EXHIBIT A

SWIFT CREEK LAND MANAGEMENT PLAN

COMPETING OBJECTIVES

It is believed that there are two competing objectives which affect land use patterns and development standards within the Swift Creek watershed; the protection of water quality, and the logical extension of urban development.

LEVEL OF WATER QUALITY PROTECTION

A request has been made by the City of Raleigh to NRCD-DEM to designate the Swift Creek Watershed as a WS-II watershed. The practical result of this designation would be that the State would prohibit industrial wastewater discharges into the watershed. In order to attain the WS-II designation, each local government involved would need to adopt appropriate water quality protection measures through a land management plan and implementing ordinances.

URBAN DENSITIES

Delineation of the Watershed

The Swift Creek watershed, located in southern Wake County, is comprised of approximately 40,174 acres. Lakes Benson and Wheeler are the primary bodies of water within the watershed. Local governments have jurisdiction in the watershed as follows (refer to Map A, Jurisdictions within Swift Creek Watershed):

Apex	1,976 acres	5%
Cary	11,126 acres	28%
Garner	7,071 acres	18%
Raleigh	3,290 acres	8%
Wake County	16,771 acres	41%
TOTAL	40,174 acres	100%

Approximately 59% of the watershed is within municipal jurisdictions. In addition, expansion within the watershed is planned by municipalities. Cary and Garner plan to extend their jurisdictional boundaries southward through the Swift Creek watershed. Cary is constructing a wastewater treatment plant in the Middle Creek watershed, and will run wastewater lines from their Middle Creek treatment plant through the Swift Creek watershed to provide service to Cary. Garner also plans to run wastewater trunk lines through the Swift Creek watershed critical area (defined below) in order to provide services to an area in the non-critical portion (defined below) of the watershed on the south side of Swift Creek.

Given municipal interest in the area, the committee studied whether residential development greater than one dwelling unit per acre, with greater than 12% impervious surface area, and non-residential development should be recommended in the non-critical area of the

watershed, subject to land use regulations designed to protect the quality of the water.

DEVELOPMENT REGULATIONS

Definition of Critical Area and Stream Buffers

For a water supply watershed WS-II classification, the following minimum critical areas and stream buffers are proposed for the Swift Creek watershed (refer to Map B):

AREA OF WATERSHED	MINIMUM CRITICAL AREA WIDTH	MINIMUM VEGETATIVE BUFFER WIDTH
Lake Benson	North side 2000 feet, south side 2640 feet measured from lake conservation pool level	100 feet measured from lake conservation pool level
Swift Creek between Lakes Benson and Wheeler	500 ft from the center of creek along both sides of creek	100 ft measured from creek bank
Lake Wheeler	1000 ft measured from lake conservation pool level	100 ft measured from lake conservation pool level
Swift Creek upstream of Lake Wheeler	500 ft from the center of creek along both sides of creek above Lake Wheeler to Holly Springs Rd. (S.R 1152)	50 ft measured from creek bank
Little Swift Creek (LSC) and Yates Mill Creek (YMC)	none	100 ft measured from creek bank, measured to Yates Mill Pond Dam for YMC, and measured to the dam located southeast of S.R. 1371 and S.R. 1152 for LSC
Drainageways	none	0 ft if area drained is less than 5 acres, 25 ft if 5 to less than 25 acres, 50 ft if 25 or more acres; measured from creek bank or center of a drainageway

Performance Standards

Table 1, on page #, summarizes minimum performance standards which could be applied to the entire watershed and are designed, with appropriate development densities and stream and vegetative buffers, to attain a WS-II classification. These standards are recommended to be applied to new development throughout the watershed. They are not proposed to affect existing or already approved development. The proposed impervious surface limit is 6% in the critical area and 12% in the non-critical area for areas without stormwater control measures. The proposed maximum impervious surface limit is 30% except for those areas designated as: (a) critical: urban limited residential, or (b) non-critical: new urban residential and non-residential, or existing urban (refer to Table 1). It should be noted that stormwater impoundments are required when proposed impervious surface limits exceed 6% in the critical area and 12% in the non-critical area, and that as the amount of impervious surface increases, the size of the proposed impoundment must also increase. All impoundments are proposed to be constructed according to DEM standards. It is believed that private maintenance of impoundments is sufficient to maintain water quality protection, but that periodic public inspection according to DEM guidelines should be required to monitor impoundment effectiveness, and that public maintenance should be required when private maintenance fails.

As a further enhancement of water quality protection, it is also proposed that point source discharges be prohibited within the watershed. A WS-II classification would prohibit industrial discharges within the watershed. The performance standards in Table 1 would also require domestic dischargers, such as public and community sewer systems, to pump their effluent out of the watershed. It should also be noted that in the critical portion of the watershed public sewer is required for limited residential uses which exceed an impervious surface ratio of 6%. In addition, in the non-critical portion of the watershed public sewer is proposed to be required for residential and non-residential uses which exceed an impervious surface ratio of 12%. These requirements for public sewer would need to be implemented and enforced by local governments through local ordinances.

LAND USES

Existing Land Use Patterns

The existing land use patterns were identified and mapped for each local government jurisdiction in the watershed (refer to Map C, Existing Land Use Patterns, Swift Creek Watershed). In general it was found that the highest intensity of land use in the watershed is north of Lake Benson, within Garner's jurisdiction, and in areas west of Holly Springs Road within Apex's and Cary's jurisdictions. These areas were developed primarily for small lot residential uses, but also have some business

TABLE 1

RECOMMENDED PERFORMANCE STANDARDS
SWIFT CREEK WATERSHED

STANDARDS	AREA									
	CRITICAL		NON-CRITICAL							
	RURAL * LTD. RES.	URBAN * LTD. RES.	RURAL RESIDENTIAL	RURAL NON-RES.	SUBURBAN-NEW RESIDENTIAL	SUBURBAN-NEW NON-RES.	URBAN-NEW RESIDENTIAL	URBAN-NEW NON-RES	EXISTING URBAN RES.& NON-RES.	
MAXIMUM DENSITY	.5 DU/AC	2.5 DU/AC	1 DU/AC	N/A	2.5DU/AC	N/A	6 DU/AC EAST OF HOLLY SPRINGS REALIGN EXCEPT 6DU/AC WEST OF HOLLY SPRINGS RD	N/A	RES.-CONTROLLED BY UNDERLY. ZON. NON-RES.-N/A	
IMPERVIOUS SURFACE LIMIT	6%	6% \1	12% \2	12% \2	12% \3	12% \3	12% \4	12% \4	12% \4	
IMPOUNDMENTS AND MAINTENANCE \5	ALLOWED	REQUIRED IF OVER 6% IMPERVIOUS, PUBLICLY OWN & MAINTAINED	REQUIRED IF OVER 12% IMPERVIOUS, PBL. OR PRV. MAINTAINED	REQUIRED IF OVER 12% IMPERVIOUS, PBL. OR PRV. MAINTAINED	REQUIRED IF OVER 12% IMPERVIOUS, PBL. OR PRV. MAINTAINED	REQUIRED IF OVER 12% IMPERVIOUS, PBL. OR PRV. MAINTAINED	REQUIRED IF OVER 12% IMPERVIOUS, PBL. OR PRV. MAINTAINED	REQUIRED IF OVER 12% IMPERVIOUS, PBL. OR PRV. MAINTAINED	REQD.IF OVER 12% IMPERVIOUS PBL. OR PRV. MTND.	
MUNICIPAL SEWER \6	PRO- HIBITED \7	REQUIRED IF OVER 6% IMPERVIOUS	PROHIBITED \7	PROHIBITED \7	REQUIRED IF OVER 12% IMPERVIOUS	REQUIRED IF OVER 12% IMPERVIOUS	REQUIRED IF OVER 12% IMPERVIOUS	REQUIRED IF OVER 12% IMPERVIOUS	REQUIRED IF OVER 12% IMPERVIOUS	
PRIVATE SEWER \6	PRO- HIBITED	PROHIBITED	ALLOWED	ALLOWED	ALLOWED IF UNDER 12%	ALLOWED IF UNDER 12%	ALLOWED IF UNDER 12%	ALLOWED IF UNDER 12%	ALLOWED IF UNDER 12%	

1/ LIMIT MAY BE INCREASED TO 35%, PROVIDED FIRST 1" OF RAINFALL RUNOFF IS RETAINED
2/ LIMIT MAY BE INCREASED TO 30%, PROVIDED THAT FIRST 1/2" OF RAINFALL RUNOFF IS RETAINED
3/ LIMIT MAY BE INCREASED TO 30%, PROVIDED THAT FIRST 1" OF RAINFALL RUNOFF IS RETAINED
4/ LIMIT MAY BE INCREASED TO 30% AND 70% PROVIDED THAT FIRST 1/2" OR 1" OF RAINFALL RUNOFF IS RETAINED, RESPECTIVELY
5/ REFER TO MINIMUM STATE CONSTRUCTION STANDARDS AND INSPECTION REQUIREMENTS
6/ POINT SOURCE DISCHARGE IS PROHIBITED IN BASIN
7/ MUNICIPAL SEWER IS ALLOWED TO PROTECT PUBLIC HEALTH WHEN PRIVATE SYSTEMS FAIL EXCEPT AS PROVIDED UNDER ISSUES FOR ADDITIONAL STUDY

* LIMITED RESIDENTIAL USES EXCLUDE INSTITUTIONAL USES SUCH AS COLLEGES, SCHOOLS, PUBLIC LIBRARIES, MUSEUMS AND ART GALLERIES

c:\js\stdyarea/swifter2

and commercial uses. The lowest intensity of land use in the watershed surrounds Lake Wheeler and the south side of Lake Benson, and is in Wake County's jurisdiction. This area is zoned by Wake County to allow about one dwelling unit per two acres in the critical area (defined by the County as the area within 1,200 feet of Lakes Benson and Wheeler, measured from the lake conservation pool level, and within 600 feet of Swift Creek between the two lakes and upstream of Lake Wheeler, measured from the floodway center), and about one dwelling unit per acre in the non-critical area. Much of this area is undeveloped. Most of the remainder of the watershed, the areas north and west of Holly Springs

Road, are developed at a residential density averaging 2.5 dwelling units per acre, and at an impervious surface area of approximately 30%. The exceptions are those central portions of Cary which exceed 2.5 dwelling units per acre and have no impervious surface limit. Although some existing development has been constructed to a 30% or greater impervious surface level, Cary staff estimates that existing impoundments and lakes meet the size requirements for collecting stormwater runoff as recommended by DEM. Therefore, Cary staff estimates that these areas were developed in a manner which could meet recommended water quality protection measures.

Potential Future Land Use Patterns

The scenario outlined below represents the potential future land use pattern of the Swift Creek watershed as municipal jurisdictions expand. Differences among land use patterns reflect the extent of planned water and sewer line extensions into the watershed. In general, Apex, Cary and Garner plan to extend sewer trunk lines in the watershed, which could create the potential for urban development. Raleigh and Wake County do not plan to extend sewer trunk lines in the watershed.

The general land use patterns in the scenario, and the recommended performance standards described in Table 1, are designed to enable the Swift Creek watershed to attain a WS-II classification. It should be noted that the checkered areas on Map D represent areas which were developed prior to the establishment of water quality protection standards, and may not meet the standards proposed in Table 1.

The performance standards discussed in Table 1 above, are recommended to be applied to the scenario discussed below.

Land Use Scenario

Vegetative Buffers

Vegetative buffers would be maintained along all streams which drain into Swift Creek, and Lakes Wheeler and Benson. DEM requires that vegetative buffers be maintained for water quality protection to attain

a WS-II classification. These buffers would remain undisturbed so that they could function to filter stormwater runoff.

Critical Area

Limited residential development would be permitted within the critical area of the watershed. Limited residential development would prohibit institutional uses such as colleges, places of worship, schools, public libraries and museums, and art galleries. In order to curb the potential for future urban development in the critical portion of the watershed, public sewer trunk line tap-ons also would be prohibited in the critical area.

Garner and Wake County are the only local governments which maintain jurisdiction in the critical area of the Swift Creek watershed as defined in this report. A portion of Garner's jurisdiction within the critical area of the watershed is already developed to urban residential densities, and part of this area was developed prior to the establishment of water quality protection standards. For the undeveloped remainder of the critical area within Garner's jurisdiction, Garner allows only limited residential, agricultural, recreational and public uses, and enforces watershed protection standards which fall within DEM's guidelines for adequate water quality protection. In order to allow development patterns in the undeveloped portion of Garner's jurisdiction within the critical area to be consistent with previous development in that area, limited residential uses at a maximum density of 2.5 dwelling units per acre with an impervious surface ratio of over 6% but no greater than 35% would be allowed provided the first 1 inch of runoff is captured and public sewer is provided.

The portion of the critical area located within Wake County's jurisdiction is partially developed to a maximum density of 0.5 dwelling units per acre with limited residential uses (prohibiting all commercial and institutional uses other than recreational uses). Because Wake County's, like Garner's, portion of the critical area is adjacent to the water take-out point, but unlike Garner's remains largely undeveloped, this area would be maintained at a maximum residential density of 0.5 dwelling units per acre, yielding an impervious surface ratio of about 6%.

Non-Critical Area: Current Jurisdictions

The area east of Lake Wheeler Road is within Garner's, Raleigh's and Wake County's jurisdictions. Much of the area within Garner's jurisdiction was developed prior to the establishment of water quality protection measures. However, Garner requires that water quality protection measures be met for all new development in the watershed. For a portion of those undeveloped areas in the watershed at the intersection of S.R. 1010 and U.S. 401, and at the intersection of U.S. 401 and the proposed Vandora Springs Road extension, Garner plans to allow residential development densities of up to 6 dwelling units per

acre. The areas which are planned to be maintained at a maximum density of 1 dwelling unit per acre are the portion of the NCSU Research Farm designated as major open space, and those areas east of and adjacent to the NCSU Research Farm, and between Lake Benson and N.C. 50.

For the portion of Raleigh's jurisdiction within the watershed east of Lake Wheeler Road, residential use densities of up to 6 dwelling units per acre are proposed. New urban areas are proposed in the area south of Tryon Road and east of the NCSU Research Farm adjacent to existing developed urban areas where public utilities exist or can be easily extended. The remainder of this area is planned to be maintained as major open space or to be developed to a maximum residential density of 1 dwelling unit per acre. It should be noted that some of the area east of Lake Wheeler Road within Raleigh's jurisdiction was developed prior to watershed protection standards.

The majority of the area east of Lake Wheeler Road within Wake County's jurisdiction is designated as rural residential which allows for a maximum density of up to 1 dwelling unit per acre. However, a portion of this area north of Swift Creek was developed with non-residential uses prior to the establishment of water quality protection standards.

Within the non-critical portion of the watershed east of Holly Springs and Jones Franklin Roads, and west of Lake Wheeler Road, residential development and a limited amount of non-residential development would be permitted. This area is largely within Wake County's jurisdiction except for smaller areas in Cary's and Raleigh's jurisdictions. The majority of this area within Wake County's jurisdiction is rural residential, with an average density of one dwelling unit per acre. The exceptions are those portions which are developed to allow non-residential uses necessary to serve the daily needs of area residents, such as convenience stores and elementary schools. The area within Wake County would be maintained at a maximum residential density of 1.0 dwelling unit per acre with a limited number of non-residential uses allowed, and would not be sewered because of the increased potential, once developed, to adversely affect the water quality of Lakes Benson and Wheeler. This type of development would yield an impervious surface area of about 12%, and would be able to maintain an adequate level of water quality protection without structural devices.

For the area within Cary's jurisdiction east of Holly Springs Road and west of Campbell Road, residential development would be allowed at a density of up to 6.0 dwelling units per acre. Municipal sewer extensions are planned for this area which is designated by Cary on Map D for new urban development. Cary proposes to restrict their impervious surface limits to a maximum of 30% in this area.

For the area within Raleigh's jurisdiction east of Jones Franklin and Holly Springs Roads, and north of the NCSU Research Farm, residential development would be allowed at a density of up to 6.0 dwelling units per acre. Although Raleigh does not plan to extend sewer trunk lines

into this portion of the Swift Creek watershed, Raleigh could extend sewer trunk lines into this area, but would restrict their impervious surface limits to a maximum of 30%.

Because these areas within Cary's and Raleigh's jurisdictions are at the periphery of the watershed, it is not believed that a limited amount of residential development at a maximum density of 6.0 dwelling units per acre would significantly increase the potential to adversely affect water quality. (As specified in Table 1, impervious surface limit may be increased to 30%, and 70%, provided that the the first one-half inch or one inch of rainfall run-off is retained, respectively.)

The remainder of the watershed, the area west of Holly Springs and Jones Franklin Roads, lies within Apex's, Cary's and Wake County's jurisdictions. Much of the area within Apex's and Cary's jurisdictions is developed or has site plans which have already been approved at a residential density averaging 2.5 dwelling units per acre and result in impervious surfaces of approximately 30%. The exceptions are those residential portions of Apex and Cary which exceed 2.5 dwelling units per acre, and those non-residential portions which have no impervious surface limit. Since these areas are located at the periphery of the watershed, and because the recommended performance standards are not proposed to affect existing or approved development, these areas would be allowed to develop at these densities.

The area within Wake County's jurisdiction west of Holly Springs Road remains largely undeveloped, but has some large lot single family subdivisions. Residential uses with a maximum density of 1 dwelling unit per acre would be allowed for the undeveloped portion.

Non-Critical Area: Municipal Jurisdiction Expansion

The potential future land use patterns (described, below) would be applied as municipal jurisdictions expand in the watershed. As proposed above, vegetative buffers would remain undisturbed, and proposed critical areas would be maintained according to the recommended performance standards in Table 1.

Within the non-critical portion of the watershed, new suburban areas with a maximum average density of 2.5 dwelling units per acre and non-residential uses with a maximum impervious surface limit of up to 30% would be allowed in municipal jurisdictions. Portions of these areas, which are currently in Wake County's jurisdiction, are proposed to be developed to suburban densities by municipalities.

In the non-critical portion of the watershed east of Holly Springs and Jones Franklin Roads, residential uses with an average density of 6 dwelling units per acre also would be allowed in municipal jurisdictions. Existing areas within Cary's and Raleigh's jurisdictions are already proposed to be developed at an average of 6 dwelling units per acre in this area. Other new urban areas proposed to allow up to 6

dwelling units per acre, and non-residential uses with a maximum impervious surface of up to 70% would be located along the north shore of Lake Benson and along U.S. 401 in Garner's jurisdiction.

In the non-critical portion of the watershed west of Jones Franklin and Holly Springs Roads, residential uses with a density exceeding 6 dwelling units per acre and non-residential uses wih a maximum impervious surface of up to 70% also would be allowed in municipal jurisdictions. New urban areas proposed to allow greater than 6 dwelling units per acre are proposed to be located adjacent to existing central business districts in Apex and Cary, and on portions of other sites within Cary's jurisdiction.

ISSUES FOR ADDITIONAL STUDY

During discussions, several issues were brought up which could have an effect on the implementation of future land use regulations in the watershed. No conclusions were reached for these issues. However, it is believed that these issues should be considered as the land management plan for the Swift Creek watershed is refined.

Impoundments Serving Multiple Properties: Impoundments serving multiple properties are proposed to be allowed. This method is used within individual Planned Unit Developments (PUDs) built within Cary's jurisdiction and should be expanded to apply to a runoff impoundment serving more than one development. It is believed that large impoundments serving multiple properties are more effective and easier to maintain than small impoundments serving individual properties.

Removal of Existing Point Source Discharges in the Watershed: The ability to attain a WS-II classification for the watershed may be improved if public sewer improvements or land use controls can be utilized to remove existing point source discharges from the Swift Creek watershed. There are approximately 7 existing discharges within the watershed.

Sewer Lines Passing Through Critical Areas: The proposed regulations specify that the critical area of a water supply watershed (except for areas already urban) should not be served with public sewer. Garner's future growth patterns include the area around and to the south of Lake Benson. In order to provide sewer service, which is required by State law for areas within corporate limits, it would be most economical to run main sewer lines through the critical area rather than around the critical area. Garner staff believes that the Town could successfully prohibit trunk line tap-ons in the critical area. There is a concern, however, that if sewer mains were allowed to run through the critical area, Garner could be pressured into allowing trunk line tap-ons to provide service to those properties in the immediate area of the lines.

General Enabling Legislation: General enabling legislation is needed to allow municipalities to annex within water supply watersheds without the

requirement that they extend water and sewer lines (G.S. 160A-35 (3) b. and G.S. 160A-47 (3) b.), thereby allowing municipal expansion while also protecting the water quality.

Low Pressure Wastewater Disposal Systems: Because of the recent failure of a low pressure wastewater disposal system in the Swift Creek watershed, it was discussed whether or not these systems should continue to be allowed in a water supply watershed, and, if so, whether public maintenance should be required if they fail.

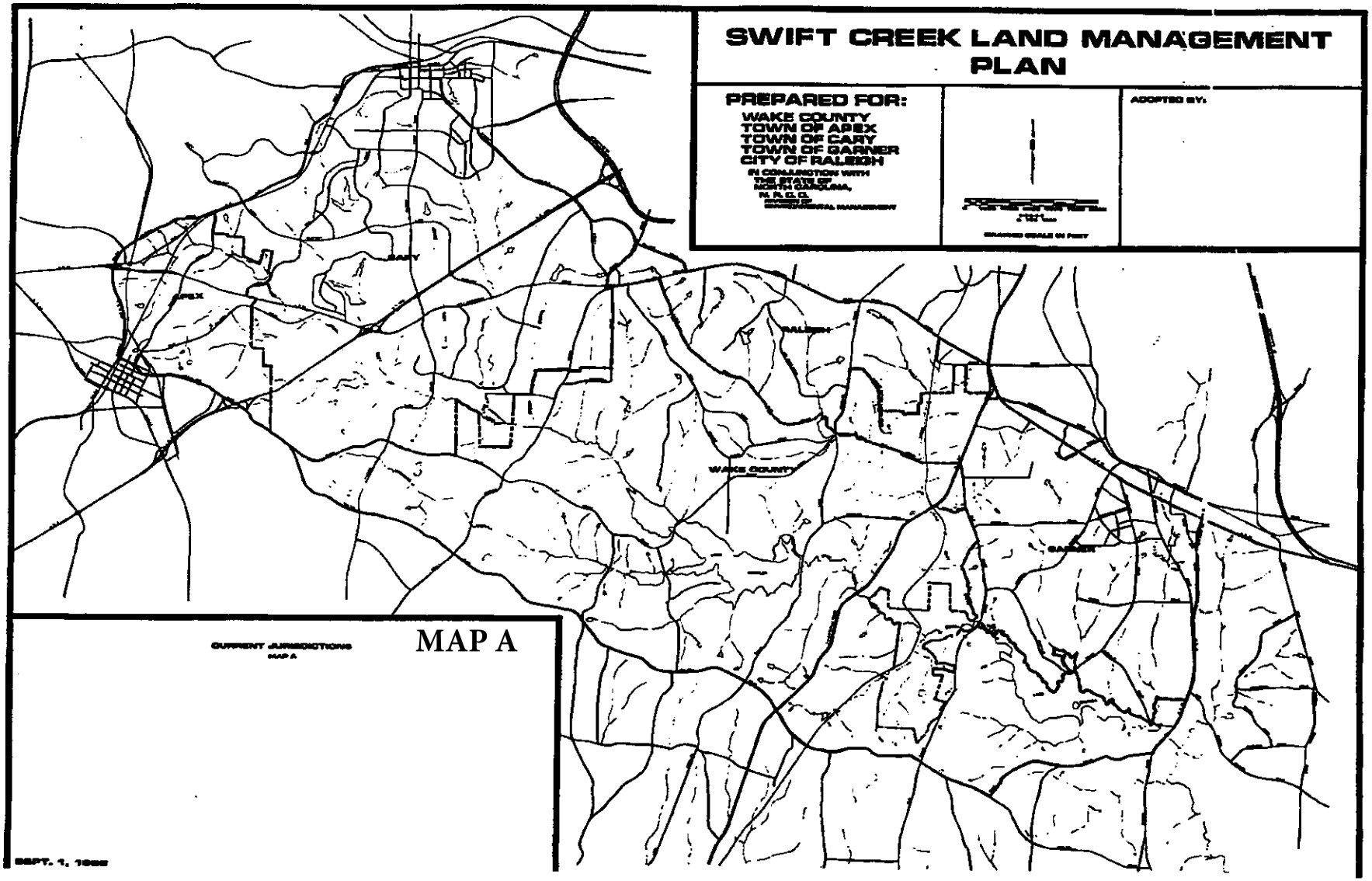
Road Construction Standards: Road construction standards were discussed briefly.

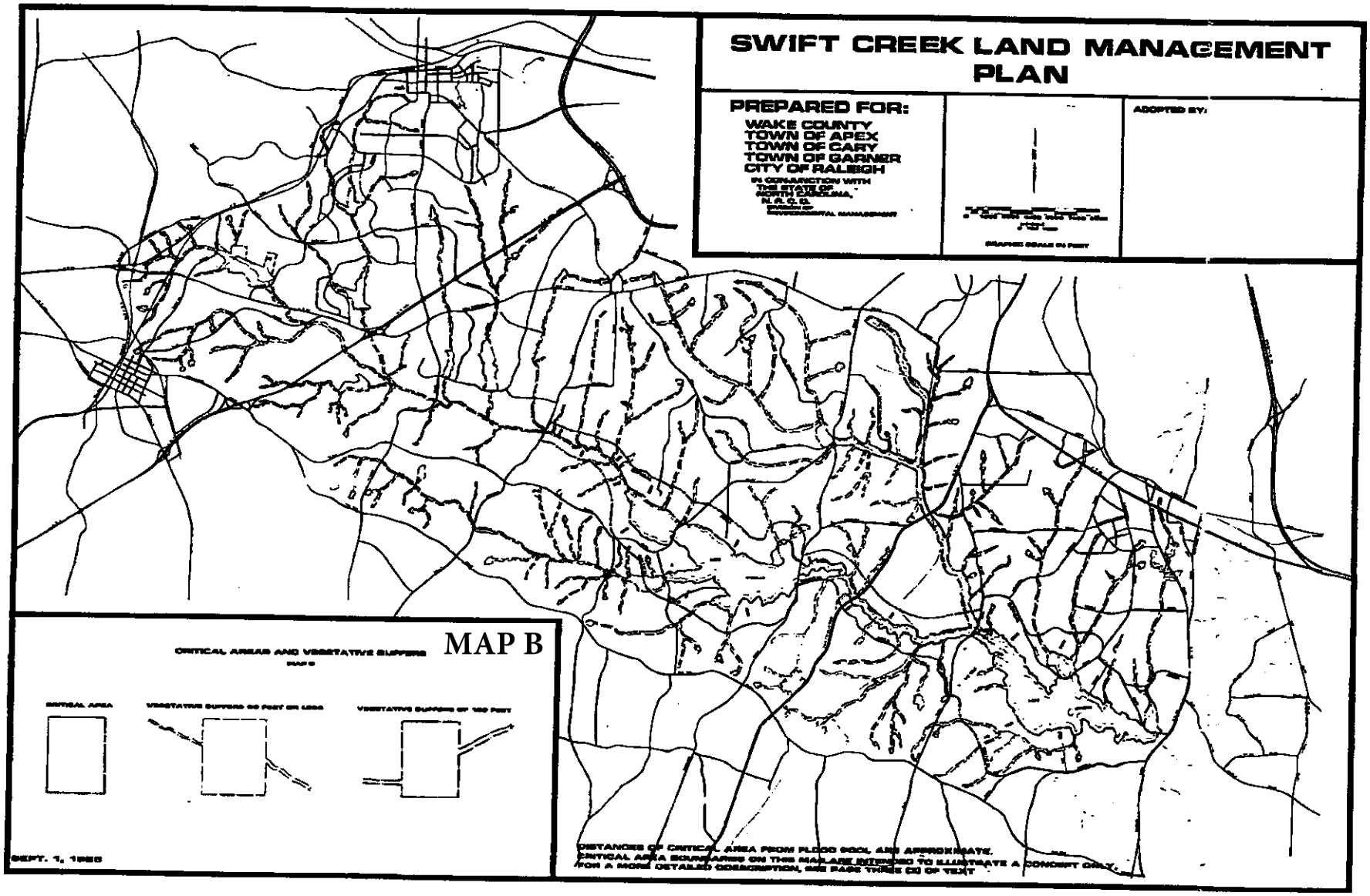
Amount of Non-Residential Development to be Allowed: The land use plans represented in this report (Map D) concentrate on residential uses as the predominant use. The amount and nature of proposed non-residential use areas needs to be further refined. The non-residential areas are not intended to be major commercial or employment areas. The intensity of non-residential development could be allowed to increase as the distance from the critical area increases.

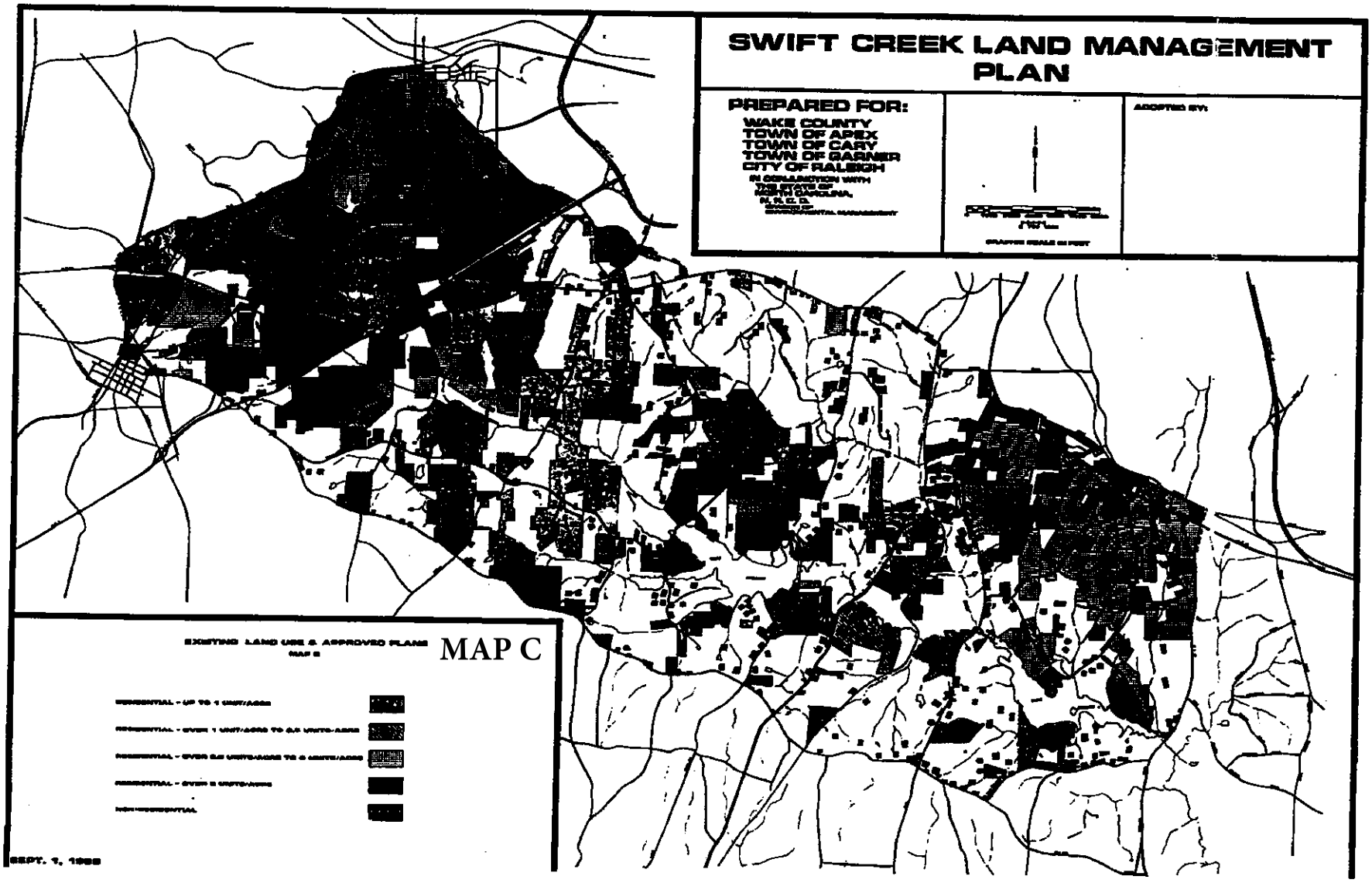
CONCLUSION

It is believed that good water quality management practices can be enforced by limiting the types and densities of future growth, controlling point source discharges, and applying water quality regulations which meet or exceed those recommended by DEM staff to maintain a WS-II classification. The performance standards outlined in Table 1 and the watershed critical areas and buffers defined above are proposed to meet these water quality management objectives, while permitting municipal growth. The scenario attempts to present land use patterns which could be applied to the watershed to attain a WS-II classification.

b:scplan


SWIFT CREEK LAND MANAGEMENT PLAN
PREPARED FOR:
WAKE COUNTY
TOWN OF APEX
TOWN OF CARY
TOWN OF GARNER
CITY OF RALEIGH
ADOPTED BY:
APEX
CARY
RALEIGH
WAKE COUNTY
GARNER
CURRENT JURISDICTIONS
MAP A
MAP A
SEPT. 1, 1988


SWIFT CREEK LAND MANAGEMENT PLAN
PREPARED FOR:
WAKE COUNTY
TOWN OF APEX
TOWN OF CARY
TOWN OF GARNER
CITY OF RALEIGH
ADOPTED BY:
MAP B
CRITICAL AREAS AND VEGETATIVE BUFFERS
CRITICAL AREA
SEPT. 1, 1988
DISTANCES OF CRITICAL AREA FROM FLOOD 500L ARE APPROXIMATE.
CRITICAL AREA BOUNDARIES ON THIS MAP ARE INTENDED TO ILLUSTRATE A CONCEPT ONLY.


SWIFT CREEK LAND MANAGEMENT PLAN
PREPARED FOR:
WAKE COUNTY
TOWN OF APEX
TOWN OF CARY
TOWN OF GARNER
CITY OF RALEIGH
ADOPTED BY:
MAP C
SEPT. 1, 1988

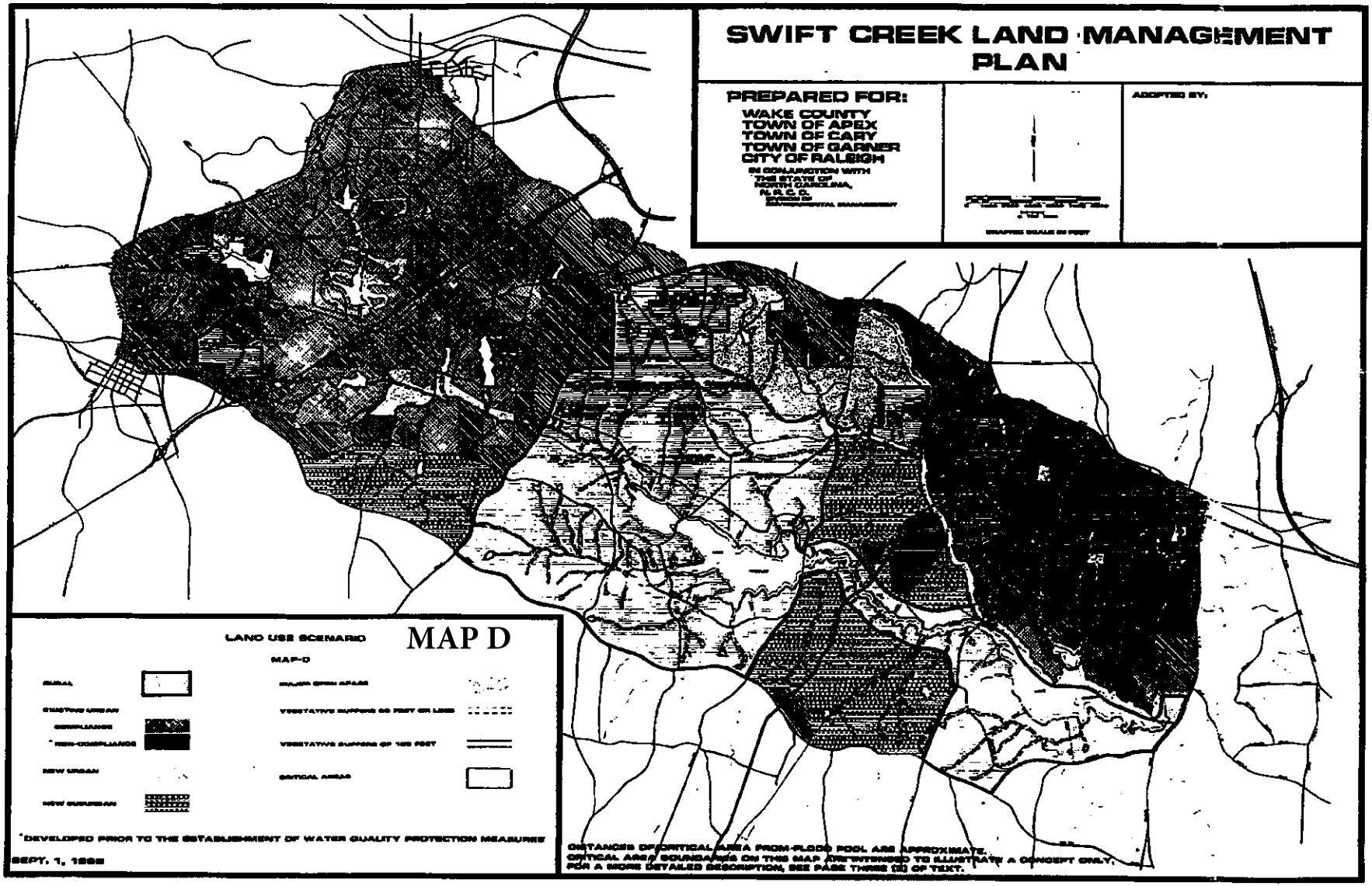

SWIFT CREEK LAND MANAGEMENT PLAN
PREPARED FOR:
WAKE COUNTY
TOWN OF APEX
TOWN OF CARY
TOWN OF GARNER
CITY OF RALEIGH
IN CONJUNCTION WITH
THE STATE OF NORTH CAROLINA,
N.R.C.D.
ADOPTED BY:
LAND USE SCENARIO
MAP-D
MAP D
RURAL
EXISTING URBAN
COMPLIANCE
* NON-COMPLIANCE
NEW URBAN
NEW SUBURBAN
WATER BODY AREAS
VEGETATIVE BUFFERS 50 FEET OR LESS
VEGETATIVE BUFFERS OF 100 FEET
CRITICAL AREAS
*DEVELOPED PRIOR TO THE ESTABLISHMENT OF WATER QUALITY PROTECTION MEASURES
SEPT. 1, 1988
DISTANCES OF CRITICAL AREA FROM FLOOD POOL ARE APPROXIMATE.
CRITICAL AREA BOUNDARIES ON THIS MAP ARE INTENDED TO ILLUSTRATE A CONCEPT ONLY.
FOR A MORE DETAILED DESCRIPTION, SEE PAGE THREE (3) OF TEXT.

TABLE 1 - PROPOSED WATERSHED PROTECTION REGULATIONS

	A	B	C	D	E
1	PROPOSED	URBAN	SLUDGE	HAZARDOUS	
2	CLASS	DEVELOPMENT	APPLICATION	MATERIALS	LANDFILLS
3					
4	WSI	EXISTING: Uninhabited, undeveloped	None	None	None
5		FUTURE: Uninhabited, undeveloped	None	None	None
6					
7	WSII	EXISTING: Predominantly undeveloped			
8		FUTURE:			
9		Critcal Area (1/2 mi. from normal pool elevation	None	None	None
10		or to the ridgeline, whichever is less)			
11		1 house/2acres; 6% impervious surface area			
12		no new commercial or industrial development			
13		no existing or future industrial or municipal dischargers allowed			
14		Rest of Watershed	None	Local Inventory	No new
15		1 house/2 acres; 6% impervious surface area		& Spill/failure	discharging
16		10% of area for commercial and industrial development **		Plan required	
17		no existing or future industrial or municipal dischargers allowed			
18					
19	WSIII	EXISTING: Low to moderately developed			
20		FUTURE:			
21		Critcal Area (1/2 mi. from normal pool elevation	None	None	No new
22		or to the ridgeline, whichever is less)			
23		1 house/2 acres; 6% impervious surface area or			
24		6-30% impervious surface area with stormwater pond(s) *			
25		no new commercial or industrial development			
26		no new industrial or municipal dischargers allowed			
27		NPDES permit holders must adhere to anti-degradation standards			
28		Rest of Watershed	Allowed	Local Inventory	No new
29		1 house/1 acre; 12% impervious surface area or		& Spill/failure	discharging
30		12-30% impervious surface area with stormwater pond(s)*		Plan required	
31		10% of area for commercial and industrial development **			
32		municipal and non-process dischargers allowed			
33					
34	WSIV	EXISTING: Moderate to highly developed			
35		FUTURE:			
36		Critcal Area (1/2 mi. from normal pool elevation	None	Local Inventory	No new
37		or to the ridgeline, whichever is less)		& Spill/failure	
38		1 house/1 acre; 12% impervious surface area or		Plan required	
39		12-30% impervious surface area with stormwater pond(s)*			
40		no limits on commercial and industrial development			
41		no new industrial dischargers allowed; municipal dischargers			
42		allowed			
43		NPDES permit holders must adhere to anti-degradation standards			
44		Rest of Watershed or Protected Area		Local Inventory	No new
45		2 houses/acre; 24% impervious surface area or	Allowed	& Spill/failure	discharging
46		24-70% impervious surface area with stormwater pond(s)		Plan required	
47		no limits on commercial and industrial development			
48		no limits on the types of dischargers			
49					
50	Notes:	* Stormwater ponds must control the first 1" of runoff			
51		** 70% impervious surface area limit			
52					
53		Vegetative buffer will be maintained adjacent to all perennial tributaries; width			
54		will be 50 ft. plus 4 times the percent of slope.			
55					
56		Critical area for direct stream intakes will be 1 mi. around			
57		the intake or to the ridgeline, whichever is less.			