

CORRESPONDENCE/MEMORANDUM

STATE OF WISCONSIN

Date: December 8, 1982

File Ref: 2100

To: Doug Morrisette - SD

RECEIVED

From: James R. Huntoon *GRAS*

DEC 10 1982

BUREAU OF
LOCAL GOVERNMENT

Subject: Approval of the Black Earth Creek, Dane County Fishery Area Master Plan

On November 18, 1982, the Natural Resources Board ratified the Black Earth Creek, Dane County Fishery Area Master Plan, following approval of the plan by Secretary Besadny. The master plan task force consisting of Chairman Clifford Brynildson, Jon Bergquist, Robert Weiss, John Daniel and Paul Pingrey recommended retaining the previous acreage goal of 437.10 acres. However, the boundary was expanded to include frontage on Vermont Creek where 57.82 acres has been acquired under the Dane County Remnant Program. Thus, 52.3% of the acreage goal has been acquired leaving 208.66 acres yet to come under Department control to achieve the acreage goal.

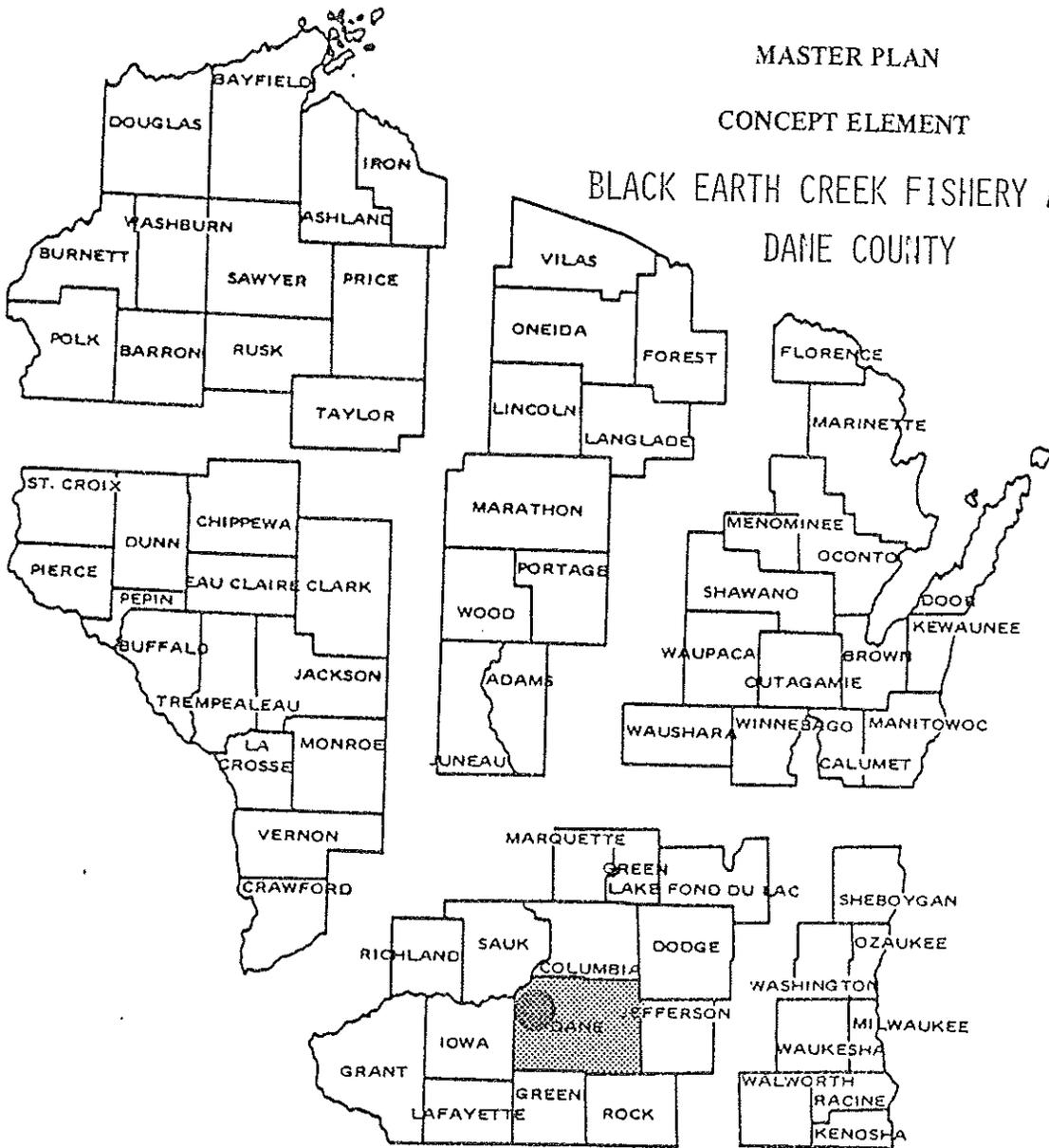
Attached are 20 copies of the approved master plan and the original maps for your district files, to answer inquiries by the public and for future use.

The implementation element of the master planning process should be completed next. You are requested to supply this office with a copy on or about March 1, 1983.

Please convey my appreciation to the task force for a job well done in the completion of this master plan.

cc: James T. Addis - FM/4
✓ Carl Evert - OL/4
Vern Hacker - Oshkosh

1395M



MASTER PLAN
 CONCEPT ELEMENT
 BLACK EARTH CREEK FISHERY AREA
 DANE COUNTY

Property Task Force

- Leader- Clifford Brynildson - Area Fish Manager
- Jon Bergquist - Area Wildlife Manager
- Robert Weiss - Park Manager
- John Daniel - Conservation Warden
- Paul Pingrey - Area Forester

Approved:

C.D. Besadny 10-19-82
 C.D. Besadny - Secretary | Date

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SECTION I - ACTIONS

GOALS, OBJECTIVES AND ADDITIONAL BENEFITS

Goals

To obtain land control and to manage, preserve and protect designated property within the boundary of the Black Earth Creek Fishery Area in Dane County; to enhance trout fishing and other recreational and educational activities while perpetuating or restoring the scenic and aesthetic qualities of the streams.

Annual Objectives

1. Provide opportunities for 4,350 angler days of quality fishing for brown trout.
2. Provide management services that successfully preserves a fishery that will offer a chance to catch a trout 6 inches or larger per fishing trip.
3. Manage the lands on the fishery area to provide for 430 participant days of hunting for white-tailed deer, cottontails, fox and gray squirrels, blue-winged teal, mallards and pheasants, and trapping for mink, muskrats, raccoons and beaver.

Annual Additional Benefits

1. Provide 500 days of other recreational and educational activities including nature study, sightseeing, berry and mushroom picking, photography, swimming, picnicking, bird watching, hiking and cross-country skiing.
2. Contribute to the habitat of native or migratory endangered and threatened species.
3. Benefit native or migrant nongame species.

RECOMMENDED MANAGEMENT AND DEVELOPMENT PROGRAM

The recommended management program for the Black Earth Creek Fishery Area, Dane County, will be the continued emphasis on land acquisition and stream habitat development. Acquisition from willing sellers will be confined mainly to a two to eight rod corridor along the stream, except where larger parcels only are available. These acquisition activities are necessary to realize the fishery potential of the project.

About 39.0 percent of the land proposed to be controlled by the State has been acquired to date (Figure 2). Attempts to acquire land along Black Earth and Garfoot Creeks have been difficult in recent years. Good progress has been made on tributary Vermont Creek in acquiring remnant acreage. About 85 percent of the privately owned lands within the boundary will require stream habitat development if they are acquired for optimum trout production. Approximately 20 additional parcels should be purchased, which may cost approximately \$500,000.

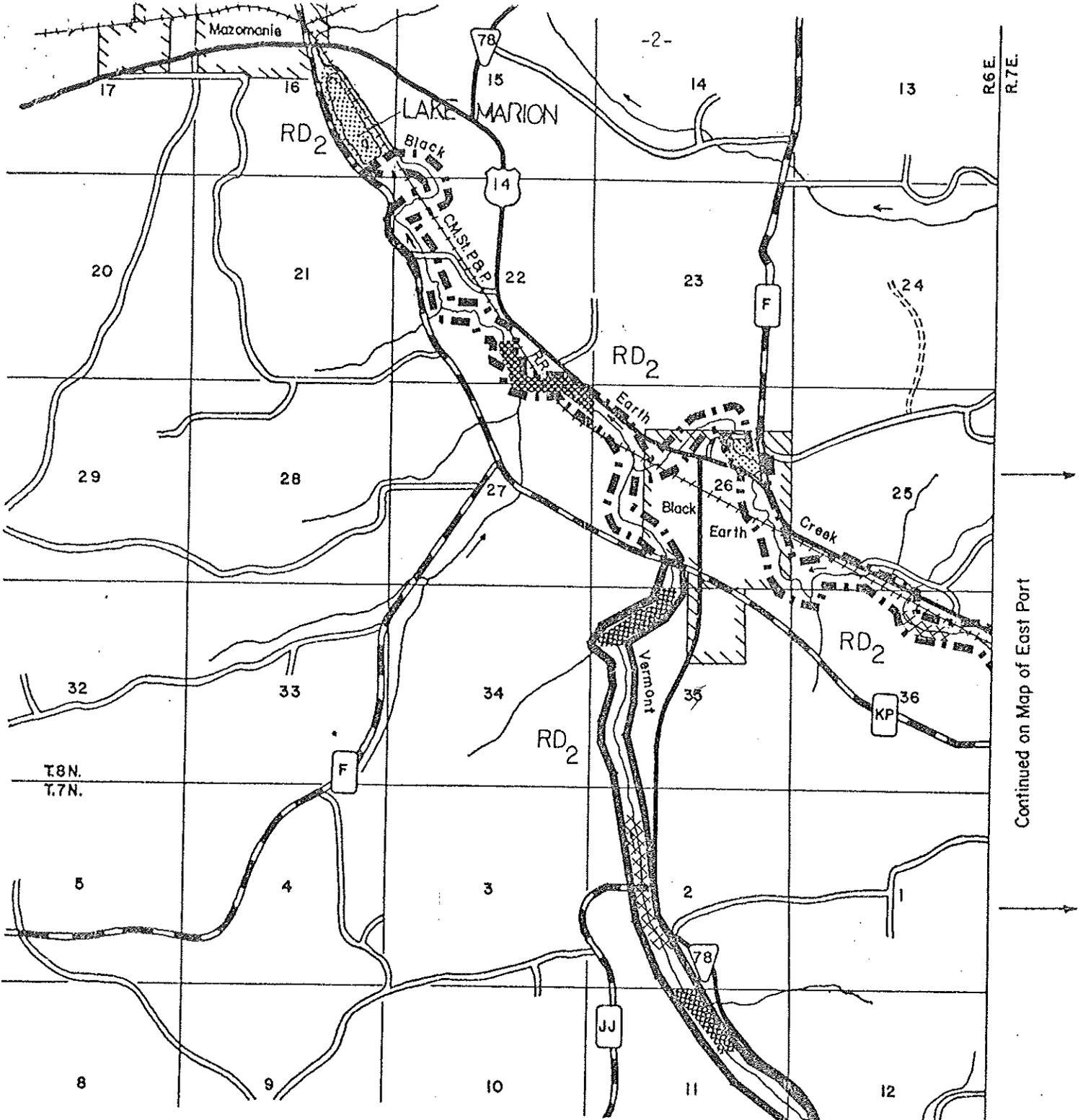
The task force recommends no change in the acreage goal of the fishery area, which will remain at 437.10 acres. However, two revisions of the boundary are recommended, expanding it to include the entire length of Vermont Creek, and the farthest upstream portion of Black Earth Creek (Figure 2).

Expanding the boundary to include Vermont Creek within the fishery area would require the transfer of 51.30 fee title and 6.52 perpetual easement Dane County remnant acres located on that stream to the fishery area. This would require adjusting the acreage remaining to be acquired in the Dane County remnant program and because it is not recommended to increase the Black Earth Creek fishery area acreage goal the acres remaining to be acquired in this fishery area would be reduced by 57.82 acres.

Currently, 132.02 fee title and 24.13 perpetual easement acres are state-owned. an additional 14.47 fee title acres will also have been acquired on the Haugen property by the date of the Secretary's approval. Thus, if the proposed expansion to include fishery owned lands on Vermont Creek is approved, 197.79 fee title and 30.65 perpetual easement acres will have been acquired, for a total of 228.44 acres (52.3 percent), leaving 208.66 acres yet to be acquired to complete the acreage goal.

Stream habitat development of stream banks presently in private ownership would require management practices that includes stabilization with rock rip-rap and seeding of permanent grasses, installing instream devices, fencing, constructing cattle crossings and floodgates if they are acquired (Figure 3). A cost of \$200,000 to \$300,000 will be needed to protect and adequately improve the lands proposed for acquisition. Selective vegetation control will be completed where needed to improve fishability and productivity. Wild brown trout production is high in the Class I upper portions of Black Earth and Garfoot Creeks (Figure 4). Aquatic production can be increased in the rest of the stream by judicious stocking of trout and through stream management activities.

One parking lot to accommodate 6-8 cars is planned at an estimated cost of \$800 for gravel and surfacing on Black Earth Creek. Additional walk-in access will be created as more stream frontage is acquired.



Continued on Map of East Part

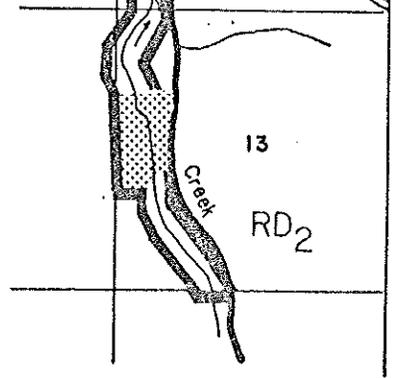
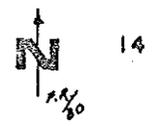
Black Earth Creek Fishery Area

(Map of West Part) Scale 1:4224

FIGURE 2a. PROPERTY OWNERSHIP AND LAND USE CLASSIFICATION MAP

LEGEND

- Property Boundary - - - - -
- Boundary Change - - - - -
- State Owned Land - - - - -
- Easement Property - - - - -
- Tracts Not Intended To Be Acquired - - - - -
- Fish + Wildlife Management Area - - - - - RD₂



R.6E.
R.7E.

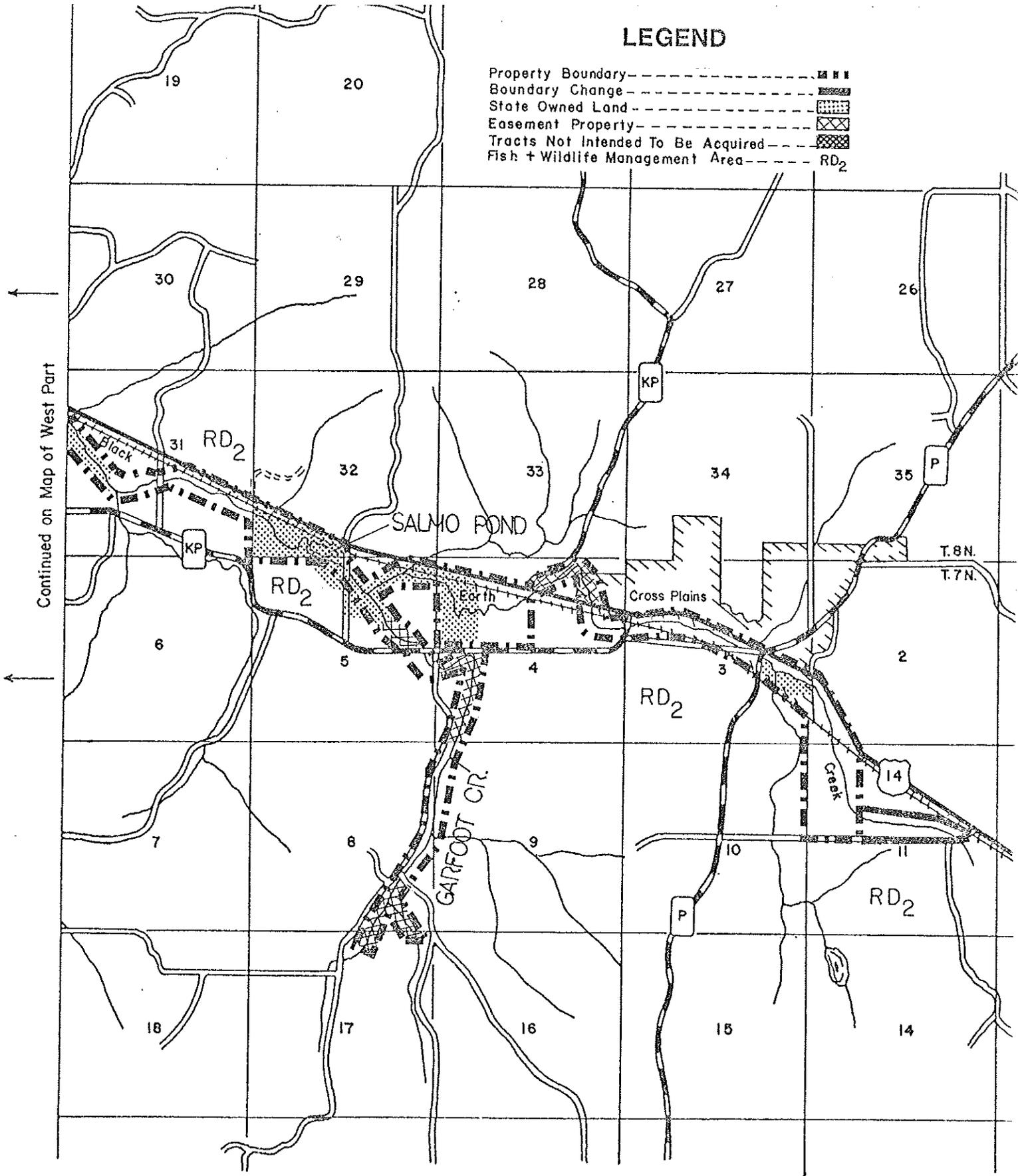
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Black Earth Creek Fishery Area

Scale 1:4224 -3- (Map of East Part)

FIGURE 2b. PROPERTY OWNERSHIP AND LAND USE CLASSIFICATION MAP



Gordon Heggsta, Chairman, Dane County Conservation Congress.

In regard to the Master Plan, I checked with the rest of the Dane County Congress delegates and they found no problems. I talked with the Dane County Conservation League and the Yahara Fishermen. I called Ron Ahner of Trout Unlimited and gave him a copy of the plan. He seemed rather uninterested and I felt that he inferred that Trout Unlimited could handle trout questions better than the Congress.

I attended the DNR meeting on the plan at Cross Plains. There several persons indicated that they favored a change in the trout harvest regulation. I informed them that I felt that the master plan was for the purpose of building and maintaining a fishery for the maximum production of fish and compatible game and vegetation. I informed them that the harvest was a regulatory thing and should be presented at the County Fish and Game hearings. I again asked if there were any objections to the master plan. No one had any so I told them I would recommend the plan to the Congress. At this time, Mr. Zimmerman said that he did not want to mislead me as they were preparing a letter that would come out later. Mr. Zimmerman did not say so, but I feel that he was speaking for Trout Unlimited. I told him that if I were to consider the letter, I would have to have it before June 5th. I have not received any letters. I hear through the grapevine that Trout Unlimited plans to circumvent the Congress and try to get in bed with the department fishery people to set aside three miles of Black Earth Creek and three miles of Vermont Creek. The purpose of this would be for fly fishing only. I told those at the meeting that I did not regard fishing regulations as part of the master plan and if they had any regulation changes in mind that, the proper place to present them was at the annual fish and game meeting and that if any attempt was made to avoid this that, the Dane County Delegation would be forced to oppose it and that we would urge the entire Congress to support us.

DNR response: There have been some preliminary proposals to establish fly fishing only areas on Black Earth and Mount Vernon (Not Vermont) Creeks. Before these could be established, it would be necessary to discuss the proposals at an appropriate Conservation Congress meeting.

DNR response: Agreed. Funding may be a problem.

3. Pages 9, 10, 11, and 12. Resource Capabilities and Inventory.

This heading also receives outstanding treatment, including unusual listings of some wildlife species.

- a) Wildlife, page 10. The statement that "there are no resident endangered species of mammals and birds" is premature and quite meaningless since inventories of both groups are scanty.

DNR response: Our data is based on the best information available. Ideally, endangered species status data should be obtained on all our properties.

- b) Water Resources, page 11. There is one piece of data that would be very helpful. WRAC made a judgment guess at the length of the state control of the 75.8 miles of the three streams in the fishery area. The Council suggests that this piece of pertinent data be revealed in this paragraph.

DNR response: About 9 miles of stream frontage is owned by DNR (%). Another 0.6 mile flowing thru Cross Plains is primarily park land.

4. Management Problems, Pages 12 and 13.

Like all of the headings of the Concept Element, this one is superb in the treatment of its material.

5. Page 13, Recreation Needs and Justification.

Considering the materials discussed under this heading, the WRAC recommends the insertion of "and Education" between the words "Recreation" and "Needs". This is another superbly handled heading.

DNR response: Do not agree. This is a standard heading for all Master Plans.

6. The charts labeled Figures 2a (page 3), 2b (page 4), 3a (page 5), 3b (page 6), 4a (page 7), and 4b (page 8) are excellent and correlate very well with the text.

7. Analysis of Alternatives

WRAC endorses the Enlargement of the Fishery Area Boundary alternative recommended by the Task Force. This alternative has all the desirable factors needed to achieve the stated goals, objectives and additional benefits of the fishery area. The Council recommends that the Natural Resources Board give its approval to this most astounding program.

Page 13. Regarding runoff. Recommend more DNR stream frontage to reduce feedlot runoff.

DNR response: Certainly more DNR ownership of the stream frontage would provide better control of feedlot runoff. Other financial incentives to the landowner are required before this problem can be resolved.

Page 15. How would the decrease in agricultural land be compensated for when this plan goes into effect?

DNR response: The decrease in agricultural land will be minimal even if the acreage goal is reached. The emphasis will be to acquire fish management easements which would range from 4 to 9 rods in width.

Henry W. Kolka, Chairperson, Wild Resources Advisory Council.

The Wild Resources Advisory Council is impressed with the professional talent exhibited by the Task Force of Clifford Brynildson, John Bergquist, Robert Weiss, John Daniel and Paul Pingrey in formulating the Black Earth Fishery Area Master Plan Concept Element. It is a remarkable management proposal.

General Review

The Wild Resources Advisory Council is impressed with the caliber of talent exhibited by planners in projecting future management for the Black Earth Creek Fishery Area, but even more important are the records of success achieved by past programs and existing ones. Actually, the achievements are even more remarkable when one considers that the managers control less than 40% of the stream threads and corridors (less than 40% control deducted from Figures 2a and 2b). Another remarkable fact is the concern exhibited by the Task Force for the multiple use of the corridor and quality of user aesthetics.

Comments and Recommendations

The copy reviewed had duplicates for pages one and two. WRAC responses are geared to page 2.

1. Page 2 Goals

WRAC considers the Goals, Annual Objectives and Annual Additional Benefits well expressed and very appropriate for Fishery Area. Council recommends one modification - the insertion of "and educational" between words "recreational" and "activities" in the Goals statement.

DNR response: Agreed

2. Pages 2 and 9. Recommended Management and Development Program.

This section receives top level treatment by the Task Force. It covers all bases for the establishment and maintenance of quality trout stream. Unfortunately, full materialization of these excellent practices is stymied by lack of full stream thread control.

WRAC disagrees with the statement made in the last paragraph, under the above heading (page 9). The Concept Element already contains a fair inventory of wildlife species; consequently, the Council recommends that instead of waiting for extra funds, the biological inventories be completed using professional help from the private sector and from the University.

T. J. Hart, Director, Bureau of Environmental Analysis and Review, Department of Transportation.

Re: Concept Element of the Master Plan for the Black Earth Creek Fishery Area

We have reviewed the above noted document and offer the following comments:

1. Much of the proposed new boundary for the Black Earth Creek Fishery Area is adjacent to State Trunk Highway (STH) 78 south of the Village of Black Earth. Though this section of STH 78 is not included in our current Six Year Highway Improvement Program, there is a need to improve a portion of this route at some future date which could involve the acquisition of right of way from the Fishery Area. We recommend that to lessen the potential for future complications, all new Fishery Area acquisitions, easements, public access points, and parking lots next to roads on the State Trunk Highway System (STH 78 & USH 14) should be coordinated with:

Transportation District #1
W. T. Wambach, Director
1317 Applegate Road
Madison, WI 53711
Telephone: (608) 266-1111

DNR response: Agreed.

2. New acquisitions, easements, public access points, and parking lots next to County Trunk Highways (CTH's) and township roads should be coordinated with the highway officials in those levels of government.

DNR response: Agreed. We have done this in the past.

Douglas R. West, U.S. Fish and Wildlife Service.

We concur with the written recommendations within the "Analysis of Alternatives" to enlarge the fishery area boundary and the addition of Vermont and upper Black Earth Creek areas. We also recommend any contiguous or adjacent wetlands, bogs or marshes be acquired to maintain or improve water quality and to provide wildlife habitat. Long term projected public use would, in our opinion, justify the acquisition of greater width of corridor where willing sellers are located; or the extension of corridors where willing sellers own tributary drains, gullies, draws, etc., beyond the present proposed boundaries.

DNR response: Each site would have to be evaluated on its own resource merit. Our first choice would be to acquire a narrower corridor so more stream frontage could be controlled relative to the limited acres available in the acreage goal. There will be exceptions when a wider corridor and other land features will be acquired.

Page 9. Salmo pond is scheduled to continue to be managed for trout and largemouth bass. They are competitive.

DNR response: The stocked brown trout provide a short duration fishery, normally over by the end of May. The bass provide most of the fishing until ice formation. The fish manager does not believe the competition is serious under these conditions.

meeting. The individual who brought the membership up to date on this very important matter, only by chance happened to get hold of a copy of the plan. Forty-eight hours later, Mr. Ronald Ahner, State Council Chairman, called me and informed me that Mr. Gordon Heggsta of the Conservation Congress was asking for his help in preparation of a response. To the best of my knowledge, no officer of the Chapter or Council received any notice of the plan, the contents of which is of great concern and interest. It is my hope that this break down in communications will be corrected in the near future by your staff, especially when proposed plans are directed toward the management of trout fisheries.

DNR comment: We are sorry that your organization has not received a copy of appropriate master plans. In the future, Mr. Ron Ahner, State Council Chairman of Trout Unlimited, will receive a 45 day review copy of each master plan relating to trout streams, and he will see that it reaches the appropriate chapter for comment. We hope this meets with your approval.

There are some minor points that you may wish to consider. Under the heading "Goals", it is our opinion that the consideration of "Quality fishing" should be included in your objectives. Rising costs of engine fuel and populations presently and in the future will set a higher value on quality as opposed to a minimum harvest size and number. Advocates of this view would be happy to sit down and discuss the terms and its implications with you.

DNR response: The word "Quality" could be inserted in the second objective preceding the word fishery or in the first objective preceding the word fishing. The latter probably would be the most appropriate.

I did learn from Cliff Brynildson at the public meeting, held in Cross Plains, why the Department preferred to purchase lands out right. However, the present economic signals that one reads and hears in the press and over the air would suggest that an alternative plan should be prepared, tested and made ready for the day if/when sources of present funding are ended.

DNR response: In the early 50's, 20 year leases were negotiated with many landowners owning frontage on Black Earth Creek. The Department in the 60's, especially fish management, recommended that more permanent equity be acquired because large expenditures would be made in habitat development in most cases. It is probable that short-term lease arrangements would never be satisfactory, even when funding is exhausted. Some type of a co-op arrangement that the Dane County Conservation League has would seem to work well in limited situations.

As I have told Cliff, recognizing that any management activity in the fishery area is labor intensive as well as expensive, alternate sources of volunteer help should be explored and exploited. The membership of T. U. is capable of providing assistance as evidenced in Columbia County on Rowan Creek and also on the Mt. Vernon where they have helped the DCCL. There are many other groups who are capable and willing to provide labor.

DNR response: We have utilized help from DCCL, T.U. and the Madison school program for years. We recently made a field inspection of Vermont and Garfoot Creeks with Bob Zimmerman, resulting in T.U. providing the manpower for two fencing projects.

Appendix - Master Plan Comments by Outside Reviewing Agencies.

Comments regarding the Black Earth Creek Fishery Area 45 day review copy of the master plan were received from a number of outside reviewing agencies. Their comments, and DNR responses where necessary, follow:

Forest Stearns, Chairman, Scientific Areas Preservation Council.

We have reviewed the Black Earth Creek Fishery Area Master Plan and have only one comment to offer regarding natural areas and scientific areas. On page 14, 2nd paragraph, a section of railroad grade is described which supports a fair quality prairie remnant including a population of glade mallow. This species is of considerable interest to University of Wisconsin plant taxonomists. We recommend that this section be classified as a public use natural area and managed to protect the prairie and glade mallow when acquired or sooner if feasible.

DNR response: Agreed. The topic was discussed with Cliff Germain of the Scientific Areas' staff.

Stanley A. Nichols, Wisconsin Geological and Natural History Survey.

No mention is made of managing for warmwater species, primarily smallmouth bass, in the section of the fishery area between Black Earth and Mazomanie.

DNR response: The status of the smallmouth bass in this reach of Black Earth Creek will continue to be monitored. Management measures are limited to selective stocking now, but stream habitat development can be initiated when equity in the stream frontage is attained.

Pg. 10 - Soils and geology section - after first paragraph add: "Adjacent to the stream are bodies of Orion, Otter and Elburn silt loams and alluvial land (wet, undifferentiated)."

DNR response: Agreed.

R. E. Zimmerman, Projects Chairman, Southern Wisconsin Chapter, Trout Unlimited.

As Projects Chairman of Southern Wisconsin Chapter of Trout Unlimited, I am sending you this letter in response to the public hearing and the printed material that has been prepared as a Master Plan for Black Earth Creek in Dane County. As a way of introduction, I would inform you that I am a member of the Southern Wisconsin Chapter of Trout Unlimited and the Dane County Conservation League.

Before commenting on the contents of the proposed plan, I wish to inform you that the package as set forth in your memo was first brought to the attention of the membership of T.U. on May 11th, the night of the monthly membership

A substantial increase in public stream frontage will be required to provide the demand for fishing in Black Earth, Vermont and Garfoot Creeks. The high production of wild brown trout plus the opportunity to catch large trout is a strong attraction to many fishermen.

A site located just east of Black Earth in the SW 1/4, SW 1/4, Section 25, and SE 1/4, SE 1/4, Section 26, T8N, R6E, where the Chicago, Milwaukee, St. Paul and Pacific railroad and Black Earth Creek come close has some good populations of prairie plants, especially Glade Mallow and other low prairie species. This site will be classified as a natural area by joint agreement of the Master Plan Task Force and Scientific Areas personnel of the Bureau of Research.

ANALYSIS OF ALTERNATIVES

Do Nothing

The stream environment would deteriorate with this alternative resulting in a loss of fish habitat and reduction in the quality of the trout fishery. Willows and box elders would eventually form a thick canopy blocking the sunlight and reducing accessibility to bait and fly fishing. Increased private development and cropping to the stream's edge would increase sedimentation and its harmful effects on trout spawning and aquatic insect production. With 7.8 miles of Class I trout water in the present and proposed fishery area, a comprehensive resource management plan that includes acquisition and habitat development is necessary.

Enlarge the Fishery Area Boundary

Enlargement of the property boundary is recommended as the plan of action to meet and protect the Black Earth Creek Fishery Area. The addition of Vermont Creek and upper Black Earth Creek would increase the property boundary significantly, and increases the probability that all the trout water in the watershed will be protected and managed in a similar manner. A more diversified resource is available for the public with 15 acres of upland hardwoods and evergreens present. Good protection of the stream resource could be realized if a corridor encompassing at least four rods on each side of the streams would be acquired. Intensive stream habitat development would be initiated on all newly acquired stream frontage needing improvement. Past habitat work would be maintained on an annual basis.

Expanding the property boundary to include more habitat for wildlife and space for public hunting is not being considered because of the expense involved.

Reduce the Size of the Fishery Area

Reducing the size of the boundary is not compatible with the goals and objectives set forth in the Master Plan. The present plan considers the minimum allowable acreage to obtain the maximum benefits.

Water Quality Problems

Sediment released into Black Earth Creek from housing developments in and to the east of Cross Plains, and from agricultural practices in the Brewery (Dry Run) Creek watershed have caused severe turbidity on occasion. Sedimentation is severe in Vermont Creek and is due to serious soil loss from poor land-use practices in the watershed. Poor quality effluent from the sewage plant in Cross Plains has resulted in serious trout mortalities during the period from 1963 to 1967. Considerable effort has been made by Cross Plains and the DNR to correct the problem and a more efficient plant is expected to go into operation during the summer of 1982.

The nutrient-rich effluent is instrumental in increasing aquatic production of Black Earth Creek below the sewage plant. Recent studies have shown that the diversity of aquatic insects and other macro-invertebrates in this portion of the stream is less than in previous years. The modified and improved sewage treatment plant should help to reduce this problem in the future. Control of upstream sedimentation will be more difficult to attain. Feed lot drainage also adds nutrients to an already fertile stream. Correcting any one of these problems will create a marked improvement in water quality, which in turn, will have a profound effect on improving the diversity of aquatic life in the streams.

Housing Encroachment

Local housing projects have increased in the last decade. Most of these are on the periphery of Cross Plains and Black Earth. Houses have been constructed along Black Earth Creek west of Cross Plains and additional construction can be expected.

Misuse by Recreational Vehicles

A potential problem exists from all-terrain and other four-wheel drive vehicles utilizing the larger tracts of state-owned property. A combination of posting and installing gates and a berm to discourage ORV misuse is recommended. Vehicular use distracts from any other management objective.

Runoff

Gravel deposits in the watershed are subject to commercial development. There is the possibility that wash water from these operations could contribute excess sediment to Black Earth Creek. Feedlot runoff is a difficult problem to control but one that could be dealt with more effectively if more of the stream frontage was under State ownership.

RECREATION NEEDS AND JUSTIFICATION

Class I trout streams are a limited resource in southern Wisconsin. Every effort should be made to protect the stream environment from further degradation by acquiring the available land within the boundary. Major State control of a corridor along Black Earth Creek Fishery Area will provide public access and an opportunity to enhance the stream environment by various habitat development measures.

The Black Earth Creek Fishery Area is located 14-25 miles from Madison in western Dane County. The stream is extremely popular, and it is not uncommon to count 20-35 cars along streamside roads and parking areas on an evening in May or June during mayfly hatches.

Dane County, and the eight counties that adjoin it had a combined 1980 population of 757,781 persons. The 1977 Wisconsin Outdoor Recreation Plan includes Dane County in its Planning Region 2 with Dodge, Jefferson, and Rock Counties. The region is highly urbanized. The 1974 population quoted in the Recreation Plan showed 149.7 people per square mile. The 1980 population has 157.0 people per square mile.

The plan supplies the following information pertaining to fishing within the region:

Supply. Surface water in Region 2 is well located in relation to population distribution. However, the density of users taxes the entire resource base, including the fishery. Region 2's per capita supply of surface water area is 55 percent of the state per capita average.

Demand. Regional resident fishing participation is only half of the State average and the preponderance of this activity takes place outside the region. Out-of-state residents fishing in the region exceed local participants by a 2 to 1 ratio.

Need. The problem of accommodating increased fishing participation can be solved by improving and increasing public access to the fishery (e.g., boat launching sites, improved transportation systems), by improving water quality and by improved and intensified fishery management techniques. To minimize the disparity between the supply and the demand for quality surface water resources in this region, governmental agencies must be committed to preserving land and river frontage wherever it is available.

Other potential uses of the Black Earth Creek Fishery Area are minimal compared to the trout fishing. Any hunting and cross-country skiing is restricted to the few state-owned parcels of one-half acres or more in size. One area of upland hardwoods bordering an evergreen plantation offers the best opportunity for hunting deer, squirrel and ruffed grouse.

Ownership

The present approved acreage goal of the fishery area is 437.10 acres. The State controls 170.62 acres of which 146.49 acres were acquired in fee title at a cost of \$125,636 and 24.13 acres in perpetual easement at a cost of \$25,783. A total of 44.05 remnant acres is state-owned in the Lake Marion rearing pond area just outside of the property boundary.

Current Use

The primary use of both the public and private portions of Black Earth Creek is trout fishing. Some waterfowl and pheasant hunting occurs along the stream, especially where State equity occurs. Individual trappers obtain rights to trap from landowners, except where the land is state-owned in fee title. The private lands surrounding Black Earth Creek are intensely farmed.

Land Use Potential

All of the lands within the existing and proposed fishery area boundaries are best suited for fish management and are designated on Figure 2 as RD₂-Fish and Wildlife Management. The boundaries and configuration will provide for only limited public hunting and wildlife habitat development. The creek provides habitat for waterfowl and aquatic furbearers and the brush margins provide critical wintering habitat for the limited pheasant population present. Upland site management within the area should be managed for nesting cover with this in mind, and therefore, these sites should be maintained in a high quality, permanent grass cover.

The greatest potential in terms of game species management and harvest lies with the furbearers that inhabit the area. That part of the corridor owned by the State in fee title can provide public trapping opportunities. The creek and its backwaters provide for good muskrat and mink habitat. Raccoons are often attracted to the creeks to feed. The State ownership should remain open to public trapping and any future easements should include the right of public trapping. The corridor is generally too narrow to include public hunting, although there are some opportunities for both waterfowl and pheasant hunting in the corridor.

Salmo Pond, inside the boundary, and Lake Marion, immediately adjacent to, but outside the boundary, have the potential to produce waterfowl in their current state. If either or both ponds are not needed for fish management during the spring, they could be drawn down so as to maintain an average water depth of less than 3 feet. These ponds would then provide brood habitat. These drawdowns should begin about the first of April and last until the first of September.

Because the streams within the fishery area include substantial Class I trout waters, Natural Resources Board policy requires that problem beaver populations be discouraged. Thus, when necessary, beaver will be live trapped or destroyed to protect the trout fishery.

The recreational potential of the Black Earth Creek Fishery Area is limited by the width of the average access corridor along the stream and the easement agreement with landowners which often restricts use to fishing activities. Other recreational and educational activities that coincide with the four to eight rod average width include hiking, nature study and bird watching. Cross-country skiing is restricted to the few larger areas within the existing boundaries.

Existing recreational facilities include community parks that border the stream in Cross Plains and Mazomanie and a community park in Black Earth. Mazomanie has an agreement with the Department and uses Lake Marion for fishing and ice skating as a part of their community park system. Festge County Park, operated by the Dane County Park Commission, is located just north of the stream and outside of the boundary off of Highway 14, between Cross Plains and Black Earth. This 70-acre facility offers picnic areas, shelter buildings, playground equipment, group camping, and cross-country ski trails.

MANAGEMENT PROBLEMS

Decreasing Public Access

The proximity of Black Earth, Garfoot and Vermont Creeks to large population centers and the high aquatic productivity of the streams attracts fishermen throughout the fishing season. The access from Highway 14 is good but there are key parcels that are privately owned. Much of the private lands on the upper half of Garfoot Creek are posted to prohibit fishing and hunting. An increase in posting of additional private stream frontage is anticipated in the future. Public access to Vermont Creek is confined to Highway JJ and fee title owned state lands in Section 13, T7N, R6E.

TABLE 1. Vegetation Types and Acreage of the Black Earth Creek Fishery Area, Dane County.

Vegetation Type	Acres
Walnut/Oak/Aspen	5
Red & White Pine/White Spruce	8
White Cedar	2
Willow/Box Elder	20
Wetlands	25
Lowland Grass	20
Permanent Pasture	242
Cultivated Fields	200
TOTAL	522

Endangered Species

No known endangered or threatened species of fish, amphibians, mollusks, mammals, birds, reptiles or wild plants are residents of this area.

Water Resources

Black Earth Creek originates in a marsh area but significant water recruitment does not occur until the Fred Festge springs enter the stream 0.5 mile east of Cross Plains. The total stream drains approximately 107 square miles. The total length of the streams within the fishery area is 18.2 miles as shown in Table 2 of which 9.0 miles of stream frontage is owned by the State. Water categories are shown in Figure 4. The mean gradient varies from 6.9 to 14.5 feet per mile. The water discharge for Black Earth Creek based on USGS data is 30.2 cfs (4.8-1750 cfs). The mean suspended sediment discharge per square mile was 74.3 tons during 1964-65. The water in the stream is alkaline with a pH of 8.0 and is very hard, with a methyl orange alkalinity reading of 293 ppm.

The portion of Black Earth Creek managed for trout extends from 0.5 mile east of Cross Plains to Vermont Creek. The substrate is primarily gravel-rubble and is rich in food organisms including mayfly, caddisfly and aquatic sowbugs. The pool-riffle ratio approaches 50% except in scattered reaches. Stream width of Black Earth Creek varies from 8-50 feet, averaging 20 feet. Garfoot Creek averages 6 feet in width and Vermont Creek 12 feet. Vermont Creek is characterized by more clay-silt bottom and less gradient.

Black Earth Creek has excellent water quality and natural reproduction and Garfoot Creek is also a source of high quality water and naturally reproduced trout. Vermont Creek has good water quality, but natural reproduction is limited by siltation and lack of gravelled spawning areas. Tables 2a and 2b show the lengths in miles of various trout water classifications on the fishery area.

TABLE 2a. Water Areas Within the Present Black Earth Creek Fishery Area, Dane County Boundary.

Name	Type of Water	County	Total Length Miles	Class I Miles	Class II Miles	Class III Miles	Acreage	Maximum Depth (Feet)
Black Earth Creek	Trout Stream	Dane	11.4	5.4	6.0			
Garfoot Creek	Trout Stream	Dane	3.8	1.8	2.0			
Black Earth Creek	Warmwater Stream	Dane	3.0				20.0	5.0 ft.
Salmo Pond	Trout & Bass Pond						4.0	13.0 ft.
TOTALS			18.2	7.2	8.0		24.0	

TABLE 2b. Water Areas Within the Proposed Expanded Boundary of the Black Earth Creek Fishery Area, Dane County.

Name	Type of Water	County	Total Length Miles	Class I Miles	Class II Miles	Class III Miles	Acreage	Maximum Depth (Feet)
Black Earth Creek	Trout Stream	Dane	0.6	0.6				
Vermont Creek	Trout Stream	Dane	7.0		5.0	2.0		
TOTALS			7.6	0.6	5.0	2.0		

Continual monitoring of water temperatures in Black Earth Creek for one year showed a temperature range between 34 to 70°F. Water temperatures are well suited for optimum trout production. Garfoot Creek has a similar water temperature profile. Vermont Creek temperatures tend to fluctuate from 32 to over 70°F.

Most of the stream banks are stable with grass, trees or brush providing support. There is bank and instream cover with the presence of undercuts, logs and aquatic vegetation.

Historical and Archaeological Features

One historical marker designating "Haneys Tavern" is located on Hwy. P, 1/4 mile south of the stream. The only archaeological sites presently identified in the area by the State Historical Society are: a prehistoric workshop located 0.5 mile south of Mazomanie in the SE 1/4 of Section 16, T8N, R6E; a campsite located in the NW 1/4 of Section 3, T7N, R7E; and a burial and two mounds located in the S 1/2 of Section 3, T7N, R7E. They will not be specifically marked to prevent vandalism.

Three mill dams were once located on Black Earth Creek. The one located in Cross Plains was removed in 1956 and the one above Black Earth in 1958. The removal of the dams improved the water quality of Black Earth Creek more than any other factor. The channelized stream above the dam in Cross Plains is still visible.

Soils and Geology

The Black Earth Creek drainage flows through outwash deposits west of the Johnstown moraine. These materials are rich in sand and gravel and groundwater discharge is high. Bedrock is a combination of upper Cambrian sandstone and Prairie du Chien dolomite. The weathering of these materials in combination with windblown loess has created clay-silt soil of the Knox moraine, Wabash and Waukesha series. These soils have been intensively farmed for over 100 years and they continue to produce high yields of grain and forage crops. Extensive gravel mining occurs east of Cross Plains. Adjacent to the stream are bodies of Orion, Otter and Elburn silt loams and Alluvial kind (wet, undifferentiated).

The Cross Plains Ice Age Trail, located 4 miles southeast of Cross Plains, was acquired by the State and will be utilized as a day use study of drumlins and other geologic formations.

Wildlife

Wildlife species that inhabit Black Earth Creek and its tributaries are white-tailed deer, cottontail, fox and gray squirrels, muskrat, mink, raccoon, mallards, blue-winged teal, pheasants and beaver. Bobwhite quail probably once inhabited the area but intensive agricultural practices were responsible for their demise.

There are stretches of creek that remain open in the winter and these areas have waterfowl, primarily mallards, using them throughout the winter.

Fish

Black Earth, Garfoot and Vermont Creeks, like most other coldwater streams in Wisconsin, once contained native brook trout. Newspaper records from 1904 describe the brook trout fishing. Brown and rainbow trout have been stocked for many years. Wild native brown trout comprise 100% of the trout above Salmo Pond in Black Earth Creek and the upper half of Garfoot Creek. Standing crops of 400 pounds/acre have been documented in Black Earth Creek. Stocked fingerlings are released in the lower reaches of both Black Earth and Garfoot Creeks. Yearling brown trout are stocked in Vermont Creek. Natural reproduction of brown trout occurs above, at and below Cross Plains.

In the most recent electrofishing survey of Black Earth Creek conducted August 31 to September 11, 1981, all of a 6.1 mile portion of stream traditionally surveyed was studied. The survey was made after the stream had been subjected to almost a full season of fishing pressure from May 2, 1981. The study showed a population estimate of 13,897 trout of which 8,797 were fingerlings, 2,088 were yearlings, and 3,012 were fish greater than Age 2. Considering all stations, the stream averaged 863 trout per acre, and 207.7 pounds per acre. The trout captured ranged from 2.2 to 22.4 inches in length.

Large populations of white suckers inhabit Black Earth Creek. Portions of the population are removed each time an electrofishing survey is conducted. The suckers are given to people requesting them. Mottled sculpins are common. Other fish species identified are northern creek chub, common shiner, largemouth and smallmouth bass, grass pickerel, burbot, carp, bluntnose shiner, black bullheads and green sunfish.

Vegetative Cover

A great variety of vegetative cover types exist on the area. Grass marsh dominated by seed carrying sedges and miscellaneous forbs dominate the upper reaches. Scattered willows, box elder, red osier and wild plum grow along the remainder of the stream. White cedars were planted by the state along selected reaches of both Black Earth and Garfoot Creeks in the early 1950's. Corn and hayfields interspersed with pasture border the stream except where dwellings and state-owned land occur.

Table 1 shows specific cover types and Figure 4 details the locations of major cover types.

Wildlife management practices will be limited to the few larger tracts of state-owned land within the boundary. Lake Marion, which is immediately outside of the boundary on state-owned land, can be managed to be of value to wildlife of the fishery area. The demand for trapping muskrat and mink is strong. Wildlife management and law enforcement personnel will cooperate in controlling problem beaver. No major shrub plantings are anticipated, as berry and seed producing plants grow naturally along the stream corridor.

Salmo Pond will continue to be managed for trout and largemouth bass. The Dane County Parks Commission now administers that body of water and the management of the fishery will not be affected.

All areas proposed for development will be examined for the presence of endangered and threatened wild animals and plants. If listed species are found, development will be suspended until the District Endangered and Nongame Species Coordinator is consulted, the site evaluated, and appropriate protective measures taken.

A complete biological inventory of the property will be conducted as funds permit or when professional help from the private and academic community is available. Additional property objectives may be developed following completion of such an inventory.

SECTION II - SUPPORT DATA

BACKGROUND INFORMATION

The Black Earth Creek Fishery Area located in south central Wisconsin in western Dane County (Figure 1) has long been recognized as one of the most productive wild brown trout streams in Wisconsin. The presence of such a self-sustaining trout fishery located near a large population center (Madison) accentuates the need to obtain additional land control for the most efficient management and protection of the resource. The fishery area presently extends from 0.5 mile east and south of Cross Plains to Lake Marion, east of the Village of Mazomanie. References to Garfoot Creek, which enters Black Earth Creek 350 yards upstream from Salmo Pond, and Vermont Creek are also included in the master plan.

A comprehensive resource management program for the stream that included land acquisition, watershed protection and habitat development was initiated in 1949. That portion of Black Earth Creek from Cross Plains to five miles downstream (SW 1/4, Section 32, T8N, R7E) was also selected for a demonstration area for stream habitat improvement in 1949.

The original land acquisition goal was 156 acres with 13 miles of stream. The acreage goal was approved and revised to 437.10 acres by the Wisconsin Conservation Commission in 1959. The first type of land control was the 20-year lease and by August, 1951, 8 leases with 7 landowners were in effect. Some of the leases were eventually converted to permanent equity by perpetual easements and fee title. Currently, the State owns 170.62 acres in fee title acquired from 15 landowners on Black Earth and Garfoot Creeks. An additional 57.82 remnant acres acquired from 4 landowners are state-owned on Vermont Creek (Figure 2), outside of the present approved boundary.

Stream habitat development completed in the past includes constructed instream devices, selective vegetation removal, seeding, placing of rock rip-rap (bank stabilization), fencing and building cattle crossings with floodgates. The most recent project on Garfoot Creek was financed with trout stamp funds (Figure 3). The stream habitat improvement shown on Vermont Creek outside of the present boundary was constructed on state-owned remnant acres.

Trout management, based on trout population electrofishing studies, has altered stocking procedures markedly. Yearling brown and rainbow trout that were stocked throughout the Black Earth Creek system in the past have been replaced by the stocking of fingerling and yearling brown trout only in Garfoot and Vermont Creeks. Natural reproduction of brown trout is excellent above Salmo Pond. Standing crops of 400 pounds per acre of wild brown trout have been recorded west of Cross Plains. Fishing pressure remains heavy throughout the fishing season and seven parking or public access areas have been developed to accommodate anglers.

RESOURCE CAPABILITIES AND INVENTORY

Black Earth Creek originates west of Middleton and flows west to the Wisconsin River, a major tributary of the Mississippi River. The stream becomes trout water where the major spring complex on the Fred Festge farm, 0.5 mile east of Cross Plains, occurs. The combination of ample groundwater, a predominantly gravel-rubble substrate for spawning which also supports a diversified aquatic insect population, good gradient, and an ideal pool-riffle ratio makes Black Earth Creek Fishery and its tributaries an excellent trout resource.

The Black Earth Creek valley supports numerous productive farm operations. Dairying and crop production are the most prevalent. The soils, except in the headwaters, are well drained and of clay-silt texture. The adjacent steep-sided hills called "goat prairies" are characterized by red cedar and juniper and an understory of prairie grass and forbs including big and little blue stem, grama grass, lead-plant, thimbleweed and prairie clover. Other uplands support red, white and bur oak and associated deciduous hardwoods, i.e., shag-bark hickory, aspen, white birch and black cherry.

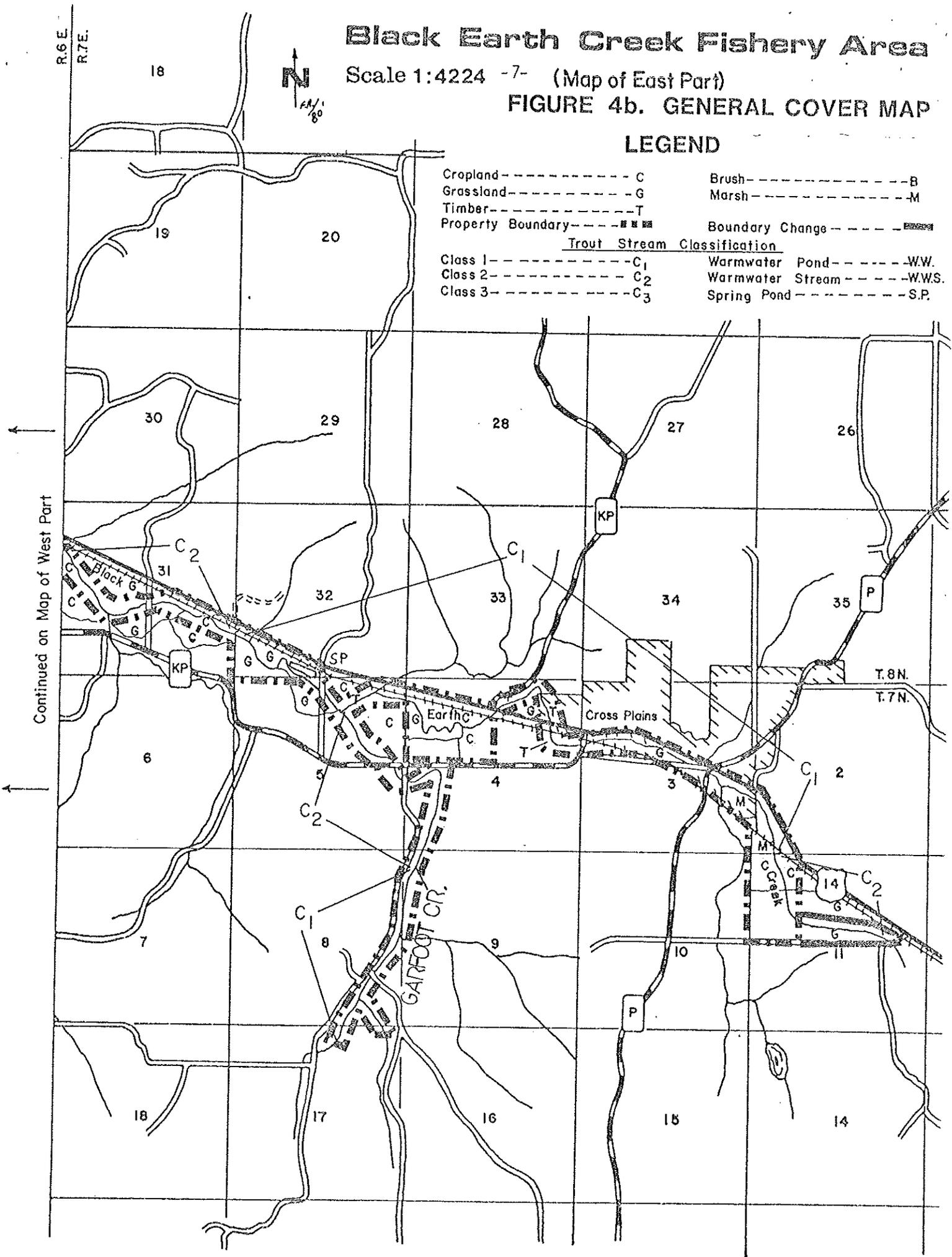
Black Earth Creek Fishery Area

Scale 1:4224 -7- (Map of East Part)

FIGURE 4b. GENERAL COVER MAP

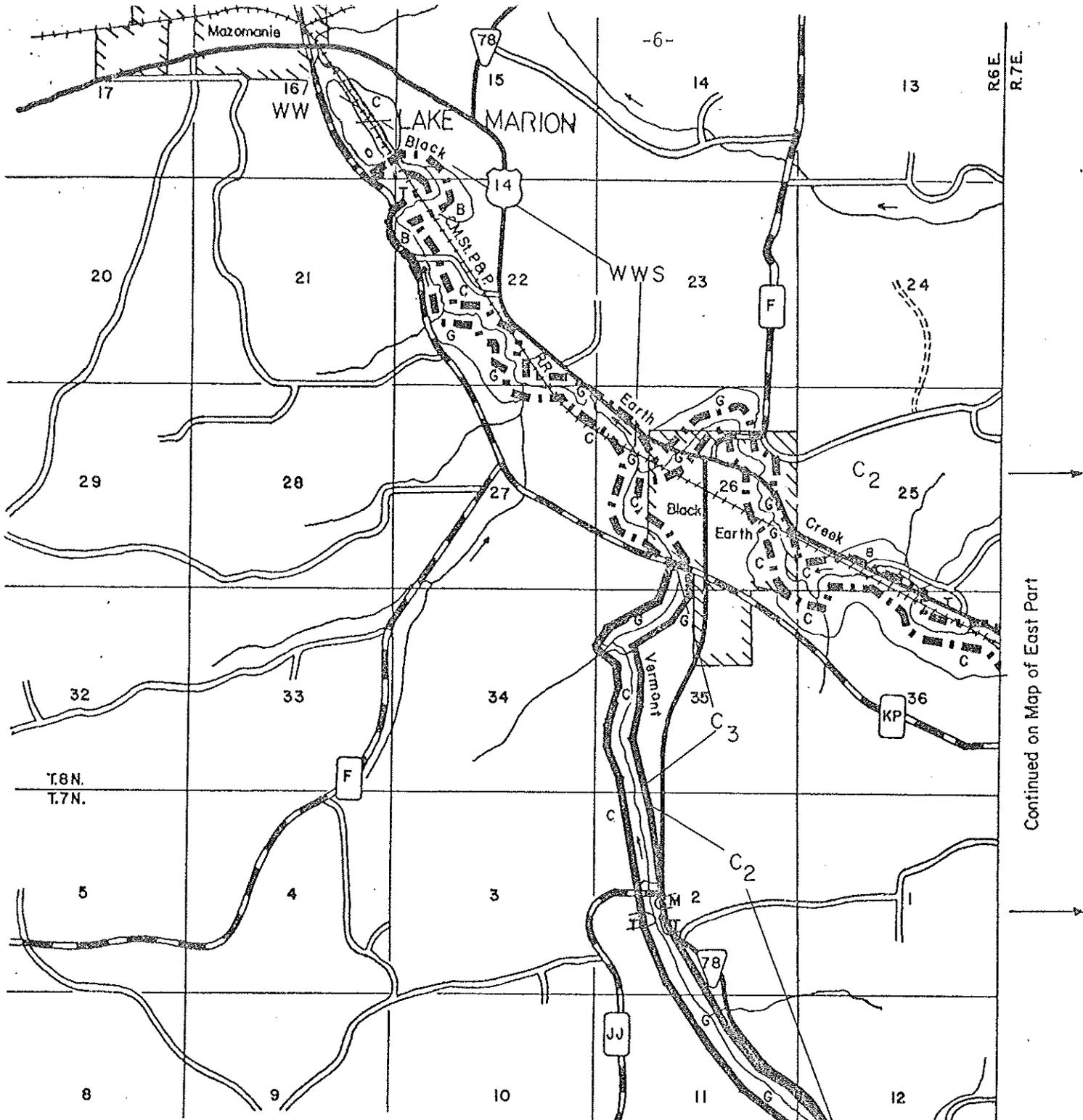
LEGEND

Cropland-----C	Brush-----B
Grassland-----G	Marsh-----M
Timber-----T	Boundary Change-----
Property Boundary-----	
<u>Trout Stream Classification</u>	
Class 1-----C ₁	Warmwater Pond-----W.W.
Class 2-----C ₂	Warmwater Stream-----W.W.S.
Class 3-----C ₃	Spring Pond-----S.P.



Continued on Map of West Part



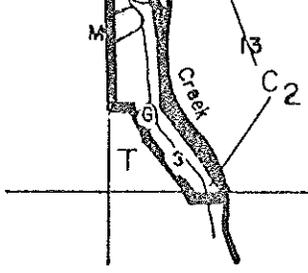


Continued on Map of East Part

Black Earth Creek Fishery Area
 (Map of West Part) Scale 1:4224
FIGURE 4a. GENERAL COVER MAP

LEGEND

- | | |
|------------------------------------|-----------------------------|
| Cropland-----C | Brush-----B |
| Grassland-----G | Marsh-----M |
| Timber-----T | |
| Property Boundary----- | Boundary Change----- |
| Trout Stream Classification | |
| Class 1-----C ₁ | Warmwater Pond-----W.W. |
| Class 2-----C ₂ | Warmwater Stream-----W.W.S. |
| Class 3-----C ₃ | Spring Pond-----S.P. |



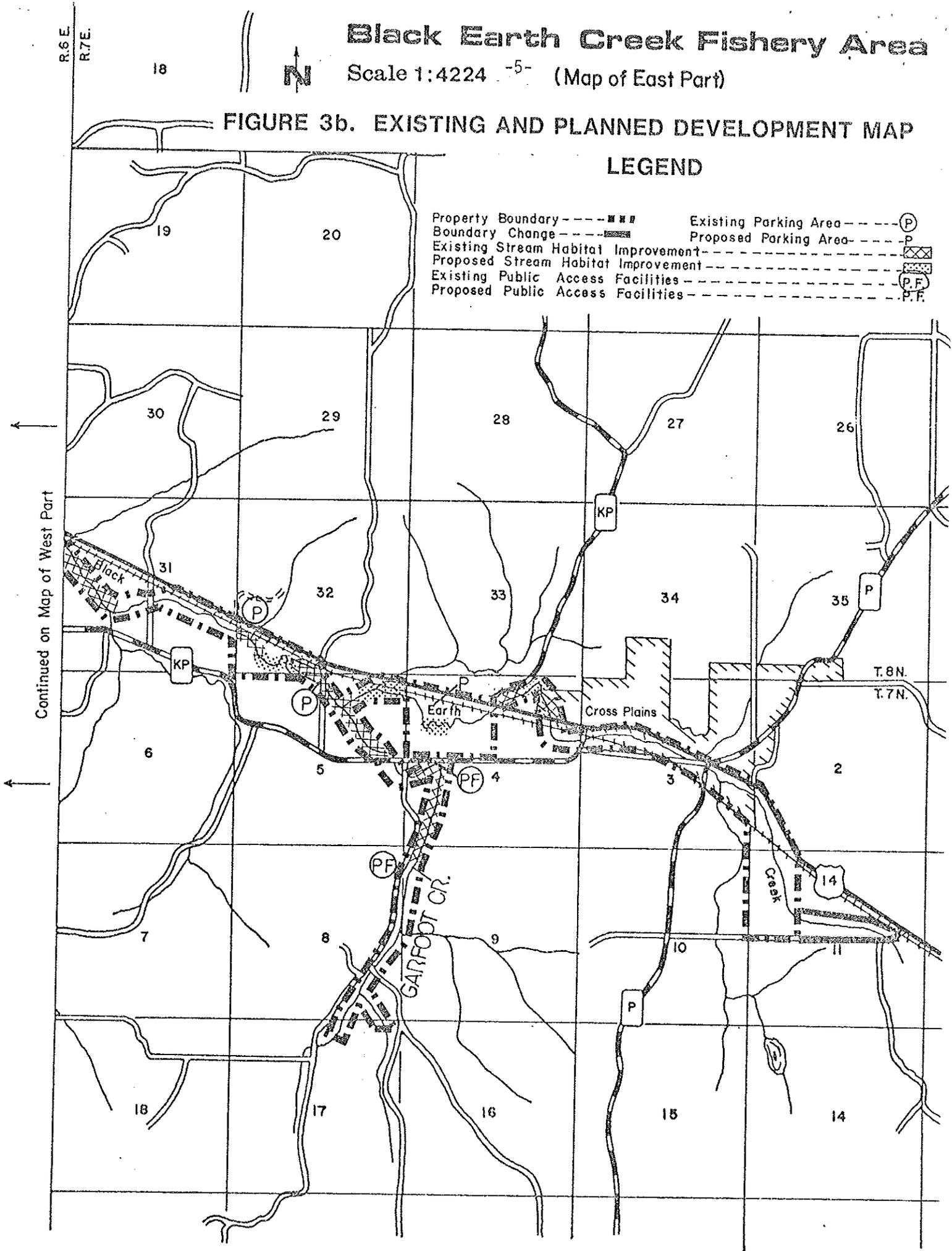
Black Earth Creek Fishery Area

Scale 1:4224 -5- (Map of East Part)

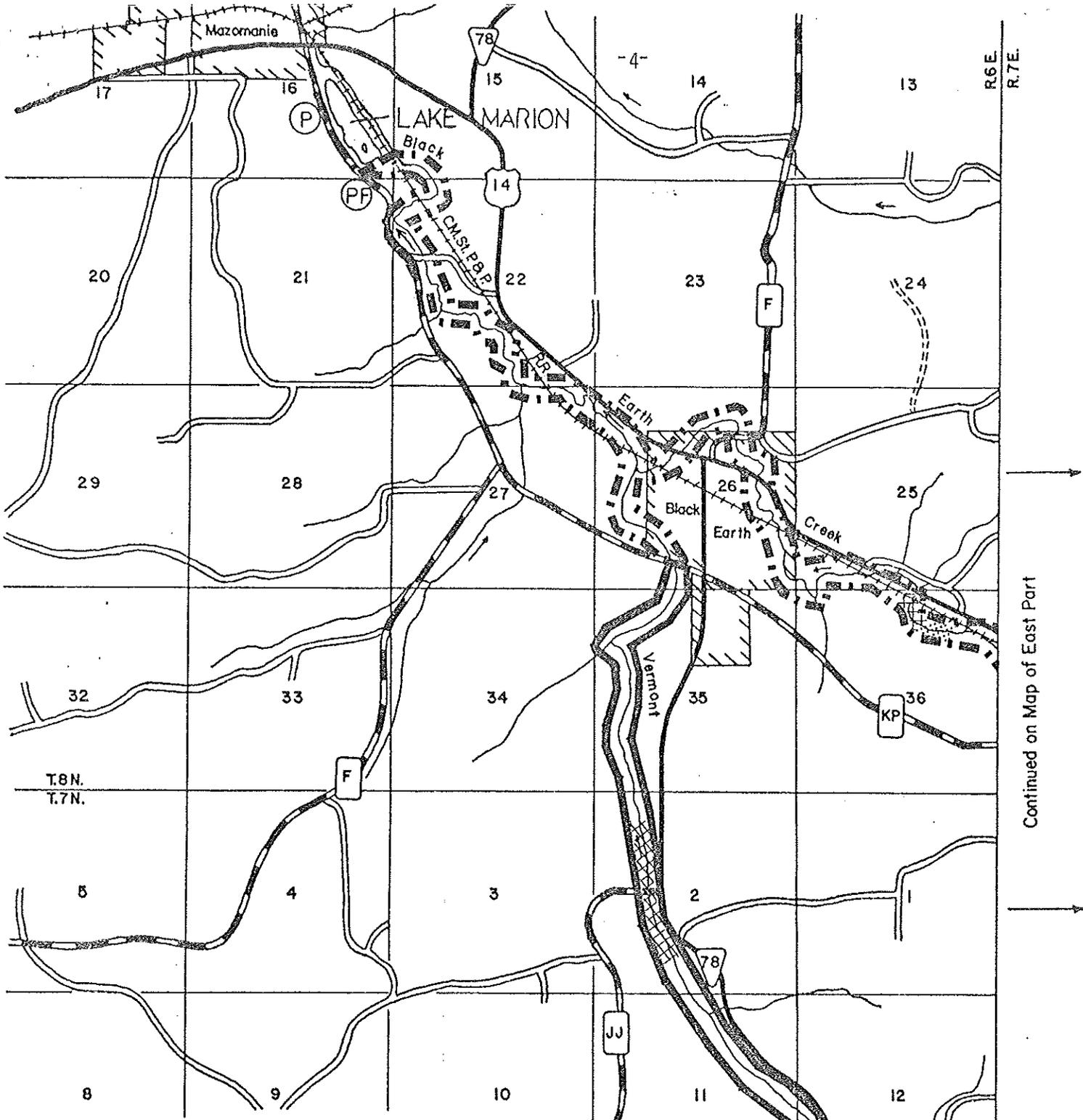
FIGURE 3b. EXISTING AND PLANNED DEVELOPMENT MAP

LEGEND

- | | | | |
|-------------------------------------|--------|-----------------------------------|--------|
| Property Boundary | -----■ | Existing Parking Area | -----Ⓟ |
| Boundary Change | -----■ | Proposed Parking Area | -----Ⓟ |
| Existing Stream Habitat Improvement | -----■ | Existing Public Access Facilities | -----Ⓟ |
| Proposed Stream Habitat Improvement | -----■ | Proposed Public Access Facilities | -----Ⓟ |



Continued on Map of West Part



Continued on Map of East Part

Black Earth Creek Fishery Area

(Map of West Part)

Scale 1:4224

FIGURE 3a. EXISTING PLANNED DEVELOPMENT MAP

LEGEND

- | | | | |
|-------------------------------------|--------|-----------------------|--------|
| Property Boundary | -----■ | Existing Parking Area | -----○ |
| Boundary Change | -----■ | Proposed Parking Area | -----○ |
| Existing Stream Habitat Improvement | ----- | | |
| Proposed Stream Habitat Improvement | ----- | | |
| Existing Public Access Facilities | -----○ | | |
| Proposed Public Access Facilities | -----○ | | |

