that Committee.

Mr. Riley Miles asked questions, but made no statement. (Pages 66 to 71, Kissimmee Transcript.)

Mr. George Aggerton, President of the Melbourne Bassmasters, appeared to favor the Game Commission's recommendations, but not specifically. (See pages 89 to 91, Kissimmee Transcript.)

No other speakers at the Kissimmee hearing made statements in regard to Lake Tohopekaliga and none were made at the Lake Wales hearing.

The Tohopekaliga Yacht Club, in a letter dated January 14, 1975 (Appendix B), recommends a maximum of 56.0 ft. and a minimum of 52.0 ft. for Lake Tohopekaliga & endorses a maximum range of fluctuation. The letter cites a problem with the channel exiting the yacht basin at Kissimmee, at low lake stages.

The Osceola County Farm Bureau, by undated resolution received January 17, 1975, recommends a 52.0 ft. - 55.0 ft. regulation schedule for Lake Tohopekaliga. (Appendix B.)

Bronson's, Inc., by letter dated January 15, 1975, expresses satisfaction with the present schedule of 52.0 - 55.0 ft. and advises that about 100 of its acres on Lake Tohopekaliga would be adversely affected by a stage increase from 55.0 ft. to 56.0 ft. (Appendix B).

Henry O. Partin and Sons, Inc., by letter dated January 14, 1975, expressed satisfaction with present regulation schedule of 52.0 ft. - 55.0 ft. (Appendix B).

The Kissimmee Boat-C-Cade, by letter dated January 13, 1975, recommends a 52.0 ft. minimum for Lake Tohopekaliga (Appendix B).

Mr. Ike Marshall, by letter dated November 12, 1974, objects to the interim increase in stage last year from 52.0 to the GDM 53.0 ft. Presumably he is satisfied with the 52.0 ft. minimum (Appendix B).

The Osceola County Cattlemen's Association, by resolution (undated) submitted by letter dated January 7, 1975, recommends a 52.0 ft. to 55.0 ft. schedule (Appendix B).

Mr. Ben Cooper, by letter dated December 16, 1974, recommends a 53.0 - 55.0 ft. schedule (Appendix B).

Mr. G. T. Murray, by letter dated January 14, 1975, expresses support for greater fluctuation of lake levels.

Commentary: There is almost unanimous agreement on the part of all who have expressed opinions (Mr. Ben Cooper is the exception) that the 53.0 ft. - 55.0 ft. range proposed in the GDM be abandoned. This near unanimous opinion represents a wide variety of specific interests: fishermen, boaters, citrus growers, ranchers and residents. The District staff is heartily in agreement with these views.

It will be noted that several of the written statements received endorse the present regulation schedule, or Schedule 2 as shown on Figure 5 of Appendix A. This calls for maintaining the minimum regulation stage for 2½ months, which approximates one of the recommendations of the Game Commission. It also calls for maintaining the maximum regulatory stage for 4 months, or about twice as long as recommended by the Game Commission.

The District staff does not agree with either of these two features of the present schedule. District biologists favor a gradual winter-spring recession. They recommend a regulation schedule designed to produce this, thereby eliminating the possibility of a too rapid drawdown, damaging to spawning beds, after March 15 when lake stage intersects the steeply declining limb of regulation schedule 2. District hydrologists and operations personnel favor a schedule which will permit the accumulation of rainfall and runoff in the lake during June-August, thus increasing the opportunity to achieve the 55.0 ft. stage by November 1. The present schedule calls for discharge rather than retention during these months and consequently the 55.0 ft. stage has only infrequently been reached. Analyses made by the staff show that operating under Schedule 3 (Figure 5 of Appendix A) in 7 out of 10 years (1964-1973) the scheduled September 1 stage would have been reached, increasing the probability of reaching the 55.0 ft. stage by November 1. In only one of those years did actual stage, operating under Schedule 2, reach the desired September 1 stage of 53.5 ft.

In regard to the Game Commission's recommended upper limiting stage of 56.0 ft. msl., flood damages begin to occur at a stage of 55.0 ft. msl. Project design has been predicated on limiting the estimated 10-year frequency flood stage to this non-damaging elevation. Finally, based on the available pre-Project record (1942-1964), 56.0 ft. is the 9 percentile stage, indicating a comparatively infrequent incidence. For these reasons the District staff cannot endorse or recommend an upper limiting stage of 56.0 ft. msl.

Concerning the Game Commission's recommended lower limiting stage of 51.0 ft. msl., the historical data show this recommendation to have some degree of validity. This is the 88 percentile stage; 0.3 ft. below the 85 percentile stage. However, in only four (1955, 1956, 1961 and 1962) of the 20 pre-Project years from 1944-1963, did the stage reach a low of 51.0 ft. or below. The comparatively high frequency (12% of the time) of stages of 51.0 ft. msl. or below is almost entirely due to the extended duration of low stages during the extremely dry periods of 1955-56 and 1961-62. A stage of 51.0 ft. msl. therefore must be considered a fairly rare occurrence; actually two occurrences in 20 years if the 1955-56 and 1961-62 occurrences are each to be taken as single events. The District staff is therefore of the opinion that 51.0 ft. msl. is too low a stage for drawdown on a more or less regular basis.

On the other hand, a stage of 51.5 ft. msl., slightly above the 85 percentile stage, occurred in 6 years (1944, 1945, 1949, 1950, 1951 and 1958) in addition to the 4 years noted above. A stage of 51.5 ft. msl. was therefore, in the pre-Project period, not an unusual occurrence, having been encountered in about half the years.

Recommendation: It is the recommendation of the District staff that a flexible regulation schedule, operating within the 51.5 ft. to 55.0 ft. msl. range, be adopted for Lake Tohopekaliga. This schedule is shown on the attached Figure 1B.

The usual yearly operation will be in accordance with this schedule except that in the year immediately following a drawdown or recession (from November 1 to June 1 stage or lowest spring stage) of more than 3.0 ft. the June 1 drawdown stage shall be 52.0 ft. rather than 51.5 ft.

As in the recommendation for the Lake Kissimmee-Hatchineha-Cypress schedule, the winter-spring drawdown will begin on December 1 regardless of the stage which exists on that date. If, during the drawdown period, stage should rise above the drawdown line shown on the regulation schedule (Figure 1B) due to heavy rainfall and inflows, then regulatory operations for the remainder of the drawdown period will be governed by the basic regulation schedule.

A degree of flexibility, as recommeded by the Game Commission, on a cyclical basis will be provided both by periodically changing the drawdown stage from the normal 51.5 ft. elevation to 52.0 ft., and by starting the drawdown every year on December 1.

This schedule does not appear to have the flexibility of that recommended by the Game Commission. However, as with its recommendation for Lakes Kissimmee - Hatchineha - Cypress, the flexibility in the Game Commission recommendations are more apparent than real. Maintaining the low stage for two months by deliberate releases, as recommended by the Game Commission, will make it impossible to reach the high limiting stage of 56.0 ft. msl. except in extremely wet years, and the 55.0 ft. msl. stage would be achieved only infrequently.

The schedule conforms with the views of the large number of individuals and organizations presenting verbal and written statements who requested the maximum regulatory stage not be increased above 55.0 ft. msl. It does not conform with the views expressed by the same individuals and organizations endorsing the status quo in regard to the low regulatory stage and in particular the Tohopekaliga Yacht Club and the Boat-A-Cade, both of which recommended a lower limit of 52.0 ft. msl. This recommendation, however, is apparently based only on the problem with the exit channel from the yacht basin (see Yacht Club letter, Appendix B). This can be rectified by deepening and extending the channel and the District and Game Commission should support the issuance of permits for the necessary work.

In this connection it should be noted that both the Tohopekaliga Yacht Club and the Boat-A-Cade endorse the concept of "maximum fluctuation of water levels", which is incorporated in this staff recommendation.

The staff believes the 51.5 ft. lower limiting stage is supportable based on past record and is justifiable for environmental reasons.

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EAST LAKE TOHOPEKALIGA

General: The levels of this lake and Lake Ajay to the northeast are regulated by S-59, located in the St. Cloud Canal (C-31) downstream of the point where C-31 leaves the southwest shore of East Lake Tohopekaliga. The St. Cloud Canal was a Disston canal, enlarged under the Project. Boggy Creek, a well defined natural stream, enters the lake at a cove, or bay, on the northwest shore. Lake Ajay is connected to East Lake by Canal 29B.

The upland adjacent to the lake is comparatively well developed. The City of St. Cloud, with a public beach on the lake, dominates the southern shore. Lake Runymede, an arm of East Lake, has a residentially developed upland. Other residential developments, more or less isolated in nature, are scattered along the upland elsewhere along the lake. Improved pasture with small pockets of orange groves and urban areas can be found primarily throughout the north, east, and western shores. There are several fish camps operating on the lake.

The north, south and western shores of Lake Ajay are totally unimproved pasture while fresh water marsh occupies the eastern side.

Treated wastewater from the City of St. Cloud discharges to C-31 downstream of S-59 and thus does not enter East Lake. Orlando International Airport (McCoy) is located in the Boggy Creek basin; its runoff enters the creek and from thence enters East Lake.

East Lake Tohopekaliga is a meandered lake.

Hydrology: Pre-Project stages for East Lake, based on 24 years of record are as follows:

15 percentile	50 percentile (median)	85 percentile
58.1 ft. msl.	55.9 ft. msl.	54.1 ft. msl.

Pre-Project recorded daily extremes, for the same 24 year period of record, are 51.9 ft. msl. (1962) and 62.2 ft. msl. (1960) for an extreme range of 10.3 ft.; approximately the same as that for Lake Tohopekaliga.

Assuming the 15 and 85 percentile stages to represent the normal range of stage fluctuation, the record indicates that range to be four feet. The GDM schedule called for a range of two feet, between 56.0 ft. and 58.0 ft. (See schedule 1, Figure 6, Appendix A.)

The following tabulation lists the actual fall-spring recessions on East Lake in the pre-Project period 1944-1963:

Season	Recession (ft.)	Season	Recession (ft.)
1944-45	4.1	1954-55	3.5
1945-46	7.3	1955-56	2.2
1946-47	2.6	1956-57	4.5
1947-48	6.1	1957-58	1.9
1948-49	7.1	1958-59	stage increased

Tabulation (cont'd.)

Season	Recession (ft.)	Season	Recession (ft.)
1949-50	5.5	1959-60	4.1
1950-51	2.8	1969-61	9.1
1951-52	3.4	1961-62	1.2
1952-53	1.1	1962-63	stage increased
1953-54	6.4		

The median recession for the 17 seasons in which recession occurred was 4.1 ft. and the average recession was 4.3 ft., both about a half-foot greater than the recessions calculated for Lake Tohopekaliga.

Lake shore examination by the District staff indicates that ordinary high water line prior to Disston's canal excavations in the Upper Kissimmee Basin approximated 64.0 ft. msl.

Discussion: As with Lake Tohopekaliga, the two foot range proposed by the GDM schedule is too narrow when compared with the pre-Project "normal" range, which approximates 4.0 feet. The actual pre-Project median and average winter-spring recessions are also more than twice the range of the GDM schedule. The maximum regulatory stage proposed in the GDM (58.0 ft. msl.) is almost exactly the 15 percentile stage (58.1 ft. msl.) based on the available pre-Project record. However, the minimum regulatory stage proposed in the GDM (56.0 ft. msl.) is the 49 percentile stage; far too high in comparison with the actual low stage experience on this lake. These comparisons clearly indicate that any changes to be made to the GDM schedule should be at the low end, rather than the high end.

The Game and Fresh Water Fish Commission's recommendation for East Lake calls for limits for the range of regulation of 59.0 ft. maximum and 54.0 ft. minimum. Other recommendations as to flexibility and maintenance of minimum and maximum stages are the same as described elsewhere herein.

It is assumed that the blanket endorsements of the Game Commission's recommendations made by Mr. Don Williams and Mr. Lewis Mason at both hearings apply to East Lake. (See earlier references herein.)

No statements concerning East Lake were made at either hearing.

The Osceola County Farm Bureau's undated resolution recommends a low of either 55.0 ft. or 56.0 ft., a high of 58.0 ft., with the "top level being held later in the spring." The same recommendation was made by the Osceola County Cattlemen's Association. (Appendix B.)

Messrs. J. Oscar Tyson and J. S. Tyson, by letters dated January 9, 1975, recommended essentially the same thing as the Farm Bureau and the Cattlemen's Association. (Appendix B.)

Mr. William M. Bishop, P.E., on behalf of Mr. Don C. Price, owner of Camptown Industries of Florida, Inc., by letter dated December 24, 1974, objected to an upper regulatory stage of 58.0 ft. msl. and a lower regulatory stage of 54.0 ft. msl. (Appendix B.)

Commentary: Neither the hearings nor subsequently submitted written statements elicited a strong general view that the GDM schedule should be adopted. The general consensus, aside from the Game Commission and the supporters of its recommendations, favored the present schedule operating in the range of 55.0 ft. to 58.0 ft. The District staff is in agreement that the GDM schedule should be abandoned.

The Game Commission's recommended upper regulatory limit of 59.0 ft. msl. represents the 8 percentile stage based on 24 years of pre-Project record. Even though this stage was reached or exceeded in 8 of these 24 years, it is not considered to be a reasonable high to be achieved on a more or less regular basis as based on the stage-frequency analysis. In addition, flood damages occur at stages above 58.0 ft. msl. and Project design is predicated on this. The District staff has been made aware of the fact,over the years, of the problems for the City of St. Cloud's drainage which are generated at stages above 58.0 ft. (See Mr. Tyson's letter, Appendix B; see also letters dated January 4, 1967 and February 24, 1967 from the City of St. Cloud, Appendix D.) For these reasons, the District staff cannot endorse, or recommend, an upper regulatory limit above that stage (58.0 ft.) which is known to produce hardship and damage.

In regard to Mr. Bishop's letter objecting to the high stage of 58.0 ft., see letter to Mr. Bishop dated August 6, 1970, signed by R. L. Taylor, advising that the upper regulatory stage is 58.0 ft. (Appendix D.)

Concerning the Game Commission's recommended lower regulatory limit of 54.0 ft. msl., the pre-Project record indicates that this stage, or lower, was reached in 8 of the 24 years, or in 6 of 24 if the 1955-56 and 1960-61 incidents are considered to be single events. In 3 additional years a stage of 54.5 ft. msl. was reached, for an incidence of about once in every three years. A stage of 54.0 ft. msl. is the pre-Project 87 percentilestage and a stage of 54.5 ft. msl. is the 79 percentile stage. The District staff is of the opinion that a sufficient basis exists in the pre-Project record to justify establishing a minimum stage of either 54.0 ft. msl. or 54.5 ft. msl.

In terms of frequency of stage incidence, as distinguished from stage duration, a stage of 54.5 ft. or lower on East Lake was not an unusual occurrence in the pre-Project period. In 11 of the 20 years 1944-1963 stage reached an elevation of 54.5 ft. or below, an average frequency of once every two years. This stage (54.5 ft. or lower) occurred in four successive years, 1948-1951, and in 3 out of 4, 1955-1958.

Analysis of the years 1963-1973, for the critical months of June-August, indicates that with a 54.0 - 58.0 ft. schedule (Schedule 4, Figure 6, Appendix A) the desired September 1 stage would be reached in only 4 of the 11 years. With a 55.0 - 58.0 ft. schedule (Schedule 3, Figure 5, Appendix A) the desired September 1 stage would be reached in 6 of the 11 years. This strongly indicates that, at best, with Schedule 3 the 58.0 ft. stage on November 1 might be reached only once every two years on the long-term average, and that with Schedule 4 the 58.0 ft. stage might be reached once every four years. In short, there is a somewhat better chance of reaching the 58.0 ft. upper stage from a starting stage of 54.5 ft. on June 1 than from a stage of 54.0 ft. From this standpoint alone a minimum drawdown stage of 54.5 ft. is preferable to one of 54.0 ft.

The above analysis indicates the unacceptability of the Game Commission's recommendation for maintaining the minimum stage for a period of at least two months. Releasing water in June-August rather than retaining it will substantially decrease the opportunities for achieving the upper regulatory stage of 58.0 ft. msl. The District staff does not concur in this recommendation of the Game Commission.

In regard to the recommendations of the Osceola County Farm Bureau and others that the "top level be held later in the spring" the District staff is of the opinion that in many, if not most, years this could result in a too-rapid drawdown of lake levels during the critical bass spawning season. The present schedule (Schedule 2, Figure 6, Appendix A) calls for such an extended top stage to March 15 and has resulted in criticism of the District's operations when the necessary comparatively rapid drawdown after mid-March has left spawn stranded. Staff biologists believe a gradual winter-spring drawdown to be mandatory to avoid this type of loss.

Recommendation: It is the recommendation of the District staff that a flexible regulation schedule, operating within the 54.5 ft. to 58.0 ft. msl. range, be adopted for East Lake Tohopekaliga. This schedule is shown on the attached Figure 2A.

The manner of operation will be as described for Lake Tohopekaliga elsewhere in this report. The usual operation will be in accordance with the schedule shown on Figure 2A, with two exceptions, as follows:

1. In the year immediately following a drawdown or recession (from November 1 to June 1 stage or lowest spring stage) of more than 3.0 ft., the June 1 drawdown stage shall be 55.0 ft. rather than 54.5 ft.

2. The winter-spring drawdown will begin on December 1 regardless of the stage which exists on that date. If during the drawdown period, stage should rise above the drawdown line shown on the regulation schedule (Figure 2A) due to heavy rainfall and inflows, then regulatory operations for the remainder of the drawdown period will be governed by the basic regulation schedule.

As with Lake Tohopekaliga, this schedule does not conform with the Game Commission's recommendations for either upper or lower limiting regulatory elevations, although the lower limit approaches that recommended by the Game Commission. It does, however, provide for a degree of flexibility under which drawdown elevations and recessions will cyclically vary.

The schedule recognizes the wishes of those who object to increasing the upper regulatory stage above 58.0 ft. msl.; but does not recognize the objection of Mr. Price who is the only objector to a 58.0 ft. regulatory maximum.

It does not conform with the desires of those expressing satisfaction with the present 55.0 ft. msl. lower regulatory stage. As noted in the previous section, however, the staff believes the 54.5 ft. minimum to be supportable based on pre-Project stage data and is justifiable for environmental reasons.

LAKES HART AND MARY JANE

General: These two lakes are located in Orange County and they are regulated together by a single structure, S-62 located in Canal 29A which discharges into Lake Ajay at its north end. They are connected by another segment of Canal 29A. Both segments of Canal 29A (Disston canals) were enlarged under the Project.

Dry forest dominates the northwestern, northeastern, and southeastern shores of Lake Hart with small areas of urbanization and improved pasture on the western portion only. Pockets of fresh water marshes can be found on the northern and eastern shores with improved pasture occupying the southern side totally.

The northeastern section of Lake Mary Jane contains a fresh water swamp, while the remainder of the northern shore is occupied by dry forests. Both the southern and southeastern portions of the lake are fresh water marshes, with the remaining eastern shoreline completely in urban use (Isle of Pines). The western shore is primarily dry forest with small pockets of fresh water marshes scattered throughout.

Considerable recreation boating use is made of Lake Mary Jane. Orange County maintains a park fronting on the south side of Canal 29A between Hart and Mary Jane and the west shore of Lake Mary Jane.

Lake Hart is a meandered lake. Lake Mary Jane is not meandered.

Hydrology: Project regulation of these lakes started in May 1970. Pre-Project stages based on 29 years of record for Lake Hart and 23 years of record for Lake Mary Jane are as follows:

	Hart	Mary Jane
15 percentile	60.5 ft.msl.	61.2 ft.msl.
50 percentile (median)	59.2 ft.msl.	60.1 ft.msl.
85 percentile	58.1 ft.msl.	59.1 ft.msl.

Under pre-Project conditions (not pre-Disston) the above data show that Lake Mary Jane levels were generally about one foot higher than those of Lake Hart. These higher levels were maintained by a hard sand ledge at the Mary Jane outlet canal to Lake Hart, left unexcavated, presumably by Disston. This ledge, which acted as a submerged weir, was removed under the Project in order to provide a greater outlet capacity for Lake Mary Jane and discharges from the lakes further upstream.

Pre-Project daily recorded extremes on these lakes are:

	Hart	Year	Mary Jane	Year
Maximum	64.9 ft.msl.	1945	64.8 ft.msl.	1960
Minimum	56.4 ft.msl.	1967	57.7 ft.msl.	1962
Extreme difference	8.5 ft.		7.1 ft.	

The recorded differences in extremes for both lakes averages somewhat under 8 feet. Assuming the 15 and 85 percentile stages to represent the range of normal stage fluctuation, the record indicates a normal range of a little over two feet on both lakes. The General Design Memorandum established a two-foot range.(See Schedule 1, Figure 7, Appendix A.) The limits of 59.0 ft.msl. to 61.0 ft.msl established by that schedule also fit the 15 and 85 percentile stages for Lake Mary Jane quite well.

The following tabulation lists the actual fall-spring recessions on Lake Hart in the pre-Project period 1955-1969:

Season	Recession (ft)	Season	Recession (ft)
1955-56	1.3	1962-63	stage increased
1956-57	3.3	1963-64	3.6
1957-58	1.6	1964-65	2.3
1958-59	stage increased	1965-66	1.7
1959-60	3.1	1966-67	3.2
1960-61	6.4	1967-68	3.0
1961-62	1.8	1968-69	1.4

The median recession for the 12 seasons in which recession occurred was 2.6 ft. The average recession was 2.7 ft. Average recessions on Lake Mary Jane were less than those on Hart due to the effect of the earth weir.

Examination of the shores of these lakes by the District staff indicates a probable location of the natural ordinary high water line (pre-Disston) on Lake Mary Jane at elevation 62.6 ft. (tree line, pine) and on Lake Hart at elevation 62.4 feet.

Discussion: As noted in the previous section the GDM regulation schedule when compared with pre-Project stage record is reasonably satisfactory in terms of range based on stage frequency (about 2 feet). It is also satisfactory in terms of elevations related to the 15 and 85 percentile stages on Lake Mary Jane. On Lake Hart the upper limit of 61.0 ft. is the 91 percentile stage and the lower limit of 59.0 ft. is the 55 percentile stage.

Shortly after this schedule was instituted protests were received from residents and recreational boaters on Mary Jane. The 59.0 ft. stage interfered with boating access to the lake and recreational navigation in the lake. These conditions were verified by the District staff; the lake is shallow throughout (lowest lake bottom elevation approximates 50.0 ft.) and its littoral zone has a flat slope. A public meeting was held in the area on October 13, 1971. As a result the District adopted a 59.5 ft. - 61.0 ft. regulation schedule. (Schedule 2, Figure 7, Appendix A.) Correspondence pertinent to the adoption of this interim regulation schedule is attached in Appendix D.

The Game and Fresh Water Fish Commission recommends upper and lower limiting stages for these lakes of 62.5 ft.msl. and 58.5 ft.msl.; and recommends a flexible operation within these limits.

As noted earlier in this report, Mr. Don Williams and Mr. Lewis Mason gave a blanket endorsement to the Game Commission's recommendations, although Lakes Hart and Mary Jane were not specifically addressed. (See both Transcripts and Mr. Mason's letter, as referenced elsewhere herein, in Appendix B.)

Mr. Holowatch wants Lake Mary Jane to be regulated as it is now. (Page 49 Kissimmee Transcript.)

Mr. G. Enright, property owner on Lake Mary Jane, stated the 59.5 ft. low stage was "good"; stated he would not be hurt until a high stage of 63.5 ft. or 64.0 ft. was reached. (Pages 50 and 51 Kissimmee Transcript and again on pages 73 and 74.)

Mr. W. Mateer, representing Mr. and Mrs. Howell D. Condrey, owners in Isle of Pines on Lake Mary Jane, stated that a fluctuation to below 59.5 ft. would cause "substantial concern"; stated that if more fluctuation is needed it should be on the high side but later retracted this. (Pages 72 and 75 Kissimmee Transcript.)

Ms. L. Forbis, representing the Isle of Pines Property Owners Association, recommended a high of 61.5 ft. and a low of 60.0 ft. (Pages 83 to 85 Kissimmee Transcript.) This statement was later modified by letter dated December 26, 1974, from Ms. Forbis recommending a 59.5 ft. to 61.0 ft. schedule. (See Appendix B.)

Mr. G. F. Foster, property owner on Lake Hart, stated the present 59.5 to 61.0 ft. regulation is "very satisfactory"; objected to the high of 61.5 ft. (Pages 86-88 Kissimmee Transcript.)

By letters dated December 10 and December 23, 1974, Mr. T. M. Hastings, P.E., Orange County Engineer, recommended that a maximum regulatory stage of 61.0 ft. not be exceeded. (See Appendix B.)

Letter dated January 17, 1975, from Circle S Bar Ranch on Lake Hart expressed satisfaction with present schedule. (See Appendix B.)

Commentary: Among those who expressed verbal and written opinions there was unanimous agreement (excepting the Game Commission) that the present regulation schedule on these two lakes was satisfactory. There was some indication from one or two of the owners on Mary Jane that a higher stage than 61.0 ft.msl. might be acceptable, but this was not a strongly expressed position. Furthermore, it is negated by: (a) the Orange County Engineer, (b) letter from Isle of Pines Property Owners Association, and (c) owners on Lake Hart.

Although a 59.5 ft. minimum stage narrows the pre-Project normal range of fluctuation by one-half foot to one foot and represents the pre-Project 30 percentile and 70 percentile stage on Hart and Mary Jane, respectively, it is the staff's opinion that valid reasons exist for not changing either the upper or lower

limits of the schedule now in effect. On the upper side there is the Orange County Engineer's recommendation based on building requirements. On the lower side there is the ample testimony as to interference with navigation and navigation access on Lake Mary Jane.

The matter of navigation and navigation access is a factor on certain of the other lakes considered in this report, as well as on Lake Mary Jane. Based on pre-Project record the District staff could, at the most, recommend a 59.0 ft. - 61.0 ft. regulation for Lakes Hart and Mary Jane. Such a narrow range, in the staff's opinion, would have little environmental value. Consequently, on Lakes Hart and Mary Jane the navigational factors carry relatively more weight since dropping the lower limit from 59.5 ft. to 59.0 ft. would provide no increased environmental value while at the same time creating navigation problems.

The Game Commission's recommendations do not take these factors into account whereas it is the staff's view that the District must. Consequently, the staff cannot endorse the Game Commission's recommendations for these reasons alone.

Additionally, the staff cannot endorse these recommendations based on pre-Project stage history. The upper stage of 62.5 ft. was exceeded only 2% of the time on both Lake Mary Jane and Lake Hart. Stages lower than the recommended lower limiting stage of 58.5 ft. occurred only 5% of the time on Lake Mary Jane.

In regard to the regulation schedule shape this was not specifically addressed in any comments; but there were numerous expressions of satisfaction with the present schedule. It would be speculative to state that this applied to the shape as well as the range.

The "plateau" shape of the regulation schedule from June through September which is incorporated in the schedules recommended for the lakes discussed earlier in this report, is believed to be beneficial for Lakes Hart and Mary Jane as well.

Recommendation: It is the recommendation of the District staff that a regulation schedule for Lakes Hart and Mary Jane with a 59.5 ft. to 61.0 ft. range be adopted, as shown on Figure 2B.

This schedule does not incorporate the feature of flexibility over a period of years. Operating within the narrow range of 1.5 ft. does not provide the opportunity for any possible environmental usefulness to be derived from regulatory flexibility.

This schedule satisfies all of the verbal and written recommendations received, except those of the Game Commission.

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LAKES MYRTLE, JOEL AND PRESTON

General: The levels of these three lakes are regulated together by a single structure, S-57, located in Canal 30, the connecting canal between Lakes Myrtle and Mary Jane. The connecting canal between Lakes Myrtle and Joel is designated as C-32B. These connecting canals were originally excavated by Disston and were enlarged under the Project. Another Disston canal, not enlarged under the Project, connects Lake Myrtle to Lake Preston, which lies to the east.

The north and half of the eastern shore of Lake Joel are occupied by fresh water marshes; the remaining eastern half is characterized by unimproved pasture. Improved pastures totally occupy the southern shore and approximately a tenth of the western side; dry forests make up the land use for the remaining area.

The total eastern shoreline of Lake Myrtle plus half of the southern portion are characterized by improved pasture, the remaining portion being fresh water marsh. Dry forests and fresh water marshes make up the northern boundary. Though most of the land area on the western side of the lake is unimproved pasture, a substantial portion is fresh water swamp and forests.

Fresh water swamps plus a small area of dry forests make up the northern boundary of Lake Preston. The western shoreline consists primarily of both improved and unimproved pasture, with a small area of fresh water marsh. Single characteristics such as fresh water marshes on the south and dry forest on the east make up the remainder of the land use surrounding the lake.

All three lakes are meandered, the original surveys showing them to be connected.

Upland ownership around these lakes is largely in the hands of a single entity; Deseret Farms of Florida, Inc.

Hydrology: Project regulation of these lakes started in September 1969. Pre-Project stage data is derived from a gaging station located in the Myrtle-Mary Jane Canal (Lake Myrtle outlet canal, now C-30) 1.2 miles downstream of Lake Myrtle. Using month-end stages only, the staff developed an approximate stage-frequency relationship for the 16 year record period (1950-1965). That relationship shows the following for Lake Myrtle:

15 percentile stage	61.5 ft. msl.
50 percentile stage (median)	60.3 ft. msl.
85 percentile stage	59.2 ft. msl.

These generalized data indicate a probable normal range of fluctuation of slightly over two feet.

Pre-Project recorded extremes at the above gaging station, for the record period November 1949 - January 1968, are:

Maximum	65.3 ft. msl., September 1960
Minimum	58.6 ft. msl., June 1962
Extreme difference	6.7 ft. msl.

The difference between recorded extremes on these lakes is similar to that observed for Lakes Hart and Mary Jane, immediately downstream. The extreme differences for these two groups of lakes are several feet less than those for the larger lakes downstream. The explanation lies partially in the smaller contributory areas; but it is believed the larger range on the lower lakes is principally due to the large inflows to these lakes from major streams (Boggy, Shingle and Reedy Creeks) whose impact is not dampened by lake storage. This consideration may not have been taken into account by the Game Commission which recommended a four or five foot extreme range on all lakes on which they commented, regardless of differences in lake hydrology.

The General Design Memorandum recommended a two-foot range (see Schedule 1 and 2, Figure 8, Appendix A), with lower and upper limits of 60.0 ft. and 62.0 ft. msl., respectively. The regulatory range of that schedule fits what appears to be the pre-Project normal range of slightly over two feet. The upper stage of 62.0 ft. is the 9 percentile stage and the lower stage of 60.0 ft. is the 38 percentile stage, both of which are somewhat high.

Period of record winter-spring stage recession data for this group of lakes were not analyzed for the purposes of this report.

Examination by the District staff of the shores of this group of lakes for evidence of the natural ordinary high water line found the average tree line (oak) elevation on Lake Joel approximates 65.0 ft. msl., and 64.3 ft. msl. on Lakes Myrtle and Preston.

Discussion: The Game and Fresh Water Fish Commission made no recommendations concerning this group of lakes, stating that their recommendations were not completed. (See Dr. Frye's letter of December 9, 1974, Appendix B.)

No verbal statements were made at either hearing in regard to regulatory schedules for this group of lakes.

The Osceola County Farm Bureau resolution recommended a 60.0 ft. - 62.0 ft. schedule, as did the resolution from the Osceola County Cattlemen's Association. (See Appendix B.)

Commentary: As noted earlier both the upper and lower limits of the present regulation schedule (which is the GDM schedule) are somewhat high; in particular the lower regulatory stage. It appears that the lower limit could be dropped a half-foot to elevation 59.5 ft. msl. which is approximately the pre-Project 25 percentile stage.

Examination of the stage record since Project regulation shows that 1971 was the only year in which stage receded below 60.0 ft. in the spring. This recession was due to natural causes; the 1970-71 drought. June 1 stage

was 59.6 ft., with a minimum of 59.3 ft. in late June. November 1 stage was 60.4, with a maximum November-December stage of 60.9 at the end of December. This is indicative that with a drawdown to 59.5 ft. it may be difficult to achieve the upper stage of 62.0 ft. by November 1; it missed by about 1.5 feet in 1971. However, summer rainfall in 1971 was below normal.

There is also some additional evidence that reaching a stage of 62.0 ft. from a drawdown stage of 59.5 ft. may be difficult. In the five full years of District regulation from 1970 to 1974 (excluding 1971 discussed above) in two years the 62.0 ft. stage was not reached. In 1970 the June 1 - November 1 rise was zero and November 1 stage was missed by 1.0 foot. In 1972 the summer-fall rise was 1.1 ft. and November 1 stage was missed by 0.6 ft.

There is justification, nevertheless, based on pre-Project stage record for a lower regulatory limit than that now in effect.

Recommendation: It is the recommendation of the District staff that a flexible regulation schedule, operating within the 59.5 ft. to 62.0 ft. msl. range, be adopted for Lakes Myrtle, Joel and Preston. This schedule is shown on the attached Figure 2C.

The procedure for use of this flexible schedule will basically be keyed to the November 1 stage, as follows:

November 1 stage 61.5 ft. or above; drawdown to 60.0 ft. on June 1

November 1 stage below 61.5 ft.; drawdown to 59.5 ft. on June 1

Operations will be such in the winter-spring period to ensure that a drawdown to 59.5 ft. will occur at least twice but no more frequently than three times during any six year period. In order to achieve this variable drawdown within these frequency of occurrence limits the basic relationship given between November 1 stage and drawdown stage will have to be occasionally ignored. During the summer-fall period of each year regulatory operations will follow the 62.0 ft. schedule until November 1 (shown by the solid line on Figure 2C).

The "plateau" shape of the schedule at a stage of 61.0 ft. during the summer months should improve the ability in some years to achieve the upper regulatory stage at the end of the rainy season, as compared with the present schedule.

The lack of any verbal reaction at the hearings and the limited written reaction as regards these lakes can probably be taken as indication of satisfaction with the present schedule. However, the recommendation made reflects the District staff's view that, for environmental reasons, a cyclically fluctuating set of regulatory limits is desirable.

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ALLIGATOR LAKE AND LAKES CENTER, COON, TROUT LIZZIE AND BRICK

General: Alligator Lake is the headwater lake of the Kissimmee Chain of Lakes. This group of lakes outlets to the north via Canal 32C between Trout Lake and Lake Joel. The regulatory structure at this end of the group is S-58, located in C-32C (the Trout-Joel connecting canal). Alligator Lake outlets at its south end to Lake Gentry via Canal 33. The regulatory structure at this end of the group of lakes is S-60, located in Canal 33. Sardine Lake and Live Oak Lake, located northwest of Alligator are also affected by regulatory operations in this system.

The northern boundary of Alligator Lake is primarily improved pasture and fresh water marsh. Both the south and eastern shorelines consist of improved and unimproved pasture, and with the exception of a few areas of orange groves, the western boundary is also unimproved pasture.

Pasture is the main land use surrounding Brick Lake, with the exception of the southern shoreline which consists entirely of fresh water swamp. There is a small area of fresh water swamp along the eastern side. The remaining uses are all combinations of improved and unimproved pasture.

With the exception of an urban area along the northeast portion of Lake Lizzie, and a fresh water marsh comprising the entire southern shoreline, the remaining land use along this lake is pasture. The north, west, and southwest shores are improved pasture and the eastern side is unimproved.

The west, north, and eastern shores of Lake Coon are totally unimproved pasture, while the southern boundary is almost all improved pasture with a small pocket of urbanization.

The north, west, and southern shorelines of Lake Center are dominated by unimproved pasture. The eastern boundary is urbanized with the exception of the southeast corner which consists of fresh water marshes.

The north, west, and the majority of the southern shoreline of Trout Lake consists of unimproved pasture. Urbanization has taken place along the southeastern corner of the lake and fresh water marshes exist along the eastern shoreline.

Lakes Alligator, Trout and Lizzie are meandered lakes. Lakes Center, Coon and Brick are not meandered.

Hydrology: Project regulation of these lakes started in May, 1970. Pre-Project stages for Alligator Lake based on 24 years of record (1941-1964) are as follows:

15 percentile	50 percentile (median)	85 percentile
64.8 ft. msl.	63.3 ft. msl.	61.7 ft. msl.

Pre-Project recorded extremes over the 15 year period 1952-1966 are 59.8 ft. msl. (1962) and 66.8 ft. msl. (1960), for a difference in extremes of 7.0 ft. These extremes occurred in the same years as the extremes on Lake Myrtle, and the difference in extreme stages is about the same as observed on Lake Myrtle.

The GDM schedule fluctuation range is 2.0 ft., whereas the normal range of fluctuation as represented by the 15 and 85 percentile stages is about 3.0 ft.

The following tabulation lists the actual winter-spring recessions which occurred on Alligator Lake in the pre-Project period 1952-1966:

Season	Recession (ft.)	Season	Recession (ft.)
1952-53	2.0	1959-60	2.1
1953-54	3.7	1960-61	5.3
1954-55	1.9	1961-62	1.7
1955-56	3.0	1962-63	stage increased
1956-57	1.9	1963-64	1.9
1957-58	1.5	1964-65	3.2
1958-59	1.6	1965-66	stage increased

For the 12 pre-Project seasons listed above in which a winter-spring recession occurred, the median recession is 2.0 ft., and the average is 2.5 ft. These data when examined in conjunction with the stage hydrographs and the stage-frequency relationships indicate a pre-Project normal stage recession of about 2 feet which varied cyclically within a usual range of approximately 3 feet.

District staff examination of these lakes for evidences of the pre-Disston ordinary high water mark included Alligator Lake and Lakes Center, Trout and Lizzie. The tree line on Lizzie was located on approximately the 63.5 ft. contour; on the other three lakes it was located on approximately the 65.0 ft. contour. This is an inconclusive indication that Lake Lizzie originally may have been the high lake of the system.

Discussion: The two-foot range proposed by the GDM schedule (see Schedules 1 and 2, Figure 9, Appendix A) for these lakes appears to be somewhat narrow based on the pre-Project stage-frequency analysis. On the other hand, it is in keeping with the normal recessions which actually occurred during a portion of the pre-Project record period. The maximum regulatory stage of 64.0 ft. msl. is the pre-Project 32 percentile stage, and the minimum regulatory stage of 62.0 ft. msl. is the pre-Project 82 percentile stage. This is a general indication that if any adjustment in the schedule is made it should be at the high end rather than the low end.

The Game and Fresh Water Fish Commission's recommendation is for a flexible operation within limiting stages of 60.5 ft. msl. and 64.5 ft. msl.

The previous comments made concerning the statements of Mr. Don Williams and Mr. Lewis Mason presented at both hearings apply here as well.

Mr. Ernest W. Tyson expressed particular concern about elevations around Lakes Lizzie and Coon, and stated that he would experience flooding at stages higher than 63.0 ft. He also stated a low stage of 61.5 ft. might be acceptable, but thinks a 62.0 ft. stage is "low enough". (See pages 44 and 45 of Kissimmee Transcript.) His verbal statement concerning the 63.0 ft. stage was later modified by letter to state: "to hold these lakes at a 64 ft. level or higher would put from 200 to 300 acres of our land under water around Lakes Coon, Trout and Lizzie", and to endorse the present 62.0 ft. to 64.0 ft. schedule. (See Appendix B.)

Mr. LeFevre made no specific statement, but asked some questions. Two of these rhetorical questions were: "What is wrong with your present plan?" and "Why can't we fluctuate a half foot down instead of up?" From these questions it can be concluded that Mr. LeFever favors the present schedule, but would not object to a low regulatory stage of 61.5 ft. (See pages 52 to 57, Kissimmee Transcript.)

Mr. Bullis made a statement somewhat difficult to follow, but its burden seems to be that a 63.0 ft. top is great for his pasture and that he could occasionally accept a 64.0 ft. stage. (See pages 57 and 58, Kissimmee Transcript.)

Mr. Birchwood stated that a 61.5 ft. low stage "hurts Bullis and it hurts me." Mr. Birchwood's lack of favor for a 61.5 ft. low stage is apparently based on boating access to the lake. Mr. Bullis did not confirm that a 61.5 ft. stage "hurts" him. (See page 59, Kissimmee Transcript.)

Mr. Cooley, representing Messrs. Sidney Hirsch and Kenneth A. Gresch, stated that a half-foot raise to 64.5 ft. msl. would cause his clients, who run cattle, to lose a "hundred to two hundred acres" around Lake Lizzie. He stated that if additional fluctuation was needed that "it go down instead of up." (See pages 59 and 60, Kissimmee Transcript.)

Mr. Kun expressed opposition to raising levels on Coon Lake stating that now, at a stage of 63.2 ft., undesirable groundwater conditions are occurring, and that he is "just able to live with 64.0 ft. as a maximum elevation." He stated going down to 61.5 ft. "doesn't seem to have a great deal of merit" and that "you all are doing a good job at 62.0 to 64.0." (See pages 91 to 93, Kissimmee Transcript.)

The Resolutions from the Osceola County Cattlemen's Association and the Osceola County Farm Bureau recommend the present 62.0 ft. to 64.0 ft. regulation schedule for this group of lakes. (See Appendix B.)

A letter dated January 8, 1975, was received from Mr. and Mrs. M. D. Tayes complaining about the high water level on Alligator in the summer of 1974. This letter is considered to be part of the record of the hearings, although not so identified by Mr. and Mrs. Tayes. Stages were above regulation throughout July-September, regulation stage for these months ranging from 62.2 on July 1 to 63.0 on October 1. Peaks in July, August and September were 63.4, 63.3 and 63.5 respectively. Note that these stages are a half-foot or more below the top regulatory stage of 64.0 ft. (See Appendix B.)

Lillian Lee and Sons, in letter dated January 17, 1975, signed by Orie Lee, stated low point of regulation should be reached on June 1 and further, a 61.5 ft. drawdown elevation would be acceptable if deferred until July 1. Also stated no objection "to any elevation in the 61.5 ft. to 64.5 ft. range." (See Appendix B.)

By letter dated January 19, 1975, Mrs. R. Tarnowski recommended periodic lowering of levels for "flushing." No specific elevations were given. (See Appendix B.)

In identical letters dated January 9, 1975, Messrs. Ernest W. Tyson, Roscoe Tyson (and Frances), Walter E. Tyson, Lee Roy Tyson, and A.L. Bullis endorsed the present regulation schedule, and recommended holding "higher elevations later into the spring." (See Appendix B.)

Commentary: Based on the verbal and written statements there seems to be substantial agreement among the residents and upland owners on this group of lakes that the present schedule is satisfactory. All, with one exception (Lillian Lee and Sons) object to raising the upper limit above 64.0 ft. msl. and one or two respondents indicated that a 63.5 ft. stage might be too high. There appeared to be a general indication that if a wider range of fluctuation was desired it be on the low side, and there were several indications that a 61.5 ft. stage would be acceptable. The cattle interests stated preference for a flatter winter-spring drawdown.

As noted in the preceding "Discussion" section, the pre-Project stage-frequency data indicates that any expanded range of fluctuation should be toward the high end rather than the low end. Despite this, the information elicited at the hearings and in subsequent statements for the record clearly show that an increase in regulatory stage will be highly objectionable and that flooding damages will occur at stages above 64.0 ft. msl. The District now receives complaints (see the Tayes letter, Appendix B) when stages approach 63.5 ft.

For this reason the District staff cannot recommend acceptance of the Game Commission's recommendation for an upper limiting stage of 64.5 ft. It is recognized that this stage is the pre-Project 20 percentile stage and that in 6 of 15 pre-Project years (1952-1966) stage equalled or exceeded this elevation. Nevertheless it appears that residential development has taken place on this group of lakes and that other land use has developed predicated on a 64.0 ft. design flood stage, as presented in the GDM. These facts must be taken into consideration at this time.

In regard to the Game Commission's recommendation of elevation 60.5 ft. msl. for the lower limiting stage, the District staff cannot recommend acceptance of this figure. In the 24 year pre-Project period of record lake stage was below this elevation only 3% of the time (97 percentile stage). This low stage was encountered in only one event; the severe drought of 1962-63. Such a low stage is an infrequent occurrence, perhaps on the order of once every 20 years. There is no present justification for reproducing such a rare stage event once every 3 years as recommended by the Game Commission.

A low stage of 61.5 ft. msl., for which some acceptance (if shown to be justified) appeared to surface at the hearings, is the pre-Project 87 percentile stage. This frequency (stage at or below 61.5 ft. msl.) is almost entirely attributable to two drought events: 1956 and 1962-63; and most of that to the severe 1962-63 event when stage was at or below 61.5 for about 11 months. Counting 1962-63 as a single event, then, a stage of 61.5 ft. or lower was experienced in 3 out of 14 years (also counting 1962-63 as a single year). There is some justification, based on historical stage information alone, for establishing a 61.5 ft. lower limiting stage for lake regulation, provided its frequency of occurrence is kept within a once in five year range.

If a stage of 64.0 ft. msl. is acceptable as presently representing the practicable upper limiting stage it appears that environmental considerations dictate establishing a more frequent lower stage than the historical record indicates. If the record on the high side can be ignored for valid reasons of practicability, it can also be ignored for valid environmental reasons on the low side. In these terms, justification exists for adjusting the regulation schedule in such fashion as to produce the lower limiting stage at least once in every three year period.

It should be noted here that a 61.5 ft. stage occurred in both 1971 and 1972 under District regulation, these being deficient rainfall years in the upper Kissimmee Basin.

In regard to the shape of the schedule, since starting regulation of these lakes in 1970, the upper regulatory stage of 64.0 ft. msl. on November 1 has never been reached. To some extent this is attributable to the shape of the present schedule which requires downstream releases of portions of the June through September rainfall and runoff, thus relying largely on October rainfall and runoff to fill up the remaining foot of storage. (See Schedules 1 and 2, Figure 9, Appendix A.) This occurred in 1974 when releases were made, in comparatively large volumes, to maintain schedule during July - September. Rainfall in October was well below normal with the result that November 1 stage was 63.3; 0.7 ft. below schedule.

A schedule having the "plateau" shape in the summer, as shown on Schedule 3, Figure 9, Appendix A, should improve the opportunity to reach the desired November 1 stage. Routings made by the District staff using Schedule 3 show that a 64.0 ft. stage could have been reached on November 1, 1973 in comparison with the actual November 1 stage of 63.6 ft. under Schedule 1. If occasionally a drawdown to 61.5 ft. is made, the "plateau" feature will be required to provide the maximum opportunity to obtain the widest possible range of fluctuation in that particular season.

The more gradual spring drawdown recommended by the cattle interests may be beneficial for environmental reasons as well. It could permit the retention of slightly more water in these lakes on the infrequent occasions of greater than normal spring rainfall in the area. It could adversely affect the ability to achieve the 64.0 ft. stage in the fall, but only minimally in comparison with the present schedule. A portion of this could be compensated for by adopting a schedule having a "plateau" shape in the summer months and, in particular, if the "plateau" stage was set at about 63.2 ft.

Recommendation: It is the recommendation of the District staff that a flexible regulation schedule, operating within the 61.5 ft. to 64.0 ft. msl. range, be adopted for Alligator Lake and its associated lakes. This schedule is shown on the attached Figure 3A.

The manner in which lake levels will be fluctuated in accordance with this schedule is as described for Lakes Myrtle, Joel and Preston elsewhere in this report. For this group of lakes the key November 1 stages which will determine the spring drawdown stage are:

November 1 stage 63.5 ft. or above, drawdown to 62.0 ft. on June 1

November 1 stage below 63.5 ft., drawdown to 61.5 ft. on July 1

Operations will be such in the winter-spring period as to ensure that a drawdown to 61.5 ft. will occur at least twice but no more frequently than three times during any six year period. This will occasionally require ignoring the basic relationship given above between November 1 stage and drawdown stage. During the summer-fall period of each year regulatory operations will follow the 64.0 ft. schedule from the end of drawdown until November 1.

The "plateau" shape recommended for the summer months at a stage of 63.2 ft. msl. should improve the ability to achieve a 64.0 ft. stage in November.

This schedule does not satisfy the Game Commission's recommendations, but does provide a degree of flexibility which was included as one of its recommendations.

Maintaining the present upper limiting stage of 64.0 ft. msl. satisfies those numerous individuals and interests who objected to a raise above 64.0 ft. It does not satisfy the objection of Mr. and Mrs. Tayes who indicate dissatisfaction with a stage over 63.0 ft.

Although there was no solid endorsement of a low stage of 61.5 ft. msl., there was widespread indication of acceptance of such a stage if justified. This feature should therefore not be specifically objectionable to any who expressed interest in these lakes except Mr. Birchwood who stated he would "be hurt" by a 61.5 ft. low.

The extension of the spring drawdown of 61.5 ft. to July 1 conforms with the recommendations received from several representatives of the cattle interests and should consequently not be objectionable.

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LAKE GENTRY

General: Lake Gentry levels are regulated by S-63 located in the outlet canal, C-34, at the south end of the lake. Canal 34 connects with Cypress Lake, entering that lake on its east shore. Downstream of S-63 water levels are further stepped down in C-34 by Structure 63A at the Turnpike. Canal 34 was excavated under the Project along the alignment of Canoe Creek.

Unimproved pasture dominates the north, west, and southern shorelines of Lake Gentry with fresh water swamps along the eastern side. The Sessions Grove is located on the west shore, and there are scattered groves on the upland back from the shoreline.

Lake Gentry is a meandered lake.

Hydrology: The hydrology of this lake was altered in June 1955 by Mr. H. O. Partin by excavation of a channel outletting on the south side of the lake. (See R. L. Taylor memorandum of July 21, 1965, Appendix D.) The effect of this channel was to lower previously occurring stages, with the most marked effect being noted on medium to low stages. Prior to this channel excavation the available record (November 1949-June 1955) indicates a median stage of 61.9 ft., with the 15 percentile and 85 percentile stages being 62.3 ft. and 61.4 ft., respectively, a "normal" range of 1.0 ft. Recorded high stage in this period was 63.0 ft. in 1953 and 60.1 ft. in September 1950. This record indicates a comparatively stable lake, but the record is too short to reveal anything reasonably conclusive with respect to stage regime prior to 1955. One piece of confirming evidence concerning high stages is the District staff's examination of the lake shoreline which established the location of the tree line around the lake at an elevation of approximately 62.5 ft. msl., indicative of the natural ordinary high water line.

In the period from mid-1955 through 1966 (11 1/2 years), the lake stage hydrographs show a much wider range of fluctuation than in the previous 5 1/2 years, with a maximum of 62.6 recorded in September 1960 and a minimum of 55.8 in 1962. This extreme range reflects, on the high side, the wettest year of record in the Basin and, on the low side, the most severe rainfall deficiency period prior to the Project; the timing of these extremes being common to all lakes in the Basin. Nevertheless, aside from these extremes, the ordinary range of fluctuation appears to be greater since 1955, being on the order of 3 feet. The staff attributes this to the Partin channel excavation, which leads to the conclusion that a comparatively wide range of fluctuation may well not be the natural condition on this lake.

Because of the definite changes which have taken place fairly recently (20 years ago) and the short hydrologic records which are available for the periods before the change and between the change and inception of District regulation in May 1967, the types of analyses made for the other lakes covered in this report are not too meaningful and hence were not made.

Discussion: The schedule set out in the GDM proposed a regulation range of 2 feet between elevations 60.0 ft. and 62.0 ft. (See Schedule 1, Figure 10,

Appendix A.) This schedule was based, quite probably, on the record available at that time which would have included a portion of the period after 1955.

Due to the situation at the Sessions Grove on the west shore of Lake Gentry (see correspondence in Appendix D) the District, shortly after starting Lake regulation operations adopted an "interim" top regulatory stage of 61.5 ft. msl. Since that time operations have been in accordance with Schedule 2, Figure 10, Appendix A; that is, between 60.0 ft. and 61.5 ft. msl.

The Game and Fresh Water Fish Commission recommends a flexible operation on Lake Gentry within upper and lower limiting stages of 62.0 ft. and 58.0 ft. msl., respectively. (See Kissimmee Transcript and letter from Dr. Frye, Appendix B.)

Mr. J. E. Carroll, representing the Sessions Groves, stated his opposition to increasing the upper regulatory stage above 61.5 ft. (See pages 47 and 48, Kissimmee Transcript.)

Mr. David Pease expressed satisfaction with the present regulation schedule. (See pages 88 and 89, Kissimmee Transcript.)

The Resolutions from the Osceola County Cattlemen's Association and the Osceola County Farm Bureau endorsed the present regulation schedule. (See Appendix B.)

By letter dated January 14, 1975, signed by Oscar Lee Partin, Henry O. Partin and Sons, Inc., expressed satisfaction with "the levels the Flood Control has been operating on", applied to all lakes in the Kissimmee Valley chain. Because of this company's ownership on Lake Gentry (although not limited to Lake Gentry) reference to this letter is included in this section of the report. (See Appendix B.)

Commentary: The GDM schedule was based on lake level conditions on Lake Gentry which no longer existed at the time operations were initiated and which had not existed for the preceding 12 years. Regardless of whether or not the work which caused a general lowering of lake levels was illegal, a de facto situation was created. The GDM schedule is particularly susceptible to possible modification for this reason alone.

The Game Commission's recommended upper limiting stage of 62.0 ft. conforms with that established in the GDM. This is a reasonable recommendation based on pre-1955 conditions. The basic issue, however, is the extent to which the pre-1955 condition is to be recognized in arriving at a reasonable conclusion concerning a regulation schedule for this lake. The Game Commission's recommended lower limiting stage of 58.0 ft. msl. should also be examined in an attempt to resolve this issue.

The stage of 58.0 is about 2 feet lower than the pre-1955 recorded minimum stage. It is a stage which is obviously derived from the post-1955, pre-Project record, being very close to the median stage for those years and having occurred in 6 of those 11 1/2 years. But the overall Game Commission's recommendation shows an inconsistency; deriving the upper limiting stage from the pre-1955 condition and the lower limiting stage from the post-1955 condition. If the de facto post-1955 condition is to be recognized, then it should be consistently

recognized. The District staff is of the opinion that the post-1955, pre-Project condition should be accepted as a general basis for establishing a regulation schedule for Lake Gentry. Accordingly, the staff recommends acceptance of the present "interim" upper regulatory stage of 61.5 ft. msl.

Although there was no testimony to this effect at the hearings, or in subsequent written submissions, there is evidence in the District's files (see R. L. Taylor memo of May 11, 1965, Appendix D) that excessively low lake levels are not favored by grove owners around the lake due to lowering of groundwater elevations. For this reason it is the staff's judgment that the low stage of 58.0 ft. recommended by the Game Commission is too low. The staff does not recommend acceptance of this lower limiting stage.

It is the staff's opinion that a lower limiting stage of 59.0 ft. msl. is justifiable based on the post-1955, pre-Project stage record, since this stage or lower was reached in every year but 1966 in the period 1955-1966.

As in the case of the other lakes considered in this report, providing for the accumulation of summer rainfall and runoff in Lake Gentry will provide greater opportunity for achieving the upper regulatory stage of 61.5 ft. on November 1.

Recommendation: It is the recommendation of the District staff that a flexible regulation schedule, operating within the 59.0 ft. to 61.5 ft. msl. range be adopted for Lake Gentry. This schedule is shown on the attached Figure 3B.

The manner in which lake levels will be fluctuated in accordance with this schedule is generally as described for Lakes Myrtle, Joel and Preston elsewhere in this report. For this lake the key November 1 stages which will determine the spring drawdown stage are:

November 1 stage 61.0 ft. or above, drawdown to 59.5 ft. on June 1

November 1 stage below 61.0 ft., drawdown to 59.0 ft. on June 1

Operations during the winter-spring period will be such as to ensure that a drawdown stage of 59.0 ft. will be obtained at least twice but no more than three times during any six year period. This requirement may occasionally necessitate ignoring the November 1 stage-drawdown stage relationship set forth above. During the summer-fall period regulatory operations will follow the 61.5 ft. top regulation line until November 1.

This recommendation does not satisfy the Game Commission's recommendations except with respect to flexibility of operations.

It satisfies the desires of those individuals and interests who requested that the upper limiting stage not be raised above 61.5 ft. msl.

It does not conform with the Resolutions of the Osceola County Farm Bureau and the Osceola County Cattlemen's Association which recommended remaining with the present 60.0-61.5 ft. schedule. In this regard the staff is of the opinion that justification exists in the pre-Project record and for environmental reasons for lowering the present lower regulatory stage, and to provide for cyclical water level fluctuations within a wider range.

APPENDIX A

NOTICE OF PUBLIC HEARINGS

The Central and Southern Florida Flood Control District will hold two public hearings concerning the regulation of water levels on certain lakes of the Upper Kissimmee Basin, located in Polk, Osceola and Orange Counties. The first hearing will be held in the Osceola County Court House, Kissimmee, Florida, starting at 7:30 P.M., December 18, 1974. The second hearing will be held in the City Hall, Lake Wales, Florida, starting at 7:30 P.M., December 19, 1974.

The lakes involved in these hearings are those whose levels are capable of being regulated by the District by means of water level control structures built under the Central and Southern Florida Flood Control Project and authorized for construction by the Congress of the United States in 1954. The map of Figure 1, attached, shows the location of these lakes and their water level control structures. The following table lists the structures and the lakes whose levels they regulate. Lake levels as of November 15, 1974, are also listed.

Structure	Lake	Lake level Nov.15, 1974
S-65	Kissimmee, Hatchineha, Cypress	51.6
S-61	Tohopekaliga	54.5
S-59	East Tohopekaliga, Ajay	57.1
S-62	Hart, Mary Jane	61.0
S-57	Joel, Myrtle, Preston	62.1
S-58 and S-60	Alligator, Brick, Lizzie, Coon, Center, Trout	63.2
S-63	Gentry	61.0

Schedules for the regulation of water levels in these lakes were developed by the Corps of Engineers as a part of the design of the Kissimmee Basin works (General Design Memorandum), completed in October 1956. Subsequently, when the decision was made to start construction of work in the Upper Valley before completion of work in the Lower Valley, interim lake regulation schedules were adopted for Lakes Tohopekaliga and East Tohopekaliga. Interim modifications to the General Design Memorandum schedules for certain other lakes were also made subsequent to completion of construction of the regulatory structures. These interim schedules have been in effect up to the present time.

The Congressional Act which authorized the Central and Southern Florida Flood Control Project requires that the regulation schedules for these lakes be approved by the Secretary of the Army. The original (GDM) schedules have been so approved. The Corps of Engineers has advised the District that it is prepared to consider recommendations from the District for revisions to those approved schedules and to endorse acceptable revisions to the Secretary of the Army for his approval. The choices are:

1. To accept the original (GDM) regulation schedules which have already been approved by the Secretary of the Army.

2. To recommend adoption of the interim regulation schedules which have been approved by the Secretary of the Army only on an interim basis until Project completion in the Kissimmee Basin, which is now a fact.

3. To recommend adoption of alternative regulation schedules.

The purpose of these public hearings is to receive pertinent information from, and the views of, interested citizens, residents and other landowners on the lakes, sportsmen and boating groups, conservation organizations, fish-camp operators, State and Federal agencies, local governments and others concerning desired lake regulation schedules. Such information and views are

solicited by the District's Governing Board in order to assist its members to arrive at a recommendation to be made to the Secretary of the Army through the Jacksonville District Engineer of the Corps of Engineers.

In considering possible revisions to the original regulation schedules specific attention must be given to maintaining the flood control capability of those original schedules. This is a feature which will be most critically reviewed by the Corps of Engineers and the Secretary of the Army, as well as by the District's Governing Board.

Also of importance is the maintenance of environmental quality and a good sports fishery in these lakes. From biological studies in these lakes, and elsewhere in the State and nation, there is strong evidence that the environmental quality of regulated lakes is enhanced by controlling levels within ranges as closely approximating natural water level fluctuations as possible.

The lake stage graphs of the attached Figure 2, for Lake Tohopekaliga and Figure 3, for East Lake Tohopekaliga, illustrate both the flood control feature and the stage stabilization feature of the present interim regulation schedules for these lakes. That portion of the graphs for the period 1942 through 1963 reflects the unregulated condition; the remaining portion represents the regulated condition. The graphs show both a reduction in flood peaks and a reduction in the range of fluctuation following the placement into effect of stage regulation.

To be taken into account as well in considering possible revisions to the approved regulation schedules are boating access from the shore to the lakes, small boat navigation within the body of the lakes themselves, other recreational uses of the lakes and their littoral zones, and esthetics. At the present time water supply is not a major consideration since consumptive use withdrawals from the lakes are small in comparison with the total volume of water available.

The regulation schedules which have been specifically considered by the District staff are shown in Figures 4 through 10, attached. The table below lists, for the lakes in question, the schedule identification number and the regulatory range of each schedule. In all cases "Schedule No. 1" is the original (GDM) schedule, and "Schedule No. 2" is the interim schedule under which the lakes have been regulated for the past several years. In those cases where the figures are identified as "Schedule 1 and 2", the lake is presently being regulated in accordance with the original schedule. All elevations are referred to mean sea level.

Lakes Kissimmee, Hatchineha and Cypress. (Figure 4)

Schedule No. 1	48.5 ft. to 52.5 ft.
" " 2	49.5 ft. to 52.5 ft.
" " 3	49.5 ft. to 53.0 ft. with option to 48.5 ft. dependent on November 1 stage.
" " 4	48.5 ft. to 53.0 ft.

Lake Tohopekaliga. (Figure 5)

Schedule No. 1	53.0 ft. to 55.0 ft.
" " 2	52.0 ft. to 55.0 ft.
" " 3	52.0 ft. to 55.0 ft.
" " 4	51.0 ft. to 56.0 ft.

East Lake Tohopekaliga. (Figure 6)

Schedule No. 1	56.0 ft. to 58.0 ft.
" " 2	55.0 ft. to 58.0 ft.
" " 3	55.0 ft. to 58.0 ft.
" " 4	54.0 ft. to 58.0 ft.

Lakes Hart and Mary Jane. (Figure 7)

Schedule No. 1	59.0 ft.	to	61.0 ft.
" " 2	59.5 ft.	to	61.0 ft.
" " 3	59.0 ft.	to	61.5 ft.

Lakes Joel, Myrtle, and Preston. (Figure 8)

Schedule No. 1 & 2	60.0 ft.	to	62.0 ft.
" " 3	60.0 ft.	to	62.0 ft.
" " 4	60.0 ft.	to	63.0 ft.

Lakes Alligator, Brick, Lizzie, Coon, Center, and Trout. (Figure 9)

Schedule No. 1 & 2	62.0 ft.	to	64.0 ft.
" " 3	62.0 ft.	to	64.5 ft.
" " 4	61.5 ft.	to	64.5 ft.

Lake Gentry. (Figure 10)

Schedule No. 1	60.0 ft.	to	62.0 ft.
" " 2	60.0 ft.	to	61.5 ft.
" " 3	60.0 ft.	to	62.0 ft.

Lake stage conditions can be related to the mean sea level datum values given herein by reference to gages located on the several lakes. The staff gage on the upper side of each lake discharge structure is the mean sea level datum given here. Lakes Alligator, East Tohopekaliga, Tohopekaliga, Mary Jane, Hatchineha and Cypress also have gages to this datum either on docks or on recording structures near the shore. Locations of these can be obtained from the Kissimmee Field Station of this District. The gage readings as of November 15, 1974, are shown on page 1.

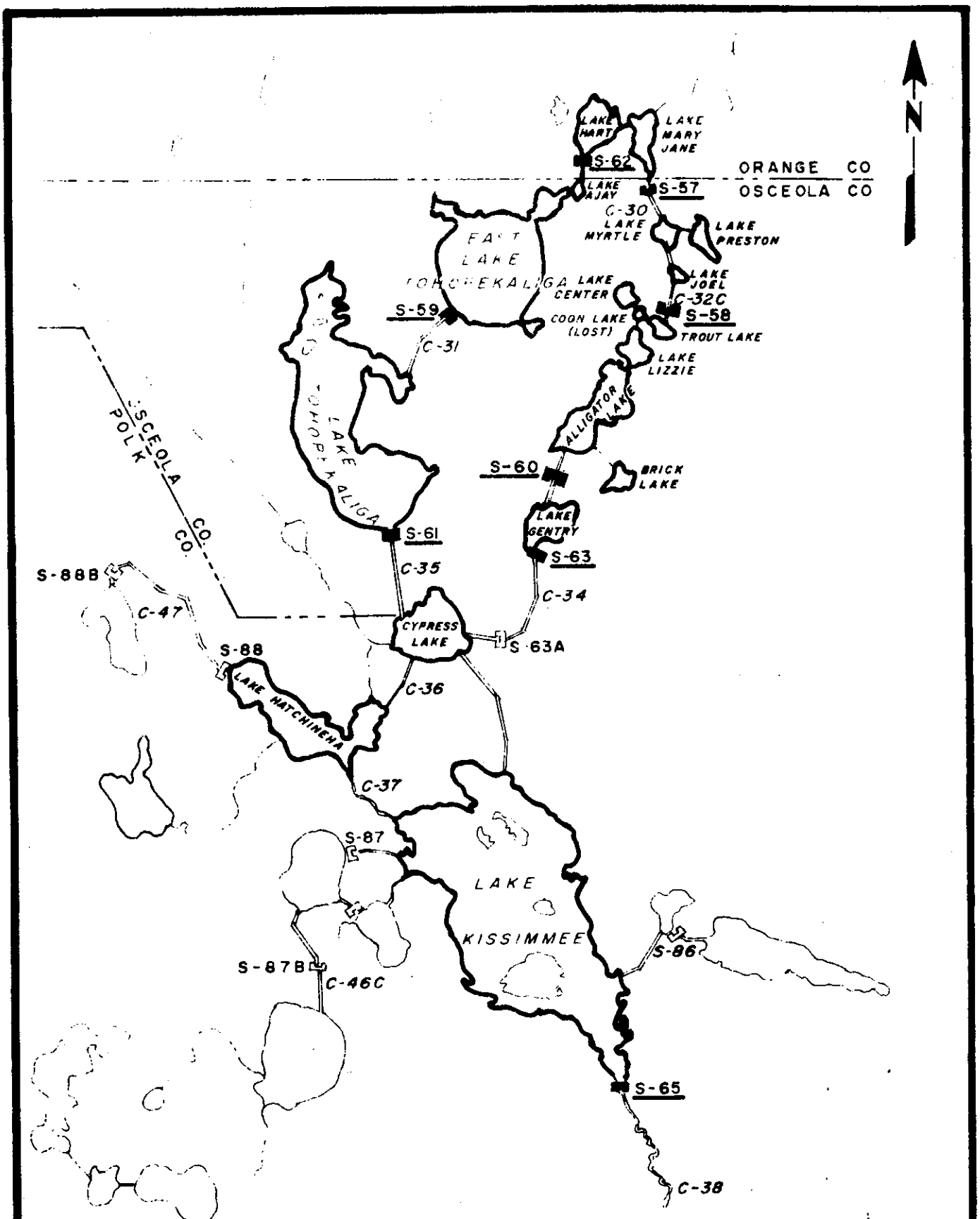
At the public hearings the District will present more detailed information concerning each of the considered regulation schedules, identify what in its opinion are the advantages and disadvantages of each schedule, and display information concerning lake stages under unregulated conditions. The same presentation will be made by the District at both public hearings and information and views from participants concerning all the lakes will be accepted at both hearings. It is hoped, however, that specific attention can be given to Lakes Kissimmee, Hatchineha and Cypress at the December 19th hearing in Lakes Wales, and to the remaining lakes at the December 18th hearing in Kissimmee.

Both oral and written information and views will be accepted as part of the record of the hearings. The record will be held open until December 31, 1974, for the submission of additional written information to the Governing Board.

Additional copies of this Notice of Public Hearing can be obtained at the FCD Field Station in Kissimmee and at water level control structure S-65 at the outlet of Lake Kissimmee just south of SR #60.

J. R. Maloy
Acting Executive Director

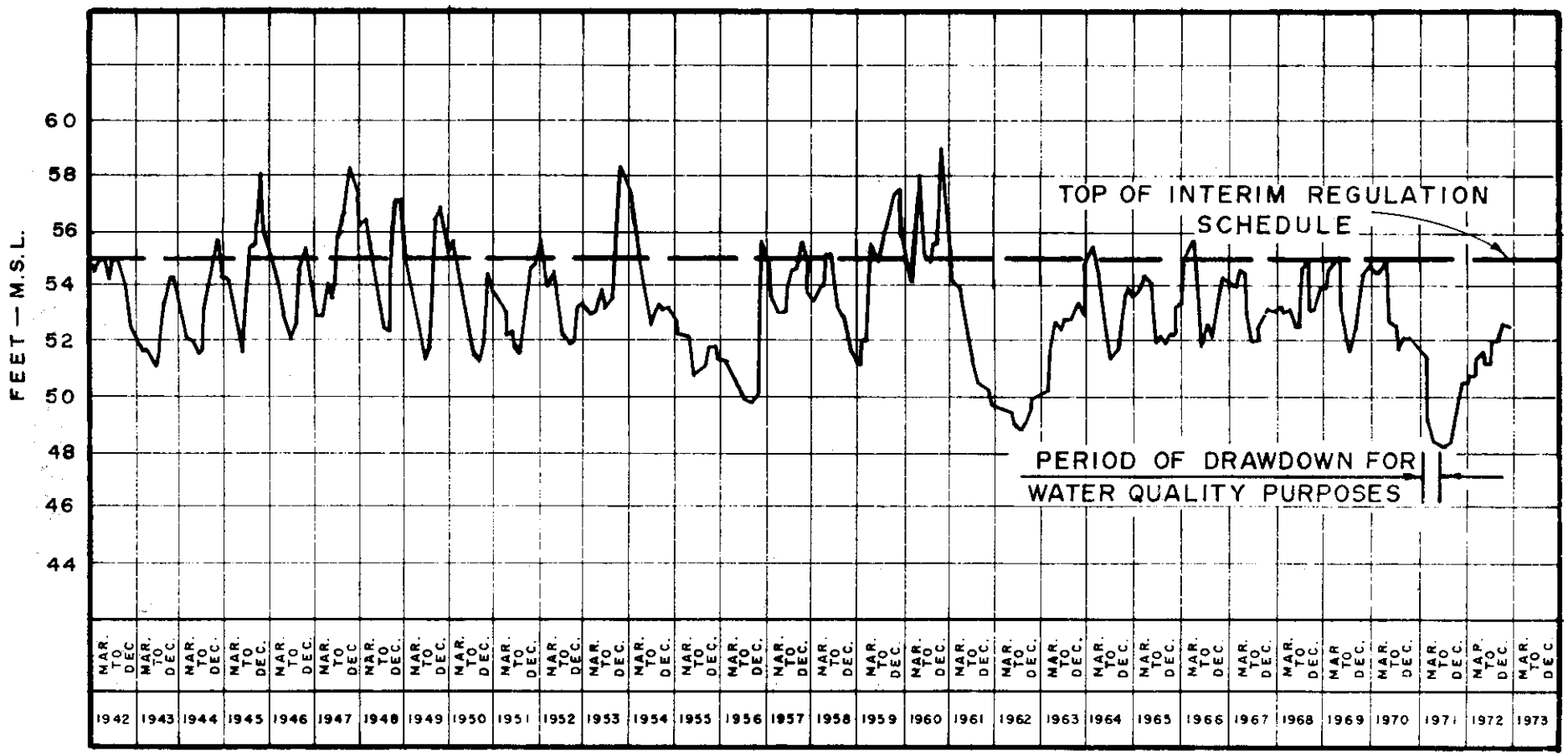
November 18, 1974



NOTE: LAKES CONTROLLED BY DISTRICT WATER LEVEL CONTROL STRUCTURES ARE INDICATED BY HEAVY OUTLINES; CONTROL STRUCTURES ARE UNDERLINED

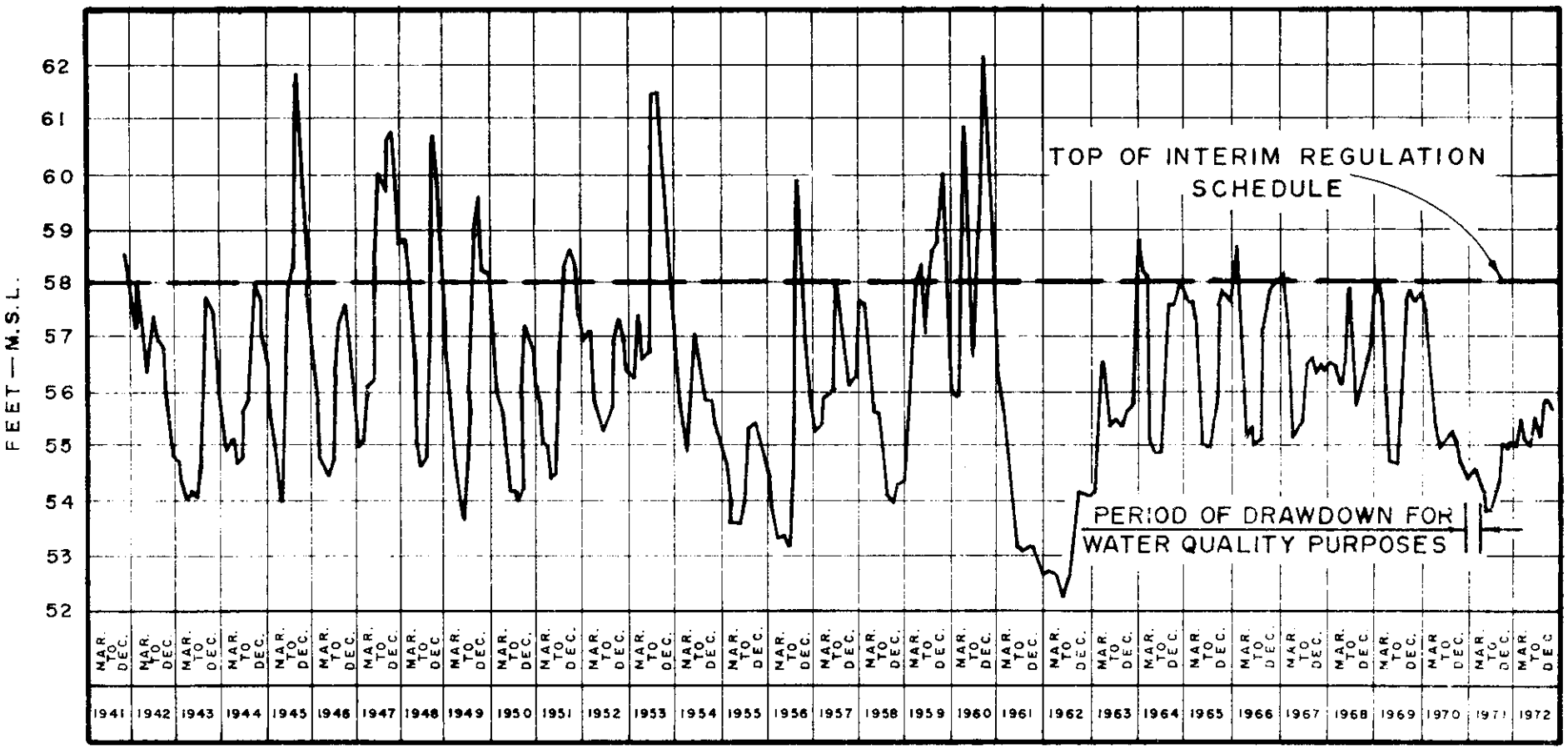
UPPER KISSIMMEE BASIN LAKES

FIGURE 1



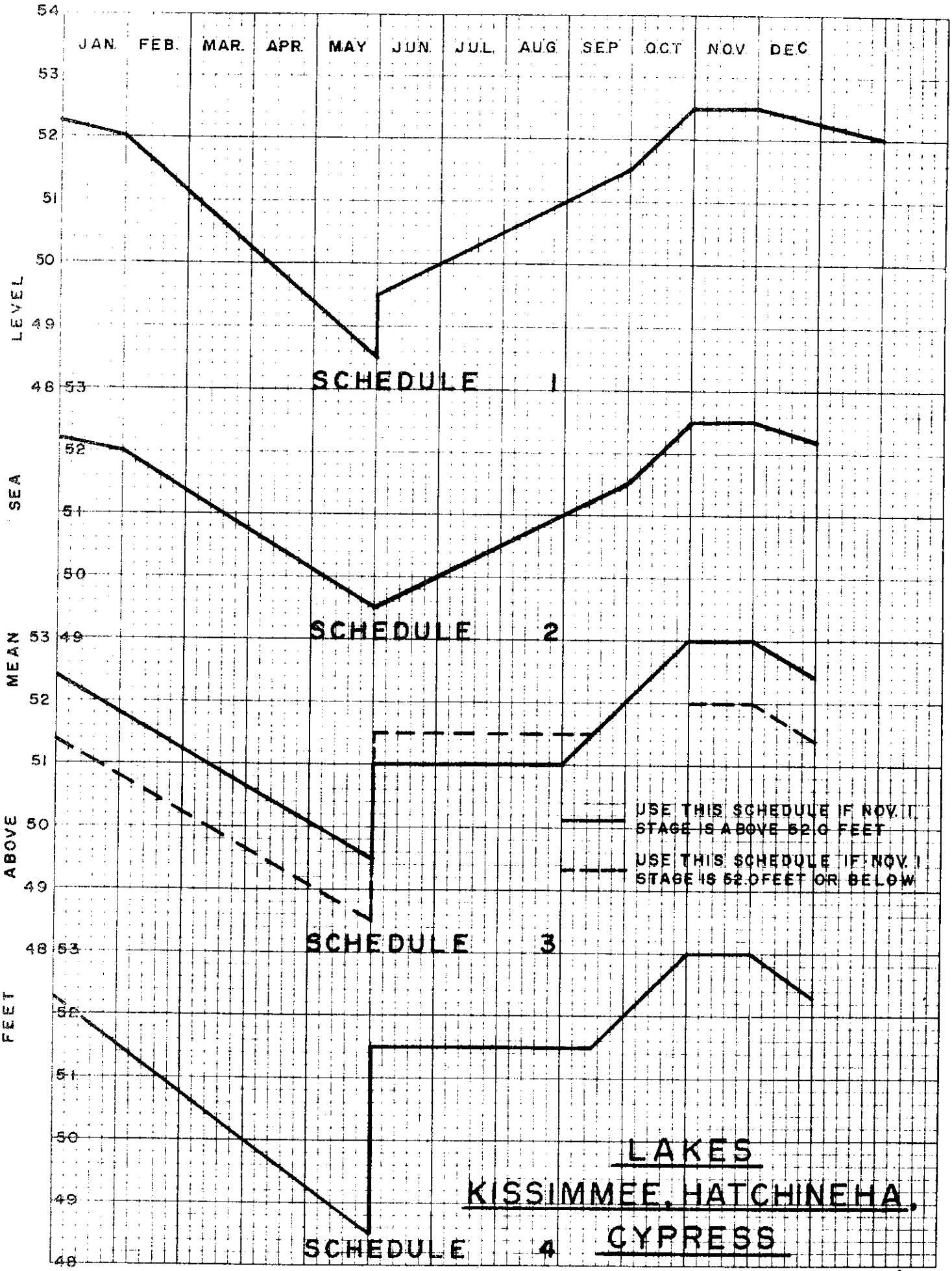
LAKE TOHOPEKALIGA

FIGURE 2



EAST LAKE TOHOPEKALIGA

FIGURE 3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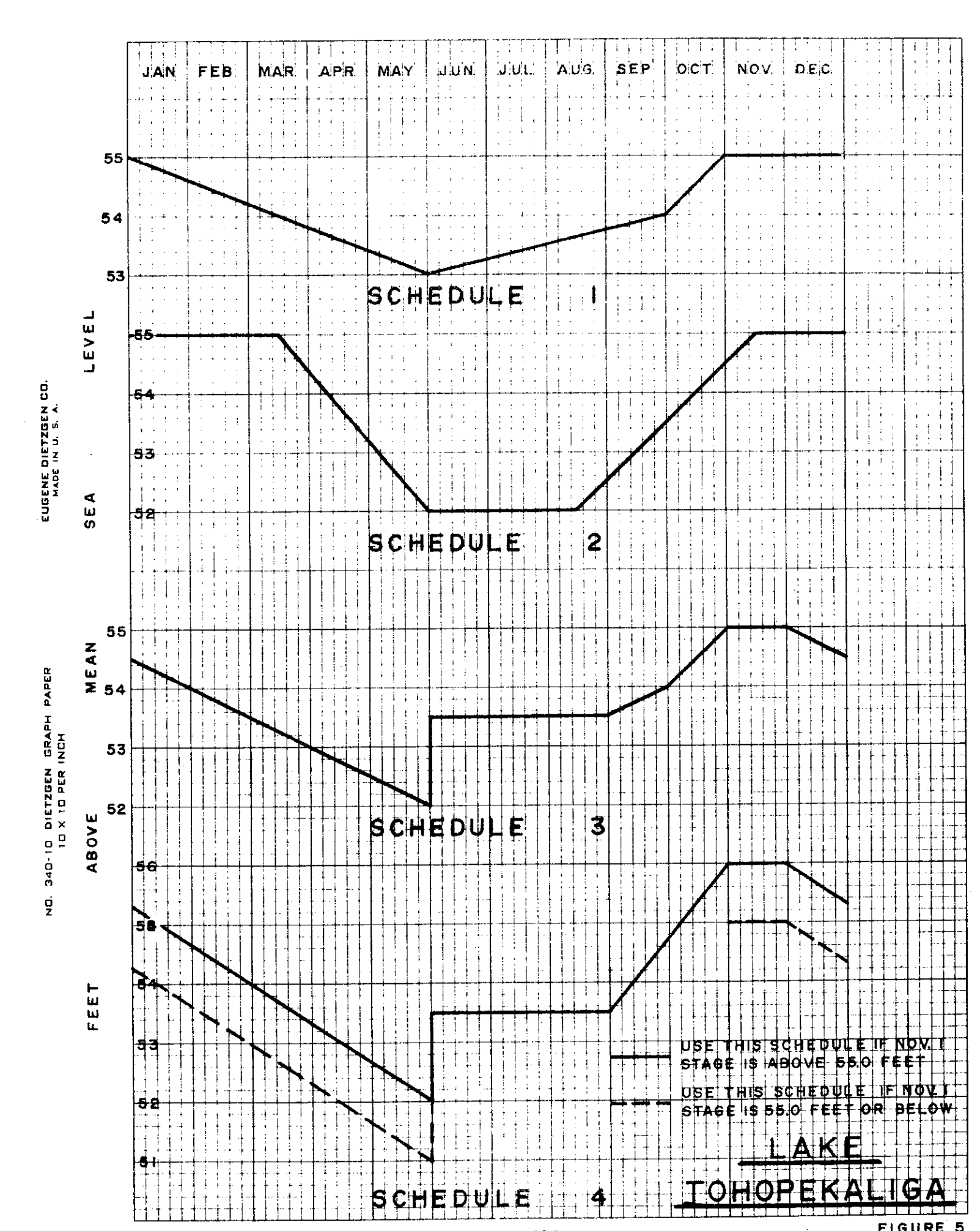
SCHEDULE 2
SCHEDULE 3
SCHEDULE 4
USE THIS SCHEDULE IF NOV. 1 STAGE IS ABOVE 52.0 FEET
USE THIS SCHEDULE IF NOV. 1 STAGE IS 52.0 FEET OR BELOW
LAKES
KISSIMMEE, HATCHINEHA, CYPRESS

FIGURE 4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SCHEDULE 4
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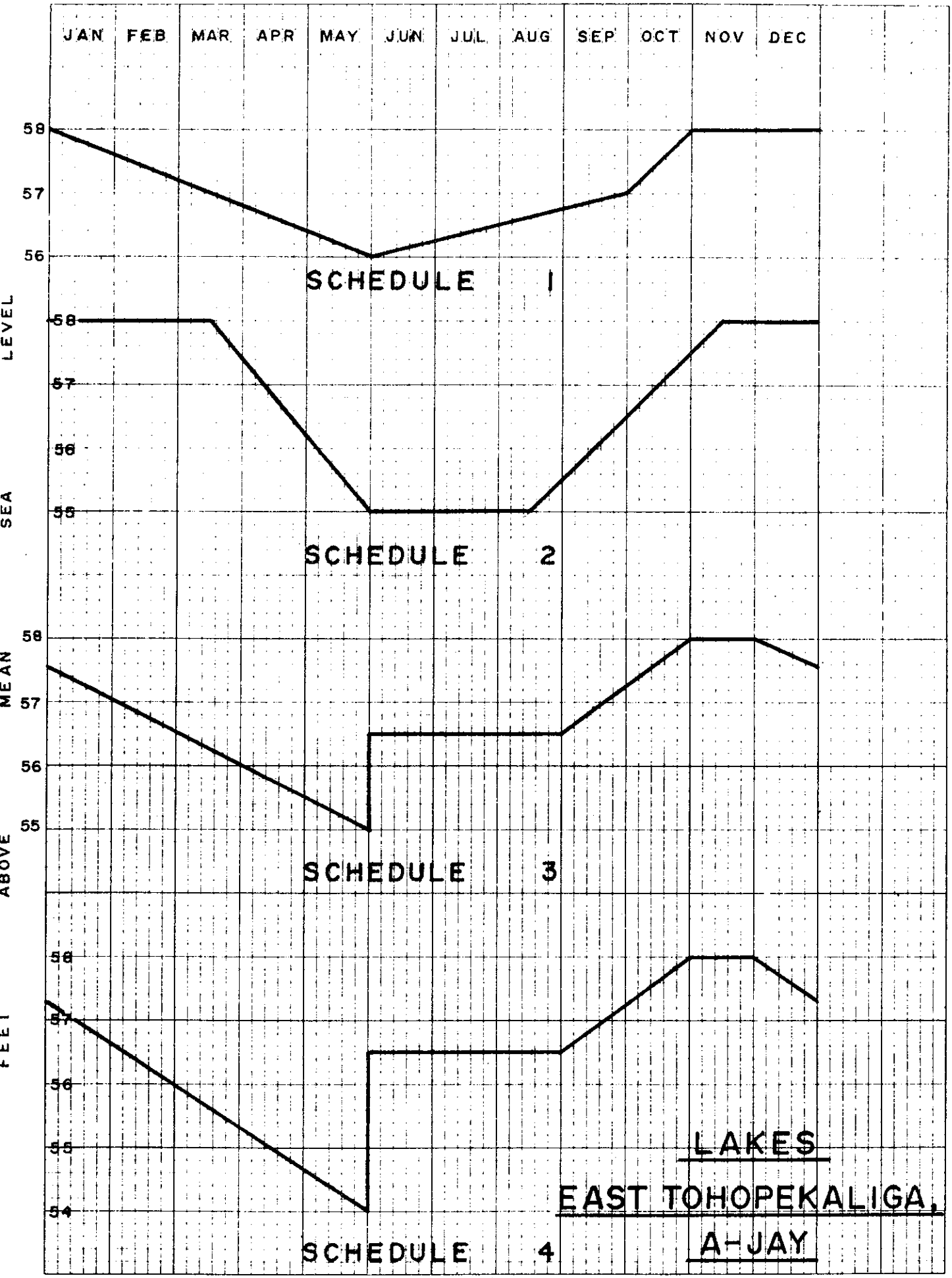
USE THIS SCHEDULE IF NOV. 1 STAGE IS 55.0 FEET OR BELOW
LAKE TOHOPEKALIGA
EUGENE DIETZGEN CO. MADE IN U. S. A.
NO. 340-10 DIETZGEN GRAPH PAPER 10 X 10 PER INCH

FIGURE 5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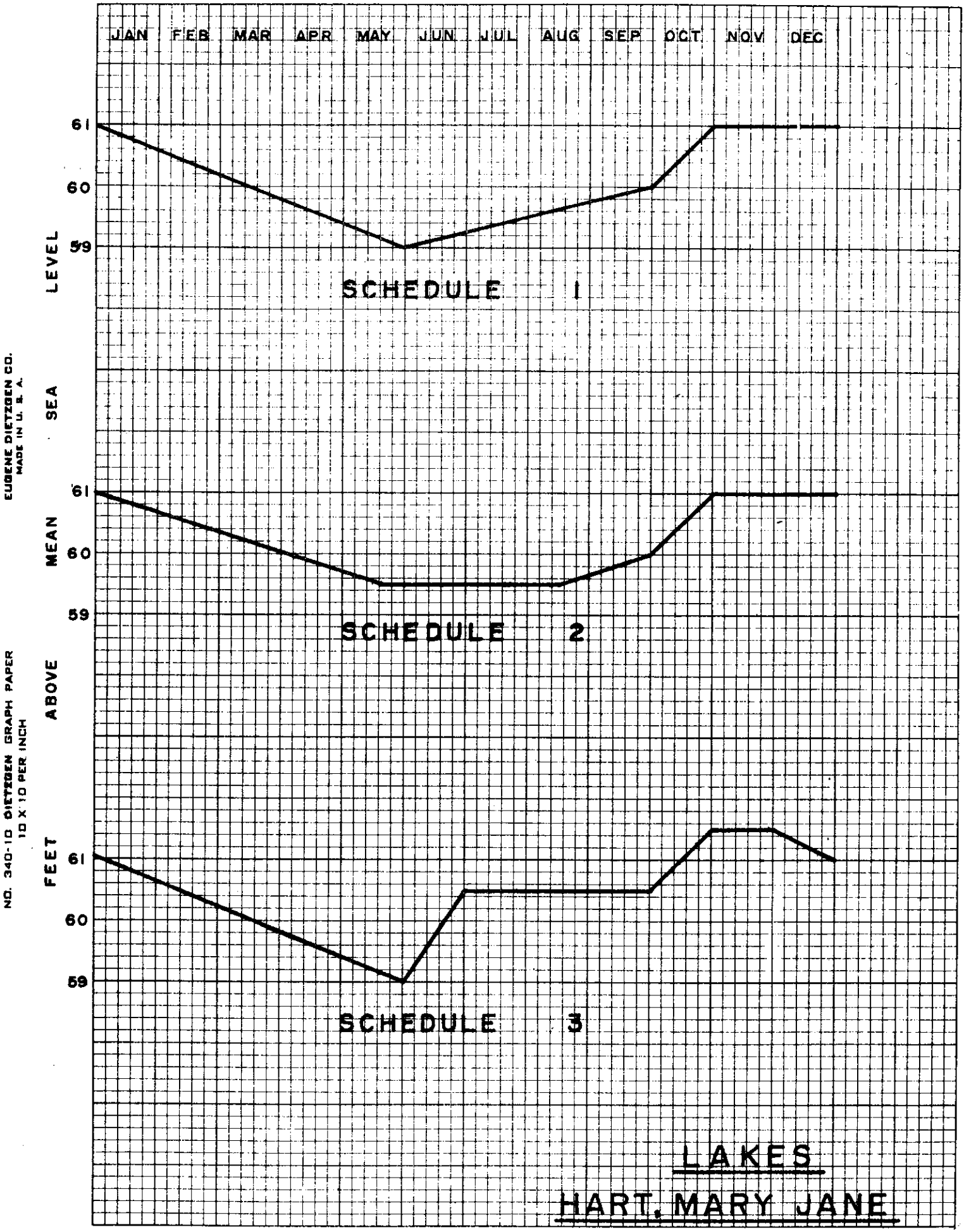
LAKES
EAST TOHOPEKALIGA,
A-JAY

FIGURE 6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SCHEDULE 1
SCHEDULE 2
SCHEDULE 3
LAKES
HART, MARY JANE
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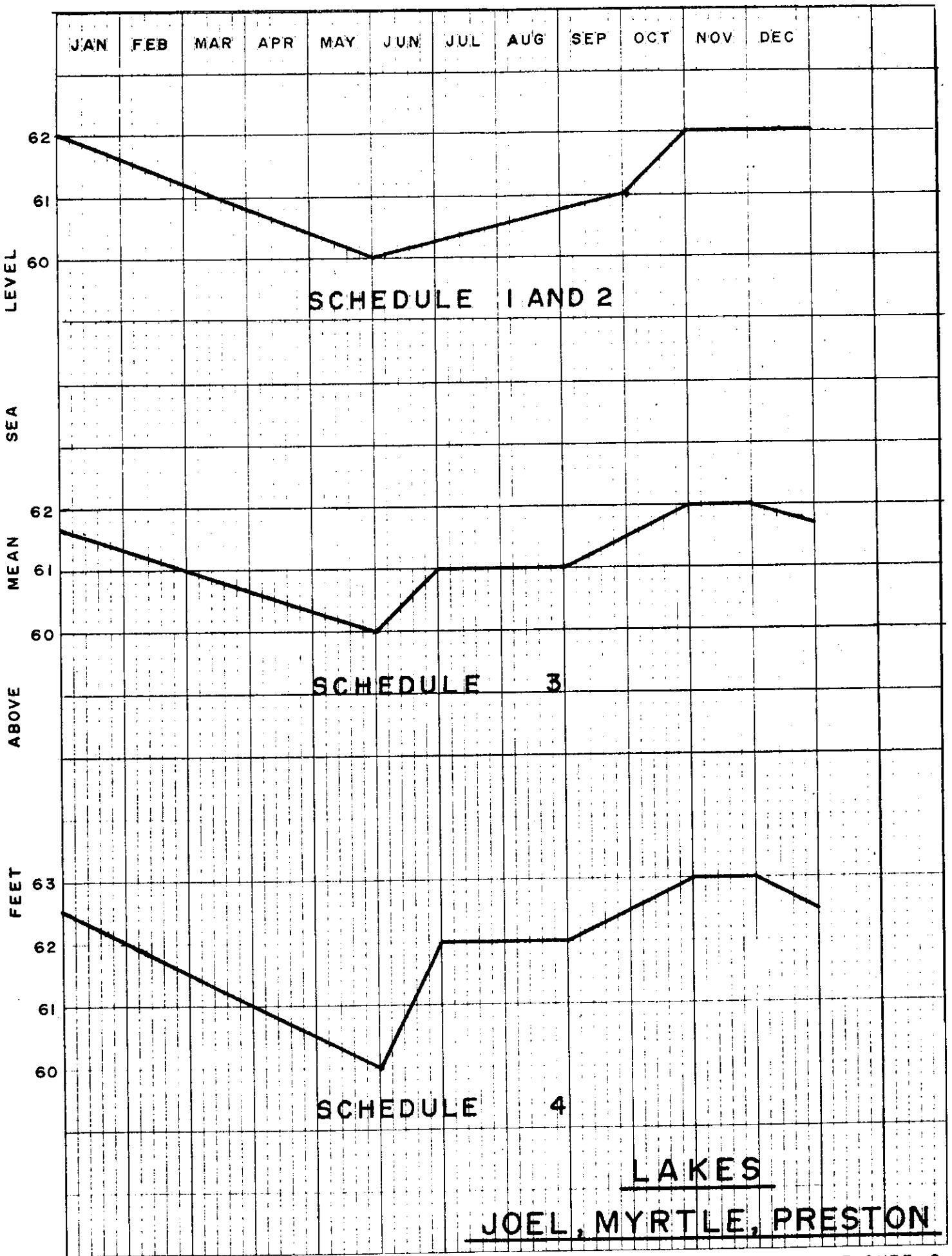
MADE IN U. S. A.
NO. 340-10 DIETZGEN GRAPH PAPER
10 X 10 PER INCH

FIGURE 7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SCHEDULE 1 AND 2
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SCHEDULE 3
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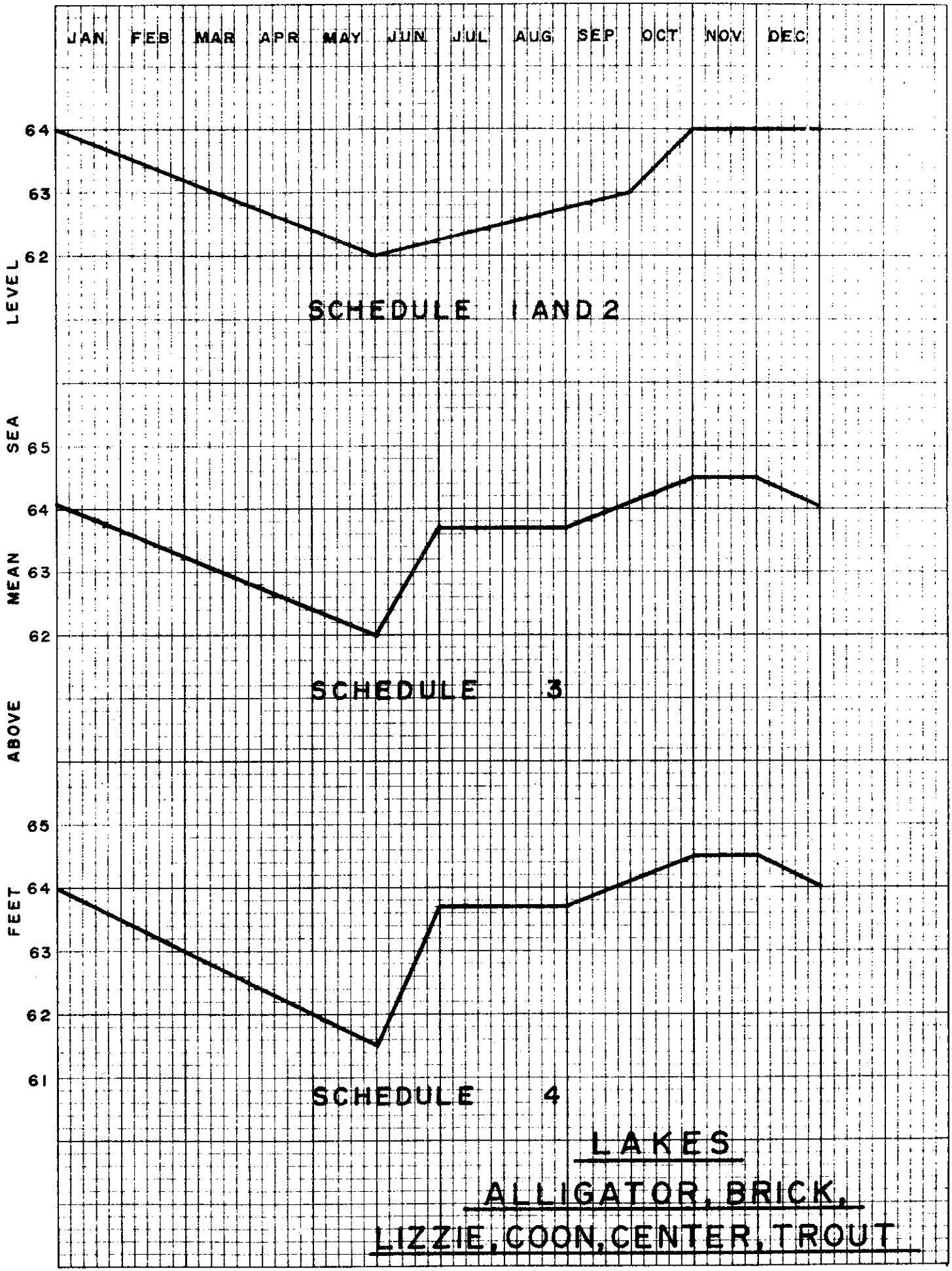
60
SCHEDULE 4
LAKES
JOEL, MYRTLE, PRESTON

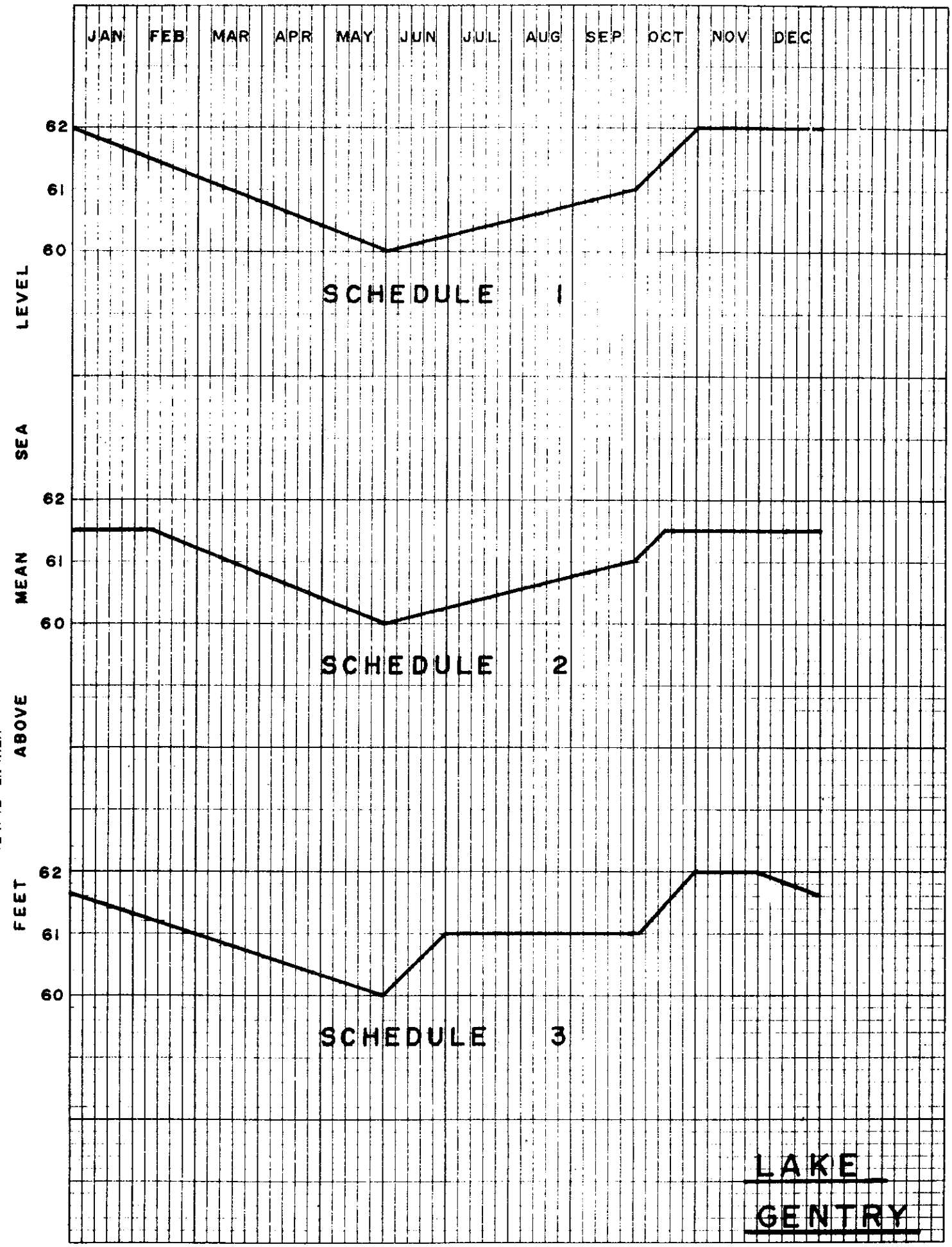
FIGURE 8



EUGENE DIETZGEN CO.
MADE IN U. S. A.

NO. 340-10 DIETZGEN GRAPH PAPER
10 X 10 PER INCH

FIGURE 9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SCHEDULE 3
FEET ABOVE MEAN SEA LEVEL
LAKE GENTRY

FIGURE 10

APPENDIX B

APPENDIX B

FLORIDA GAME AND FRESH WATER FISH COMMISSION

DR. O. E. FRYE, JR., Director
H. E. WALLACE, Assistant Director

HARRIS BRYANT BUILDING
620 South Meridian Street
Tallahassee, Florida 32304

RESOURCES PLANNING DEPT.
DATE
DIRECTOR
RECEIVED
DEC 17 1974
CENTRAL & SOUTHERN FLORIDA
FLOOD CONTROL DISTRICT
LAND PLNG.
WATER PLNG.
HYDROLOGY
ENV. SCI.
OTHER:
FILE:

9 December 1974

Mr. William V. Storch
Central & Southern Florida/
Flood Control District
Post Office Box V
West Palm Beach, Florida 33404

Dear Mr. Storch:

This letter is in response to your agency's request for comments on proposed water level fluctuation changes in the upper Kissimmee Basin Chain of Lakes.

The major objectives of the Florida Game and Fresh Water Fish Commission in the upper Kissimmee Basin are long-term maintenance and improvement of desirable aquatic habitat. By maintaining this quality aquatic habitat, fish and wildlife resources can be managed to provide for optimum utilization. Not only fishermen and hunters, but also boaters and non-consumptive users of these lakes would benefit.

We have completed an extensive study concerned with one form of artificial water level regulation - the Lake Tohopekaliga drawdown. This study has served to expand our knowledge of water level fluctuation as it relates to lake management and has extended the productive recreational and aesthetic life span of Lake Tohopekaliga. (Copies of the summary of this study are available upon request).

From this study and others, it is apparent that extremes in water fluctuation are much more valuable than once thought and are probably the single most important factor in maintaining a desirable, high quality aquatic habitat. Therefore, our recommendations concerning future regulation schedules are oriented towards providing the widest possible range in fluctuation of water levels, taking into consideration the effects on all water-oriented recreational and non-recreational avtivities. We must emphasize, however, that as new evidence and knowledge is uncovered in future years concerning lake level fluctuations, additional scheduling changes will become necessary; and we feel that no schedules will last indefinitely.

Recommended lake level schedules (all elevations expressed as feet, mean sea level):

	Maximum	Minimum
Lake Gentry	62.0	58.0
Lakes Alligator, Brick, Lizzie, Coon, Center, and Trout	64.5	60.5
Lakes Hart and Mary Jane	62.5	58.5
East Lake Tohopekaliga	59.0	54.0
Lake Tohopekaliga	56.0	51.0
Lakes Kissimmee, Hatchineha and Cypress	53.5	48.5

We have not completed recommendations for water levels for Lakes Joel, Myrtle and Preston.

It is recommended that the maximum and minimum lake levels mentioned above should be scheduled to occur within a three-year cycle, rather than on an annual basis, with the extremes to be reached at least once during each three-year period and maintained for a minimum of two months. Water level elevations between these two extremes should vary depending upon local climatic conditions, rather than seasons of the year. Lake levels should always be moving upwards or downwards between the two set extremes. Yearly fluctuation of at least three feet would be desirable.

The Lake Tohopekaliga drawdown study has demonstrated the importance and incurring benefits of extreme low water levels; however, it is evident that higher scheduled water levels are also very important. One major advantage of the latter would be assisting in the control of water hyacinths. Raising water levels much higher than normally scheduled for a short period of time, accompanied by wind action, would push hyacinth mats landward. Here they would be stranded on dry ground after water recedes. According to local average rainfall, this would normally occur in the summer and early fall, at which time new re-growth would be retarded by cool weather. Stranded hyacinths would then be left to die and decay on the upper areas of the flood plain, and not within the more productive littoral areas of the lake. This may well prove to be the most logical, economical and practical approach to the control problems that exist today.

It is again recommended, as has been in the past, that a water control structure, including navigation locks, be constructed between Lakes Kissimmee and Hatchineha so that future water fluctuations on these lakes can work independently of each other.

Commission personnel are presently evaluating existing conditions in Lake Kissimmee and may at some future date recommend an extreme drawdown for this lake. If this occurs it will be necessary to place an earthen plug, or some other type of temporary structure, into C-37 canal to maintain adequate water levels in Lakes Hatchineha and Cypress for the short period of extreme low water level. We must emphasize that this plan is by no means complete. In the event it is proposed, it will have to be approved locally at numerous meetings, public hearings, etc., and stand on its own merits; it is not a part of this public hearing. Consideration of this factor does, however, emphasize the need for a permanent control/navigational structure in C-37.

Thank you for the opportunity to express our view, comments and recommendations on future water regulation schedules for the upper Kissimmee Basin.

Sincerely yours,

O. E. Frye, Jr.
Director

OEF/VPW/ehc

cc: Mr. H. E. Wallace
Mr. John W. Woods
Mr. Jack Malloy

TOHOPEKALIGA YACHT CLUB

P. O. Box 524

KISSIMMEE, FLORIDA 32741

HOME OF THE FOAT-A-CADE

January 14, 1975

Central & Southern
Flood Control District
P. O. Box 5,
West Palm Beach, Florida 33042

Gentlemen:

I am writing to you as the Official Representative of the Tohopekaliga Yacht Club of Kissimmee, Florida regarding the hearing on future water levels held in Kissimmee on 18 December 1974.

The Tohopekaliga Yacht Club (TYC) has one hundred and thirty active members who regularly boat on the waters of lakes Tohopekaliga, Cypress, Hatchineha and Kissimmee. The majority of our members are residents and property owners in Osceola and Orange County, although we have one family as far south as Lake Wales and one from Sanford, Florida. The TYC maintains two facilities, the main club house on the Tohopekaliga lakefront at Kissimmee and the campsite on Lake Hatchineha. Our campsite is in use almost every weekend by members and guests and as many as 20 boats may be moored enjoying the boating activities on Hachineha.

While our members are primarily concerned with Yacht Club activities, they also have an active interest in the quality of water, hyacinth control, and the general health and well being of all the lakes. Most of them maintain two boats, one large one for the Yacht Club activities and another for fishing, skiiing, and other water activities. We believe our boating requirements not only reflect our own activities but are representative of hundreds of other general boaters and fisherman who are not represented by any particular organization and consequently do not have a voice that can be heard.

The Tohopekaliga Yacht Club endorses the concept of maximum fluctuation of the water level, however, our boating requirements dictate that at least three feet of water must be maintained for safe boating. There are three places at which water depth is critical during minimum water levels. These are:

1. The channel exiting the yacht basin into the main lake at the north end of Lake Tohopekaliga on Kissimmee lakefront;

TOHOPEKALIGA YACHT CLUB

P. O. Box 524

KISSIMMEE, FLORIDA 32741

HOME OF THE BOAT-A-CADE

2. The channel exiting the Southport canal into Lake Cypress;

3. The last two hundred yards of Lake Cypress just prior to entering the canal while southbound to Hatchineha.

Without additional dredging or the deepening of the channels at these critical points, the following lake levels must be maintained to adequately support our boating requirements:

1. Lake Tohopekaliga - A maximum water level of 56.0 feet and a minimum of 52.0 feet.

2. Lakes Kissimmee, Hatchineha and Cypress - A maximum water level of 53.0 feet and a minimum of 50.0 feet.

Again it is emphasized that any plan that gives a minimum of three feet navigable water would meet the needs of the Club and gain approval of lower water levels by the members of the Tohopekaliga Yacht Club.

Sincerely,

James M. Thompson

James M. Thompson
Commodore,
Tohopekaliga Yacht Club

Hand stamped postmarked 1/20/75 & therefore available as part of the record

RECEIVED

JAN 22 1975

CENTRAL & SOUTHERN FLORIDA FLOOD CONTROL DISTRICT RESOURCES PLANNING DEPT.

DATE:

DIRECTOR

LAND PLNG.

WATER PLNG.

HYDROLOGY

ENV. SCI.

OTHER:

FILE:

SOUTHERN LAKES, INC.

P. O. BOX 874

Cape Canaveral, Fla. 32920

January 20, 1975

Central and Southern Florida
Flood Control District
Post Office Box V
West Palm Beach, Florida 33402

Attention: Mr. Jack R. Maloy

Re: Proposed Regulation of Water Levels for the Upper Kissimmee Basin

Dear Mr. Maloy:

Southern Lakes, Inc., has recently acquired title to properties situated along the southern banks of Lake Russell, Reedy Creek, Lake Rosalie, and northeast regions of Tiger Lake. These lands are located in both Osceola and Polk Counties, comprising approximately four miles of lake/creek shoreline. Drainage outfalls for each of these latter properties are directly affected by the common stages of Cypress Lake, Lake Hatchineha and Lake Kissimmee.

As future development plans for each mentioned site are eminent, we would like to express our deep concern and opposition to the suggested higher stages of the Lake Kissimmee chain, recently proposed at your December 18, 1974, Kissimmee public hearing. We feel these higher stages would cause great damage to our properties.

In order to further analyze the situation, we would like to ask the following questions associated with the proposed higher Upper Kissimmee Lake Chain:

1. What anticipated backwater effects will result in the Lake Russell/Reedy Creek regions, with a combination of Lake Hatchineha at elevation 53.0 and the storm runoff from a 5 day, 100 year storm frequency?

2. Has future land use criteria been incorporated into your proposed higher elevations?

Original: Exec. Office
XC: ✓Resource Planning - Please prepare reply for signature by Mr. Maloy by Feb. 12, 1975.

3. Have any studies concerning the National Flood Insurance Program and related flood elevations been incorporated into the proposed higher lake levels?

4. For State owned meander lakes, what effects on boundary lines will the higher elevations have?

5. What anticipated backwater effects will result in the Lake Rosalie and Tiger Lake shorelines with a combination of Lake Kissimmee at elevation 53 and the storm runoff from a 5 day, 100 year storm frequency?

6. To what degree will the anticipated future land uses affect the stages asked in questions 1 and 5 above?

While it is understood that answers to the above questions may involve considerable studies and effort, we feel that without this knowledge "people concerns" cannot be adequately assessed in your proposed Kissimmee Lake(s) regulation schedule.

We submit this letter as part of the open record of your Kissimmee public hearing to be reviewed by your Governing Board.

Very truly yours

Thomas E. Wasdin

Thomas E. Wasdin
Vice President and
General Manager

TEW/rf

GAC Properties Inc

A unit of GAC Corporation

7880 Biscayne Boulevard
Miami, Florida 33138
Telephone 305 756-2121

20th January, 1975

Central and Southern Flood Control District
PO Box V
West Palm Beach, Florida 33402

Gentlemen:

Reference is made to the District's Public Hearings held on December 18th and 19th 1974, concerning the regulation of water levels in certain lakes in the Upper Kissimmee Basin located in Polk, Osceola and Orange Counties.

Please consider this correspondence from GAC Properties Inc., as a letter to be placed into the record of the December 18th hearing held in the Osceola County Courthouse at Kissimmee.

Because of our large Poinciana Project located in Polk and Osceola Counties which abuts Lake Hatchineha and Lake Russell and which has portions of Single Creek and Reedy Creek within its boundaries, we are vitally interested in the proposed changes of regulated lake levels and discharge capabilities of canal C-37.

Ninety-five percent of Poinciana has approved zoning and recorded platting. Multi-family land use surrounds Lake Hatchineha and an increase of the lake's peak elevation from 52.5' to 53.0' results in putting a minimum of fourteen (14) acres of this land under water. Conservatively, the land is valued at $20,000 per acre or $280,000 totally. Land platted and zoned as a high school site would also be lost.

The master drainage plan for the project was based upon the General Design Memorandum of October, 1956. Our consulting engineers are extremely concerned of the consequences of a storm of major proportions (50 or 100 year storm) falling when the lakes (Hatchineha, Cypress and Tohopekaliga) are at the peak levels. Areas of special concern are Single Creek and Reedy Creek. To date no comprehensive study by a governmental agency has been undertaken of the Single Creek Basin. We strongly urge this action prior to raising lake levels. Also no decision relative to clearing and de-snagging Reedy Creek has yet been made.

Continued/.....

Proponents of the higher lake levels at the Kissimmee hearing were persons directly or indirectly associated with fishing interests. A letter read into the record from Mr. O.E. Frye, Jr., Director of the Florida Game and Fresh Water Fish Commission, stated that the Commission even has under consideration scheduling maximum and minimum lake levels to occur on a three year cycle rather than one. Three year cycling could generate grave problems for the farming, ranching and development industries, should the major storm be encountered during the rainy season of the second year of the cycle when the lakes are just below or at their maximum levels.

Game and fresh water fish should not be your only consideration. The potential of serious flooding is equally important. The Federal "Flood Disaster Protection Act of 1973" was enacted to protect persons and property from such probabilities. Much of Polk and Osceola Counties have been declared flood prone areas under the act. However, neither county has received their Federal Flood Insurance Rate Maps which stipulate the protection elevations regarding the 100 year storm. It is premature in our judgment to revise lake levels upward in these flood prone areas until such time as the Insurance Rate Maps are available; this being after Washington completes its area study.

In summary, GAC requests postponement of any change in lake levels until Federal Flood Insurance Rate Maps are available for Polk and Osceola counties and until governmental studies are completed for Single and Reedy Creeks. In addition, monetary restoration must be considered for all acreage lost by shore lands being put under water because of the higher lake levels.

Very truly yours,

JAMES F. LUECKER

RECEIVED

1975

Opera

HENRY O. PARTIN & SONS, INC. — Heart Bar Ranch — **KISSIMMEE, FLORIDA 32741 • PH. 305/846-343**

January 14, 1975

Central and Southern
Flood Control District
901 Evernia St.
P.O. Box V
West Palm Beach, Florida 33401

Dear Gentlemen:

We are writing this letter as we are vitally concerned with the water levels of the lakes in the Kissimmee Valley Chain.

We are satisfied with the levels the Flood Control has been operating on. We are opposed to any higher levels because of the danger to present dikes on our property and the added pasture that would be flooded on our ranch as well as numerous other ranches whose pasture land would be flooded.

We've been operating in this area all of our lives and have seen the wet season come and go. We feel that we have been in a dry season for several years. Since the Flood Control District has been in effect we have had short rainfall. Eventually we are going to have a stormy rainy season and if the lake levels are raised it will cause trouble all over the area.

Thank you, very much for reading our letter and hearing our side of the problem.

Yours truly,

HENRY O. PARTIN & SONS, INC.

Oscar Lee Partin

Oscar Lee Partin

OLP:jp

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JAN 16 '75

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Zek: I suppose this is in response to Public meeting
Z 1-16-75

REGISTERED AND COMMERCIAL BRAHMAN CATTLE

B10

KISSIMMEE BOAT-A-CADE

P. O. BOX 776. - KISSIMMEE, FLORIDA 32741

January 13, 1975

Central & Southern Florida
Flood Control District

The KISSIMMEE BOAT-A-CADE, Inc., now in its 25th continuous year, wishes to express its vital interest in the water level fluctuation of the lakes in the Kissimmee Valley Chain.

During these years more than 20,000 people have enjoyed this annual cruise for they have come from almost every State in the Nation and from Canada. They have come to Kissimmee and taken their boats through the Chain of Lakes, the river and canals to Lake Okeechobee, and often beyond. Hundreds plan their vacations to include this nationally known event.

Therefore, our first concern as BOAT-A-CADE directors must be with the minimum water levels of this chain during the summer months--especially those of Lakes Tohopekaliga and Cypress. Last year the level in Lake Cypress in June was an absolute minimum for even small boat navigation, as low as 49½ feet, averaging for the month 51 feet. Many props churned mud and some had to get out and push. Had the lake level been six inches lower it is probable the entire cruise would have had to be cancelled.

Nevertheless, as concerned citizens we understand the other very important consideration upon which many are working hard and diligently with all the scientific tools available--the control of pollutants in the lakes. We also realize that until the inflow of these materials from other areas can be checked, that greater controlled fluctuations in our lakes is now the best remedy.

We recommend a flexible schedule of flucuation under FCD management rather than a permanent schedule which might not make allowance for the extreme wet and dry years. We recommend a minimum of 52 feet for Lake Tohopekaliga and a minimum of 51 feet for Lake Cypress, and a high level mark which would not interfere with any bridges.

In the interests of our BOAT-A-CADE promotion we will appreciate receiving all the advance information on minimum lake levels and drawdowns that is available--even to the plan for each following year.

Sincerely,

William H. Vogel, President

KISSIMMEE BOAT-A-CADE, Inc.

OSCEOLA COUNTY FARM BUREAU

Osceola lakes JAN 17 1975

CENTRAL & SOUTH FLORIDA

RESOLUTION

WHEREAS, the Osceola County Farm Bureau is vitally concerned with the maximum and minimum levels of the lakes in the Kissimmee Valley Chain,

WHEREAS, the Association recongnizes the need for fluctuation in the Chain of Lakes in the Kissimmee River Valley Basin, to promote the growth of the aquatic life for the propagation of fish and for its beneficial effect in the retardation of pollution in the waterways, and

WHEREAS, the Osceola County Farm Bureau represents a crosssection of land owners, owning cattle and citrus, all aspects of the proposed fluctutation schedule were reviewed in an attempt to determine the net affect on the divergent interests concerned.

WHEREAS, most of these men are quite aware of the various proposed schedules having been involved when these schedules were first established through meeting held on each lake with levels established by survey, and

WHEREAS, this Association is quite aware of the adverse effect that extreme high and low levels can have on citrus, pastures, boating and residential property.

NOW THEREFORE BE IT RESOLVED, that the Association recommends the proposed levels be adopted on an interim basis rather than a permanent schedule, with a flexability included to allow for extreme drought and wet seasons so as not to endanger life and property as follows:

Lakes - Kissimmee, Hatchineha, and Cypress
Schedule 2 49.5 ft. to 52.5 ft.

Lake Tohopekaliga
Schedule 2 52.0 ft to 55.0 ft.

East Lake Tohopekaliga
Schedule 1 56 ft to 58 ft.
or Schedule 2 55 ft. to 58 ft.
with top level being held later in the spring.

Lakes - Joel, Myrtle, and Preston
Schedule no. 3

Lakes - Alligator, Brick, Lizzie, Coon, Center and Trout
Schedule no. 1 & 2 62.0 ft. to 64.0 ft.

Lake Gentry
Schedule 2 60.0 ft. to 61.5 ft.

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MAINT.
OPRS.
FIELD STA.
PUMP STA.
OTHER
OTHER
FILE

BE IT FURTHER RESOLVED, that the Association commends the District for asking for comments and recommends that the District after hearing all comments make its recommendations at later public hearings, and should scientific evalutation determine the need for extreme draw down for ecological purposes such drow down will

OSCEOLA COUNTY FARM BUREAU

Resloution

be made under strict Flood Control District Control.

LaVerne McDanel, President
Osceola County Farm Bureau

Commercial Cattle

Telephone 847-2847

BRONSON'S, INC.

A FLORIDA CORPORATION

~~211 CENTRAL AVENUE • P.O. BOX 817~~

1415 West Vine Street

KISSIMMEE, FLORIDA

January 15, 1975

Tohopekaliga K-H-C.

Central & Southern Florida Flood Control District
901 Euernia Street, Box V
West Palm Beach, Florida 33401

Gentlemen:

I represent Bronsons, Inc., which is a cattle - citrus operation with central headquarters located in Osceola County.

Bronsons, Inc. has approximately the following lakefront miles that would be affected if the water level was changed:

Lake Tohopekaliga	4¼ miles	(approximately 100 acres would be affected if the lake level was changed from 55 feet to 56 feet.)
Lake Cypress	6 miles	(the difference between holding the
Lake Hatchineha	1¼ miles	(levels at 52.5 feet and changing
Lake Kissimmee	8¼ miles	(them to 53 feet would affect approxi- (mately 2,500 acres. The difference (between levels 52.5 feet and 53.5 feet (would affect approximately 4,500 acres.)

We are satisfied with the schedule now being used and we strongly urge the continued use of this schedule.

Thanking you in advance for your consideration in this matter, I am

Sincerely,

BRONSONS, INC.

Irlo Bronson Jr.

Irlo Bronson, Jr.
President.

IBj/pm

WHS.

BEN COOPER
P. O. Box 1358
Kissimmee, Florida 32741

December 26, 1974

Florida Flood Control Dist.
Box 1671
West Palm Beach, Florida

Gentlemen:

In all the furor over lake levels, the aesthetic quality of the lakes appears to have been completely overlooked.

Before the 1970 or 1971 major drawdown, Lake Tohopakaliga was just as beautiful a lake as most other lakes in Florida. During the drawdown a vast area of the lake bottom was exposed. Grass became established in these areas and there is now a sea of ugly grass where there used to be beautiful water.

The additional grass area may have some questionable benefit to the fish population but since this lake has always had a top reputation for bass fishing, I doubt that the definite detriment to beauty comes anywhere near being compensated by the questionable benefit to the fish. An aerial inspection of big Lake Toho would confirm that it is one of the sorriest looking lakes in the chain and possibly all of Florida. A view from the shores is every bit as bad. As a matter of fact, there are many areas of shoreline where the grass extends so far out that the lake is completely obscured.

The need for extreme lake fluctuation could be eliminated if the sources of pollution were eliminated. That is where the enemy lies and unless it can be attacked and eliminated, all we can hope for is a Viet Nam type war that lasts forever, costs untold millions of dollars, creates hardship for everyone, is beneficial to no one, and accomplishes nothing.

In my opinion, the standards on sanitary effluent should be made far more stringent and should be effectively enforced. If this were done, then I believe that a fluctuation level from 53' to 55' would be adequate for Lake Toho. At these levels the ranchers would not be

Original: Exec. Office
~~XC~~: Resource Planning - Please respond with copy to Exec. Office.

hurt and boating would not be too adversely affected. Eliminating pollution would, of course, be beneficial to everyone, including the fish population and fishing enthusiasts.

I am very much opposed to any further major drawdowns which, at best, are only temporary measures and, at worst, create as many or more problems than they supposedly alleviate.

Sincerely,

Ben Cooper

BC:1

cc: Mr. Bill Morse
Osceola Waterways Committee
Kissimmee Chamber of Commerce

6-A

Rt. 2, Box 2196
St. Cloud, Fl. 32769
January 7, 1975

Central and Southern Florida
Flood Control District
P. O. Box V
West Palm Beach, Fl. 33401

Gentlemen:

I attended the public hearing on the Kissimmee Valley Chain of Lakes, held in Kissimmee December 18th and would like to make the following comments for the record.

Having lived on Lake Tohopekaliga most of my life and observed the lake at extreme high and low levels, I would recommend that schedule no. 2 be followed for the following reasons. Levels higher than the proposed high adversely affect citrus groves around the lake by causing them to become more susceptible to dry periods when the lake is lowered.

Many homes have been built since the interim control stage has been established and higher levels could prove disastrous in extreme flood periods.

No excessive heavy rainfall has occurred since 1960 to test structures at Southport. Many peoples memory is quite short and it is hard to explain the damage that might occur with ten to fifteen inches of rainfall in a short period of time.

I would like to commend the District for a job well done in controlling levels this past summer.

Sincerely,

Cecil E. Whaley

Cecil E. Whaley, President
Osceola County Cattlemen's Association

Original: Executive Office-
XC: Resource Planning

B17

OSCEOLA COUNTY CATTLEMEN'S ASSOCIATION

Osceola Letter

RESOLUTION

WHEREAS, the Osceola County Cattlemen's Association is vitally concerned with the maximum and minimum levels of the lakes in the Kissimmee Valley Chain,

WHEREAS, the Association recognizes the need for fluctuation in the Chain of Lakes in the Kissimmee River Valley Basin, to promote the growth of the aquatic life for the propagation of fish and for its beneficial effect in the retardation of pollution in the waterways, and

WHEREAS, the Osceola County Cattlemen's Association represents a cross-section of land owners, owning cattle and citrus, all aspects of the proposed fluctuation schedule were reviewed in an attempt to determine the net affect on the divergent interests concerned.

WHEREAS, most of these men are quite aware of the various proposed schedules having been involved when these schedules were first established through meetings held on each lake with levels established by survey, and

WHEREAS this Association is quite aware of the adverse effect that extreme high and low levels can have on citrus, pastures, boating and residential property.

NOW THEREFORE BE IT RESOLVED, that the Association recommends the proposed levels be adopted on an interim basis rather than a permanent schedule, with a flexability included to allow for extreme drought and wet seasons so as not to endanger life and property as follows:

Lakes - Kissimmee, Hatchineha, and Cypress
Schedule 2 49.5 ft. to 52.5 ft.

Lake Tohopekaliga
Schedule 2 52.0 ft to 55.0 ft.

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with top level being held later in the spring.

Lakes - Joel, Myrtle, and Preston
Schedule no. 3

Lakes - Alligator, Brick, Lizzie, Coon, Center and Trout
Schedule no. 1 & 2 62.0 ft to 64.0 ft.

Lake Gentry
Schedule 2 60.0 ft to 61.5 ft.

BE IT FURTHER RESOLVED, that the Association commends the District for asking for comments and recommends that the District after hearing all comments make its recommendations at later public hearings, and should scientific evalutation determine the need for extreme draw down for ecological purposes such draw down will be made under strict Flood Control District Control.

B18

Cecil E. Whaley

Cecil E. Whaley, President
Osceola County Cattlemen's Association

Ike M. Hall
1114 Flamingo Drive
Kissimmee Isles
Kissimmee, Fla. 32741

November 12, 1974

Central and Southern Florida Flood Control

Dear Sir,

I am writing in regard to the hearing to be held in Osceola County December 18th, about the lake levels in the Upper Kissimmee River basin. My particular interest is West Lake Tohopekaliga and Shingle Creek.

I built my home in Kissimmee Isles on the canal that goes into Shingle Creek. I had a double sea wall and boat house built in 1971 at a cost of $6,000.00. The men who installed this made a study of the lake level and came up with the best evaluation for the best year-around use of these facilities. All worked fine until last year when the lake level was raised by one foot. At this increased level the floor of my boat-house

Original: Exec. Office ~~XS~~ Resource Planning, Regulation, Field Ser.

touches the water and during heavy rains) it is completely under water. In July, 1974, during the heavy rains, the water level was to the top of my sea wall. Homes on Shingle Creek were near flood stage.

I do not know the reason for raising the lake level but understand it was because a higher lake level was needed for the annual Boat-Arade. This is a wonderful event but I am sure the protection of property should have priority.

If the level could be lowered six inches, or one foot, the year-a-round, I am sure it would be better for all concerned.

I hope you will consider this in your final decision; and I plan to attend the meeting on December 18th to talk with you.

Very truly yours,

Osceola County Sportsman's Club, Inc.

P.O. Box 1377 Kissimmee, Florida 32741

December 17, 1974

Mr. William U. Storch
Central and South Florida
Flood Control District
P. O. Box U
West Palm Beach, Florida 33404

Dear Mr. Storch,

This letter is in response to your agency's request for comments on proposed water level fluctuations changes in the upper Kissimmee Basin chain of lakes.

The Board of Directors of our club decided to support the recommendations of the Florida Game and Fresh Water Fish Commission.

We have followed the study made on Lake Tohopekaliga very closely and feel that the recommendation made by the Florida Game and Fresh Water Fish Commission is a compromise which takes into consideration not only the fish and wildlife, but also the boating and other water oriented activities as well as the ranchers, farmers, and home owners around the lakes.

We feel that the flexible water level fluctuations recommended should cause little trouble to the boaters on the low end, and little or no trouble to the ranchers, farmers and home owners on the high end, because these extremes will be held for such a short period of time.

We also feel that these water level changes are necessary to maintain a healthy aquatic habitat for the fish and wild life and to preserve the highest possible water quality in the lakes.

Thank you for giving us the opportunity to express our views and feeling on the matter.

Sincerely,

s/ Lewis R. Mason

Lewis R. Mason, President

LRM/dc

Tohop

14 January, 1975.

Mr. William V. Storch
Central and Southern Florida Flood Control District
P.O. Box V
West Palm Beach, Florida 33404

Dear Mr. Storch;

The purpose of this letter is to make known my feelings on the proposed water level fluctuation changes on Lake Tohopekaliga and other lakes in the chain.

As one of my primary reasons for settling in this area was the reports I had received about the excellent fishing and boating to be found here.

Having read several reports on the studies made and the recommendations made on the fluctuation of the lake levels, I am much in favor of this means of trying to duplicate natures way of cleansing our lakes. It seems a shame that more radical fluctuations could not be maintained at least for a few years. This, with more stringent control of the purity of the streams feeding the lakes would benifit not only ourselves but would insure future generations of the pleasures of fishing and boating.

The small sacrafices and inconvieniences necessary seems a small price to pay for the improvements we would gain. I wish to go on record as saying that you have my wholehearted vote on this matter.

Yours truly,

G. Thomas Murray

G. THOMAS MURRAY
10 HARRIS BLVD.
KISSIMMEE, FL. 32741

William M. Bishop

Consulting Engineers, Inc.

TELEPHONE 222-0334
P O BOX 3407

317 EAST VIRGINIA STREET
TALLAHASSEE, FLORIDA 32303

East Lake

WMB

Mr. W. V. Storch, P. E.
Chairman, Conservation and
Environmental Quality Committee
185 Yale Drive
Lake Worth, Florida 33460

Re: Regulated Level of East Lake Tohopekaliga

Dear Mr. Storch:

Our firm represents Mr. Don C. Price, President of Camptown Industries of Florida, Inc., who owns 300 acres on the north side of Fells Cove of East Lake Tohopekaliga. Of the 300 acres, approximately 100 acres have been developed into a recreational vehicle resort camping area.

During the course of the design the Trustees of the Internal Improvement Fund maintained that all property below elevation 57.0 feet, the normal lake level (see enclosed first sheet of Official Record Book 42, Page 286, Public Records of Osceola County), was the property of the State of Florida. In subsequent action this was disproved; however, the 57 foot contour was accepted as the normal lake level and 58.6 feet as the ten year flood level. All design was based on this assumption.

The proposed scheduled fluctuation of 54.0 feet elevation to 58.0 feet can be most damaging to our client. The difference in the 57 foot level and the 58 foot contour amounts to more than 15 acres of very valuable property.

Although facilities were designed to accept a ten year flood level of 53.6 feet, they were not designed to accept yearly levels of 58.0. When the lake level approaches this elevation, the ground water table rises accordingly on the lower lots, causing excess infiltration into the sewerage system, surface water to stand for extended periods of time and flooding of the parking area. Although these facilities could accept these conditions once every ten years, they are not capable of accepting yearly floodings.

The boat ramp on the FCD canal connecting to Fells Cove will not be useable nor will the canal be navigable at an elevation of 54.0 feet. Four foot fluctuations in the lake level make the use of all docks (except perhaps for elaborate and expensive floating docks) almost impossible.

The Trustees have recognized that Camptown Industries owns to a meander line that approximates a lake elevation of 54 - 55 feet. Camptown, Inc. owns this property and pays taxes for it, but it is unusable.

The proposed schedules on the lake level will remove another 15 acres of property and, in addition, will render the lake facilities now being furnished unusable for long periods during the year.

Certainly the fluctuation of lake levels has become a recognized and successful method of improving fish productivity, but the yearly extreme fluctuations are not necessary and cause undue, unnecessary and unwarranted costs to property owners.

With these considerations in mind, we urge FCD to reconsider the lake levels and establish a more moderate high and low yearly level.

Very truly yours,

William M Bishop

WILLIAM M. BISHOP CONSULTING ENGINEERS, INC.
William M. Bishop, P. E.

WMB:ac
Enclosure

cc: Mr. Don C. Price
P. O. Box 3187
Tallahassee, Florida 32303

Mr. Marion Riely
Route 5, Box 200
Orlando, Florida 32807

TRUSTEE OF THE INTERNAL IMPROVEMENT FUND
OF THE STATE OF FLORIDA

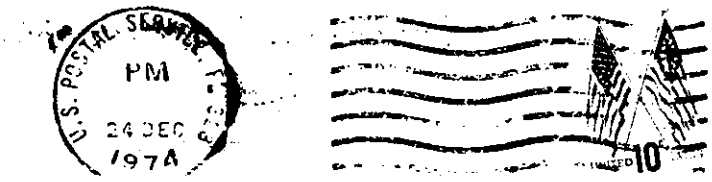
D I S C L A I M E R

NO. 22082 (319-49)

KNOW ALL MEN BY THESE PRESENTS, that the Trustees of the Internal Improvement Fund, pursuant to application made on behalf of Norman Josepn, George J. George and Marvin Sillman, on February 3, 1959, in regular meeting authorized issuance of a disclaimer for the lands hereinafter described. Said lands all lying and being landward of the 57 foot mean sea level which has been determined to establish the normal lake level under regulations of the Central and Southern Florida Flood Control Program as accepted by the Trustees of the Internal Improvement Fund January 6, 1959.

NOW, THEREFORE, the Trustees of the Internal Improvement Fund of the State of Florida, in consideration of the premises and the sum of Two Thousand Nine Hundred Eighty-Seven and 50/100 Dollars, ($2,987.50), to them in hand paid, receipt of which is hereby acknowledged, have disclaimed, relinquished and surrendered, and by these premises hereby disclaim,

William M. Bishop
Consulting Engineer, Inc.
P. O. BOX 3407
TALLAHASSEE, FLORIDA
32303



Keystone Lakes.

Mr. W. V. Storch, P. E.
Chairman, Conservation and
Environmental Quality Committee
185 Yale Drive
Lake Worth, Florida 33460

January 9, 1975

East lake

Central and Southern Florida Flood
Control District
P. O. Box V
West Palm Beach, Fl. 33401

Gentlemen:

Having been unable to attend the public hearing December 18, 1974 in Kissimmee on the upper Chain of Lakes. I would like to make the following recommendations on East Lake Tohopekaliga.

I would recommend that schedule two be followed with the following changes if possible. The 58 ft. level be held later into the spring possibly into the middle of April or later and the bottom level be held to 56 ft. if possible.

These recommendations are made for the following reasons. Historically the spring is dry and if the lakes are lowered to soon both citrus and pastures suffer from excessive drought.

Higher levels than 58 ft. would be disastrous to the City of St. Cloud and excessive low levels also adversely affect the recreational use of this lake.

Sincerely,
W. J. Brack Jr.

P. O. Box 673
St. Cloud, Fla. 32769

OTHER:

FILE:

Mr. Steele.

Routed to you from Mr. Jackson's office &

E. Lake

January 9, 1975

Received: WS 1/15/75

Central & Southern Florida Flood
Control District
P. O. Box V
West Palm Beach, Fl. 33401

Gentlemen:

Having been unable to attend the public hearing December 18, 1974 in Kissimmee on the upper Chain of Lakes. I would like to make the following recommendations on East Lake Tohopekaliga.

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Higher levels than 58 ft. would be disastrous to the City of St. Cloud and excessive low levels also adversely affect the recreational use of this lake.

Sincerely,

J. C. Tyson

reviewed by WStorch 1/16/75

RECEIVED

JAN 15 1975

CENTRAL & SOUTHERN FLORIDA FLOOD CONTROL DISTRICT

January 9, 1975

E. Lake

Central and Southern Florida Flood
Control District
P. O. Box V
West Palm Beach, Fl. 33401

Gentlemen:

Having been unable to attend the public hearing December 18, 1974 in Kissimmee on the upper Chain of Lakes. I would like to make the following recommendations on East Lake Tohopekaliga.

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Higher levels than 58 ft. would be disastrous to the City of St. Cloud and excessive low levels also adversely affect the recreational use of this lake.

Sincerely,

J. Oscar Tyson

RESOURCES PLANNING DEPT.
DATE: 1-16-75
DIRECTOR
LAND PLNG.
OTHER:
FILE:

P.O. Box H
Kissimmee, Florida 32741
January 15, 1975

Central & Southern Florida Flood Control District
901 Euernia Street, Box V
West Palm Beach, Florida 33401

Gentlemen:

I am a homeowner on Lake Gentry, Osceola County.

I am writing in support of the schedule now being used in this area on the lakes levels as a raise in the levels would cause me to be concerned about my home.

In closing, I earnestly urge the continued use of this schedule.

Sincerely,

Charles H. Bronson

Original: Exec. Office
cc: Resource Planning

ORANGE COUNTY FLORIDA
ORLANDO, FLORIDA

PUBLIC WORKS / CHARLES L. GOODE, P.E., DIRECTOR
COUNTY ENGINEER'S DEPARTMENT
THOMAS M. HASTINGS, P.E., COUNTY ENGINEER
TELEPHONE (305) 849-3445

Hart

December 10, 1974

Central and Southern Florida
Flood Control District
P. O. Box V
West Palm Beach, Florida 33402

Subject: Proposed Regulation of Water Levels, Lakes Mary Jane and Hart, Orange County

Gentlemen:

The Orange County Engineering Department has reviewed the information submitted along with the notice of public hearings concerning the subject lakes. The Engineering Department recommends that the district establish either Schedule 1 or 2 for operation of the lakes. This recommendation is based on a history of lake levels as we have recorded on the lakes and on the basis of building elevations and maximum elevations established at a public hearing held by Orange County in 1965. Schedules 1 and 2 propose to continue a maximum elevation of 61 feet above mean sea level while Schedule #3 permits maximum elevation of 61.5. The Public Hearing held by Orange County in 1965 established minimum building elevations at 67.0 and maximum elevations at 61.0. The Schedule #3 proposal does not provide for the storage availability during the rainy season that is provided by Schedules 1 and 2. However, the difference does not appear to be critical with Orange County.

Please accept this as a part of the official hearing proceedings.

Sincerely,

T. M. Hastings
T. M. Hastings, P.E.
County Engineer

TMH/rew

RESOURCES PLANNING DEPT.
DATE: 12-16-74
DIRECTOR
LAND PLNG.
WATER PLNG.
HYDROLOGY
ENV. SCI.
OTHER:
FILE:

CIRCLE S BAR RANCH
Rt. 5 Box 118A
Orlando, Florida 32807
Jim Day, Manager

Hart

January 17, 1975

Mr. Bill Storch
Resource Planning Department
Central and Southern Florida Flood Control District

Re: Lake level changes on Lake Hart, Orange County, Florida

The Circle S Bar Ranch would like to go on record as being for the present schedule (Schedule 2) which controls the water level of Lake Hart.

The Circle S Bar Ranch has approximately 4200 Acres which are affected by Lake Hart. Our acreage borders about 3/4 of Lake Hart.

We have found that during the dry season (December to April) a level of 62-65 feet above sea level meets our requirements. During the rainy season (April to October) the lowest level possible is fine. This past year, under the schedule being used, these levels have been kept and has satisfied our needs.

CIRCLE S BAR RANCH

Jim Day

JIM DAY, Manager

B32

JD:jz

ORANGE COUNTY FLORIDA
ORLANDO, FLORIDA
PUBLIC WORKS DIVISION

CHARLES L. GOODE, P.E.
DIRECTOR

ENGINEERING DEPARTMENT
THOMAS M. HASTINGS, P.E. COUNTY ENGINEER
118 W. KALEY AVENUE
TELEPHONE (305) 849-3445

December 23, 1974

Mr. William Storch
Central & Southern Florida
Flood Control District
Post Office Box V
West Palm Beach, Florida 33402

Subject: Proposed Regulation of Water Levels in Lakes Mary Jane and Hart, Orange County

Dear Bill:

This letter is to confirm our conversation this date clarifying my letter of December 10, 1974, concerning minimum building elevations and maximum lake elevations, established by Orange County through public hearings held in 1965.

An elevation of 67.00 feet above mean sea level based on U.S.C.&G.S. datum, was established as the minimum building elevation for both Lake Mary Jane and Lake Hart. This is the elevation below which no habitable structure may be erected.

An elevation of 61 feet above mean sea level based upon U.S.C.& G.S. datum was established as the maximum lake elevation. This is the highest elevation that Orange County is obligated to allow the lakes to rise under any conditions.

If this does not provide the information you need, please contact this office.

Sincerely,

T. M. Hastings

T. M. Hastings, P.E.
County Engineer

TMH:WCF:jls

RESOURCES PLANNING DEPT. DATE 12-27-74 DIRECTOR
3 - 1 -
LAND PLNG.
WATER PLNG.
2 - HYDROLOGY
ENV. SCI
OTHER
FILE 9-5-2 (Mary Jane)

Isle of Pines Property Owners' Association, Inc.

P.O. Box 8396
Orlando, Florida 32806

RESOURCES PLANNING DEPT.
DATE: 1-2-75
DIRECTOR
LAND PLAN.
WATER MGT.
HYDROLOGY
ENV. SCI.
OTHER:
FILE:

December 26, 1974

Re: Lake Mary Jane
Water Level

Dear Mr. Maloy:

Several of our members attended the public hearing in the Osceola County Court House, Kissimmee, December 18, 1974. We were interested in obtaining more information concerning each of the considered regulation schedules for Lake Mary Jane.

Our association feels it is necessary for the lake to maintain the levels stated in Schedule No. 2 (59.5 ft. to 61.0 ft).

In your opinion, Lake Mary Jane needs a greater degree of fluctuation, we would recommend a level structure of 59.5 ft. to 61.5 ft.

Please notify our association of your recommendation to the Corps of Engineers.

Sincerely,

Linda Forbis

Linda Forbis (Mrs.)

Original: Exec. Office
XC: Resource Planning - Please prepare reply for Mr. Maloy's Signature.

Alligator-Brick

LILLIAN LEE AND SONS

PRODUCERS OF CITRUS FRUIT AND BEEF CATTLE

Rural Route 1, Box 586 St. Cloud, Florida 32769

LILLIAN LEE - TEL. (305) 892-2078
ROBERT LEE - TEL. (305) 892-3373
ORIE LEE - TEL. (305) 892-3173

JAN 2

January 12, 1976

Central & Southern Florida
Flood Control District
P. O. Box V
West Palm Beach, Florida 33402

Attention: Mr. Patrick Goetel

Dear Sir:

This letter is written as a result of the meeting held in Kissimmee on December 12th, 1974. It was my understanding that the record is to be held open until January 28th, 1975.

We are property owners in the Alligator and Brick Lake area. We wish to request that the level of these lakes be held at a level during March, April and May high enough to permit the withdrawal of water by agricultural interests without incurring the ire of residential interests on Alligator and Lizzie Lakes.

Of the proposed schedules, it seems that numbers 1 to 3 would be less likely to create such a problem, since the low point of 62 ft. is reached on June 1st compared to May 1st for schedule 4. Were it possible to delay the proposed drop in schedule 4 to 61.5 ft. until June 30th, then it would seem equally acceptable to us since we have no objection to any elevations in the 61.5 ft. to 64.5 ft. range.

We would appreciate your consideration of the above proposal.

Yours very truly,

Orie Lee

OL:et

Rt. 1, Bx. 957
St. Cloud, FL 32769
19 January 1975

Alligator

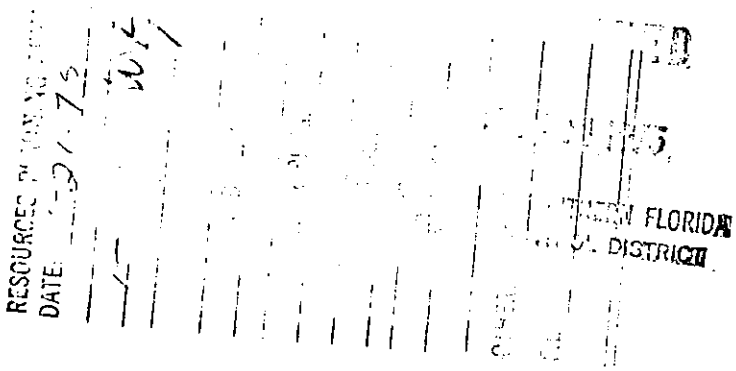
Dear Sirs;

I am writing in reference to the lowering of the lake levels in Osceola County, particularly Alligator. I live on the east side of the lake and find that since the level has been maintained at a high mark, the lake is dirty and aquatic growths in it that were not there before. I don't know if this is all due to the level or if to additional pollution, but has happened since the level has been maintained at a high mark.

I don't know if this will carry much weight, but we like to swim in the lake and found that last year, the water was so messy it wasn't pleasant to do so. It seems that a periodic lowering does flush the lake and gives us a chance to clean out along the lakeshore. This is more important to me than to some people's request that the high level be maintained so they'll have water at the end of their docks. The majority of people around the lake does not have docks, but I believe most of the people did move to the lake to enjoy swimming in it.

Thank you very much for any thought you give to this.

Sincerely,
Mrs. R. Tarnowski



Alligator

January 9, 1975

Central and Southern Florida
Flood Control District
P. O. Box V
West Palm Beach, Fl. 33401

Gentlemen:

I have studied information furnished in the notice of public hearing held in Kissimmee December 18, 1974 on the upper Chain of Lakes, and would like to make the following comments for the record on Lakes Alligator, Brick, Lizzie, Coon, Center and Trout.

Proposed schedules one and two seem to be the most practical schedules and have worked in the past. Levels higher than proposed in these schedules could damage both residential and agricultural property in years of excessive rainfall and would adversely affect citrus and recreation if lower levels were met.

In schedules one and two most interests would benefit if levels were held higher later into the spring.

The district is to be commended for the joy they have done in the past and should establish interim levels that would allow common sense judgment to prevail in years of extreme wet or drought.

Sincerely,

Ernest W. Tyson

P.S. To hold these Lakes at a 7.64' level or higher will put from two to three hundred acres of our land under water. Around Lakes Coon Trout and Lizzie.

Alligator

January 9, 1975

Central and Southern Florida
Flood Control District
P. O. Box V
West Palm Beach, Fl. 33401

Gentlemen:

I have studied information furnished in the notice of public hearing held in Kissimmee December 18, 1974 on the upper Chain of Lakes, and would like to make the following comments for the record on Lakes Alligator, Brick, Lizzie, Coon, Center and Trout.

Proposed schedules one and two seem to be the most practical schedules and have worked in the past. Levels higher than proposed in these schedules could damage both residential and agricultural property in years of excessive rainfall and would adversely affect citrus and recreation if lower levels were met.

In schedule one and two most interests would benefit if levels were held higher later into the spring.

The district is to be commended for the job they have done in the past and should establish interim levels that would allow common sense judgment to prevail in years of extreme wet or drought.

Sincerely,

If the water is held higher our land on the lake will be [illegible] under water. This will mean the loss of our marsh pasture on lake Lizzie

Roscoe Tyson.
Frances Tyson

PLANNING DEPT. | DIRECTOR | LAND PLNG. | WATER PLNG. | HYDROLOGY | ENV. SCI.

B38

Alligator

January 9, 1975

Central & Southern Florida Flood
Control District
P. O. Box V
West Palm Beach, Fl. 33401

Gentlemen:

I have studied information fornished in the notice of public hearing held in Kissimmee December 18, 1974 on the upper Chain of Lakes, and would like to make the following comments for the record on Lakes Alligator, Brick, Lizzie, Coon, Center and Trout.

Proposed schedules one and two seem to be the most practical schedules and have worked in the past. Levels higher than proposed in these schedules could damage both residential and agricultural property in years of excessive rainfall and would adversely affect citrus and recreation if lower levels were met.

In schedule land 2 most interests would benefit if levels were held higher later into the spring.

The district is to be commended for the job they have done in the past and should establish interim levels that would allow common sense judgment to prevail in years of extreme wet or drought.

Sincerely,

G. L. Bullis

RESOURCES PLANNING DEPT.
DATE: 1-24-75
DIRECTOR
LAND PLNG.
WATER PLNG.
HYDROLOGY
ENV. SCI.
OTHER:
FILE:

RECEIVED

JAN 20 1975

CENTRAL & SOUTHERN FLORIDA
FLOOD CONTROL DISTRICT

Alligator

January 9, 1975

Central and Southern Florida
Flood Control District
P. O. Box V
West Palm Beach, Fl. 33401

Gentlemen:

I have studied information furnished in the notice of public hearing held in Kissimmee December 18, 1974 on the upper Chain of Lakes, and would like to make the following comments for the record on Lakes Alligator, Brick, Lizzie, Coon, Center and Trout.

Proposed schedules one and two seem to be the most practical schedules and have worked in the past. Levels higher than proposed in these schedules could damage both residential and agricultural property in years of excessive rainfall and would adversely affect citrus and recreation if lower levels were met.

In schedule 1 and 2 most interests would benefit if levels were held higher later into the spring.

The district is to be commended for the job they have done in the past and should establish interim levels that would allow common sense judgment to prevail in years of extreme wet or drought.

Sincerely,

Walter E. Tyson

DATE: 1-21-75
DIRECTOR CWS
LAND PURS.
WATER PLNG.
HYDROLOGY
FILE

Alligator

January 9, 1975

Central and Southern Florida
Flood Control District
P. O. Box V
West Palm Beach, Fl. 33401

Gentlemen:

I have studied information furnished in the notice of public hearing held in Kissimmee December 18, 1974 on the upper Chain of Lakes, and would like to make the following comments for the record on Lakes Alligator, Brick, Lizzie, Coon, Center and Trout.

Proposed schedules one and two seem to be the most practical schedules and have worked in the past. Levels higher than proposed in these schedules could damage both residential and agricultural property in years of excessive rainfall and would adversely affect citrus and recreation if lower levels were met.

In schedule one and two most interests would benefit if levels were held higher later into the spring.

The district is to be commended for the job they have done in the past and should establish interim levels that would allow common sense judgment to prevail in years of extreme wet or drought.

Sincerely,

Lee Roy Tyre

1-21-75
ils

OTHER:
FILE:

Alligator REGEIV

JAN 16

Route 2, Box 958
St. Cloud, Florida 32769
January 8, 1975

Flood Control District
Post Office Box V
West Palm Beach, Florida 33402

Gentlemen:

We live on Alligator Lake and this letter is to complain about the high level of the lake this summer. There was never any problem with the shoreline prior to this time (house has been built 5 years). However, this past summer when the lake level was raised so high (the local thunderstorms didn't help any, either) the soil on this property started eroding and about 6-8 feet of lakefront land has been lost.

Also, when the water is so high, the lake doesn't have a chance to clean itself. We have lived at this location since July 1974, and in this short period of time the lake has become extremely dirty from the water let in from the other lakes. Alligator Lake was once crystal clear.

We would like to see the maximum water level for Alligator Lake returned to the level it was before 1974. Anything you can do to assist in this direction will be greatly appreciated.

Sincerely yours,

Mr. + Mrs. M. D. Tayes

Mr. and Mrs. M. D. Tayes

RECEIVED
FIELD SERVICES DEPT.
JAN 20'75

DIR. FS
ADM.
MAINT.
OPRS.
FIELD STA.
PUMP STA.
OTHER
OTHER
FILE

APPENDIX C

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UPPER KISSIMMEE RIVER BASIN

Lake Regulation Hearing
Kissimmee, Florida
December 18, 1974

The following individuals indicated they wished to present comments:

Name	Representing
William Wegener 207 Carroll Street Kissimmee, Florida 32741	Florida Game & Fresh Water Fish Commission
Bill Morse P. O. Drawer A Kissimmee, Florida	Osceola County Waterway Committee
Mr. & Mrs. John Carroll P. O. Box 1000 Kissimmee, Florida	Sessions Grove Canoe Creek Road Lake Gentry
Ernest W. Tyson Route 1, Box 500 St. Cloud, Florida	
Peter Holowatch (Lake Mary Jane) 4721 S. Ferncreek Avenue Orlando, Florida 32806	
Dan LeFevre (Alligator Lake)	
A. L. Bullis St. Cloud, Florida	
A. W.Birchwood (Alligator Lake) P. O. Box 96 St. Cloud, Florida	
Pat Johnston Route 1, Box 191A Kissimmee, Florida	Box 7 Ranch
Don Williams Route 4, Box 225 LakeWales, Florida	Camp Lester
Riley Miles Kissimmee, Florida	Water User's Association
William G. Mateer, Attorney Mateer & Harbert, P.A. 1000 Pan American Bank Bldg. Orlando, Florida	Mr. & Mrs. Hal D. Condrey Commercial Iron & Metal Co.

M. M. Overstreet
Route 2, Box 334
Kissimmee, Florida

Bill Vogel
P. O. Box 370
Kissimmee, Florida

Kissimmee Boat-A-Cade

Linda Forbis
P. O. Box 2884
Orlando, Florida

Isle of Pines Property Owners

G. Fred Foster
Route 5, Box 138
Orlando, Florida 32807

R. Edward Cooley
P. O. Drawer 1690
Winter Park, Florida

Sidney Hirsch and Kenneth A. Gresch

Lewis B. Mason
Route 5, Box 51
Kissimmee, Florida

Osceola County Sportsmen's Club

Ike Marshall
1414 S. Flamingo Drive
Kissimmee, Florida

David W. Pease (Lake Gentry)
701 Oregon Avenue
St. Cloud, Florida 32769

Harry A. Monroe
c/o Harry's Harbor
Route 4, Box 171
Lake Wales, Florida

James Cronk
2812 Fountainhead Blvd.
Melbourne, Florida

Melbourne Bassmasters

Donald F. Kun
Route 1, Box 526
St. Cloud, Florida 32769

Shelter Cove Resort Condominium
(200 landowners)

og

UPPER KISSIMMEE RIVER BASIN

Lake Regulation Hearing
Lake Wales, Florida
December 19, 1974

The following individuals indicated they wished to present comments:

Name	Representing
William Wegener 207 Carroll Street Kissimmee, Florida	Florida Game & Fresh Water Fish Commission
Lewis R. Mason Route 5, Box 51 Kissimmee, Florida	Osceola County Sportsmen's Club
Don Williams Route 4, Box 225 Lake Wales, Florida	Chamber of Commerce and C. Lester
O. C. Henderson Route 4, Box 233 Lake Wales, Florida	Kissimmee River Park
Richard L. Coleman 1507 Avenue E, N.E. Winter Haven, Florida	Polk County Coalition
Jack P. Brandon 130 E. Central Avenue Lake Wales, Florida	Attorney for Mr. Paul Keen
R. R. Murphy 822 Fairway Avenue Lakeland, Florida	
J. H. Raymer Grape Hammock Route 1 Lakes Wales, Florida	
Jerry W. Lunsford Route 1, Box 415 Lake Wales, Florida	
G. G. Blair, II Drawer AB Davenport, Florida 33837	

Harry A. Monroe
Harry's Harbor
Lake Wales, Florida

Robert L. Sawyer
902 Hesperides Road
Lake Wales, Florida 33853

Belk-Lindsey Company

L. R. Caldwell
Box 46, Route 6
Hickory Hammock
Lake Wales, Florida

Fred D. Speight
701 N. E. 1st Street
Fort Meade, Florida

Shady Oaks Fish Camp

Mrs. Helen C. Morrison
Route 1, Box 81
Babson Park, Florida 33827

Florida Bi-Partisan Civic Affairs

Ken Morrison
Route 1, Box 81
Babson Park, Florida

Ridge Audubon Society

A. M. Yager
Lonnie Yager
413 E. Tillman Avenue
Lake Wales, Florida

M E M O R A N D U M

TO: W. V. Storch
Director, Department of Resource Planning

FROM: Real Estate Section, Title Examination Division

SUBJECT: Upper Kissimmee River Basin Lake Regulation (Ownership)

The following information was acquired from the 1974 TAX ROLL from the following counties Orange, Osceola and Polk, for the ownership pattern on the following described lakes.

1. Owner: Faye Sessions
Address: 625 Lakeshore Drive
Kissimmee, Florida
Lake: Gentry
County: Osceola
Description: Lot 1 of Section 18, Township 27 South, Range 31 East.

2. Owner: Faye Sessions
Address: 625 Lakeshore Drive
Kissimmee, Florida
Lake: Gentry
County: Osceola
Description: Lots 1, 2, 3, 14 to 19 inclusive and 30 to 35 inclusive, 46 to 51 inclusive, 62 to 64 inclusive and that part of lots 4, 13, 20, 29, 36, 45 and 52 all being in seminole land and Investment Company, subdivision of Section 13, Township 27 South, Range 31 East.

3. Owner: Ernest W. and Walter E. Tyson
Address: Route 1
St. Cloud, Florida
Lake: Lizzie
County: Osceola
Description: All the West one-half (W½) of Section 2, Township 26 South, Range 31 East that lies West of Lake Lizzie Canal and less right of way of C 32 F and less plat of Twin Lakes Terrace.

4. Owner: Ernest W. and Walter E. Tyson
Address: Route 1, Box 323
St. Cloud, Florida
Lake: Lizzie
County: Osceola
Description: Lots A and B of Twin Lakes Terrace, Plat Book 2, page 72.

5. Owner: Ernest Tyson
Address: Route 1, Box 323
St. Cloud, Florida
Lake: Alligator
County: Osceola
Description: A part of Section 14, Township 26 South, Range 31 East, described as follows: Begin at a point on the South boundary of Old Nine Foot Asphalt Road and Highway 441 intersection, thence Southeasterly along said Highway 200 feet, thence Northwesterly parallel with the Nine Foot Road to Alligator Lane, thence Northerly along waters edge to a point on the South boundary of the Old Nine Foot Road, thence Easterly along the Road to a Point of Beginning also the 520 feet of vacated Lake Road abutting said property.

6. Owner: Peter and Mabel Holowatch
Address: 4721 South Ferncreek Drive
Orlando, Florida 32806
Lake: Mary Jane
County: Orange
Description: Lot 15, of Isle of Pines Subdivision, Plat Book U, pages 97 and 98.

7. Owner: Daniel J. Lefevre
Address: Route 1, Box 56
St. Cloud, Florida
Lake: Alligator
County: Osceola
Description: A part of Section 10, Township 26 South, Range 31 East, described as follows: Begin at the intersection of the West line of Section 10, and the South line of Highway 441, thence run Southeasterly along Highway 380.6 feet, thence run South 1889.4 feet, thence go South 38 degrees, 20 minutes East for a distance of 547 feet more or less to the waters edge of Alligator Lake, thence Southwesterly along waters edge a distance of 125 feet, thence West to the West line of Section 10, thence North along said Section line to the Point of Beginning.

8. Owner: Lewis A. Bullis
Address: Route 1, Box 26
St. Cloud, Florida
Lake: Alligator
County: Osceola
Description: All of Section 15, Township 26 South, Range 31 East.

9. Owner: Lewis A. Bullis
Address: Route 1, Box 26
St. Cloud, Florida
Lake: Alligator
County: Osceola
Description: All of Section 16, Township 26 South, Range 31 East, Less beginning 138 feet East of the Northwest corner of said Section 16, thence run

East 792 feet, thence South 36 degrees 45 minutes East, a distance of 1100 feet, thence West 810 feet to the waters edge of Live Oak Lake, thence run Northwesterly along the waters edge to the Point of Beginning, Less that part of the Southeast one-quarter (SE¼) lying South of Sardine Lake and Alligator Lake Canal.

10. Owner: A. Lewis Bullis
Address: Route 1, Box 26
St. Cloud, Florida
Lake: Alligator
County: Asceola
Description: All that part of Section 9, Township 26 South, Range 31 East lying South of Highway 441, Less the West 913.2 feet of the Northwest one-quarter (NE¼), lying South of Highway 441 and also Less, beginning at the intersection of Highway 441 and the East line of said Section 9, thence run Northwesterly along said Highway for a distance of 286.66 feet, thence South 1889.4 feet, thence South 13 degrees, 04 minutes East for a distance of 659 feet to the Centerline of the present canal, thence run East to the East line of said Section, thence go North to the Point of Beginning. Less Nova Road Right of Way. Also Less, beginning at the Northwest corner of the Southwest one-quarter (SW¼), run South 1330 feet, thence South 89 degrees, 42 minutes, 30 seconds East for a distance of 377 feet, thence North 39 degrees, 31 minutes, 40 seconds East for a distance 842.48 feet, thence North 677.45 feet, thence North 89 degrees, 42 minutes 30 seconds West 913.2 feet to the Point of Beginning and also Less New Road Right of Way for Highway 441.

11. Owner: A. Lewis Bullis
Address: Route 1, Box 26
St. Cloud, Florida
Lake: Alligator
County: Osceola
Description: All that part of Section 10, Township 26 South, Range 31 East described as follows: Beginning at the Southwest corner of said Section 10, run North approximately 1200 feet more or less, thence run East to Alligator Lake, thence Southwesterly along the waters edge to the South line of said Section 10, thence run West for a distance of 342.54 feet to the Point of Beginning.

12. Owner: Archie W. and June Birchwood
Address: P. O. Box 96
St. Cloud, Florida
Lake: Alligator
County: Osceola
Description: That part of Section 14, Township 26 South, Range 31 East described as follows: Beginning at a point 1381.4 feet West of and 760 feet North of the Southeast corner of the Southwest one-quarter (SW¼), of said Section, thence North 12 degrees, 12 minutes 30 seconds West for a distance of 676.92 feet to the Point of Beginning, thence run

North 12 degrees, 12 minutes 30 seconds West 101.8 feet, thence South 88 degrees, 34 minutes West for a distance of 225 feet, thence South 12 degrees, 12 minutes, 30 seconds East 101.8 feet, thence North 88 degrees, 24 minutes East 225 feet to the Point of Beginning.

13. Owner: Adalene Johnston (Mother of Pat Johnston)
Address: Kissimmee, Florida
Lake: Kissimmee
County: Osceola
Description: That part of Government Lot 3 of Section 10, Township 29 South, Range 30 East, lying South and East of the following described line: Begin 979.81 feet North of the Southeast corner of said Section, thence run South 37 degrees, 36 minutes West 1513 feet more or less to the waters edge of Lake Kissimmee.

14. Owner: Adalene Johnston
Address: Kissimmee, Florida
Lake: Kissimmee
County: Osceola
Description: Government Lot 2 and that part of Government Lot 1, lying South of the following described line: Begin 979.81 feet North of the Southwest corner of Section 11, Township 29 South, Range 30 East, thence run North 37 degrees, 36 minutes East for a distance of 816.93 feet, thence North 28 degrees, 34 minutes East 480.75 feet to the waters edge of Lake Kissimmee. All being a part of Section 11, Township 29 South, Range 30 East.

15. Owner: Adalene Johnston
Address: Kissimmee, Florida
Lake: Kissimmee
County: Osceola
Description: Lot 2 of Section 12, Township 29 South, Range 30 East.

Lots 1 to 7 inclusive and the Southeast one-quarter of the Southeast one-quarter (SE¼ of SE¼), of Section 13, Township 29 South, Range 30 East.

Lot 2 and Government Lot 1 also known as Fractional part of the Northwest one-quarter of the Northwest one-quarter (NW¼ of NW¼), and Government Lot 3, Leman Point of Section 14, Township 29 South, Range 30 East.

That part of Government Lot 1, lying South and East of the following described line: Begin at a point 979.81 feet North of the Northeast corner of Section 15, Township 29 South, Range 30 East, thence run South 37 degrees, 36 minutes West a distance of 1513 feet more or less to the waters edge of Lake Kissimmee.

Government Lot 3 Leman Point of Section 23, Township 29 South, Range 30 East.

Lots 1 and 2 of Section 24, Township 29 South, Range 30 East.

Government Lot 1, part of Sturm Island, of Section 18, Township 29 South, Range 31 East.

Government Lots 1 and 2, part of Sturm Island.

Lots 1 to 4 inclusive, part of Bird Island of Section 31, Township 29 South, Range 31 East.

Lot 1 of Section 32, Township 29 South, Range 31 East.

All Fractional Bird Island of Section 5, Township 30 South, Range 31 East.

All Fractional Bird Island of Section 6, Township 30 South, Range 31 East.

16. Owner: Jennings Overstreet (Son of M. M. Overstreet)
Address: Kissimmee, Florida
Lake: Cypress
County: Osceola
Description: All of Section 7, Township 28 South, Range 30 East lying South of Reedy Creek and East of Dead River.

All of Section 8, Township 28 South, Range 30 East lying South of Reedy Creek and West of Canal C-36.

All of Section 17, Township 28 South, Range 30 East, lying West of Canal.

All of Section 18, Township 28 South, Range 30 East lying East of River.

All of Section 19, Township 28 South, Range 30 East lying West of Canal and East of River.

All of Section 20, Township 28 South, Range 30 East lying West of Canal.

17. Owner: Jennings L. Overstreet (Son of M. M. Overstreet)
Address: South Highway 17-92
Kissimmee, Florida
Lake: Cypress
County: Polk
Description: The South one-half of the Southeast one-quarter ($S\frac{1}{2}$ of $SE\frac{1}{4}$), of Section 1, Township 28 South, Range 29 East lying East of Reedy Creek.

The Southwest one-quarter of the Southwest one-quarter ($SW\frac{1}{4}$ of $SW\frac{1}{4}$), of unsurveyed Section 5, Township 28 South, Range 30 East.

The Southeast one-quarter of the Southeast one-quarter (SE¼ of SE¼), and South one-half of the Southwest one-quarter (S½ of SW¼), and the Southwest one-quarter of the Southeast one-quarter (SW¼ of SE¼), of unsurveyed Section 6, Township 28 South, Range 30 East.

All of unsurveyed Section 7, Township 28 South, Range 30 East, Less the West one-quarter (W½), lying West of River.

All of unsurveyed Section 8, Township 28 South, Range 30 East that lies West of the Kissimmee River County line.

18. Owner: Richard M. and Linda P. Forbis
Address: P. O. Box 2884
Orlando, Florida 32802
Lake: Mary Jane
County: Orange
Description: Lot 288, of Isle of Pines 5th Add Subdivision, Plat Book V, pages 5 and 6.

19. Owner: Isle of Pines Property Owners Association Inc.
Address: P. O. Box 2884
Orlando, Florida 32802
Lake: Mary Jane
County: Orange
Description: In Section 25, Township 24 South, Range 31 East, Lot 3, of Isle of Pines Subdivision, Plat Book U, pages 97 and 98.
Also Lot 251 and 321 of Isle of Pines 5th Addition Subdivision, Plat Book V, Pages 5 and 6.
Also Lot 117 of Isle of Pines 2nd Addition Subdivision, Plat Book U, page 125.
Also West 90 feet of Lot 245 of Isle of Pines 4th Addition Subdivision, Plat Book U, pages 132 and 133.

20. Owner: G. F. Foster and Ernestine M. Foster
Address: Route 5, Box 131
Orlando, Florida 32807
Lake: Hart
County: Orange
Description: Northwest one-quarter of the Northwest one-quarter (NW¼ of NW¼), Less the South 30 feet and Less the North 300 feet of the West 300 feet of Section 21, Township 24 South, Range 31 East.

21. Owner: G. Fred Foster and Ernestine M. Foster
Address: Route 5, Box 138
Orlando, Florida 32807
Lake: Hart
County: Orange
Description: Beginning 660 feet South and 30 feet East of the Northwest corner of Section 28, Township 24 South, Range 31 East, thence run East 500 feet to shore of Lake Hart, thence Southwesterly along shore 309.76 feet, thence

West 424 feet to East Right of Way of Road, thence North 300 feet to Point of Beginning, being part of Lot 1, and a parcel of reclaimed Lake Bottom on the East to the 60 foot contour line. All being in Section 28, Township 24 South, Range 31 East.

22. Owner: David W. Pease
Address: 701 Oregon Avenue
St. Cloud, Florida 32769
Lake: Gentry
County: Osceola
Description: Lot 32, of Seminole Land and Investment Company, subdivision of fractional Section 7, Township 27 South, Range 31 East.

23. Owner: David W. Pease
Address: 701 Oregon Avenue
St. Cloud, Florida 32769
Lake: Gentry
County: Osceola
Description: West 330 feet of the South 283.2 feet of Lot 33, and the West 330 feet of Lots 48, 49, 64 and 65, of Seminole land and Investment Co., Subdivision of fractional Section 7, Township 27 South, Range 31 East.

24. Owner: P. M. Keen
Address: Route 1, Box 348
Lake Wales, Florida
Lake: Kissimmee
County: Polk
Description: The East one-half (E½), of Section 22, Township 30 South, Range 30 East.

All fractional Section 23, Township 30 South, Range 30 East.

United States Lot 5 of Section 24, Township 30 South, Range 30 East.

All fractional Section 25, Township 30 South, Range 30 East.

All of Sections 26 and 27 of Township 30 South, Range 30 East.

The East one-quarter (E¼), of Section 28, Township 30 South, Range 30 East.

All of Section 32, Township 30 South, Range 30 East, lying North and East of Highway and Less the North one-half of the Northeast one-quarter (N½ of NE¼), and a tract South and West of Highway 60 of the Southeast one-quarter of the Southeast one-quarter (SE¼ of SE¼).

The North one-half (N½), and the Southeast one-quarter (SE¼), and the South 50 feet of the Southwest one-quarter (SW¼), and the North one-half of the Southwest one-quarter (N½ of SW¼), of Section 33, Township 30 South, Range 30 East.

All of Section 34, all of Section 35, and all of Section 36 of Township 30 South, Range 30 East.

25. Owner: Harry A. Monroe
Address: Route 4, Box 131
Lake Wales, Florida
Lake: Rosalie
County: Polk
Description: That part of Section 21, Township 29 South, Range 29 East, described as follows: Begin 2543.93 feet East of the Southwestcorner of said Section, thence run North 24.46 feet, thence North 55 degrees, 11 minutes, 25 seconds East a distance of 245 feet, thence run East 42 feet, thence North 08 degrees, 08 minutes, 15 seconds, East for a distance of 131.99 feet, thence East 547.25 feet, thence North 200 feet, East 450 feet, more or less, to Lake Rosalie, thence Southerly along Lake to South line of Section, thence West to Point of Beginning. Less 39 Tracts and Less Road Right of Way.

Also that portion of Section 21, Township 29 South, Range 29 East described as follows: Begin at the Southwest corner of said Section and run East 2926.79 feet, thence run North 71.16 feet, thence East 650 feet for Point of Beginning, thence run East 95 feet, thence run South to Section line thence West 95 feet thence North to Point of Beginning.

Also Lot 1, Block C of Tiotie Beach Estates Unit 1, Plat Book 40, page 39 (said subdivision is in Section 21, Township 29 South, Range 29 East).

That part of Section 28, Township 29 South, Range 29 East described as follows: Begin 2543.93 feet East of the Northwest corner of said Section, thence run South 35 degrees West for a distance of 375 feet, thence South 04 degrees, 52 minutes East for a distance of 118.25 feet, thence South 651 feet, thence run East 1445.5 feet to Lake Rosalie thence Northerly to North Section line, thence West to Point of Beginning. Less 18 Tracts of unrecorded Harrys Harbor.

Also that portion of Section 28, Township 29 South, Range 29 East described as follows: Begin 3490 feet, more or less, East of Northwest corner for the Point of Beginning thence run South 50 feet, more or less, thence East 95 feet, thence North 50 feet, more or less, to the North Section line, thence West 95 feet to the Point of Beginning.

Ronald L. Canada
January 23, 1975/sp

cc: Bill Brannen

APPENDIX D

APPENDIX D

AGREEMENT

This Agreement, made and entered into this 4th day of June, 1962, by and between BRONSON'S, INC., a Florida corporation, hereinafter referred to as "Bronson", and CENTRAL AND SOUTHERN FLORIDA FLOOD CONTROL DISTRICT, a public corporation of the State of Florida, hereinafter referred to as "District".

WITNESSETH, Whereas, the District in its program of flood control and water conservation in central and southern Florida will soon commence the construction and improvement of Canal 35 (South Port Canal) and Canal 36 (Cypress-Hatchineha Canal) in Osceola County, Florida, and

Whereas, Bronson is the owner of certain necessary rights of way for the construction and improvement of said canals and, for no consideration other than the covenants and promises of the District as set out below, Bronson has executed easements deeds for Canal 35 (Dated May 12th, 1962) and Canal 36 (Dated June 4th, 1962) and will deliver said easements upon execution of this agreement by the District.

In consideration of the promise by Bronson to deliver the easements referred to above, the District makes the following covenants:

1. The District agrees to furnish and install two inlet structures discharging into Canal 35 (South Port Canal), one on each side, at a point approximately 2600 feet south of the north line of Section 30, Township 27 South, Range 30 East, as measured along the centerline of said canal. Each of the above inlet structures shall consist of one 72-inch corrugated metal pipe culvert, complete with flashboards and riser. These

structures shall be installed under the Corps of Engineers contract for the construction of improvements in Canal 35 and shall become the property of Bronson.

2. The District agrees to furnish and install two additional inlet structures discharging into Canal 35, one on each side, at a point approximately 200 feet south of the north line of Section 5, Township 28 South, Range 30 East, as measured along the centerline of said canal. Each of the above inlet structures shall consist of one 72-inch corrugated metal pipe culvert complete with flashboards and riser. These structures shall be installed at some future date upon receipt of written request from Bronson.

3. The District agrees to furnish and install two inlet structures discharging into Canal 36 (Cypress-Hatchineha Canal) on the east side. These structures shall be located approximately 750 feet and 3500 feet, respectively below Lake Cypress.

The above structures shall each consist of one 36-inch corrugated metal pipe culvert complete with flashboards and riser. These structures shall be installed under the Corps of Engineers contract for the construction of improvements in Canal 36.

4. The District agrees to install and maintain substantial fencing sufficient to turn cattle between the right of way to be conveyed and the adjacent lands of Bronson. On the easterly side of Canal 35 and on the westerly side south of approximately Station 102+00 said fencing shall be constructed on the right of way line. On the westerly side of Canal 35 between approximately Stations 102+00 and 224+00 said fencing shall be constructed within the right of way on a uniform alinement along the westerly edge of the existing seepage ditch west of the existing spoil mound. On

Canal 36 said fencing shall be constructed within the right of way on a uniform alinement approximately 25 feet landward of the land-side toe of the spoil mound to be constructed under the Corps of Engineers contract for the construction of improvements in Canal 36.

5. Bronson shall have the right, under permit from the District, to make connection of dikes and levees to the spoil mounds to be constructed by the District along Canals 35 and 36. Re-establishment of the fencing constructed under paragraph 4 shall be at the expense of Bronson.

6. Bronson shall have the right, under permit from the District, to install additional inlet structures discharging into Canals 35 and 36 in accordance with the inflow criteria of the District. Said structures shall be installed at the expense of Bronson.

7. The stage regulation schedule for Cypress Lake is shown on the attached print entitled "Regulation Schedule for Lakes Cypress, Hatchineha and Kissimmee". The District agrees that insofar as practicable and consistent with the overall flood and water control purposes of the District stages in Lake Cypress will be regulated in accordance with this schedule upon completion of the authorized plan for flood control in the Kissimmee River Basin. It is understood, however, that in the future changes in this schedule may be required to provide for more or less flood or conservation storage to meet the changing land use and other economic needs of the general area.

8. In view of the mutual advantages to the District and to Bronson, the District agrees that it will establish at the earliest possible date a "dike line" along the shore of Cypress Lake adjacent to the upland ownership of Bronson. The purpose of said dike line will be to establish

by agreement between the District and Bronson a line beyond which no diking in Cypress Lake will be performed by Bronson. Said dike line will be delineated on a suitable map and shall become a part of the agreement to be entered into by the District and Bronson.

9. The District will construct and maintain adequate gates, with locks, across its right of way to prevent ingress and egress by the public along the banks of the canals and will endeavor at all times to prevent unauthorized use thereof.

This agreement shall run with the land and shall be for the benefit of Bronson, its successors and assigns, forever.

IN WITNESS WHEREOF, the parties hereto have executed this agreement the day and year first above written.

BRONSON'S, INC., a Florida corporation

(Corporate Seal)

By Irlo O. Bronson, Jr.

ATTEST:

Secretary

CENTRAL AND SOUTHERN FLORIDA FLOOD CONTROL DISTRICT, BY ITS GOVERNING BOARD

(Corporate Seal)

By

Chairman

ATTEST:

Secretary

STATE OF FLORIDA

COUNTY OF OSCEOLA

I HEREBY CERTIFY that on this day before me, the undersigned authority, personally came Irlo O. Bronson, Jr. as President and Inelle B. Kelley, ~~and~~ as Secretary , respectively of BRONSON'S, INC., a Florida corporation, and they acknowledged before me that they executed the above and foregoing instrument as such officers of said corporation, and that they affixed thereto the official seal of said corporation, and the said instrument is the act and deed of said corporation.

WITNESS my signature and official seal at Kissimmee in the County and State above mentioned, this the 4th day of June A. D. 1962.

Notary Public

My commission expires: Nov. 17, 1963

Notary Public, State of Florida at Large
My Commission Expires Nov. 17, 1963
Bonded by American Surety Co. of N. Y.

STATE OF FLORIDA)
)
COUNTY OF PALM BEACH)

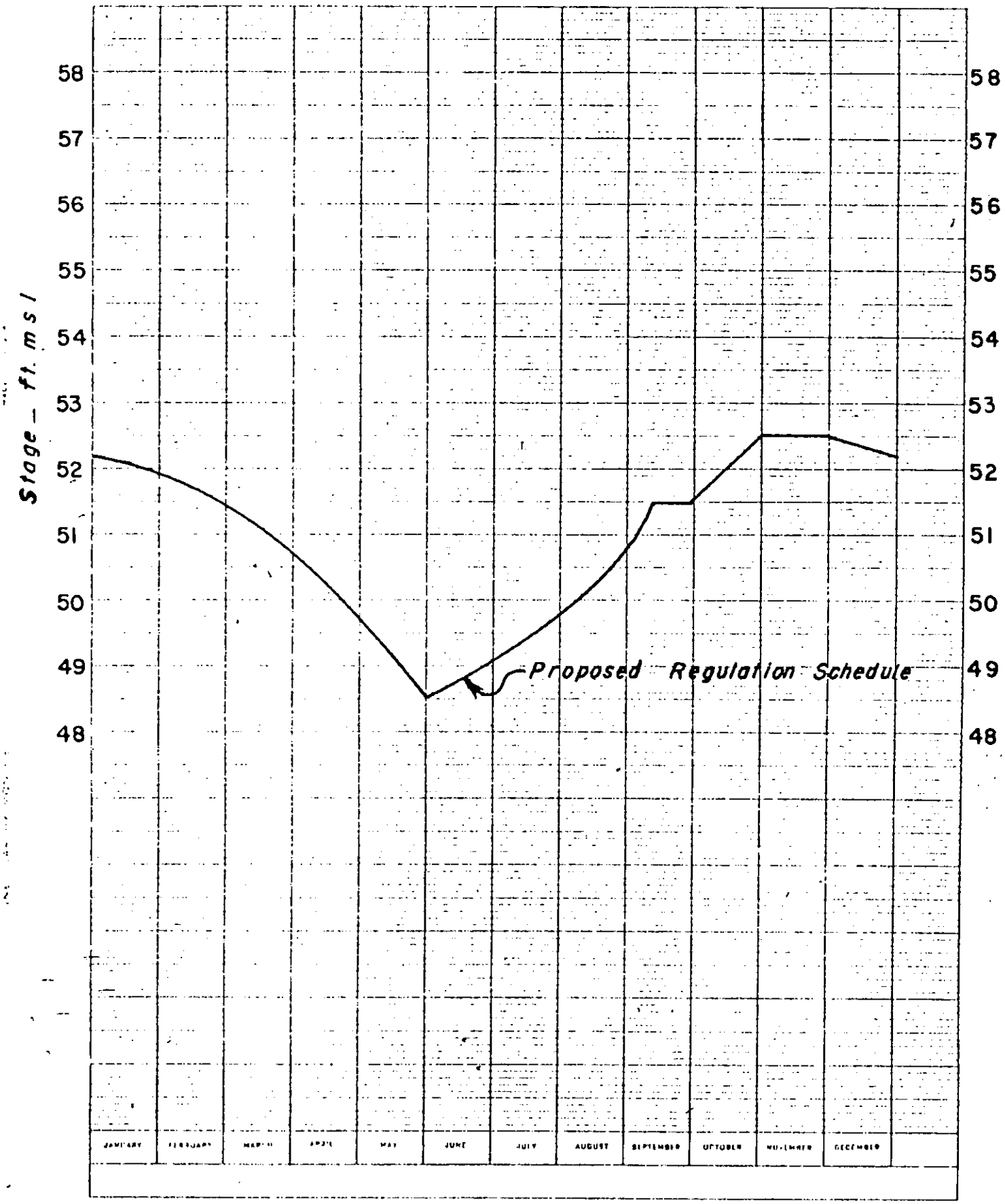
I HEREBY CERTIFY that on this the 8th day of June A. D. 1962, before me, the undersigned authority, personally appeared RILEY S. MILES and G. E. DAIL, JR. Chairman and Secretary respectively of the Governing Board of CENTRAL AND SOUTHERN FLORIDA FLOOD CONTROL DISTRICT, a public corporation created by the Acts of the Florida Legislature of 1949, to me known to be the persons who signed the foregoing instrument as such officers, and acknowledged the execution thereof to be their free act and deed as such officers for the purposes and uses therein mentioned, and that they affixed thereto the official seal of the Governing Board of Central and Southern Florida Flood Control District, and that the said instrument is the act and deed of said CENTRAL AND SOUTHERN FLORIDA FLOOD CONTROL DISTRICT and the Governing Board thereof.

WITNESS my signature and official seal at West Palm Beach, said County and State, the day and year last aforesaid.

Lydia S. Redding
Notary Public

My commission expires:

Notary Public, State of Florida at Large
My Commission Expires Jan. 21, 1966
Bonded by American Surety Co. of N. Y.



REGULATION SCHEDULE FOR LAKES
CYPRESS, HATCHINEHA & KISSIMMEE

OSCEOLA COUNTY
BOOK 111 PAGE 362

A G R E E M E N T

THIS AGREEMENT, Made and entered into this 6th day of February, A.D., 1963, by and between M..M. OVERSTREET and JEANNETTE OVERSTREET, his wife, hereinafter referred to as Overstreet, and CENTRAL AND SOUTHERN FLORIDA FLOOD CONTROL DISTRICT, a public corporation of the State of Florida, hereinafter referred to as District;

WITNESSETH:

WHEREAS, the District in its program of flood control and water conservation in central and southern Florida will soon commence the construction and improvement of Canal 36, Osceola County, Florida, and

WHEREAS, Overstreet is the owner of certain necessary rights of way for the construction and improvement of said canal and for no consideration other than the covenants and promises of the District as set out below, Overstreet has executed an easement deed for Canal 36 (dated Feb.6, 1963,) and will deliver said easement upon execution of this Agreement by the District. In consideration of the promise of Overstreet to deliver the easement referred to above, the District makes the following covenants:

1. The District agrees to furnish and install three inlet structures discharging into Canal 36, all on the west side of said canal as follows:

A. 1 - 36 inch corrugated metal pipe culvert, complete with flash boards and riser at a point approximately on the south line of Section 8, Township 28 South, Range 30 East.

B. 1 - 36 inch corrugated metal pipe culvert, complete with flash boards and riser, at a point approximately 2700 feet south, as measured along the centerline of the canal, of the south line of Section 8, Township 28 South, Range 30 East.

C. 1 - 36 inch corrugated metal pipe culvert at a point approximately 1400 feet south, as measured along the centerline of the canal, of the south line of Section 17, Township 28 South, Range 30 East.

These structures shall be installed under the Corps of Engineers' contract for the construction and improvements in Canal 36.

2. The District agrees to install and maintain substantial fencing sufficient to turn cattle between the right of way conveyed and the adjacent lands of Overstreet. This fencing shall be constructed within the right of way on a uniform alignment approximately 25 feet landward of the landside toe of the spoil mound to be deposited under the Corps of Engineers' contract for the construction and improvements in Canal 36. A 12 foot gate will be installed in the fence at a location to be designated by Overstreet, sufficient to pass cattle. The purpose of this gate is to allow Overstreet the ability to retrieve any of his cattle that might somehow get upon the spoil mound. It shall not be used for the purpose of allowing cattle to go from the adjacent lands of Overstreet onto the spoil mound of the District.

3. Overstreet shall have the right, under permit from the District, to make connection of dikes and levees to the spoil mound to be constructed by the District along Canal 36. Re-establishment of the fencing constructed under Paragraph 2 shall be at the expense of Overstreet.

4. Overstreet shall have the right, under permit from the District, to install additional inlet structures discharging into Canal 36 in accordance with the inflow criteria of the District. Said structures shall be installed at the expense of Overstreet.

5. The stage regulation schedule for Lake Cypress and Lake Hatchineha is shown on the attached print entitled "Regulation Schedule for Lakes

Cypress, Hatchineha and Kissimmee". The District agrees that insofar as practicable and consistent with the overall flood and water control purposes of the District, stages in Lakes Cypress and Hatchineha will be regulated in accordance with this schedule upon completion of the authorized plan for flood control in the Kissimmee River Basin. It is understood, however, that in the future, changes in this schedule may be required to provide for more or less flood or conservation storage to meet the changing land use and other economic needs of the general area. In the event stages in Lakes Cypress and Hatchineha should be regulated in the future at a higher elevation than shown on the attached schedule, then the District agrees to install 4 - 72 inch corrugated metal pipe culverts of sufficient length to provide for a 14 foot wide roadway, or an equivalent structure, across Dead River. It will be the obligation of Overstreet to provide what other facilities or materials which are necessary in order for him to maintain access to Rough Island. The District agrees to provide and install the culverts mentioned above within six months of the time it shall regulate Lakes Cypress and Hatchineha at a higher elevation than shown on the attached schedule. It is understood and agreed that these culverts will not be installed lakeward of the dike around the lake.

6. The District and Overstreet have established a "dike line" along the shore of Cypress Lake adjacent to the upland ownership of Overstreet and Bronson's, Inc., a Florida corporation. It is agreed between Overstreet and the District that Overstreet will not dike around Lake Cypress or cause a fill to be made in Lake Cypress lakeward of the following described dike line:

> From KR 629, a concrete reference monument of the Corps of Engineers, U. S. Army, bear North 71°22'24" West, a distance of 430.00 feet to an intersection thereof with the Westerly right of way line of Canal C-36 (Hatchineha Canal); thence, South 18°37'36" West, along said right of way line, a distance of 216.98 feet to the point of beginning;

Thence, North 54°34'35" West, a distance of 4669.78 feet to the end of the described line.

ALSO,

From KR 622, a concrete reference monument of the Corps of Engineers, U. S. Army, bear South 48°48'24" West, a distance of 49.32 feet to an intersection thereof with the Westerly right of way line of Canal C-35 (South Port Canal); thence, North 41°11'36" West, along said right of way line, a distance of 124.54 feet; thence, North 6°32'26" West, along said right of way line, a distance of 1675.44 feet to the point of beginning;

Thence, South 68°23'52" West, a distance of 1587.61 feet;
Thence, South 0°35'34" East, a distance of 2900.15 feet;
Thence, South 4°59'26" East, a distance of 3563.51 feet to the end of the described line.

ALSO,

From KR 628, a concrete reference monument of the Corps of Engineers, U. S. Army, bear South 11°05'28" West, a distance of 42.58 feet to an intersection thereof with the Northerly right of way line of Canal C-34; thence, North 78°54'32" West, along said right of way line, a distance of 1098.45 feet to the point of beginning;

Thence, North 18°10'42" West, a distance of 3723.11 feet;
Thence, North 36°02'04" West, a distance of 6034.63 feet;
Thence, North 46°10'09" West, a distance of 2772.43 feet;
Thence, South 82°31'09" West, a distance of 1997.00 feet;
Thence, South 16°45'36" West, a distance of 2704.92 feet;
Thence, South 67°10'53" West, a distance of 5405.36 feet to an intersection thereof with the Easterly right of way line of Canal C-35 (South Port Canal) and the end of the described line.

ALSO,

From KR 629, a concrete reference monument of the Corps of Engineers, U. S. Army, bear South 71°22'24" East, a distance of 120.00 feet to an intersection thereof with the Easterly right of way line of Canal C-36 (Hatchineha Canal); thence, South 18°37'36" West, along said right of way line, a distance of 27.76 feet to the point of beginning;

Thence, South 86°16'24" East, a distance of 5183.97 feet;
Thence, North 82°33'42" East, a distance of 3630.56 feet;
Thence, North 54°00'11" East, a distance of 5512.65 feet;
Thence, North 23°23'55" West, a distance of 2496.94 feet to an intersection thereof with the Southerly right of way line of Canal C-34 (Canoe Creek) and the end of the described line.

The above described lines lying and being in Sections 28 and 29, fractional Sections 31, 32, 33 and 34, Township 27 South, Range 30 East, and in Sections 2, 8, 9, 10 and 11, fractional Section 3, and unsurveyed Sections 6 and 7, Township 28 South, Range 30 East, Counties of Osceola and Polk, State of Florida.

The bearings in the above descriptions refer to the standard plane rectangular coordinate system for the East Zone of Florida.

7. In view of mutual advantages to the District and Overstreet, the District agrees that it will establish at the earliest possible date, a dike line along the shore of Lake Hatchineha adjacent to the upland ownership of Overstreet. The purpose of said dike line will be to establish by agreement between the District and Overstreet, a line beyond which no diking of Lake Hatchineha will be performed by Overstreet. Said dike line will be delineated by legal description and on a suitable map and shall become a part of this agreement to be entered into by the District and Overstreet.

8. The District will construct and maintain adequate gates, with locks, across its right of way to prevent ingress and egress by the public along the banks of Canal 36 and will endeavor at all times to prevent unauthorized use thereof.

This Agreement shall run with the land and shall be binding upon Overstreet, his heirs, administrators and assigns; the District, its successors and assigns.

IN WITNESS WHEREOF, the parties hereto have executed this Agreement the day and year first above written.

Witness:
Murray W. Overstreet Jr
Marjorie Honeton

M M Overstreet
M. M. OVERSTREET

Jeannette Overstreet
JEANNETTE OVERSTREET, his wife

(Corporate Seal)

ATTEST: [signature]
Secretary

CENTRAL AND SOUTHERN FLORIDA FLOOD CONTROL DISTRICT, BY ITS GOVERNING BOARD

By [signature]
Chairman

STATE OF FLORIDA,

COUNTY OF OSCEOLA, ss:

I HEREBY CERTIFY that on this day before me, the undersigned authority, personally came M. M. OVERSTREET and JEANNETTE OVERSTREET, his wife, to me known to be the persons described in and who executed the foregoing instrument and acknowledged before me that they executed same for the purposes therein expressed.

WITNESS my hand and official seal at Kissimmee, in the State and County aforesaid, this the 6th day of February, A.D., 1963.

(SEAL)

Marjorie Houston
Notary Public
State of Florida

My Commission expires: 7/26/66

STATE OF FLORIDA)
)
COUNTY OF PALM BEACH)

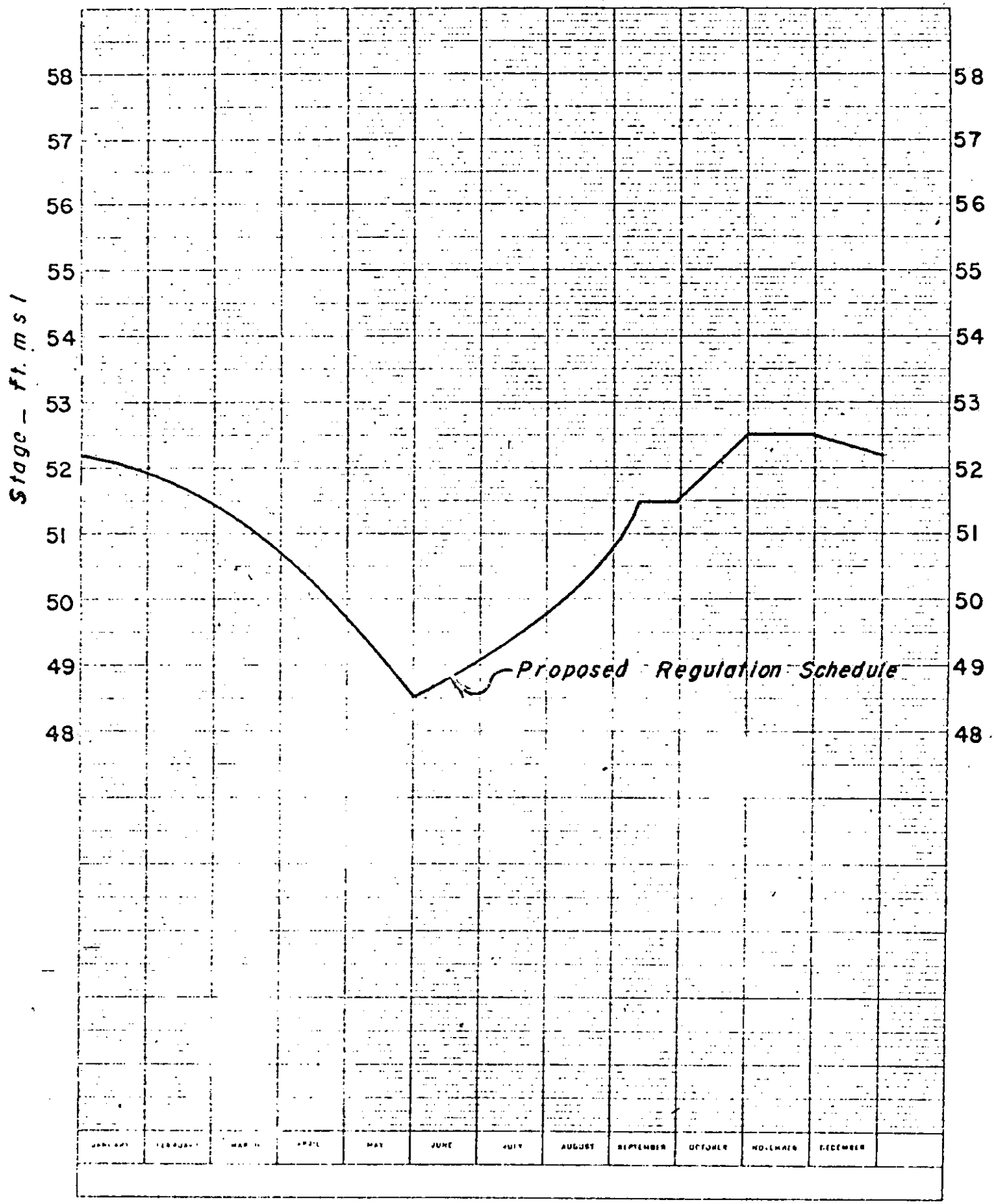
I HEREBY CERTIFY that on this the 7th day of March, A.D., 1963, before me the undersigned authority, personally appeared RILEY S. MILES and G. E. DAIL, JR., Chairman and Secretary respectively of the Governing Board of CENTRAL AND SOUTHERN FLORIDA FLOOD CONTROL DISTRICT, a public corporation created by the Acts of the Florida Legislature of 1949, to me known to be the persons who signed the foregoing instrument as such officers, and acknowledged the execution thereof to be their free act and deed as such officers for the purposes and uses therein mentioned, and that they affixed thereto the official seal of the Governing Board of Central and Southern Florida Flood Control District, and that the said instrument is the act and deed of said CENTRAL AND SOUTHERN FLORIDA FLOOD CONTROL DISTRICT and the Governing Board thereof.

WITNESS my signature and official seal at West Palm Beach, said County and State, the day and year last aforesaid.

Notary Public

My Commission expires:

Notary Public, State of Florida at Large
My Commission Expires Dec. 12, 1966
Bonded by American Surety Co. of N. Y.



REGULATION SCHEDULE FOR LAKES
CYPRESS, HATCHINEHA & KISSIMMEE

MATEER, YOUNG & HARBERT
ATTORNEYS AND COUNSELORS AT LAW

WILLIAM G. MATEER
V. KEITH YOUNG
RONALD A. HARBERT
STEVEN R. BECHTEL

October 4, 1971

TENTH FLOOR
CITIZENS NATIONAL BANK BUILDING
POST OFFICE BOX 2854
ORLANDO, FLORIDA 32802
TELEPHONE (305) 425-9044

Mr. G. E. Dail, Executive Director
Central & Southern Florida Flood Control District
P. O. Box 1671
West Palm Beach, Florida 33402

Dear Mr. Dail:

This will confirm our telephone conversations regarding your meeting with the Lake Mary Jane Property Owners. We have arranged for the conference room used by the County Commissioners at the Orange County Courthouse for the meeting. All concerned will be in attendance at 2:00 P.M. on Wednesday, October 13, 1971. The conference room is on the third floor of the new section of the Courthouse, in the vicinity of the section where the County Commissioners' offices are. I look forward to meeting you and the gentlemen who will accompany you, and hopefully the difficulties will be resolved.

Very truly yours,

Ronald A. Harbert

RAH/fs

cc: The Honorable Walter Sims
Mr. Jack Martin
The Honorable Louis Frey, Jr.

Original: Executive Office
Xerox: Engineering
Field Services

[illegible] DIVISION
DIRECTOR
OFFICE ENG.
H & H DEPT.
DESIGN DEPT.
FILES

MATEER, YOUNG & HARBERT
ATTORNEYS AND COUNSELORS AT LAW

WILLIAM G. MATEER
V. KEITH YOUNG
RONALD A. HARBERT
STEVEN R. BECHTEL

TENTH FLOOR
CITIZENS NATIONAL BANK BUILDING
POST OFFICE BOX 2809
ORLANDO, FLORIDA 32802
TELEPHONE (305) 425-9044

November 22, 1971

Mr. G. E. Dail, Executive Director
Central & Southern Florida Flood Control District
Post Office Box 1671
West Palm Beach, Florida 33402

Re: Lake Mary Jane Property Owners

Dear Mr. Dail:

I met with my clients on Saturday and discussed our recent correspondence. Needless to say, my people were skeptical due to the recent failure of the supposed design of the system to meet their needs in a drought period. If you will furnish me some further information it will be helpful.

First, I would appreciate knowing how the District intends to bring the lake to the 59.5 foot level. The lake is presently at approximately 58.8 feet. Also, once this level is attained, how does the District propose to hold it?

Next, I would appreciate updated copies of the logs showing the operation of the gates at Structures 62 and 57.

Finally, I would appreciate copies of the sheets showing the contours of Lake Myrtle and the associated lakes upstream from Lake Mary Jane.

My clients have authorized and instructed me to inform you and your Board that their primary interest at this point is obtaining a commitment for a satisfactory program to maintain a lake level in Lake Mary Jane which will permit navigation on the lake. All current knowledge certainly points to the need for a structure between Lakes Hart and Mary Jane. My people realize, however, that it is impractical to expect a boatlock or lift at this point. While the Corps of Engineers and the District apparently use the navigational aspects of design for the chain of lakes in an effort to solicit support for the flood control program, my people are realistic enough to realize that a navigational structure cannot be installed until the navigational aspects

Xerox copy - Engineering, Field Services

are taken care of regarding the entire chain. They, therefore, will be satisfied completely at this juncture with some program which will maintain the lake level of Lake Mary Jane without regards to navigation.

Thank you for your continued cooperation and, hopefully, we can resolve the situation to the satisfaction and best interests of all concerned. I conveyed to my people the offer of your Board to meet with them in Orlando. My clients appreciate the offer. At this time it does not appear that we have sufficient facts to make such a meeting fruitful. It might be helpful to have such a meeting in the foreseeable future, and I would appreciate knowing the time and frequency of your Board meetings in order that we might make a suggestion.

Very truly yours,

Ronald A. Harbert

RAH/fs

7-LMJ-87

December 6, 1971

Ronald A. Harbert, Esquire
Mateer, Young & Harbert
P. O. Box 2854
Orlando, Florida 32802

Dear Mr. Harbert:

In response to your letter of November 22, 1971 I am enclosing the following:

1. Copy of a set of maps, in four sheets, showing lake bottom contours for Lakes Lizzie, Trout, Lost, Center, Myrtle, Preston, Joel, Alligator and Brick.

2. A copy of this District's operation log for Structure 62 in the Hart-Ajay canal, which regulates water levels in Lake Mary Jane. You will note, as we have previously advised you, that S-62 has been closed since early June 1970.

The enclosed material is, I believe, responsive to the second and third requests made in your letter.

Concerning your first question, the District intends to bring Lakes Hart and Mary Jane to a stage of 59.5 feet when rainfall and consequent runoff occurs in amounts sufficient to raise the lake stage. Stages will be maintained between our recommended limits of 59.5 feet and 61.0 feet, dependent upon the availability of water, by operation of Structure 62.

Neither this District nor the Corps of Engineers have used the navigational aspects of our program in the Kissimmee Basin in an effort to solicit support of that program. This aspect was merely brought to your attention by our Board to point out that provision of a control in the Mary Jane-Hart canal would further restrict the already restricted navigation capability between Lake Tohopekaliga and Alligator Lake. The views of your clients in this regard, as stated in your letter, are acknowledged.

Our Governing Board meets every month, usually on the second or third Friday. Our next meeting will be at West Palm Beach on December 17. You are, of course, welcome to attend any of these meetings.

Sincerely,

G. E. DAIL, JR.
Executive Director

GED:wvs/og

bcc: Executive offices

FLORIDA HOUSE OF REPRESENTATIVES

TALLAHASSEE

WALTER SIMS
REPRESENTATIVE, 41ST DISTRICT
1720 S. ORANGE AVENUE, SUITE 302
ORLANDO, FLORIDA 32806

COMMITTEES:
COMMUNITY AFFAIRS
INSURANCE
TRANSPORTATION

January 5, 1972

Mr. G.E.Dail,Jr.
Executive Director
Central and Southern Florida
Flood Control District
Post Office Box 1671
West Palm Beach, Florida 33402

Dear Mr. Dail:

In your letter of November 12, you stated that you were requesting the Corps of Engineers to give full consideration to approval and adoption of a regulation schedule for lakes Hart and Mary Jane, which will range between 59.5 ft.msl to 61.0 ft.ms. I would like to know if such approval has been granted; and what is the current status of the project.

Thank you, and best of wishes to you.

Very truly yours,

Walter Sims

Walter Sims

WS/hd

xerox copy - Engineering

MATEER & HARBERT
ATTORNEYS AND COUNSELORS AT LAW

WILLIAM G. MATEER
RONALD A. HARBERT
STEVEN R. BECHTEL
LAWRENCE J. PHALIN

TENTH FLOOR
CITIZENS NATIONAL BANK BUILDING
POST OFFICE BOX 2854
ORLANDO, FLORIDA 32802
TELEPHONE (305) 425-9044

May 1, 1972

DIVISION
2 DIRECTOR
1 OFFICE ENG.
3 H & H DEPT.
DESIGN DEPT.
7-LMJ-87
4 FILES

Mr. G. E. Dail, Jr.
Executive Director
Central and Southern Florida
Flood Control District
P. O. Box 1671
West Palm Beach, Florida 33402

Re: 7-LMJ-87

Dear Mr. Dail:

It appears that nature has cooperated with the intentions expressed in your December 6, 1971 letter to me. On April 12 the records of the Geological Survey indicated the Lake Mary Jane level had reached 59.28 feet above sea-level. This is a rise from 57.98 feet in August of 1971, and 58.76 on January 15, 1972. We assume that the District will abide by your letter of December 6, 1971, so that Structures 57 and 62 will be operated to maintain the level of Lake Mary Jane and Lake Hart at a minimum level of 59.5 feet once this level is attained, and, in any event, that the water will be permitted to pass out of Lakes Hart and Mary Jane through Structure 62 until the level is in excess of the design levels. If at any time it appears there will be a diviation in this policy, I would appreciate immediate notification so that I may inform my clients.

Very truly yours,

Ronald A. Harbert

RAH/fs

cc: Lake Mary Jane Property Owners Association

Orig. - Engineering
xc: Exec. office
Field Services

RECEIVED
MAY 3 - 1972
CENTRAL & SOUTH FLORIDA
FLOOD CONTROL DISTRICT

City of St. Cloud

ST. CLOUD, FLORIDA

MAYOR'S OFFICE

January 4,1967

Mr. S.V.Storch,
Central & Southern Florida Flood Control,
West Palm Beach, Florida

Dear Mr. Storch:

Reference is made to your letter dated November 2,1966, relative to raising the present project regulation of East Lake Tohopekaliga from 56 - 58 feet to 57 - 59 feet,

Two months have elapsed since receipt of your letter so I wish to make an interim reply pending receipt of the complete study being prepared by the Florida Game and Fresh Water Fish Commission. Recently I conferred with representatives of the Florida Game and Fresh Water Fish Commission and they pointed out some added benefits to fish growth and population in raising the water level. I was also present at the meeting at the Osceola Room in the First Federal Savings & Loan building in Kissimmee.

The City Council feels there are a number of adverse affects to the City from the high water levels which would be further aggravated by raising the lake to 57 - 59 foot level. Whenever the lake level reaches 57 feet, our City's "sandy bathing beach" is inundated. At the 58 foot level, water rises along the sand filled area adjacent to Lakeshore Boulevard between Florida Avenue and Indiana Avenue (bathing beach area) and the wave action of the water extensively erodes the north side of the area developed and maintained as a City picnic and playground area. To raise this another foot would further aggravate the erosion. This year, lake weeds and soil have been hauled in by the City to form a temporary dyke to prevent extensive damage to this area. As soon as the water level is lowered below 57 feet, the City will again load and haul away the weeds and soil, and re-establish a public bathing beach. Even if a high of 58 feet is to be maintained through the winter months, a concrete "sea wall" will have to be constructed to eliminate the extensive maintenance in this area.

The base fill dirt laid for a causeway to the fishing pier construction site this summer had not been stablized when the lake level was raised to 57 feet. Recently wave action has extensively eroded the fill. The causeway is reparable and must be stabilized to prevent further erosion when the recreational fishing pier is constructed. However, this illustrates the problem associated with a 2 foot variation in the lake level.

Two small boat docks in the boat basin on East Lake Tohopekaliga will be under water if the lake is raised to 59 feet.

Several storm drainage trunk lineoutlets are approximately level with the 57 foot lake level, and lake water backs into the drain at 58 feet. It is estimated that at 59 foot level, the lake water will back up into several of our storm sewers several city blocks. The loss of an additional one foot elevation at our city's principal storm sewer outlets would be detrimental to our present system and adversely effect future storm sewer construction.

We have not determined to what extent Lakeshore Boulevard would be damaged as a result of raising the lake level to 59 feet.

The City of St.Cloud wishes to co-operate to the fullest, practicable extent to improve fishing in East Lake Tohopekaliga, to provide a source of recreation and to promote tourism, but is not financially able to restore nor reconstruct its facilities to prevent damages from raising the lake to a 59 foot level.

We believe that from May 15th through September 30th, East Lake Tohopekaliga should remain near the summer low level of 56 feet. We further believe that the best condition would be to reduce the variation from 56 - 58 feet to 56 - 57 feet.

Respectfully,

Ernest B. Hoover
City Manager

EBH:kib

CC to Larry Shanks
Vero Beach, Fla.

City of St. Cloud

1300 NINTH STREET
ST. CLOUD, FLORIDA 32769

February 24, 1967

Mr. Riley Miles
Central and Southern Florida Flood Control
Kissimmee, Florida 32741

Re: correspondence from Mr. Storch dated November 2, 1966
correspondence from Mr. Taylor dated November 9, 1967
letter from City of St. Cloud dated January 4, 1967
Report - proposed Kissimmee Lakes Water Level and Regulation Schedule

Dear Mr. Miles:

The City Council of St. Cloud, Florida have thoroughly reviewed the above referenced correspondence and reports.

We wish to cooperate to the fullest practicable extent to improve all the recreation facilities in East Lake Tohopekaliga and to promote tourism for the area. The report prepared by the Florida Game and Fresh Water Fish Commission indicate that if a 3 ft. variation was established between the high and low levels of the lake it would assist in aquatic weed control and improve the fish population in East Lake Tohopekaliga.

The proposed regulation schedule for East Lake Tohopekaliga reflecting a high water level of 59 MSL from November 1st through April 15th with a low level 56 MSL from June 1st to August 1st is not favorably considered. The adverse affect on our Lakefront area and the City drainage system caused by the present high level of 58' MSL were outlined in our letter of December 29th. The City of St. Cloud is not financially able to restore and reconstruct its facilities to prevent damages to the lakefront from a high stage of 58 ft.

The City Council hopes that this makes our position clear with respect to raising the high stage of the lake to 59' MSL.

Respectfully,

Mayor

LEW/df

enclosure

7-LET-87

August 6, 1970

Mr. William M. Bishop
P.O. Box 3407
Tallahassee, Florida

Dear Mr. Bishop:

As requested through Bill Storch, the Project regulation on East Lake Tohopekaliga is 56.0 - 58.0 feet m.s.l. We presently are using an interim regulation of 55.0 - 58.0 feet m.s.l. until the Kissimmee River project is completed

The once in 10-year stage will approximate 58.6 feet, and the once in 100 years, 62.0 feet.

Yours very truly,

Robert L. Taylor
Chief
Hydrology & Hydraulics Division

RLT:jk

noted: WS

MEMORANDUM

May 11, 1965

To: Director, Engineering Division

From: Chief, Hydrology & Hydraulics Department

Subject: Lake Gentry Project Regulation - Request to Lower One Foot

Ref: 7-LG-87

While discussing various portions of the C-33 and C-34 Project construction with Mr. Henry O. Partin in April 1964, he stated that he felt the Lake Gentry regulation of 60-62 feet m.s.l. was too high (See memo. April 24, 1964). No other such comments by local persons have come to our attention with the exception of Bill Johnson, the County Engineer, who concurs in the Project elevation. It is known however that citrus growers, northerly of the Lake constrained Mr. Partin some years ago as he prepared to enlarge the canal into the Lake from the south. It is well known this group desires a regulation as high as reasonably possible. This enlargement has never been made although canal improvement to the south and around the lake rim did lower the mean yearly stage. (See attached month-end graph for period of record).

The primary reasons given by Mr. Partin for indicating the regulation should be lowered one foot to 59-61 feet was because of the low elevation of Dr. Session's weekend house and his citrus grove. (He felt a portion of this grove would be killed with the Project regulation). He also preferred having the band of cypress bordering the Lake remain out of water to permit cattle grazing of this area.

Ground elevations taken on an inspection trip to the area on November 12, 1964, by the writer, as well as other elevation data, are shown as follows. The attached map assists in identifying the locations.

LOCATION	ELEVATION FEET M.S.L.
Lakeward tree line - USGS recorder	60.7
Landward tree line - USGS recorder	62.5
Lakeward tree line - Partin's weekend house	60.5
Landward tree line - Partin's weekend house	62.9
Lakeward tree line - Northwest end lake	61.0
Landward tree line - Northwest end lake	62.6
Ground at Partin's weekend house	62.8
Floor of Partin's weekend house	65.2
Ground of Dr. Session's house	63.1
Floor of Dr. Session's house	63.4
Top septic tanks (2) Dr. Session's house	63.4

LOCATION	ELEVATION FEET M.S.L.
Ground approximately 40' lakeward Session's house	62.0
Base lowest citrus tree Session's grove	62.9+
Base trees on east side grove	63.6 to 64.6
Ground at 20' X 30' house-northeast end lake	64.1
Fill (one acre+) front of 20' X 30' house-northeast end lake	64.0+

The cypress tree line shots checked well and indicated the lakeward edge of the tree line approximated 60.7 feet elevation, and the shoreward edge 62.7 feet. The ground at Partin's 12' X 15' weekend house (D) is only 0.8+ foot above the top of the regulation but this ground could be filled as the floor elevation is quite adequate. The relatively new 20' X 30' house approximately 1000 feet west of the County road leading to the Lake on the north side is sufficiently high, as is the fill.

The primary deterrents for holding the regulatory stages as high as designated under the Project is the relatively low elevation of Dr. Session's house and of a portion of his grove. The writer talked with Dr. Sessions on the site and found him not opposed to the Project regulation, in regard to his house, provided some alteration be made should it in time prove determental to him.

His grove, consisting of three and four year old trees, is quite another problem. The top of the tree beds in the low northeast corner of the grove approximates 63.0, with approximately 30 trees at this elevation. The remainder of the trees on the lake side are on beds, the top of which range from 63.6 to 64.6 feet, except for a few near the south end that are at 63.0+ feet. The bottom of the swales on the lake side of the grove approximate 61.0 feet. These swales run east-west and have direct access to the lake stage by way of an east boundary canal. East-west Profile E indicates the swale 400 feet westward into the grove was at 63.2 feet, 64.1 feet at 600 feet, and 65.4 feet at 900 feet. Assuming the trees at a two foot higher elevation, all the trees in the east 600 feet of the grove for an undetermined distance to the south would be four feet, or less, above the top of the regulation (62.0). The land is assumed to continue rising to a higher elevation on the west side of the grove.

These ground contours indicate a substantial portion of this grove will probably be severely damaged if water at lake regulation is permitted in the swales. The reason this has not occurred to date is because the lake has remained at or above this elevation only a relatively short period since the grove was planted, and because the trees are small and have not acquired a deep root system. It is interesting to note that Dr. Sessions stated that he was told he would have difficulty with a grove in this location, the reason not being known at this writing but it could well have been because it was low in relation to lake stages. He indicated his grove expenditures to date had been far above the average. Approximately one-half the grove would be effected if a 5-foot distance to water table was assumed at the top of the regulation and one-third the acreage of a 4-foot water table was not considered determental.

On weighing the data presently available however, there is little doubt with the writer that the arguments for maintaining the presently proposed 60-62 foot regulation far outweigh the one isolated argument for lowering the regulation to a 59-61 foot regulation. The primary reasons are (1) Necessity to maintain the general ground water tables to that elevation maintained in past to degree possible (2) desire of grove owners to hold proposed regulation, or higher, (3) a 61-59 foot regulation practically eliminates boat travel within 400 to 500 feet from shore during lower portion of regulation.

In conclusion it is not felt that major landowner abuting the Lake, Mr. Partin, has any strong objection to holding the regulation to 62-60 foot as far as his own operations are concerned even though he has gone on record as desiring a lower stage. He undoubtedly under the circumstances would protest Dr. Sessions investments being damaged. It is felt however he would not wish the regulation lowered more than one foot as far as his own property is concerned. The grove could be pumped with little or no additional ditching - the amount of seepage that would be experienced from Lake Gentry is not but would probably be small.

No other permanent dwellings are on the lake shore other than those mentioned. The water at the top of the regulation remains inside the cypress tree line on the remaining portion of the lake not previously mentioned.

R. Burt Taylor

Robert L. Taylor

RLT:am
Attachments:

P.S. Dr. Sessions passed away between preliminary and final writing of this memorandum, and the estate is assumed to have been turned over to his wife.

MEMORANDUM

TO: Director, Engineering Division

FROM: Assistant Director, Real Estate Division

SUBJECT: Sessions' Grove on Lake Gentry

Re: 3-LG-1
X 7-LG-87

Attached to this Memo is a Memo prepared by Gerald D. Brisbin with his comments. The purpose of this Memo is to add to that which he reports.

Citrus trees are generally accepted as being a deep rooted crop when comparing agricultural crops as a whole. Therefore, it is desirable to have a water table somewhat lower than for shallower rooted crops. Most agronomists and horticulturalists will agree on a minimum depth water table level around 24 to 30 inches below the surface. There is a more recent tendency to desire lower water table levels in order to increase the effective root zone in hopes of obtaining a larger tree and higher production. The roots of citrus trees cannot live very long below the water table level. Therefore, it is essential to lower the water table level below the root zone within 72 hours after a rain. In order not to require all of the rain to soak into the ground, bedding or shaping of the land is done to remove excess run off water via water furrows, tile or swale outlets or crowning across adjacent close spaced ditches. Some profile drainage is obtained in the higher beds and deeper water furrows, but primarily water table control must come from deeper lateral and sub-lateral canals or a drainage tile system. 1/

1/Systems and Costs of Developing Poorly-Drained Citrus Soils, Kenneth A. Harris, Agricultural Engineer, presented at 17th Annual Indian River Citrus Seminar, January 15, 1964.

Many owners, managers, consultants and specialists will vary in preference to soils, but generally most agree that the Felda, Sunniland, Bradenton, Ona, Parkwood, Managee and Delray Fine Sands are well suited for citrus, Shallow Phase Adamsville, Charlotte and the Heavy Stratum Leon Fine Sands are marginal; while Immokalee, Pompano and Leon Fine Sands are considered sub-marginal. 2/

2/Ibid.

There are some citrus rootstocks that are more tolerant than others to a rather high water table, or poor internal drainage of the various soils. Rough lemon has been found to be good for planting in the light sandy soils on the well drained areas in the Ridge section, but does

not do well in the colder areas. Until recently, all successful plantings in low, wet or heavy soils, as in the Indian River section, were on sour orange stock. The almost standard formula was: generally, sour orange rootstocks were used on low, wet soils; rough lemon on high, sandy soils; and trifoliate orange or sour orange stocks in the colder areas. 3/

3/Circular 132A, University of Florida, Agricultural Extension Service, July 1958.

There should be an effort made by the District to secure the services of a competent citrus nurseryman to determine the rootstock of this grove.

It is my suggestion that the Engineering Division initiate a study to determine (1) mean high water elevation before lowering of Lake Gentry by the Diston canal system and (2) mean high water elevation after lowering of lake by Diston and before further lowering of lake by Partin and (3) mean high water elevation after lowering by Partin. The facts derived from such a study should provide our Legal Department with enough information to render an opinion as to the legal liability of the District, if in fact, there is any.

B. A. Redding, Jr.

May 28, 1965/mh

Attachment

cc: Mr. Robert Grafton

MEMORANDUM

TO: B. A. Redding, Jr.

FROM: Gerald D. Brisbin

SUBJECT: Claim for Possible Damages to Sessions' Grove on Lake Gentry

Re: 3-LG-1

A preliminary investigation into the question of possible damages to the orange grove owned by Faye C. Sessions, discloses the following:

(A) Preliminary Investigation of Title to said Grove

Title to Fractional Section 18, Township 27 South, Range 31 East and Section 13, Township 27 South, Range 30 East (and other lands) was patented by the United States to the State of Florida by Tampa Patent No. 1, dated April 4, 1856; a certified copy of same is recorded in Deed Book "S", page 263, Osceola County, Florida, public records.

There does not appear to be of record a conveyance from the T.I.I.F. as to Fractional Section 18, Township 27 South, Range 31 East. However, the first conveyance of record is from Florida Southern Railway Company, recorded in Deed Book "E", page 14, Osceola County, Florida, public records.

The T.I.I.F. conveyed Section 13, Township 27 South, Range 30 East, to the Atlantic and Gulf Coast Canal and Okeechobee Land Co. by deed recorded in Deed Book "A", page 483, being Deed No. 12,869, and said deed ratified and confirmed by a deed recorded in Deed Book "E", page 390, Osceola County, Florida, public records.

Subsequent conveyances vested title in the Seminole Land and Investment Company, as recorded in Deed Book 9, page 1, as to said Section 13. This company subdivided this section and recorded the plat in Plat Book "B", page 41, Osceola County, Florida, public records. (No mention is made in the above deed as to said Section 13 being a Fractional Section.)

The Sessions' orange grove is located on the westerly side of Lake Gentry, Osceola County, Florida, and appears to lie (without a survey) entirely in Section 13, Township 27 South, Range 30 East.

Title to the land in question appears to be vested in Faye C. Sessions. She acquired title thereto by a Warranty Deed, dated May 15, 1956, recorded January 3, 1957 and recorded in Official Records Book 1, page 74, from Henry O. Partin, et al, to Raymond R. Sessions and Faye C. Sessions, husband and wife. The subsequent death of Raymond R. Sessions, on or about March 3, 1965, as disclosed of record by Probate File No. 6010, as filed in the public records of the County Judge's office of Osceola County, Florida, would vest title in Mrs. Sessions,

since the deed makes no reference to the interests acquired by the grantees. Hence, would it create an estate by the entireties? The land conveyed in said deed is described as follows:

> Government Lot 1, Section 18, Township 27 South, Range 31 East.
>
> and
>
> That portion of Lots 4, 13, 20, 29, 36, 45, 52 and 61, lying East of Canoe Creek Road.
>
> and
>
> Lots 1, 2, 3, 14 to 19 inclusive, 30 to 35 inclusive, 46 to 51 inclusive, and Lots 62, 63 and 64, all according to the Seminole Land and Investment Company's Subdivision of Section 13, Township 27 South, Range 30 East, according to plat on file in the office of the Clerk of the Circuit Court, Seminole County, Florida.

A copy of said plat is recorded in Plat Book "B", page 41, Osceola County, Florida, public records. The copy of said plat bears a filing date of November 8, 1909. (A sketch of a portion of said plat is attached hereto.) The plat of record leaves a great deal to be desired regarding dimensions and bearings on the lot lines.

Subsequent to the filing of the deed to the Sessions, the road along the west side of Lots 2, 15, 18, 31, 34, 47, 50 and 63, was closed and abandoned by resolution of the County Commissioners of Osceola County, dated June 13, 1960, and recorded in Official Records Book 62, pages 351, 352 and 356.

Government Lot 1 of Section 18, Township 27 South, Range 31 East appears to lie within the band of cypress trees surrounding Lake Gentry on the Westerly side.

The Government field notes of Section 13, Township 27 South, Range 30 East, discloses that a traverse line was run by B. F. Whitner when he surveyed the Township in 1884. However, the traverse line is considered to be only a line of convenience for survey purposes and not a meander line, mainly due to the fact that he recites in said notes, as follows:

> "3rd mile on East boundary (being Section 13, of Township 27 South, Range 30 East, going South) 30.90 chains to small lake - the principle portion lying to the East of the line. (30.90 Ch. = 2039.40 feet)
> at 20 chains from the mile post, ran

Courses	Distance (Chains)	(Converted to Feet)
S. 68° 30' W.	6.00	(396 feet)
S. 14° 30' W.	29.00	(1914 feet)

Courses	Distance (Chains)	(Converted to Feet)
S. 17° 45' E.	30.00	(1980 feet)
South	7.85	(518.10 feet)
East	3.69	(243.54 feet)
North	2.00 to the Lake	(132.0 feet)

Distance across 53.80 Chains
1st 30.90 Chains - Bay Gall bordering the Lake or Pond Feb. 13th
4th mile (Section 24, Township 27 South, Range 30 East)
4.70 Chains x Lake or Pond (see traverse last page) to bordering Bay Gall
20.00 Chains out of Bay Gall to flat pine
40.00 Chains set ½ mile post."

Since this surveyor proceeded South for 30.90 chains (2039.40 feet) before reaching the Lake then retraced his line back to a point 20 chains (1320 feet) South of the section corner before beginning his traverse of the Lake would indicate that this was not a meander line of the Lake but a line of convenience only. The 10.90 chains difference is 719.40 feet, so he was that far North of the Lake when he began his traverse. (Please note that a portion of this traverse has been superimposed on the plat attached and lies westerly of the Lake's edge as indicated by the plat and is not a part of the recorded plat.)

It would appear that Mrs. Sessions would own up to the East boundary line of Lots 48, 49 and 64 of said plat. The land lying easterly of said lot lines, if any, would be still vested in the Seminole Land and Investment Company. It is believed that the orange trees in the grove are growing westerly of the East boundary of the lots owned by Mrs. Sessions.

Damage to the grove and weekend house, if any, will be caused by the increased level of ground water table resulting from the increased level of the Lake. Orange trees require an effective root zone (depth of soil between surface and ground water table) between 3 to 5 feet. The trees in the grove are 6 years, 1975 of age this year. The roots of these trees have grown to the depth of approximately 4 feet. Since the level of the Lake is to be regulated between 60 feet and 62 feet m.s.l., it is reasonable to assume that the ground water table will also be of approximately the same level. Trees with a minimum root zone of 3 feet (assuming mean regulation at 61 feet) would have to be at elevation 64 feet m.s.l. It is reasonable to assume that all trees below 64 feet m.s.l. will be killed or the roots thereof damaged to the extent that production will almost be halted. Trees growing between 64 feet m.s.l. and 66 feet m.s.l. will be damaged to a lesser extent as elevation increases.

The sewage disposal system of the weekend house is 2 septic tanks. The utility of these septic tanks will diminish as the ground water table increases. The drain fields for these tanks are installed at approximately 62.5 feet m.s.l. As the water table rises the absorption of effluent by the soil will diminish. These tanks may have to be replaced or modified.

Since (as far as I could determine) the house and orange grove is entirely on private property the question arises -- "IF THESE DAMAGES ACTUALLY TAKE PLACE WILL THE F.C.D. BE LIABLE?"

(B) General Information in the Grove

1. Acreage

In a conversation with Mr. Blake Johnston, of the U. S. Soil Conservation Service in Kissimmee, I learned that of the total of 152 acres, owned by Mrs. Sessions, 125 acres were planted to oranges, 26 acres were left in the native state (this being the cypress band surrounding the Lake) for wildlife and 1 acre utilized as a site for a weekend house.

2. Soils

Of the 152 acres ±, 15 acres ± are Rutledge Fine Sand, 10 acres ± are Plummer Fine Sand (high), 10 acres ± are unclassified (this being the "cypress band".) The balance of 117 acres are of the Leon Fine Sands series.

3. Taxes

The 1964 tax assessment roll of Osceola County, Florida, shows the following taxes levied:

Description	Assessed Value	Total Tax
Lot 1, Sec. 18-27-31	$1,170.00	$9.13
Lots 1, 2, 3, 14 to 19 inc., 30 to 35 inc., 46 to 51 inc., 62, 63 and 64, and that part of Lots 4, 13, 20, 29, 36, 45, 52 and 61, Seminole Land and Investment Company's S/D in Sec. 13-27-30.	$86,205.00	$672.40

4. Grove Production

This grove produced 1500 boxes of oranges last year, this being the first year it produced a crop.

The trees are very heavily laden with oranges now and it was estimated by Mr. Bass (grove consultant and manager) that production this year will be between 6 and 7 thousand boxes.

(C) Conversations had with Owner and Grove Manager

Upon visiting the grove in question, I met Mrs. Sessions. During the conversation with her I mentioned the fact that I would like to talk to Mr. Walter P. Bass, who is managing the grove for her. She reached him by telephone and he came out to the grove. We discussed the possibility of

damage to the grove. He related that in his opinion approximately 30% of the grove would be damaged.

Mrs. Sessions was quite concerned about the possible damages. She stated that since the death of her husband that this grove was her only source of income. Mrs. Sessions did not relate whether or not Mr. Sessions had any knowledge of the Lake level (as it is to be regulated by the project) at the time the grove was planted.

She stated that he had checked into the Lake levels prior to the construction of the weekend house and had been governed accordingly. Just how extensive his research was she did not know.

I related to them that the scheduled Lake regulation was to be between 60 and 62 feet m.s.l. and that this regulation would not contain the greater than once in 10 years storm.

Mr. Bass suggested that a small levee be constructed along the easterly side of the property, so the grove would be protected, with a borrow channel on the landward side.

I told both Mrs. Sessions and Mr. Bass that I did not know what course the F.C.D. would take, but that we would let them know as soon as possible.

Mrs. Sessions also was concerned about the possible inundation of the "cypress band" since (she and Mr. Sessions, prior to his death) offers to purchase some of this area had been made by two parties and the sales were not consummated, because of the project regulation of the Lake.

(D) Conclusion

Without a survey of the property with adequate cross sections to provide a contour map with an accurate count of trees lying easterly of the 66 or 67 foot contour, it is difficult to argue against a 30% damage to the grove. Of this 30% of the trees as related by Mr. Bass, some will be killed outright by the increase in the ground water, which will raise high enough that there will be an inadequate depth for root growth.

Damage to the grove will diminish as the distance from the Lake increases and the elevation increases. Since the ground water table generally has a tendency to follow the contour of the ground, damage to 30% of the grove is possible.

If the F.C.D. is liable for these damages, I would recommend the construction of a small dike (approximately 6 to 7 feet high) on the easterly side of the band of cypress trees and tied back to a suitable elevation on the North and South sides of the grove. Because of the type of damage that will be done to the grove the claim of trees dying for the next 10 years, or longer, regardless of cause, i.e., disease, etc., could very likely be blamed on the increase in the ground water table.

The highest stage of Lake Gentry since 1949 was 63.13 feet m.s.l. on August 10, 1953 and the lowest stage was 55.76 feet m.s.l. on June 7 and 8, 1962. The

highest stage since the grove was planted was 62.4 feet m.s.l. in 1960.

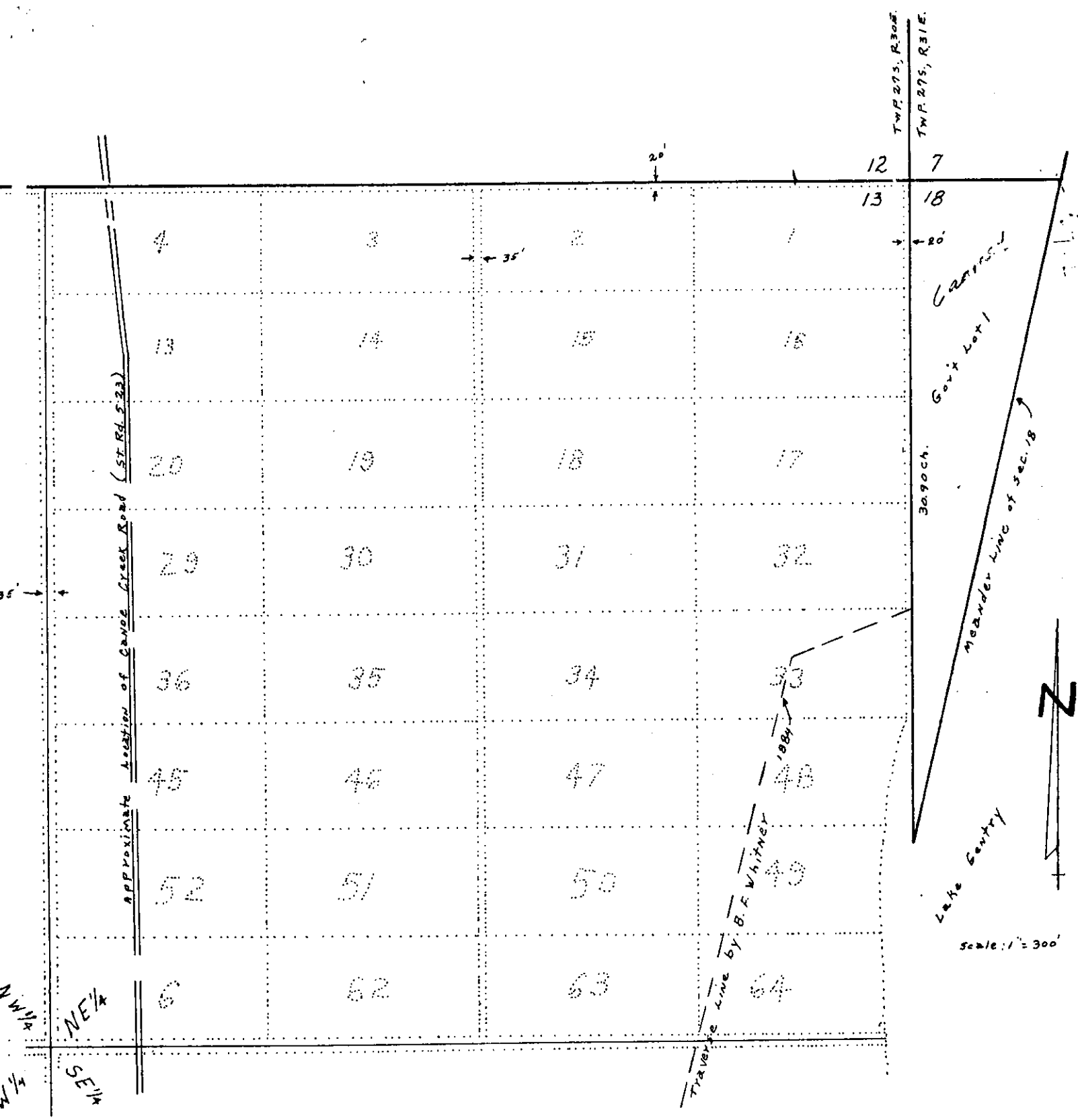
I do not believe a claim for damages resulting from waters of the Lake itself could be sustained. However, damages resulting from increased water table level possibly could.

Gerald D. Brisbin

Gerald D. Brisbin

May 25, 1965/mh

Attachment



A Sketch of the NE¼ of Sec. 13 Twp. 27S., R30E. & Gov't Lot 1, Sec. 18, Twp. 27S., R.31E., showing part of the Seminole Land & Investment Company's S/D of said Sec. 13 as recorded in Map Book "B" page 41, Osceola County Records.

MEMORANDUM

July 21, 1965

To: Director, Engineering Division

From: Hydrology & Hydraulics Department

Subject: Changes in Lake Gentry Water Level Resulting From Outlet Changes

Ref: 7-LG-87

The first known channel improvement which would affect the stage of Lake Gentry was in Canoe Creek north of the St. Cloud-Kenansville Road (State Road 523). This improvement followed the creek for some distance above the road, then continued northward to the vicinity of the Lake tree line, rather than following the creek to the northeast. It did not cut into the Lake.

This channel was apparently dug at sometime prior to 1944 by a Mr. Parker for the owner, a Dr. Moorman.

In 1944, William T. Sammons constructed the 1 3/4 mile levee on the south side of the Lake for Dr. Moorman. This levee, the majority of which is still in existance, generally follows the south side of the tree line and extends to high ground at both ends. The purpose of the levee was to protect the pasture lying to the south from Lake overflow. The borrow ditch acted as a collector ditch, discharging to the north-south ditch previously dug. Originally there was a pipe through this levee but it supposedly washed out soon after placing. The above information on ditch construction and purpose was supplied by Mr. Sammons who still resides in Kissimmee.

At the time a periodic discharge station established was by the U.S. Geological Survey in 1949, this levee had broken in places and some excess lake water was discharging directly into the borrow. However, there was still no man-made channel into the lake at this time. Stage and discharge measurements during the period 1949-52 indicate flow through these openings ceased at approximately 61.5 feet, and reached approximately 50 second-feet at 62.2. No high stage measurements were made.

The mean high water elevation of the Lake for the period November 1949 through June 1955 as determined from stage records is approximately 62.2 feet. The outside edge of the tree line is at approximately 62.3 feet. The elevation at which the high water rim flow begins as indicated from stage data is approximately 62.5 feet. These latter elevations are felt to substantiates the 62.2 foot mean high water stage rather well.

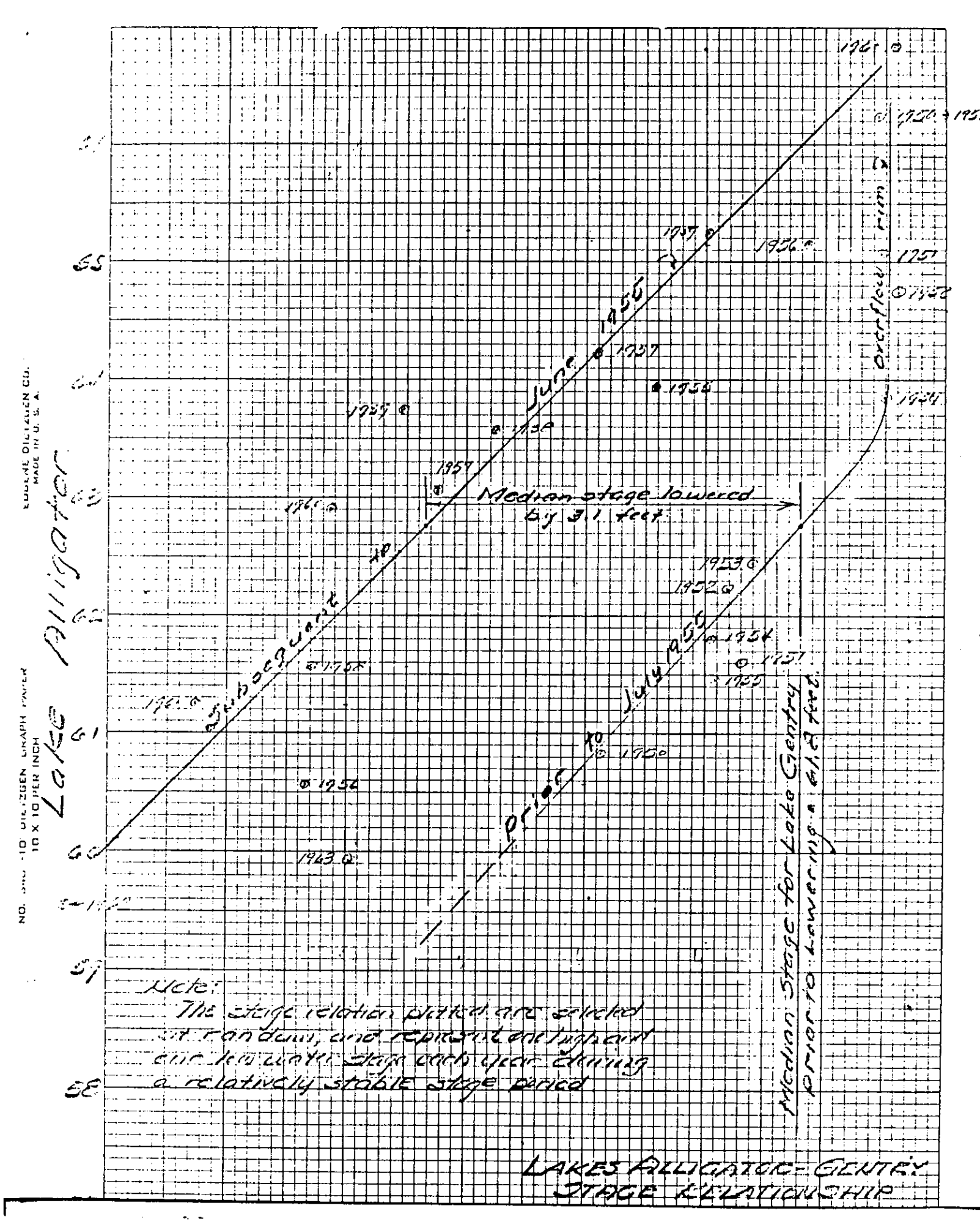
Comparison of stage records with adjacent lakes indicate a sufficient channel was cut into the Lake on the south side of Lake Gentry in June 1955 to cause a substantial reduction in stage. Comparison of prior and subsequent stages (see attached graph) indicate the median stage was lowered 3.1 feet from approximately

61.8 feet to 58.7 feet. The excavation involving the lowering was done by H.O. Partin. Apparently Mr. Partin was constrained by parties adjacent to the Lake from further excavation to lower the Lake even more than that which was accomplished. (See attached "Memorandum in Regard Control Exercised by the State of Florida in Respect to Lake Levels"). The amount the mean high water stage was lowered was less than 3.1 feet previously mentioned since the improvement was sufficient only to materially effect low and medium stages. The amount of this high water lowering has not been determined however since five years of the nine years available record since the lowering have been drought years when no socalled high water occurred. An approximate height could be obtained if it became necessary.

See also memorandum of May 11, 1965 for additional stage data on this Lake.

Robert L. Taylor

RLT:am
Attachments.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Median stage lowered by 3.1 feet
Median stage for Lake Gentry prior to lowering of 3.1 feet.
Note:
The stage relation which are selected at random, and represent highest and lowest water stage each year during a relatively stable stage period
LAKES ALLIGATOR-GENTRY
STAGE RELATIONSHIP
EUGENE DIETZGEN CO.
MADE IN U. S. A.
NO. 340 -10 DIETZGEN GRAPH PAPER
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Memorandum in re control exercised by the State of Florida in respect of lake levels.

The following is found in the revised general statutes of Florida, adopted by the State Legislature, June 9th, 1919, Chapter III, Article 6.

Drainage of lakes.

1190.

Ch. 6956, Acts 1915, Sec. 1. "Lakes, unlawful to drain without consent of abutting landowners.- It shall be unlawful for any person, persons, firm or corporation to drain or draw water from any lake of greater area than two square miles so as to lower the level thereof without first obtaining the written consent of all owners of property abutting on or bounded by said lake: Provided, however, That this Article shall not apply to any lake included wholly within any drainage district created by Chapter 6456, Acts of 1913, under any other laws of the State of Florida.

1191.

Ib., Sec. 2 "Courts may enjoin.- Courts of chancery shall entertain suits by persons claiming to own lands abutting on or bounded by lakes in the State of Florida, of greater area than two square miles, to enjoin any person, persons, firm or corporation from draining or lowering the level of such lake."

HUNTER, PATTILLO, POWELL & CARROLL
ATTORNEYS AND COUNSELLORS AT LAW
243 W. PARK AVENUE
WINTER PARK, FLORIDA 32790

DANIEL M. HUNTER
JOHN T. PATTILLO
ROM W. POWELL
LAWRENCE W. CARROLL, JR.

POST OFFICE BOX 340
TELEPHONE 647-6900

October 28, 1969

Mr. G. E. Dail, Jr.
Executive Director
Central and SouthernFlorida
Flood Control District
P. O. Box 1671
West Palm Beach, Florida

Re: Lake levels of Lake Gentry, Osecola County, Florida. - damage to property owned by Mrs. R. E. Sessions.

Dear Mr. Dail:

On March 9, 1966, I contacted you for the first time concerning the above mentioned matter. You responded by letter under date of March 29, 1966. In subsequent telephone conversations I explained to you and your representatives that my client, Mrs. R. E. Sessions, owned approximately 100 acres of grove, fronting along the west shore of Lake Gentry. I additionally explained that if the level of Lake Gentry at that time (62 feet) were maintained, substantial damage would accrue to my client because of ground water intrusion in the first 3-5 rows of her grove. Pursuant to our request, the lake was subsequently lowered to a height of less than 61.5 feet.

Last year about this same time, to be exact on November 21, 1968, I contacted a Mr. Jack Malloy of your office with the same request as made in 1966; that is, the level of Lake Gentry was fast approaching 62 feet (in fact was 62.1 on the day your men checked the level) and that if this level was reached and maintained for even a matter of days, substantial damage again would accrue to my client's grove. Again, pursuant to our request, the lake level was lowered to less than 61.5 feet and again, damage was averted.

I received a call yesterday from the grove caretaker of my client's grove informing me that the level of Lake Gentry was again fast approaching the level of 62 feet and would I again

Xerox - Field Services
Engineering - Attn. Mr. Maloy

contact you with the same request as before. The initial purpose, then, of this letter is to put your agency and you as its Executive Director on notice that if the level of Lake Gentry is not lowered to a level sufficient to avoid damage to my client's grove and if any damage occurs, she will look to your agency for damages, both present, future and punitive.

The additional and long-run purpose of this letter is to ask that we be provided an audience before the proper officials to discuss the lowering of the lake regulation schedule for Lake Gentry for the months of November and December of each year. It would be our hope that we could prevail on your Board to lower these maximum levels down to 61feet. I am herein enclosing a schedule someone provided me in 1966 (either your office or the Corps of Engineers) where the apparent initial design maximum of the Corps of Engineers was only 61.5.

Mr. Jack Malloy of your office asked that I note that I have talked with him both last year and yesterday and that he would be happy to fill you in on our conversations.

We will, of course, expect that the level will at least be immediately lowered to avoid damage to Mrs. Sessions grove. Please advise both when this is done and also when we could meet with you further regarding the long-range aspects of this matter.

Sincerely,

John T. Pattillo

JTP:bl

Enclosure

cc: Mrs. R. E. Sessions
625 Lake Shore Drive
Kissimmee, Florida

6-C33*100

October 31, 1969

Mr. John T. Pattillo, Attorney
Hunter, Pattillo, Powell & Carroll
P. O. Box 340
Winter Park, Florida 32790

Re: Lake levels of Lake Gentry, Osceola County, Florida - damage to property owned by Mrs. R. E. Sessions

Dear Mr. Pattillo:

Referring to your letter of October 28, 1969, I wish to advise that the level of Lake Gentry will be lowered today to 61.5 feet, msl, if at all possible under present weather conditions.

We will be glad to meet with you concerning water control levels in this area if you will indicate a date and time that will be convenient for you. As we will be rather pushed for time next week, due to the monthly meeting of our Governing Board, we would request that the date be sometime after November 7, 1969.

Sincerely,

G. E. DAIL, JR.
Executive Director

GED:cc
bcc: Mr. Storch
Mr. Grafton

MEMORANDUM

April 16, 1970

To: Director, Department of Engineering

From: Chief, Hydrology & Hydraulics Division

Subject: Requested reduction in Lake Gentry stage - letter of October 28, 1969 from Attorney John T. Pattillo.

Ref: 7-LG-87

A meeting of interested persons regarding the lowering of the top of the regulation to accommodate the Sessions Grove was held at the grove site on December 2, 1969. Present were:

J.T. Pattillo	Attorney for Mrs. Sessions
L.R. Johns	Grove Manager
W.B. Hutcheson	Soil Conservation Service
Blake Johnson	Soil Conservation Service
Walter Bass	Grove Consultant
Jim Smith	County Agricultural Agent
G.E.Dail, Jr.	Flood Control District
Earl Boyce	Flood Control District
R.L. Taylor	Flood Control District

The meeting was held at the grove site on the lake in order to observe the relation of the present stage and ground elevation, and to observe any adverse effect on the grove.

Mr. Pattillo, representing the owner, reviewed past requests to the District for lowering the top of the regulation. He stated that reputable experts in grove management were of the opinion that the water table was too high to enable the tree roots to penetrate into the soil sufficiently to sustain a healthy tree. This condition resulted both in less fruit, and inferior fruit, with subsequent reduced revenue. He requested the top of the regulation be lowered one foot to 61.0 feet to remedy this condition.

Mr. Dail reviewed the District's policy of recommending to the Corps of Engineers those stages best serving the general interest of the public. The writer stated that the present top of the regulation of 62.0 feet was based on stage-frequency for the period 1949-55, and shoreline vegetational features. He further stated that following 1955 the lake was lowered appreciably by an unauthorized enlargement of the outlet channel from the lake - that it was during this period that the grove was planted. Mr. Pattillo was not aware that any changes in the regulation schedule must be approved by the Corps of Engineers.

The meeting resulted in the District stating it would review the possibility of lowering the top of the regulation one-half foot to 61.5 feet --- that no consideration could be given to lowering it one foot as requested by Mr. Pattillo. The District agreed to again maintain the top of the regulation at 61.5 feet on an interim basis as in the past two years.

Mr. Johns, the grove manager, intimated the trees [redacted] in the lower portion of the grove were showing the effect of the present schedule, including that of smaller fruit. A tour of this section of the grove by the entire group was made after the meeting. No difference was noted between the trees in the low portion compared with those in the remaining portion of the grove, in fact there were statements made that the former trees looked even more healthy. No difference was noted in the fruit which was ready for marketing at the time of inspection. In fact the writer was later told that there was some question as to whether the meeting and inspection was timely for the purpose intended.

Our levels in this lower portion have indicated the water table of 62.0 feet lake stage will be higher under these trees than that normally considered advisable. This higher water table, if it does effect the trees in this particular grove, would probably not be felt until the trees are older. These are considerations as the determination is made whether the District should recommend to the Corps of Engineers that this regulation be lowered one-half foot or remain as at present.

This memorandum is being belatedly written at a time when the Corps is currently asking for confirmation of the 62.0 foot regulation as per letter of January 28, 1970.

Robert L. Taylor

RLT:am
cc: Office of Counsel