Franklin to Fontana
Local Watershed Plan
Phase I

Upper Little Tennessee River Basin
Swain and Macon Counties, N.C.

Project Atlas

February 2009

A Project Of
The NC Ecosystem
Enhancement Program

With Assistance From
Equinox Environmental
Consultation and Design, Inc.
Asheville, NC

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Section 1

Introduction

1.1 Purpose

The purpose of this Project Atlas is to identify potential stream restoration and preservation project opportunities in the Franklin to Fontana Local Watershed Planning Area. Because the North Carolina Ecosystem Enhancement Program (NCEEP) has a large mitigation need in the Little Tennessee River Basin, Equinox Environmental Consultation and Design, Inc. (Equinox) has developed this preliminary Atlas during Phase I of the planning effort. This preliminary site atlas will enable NCEEP staff to begin pursuing projects as plan development continues. The projects identified in this atlas will be further evaluated and prioritized during Phases II and III, with a specialized project atlas developed during Phase III. References to restoration opportunities within this document are all inclusive and include both potential restoration (channel reconfiguration) and enhancement (primarily riparian area revegetation) projects.

1.2 Screening Area

The site search was conducted for the entire 154 square mile area included in the Franklin to Fontana Local Watershed Plan (Equinox, 2009). Located in Macon and Swain Counties, the project area consists of land draining to the Little Tennessee River between the mouth of the Cullasaja River and the headwaters of Fontana Lake (Figure 1.1). The project area is located in Catalog Unit 06010202 and consists of five 14-digit hydrologic units (040010, 040020, 040030, 040040, and 060010). The area includes Lake Emory and a 23-mile stretch of the Little Tennessee River below the Porters Bend Dam. Some of the major tributaries include Cowee, Burningtown, Tellico, Iotla, Rabbit and Watauga Creeks.

To facilitate data management and analysis, the 29 subwatersheds delineated for the Preliminary Finding and Recommendations Report (Equinox, 2009) were utilized. Subwatersheds are listed in Appendix A.

1.3 Overview of Screening Approach

Potential restoration and preservation reaches were identified by Geographic Information System (GIS) analysis, primarily using 2006 aerial photos, 2007 Light Detection and Ranging (LIDAR) stream data, 2008 Swain County parcel data, and 2008 Macon County parcel data. Additional GIS data sources utilized in the screening approach are listed in Appendix B. Limited ground-truthing of sites identified as potential restoration reaches was conducted to determine the accuracy of selected GIS determinations and identify additional site features not evident from GIS.

1.4 Organization of the Project Atlas

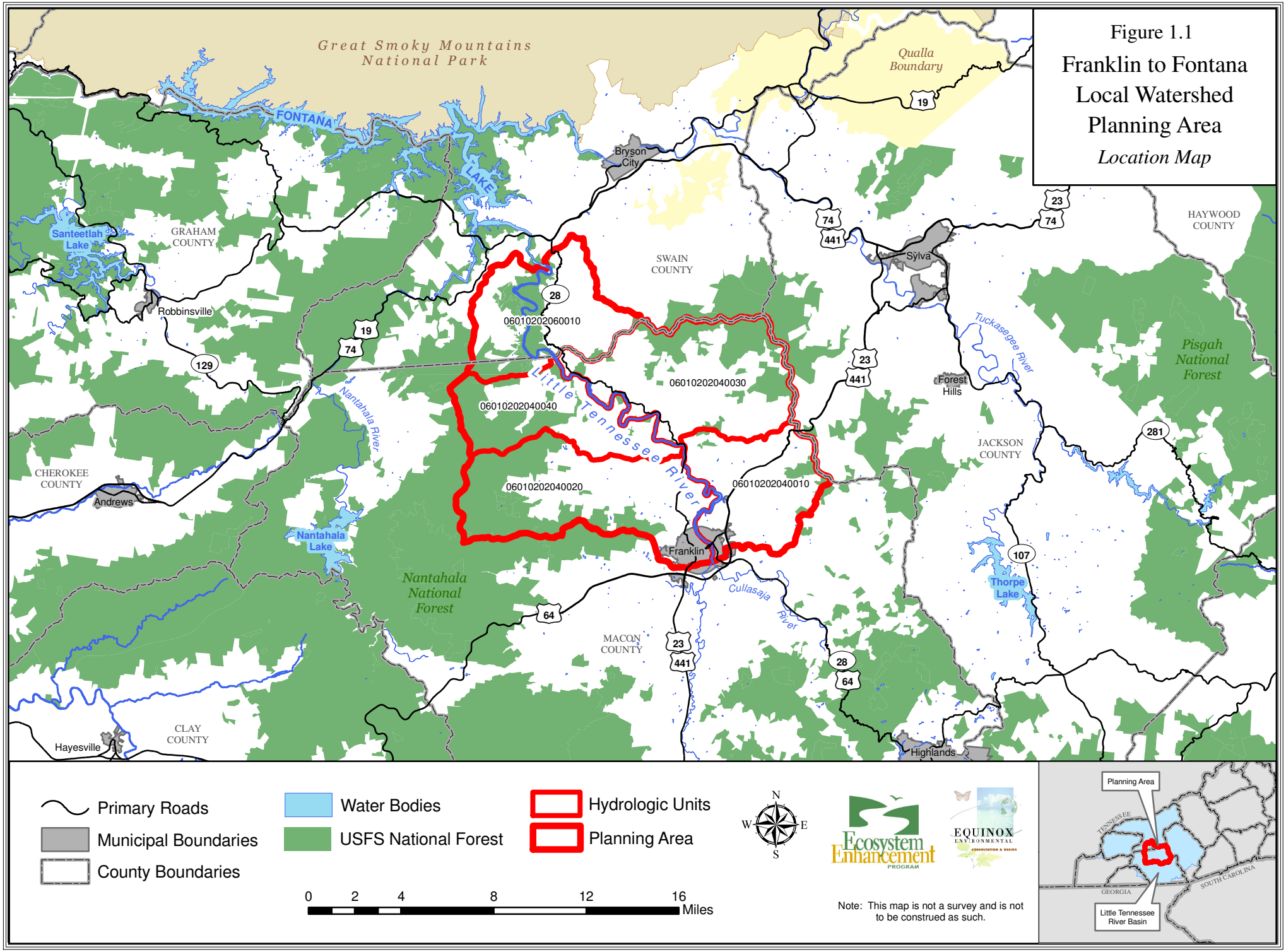
The Project Atlas Report is organized as follows:

- The initial restoration reach identification methodology, field reconnaissance observations, and reach prioritization are presented in Section 2.
- Section 3 presents recommendations for restoration focus areas.
- Potential preservation reach identification methods, prioritization, and focus areas are presented in Section 4.
- Section 5 briefly discusses the limitations of the site evaluations and the need to conduct a more thorough site screening to improve the prospects of project success.
- Subwatershed data, GIS data sources, and the landowner databases are included in the attached appendices.

Figure 1.1

Franklin to Fontana Local Watershed Planning Area

Location Map



Note: This map is not a survey and is not to be construed as such.

Section 2

Identification of Potential Restoration Reaches

2.1 Introduction

A multi-step screening approach was implemented to identify and prioritize potential restoration reaches.

1. **Initial reach identification:** This involved a GIS based screening analysis to identify potential reaches that appeared to meet specific NCEEP project requirements.
2. **Field reconnaissance:** This was limited to a windshield survey of indentified restoration reaches to determine the accuracy of selected GIS determinations and identify additional site features not evident from the GIS screening.
3. **Reach prioritization:** Reaches were scored based on several criteria pertaining to ecological uplift and project implementation constraints associated with landowner numbers per reach. Reaches were then prioritized based on final reach rankings.

2.2 Initial Reach Identification

The GIS based screening approach was based on a multi-stage elimination design which assessed stream features and parcel ownership. Initial screening involved the selection of reaches that met the following criteria developed in consultation with NCEEP. Screening involved the sequential application of these four criteria in the order listed:

- Location outside of the Nantahala National Forest;
- Forested riparian zones < 30 feet wide on both banks;
- Reach length of a minimum of 2,000 contiguous linear feet; and
- 3 or fewer landowners.

Reach Location

Stream segments within the Nantahala National Forest boundary were not included in the screening. Additionally, the screening was confined to tributaries of the Little Tennessee River. The mainstem of the River was not included in the screening due to impracticalities associated with river restoration projects.

Riparian Zone

The riparian zone dataset developed for NCEEP by Equinox in 2008 (Equinox, 2008) was used to identify reaches lacking wooded riparian areas at least 30 foot wide on both banks. All other reaches were eliminated from further restoration screening.

Reach Length

Reaches were further evaluated to identify reaches ≥ 2,000 contiguous linear feet. A contiguous stream segment could include adjacent segments on the same stream and/or adjacent segments on a stream and one or more of its tributaries.

Number of Landowners

Swain and Macon County parcel data were analyzed to determine the total number of landowners associated with each potential reach identified above. A potential restoration reach

was identified as a stream segment or set of contiguous segments that contains a minimum of 2,000 linear feet of poor riparian zone owned by three or fewer landowners. The number of parcels owned by a particular landowner was not considered in this screening, only the number of different landowners. Reaches were eliminated if they involved more than three landowners. There were four reaches, however, with four different landowners that were retained because they were exceptionally longer projects.

Summary of Initial Screening Results

Based on this initial screening, 63 potential restoration reaches totaling 183,041 linear feet of stream were identified (Figure 2.1). In addition to the criteria described above, several additional site characteristics (channelization and proximity to wetlands) were considered as part of the site prioritization process (Section 2.5.1).

2.3 Field Reconnaissance

In November 2008, Equinox and NCEEP staff conducted a limited reconnaissance to field check the accuracy of the initial GIS screening and to document additional site features and constraints not observable through GIS. Field assessments focused on several factors: feasibility of project, project type, verification of stream channel presence, stream channelization, and the identification of other project features including livestock access, wetland opportunities, constraints, and upstream impacts. The Field Survey Worksheet used to record field observations may be viewed in Appendix C.

An effort was made to assess all identified project reaches using a windshield survey approach in which determinations were made from public right-of-ways. No attempts were made to access private property. Of the 63 potential project reaches, the field reconnaissance team was able to assess all or portions of 61 reaches. Two reaches (Reaches 6 and 19) were located on private drives and could not be evaluated. Fourteen additional reaches were only partially visible from public right-of-ways. Data from the field reconnaissance are summarized in Table 2.1.

The field reconnaissance identified some reaches where mapped stream segments did not appear on the ground, or where restoration would not be feasible. In these cases, the affected stream length was subtracted from the original stream length determined during the GIS screening. The adjusted stream length is shown in Table 2.1. Because of this adjustment, some reaches dropped below the original criteria of 2,000 feet. Although these reaches no longer fit the initial restoration reach criteria, these sites were kept in the list of potential restoration reaches at NCEEP's request.

Figure 2.1

Franklin to Fontana Local Watershed Planning Area

Potential Restoration Reaches Identified by Initial Screening

- USGS Stream Gage
- Initial Restoration Reaches
- Streams
- Primary Roads
- Secondary Roads
- Llot — Subwatersheds
- Planning Area
- Municipal Boundaries
- County Boundaries
- NCWRC Needmore Tract
- USFS National Forest

N W E S

0 0.75 1.5 2.25 3 Miles

Note: This map is not a survey and is not to be construed as such.

Ecosystem Enhancement Program

EQUINOX ENVIRONMENTAL CONSULTATION & DESIGN

Table 2.1 Summary of Field Survey Data

Reach ID	SubWS	Stream Name	Total Length (ft)	Portion of Reach Observed	Project Type	Project Expansion Opportunity	Channelization Obvious	Livestock Access	Wetland Opportunity	Constraints	Immediate Upstream Impacts	Notes
1	Cat	UT Cat Creek	2,687	All	Both	Yes-upst	Unknown	Yes	No	VT, Pas, SR, PL	Res, Pas	Add upstream sections
2	Cat	Cat Creek + UT	5,399	All	Both	No	Yes	Yes	No	VT, Pas, SR, DR	Res, Pas	Connect site with #1
3	Cat	Cat Creek + UT	2,315	All	Both	No	No	Yes	No	VT, P, Pas, PL	Res, Pas	Project would take land out of production
4	Cat	Cat Creek + UT	4,205	All	Both	No	Yes	No	No	ST, VT, Pas, DR	Pas	Heavily grazed, project depends on landowner, easment would take pasture out of operation
5	Cat	Cat Creek	2,190	Part	Cannot Determine	No	Yes	No	Yes	Row	Row	Entire project goes through tomato farm
6	URab	Berry Creek	2,433	None	Cannot Determine	No	Unknown	Unknown	No			
7	URab	Berry Creek	2,538	Part	Cannot Determine	No	Unknown	Unknown	No	ST		
8	URab	Corbin Creek	2,884	All	Both	Yes-upst	No	Yes	No	Pas, PL	Res, Pas, LO	Poorly managed cattle lot
9	URab	Corbin Creek + Berry Creek	2,332	All	Both	No	Yes	No	No	Pas, SR	Res	Project would require moving stream into hayfield
10	URab	UT Rabbit Creek	2,087	Part	Both	No	Unknown	Yes	No	ST, Pas	Pas	
11	URab	Rabbit Creek	3,793	All	Restoration	No	Yes	Minor	Yes	Pas	Pas	Good project, cattle fenced out in some areas, but access remains
12	URab	Elmore Branch + Rabbit Creek	4,313	All	Restoration	No	Yes	Yes	Yes	Pas	Pas	
13	LRab	UT Rabbit Creek	2,083	All	Enhancement	No	Yes	No	Yes	ST, SC, Hat, SR, PL, O	Pas	Billboards, project would require moving stream into hayfield, prime commercial area along US 23/441
14	UWat	Watauga Creek	2,289	All	Restoration	Yes-upst	Yes	Yes	No	VT, SC, Pas, DR, PL	Res, Pas	Narrow valley utilized as pasture, highly eroding banks
15	LWat	Watauga Creek	4,669	All	Both	No	Part	Yes	No	Pas	Res, Pas	Good project
16	Rock	Rocky Branch	2,884	All	Both	No	Yes	Yes	No	ST, SC, Pas, G	Res, Pas	
17	Ulot	Iotla Creek	1,431	All	Both	Yes-dwnst	Part	Yes	Yes	ST, Row, G, DR, PL	Res, Pas	
18	Ulot	Iotla Creek + UT	1,322	All	Both	Yes-dwnst	Part	Yes	No	ST, Pas, DR	Res, Pas, LO	
19	Llot	UT Iotla Branch	2,323	None	Cannot Determine	No	Unknown	Unknown	No	P		

Table 2.1 Summary of Field Survey Data, Continued

Reach ID	SubWS	Stream Name	Total Length (ft)	Portion of Reach Observed	Project Type	Project Expansion Opportunity	Channelization Obvious	Livestock Access	Wetland Opportunity	Constraints	Immediate Upstream Impacts	Notes
20	Llot	Iotla Branch	2,742	All	Both	Yes-dwnst	Yes	Unknown	No	Hay	Pas	
21	Llot	Iotla Branch + UT	3,386	Part	Enhancement	No	Part	Yes	No	VT, Pas, DR, O	Res, Pas	Project would take land out of production
22	Llot	Iotla Branch	2,327	All	Restoration	No	Yes	No	Yes	Row, Hay, PL	CND, O	Kudzu
23	Llot	UT Iotla Creek	2,459	All	Enhancement	No	Yes	No	No	Row, Hay, PL	Row, Pas	Eroding banks
24	Llot	UT Iotla Creek	5,051	Part	Restoration	No	Yes	Yes	Yes	Pas	Row, Pas	
25	CFrk	UT Caler Fork	975	Part	Enhancement	No	Part	Yes	No	ST, P, Pas, Sr, DR	Res, Pas	
26	CFrk	Caler Fork + UT	2,702	All	Restoration	No	Yes	Unknown	No	Pas, O	Pas	Stream recently modified by landowner
27	UCow	UT Cowee Creek	2,029	Part	Both	No	Unknown	Yes	No	ST, Pas	Res, Pas	
28	Mica	Mica City Creek	1,387	Part	Restoration	Yes-dwnst	Yes	Yes	No	ST, SC, Pas, SR, DR	Res, Pas	
29	Mica	Mica City Creek	1,572	All	Both	No	Yes	Yes	No	P, Pas, SR	Pas	
30	Beas	Beasley Creek	2,234	All	Both	Yes-upst	Part	Yes	Yes		Pas	
31	UCow	Shepherd Creek	2,060	Part	Both	No	Unknown	Yes	No	Pas, DR	Pas	
32	Matl	Matlock Creek	3,229	All	Enhancement	Yes-dwnst	Yes	Yes	No	ST, SC, SR, O	O	Greenhouse operation, landowner manicures banks, good education opportunity
33	Matl	UT Matlock Creek	2,104	All	Restoration	No	Yes	Yes	No	ST, SC, Pas, DR	Res, Pas	Dredged and bermed banks
34	LCow	Cowee Creek	3,100	Part	Enhancement	No	Part	Unknown	No	Hat, Pas	Pas	Bamboo along streambank
35	Rose	UT Rose Creek	3,083	All	Enhancement	No	No	No	No	O	Res, O	Manicured lawn, good education opportunity
36	Rose	UT Little Tennessee	2,305	All	Enhancement	Yes-pres	No	No	No	ST, VT, Pas, PL	Pas	
37	Brad	UT Bradley Creek	2,200	All	Both	Yes-upst	Yes	Yes	No	Pas, DR	Res, Pas	
38	Lak	UT Lakey Creek	2,128	Part	Enhancement	No	No	Unknown	No	VT, P		
39	Lak	Lakey Creek	2,219	All	Restoration	No	No	No	No			Good project
40	Lak	Caler Cove Branch	3,686	Part	Restoration	No	No	Yes	No	ST, Pas, PL, O	Pas	Rooster operation on property
41	MBur	UT Burningtown Creek	4,687	Part	Both	No	Part	No	Yes	ST, SR, PL	Res, Pas	Old pasture
42	MBur	Younce Creek + UT	2,709	All	Enhancement	Yes-upst	No	Yes	Yes	ST, Pas, DR, PL	Res, Pas	Banks are dredged, sprayed, and heavily manicured, good opportunity for landowner education
43	MBur	Younce Creek	1,953	All	Restoration	Yes-trib	Yes	Yes	No	ST, SR	Res, Pas, LO	
44	LBur	Burningtown Creek	2,333	All	Enhancement	No	Part	No	No	Pas, PL	Res, Pas	Several high and low voltage power lines
45	Bru	Marr Branch + UT	1,106	Part	Both	Yes-upst & dwnst	Part	Minor	No	ST, VT, SC, Pas, PL	Res	

Table 2.1 Summary of Field Survey Data, Continued

Reach ID	SubWS	Stream Name	Total Length (ft)	Portion of Reach Observed	Project Type	Project Expansion Opportunity	Channelization Obvious	Livestock Access	Wetland Opportunity	Constraints	Immediate Upstream Impacts	Notes
46	Need	Licklog Creek + UT	2,088	All	Cannot Determine	No	Part	No	No	ST, Hay, G, PL	Res, Pas	
47	Need	Licklog Creek	2,024	All	Both	No	Part	No	No		Res	
NA1	Cat	Cat Ck + UT	4,182	All								Already in EEP Easement
NA2	Cat	Cat Creek	2,134	All								Already in EEP Easement
NA3	Cat	Cat Creek	3,410	All								Already in EEP Easement
NA4	Llot	Iotla Creek	3,574	All								Airport
NA5	Llot	Iotla Creek	2,476	Part								Airport
NA6	Matl	Matlock Creek + UT	3,562	All						ST, VT, Pas, PVT, O	Pas	Too many constraints, project would take land out of production
NA7	Matl	Wests Branch + UT	2,030	All						P, Row, Pas, PVT		Too many constraints
NA8	Lak	Lakey Creek	2,217	Part								Stream absent due to in-line pond
NA9	Bru	UT Brush Creek	5,700	Part						ST, SC, PL	Res, Pas, LO	Most of stream absent, too many constraints
NA10	Need	Painter Branch	2,403	All								Reach too short, pasture overgrazed, potential project for SWCD
NA11	Need	UT Painter Branch	2,602	All						ST, VT, SR		Too many constraints
NA12	UBur	Burningtown Creek + UT	2,019	All						ST, Pas, SR		Too many constraints, straight pipe observed going into stream
NA13	Saw	Davis Creek + UT	2,026	All						ST, Hay		Too many constraints
NA14	Saw	Sawmill Creek	2,009	All						ST, VT, SC, Pas, PL, O	Pas, LO	Too many constraints, overgrazed pasture, potential project for SWCD

Summary of Field Survey Data Abbreviations

NA-Reach ID is not applicable. These reaches were eliminated as potential projects.

Constraints: ST-Structure, VT-Valley Type Too Narrow, P-Ponds, SC-Stream Crossing, EqA-Possible Equipment Access Limitations, Row-Row Crops, Hay-Hay Fields, Pas-Pasture, Nur-Nursery, G-Gardens, SR-State Road, DR-Dirt Road, PL-Power Line, UT-Utilities, CND-Could Not Determine, O-Other (see notes)

Immediate Upstream Impacts: L-Logging, CD- Commercial Development Under Construction, RD-Residential Development Under Construction, Com-Established Commercial, Res- Established Residential, Row-Row Crops, Pas-Pasture, LO-Livestock Operation, BL-Barren Land/Mining, CND-Could Not Determine, O-Other (see notes)

The field reconnaissance indicated that 14 of the 63 reaches were not viable projects and were eliminated as potential NCEEP projects. These eliminated reaches are listed at the end of Table 2.1 and have a Reach ID of NA, not applicable. The notes column in Table 2.1 indicates why these sites were eliminated. While these projects were eliminated as potential NCEEP projects, alternative entities such as the Soil & Water Conservation District (SWCD) and other funding sources should be considered to restore or enhance these reaches. Landowner contact information for these sites is included in Appendix D, Eliminated Restoration Reach Landowner Database.

Two additional reaches do not appear in the final listing in Table 2.1 because they were combined with an adjacent reach, creating two reaches (12 and 41) that were originally four separate reaches identified in the initial screening. This reduces the number of feasible reaches from 49 to 47 as seen in Table 2.1. These remaining 47 potential restoration reaches (Figure 2.2), totaling 124,058 feet, were then prioritized, as discussed in Section 2.5.

The field survey attempted to determine whether each reach would likely be a restoration or enhancement project. This field determination was based in part on the extent of channelization, but also considered observed constraints, particularly how the land is currently being used. Several reaches could be improved with livestock fencing and riparian plantings and were identified as enhancement reaches. Many sites contained both restoration and enhancement components (Table 2.3). The total numbers for each project type are as follows:

- Restoration (n=11);
- Enhancement (n=11);
- Combination of restoration and enhancement (n=20); and
- Could not determine (n=5).

Because of the difficulty of determining whether reaches should be considered restoration or enhancement opportunities (and the large number of sites containing elements of both) during the brief reconnaissance, no further attempt was made to differentiate the type of project. This determination must be made by NCEEP based upon further investigation.

2.4 Project Expansion Opportunities

During the field reconnaissance, several opportunities were identified to extend the project upstream or downstream of the area initially identified during the GIS screening. In some instances, extending the length would compensate for portions of a reach eliminated from consideration as discussed above (e.g. due to an absent tributary). Extension opportunities attributed to preservation were generally not considered, but were noted in the field and are included in the notes in Table 2.2. Additional GIS analysis is needed to fully capture preservation opportunities adjacent to restoration reaches throughout the watershed.

Estimating the additional stream length associated with these potential project areas is beyond the scope of this Project Atlas. However, project expansion opportunities observed during the field reconnaissance are listed in Table 2.2.

Table 2.2 Description of Expansion Opportunities

Reach ID	SubWS	Stream Name	Total Length[1] (ft)	Expansion Location	Notes
1	Cat	UT Cat Creek	2,687	upstream	extend reach upstream
8	URab	Corbin Creek	2,884	upstream	include tributary parallel to Corbin Road
14	UWat	Watauga Creek	2,289	upstream	extend reach upstream
17	UIot	Iotla Creek	1,431	downstream	tributary eliminated, but extend reach downstream
18	UIot	Iotla Creek + UT	1,322	upstream & downstream	tributary eliminated, but extend reach upstream & downstream
20	LIot	Iotla Branch	2,742	downstream	immediately downstream of reach is heavily degraded (channelized, bermed, cattle access, and agricultural pond)
28	Mica	Mica City Creek	1,387	downstream	extend reach downstream
30	Beas	Beasley Creek	2,234	upstream	upstream of reach left bank buffer is good, but right bank buffer is poor, extend reach upstream
32	Matl	Matlock Creek	3,229	downstream	extend reach downstream of private drive
36	Rose	UT Little Tennessee	2,305	upstream	potential preservation upstream
37	Brad	UT Bradley Creek	2,200	tributary	include tributary adjacent to private road
42	MBur	Younce Creek + UT	2,709	upstream	banks are dredged, sprayed, and heavily manicured, good opportunity for landowner education
43	MBur	Younce Creek	1,953	tributary	include tributary
45	Bru	Marr Branch + UT	1,106	upstream & downstream	include reach upstream of structures, and extend reach downstream in field
*	Brad	Potts Branch	unknown	mainstem	heavily degraded reach, channelized through pasture, eroding banks, no riparian buffer

[1] Based on initial GIS Screening and ground-truthing of absent segments
* This reach was not identified during the initial GIS screening. It was incidentally identified during the field reconnaissance as a heavily degraded reach. Feasibility of this reach based on screening criteria was not determined.

2.5 Reach Prioritization

The 47 potential stream project reaches were prioritized to distinguish between projects of varying feasibility and mitigation value. Each project was evaluated on five criteria, using both GIS data and information from the field reconnaissance:

- Total reach length;
- Number of landowners per reach;
- Livestock access;
- Potential wetland project opportunity;
- Channelization.

Scoring of individual criteria was based upon the importance associated with the criteria and confidence levels of the data sources, as summarized in Section 2.5.1 below. Individual criteria scores for each reach were summed to obtain a total score ranging from 0 to 12. As noted earlier, the scoring system does not distinguish between restoration and enhancement projects.

2.5.1 Prioritization Methods

Reach Length: Due to project feasibility and mitigation potential, longer reaches are preferred by NCEEP. Because of its importance to the number of mitigation credits, this criterion was weighted more heavily than other criteria. The adjusted reach length (Section 2.3) was used.

The longest reach identified is approximately 5,400 linear feet. Categories and scores are as follows:

- < 2,000 linear feet = 0;
- 2,000 – 2,999 linear feet = 1;
- 3,000 – 3,999 linear feet = 2;
- 4,000 – 4,999 linear feet = 3; and
- ≥ 5,000 linear feet = 4.

Number of Landowners: The feasibility of successful project implementation declines as the number of landowners associated with a reach increases. Since this is a critical factor in NCEEP project selection, this factor was assigned a maximum score of 3. No reach identified had more than 4 landowners. The categories and scores assigned are as follows:

- 4 landowners = 0;
- 3 landowners = 1;
- 2 landowners = 2; and
- 1 landowner = 3.

Livestock Access: Where streams are subject to livestock activity, additional impacts are likely to exist, increasing the benefits that may be derived from stream projects. To capture this issue, livestock access to streams was examined during the field reconnaissance. Based on this information, sites were scored as follows:

- Livestock access not observed = 0;
- Livestock access considered minor = 1; and
- Livestock access considered substantial = 2.

Identified Wetland Areas: Potential wetland opportunities associated with the reaches were identified based upon GIS analysis of the National Wetland Inventory (NWI) data, hydric soils, and aerial photography. A reach was identified as having a potential wetland opportunity if NWI wetlands and/or hydric soils occurred within the same tax parcel. Once these were identified, aerial photos were observed for indications of wetlands such as shrubby vegetation, saturated soil, or other indicators. GIS based information on potential wetlands adjacent to each reach was updated based upon the field evaluation. Reaches with potential wetland project opportunities were considered higher priority based on the potential for greater ecological benefits associated with the overall project. Scores are as follows:

- Wetland restoration component not associated with reach = 0; and
- Wetland restoration component associated with reach = 1.

Channelization: Channel modification is an important factor because channel modification often leads to degradation in stream condition and a greater potential for ecological improvement if these impacts are remediated. Additionally, the extent and nature of channelization is a factor in determining the type of project (restoration vs. enhancement) and the number of mitigation credits.

Channelization was difficult to determine with confidence. Consideration was initially given to using slope and sinuosity calculations to assess the likelihood of channelization. However, given the limited extent of low slope terrain (<4%) in the planning area, and the frequent occurrence of valley confinement, it was not possible to develop a defensible methodology. Therefore, channelization was determined based on aerial photo analysis of each site. Channelization in each reach, or portions thereof, was classified as likely, unlikely or possible/uncertain. Channelization was also evaluated during the field survey, though this

evaluation was also subjective, especially given the brief time available and access limitations. The channel modification scoring used here is based upon best professional judgment regarding the status of each reach, using both the GIS and field information.

- Channelization is unlikely or impacts only a relatively small (< approximately 30%) portion of the reach = 0;
- Channelization is intermediate in extent or is uncertain = 1; and
- Most or all of the reach has likely been channelized = 2.

In assigning these scores, the results of the field verification were generally weighted more heavily when the GIS and field information conflicted, especially where the entire site could be observed during the field visit.

2.5.2 Site Prioritization Results

Scores ranged from 3 to 12 out of a maximum of 12, with most sites (29 of 47) in the 5 to 7 range. Based on the total site score, reaches were classified as Very High, High, Medium or Low Priority as follows:

- 10 -12 = Very High (1 reach);
- 7 -9 = High Priority (13 reaches);
- 5 -6 = Medium Priority (20 reaches); and
- < 5 = Low Priority (13 reaches).

Potential restoration reach scores and prioritization ranking are shown in Table 2.3. Scores for each criterion are given in parentheses following the data for each reach. Appendix E contains the landowner data base for prioritized restoration reaches.

Figure 2.3 demarcates the assessment area into six zones (Zone A – F) to facilitate a more detailed mapping of the potential restoration opportunities. The detailed zones are illustrated in Figures 2.4 – 2.9.

Table 2.3 Restoration Reach Scores and Prioritization Ranking

Site Information			Scoring Criteria and Ranking				Channelization				Total Score	Priority
							GIS Screening			Field survey		
Reach ID	SubWS	Stream Name	Total Length (ft)	Number of Landowners	Livestock Access	Wetland Opp	Very Likely (%)	Uncertian (%)	Very Unlikely (%)			
24	LIot	UT Iotla Creek	5,051 (4)	1 (3)	Yes (2)	Yes (1)	100%	0%	0%	Yes (2)	12	Very High
30	Beas	Beasley Creek	2,234 (1)	1 (3)	Yes (2)	Yes (1)	47%	52%	0%	Part (1)	8	High
37	Brad	UT Bradley Creek	2,200 (1)	1 (3)	Yes (2)	No (0)	68%	32%	0%	Yes (2)	8	High
2	Cat	Cat Creek + UT	5,399 (4)	3 (1)	Yes (2)	No (0)	72%	0%	28%	Yes (1)	8	High
15	LWat	Watauga Creek	4,669 (3)	2 (2)	Yes (2)	No (0)	51%	49%	0%	Part (1)	8	High
4	Cat	Cat Creek + UT	4,205 (3)	2 (2)	No (0)	No (0)	100%	0%	0%	Yes (2)	7	High
1	Cat	UT Cat Creek	2,687 (1)	1 (3)	Yes (2)	No (0)	50%	50%	0%	Unknown (1)	7	High
5	Cat	Cat Creek	2,190 (1)	1 (3)	No (0)	Yes (1)	100%	0%	0%	Yes (2)	7	High
40	Lak	Caler Cove Branch	3,686 (2)	1 (3)	Yes (2)	No (0)	26%	74%	0%	No (0)	7	High
13	LRab	UT Rabbit Creek	2,083 (1)	1 (3)	No (0)	Yes (1)	100%	0%	0%	Yes (2)	7	High
32	Matl	Matlock Creek	3,229 (2)	3 (1)	Yes (2)	No (0)	100%	0%	0%	Yes (2)	7	High
28	Mica	Mica City Creek	1,387 (0)	1 (3)	Yes (2)	No (0)	100%	0%	0%	Yes (2)	7	High
12	URab	Elmore Branch + Rabbit Creek	4,313 (3)	4 (0)	Yes (2)	Yes (1)	24%	58%	17%	Yes (1)	7	High
11	URab	Rabbit Creek	3,793 (2)	3 (1)	Minor (1)	Yes (1)	100%	0%	0%	Yes (2)	7	High
16	Rock	Rocky Branch	2,884 (1)	3 (1)	Yes (2)	No (0)	61%	39%	0%	Yes (2)	6	Moderate
22	LIot	Iotla Branch	2,327 (1)	2 (2)	No (0)	Yes (1)	100%	0%	0%	Yes (2)	6	Moderate
33	Matl	UT Matlock Creek	2,104 (1)	3 (1)	Yes (2)	No (0)	100%	0%	0%	Yes (2)	6	Moderate
29	Mica	Mica City Creek	1,572 (0)	2 (2)	Yes (2)	No (0)	100%	0%	0%	Yes (2)	6	Moderate
27	UCow	UT Cowee Creek	2,029 (1)	2 (2)	Yes (2)	No (0)	100%	0%	0%	Unknown (1)	6	Moderate
17	UIot	Iotla Creek	1,431 (0)	2 (2)	Yes (2)	Yes (1)	51%	49%	0%	Part (1)	6	Moderate
10	URab	UT Rabbit Creek	2,087 (1)	2 (2)	Yes (2)	No (0)	59%	41%	0%	Unknown (1)	6	Moderate
14	UWat	Watauga Creek	2,289 (1)	3 (1)	Yes (2)	No (0)	80%	20%	0%	Yes (2)	6	Moderate
6	URab	Berry Creek	2,433 (1)	1 (3)	Unknown (0)	No (0)	17%	69%	14%	Unknown (1)	5	Moderate
9	URab	Corbin Creek + Berry Creek	2,332 (1)	2 (2)	No (0)	No (0)	77%	24%	0%	Yes (2)	5	Moderate
45	Bru	Marr Branch + UT	1,106 (0)	1 (3)	Minor (1)	No (0)	100%	0%	0%	Part (1)	5	Moderate
25	CFrk	UT Caler Fork	975 (0)	1 (3)	Yes (2)	No (0)	0%	100%	0%	Part (0)	5	Moderate
21	LIot	Iotla Branch + UT	3,386 (2)	4 (0)	Yes (2)	No (0)	100%	0%	0%	Part (1)	5	Moderate
23	LIot	UT Iotla Creek	2,459 (1)	2 (2)	No (0)	No (0)	100%	0%	0%	Yes (2)	5	Moderate
19	LIot	UT Iotla Branch	2,323 (1)	1 (3)	Unknown (0)	No (0)	39%	61%	0%	Unknown (1)	5	Moderate
42	MBur	Younce Creek + UT	2,709 (1)	3 (1)	Yes (2)	Yes (1)	100%	0%	0%	No (0)	5	Moderate
41	MBur	UT Burningtown Creek	4,687 (3)	4 (0)	No (0)	Yes (1)	78%	22%	0%	Part (1)	5	Moderate
43	MBur	Younce Creek	1,953 (0)	3 (1)	Yes (2)	No (0)	100%	0%	0%	Yes (2)	5	Moderate
31	UCow	Shepherd Creek	2,060 (1)	2 (2)	Yes (2)	No (0)	29%	31%	40%	Unknown (0)	5	Moderate
18	UIot	Iotla Creek + UT	1,322 (0)	2 (2)	Yes (2)	No (0)	100%	0%	0%	Part (1)	5	Moderate

Table 2.3 Restoration Reach Scores and Prioritization Ranking, Continued

Site Information			Scoring Criteria and Ranking				Channelization				Total Score	Priority
							GIS Screening			Field survey		
Reach ID	SubWS	Stream Name	Total Length (ft)	Number of Landowners	Livestock Access	Wetland Opp	Very Likely (%)	Uncertian (%)	Very Unlikely (%)			
3	Cat	Cat Creek + UT	2,315 (1)	3 (1)	Yes (2)	No (0)	100%	0%	0%	No (0)	4	Low
26	CFrk	Caler Fork + UT	2,702 (1)	3 (1)	Unknown (0)	No (0)	62%	38%	0%	Yes (2)	4	Low
34	LCow	Cowee Creek	3,100 (2)	2 (2)	Unknown (0)	No (0)	26%	0%	74%	Part (0)	4	Low
47	Need	Licklog Creek	2,024 (1)	2 (2)	No (0)	No (0)	49%	51%	0%	Part (1)	4	Low
36	Rose	UT Little Tennessee	2,305 (1)	1 (3)	No (0)	No (0)	100%	0%	0%	No (0)	4	Low
8	URab	Corbin Creek	2,884 (1)	3 (1)	Yes (2)	No (0)	8%	92%	0%	No (0)	4	Low
7	URab	Berry Creek	2,538 (1)	2 (2)	Unknown (0)	No (0)	21%	62%	16%	Unknown (1)	4	Low
39	Lak	Lakey Creek	2,219 (1)	2 (2)	No (0)	No (0)	100%	0%	0%	No (0)	3	Low
38	Lak	UT Lakey Creek	2,128 (1)	2 (2)	Unknown (0)	No (0)	51%	49%	0%	No (0)	3	Low
44	LBur	Burningtown Creek	2,333 (1)	3 (1)	No (0)	No (0)	71%	0%	29%	Part (1)	3	Low
20	Llot	Iotla Branch	2,742 (1)	4 (0)	Unknown (0)	No (0)	100%	0%	0%	Yes (2)	3	Low
46	Need	Licklog Creek + UT	2,088 (1)	3 (1)	No (0)	No (0)	49%	51%	0%	Part (1)	3	Low
35	Rose	UT Rose Creek	3,083 (2)	3 (1)	No (0)	No (0)	100%	0%	0%	No (0)	3	Low

Figure 2.2

Franklin to Fontana Local Watershed Planning Area

Prioritization of Potential Restoration Reaches

Potential Restoration Reaches
- Low Priority
- Moderate Priority
- High Priority
- Very High Priority
- USGS Stream Gage
- Streams
- Primary Roads
- Secondary Roads
- Subwatersheds
- Planning Area
- Municipal Boundaries
- County Boundaries
- NCWRC Needmore Tract
- USFS National Forest

N W E S

0 0.75 1.5 2.25 3 Miles

Note: This map is not a survey and is not to be construed as such.

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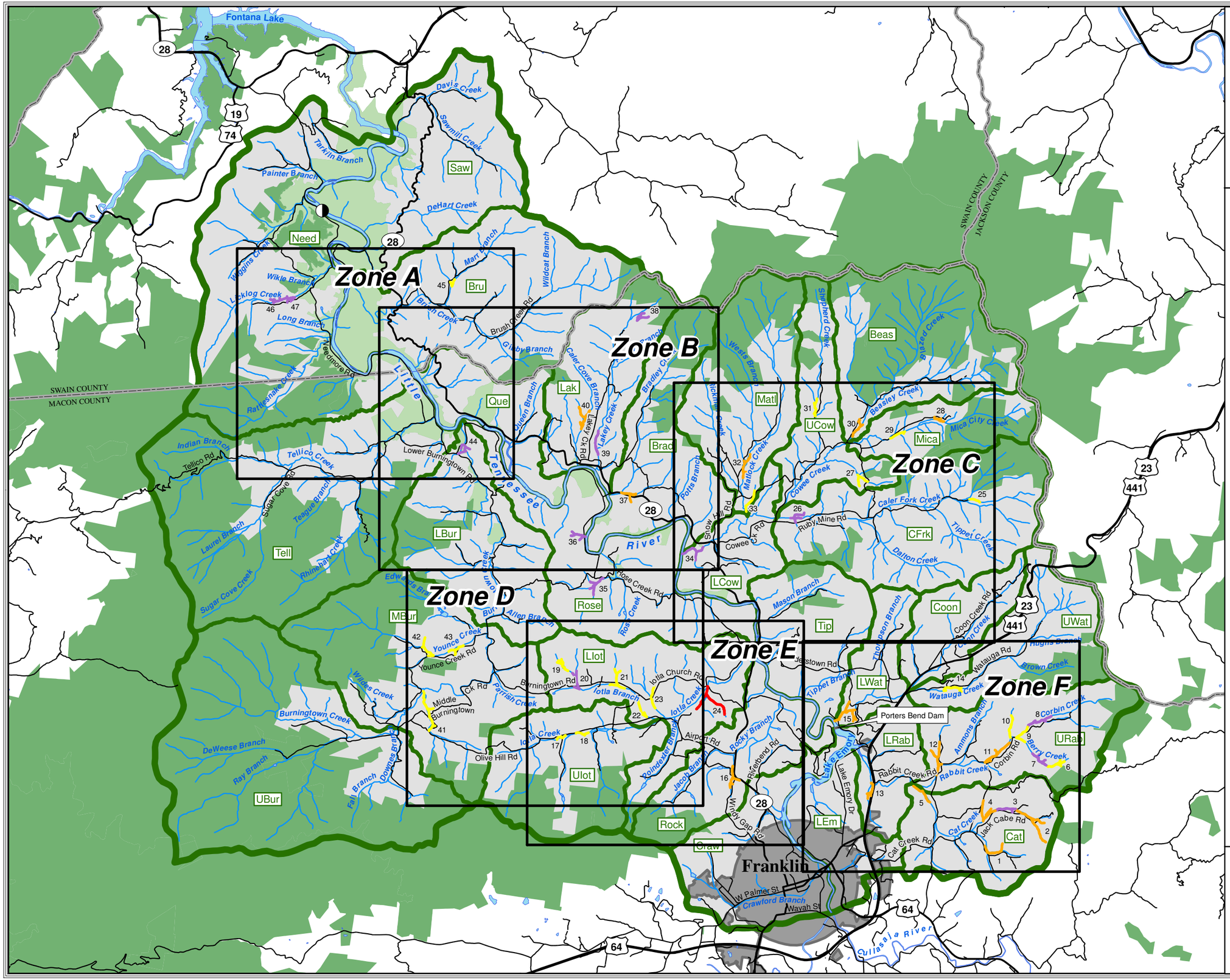

Figure 2.3

Franklin to Fontana Local Watershed Planning Area

Key to Zones

Potential Restoration Reaches
- Low Priority
- Moderate Priority
- High Priority
- Very High Priority

Zones

USGS Stream Gage

Streams

Primary Roads

Secondary Roads

Llot Subwatersheds

Planning Area

Municipal Boundaries

County Boundaries

NCWRC Needmore Tract

USFS National Forest

N W E S

0 0.75 1.5 2.25 3 Miles

Note: This map is not a survey and is not to be construed as such.

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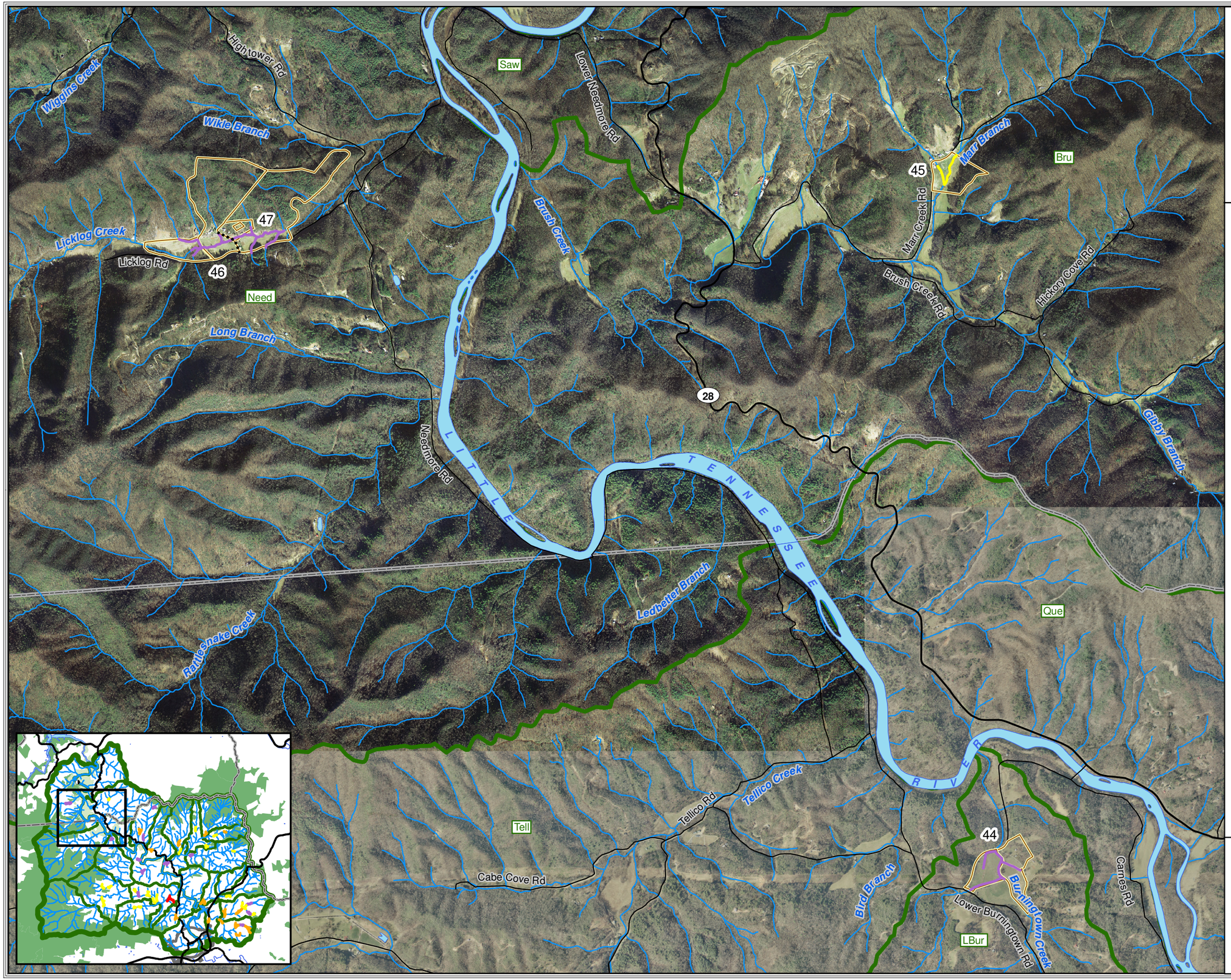

Figure 2.4

Franklin to Fontana Local Watershed Planning Area

Zone A

Potential Restoration Reaches
- Low Priority
- Moderate Priority
- High Priority
- Very High Priority
- Project Division
- Associated Parcels
- Streams
- Primary Roads
- Secondary Roads
- Ponds
- Saw — Subwatersheds
- Planning Area
- County Boundaries

N
W E
S

0 1,000 2,000 3,000 4,000 Feet

Note: This map is not a survey and is not to be construed as such.

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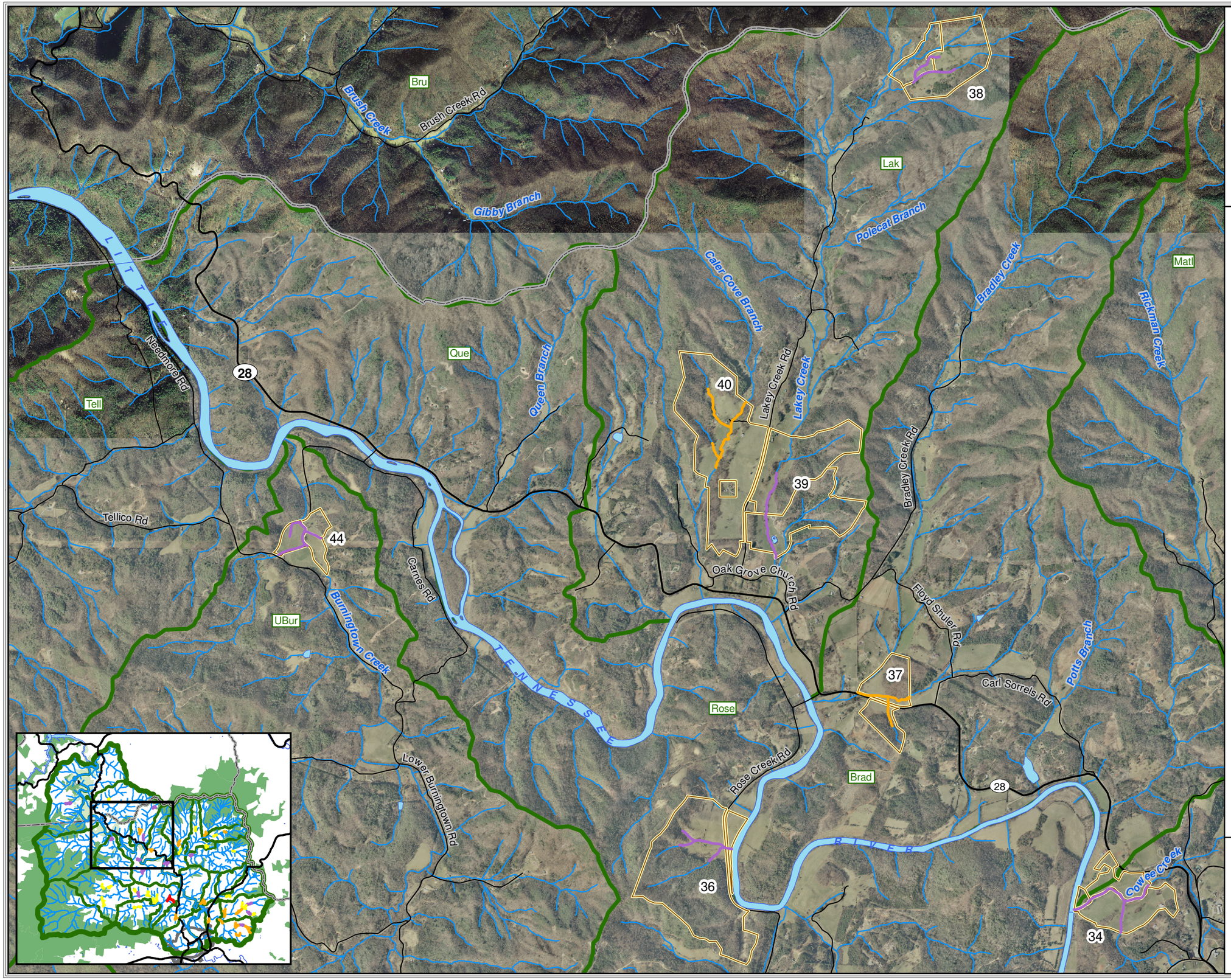

Figure 2.5

Franklin to Fontana Local Watershed Planning Area

Zone B

Potential Restoration Reaches
- Low Priority
- Moderate Priority
- High Priority
- Very High Priority

Project Division

Associated Parcels

Streams

Primary Roads

Secondary Roads

Ponds

Que Subwatersheds

Planning Area

County Boundaries

N
W E
S

0 1,000 2,000 3,000 4,000 Feet

Note: This map is not a survey and is not to be construed as such.

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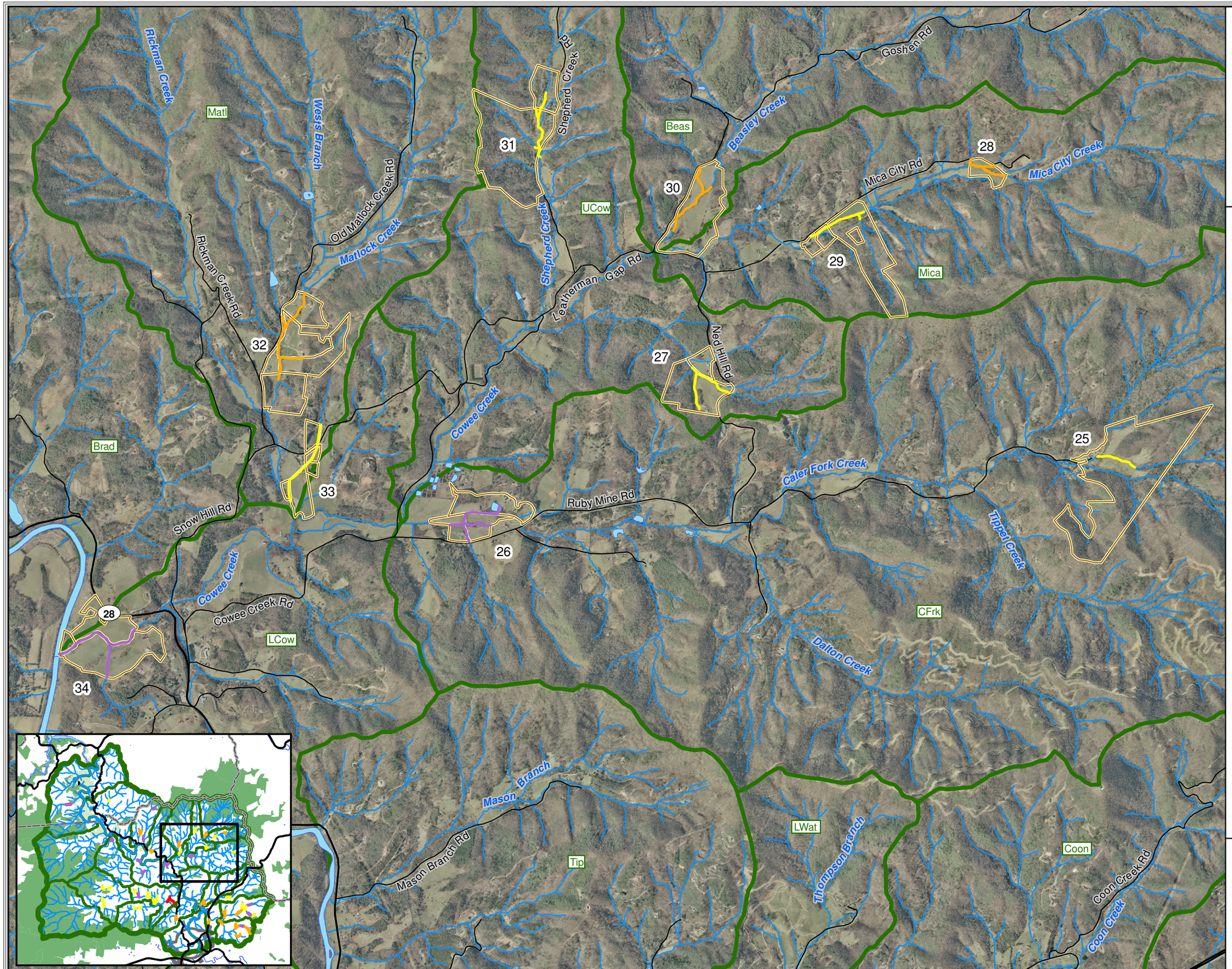

Figure 2.6

Franklin to Fontana Local Watershed Planning Area

Zone C

Potential Restoration Reaches

- Low Priority
- Moderate Priority
- High Priority
- Very High Priority

- Associated Parcels
- Streams
- Primary Roads
- Secondary Roads
- Ponds
- Matl — Subwatersheds
- Planning Area
- County Boundaries

N W E S

0 1,000 2,000 3,000 4,000 Feet

Note: This map is not a survey and is not to be construed as such.

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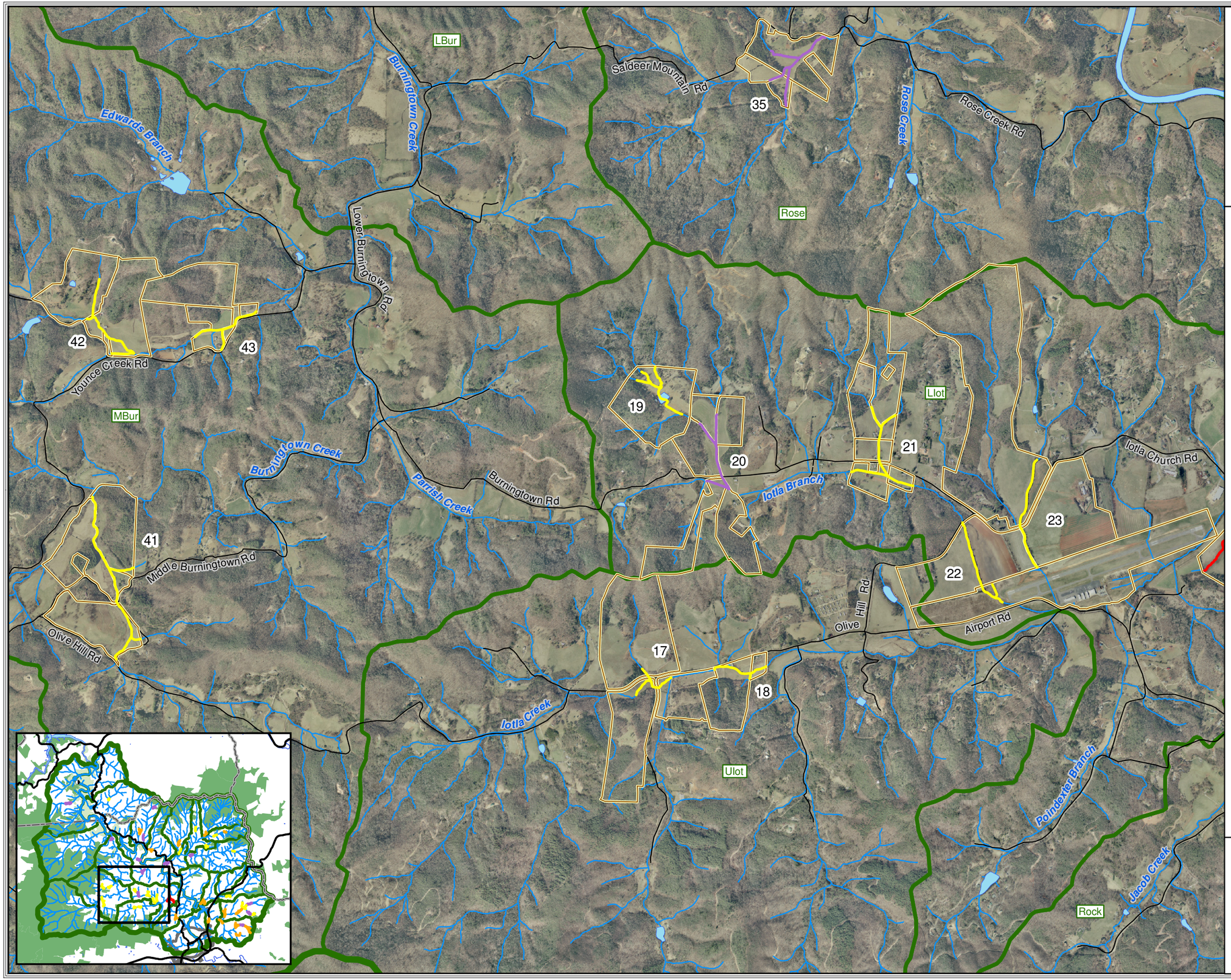
Figure 2.7

Franklin to Fontana Local Watershed Planning Area

Zone D



Potential Restoration Reaches
- Low Priority
- Moderate Priority
- High Priority
- Very High Priority

- Associated Parcels
- Streams
- Primary Roads
- Secondary Roads
- Ponds
- Ulot Subwatersheds
- Planning Area
- County Boundaries

N W E S

0 1,000 2,000 3,000 4,000 Feet

Note: This map is not a survey and is not to be construed as such.

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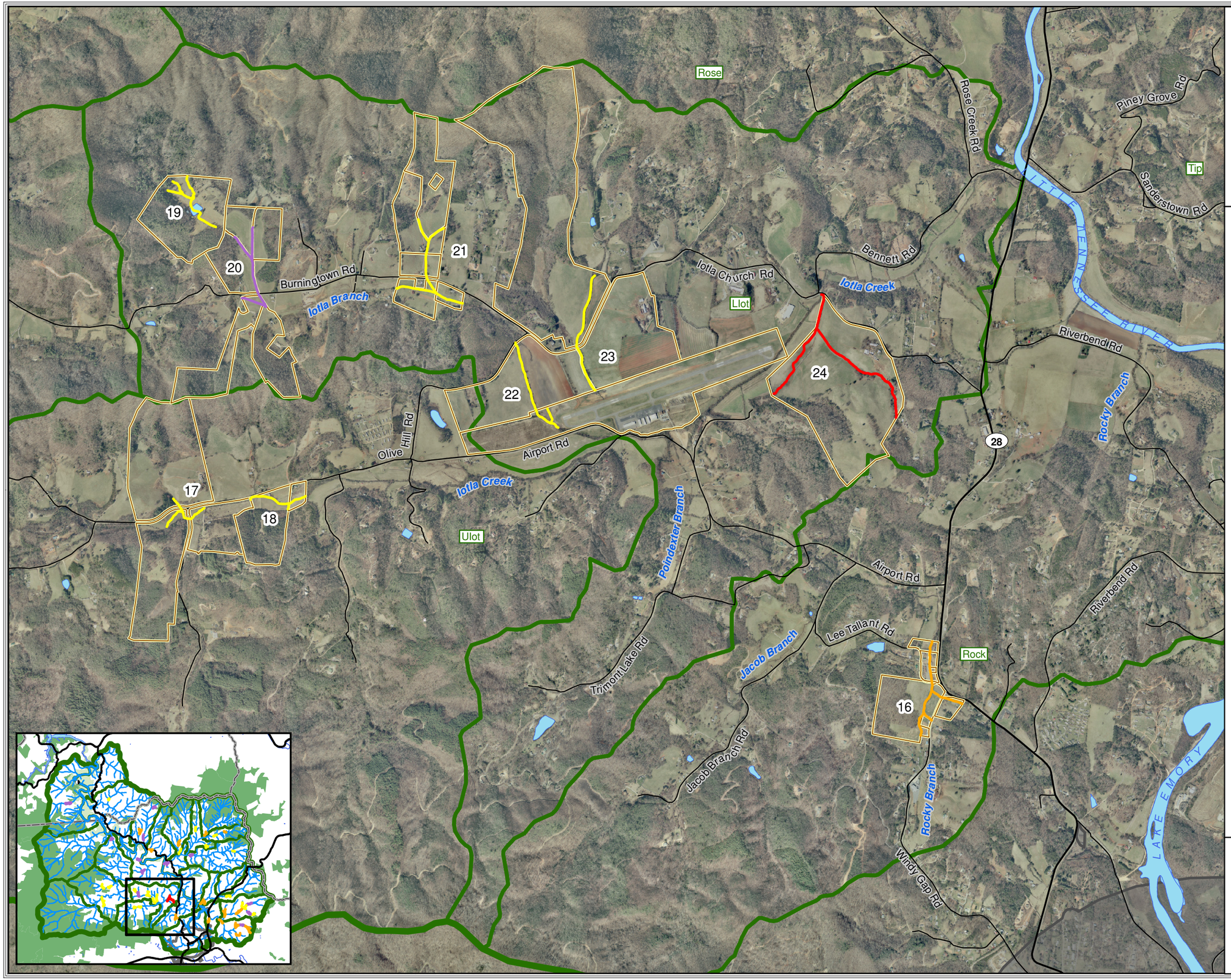

Figure 2.8

Franklin to Fontana Local Watershed Planning Area

Zone E

Potential Restoration Reaches
- Low Priority
- Moderate Priority
- High Priority
- Very High Priority

Associated Parcels

Streams

Primary Roads

Secondary Roads

Ponds

Rock Subwatersheds

Planning Area

Municipal Boundaries

County Boundaries

N
W E
S

0 1,000 2,000 3,000 4,000 Feet

Note: This map is not a survey and is not to be construed as such.

Ecosystem Enhancement Program

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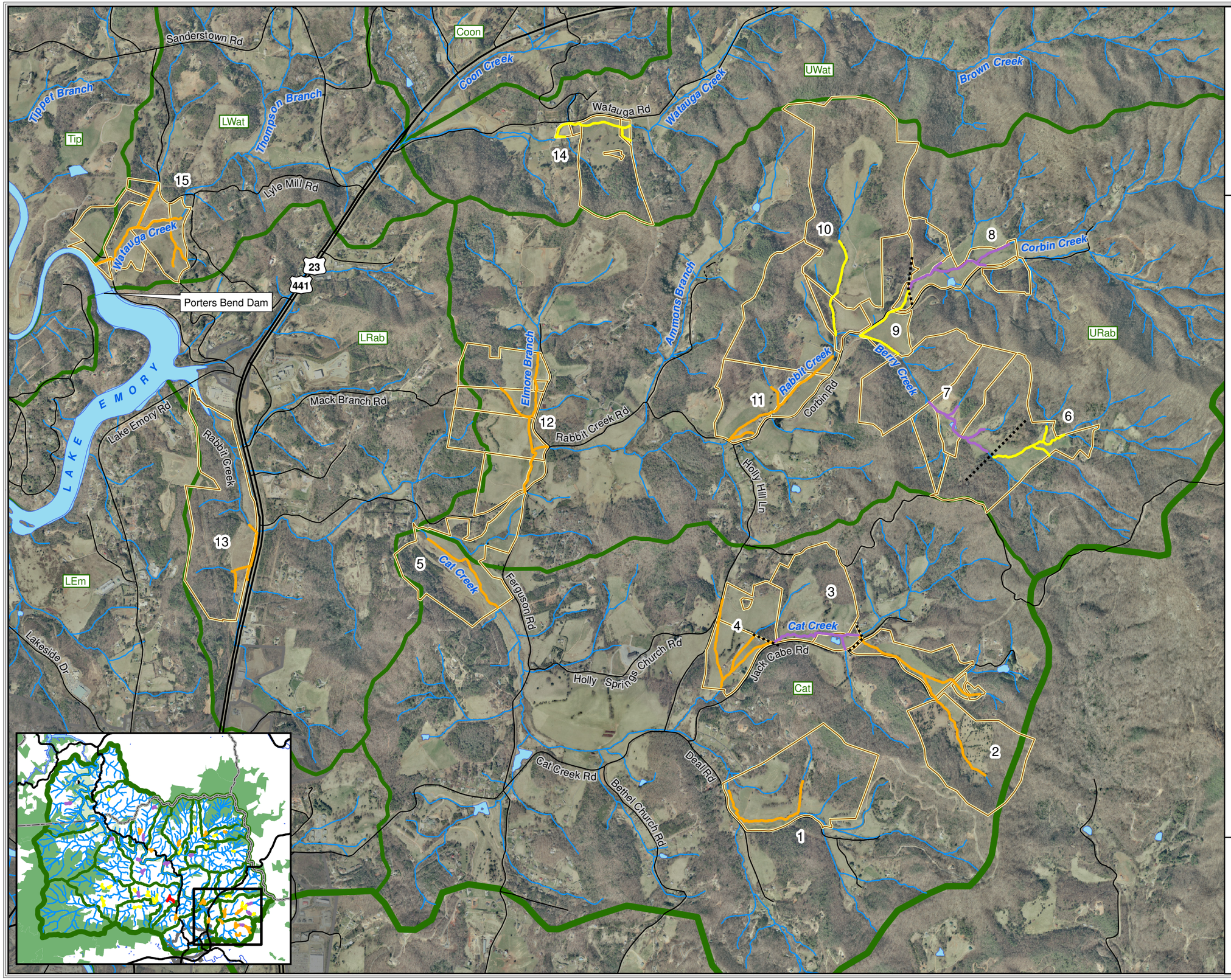

Figure 2.9

Franklin to Fontana Local Watershed Planning Area

Zone F

Potential Restoration Reaches
- Low Priority
- Moderate Priority
- High Priority
- Very High Priority

Project Division

Associated Parcels

Streams

Primary Roads

Secondary Roads

Lake/Pond

Tip Subwatersheds

Planning Area

Municipal Boundaries

County Boundaries

N W E S

0 1,000 2,000 3,000 4,000 Feet

Note: This map is not a survey and is not to be construed as such.

Ecosystem Enhancement Program

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Section 3

Identification of Focus Areas for Restoration

3.1 Introduction

The site prioritization presented above was based solely on reach characteristics. While NCEEP is interested in implementing quality projects, it is also interested in the watershed context in which project work takes place, including the potential for project implementation to result in observable improvement at the subwatershed scale. For example, concentrating multiple restoration projects in the same area could provide maximum ecological uplift to a targeted subwatershed area. On the other hand, observable improvement may not occur if the major problems impacting an area are due to watershed activities not likely to be affected by stream project implementation. In order to provide NCEEP with additional information to use in planning stream restoration projects, existing subwatershed data were reviewed and potential focus areas evaluated.

3.2 Focus Area Analysis and Recommendations

The highest concentration of potential projects and project stream length occurs in the Upper Rabbit Creek, Cat Creek and Lower Iotla subwatersheds (Table 3.1). Collectively, these account for 55,465 feet (44%) of the 124,000 linear feet of restoration projects identified. An additional 10 projects (21,392 linear feet) are located in the Cowee drainage, which encompasses six subwatersheds. Most subwatersheds (17 of 29) had only a single site or no sites at all. Cat Creek has the highest concentration of High/Very High priority sites.

Table 3.1. Potential Restoration Opportunities by Subwatershed

SubWS ID	SubWS Code	Project Opportunities (#)	Project Opportunities (linear feet)	High / Very High Priority Projects (#)	Notes
2	URab	7	20,380	2	1 project downstream in LRab
19	LIot	6	18,288	1	2 projects upstream in UIot
3	Cat	5	16,797	4	1 project downstream in LRab
16	Lak	3	8,032	1	
105	MBur	3	9,350	0	1 project in LBur, none in UBur
12	CFrk	2	3,678	0	Cowee drainage
13	Matl	2	5,333	1	Cowee drainage
10	Mica	2	2,958	1	Cowee drainage
108	Need	2	4,113	0	
103	Rose	2	5,389	0	
11	UCow	2	4,089	0	Cowee drainage
18	UIot	2	2,753	0	
9	Beas	1	2,234	1	Cowee drainage
15	Brad	1	2,200	1	
109	Bru	1	1,106	0	
106	LBur	1	2,333	0	
14	LCow	1	3,100	0	Cowee drainage
4	LRab	1	2,083	1	
7	LWat	1	4,669	1	
102	Rock	1	2,884	1	
5	UWat	1	2,289	0	
6	Coon				
101	Craw				
1	LEm				
17	Que				
110	Saw				
107	Tell				
8	Tip				
104	UBur				
	Total	**47**	**124,058**		

Drawing on subwatershed data compiled for the Preliminary Finding and Recommendations Report (Equinox, 2009), Table 3.2 summarizes key background information for each subwatershed and includes the following:

- Summary information on potential stream project opportunities;
- Overall ecological condition rating developed during Phase I of the Local Watershed Plan;
- Data for the four attributes used to derive the overall subwatershed ecological rating; and
- Additional subwatershed parameters.

Table 3.2. Background Information by Subwatershed

Subwatershed			Potential Projects				Rating	Data for Ecological Condition Attributes[1]				Other Data[1]		
ID	Code	Area (sq mi)	Potential Projects (#)	Total Project Length (ft)	Project Length as % of Unbuffered Stream Length[2]	High/Very High Priority Projects (#)	Overall Ecological Condition[1]	Forest Cover (%)	Streams Unbuffered[3] (%)	Bioclass.	Median Conduct. (µS/cm)	Developed Land (%)	Agricul. Land (%)	Protected Land (%)
2	URab	4.8	7	20,380	36%	2	Low	77%	31%	F	52	7%	15%	11%
19	Llot	5.1	6	18,289	27%	1	Low	63%	40%	G-F	47	13%	23%	2%
3	Cat	3.7	5	16,796	27%	4	Low	67%	53%	F	50	12%	21%	0%
105	MBur	8.8	3	9,350	17%		High	90%	16%	E	18	4%	6%	40%
16	Lak	4.3	3	8,033	23%	1	Moderate	83%	21%	G-F	25	5%	11%	11%
103	Rose	6.0	2	5,388	13%		Moderate	81%	23%	G-F	28	7%	10%	12%
13	Matl	5.1	2	5,333	17%	1	High	92%	14%	G-F	27	4%	4%	36%
7	LWat	1.8	1	4,669	20%	1	Moderate	70%	36%	G-F	51	12%	17%	0%
108	Need	12.0	2	4,112	10%		High	93%	10%	G	30	5%	1%	44%
11	UCow	3.1	2	4,089	20%		High	91%	15%	G	22	5%	5%	15%
12	CFrk	7.4	2	3,677	10%		High	91%	12%	G	33	5%	3%	19%
14	LCow	2.1	1	3,100	14%		Moderate	65%	35%	G	29	9%	25%	3%
10	Mica	2.4	2	2,958	20%	1	High	95%	15%	nd	24	2%	3%	41%
102	Rock	3.8	1	2,884	8%	1	Moderate	70%	31%	G-F	43	11%	18%	16%
18	Ulot	4.8	2	2,753	9%		Moderate	87%	17%	G-F	31	5%	8%	35%
106	LBur	5.3	1	2,333	10%		High	91%	11%	G	18	4%	5%	18%
5	UWat	3.9	1	2,289	7%		Moderate	84%	19%	G-F	57	12%	4%	19%
9	Beas	6.2	1	2,234	24%	1	High	97%	3%	nd	20	2%	1%	65%
15	Brad	4.6	1	2,200	7%	1	Moderate	79%	23%	G-F	26	7%	12%	25%
4	LRab	1.9	1	2,083	17%	1	Moderate	73%	24%	G-F	43	21%	4%	0%
109	Bru	8.6	1	1,106	3%		High	93%	12%	G	36	3%	2%	17%
6	Coon	2.4	0	0	0%		Moderate	82%	23%	G-F	34	16%	1%	0%
101	Craw	4.5	0	0	0%		Low	60%	41%	P	54	34%	3%	1%
1	LEm	2.5	0	0	0%		Low	56%	37%	nd	45	32%	6%	0%
17	Que	2.6	0	0	0%		High	88%	13%	nd	20	7%	1%	22%
110	Saw	6.8	0	0	0%		High	93%	15%	G-F	32	4%	1%	25%
107	Tell	12.8	0	0	0%		High	97%	3%	G	25	2%	1%	74%
8	Tip	3.7	0	0	0%		Moderate	78%	20%	nd	34	8%	12%	10%
104	UBur	12.6	0	0	0%		High	98%	3%	nd	17	1%	1%	79%

[1] From Preliminary Findings and Recommendations Report

[2] Unbuffered length = length with wooded riparian areas <30 ft wide on both banks

[3] Unbuffered length as % of total stream length

Bioclassification Key E=Excellent F=Fair nd=no data
G=Good P=Poor
G-F=Good-Fair

Based simply on the distribution of potential project opportunities, only the following drainages and subwatersheds can be considered as candidate focus areas for stream projects. Opportunities are limited elsewhere in the planning area based on the project identification methods used here.

- Rabbit Creek drainage area (Cat, URab and LRab);
- Iotla Creek drainage area (LIot and UIot);
- Lakey Creek subwatershed (Lak);
- Cowee Creek drainage area (Beas, Mica, CFrk, Matl, UCow and LCow); and
- Middle Burningtown subwatershed (MBur).

These five potential focus areas were compared to examine the positive and negative factors associated with project implementation (Table 3.3). Several are recommended as priority areas for NCEEP project work (Figure 3.1). The factors considered included the following:

- Extent of project opportunities;
- Ability of projects to address existing riparian deficiencies;
- Status of stream communities; and
- Likely existence of watershed impacts that may not be directly addressed by the implementation of NCEEP projects.

Rabbit Creek Drainage: Projects in the Upper Rabbit and Cat Creek subwatersheds could cumulatively address about one-third of the unbuffered stream length in these areas. However, because riparian impacts are widespread, it may take the implementation of numerous projects to accomplish much at the subwatershed scale. This drainage also appears to be affected by a variety of other water quality issues, including elevated nitrogen concentrations, fecal coliform bacteria contamination and possible toxicity from tomato farm pesticides. Extensive sedimentation is evident, although how much of the problem is due to upland inputs as opposed to channel erosion has not been investigated. Whether implementation of stream projects would result in observable improvement in biological communities without addressing these other concerns is unclear.

Upper Rabbit Creek has more extensive forest and more intact riparian areas than Cat Creek, and may have fewer watershed impacts, although restoration projects generally received a lower priority rating than Cat Creek projects. As discussed in Section 4, there is a preservation opportunity (8,700 ft) on Corbin Creek within the Upper Rabbit Creek subwatershed.

Upper Rabbit Creek and Cat Creek are recommended as focus areas for NCEEP stream restoration: These modest size subwatersheds (4.8 and 3.7 square miles, respectively) contain 37,176 feet of potential restoration projects and represent an opportunity to build on existing NCEEP work on Cat Creek. Attaining noticeable improvement in subwatershed scale conditions will require the implementation of multiple projects and possibly the remediation of other water quality concerns.

Iotla Creek Drainage: As is the case with Rabbit Creek, the Iotla Creek drainage contains substantial project opportunity, but it may take the implementation of numerous projects to accomplish much at the subwatershed scale. This drainage also appears to be affected by nutrient and fecal coliform contamination, although pollutant levels in the LIot subwatershed are not as elevated as in Cat or Upper Rabbit Creeks, and benthic communities on the whole are not as degraded. The source of existing sediment deposition, which is considerable at many locations, must be evaluated. Most of the potential project length (10,778 feet or 59%) in the LIot subwatershed is concentrated in the Iotla Branch catchment.

Iotla Branch is recommended as a focus area for NCEEP stream restoration: Focusing on this 1.7 square mile drainage would enable NCEEP to concentrate projects in a relatively small area. Iotla Branch lacks riparian vegetation for most of its length and the four projects identified on this stream could remediate most of these areas. However, a number of other issues on Iotla Branch (e.g., high conductivity, extensive sediment deposition) would also need to be assessed. Additional project opportunities exist downstream on Iotla Creek, though if the focus area is expanded to include the entire Lower Iotla subwatershed, this would necessitate evaluation of sediment sources in the Upper Iotla subwatershed as well.

Lakey Creek Subwatershed: Projects are located within both the Lakey Creek (2.7 square mile) and Caler Cove Branch (< 1 square mile) catchments, which comprise this 4 square mile subwatershed (along with other smaller tributaries to the Little Tennessee River). The cumulative size of identified projects is modest (about 8,000 feet). However, these sites may provide an opportunity to work on several small streams that have some evident impacts, but do not appear to be complicated by the watershed scale issues evident in Rabbit, Cat or Iotla Creeks. There is also a potential preservation project opportunity on Caler Cove Branch as discussed in Section 4. *The Lakey Creek subwatershed is recommended as a focus area for NCEEP stream restoration.*

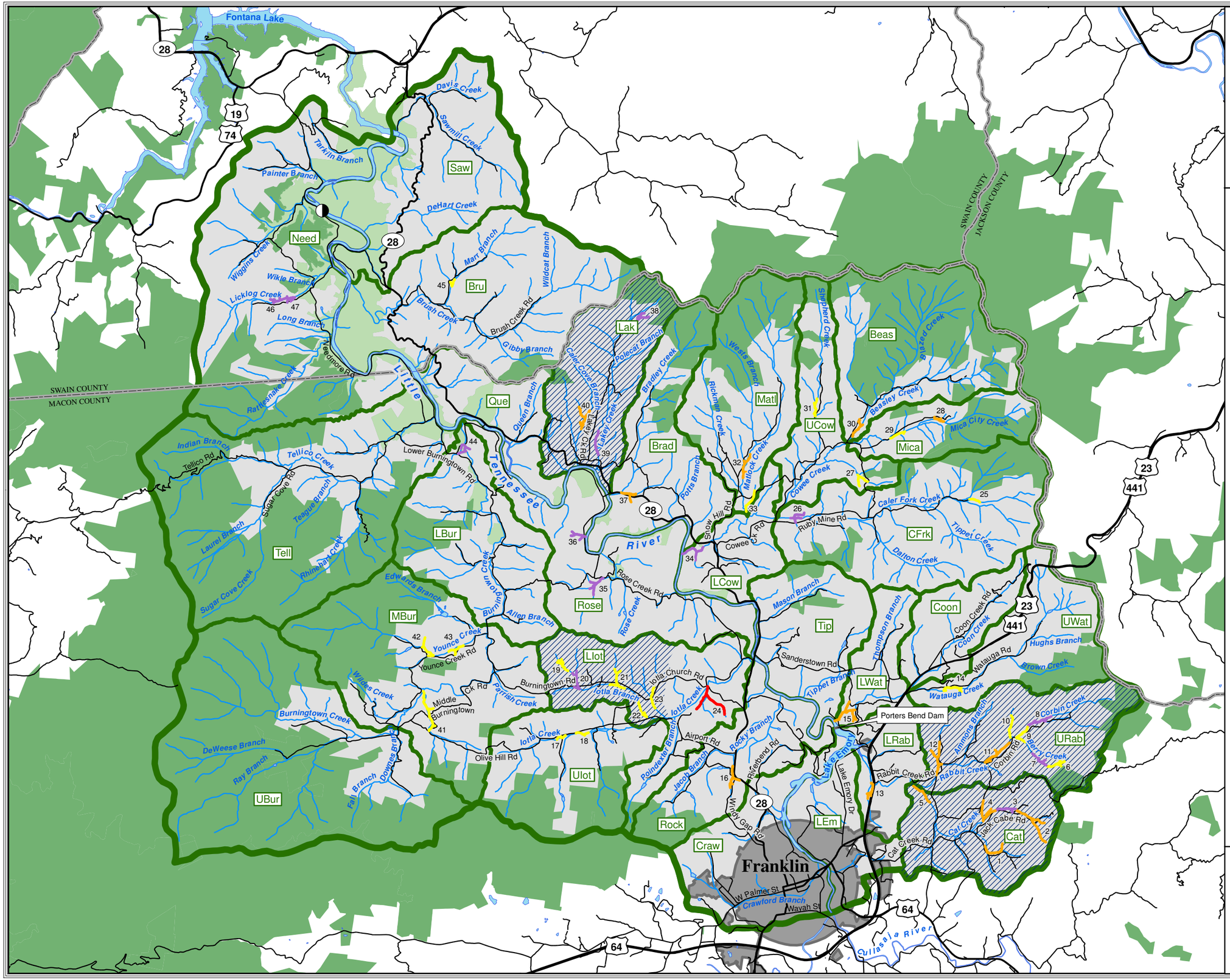
Cowee Creek Drainage: While there are many potential sites here, they are scattered over a large drainage, possibly limiting the beneficial effects. Since biological communities are relatively intact at most monitoring sites, observable improvements at the drainage (or subwatershed) scale may be difficult to attain. Projects implemented in the Cowee drainage would likely serve as a buffer against future watershed impacts rather than provide measurable ecological uplift beyond the site scale. As discussed in Section 4, potential preservation opportunities in the Cowee drainage are also extensive (>75,000 feet).

Middle Burningtown Creek Subwatershed: This large subwatershed (almost 9 square miles) is one of three comprising the 27 square mile Burningtown Creek drainage. Overall conditions in all three subwatersheds are very good. It seems unlikely that notable improvements beyond the site level would be observed from the identified stream projects. As with Cowee, projects could serve as a buffer against potential future impacts in the drainage.

Table 3.3. Comparison of Potential Focus Areas for Restoration

Focus Area	Restoration Opportunities	Preservation Project Opportunities	Subwatershed Riparian Condition	Overall Subwatershed / Drainage Condition
Rabbit Ck Drainage	• Extensive opportunities (37,176 ft) in Upper Rabbit and Cat Ck subwatersheds. • Many (4 out of 5) in Cat Ck are High Priority. • One additional project in Lower Rabbit (2,083 ft).	• 8,714 ft in Upper Rabbit.	• Riparian conditions highly degraded, especially in Cat. • Identified projects could cumulatively address about 1/3 of the unbuffered reaches in Cat and URab.	• Cat and Upper Rabbit are among the most degraded subwatersheds in the planning area. • Extensive sedimentation evident. • High conductivity levels, significant agricultural acreage and (in Cat Creek) a fair amount of development. • Possible toxicity impacts from tomato farm a concern. Relatively low overall forest cover for the planning area. • Upper Rabbit may have fewer land cover issues than Cat.
Iotla Ck Drainage	• Substantial opportunities (18,288 ft) in Lower Iotla. • Several additional smaller projects in Upper Iotla (2,753 ft).	• none	• Riparian conditions highly degraded in Upper Iotla. • Identified projects could cumulatively address almost 30% of these areas in UIot.	• As with Cat and Rabbit, conditions are generally degraded (though not as bad as the above areas). • Extensive sedimentation evident. • High conductivity and substantial agricultural and development activity.
Cowee Ck Drainage	• Substantial opportunity (21,392 ft) spread over 6 subwatersheds (>26 sq mi).	• >75,000 ft, primarily in CFrk and Matl.	• Riparian areas relatively intact, except for Lower Cowee.	• Most subwatersheds (except Lower Cowee) in decent condition. • Good to Excellent biota at many sites. • Tributaries heavily forested, with many headwaters in National Forest.
Middle Burningtown Subwatershed	• 9,349 ft of project opportunity in 9 sq mi subwatershed.	• none in MBur • 14,829 ft in LBur.	• Riparian areas relatively intact. • Projects would cumulatively address only 17% of degraded riparian areas.	• Among the best condition of any subwatershed. • Many biological samples Good to Excellent. • Low conductivity. • Forested headwaters.
Lakey Ck Subwatershed	• 8,033 ft located on Lakey Ck and Caler Cove Creek.	• 5,473 ft on Caler Cove Branch.	• Riparian areas moderately impacted. • Projects would cumulatively address 23% of degraded riparian areas.	• Moderate overall condition, with fish community Good-Fair. • Conductivity fairly low. • Extensive forest cover, especially in headwaters. Limited development. • Most impacts may be at downstream end.

Figure 3.1
Franklin to Fontana Local Watershed Planning Area
Restoration Focus Areas



Potential Restoration Reaches
- Low Priority
- Moderate Priority
- High Priority
- Very High Priority
- Restoration Focus Areas
- USGS Stream Gage
- Streams
- Primary Roads
- Secondary Roads
- Llot Subwatersheds
- Planning Area
- County Boundaries
- Municipal Boundaries
- NCWRC Needmore Tract
- USFS National Forest

N W E S

0 0.75 1.5 2.25 3 Miles

Note: This map is not a survey and is not to be construed as such.

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Section 4

Identification of Potential Preservation Reaches

4.1 Introduction

Forested reaches were identified as potential NCEEP preservation reaches using a multi-step screening process similar to the process used to select restoration reaches.

1. **Initial reach identification:** This involved a GIS based screening analysis to identify potential reaches that appeared to meet specific NCEEP preservation project requirements.
2. **Reach prioritization:** Reaches were scored based on several factors pertaining to ecological uplift. Reaches were then prioritized based on final reach rankings.
3. **Preservation focus areas:** Identified reaches were further assessed to identify subwatershed focus areas.

4.2 Reach Identification

Initial screening involved the selection of reaches that met the following criteria developed in consultation with NCEEP. Screening involved the sequential application of these four criteria in the order listed:

- Reach location outside of the Nantahala National Forest, the Needmore Tract, and land protected by the Land Trust for the Little Tennessee;
- Forested buffer ≥ 100 feet wide on both banks;
- Reach length of a minimum of 5,000 contiguous linear feet; and
- Reach is in single ownership.

Reach Location

All stream reaches that fell within the Nantahala National Forest, Needmore Tract, and Land Trust conservation easements were excluded from the screening. Streams within these tracts are already under permanent protection.

Riparian Zone

The riparian zone dataset developed for NCEEP by Equinox in 2008 (Equinox, 2008) was used to identify reaches with forested buffers ≥ 100 feet on both banks. All other reaches were eliminated from further preservation screening.

Reach Length

Stream reaches were further evaluated to identify reaches ≥ 5,000 contiguous linear feet. A contiguous stream segment included adjacent segments on the same stream or adjacent segments on a stream and one or more of its tributaries.

Number of Landowners

Swain and Macon County parcel data were analyzed to determine the total number of landowners associated with the potential reaches identified above. Reaches identified through the above screening were considered a potential project opportunity if the reach was in single ownership.

4.3 Reach Prioritization

Based on this screening, 23 potential preservation opportunities totaling 178,736 linear feet were identified (Figure 4.1). These reaches were prioritized based upon their ecological significance. The following primary attributes were assessed to determine the significance of each identified reach:

- Total reach length;
- Location immediately adjacent to protected tracts;
- Subwatershed ecological condition; and
- Reach composed of headwaters or immediately downstream from protected headwaters.

4.3.1 Prioritization Methods

Reach Length: The total contiguous linear feet of stream within each identified site with forested buffers ≥ 100 feet wide on both banks was used. Due to the overall potential for ecological uplift, this criterion was weighted more heavily than any of the others.

- 5,000 – 6,999 linear feet = 1;
- 7,000 – 8,999 linear feet = 2;
- 9,000 – 10,999 linear feet = 3; and
- ≥ 11,000 linear feet = 4.

Location Adjacent to Protected Lands: The proximity of potential preservation reaches to protected lands within the project area was determined. Protected lands include the United States Forest Service Nantahala National Forest, the North Carolina Wildlife Resources Commission Needmore Tract, and land protected by the Land Trust for the Little Tennessee (primarily conservation easements). The scores assigned are as follows:

- Reach not adjacent to protected lands = 0; and
- Reach adjacent to protected lands = 2.

Subwatershed Ecological Condition: Reaches were scored based upon the overall ecological condition of the subwatershed in which they were located. The subwatershed condition ratings developed for the Preliminary Findings and Recommendations Report (Equinox, 2009) were used. Implementing preservation projects with high ecological condition maintains their functional basis and is an important component of NCEEP's approach to local watershed planning. Sites were scored as follows:

- Subwatershed ecological condition low = 0;
- Subwatershed ecological condition medium = 1; and
- Subwatershed ecological condition high = 2.

Headwaters: Potential preservation reaches that consisted entirely of headwater streams (reaches with no upstream channels depicted on the GIS stream database) or were located immediately downstream from protected headwater streams were identified. Preserving headwater streams minimizes potential downstream impacts due to changes in land use adjacent to these source waters. Scores are as follows:

- Reach not comprised entirely of headwater streams = 0; and
- Reach comprised entirely of headwater streams or immediately downstream from protected headwater streams = 2.

4.3.2 Site Prioritization Results

Scoring for each of the 23 sites is shown in Table 4.1. Scores for each criterion are given in parentheses following the data for each reach. Appendix F contains the landowner database for these reaches. Scores ranged from 2 to 8 out of a maximum of 10, with most sites in the 5 to 6 range.

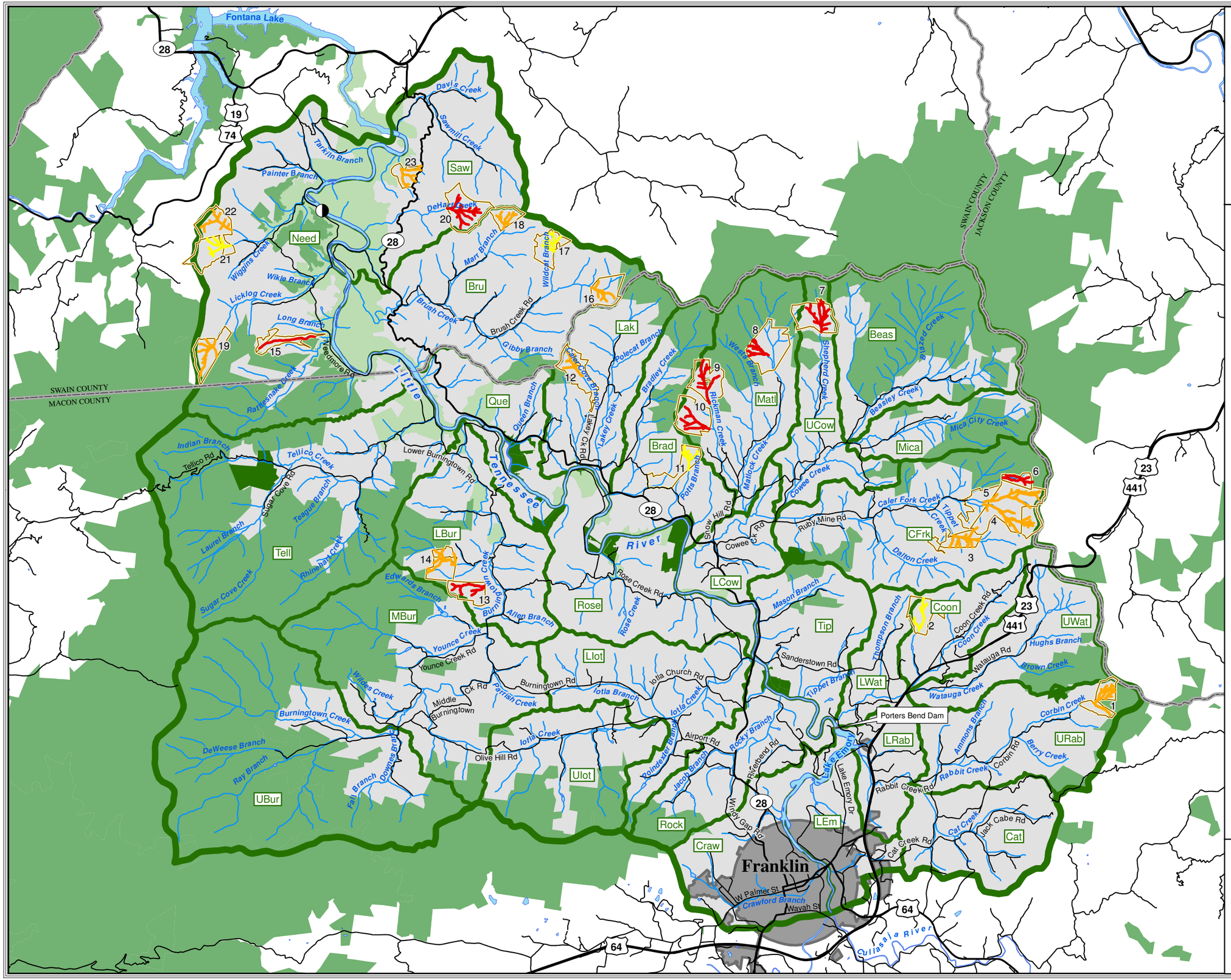
Based on the total site score, reaches were classified as High, Medium or Low Priority as follows:

- 7 -8 = High Priority (8 reaches);
- 5 -6 = Medium Priority (11 reaches); and
- < 5 = Low Priority (4 reaches).

Table 4.1. Preservation Reach Scores and Prioritization

Reach ID	SubWS	Stream Name	Total Length (ft)	Adjacent to Protected Lands	SubWS Ecological Condition	Headwater Streams	Total Score	Priority
20	Saw	DeHart Creek + UT	12,717 (4)	No (0)	High (2)	Yes (2)	8	High
7	UCow	Shepherd Creek + UT	11,235 (4)	Yes (2)	High (2)	No (0)	8	High
10	Matl	UT Rickman Creek	7,851 (2)	Yes (2)	High (2)	Yes (2)	8	High
9	Matl	Rickman Creek + UT	9,416 (3)	Yes (2)	High (2)	No (0)	7	High
15	Need	UT Little Tennessee	5,086 (1)	Yes (2)	High (2)	Yes (2)	7	High
13	LBur	UT Burningtown Creek	6,309 (1)	Yes (2)	High (2)	Yes (2)	7	High
6	CFrk	Caler Fork + UT	5,234 (1)	Yes (2)	High (2)	Yes (2)	7	High
8	Matl	UT Matlock Creek	6,736 (1)	Yes (2)	High (2)	Yes (2)	7	High
5	CFrk	UT Caler Fork	12,614 (4)	No (0)	High (2)	No (0)	6	Medium
4	CFrk	UT Caler Fork	13,005 (4)	No (0)	High (2)	No (0)	6	Medium
22	Need	Monkey John Branch	7,226 (2)	No (0)	High (2)	Yes (2)	6	Medium
14	LBur	UT Burningtown Creek	8,520 (2)	Yes (2)	High (2)	No (0)	6	Medium
19	Need	Licklog Creek + UT	8,730 (2)	Yes (2)	High (2)	No (0)	6	Medium
12	Lak	Caler Cove Branch + UT	5,473 (1)	Yes (2)	Moderate (1)	Yes (2)	6	Medium
1	URab	Corbin Creek + UT	8,714 (2)	Yes (2)	Low (0)	Yes (2)	6	Medium
3	CFrk	Tippet Creek + UT	9,318 (3)	No (0)	High (2)	No (0)	5	Medium
18	Bru	Marr Branch + UT	5,470 (1)	No (0)	High (2)	Yes (2)	5	Medium
16	Bru	Brush Creek + UT	5,903 (1)	Yes (2)	High (2)	No (0)	5	Medium
23	Saw	Cabe Branch + UT	6,108 (1)	Yes (2)	High (2)	No (0)	5	Medium
11	Brad	Potts Branch + UT	5,060 (1)	Yes (2)	Moderate (1)	No (0)	4	Low
17	Bru	Wildcat Branch + UT	6,016 (1)	No (0)	High (2)	No (0)	3	Low
21	Need	Hurricane Branch	6,712 (1)	No (0)	High (2)	No (0)	3	Low
2	Coon	UT Coon Creek	5,283 (1)	No (0)	Moderate (1)	No (0)	2	Low

Figure 4.1
Franklin to Fontana Local Watershed Planning Area
Potential Preservation Reach Locations



Potential Preservation Reaches
- Low Priority
- Medium Priority
- High Priority
- Associated Parcels
- USGS Stream Gage
- Streams
- Primary Roads
- Secondary Roads
- Llot — Subwatersheds
- Planning Area
- Municipal Boundaries
- County Boundaries
- LTLT Protected Land
- NCWRC Needmore Tract
- USFS National Forest

N W E S

0 0.75 1.5 2.25 3 Miles

Note: This map is not a survey and is not to be construed as such.

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4.4 Focus Area Recommendations

Extensive preservation opportunities were identified in the Cowee drainage (75,409 feet, or 42% of total length of preservation opportunities) and in the Swain County portion (Need, Bru and Saw subwatersheds) of the planning area (63,968 feet, or 36% of the total). Elsewhere, opportunities are widely scattered, although there are several projects in the Lower Burningtown Creek subwatershed (Table 4.2). No potential preservation opportunities were identified in 18 of the 29 subwatersheds.

Ecological preservation priorities should ideally be developed based on the status of ecological communities within the planning area, giving consideration to existing priorities of other agencies and organizations. The Land Trust for the Little Tennessee has not developed specific protection priorities within the project area. A Natural Heritage Inventory for Macon County is currently underway.

Table 4.2 Potential Preservation Opportunities by Subwatershed

SubWS ID	SubWS Code	Project Opportunities (#)	Project Opportunities (linear feet)	High Priority Projects (#)	Notes	SWS Priority Level
12	CFrk*	4	40,171	1	SubWS ecological condition high	High
108	Need	4	27,754	1	SubWS ecological condition high	Medium
13	Matl*	3	24,003	3	SubWS ecological condition high	High
110	Saw	2	18,825	1	SubWS ecological condition high	Medium
109	Bru	3	17,389	0	SubWS ecological condition high	High
106	LBur	2	14,829	1	SubWS ecological condition high	Medium
11	UCow*	1	11,235	1	SubWS ecological condition high	High
2	URab	1	8,714	0	Restoration focus area	Low
16	Lak	1	5,473	0	Restoration focus area	Low
6	Coon	1	5,283	0		Low
15	Brad	1	5,060	0		Low
9	Beas	0				High
3	Cat	0				NA
101	Craw	0				NA
14	LCow	0				High
1	LEm	0				NA
19	Llot	0				NA
4	LRab	0				NA
7	LWat	0				NA
105	MBur	0				NA
10	Mica	0				High
17	Que	0				NA
102	Rock	0				NA
103	Rose	0				NA
107	Tell	0				NA
8	Tip	0				NA
104	UBur	0				NA
18	Ulot	0				NA
5	UWat	0				NA
	Total	**23**	**178,736**			

* Subwatershed is part of the Cowee Creek drainage

Focus areas for preservation (Figure 4.2) were determined based upon professional judgment, as discussed below.

High Priority

Cowee Creek Drainage: There are > 75,000 linear feet of potential preservation opportunities within this drainage area. These include sites within the Matlock Creek, Upper Cowee Creek, and Caler Fork subwatersheds. All three of the Matlock Creek sites are classified as high priority. Project implementation within this drainage area would provide a means to buffer against future watershed impacts while expanding on existing protected reaches. The Cowee drainage is considered high priority focus area because of the large number of potential projects (including 5 high priority projects), the relatively high level of ecology function in most areas, and the historic importance of the Cowee area.

Brush Creek Subwatershed: Project opportunities within this subwatershed include three sites totaling 17,389 linear feet. Brush Creek has been identified as an important tributary in the planning area for the Spotfin Chub, a Federally Threatened species. The majority of existing protected lands in this subwatershed are located in the Needmore Tract, located at the downstream end of Brush Creek. The identified preservation reaches are all located in the headwaters of this subwatershed where protection is currently minimal. It is primarily the presence of the Spotfin Chub that distinguishes the Brush Creek subwatershed from the Needmore and Sawmill subwatersheds, which are considered medium priority focus areas.

Medium Priority

Needmore Subwatershed: This subwatershed contains four potential preservation reach opportunities totaling 27,754 linear feet, one of which was identified as a high priority reach. While a significant portion of streams within this watershed are currently protected, project implementation would provide additional protection to existing ecological conditions.

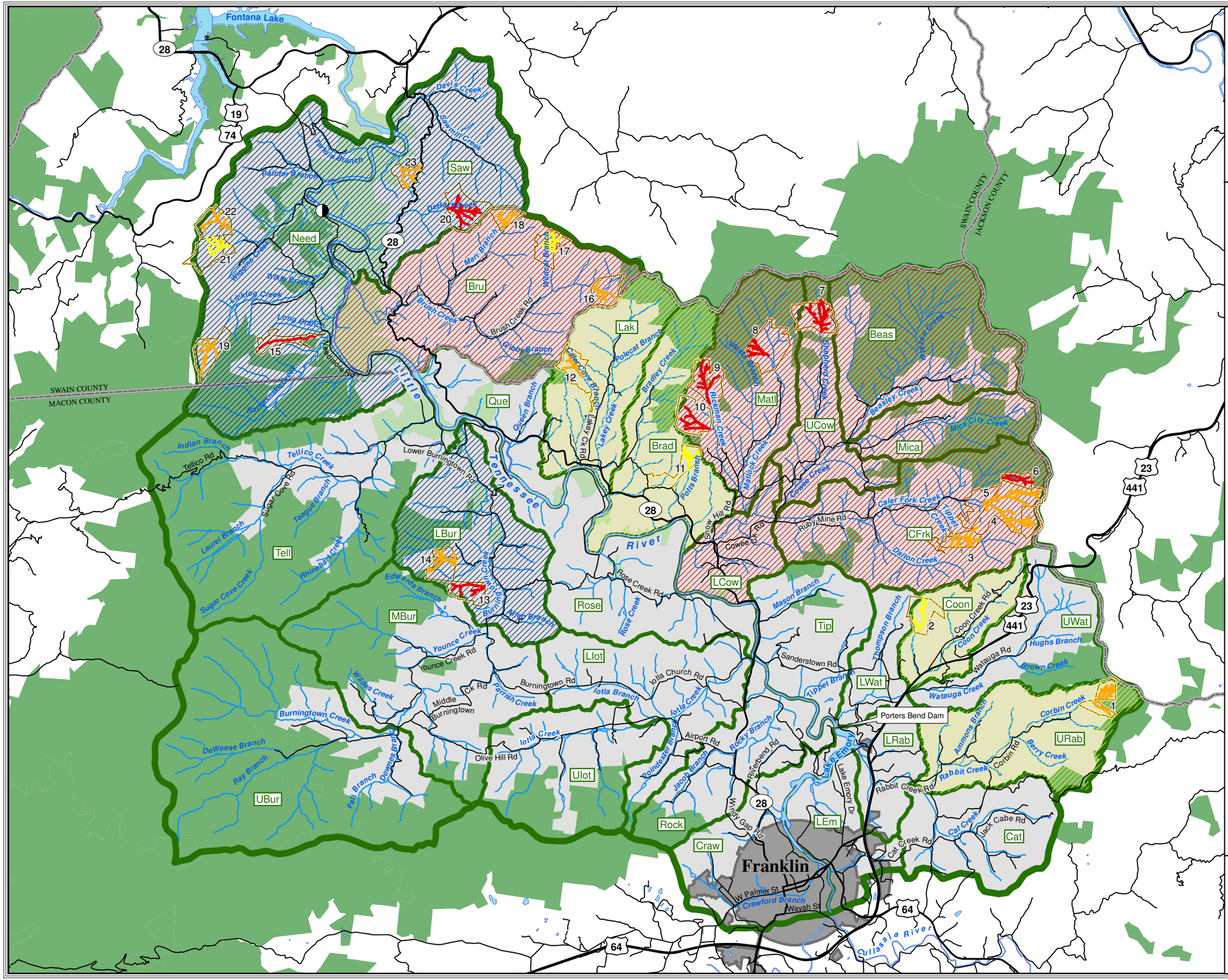
Sawmill Creek Subwatershed: This subwatershed is similar to the Needmore subwatershed, and contains two potential projects totaling 18,825 linear feet, one of which is considered high priority. While the lower portion of this subwatershed along the Little Tennessee River is under protection, the headwaters are in private ownership. The two identified reaches are located within the headwaters of DeHart Creek and Cabe Branch.

Lower Burningtown Creek Subwatershed: There are two potential project sites totaling 14,829 linear feet with one site classified as high priority. Of the two projects located in this watershed, one is located downstream from protected land and the other reach encompasses the headwaters of an unnamed tributary to Burningtown Creek. Preservation of these reaches would further promote existing high quality ecological conditions.

Low Priority

The remaining subwatersheds are considered to be low priority focus areas for preservation. Only modest preservation opportunities have been identified in these areas (Upper Rabbit, Lakey Creek, Coon Creek, Bradley Creek). These subwatersheds are more degraded than those classified as high or medium priority focus areas. Many of the potential preservation opportunities are located in headwater areas, however. In the Upper Rabbit and Lakey Creek subwatersheds, protection of headwater streams would be beneficial to potential downstream restoration or enhancement efforts.

Figure 4.2
Franklin to Fontana Local Watershed Planning Area
Preservation Focus Areas



Preservation Focus Areas
- Low Priority
- Medium Priority
- High Priority

Potential Preservation Reaches
- Low Priority
- Medium Priority
- High Priority

- Associated Parcels
- USGS Stream Gage
- Streams
- Primary Roads
- Secondary Roads
- Llot Subwatersheds
- Planning Area
- Municipal Boundaries
- County Boundaries
- LTLT Protected Land
- NCWRC Needmore Tract
- USFS National Forest

Note: This map is not a survey and is not to be construed as such.

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Section 5
Screening Limitations

This Atlas has identified substantial stream restoration and enhancement opportunities in the Franklin to Fontana area. However, the rapid GIS screening procedure used has very likely excluded some project opportunities. The screening criteria specified that project reaches must have wooded riparian zones less than 30 feet wide on both banks for a distance of at least 2,000 contiguous feet. This excluded long (> 2,000 feet) reaches where riparian zones were largely less than 30 feet wide, but which had short wooded areas wider than 30 feet. Such reaches could make suitable NCEEP projects. Additionally, no attempt was made to screen for areas with inadequate riparian vegetation on only one bank, even though some of these areas may also constitute viable projects. Finally, the approach effectively assumed that restoration/enhancement was not needed for any areas for which aerial photo analysis indicated woody riparian areas greater than 30 feet wide on both banks. While this assumption is generally valid, there will be exceptions. For example, in some cases, livestock have access to the riparian zone and the stream channel, resulting in impacts to vegetation and stream banks. More generally, riparian areas classified as wooded vary in the age and type of woody vegetation, and NCEEP project work may be appropriate in some of these areas. Additional GIS analysis and field evaluations could almost certainly identify additional project sites by addressing these considerations.

The field reconnaissance undertaken in the development of this Atlas was limited, providing only a brief visual assessment of site conditions from the public right-of-way. The potential restoration sites identified here are in clear need of remediation. However, only a limited effort was made to determine the actual mix of approaches appropriate for each site (e.g. riparian revegetation only vs. channel reconfiguration or other options). Recent reviews of stream restoration (channel reconfiguration) efforts in North Carolina indicate that success, in terms of post-construction geomorphic stability and biological community improvements, is often difficult to attain (Penrose, 2008; Miller and Kochel, 2008; Tullos et al, 2009). Large post-construction adjustments in channel morphology appear especially likely where reaches have a large upstream sediment supply, are adjusting to watershed change (e.g. increased development) or have banks of noncohesive materials (Miller and Kochel; 2008; Doyle, 2008). Investigation of these issues was beyond the scope of the screening conducted for this Atlas.

Section 6

References

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Tullos, Desiree, D. Penrose, G. Jennings and W.G. Cope. 2009. *Analysis of Functional Traits in Reconfigured Channels: Implications for the Bioassessment and Disturbance of River Restoration.* Journal of the North American Benthological Society. 28(1):82-92.

Appendix A

Subwatersheds

	Subwatershed Name	Sub WS ID	Sub WS Code	Area		Stream Drainage
				Acres	Sq Miles	
Focus Area Subwatersheds	Lake Emory East UTs	1	LEm	1,609	2.5	
	Upper Rabbit Ck	2	URab	3,073	4.8	Rabbit Ck
	Cat Ck	3	Cat	2,383	3.7	Rabbit Ck
	Lower Rabbit Ck, UTs	4	LRab	1,230	1.9	Rabbit Ck
	Upper Watauga Ck	5	UWat	2,499	3.9	Watauga Ck
	Coon Ck	6	Coon	1,505	2.4	Watauga Ck
	Lower Watauga Ck	7	LWat	1,128	1.8	Watauga Ck
	Tippet Br, Mason Br	8	Tip	2,379	3.7	
	Beasley Ck	9	Beas	3,954	6.2	Cowee Ck
	Mica City Ck	10	Mica	1,543	2.4	Cowee Ck
	Upper Cowee Ck	11	UCow	1,974	3.1	Cowee Ck
	Caler Fork	12	CFrk	4,747	7.4	Cowee Ck
	Matlock Ck	13	Matl	3,290	5.1	Cowee Ck
	Lower Cowee, UTs	14	LCow	1,342	2.1	Cowee Ck
	Bradley Ck, misc tribs	15	Brad	2,954	4.6	
	Lakey Ck, Caler Cove Br, UTs	16	Lak	2,742	4.3	
	Queen Br, Simon Br, UTs	17	Que	1,693	2.6	
	Upper Iotla Ck	18	UIot	3,081	4.8	Iotla Ck
	Lower Iotla Ck	19	LIot	3,281	5.1	Iotla Ck
	Sub-total			***46,407***	***72.5***	
Remainder of Planning Area	Crawford Br, UTs	101	Craw	2,871	4.5	
	Rocky Br, UTs	102	Rock	2,448	3.8	
	Rose Ck, misc tribs	103	Rose	3,828	6.0	
	Upper Burningtown Ck	104	UBur	8,059	12.6	Burningtown Ck
	Middle Burningtown Ck	105	MBur	5,611	8.8	Burningtown Ck
	Lower Burningtown Ck	106	LBur	3,422	5.3	Burningtown Ck
	Tellico Ck, misc tribs	107	Tell	8,205	12.8	
	Needmore - West	108	Need	7,668	12.0	
	Brush Ck	109	Bru	5,490	8.6	
	Sawmill Ck, Dehart Ck	110	Saw	4,347	6.8	
	Sub-total			***51,948***	***81.2***	
			Total	**98,355**	**153.7**	

Appendix B

GIS Data Sources

Appendix B

GIS Data Sources

This appendix lists the spatial data sets (GIS, or Geographic Information System data) used during the development of the Phase I Project Atlas, along with the sources for these data.

Feature	Data Set	Source
Hydrography	2007 LIDAR	NCDENR Stream Mapping Program
Roads	NC Primary and Secondary Roads for Swain and Macon Counties Roads	NCDOT
Protected Lands	Nantahala National Forest	NCGIA (BasinPro 3.1)
Protected Lands	Needmore Tract	NCGIA (BasinPro 3.1)
Protected Lands	LTLT Protected Lands	LTLT
Wetlands	National Wetlands Inventory	US FWS, via NCDENR
Municipal Boundaries	Municipal Boundaries	NCCGIA (BasinPro 3.1)
County Boundaries	County Boundaries	NCCGIA (BasinPro 3.1)
USGS Gage Stations	USGS Gage Stations	NCCGIA (BasinPro 3.1)
Parcel Data	Parcel Data for Swain and Macon Counties	Swain and Macon Counties
Corrected LIDAR Streams within the Planning Area	Corrected Streams	Equinox
Riparian Zone Width	Stream Buffer Classification	Equinox
Project Area Boundary	Project Area Boundary	Equinox
Subwatershed Boundary	Subwatershed Boundary	Equinox
Certainty of Channelization	Channelization	Equinox
2006 Color Aerial Photography	2006 Color Aerial Photography	Swain and Macon Counties
Potential Restoration Reaches	Potential Restoration Reaches	Equinox
Restoration Focus Areas	Restoration Focus Areas	Equinox
Potential Preservation Reaches	Potential Preservation Reaches	Equinox
Preservation Focus Areas	Preservation Focus Areas	Equinox

Table Notes:
LIDAR = Light Detection and Ranging
NCDENR = NC Department of Environment and Natural Resources
NCDOT = NC Department of Transportation
NCCGIA = NC Center for Geographic Information and Analysis
LTLT=Land Trust for the Little Tennessee
BasinPro 3.1 is a set of custom data layers and ArcView tools developed by NCCGIA for the NC Clean Water Management Trust Fund.
US FWS = US Fish and Wildlife Service
Equinox = data set created by Equinox Environmental Consultation and Design, Inc.
NCEEP = NC Ecosystem Enhancement Program

Appendix C

Field Survey Worksheet

Field Survey Worksheet – Phase I Project Atlas, Franklin to Fontana Plan

Site ID:_____ **Stream:**_____ **Road Name:**_____
Subwatershed:_____ **Staff:**_____ **Date:**_____
Reach Length (ft, from GIS screening):_____

Reach Observations

Portion of Site Observed: ☐ All ☐ Part ☐ None (if none, skip remainder of form)

Project Feasibility (site appears to be a viable project?): ☐ Yes ☐ No (reason)_____
(if no, remainder of form can be skipped)

Project Type: ☐ Restoration ☐ Enhancement ☐ Combination ☐ Cannot Determine

Stream Status (do mapped streams exist?): ☐ Yes (all) ☐ Partial ☐ No ☐ Cannot Determine

Stream Channelization Obvious: ☐ Yes, entire reach ☐ Yes, partial ☐ No ☐ Cannot Determine

Livestock Stream Access: ☐ Yes ☐ Yes, but minor ☐ No, but access to riparian area ☐ No ☐ Cannot Determine

Potential Wetland Project Opportunity: ☐ Yes ☐ No ☐ Could Not Determine

Constraints

☐ None
☐ Structures
☐ Valley Type too narrow
☐ Ponds
☐ Stream Crossing
☐ Possible Equipment Access Limitations
☐ Agricultural Practices to Stream Bank (Row Crops, Hay Fields, Pasture, Nursery)
☐ Gardens
☐ Could Not Determine
☐ Other_____
_____
☐ NCDOT Road
☐ Private Road
☐ Power Lines
☐ Gas/Sewer Lines

Immediate Upstream Impacts

☐ None (Forested)
☐ Logging
☐ Commercial Development Under Construction
☐ Residential Development Under Construction
☐ Established Commercial
☐ Established Residential
☐ Row Crops
☐ Pasture Land
☐ Livestock Operation
☐ Barren Land/Mining
☐ Could Not Determine
☐ Other_____

Notes:

* Use other side for additional notes/diagrams/etc.

Appendix D

Eliminated Reach Landowner Database

Reach ID	SubWS	Stream Name	Acres	PIN	Landowner	Address	City	State	Zip Code	County	Notes
NA1	Cat	Cat Ck + UT	27.2	201676	SOUTHARD EDWIN EUGENE	84 BRIAN LN	FRANKLIN	NC	28734	Macon	Already in EEP Easement
NA1	Cat	Cat Ck + UT	35.8	224339	POTTS ESTHER C ESTATE	478 HOLLY SPRINGS CHRUCH RD	FRANKLIN	NC	28734	Macon	Already in EEP Easement
NA1	Cat	Cat Ck + UT	117.5	248997	WALDROOP JIM & SUE	478 HOLLY SPRINGS CHURCH RD	FRANKLIN	NC	28734	Macon	Already in EEP Easement
NA2	Cat	Cat Creek	12.6	237942	NC DEPT OF TRANSPORTATION	1594 E MAIN ST	SYLVA	NC	28779	Macon	Already in EEP Easement
NA3	Cat	Cat Creek	13.5	238396	NC DEPT OF TRANSPORTATION	1594 E MAIN ST	SYLVA	NC	28779	Macon	Already in EEP Easement
NA4	LIot	Iotla Creek	15.4	141836	MACON COUNTY	5 WEST MAIN STREET	FRANKLIN	NC	28734	Macon	Airport
NA4	LIot	Iotla Creek	113.5	144933	MACON COUNTY AIRPORT AUTHORITY	1241 AIRPORT RD	FRANKLIN	NC	28734	Macon	Airport
NA4	LIot	Iotla Creek	69.5	145079	PYATT MARCIA	164 MAYAPPLE LANE	FRANKLIN	NC	28734	Macon	Airport
NA5	LIot	Iotla Creek	17.3	132053	LIBERTY WOOD PRODUCTS INC	874 IOTLA CHURCH RD	FRANKLIN	NC	28734	Macon	Airport
NA6	Matl	Matlock Creek + UT	5.2	1143611	JONES MEL	11025 SPRING ST	LARGO	FL	33774	Macon	Too many constraints, project would take land out of production
NA6	Matl	Matlock Creek + UT	24.0	1111702	JONES MEL	1771 MATLOCK CREEK RD	FRANKLIN	NC	28734-4221	Macon	Too many constraints, project would take land out of production
NA6	Matl	Matlock Creek + UT	29.3	1114060	BOATWRIGHT SHAYNE A	1630 MATLOCK CREEK RD	FRANKLIN	NC	28734	Macon	Too many constraints, project would take land out of production
NA6	Matl	Matlock Creek + UT	4.4	1132712	JONES MEL	11025 SPRING ST	LARGO	FL	33774	Macon	Too many constraints, project would take land out of production
NA6	Matl	Matlock Creek + UT	18.4	1100444	JONES JOHN P & MARY	1737 MATLOCK CREEK RD	FRANKLIN	NC	28734	Macon	Too many constraints, project would take land out of production
NA6	Matl	Matlock Creek + UT	1.2	1100445	JONES JOHN P & MARY	1737 MATLOCK CREEK RD	FRANKLIN	NC	28734	Macon	Too many constraints, project would take land out of production
NA6	Matl	Matlock Creek + UT	1.6	1101035	JONES MEL	11025 SPRING ST	LARGO	FL	33774	Macon	Too many constraints, project would take land out of production
NA7	Matl	Wests Branch + UT	4.3	1141984	MOSLING SUZANN G	363 MATLOCK CREEK RD	FRANKLIN	NC	28734	Macon	Too many constraints
NA7	Matl	Wests Branch + UT	2.5	1100769	MEL JONES PROPERTIES	11025 SPRING STEET	LARGO	FL	33774	Macon	Too many constraints
NA7	Matl	Wests Branch + UT	2.9	1101987	HOUSLEY J R	3158 PENLAND DRIVE	MARIETTA	GA	30066	Macon	Too many constraints

Reach ID	SubWS	Stream Name	Acres	PIN	Landowner	Address	City	State	Zip Code	County	Notes
NA8	Lak	Lakey Creek	3.8	1145198	LAGASSE ROBERT A	55 HARTMAN LANE	FRANKLIN	NC	28734	Macon	Stream absent due to in-line pond
NA8	Lak	Lakey Creek	6.2	1100207	BRADLEY DAVID & ELAINE	87 BRADLEY RD	FRANKLIN	NC	28734	Macon	Stream absent due to in-line pond
NA8	Lak	Lakey Creek	10.4	1121048	KROME WILLIAM H	PO BOX 596	HOMESTEAD	FL	33090	Macon	Stream absent due to in-line pond
NA9	Bru	UT Brush Creek	17.9	655900598484	VOIGT JUANITA REVOCABLE TRUST C/O CHERYL LEWIS	1307 AVENUE A SE	WINTER HAVEN	FL	33880	Swain	Most of stream absent, too many constraints
NA9	Bru	UT Brush Creek	72.6	665000736770	TAYLOR RUFUS	5367 HWY 28 S	BRYSON CITY	NC	28713	Swain	Most of stream absent, too many constraints
NA9	Bru	UT Brush Creek	123.2	665000628820	EARLEY DONALD & PATSY	5171 HWY 28 SOUTH	BRYSON CITY	NC	28713	Swain	Most of stream absent, too many constraints
NA10	Need	Painter Branch	15.4	664100715448	BREEDLOVE NORMAN	465 PANTHER BR ROAD	BRYSON CITY	NC	28713	Swain	Reach too short, pasture overgrazed, potential project for SWCD
NA10	Need	Painter Branch	13.2	664100615643	SIMONDS RAY & SHIRLEY	580 PANTHER BR	BRYSON CITY	NC	28713	Swain	Reach too short, pasture overgrazed, potential project for SWCD
NA10	Need	Painter Branch	8.4	664100811719	PARTON HARRIE & DESSIE	7600 HWY 19 W	BRYSON CITY	NC	28713	Swain	Reach too short, pasture overgrazed, potential project for SWCD
NA11	Need	UT Painter Branch	0.9	664100932502	CABE KENNETH & SHERRY J CABE	PO BOX 162	WHITTIER	NC	28789	Swain	Too many constraints
NA11	Need	UT Painter Branch	0.8	664100838903	ALLEN CLYDE	1415 NEEDMORE RD	BRYSON CITY	NC	28713	Swain	Too many constraints
NA11	Need	UT Painter Branch	3.8	664100949034	ALLEN CLYDE	1415 NEEDMORE RD	BRYSON CITY	NC	28713	Swain	Too many constraints
NA11	Need	UT Painter Branch	10.8	664100941689	HALL HELEN ALLEN	1982 MORRIS RD	GOODVIEW	VA	24095	Swain	Too many constraints
NA11	Need	UT Painter Branch	3.9	664100846449	ALLEN CLYDE	1415 NEEDMORE RD	BRYSON CITY	NC	28713	Swain	Too many constraints
NA11	Need	UT Painter Branch	1.4	664100846877	HALL HELEN ALLEN	1982 MORRIS RD	GOODVIEW	VA	24095	Swain	Too many constraints
NA12	UBur	Burningtown Creek + UT	1.6	1041301	SWAFFORD ROBERT	6579 UPPER BURNINGTOWN RD	FRANKLIN	NC	28734	Macon	Too many constraints, straight pipe observed going into stream
NA12	UBur	Burningtown Creek + UT	38.8	1049221	CRAWFORD ROBERT LESTER III	24 SHASTA DRIVE	SYLVA	NC	28779	Macon	Too many constraints, straight pipe observed going into stream
NA12	UBur	Burningtown Creek + UT	0.3	1000063	KARALIS ASTA JUDITH	335 MONIKA PLACE	ST AUGUSTINE	FL	32084	Macon	Too many constraints, straight pipe observed going into stream

Reach ID	SubWS	Stream Name	Acres	PIN	Landowner	Address	City	State	Zip Code	County	Notes
NA13	Saw	Davis Creek + UT	6.6	666101182820	PARTON THAD & DELPHIA LIFE EST	474 DAVIS BRANCH RD	BRYSON CITY	NC	28713	Swain	Too many constraints
NA13	Saw	Davis Creek + UT	37.1	666101294222	WHITESIDE JERRY	107 ROCKMONT RD	GREENVILLE	SC	29607	Swain	Too many constraints
NA13	Saw	Davis Creek + UT	4.7	666101195196	PARTON JACK W	474 DAVIS BR	BRYSON CITY	NC	28713	Swain	Too many constraints
NA14	Saw	Sawmill Creek	13.4	665100889018	DEHART LARRY	292 BYRD ROAD	BRYSON CITY	NC	28713	Swain	Too many constraints, overgrazed pasture, potential project for SWCD
NA14	Saw	Sawmill Creek	25.1	665100984517	SIMMONS MARGARET D	792 FINWOOD CT	ELYRA	OH	44035	Swain	Too many constraints, overgrazed pasture, potential project for SWCD

Appendix E

Potential Restoration Reach Landowner Database

Reach ID	Acres	PIN	Landowner	Address	City	State	Zip Code	County
1	99	200581	DEAL J P HEIRS, C/O SUSIE D WIGGINS	1965 COWEETA CHURCH RD	OTTO	NC	28763	Macon
2	28.4	249139	KINSLAND HARRY	62 KINSLAND PARK RD	FRANKLIN	NC	28734	Macon
2	81.9	200383	CABE EARL H	427 WEAVER CABE RD	FRANKLIN	NC	28734	Macon
2	3.8	238407	WATERBURY SCOTT	2795 MEADOW OAK DRIVE E	CLEARWATER	FL	33761	Macon
3	5.7	249139	KINSLAND HARRY	62 KINSLAND PARK RD	FRANKLIN	NC	28734	Macon
3	0.8	249140	BARNETT BEVERLY	2980 JACK CABE RD	FRANKLIN	NC	28734	Macon
3	60	221695	NOT PROVIDED	NOT PROVIDED				Macon
4	27.8	248928	SEAGLE DONALD G	2433 JACK CABE ROAD	FRANKLIN	NC	28734	Macon
4	24.5	200043	AMMONS PAUL C/O RUBY G AMMONS	2528 CAT CREEK RD	FRANKLIN	NC	28734	Macon
5	80.4	224654	MOSS WAYNE	370 EVITT CEMETERY RD	CASHIERS	NC	28717	Macon
6	99.5	245409	TAYLOR JOE & EMMA JEAN	681 CLYDE DOWNS RD	FRANKLIN	NC	28734	Macon
7	15.4	225305	BRANNON HAROLD E	721 CORBIN ROAD	FRANKLIN	NC	28734	Macon
7	99.5	245409	TAYLOR JOE & EMMA JEAN	681 CLYDE DOWNS RD	FRANKLIN	NC	28734	Macon
7	35.5	201666	BRANNON HAROLD E	721 CORBIN ROAD	FRANKLIN	NC	28734	Macon
8	12.7	241389	CORBIN HAROLD P	1167 CORBIN RD	FRANKLIN	NC	28734	Macon
8	16.5	200540	CRISP ROY PINKNEY	332 CRISP COUNTRY LN	FRANKLIN	NC	28734	Macon
8	19.2	235798	CORBIN WILMA	1422 CORBIN ROAD	FRANKLIN	NC	28734	Macon
9	14.4	233018	TAYLOR DAVID W	907 CORBIN RD	FRANKLIN	NC	28734	Macon
9	2.7	201777	KENNEY PATRICK WALTER	226 CLEVELAND AVE	BALTIMORE	MD	21222	Macon
10	169.6	229576	TAYLOR JOE	681 CLYDE DOWNS RD	FRANKLIN	NC	28734	Macon
10	15.7	233630	TAYLOR RANDALL ZEB	830 CORBIN RD	FRANKLIN	NC	28734	Macon
11	9.2	244258	KINSLAND JOHN & BETTY ESTATE	231 CORBIN RD	FRANKLIN	NC	28734	Macon
11	84.9	248764	EVERS LARRY MICHAEL	552 CORBIN RD	FRANKLIN	NC	28734	Macon
11	45.2	201786	SEAY ROGER L	2354 WELLS GROVE RD	FRANKLIN	NC	28734	Macon
12	31.5	241193	ROBISON RUSSELL SHANE	303 HARRISON AVENUE	FRANKLIN	NC	28734	Macon
12	3.5	224655	HORNSBY THOMAS M.	1148 RABBIT CREEK RD	FRANKLIN	NC	28734	Macon
12	19.9	244803	SHEPHERD JOSEPH STEPHEN LIFE ESTATE	211 FRED DALTON RD	FRANKLIN	NC	28734	Macon
12	34.9	250287	TASTINGER THOMAS JACOB	198 STONE CREEK DRIVE	FRANKLIN	NC	28734	Macon
12	1.1	233698	ROBINSON RUSSELL S	303 HARRISON AVE	FRANKLIN	NC	28734	Macon
12	21.9	201228	HORNSBY THOMAS M.	1148 RABBIT CREEK RD	FRANKLIN	NC	28734	Macon
13	104.9	228072	KLATT FAMILY LIMITED PARTNERSHIP 1	PO DRAWER 1240	BOYNTON BEACH	FL	33435	Macon
14	1.6	200204	JONES GRANT O LIFE ESTATE	164 WATAUGA CROSSROAD	FRANKLIN	NC	28734	Macon
14	1.1	201750	JONES GRANT O LIFE ESTATE	164 WATAUGA CROSSROAD	FRANKLIN	NC	28734	Macon
14	2	201905	DILLS RAY DICK	871 WATAUGA RD	FRANKLIN	NC	28734	Macon
14	51	201904	NOT PROVIDED	NOT PROVIDED				Macon

Reach ID	Acres	PIN	Landowner	Address	City	State	Zip Code	County
15	22.9	201265	TAYLOR JOE	681 CLYDE DOWNS RD	FRANKLIN	NC	28734	Macon
15	19.2	225143	TAYLOR JOE & EMMA JEAN	681 CLYDE DOWNS RD	FRANKLIN	NC	28734	Macon
15	20.1	243842	TAYLOR JOE & EMMA JEAN	681 CLYDE DOWNS RD	FRANKLIN	NC	28734	Macon
15	10.3	212371	DOWNS MAX	1176 JIM BERRY RD	FRANKLIN	NC	28734	Macon
16	0.9	104238	REVIS JAMES P LIFE ESTATE	1358 WINDY GAP RD	FRANKLIN	NC	28734	Macon
16	31.2	104240	REVIS ROBERT PAUL	980 WINDY GAP RD	FRANKLIN	NC	28734	Macon
16	3.8	104301	REVIS ROBERT PAUL	980 WINDY GAP RD	FRANKLIN	NC	28734	Macon
16	2.6	104545	CRISP GARY WAYNE	19 LEE TALLENT RD	FRANKLIN	NC	28734	Macon
16	0.9	106362	CRISP GARY WAYNE	19 LEE TALLENT RD	FRANKLIN	NC	28734	Macon
16	3	101108	CRISP GARY WAYNE	19 LEE TALLENT RD	FRANKLIN	NC	28734	Macon
16	0.3	101955	CRISP GARY WAYNE	19 LEE TALLENT RD	FRANKLIN	NC	28734	Macon
17	119	121147	ROGERS CARLOS ADAMS	1555 OLIVE HILL RD	FRANKLIN	NC	28734	Macon
17	22.5	104423	TIPPETT JOE W	1560 OLIVE HILL RD	FRANKLIN	NC	28734	Macon
18	28.6	145308	CABE WARREN JAMES	1231 OLIVE HILL RD	FRANKLIN	NC	28734	Macon
18	3.4	100266	CAMPBELL JOHN H MRS	1214 OLIVE HILL RD	FRANKLIN	NC	28734	Macon
19	50.7	1000337	LESHAW JAY & BEN JACOBSTEIN & KATE	3 GROVE ISLE DRIVE, APT. 909	COCONUT GROVE	FL	33133	Macon
20	23.9	1027802	ALLEN CLAUDE	3214 BURNINGTOWN RD	FRANKLIN	NC	28734	Macon
20	21.5	1033165	WELCH NELL DUVALL LIFE ESTATE	79 FOUTS LANE	FRANKLIN	NC	28734	Macon
20	9.3	1000080	CABLE PAULINE FOUTS	3339 BURNINGTOWN RD	FRANKLIN	NC	28734	Macon
20	30.3	1000185	FOUTS D C HEIRS C/O PAULINE F CABLE	3339 BURNINGTOWN RD	FRANKLIN	NC	28734	Macon
21	10.9	147028	FOUTS JAMES MERRITT	2638 BURNINGTOWN RD	FRANKLIN	NC	28734	Macon
21	4.7	115399	ALESSI DANIEL	1542 WASHINGTON ST	HOLLYWOOD	FL	33020	Macon
21	20.7	101606	FOUTS GAY & MAUDE	110 FIVE OAKS DR	FRANKLIN	NC	28734	Macon
21	8.2	101611	FOUTS GAY	110 FIVE OAKS DR	FRANKLIN	NC	28734	Macon
21	29.6	127511	NOT PROVIDED	NOT PROVIDED				Macon
22	66.5	121661	BAPTIST CHILDRENS HOMES OF N.C.INC	PO BOX 338	THOMASVILLE	NC	27360	Macon
22	113.5	144933	MACON COUNTY AIRPORT AUTHORITY	1241 AIRPORT RD	FRANKLIN	NC	28734	Macon
23	245	121661	BAPTIST CHILDRENS HOMES OF N.C.INC	PO BOX 338	THOMASVILLE	NC	27360	Macon
23	63.8	123338	PENLAND BETTY TIPPETT C/O STANLEY PENLAND	517 IOTLA CHURCH RD	FRANKLIN	NC	28734	Macon
24	122.9	103500	RAMSEY ALBERT	424 IOTLA CHURCH RD	FRANKLIN	NC	28734	Macon
25	121.6	1147649	COORDINATED PROPERTIES INC	1100 GARMON DR NW	ATLANTA	GA	30327	Macon
26	10.1	1142967	BENNETT DAVID L	515 RUBY MINE RD	FRANKLIN	NC	28734	Macon
26	7.4	1143024	TUCEK GEORGE T & GLORIA J	310 RUBY MINE RD	FRANKLIN	NC	28734	Macon
26	20.7	1121434	DEMKO J WESLEY HOLDINGS LTD	5510 NE 31ST AVENUE	FT LAUDERDALE	FL	33308	Macon

Reach ID	Acres	PIN	Landowner	Address	City	State	Zip Code	County
27	29.3	1130656	ELLIOTT GENEVA GUFFEY	680 NED HILL RD	FRANKLIN	NC	28734	Macon
27	6.6	1101409	ROUGHTON DENNIS	17004 EDGEWATER DRIVE	PORT CHARLOTTE	FL	33948	Macon
28	7.8	1143328	ALLEN JOSEPH L & JANET S	1269 NED HILL RD	FRANKLIN	NC	28734	Macon
29	3.3	1143318	BLANTON DOUG	1945 ROLLING GREEN CIR	SARASOTA	FL	34240	Macon
29	42.8	1116196	SOUTO JOSEPH A TRUSTEE	114 COWEE VIEW LANE	FRANKLIN	NC	28734	Macon
29	3.8	1116197	SOUTO JOSEPH A TRUSTEE	114 COWEE VIEW LANE	FRANKLIN	NC	28734	Macon
30	45.8	1130712	SHEPHERD WILEY C/O DAVID SHEPHERD	1459 NED HILL ROAD	FRANKLIN	NC	28734	Macon
31	78.6	1149423	GIBSON CECILE	564 SHEPHERD CREEK RD	FRANKLIN	NC	28734	Macon
31	13.6	1102089	WOOTEN MICHAEL HEATH	858 COUNTRYSIDE COURT	MARIETTA	GA	30067	Macon
32	4.1	1128996	KELLY SAM L JR & KAY A	41 MATLOCK CREEK RD	FRANKLIN	NC	28734	Macon
32	12.7	1133129	MOSLING SUZANN G	363 MATLOCK CREEK RD	FRANKLIN	NC	28734	Macon
32	18.1	1100291	REECE PEGGY S	209 HIDDEN LANE	FRANKLIN	NC	28734	Macon
32	21.1	1100314	REECE PEGGY S	209 HIDDEN LANE	FRANKLIN	NC	28734	Macon
32	17.6	1134814	MOSLING SUZANN G	363 MATLOCK CREEK RD	FRANKLIN	NC	28734	Macon
33	1.7	1147737	COKER CONNIE	1205 SNOW HILL ROAD	FRANKLIN	NC	28734	Macon
33	11.1	1131659	SHEFFIELD WAYNE & MARY	1450 PLANTATION DR	GREENSBORO	GA	30642	Macon
33	5.7	1122416	SHEFFIELD KIM	1172 SNOW HILL RD	FRANKLIN	NC	28734	Macon
33	1.9	1124525	SHEFFIELD KIM	1172 SNOW HILL RD	FRANKLIN	NC	28734	Macon
33	1.2	1124530	SHEFFIELD KIM	1172 SNOW HILL RD	FRANKLIN	NC	28734	Macon
34	37.2	1126253	MOORE CARROLL L	351 SAUNDERS RD	FRANKLIN	NC	28734	Macon
34	18.6	1126601	MORGAN LYMAN DALE & BLANCHE S	7130 BRYSON CITY RD	FRANKLIN	NC	28734	Macon
34	2.8	1100816	MORGAN LYMAN DALE & BLANCHE S	7130 BRYSON CITY RD	FRANKLIN	NC	28734	Macon
35	5	1125978	ASHLOCK CARL HENRY	291 STONEY BROOK LANE	FRANKLIN	NC	28734	Macon
35	35.8	1129136	SNYDER HELEN	3815 ROSE CREEK RD	FRANKLIN	NC	28734	Macon
35	7	1100263	HOUSTON JAMES N JR	20 LOIS LN	FRANKLIN	NC	28734	Macon
36	150.9	1141983	MELCAR LLC	3001 ALAMO DRIVE	ORLANDO	FL	32805	Macon
37	39.5	1138551	GUY THOMAS THAD & KAY	1015 BAIRD COVE RD	FRANKLIN	NC	28734	Macon
38	52.9	1134821	MITCHELL JOHN W JR	2535 LAKEY CREEK RD	FRANKLIN	NC	28734	Macon
38	19.4	1134822	MITCHELL DOROTHY L.	2535 LAKEY CREEK RD	FRANKLIN	NC	28734	Macon
39	71.3	1123556	RENNELL ROBERT R TRUSTEE	1098 CHAPARRAL DRIVE	CHOCTAW	OK	73020	Macon
39	63.4	1124658	ALLEN JACK W TR	PO BOX 1973	PALATKA	FL	32178	Macon
40	138.9	1136280	BRADLEY RALPH CURTIS LIFE EST	384 LAKEY CREEK RD	FRANKLIN	NC	28734	Macon
41	32.8	1028268	DUFFALA DENNIS C	3534 S E 19TH AVE	CAPE CORAL	FL	33904	Macon
41	3	1028269	TYLER SCOTT	4230 NE 22ND TERRACE	POMPANO BEACH	FL	33064	Macon
41	31.6	1048607	KAHKONEN ALLAN S	2055 MID-BURNINGTOWN RD	FRANKLIN	NC	28734	Macon
41	36.6	1000408	PARRISH JAMES HARGRAVE	9697 BRYSON CITY RD	FRANKLIN	NC	28734	Macon

Reach ID	Acres	PIN	Landowner	Address	City	State	Zip Code	County
42	38.4	1000276	HONG YUN TR	2951 LAKE TOHOPEKALIGA BLVD	KISSIMMEE	FL	34746-3011	Macon
42	43.6	1035086	VINSON CONNIE TERESA	PO BOX 1884	FRANKLIN	NC	28734	Macon
42	1	1021796	CONTE JULIAN DAVID	750 N VILLIAGE DRIVE APT 103	ST PETERSBURG	FL	33716	Macon
43	36	1041165	HENRY ARCILLA W LIFE ESTATE	680 YOUNCE CREEK RD	FRANKLIN	NC	28734	Macon
43	2	1041166	HENRY HARRY S	561 YOUNCE CREEK RD	FRANKLIN	NC	28734	Macon
43	14.4	1000244	HENRY REBECCA WRIGHT	747 YOUNCE CR RD	FRANKLIN	NC	28734-5912	Macon
44	6.9	1025930	COLE JOSEPH ALLEN	9712 FRANKLIN HILL BLVD	KNOXVILLE	TN	37922	Macon
44	8.9	1043124	STATE OF NORTH CAROLINA	1321 MAIL SERVICE CENTER	RALEIGH	NC	27699	Macon
44	7	1038006	JACKSON E EARL	175 CLINT COLE RD	FRANKLIN	NC	28734-6212	Macon
45	13.5	666000118802	MARR JOHN H SR & ANNE	575 BRUSH CREEK RD	BRYSON CITY	NC	28713	Swain
46	4.1	664000700696	CRISP ROBERT MARTIN	116 BREEDLOVE DR	BRYSON CITY	NC	28713	Swain
46	10.1	664000601355	BREEDLOVE THAD W	1058 DOGWOOD DR	GASTONIA	NC	28056	Swain
46	40.7	664000617425	BREEDLOVE MAX	120 BREEDLOVE DR	BRYSON CITY	NC	28713	Swain
47	47.5	664000718207	BREEDLOVE JIMMY KEITH	26 BREEDLOVE DR	BRYSON CITY	NC	28713	Swain
47	4.1	664000700696	CRISP ROBERT MARTIN	116 BREEDLOVE DR	BRYSON CITY	NC	28713	Swain

Appendix F

Potential Preservation Reach Landowner Database

Reach ID	Acres	PIN	Landowner	Address	City	State	Zip Code	County
1	65.2	201273	REINMAN JOSEPH P	1866 WINERY WAY	TALLAHASSEE	FL	32317	Macon
1	49.1	201275	REINMAN JOSEPH P	1866 WINERY WAY	TALLAHASSEE	FL	32317	Macon
2	141.8	226687	SANDERS JOHN EARL	622 BRENDLE RD	FRANKLIN	NC	28734	Macon
3	103.0	1148218	COORDINATED PROPERTIES LLC ATTN: FRED FILSOOF	1100 GARMON DR NW	ATLANTA	GA	30327	Macon
3	330.4	1150085	COORDINATED PROPERTIES LLC ATTN: FRED FILSOOF	1100 GARMON DR NW	ATLANTA	GA	30327	Macon
4	121.6	1147649	COORDINATED PROPERTIES LLC ATTN: FRED FILSOOF	1100 GARMON DR NW	ATLANTA	GA	30327	Macon
4	84.2	1148217	COORDINATED PROPERTIES LLC ATTN: FRED FILSOOF	1100 GARMON DR NW	ATLANTA	GA	30327	Macon
4	330.4	1150085	COORDINATED PROPERTIES LLC ATTN: FRED FILSOOF	1100 GARMON DR NW	ATLANTA	GA	30327	Macon
5	121.6	1147649	COORDINATED PROPERTIES LLC ATTN: FRED FILSOOF	1100 GARMON DR NW	ATLANTA	GA	30327	Macon
5	84.2	1148217	COORDINATED PROPERTIES LLC ATTN: FRED FILSOOF	1100 GARMON DR NW	ATLANTA	GA	30327	Macon
5	330.4	1150085	COORDINATED PROPERTIES LLC ATTN: FRED FILSOOF	1100 GARMON DR NW	ATLANTA	GA	30327	Macon
6	51.9	1101401	BROGDEN C E	82 COWEE SCHOOL RD	FRANKLIN	NC	28734	Macon
7	180.4	1100089	J AND B INVESTMENTS	P O BOX 3188	GREENWOOD	SC	29648	Macon
8	239.0	1121077	VALLEY MANAGEMENT	3533 N CARSON ST V-180	CARSON CITY	NV	89706	Macon
9	163.8	1121637	PRESTON RALPH	575 LAKESHORE DRIVE	FRANKLIN	NC	28734	Macon
10	178.7	1121638	PRESTON RALPH	575 LAKESHORE DRIVE	FRANKLIN	NC	28734	Macon
11	136.5	1135824	HABEEB MIKE	3639 LODGEHAVEN DR	GAINESVILLE	GA	30506	Macon
12	163.5	1132279	SEVERIN PATRICIA C/O DOUGLAS WOODWARD	412 THUNDERCREEK ROAD	FRANKLIN	NC	28734	Macon
13	117.0	1050254	DEAN DALE JARRETT	21 FALLING ROCK RD	FRANKLIN	NC	28734	Macon
14	98.3	1045349	EVERS LARRY M	552 CORBIN RD	FRANKLIN	NC	28734	Macon
14	29.7	1000041	EVERS LARRY M	552 CORBIN RD	FRANKLIN	NC	28734	Macon
14	6.4	1000395	EVERS LARRY M	552 CORBIN RD	FRANKLIN	NC	28734	Macon
15	71.2	654900776099	PENELY MICHAEL A & ELIZABETH J	PO BOX 28	ALMOND	NC	28702	Swain
15	24.8	654900577676	PENELY MICHAEL A & ELIZABETH J	PO BOX 28	ALMOND	NC	28702	Swain
16	129.9	667000514352	GOWAN DREW	4178 BRUSH CREEK ROAD	BRYSON CITY	NC	28713	Swain
17	120.6	667000165247	MOUNTAIN TRACTS INC	PO BOX 1159	BRYSON CITY	NC	28713	Swain
18	80.5	666000671687	CREIGHTON J B JR & SANDRA L FALBITHA S WOODRICH	1430 OAKLAWN PLACE	LAKELAND	FL	33803	Swain
19	153.5	654900058699	TAYLOR MARGARET ELLEN BINGHAM	760 E SILVERMINE RD	BRYSON CITY	NC	28713	Swain
20	212.7	666000286348	KLAUCK KARL	3716 N 25TH RD	ARLINGTON	VA	22207	Swain
21	167.4	664000262546	KING HENRY & LOIS	5501 HWY 19 WEST	BRYSON CITY	NC	28713	Swain
21	133.4	664000048980	KING HENRY & LOIS	5501 HWY 19 WEST	BRYSON CITY	NC	28713	Swain
22	167.4	664000262546	KING HENRY & LOIS	5501 HWY 19 WEST	BRYSON CITY	NC	28713	Swain
23	76.0	665100716192	PEDERSEN MILLARD & CAROLYN TRU	41 OWENS ROAD	NEWPORT NEWS	VA	23602	Swain