

Volunteers Join Together to Restore Crayfish Creek— Building Capacity Through Stakeholder Partnerships



Jay Shelton (jshelton@uga.edu)
Danny Jackson (djackso@uga.edu)
Jon Calabria (jcalabr@uga.edu)





Georgia Aquatic Connectivity Team

ga-act.org

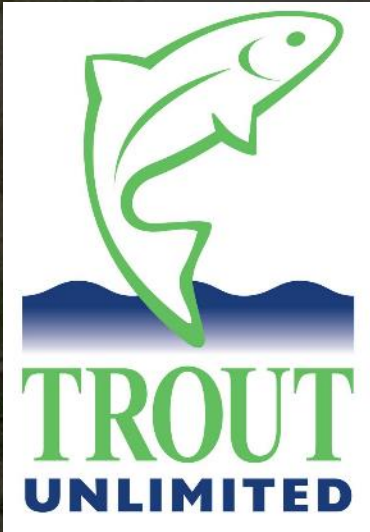


What is Aquatic Connectivity?

- Aquatic connectivity refers to physically linked pathways through which energy, material, and organisms move from one place to another via water.
- It includes longitudinal (upstream and downstream) and lateral (between stream and floodplain) connectivity.
- The physical scope includes streams and wetlands, floodplains, and estuaries.



"Take care of the fish, then the fishing will take care of itself."



Embrace A Stream

- Matching grant program administered by TU

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- Since its inception in 1975, Embrace A Stream has funded more than 1,100 individual projects
- More than \$4.75 million in direct cash grants have been awarded
- Each year, over \$100,000 is awarded to more than two dozen projects

Embrace A Stream

- In 2018 2 TU Chapters in GA were interested in applying for a grant.
- Problem: \$100,000 divided by 2 dozen projects = Average of \$4,100 per project



**Restoring aquatic connectivity
is complicated and expensive**

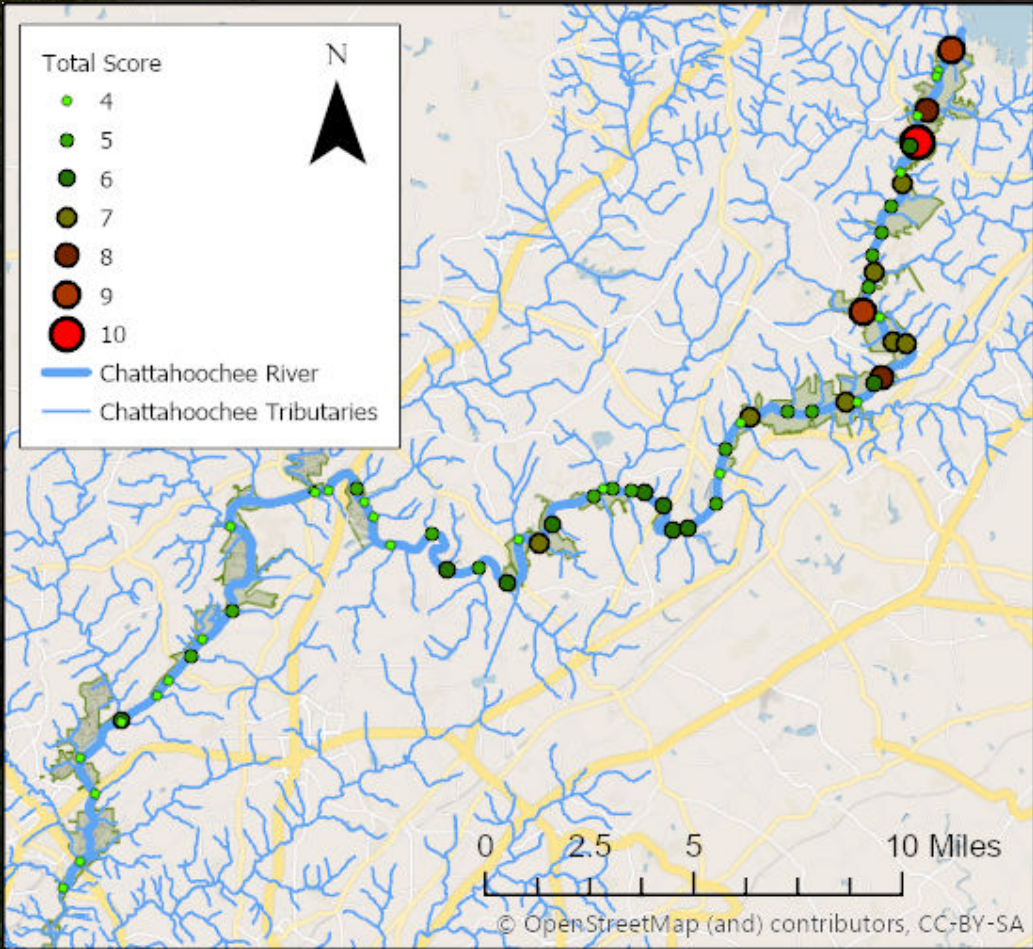


Chattahoochee River National Recreation Area (CRNRA), a series of fifteen park units along 48 miles of the Chattahoochee River in metro Atlanta

High-Definition Stream Survey of the Chattahoochee River National Recreation Area (CRNRA), Georgia, USA, Trutta Environmental Solutions

	Streambed			Streambanks			Riparian	
	Widening or Narrowing and Straightening	Aggregation or Degradation	Habitat Heterogeneity	Bank Angle	Bank Height	Surface Protection	Vegetated Diversity	Vegetative Functional Complexity
Fully Functional	None to minimal	None to minimal	High	Low Slope	Low	High	High	High
Functional								
Slightly Impaired								
Impaired								
Non-Functional	Extreme	Extreme	Low to none	High slope	High	Low	Bare soil	Low





Tributary	Tributary Streambank Condition	Sediment Bar Severity	Large Woody Debris Severity	Total Score
Crayfish Creek	5	3	2	10
Dicks Creek	5	2	2	9
Haw Creek	5	1	3	9
Richland Creek	5	2	1	8
Brushy Creek	5	2	1	8



What can you really do for a few thousand dollars?

Embrace A Stream

Crayfish Creek Embrace a Stream Grant Proposal:

Embrace A Stream

Crayfish Creek Embrace a Stream Grant Proposal: \$7,500

TU Embrace A Stream – Crayfish Creek

Project Partners:

- Upper Chattahoochee Chapter
- Oconee River Chapter
- UGA 5Rivers Chapter
- GA Council
- Chattahoochee River National Recreation Area (National Parks Service)
- GA DNR
- Chattahoochee Parks Conservancy
- Chattahoochee River Keeper
- UGA Warnell School of Forestry and Nat. Res.
- River Through Atlanta
- Trout Unlimited National
- Columbia Engineering
- Gwinnett Soil and Water Conservations District
- National Fish and Wildlife Foundation
- Southern Company
- US Forest Service



Embrace A Stream

Crayfish Creek Embrace a Stream Grant Proposal: \$ 7,500

Additional donations from fundraising:

Other grants:

In-kind contributions

Volunteer hours (2,900 hours/\$28.54 per hour*)

GRAND TOTAL

Funds Raised

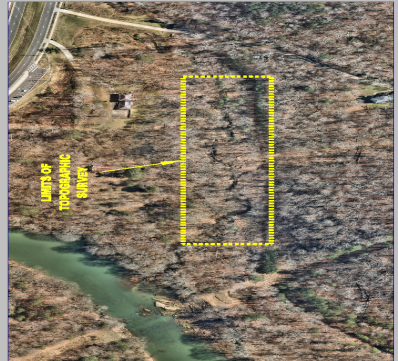
UCCTU, ORCTU, GA Council	\$7,750
2019 TU Embrace-A-Stream Grant	\$7,000
2019 EAS Fundraising Campaign	\$23,500
National Fish and Wildlife Foundation	\$50,000
2020 USDA NRCS	\$90,000
<u>2021 TU Chapter Contributions</u>	<u>\$16,573</u>
Total	\$184,823



Embrace A Stream

Crayfish Creek Embrace a Stream Grant Proposal:	\$ 7,500
Additional donations from fundraising:	\$ 43,515
Other grants:	\$140,000
In-kind contributions	\$ 22,000
Volunteer hours (2,900 hours/\$28.54 per hour*)	<u>\$ 83,822</u>
GRAND TOTAL	\$296,837

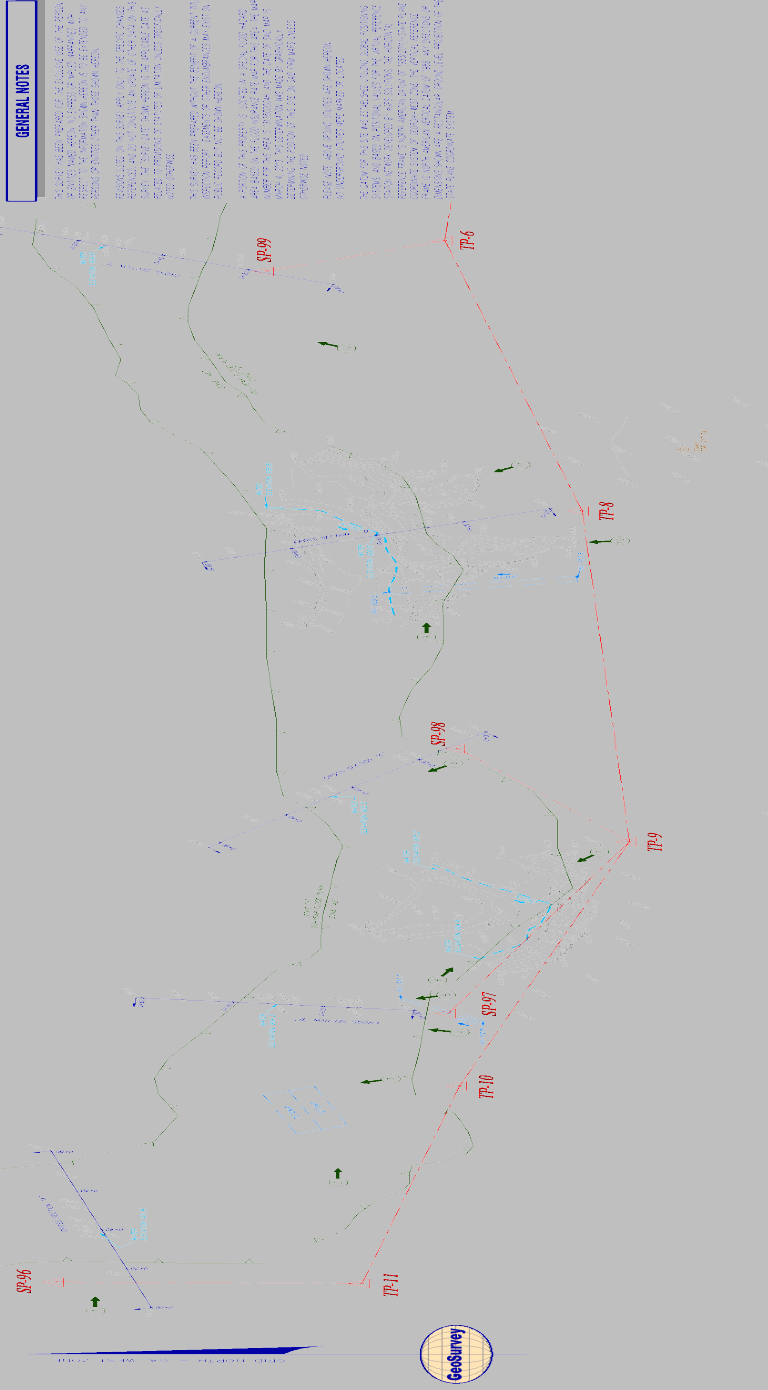
AERIAL IMAGE



SITE PHOTOGRAPHS



VICINITY MAP



GENERAL NOTES

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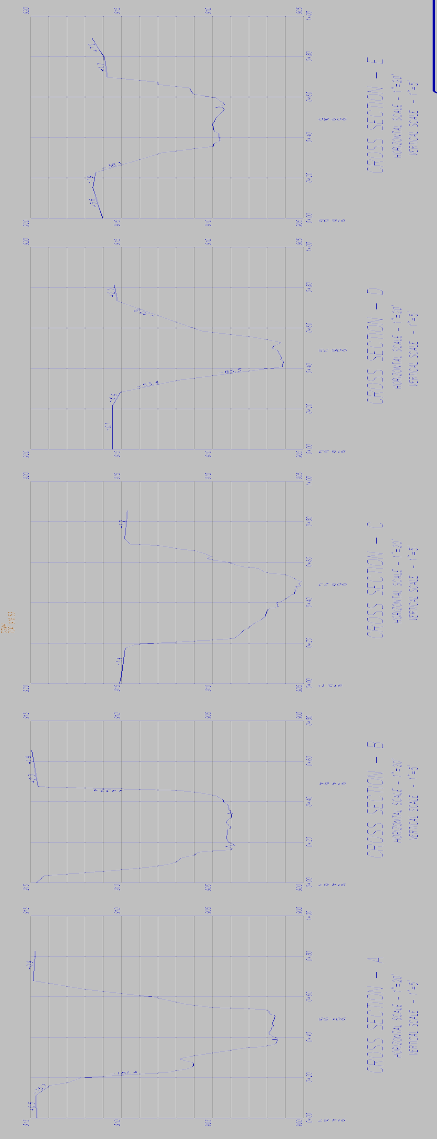
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CONTROL POINT TABLE

ID	MARKING	BEARING	HEIGHT (FEET)	DESCRIPTION
1	1508007	1508011	80.4	CP-1
2	1508007	1508011	80.4	CP-2
3	1508007	1508011	80.4	CP-3
4	1508014	1508016	80.8	CP-4
5	1508017	1508019	81.2	CP-5
6	1508021	1508023	81.6	CP-6
7	1508025	1508027	82.0	CP-7
8	1508029	1508031	82.4	CP-8
9	1508033	1508035	82.8	CP-9
10	1508037	1508039	83.2	CP-10
11	1508041	1508043	83.6	CP-11
12	1508045	1508047	84.0	CP-12
13	1508049	1508051	84.4	CP-13
14	1508053	1508055	84.8	CP-14
15	1508057	1508059	85.2	CP-15
16	1508061	1508063	85.6	CP-16
17	1508065	1508067	86.0	CP-17
18	1508069	1508071	86.4	CP-18
19	1508073	1508075	86.8	CP-19
20	1508077	1508079	87.2	CP-20
21	1508081	1508083	87.6	CP-21
22	1508085	1508087	88.0	CP-22
23	1508089	1508091	88.4	CP-23
24	1508093	1508095	88.8	CP-24
25	1508097	1508099	89.2	CP-25
26	1508101	1508103	89.6	CP-26
27	1508105	1508107	90.0	CP-27
28	1508109	1508111	90.4	CP-28
29	1508113	1508115	90.8	CP-29
30	1508117	1508119	91.2	CP-30

LEGEND

- Channel
- Bank
- Point
- Control Point
- Sampling Point
- Topography

IF YOU DIG

Know what's below.
Call before you dig.
Dial 811
or call 800-282-1111

GRAPHIC SCALE

CLOSURE STATEMENT

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Fish Weir Shoals
 United States Department of the Interior
 United States National Park Service
 Chatahoochee River National Recreation Area

NO.	DATE	DESCRIPTION	BY
1	01/15/11	Final Report	J. Shelton
2	02/15/11	Final Report	J. Shelton
3	03/15/11	Final Report	J. Shelton
4	04/15/11	Final Report	J. Shelton
5	05/15/11	Final Report	J. Shelton
6	06/15/11	Final Report	J. Shelton
7	07/15/11	Final Report	J. Shelton
8	08/15/11	Final Report	J. Shelton
9	09/15/11	Final Report	J. Shelton
10	10/15/11	Final Report	J. Shelton
11	11/15/11	Final Report	J. Shelton
12	12/15/11	Final Report	J. Shelton

Construction Plans

CRAYFISH CREEK SUGAR HILL, GEORGIA 30303 STREAM RESTORATION PROJECT CONSTRUCTION PLANS

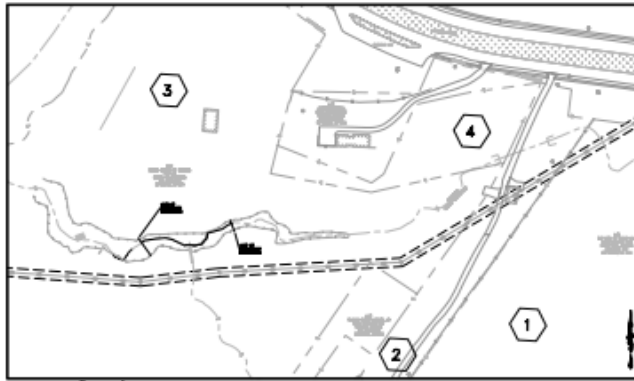


LOCATION MAP
SCALE: 1"=1000'

PROPERTY OWNER LISTING

PARCEL	PROPERTY OWNER
1	CITY OF SUGAR HILL (PIN: 7348 187)
2	THOMAS BABBY GARNER, JR. (PIN: 7348 028)
3	UNITED STATES OF AMERICA (PIN: 7348 164)
4	BORIS K. BRESCH (PIN: 7348 034)

ALL PARCELS IN DISTRICT 7 LAND LOT 348



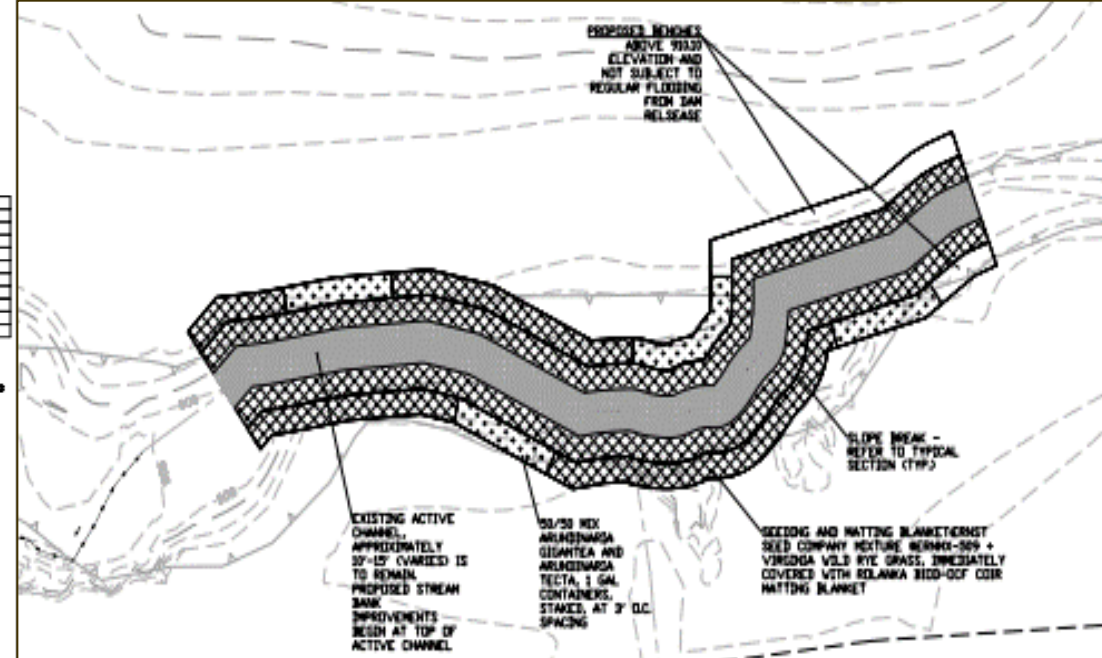
SCALE: 1"=100'

DATE	PROJECT NUMBER	SHEET	TOTAL
04/16/03	0479.03	1	14

INDEX

SHEET NO.	DRAWING NO.	DESCRIPTION
1	1	COVER SHEET AND INDEX
2	2	GENERAL NOTES
3	3	EXISTING OVERBANKS PLAN SHEET
4	4	EROD PLAN SHEET
5	5	CONSTRUCTION PLAN SHEET
6	6	EROSION & SEDIMENT CONTROL DETAILS
7-10	7-10	EROSION & SEDIMENT CONTROL PLAN SHEETS
11-12	11-12	EROSION & SEDIMENT CONTROL DETAILS
13	13	EROSION CONTROL PLAN SHEET
14	14	EROSION CONTROL DETAILS

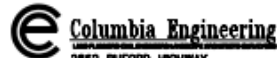
PROJECT DESCRIPTION:
THE CRAYFISH CREEK RESTORATION PROJECT PROPOSES TO IMPROVE THE EXISTING HABITAT AND REDUCE EXCESSIVE EROSION BY RESHAPING THE EXISTING STREAMBANK, INSTALLING EROSION CONTROL MEASURES TO PREVENT FUTURE EROSION, AND REESTABLISH BENEFICIAL SPECIES INTO THE STREAMBANK.



Thank you Columbia Engineering!



ALL REQUIREMENTS OF THE CITY OF SUGAR HILL DEVELOPMENT REGULATIONS RELATIVE TO THE PREPARATION AND SUBMISSION OF A DEVELOPMENT PERMIT APPLICATION HAVING BEEN FULFILLED, AND SAID APPLICATION AND ALL SUPPORTING PLANS AND DATA HAVING BEEN REVIEWED AND APPROVED BY ALL AFFECTED COUNTY DEPARTMENTS AS REQUIRED UNDER THEIR RESPECTIVE AND APPLICABLE REGULATIONS, APPROVAL IS HEREBY GRANTED OF THIS SITE PLAN AND ALL OTHER DEVELOPMENT PLANS ASSOCIATED WITH THIS PROJECT SUBJECT TO ALL FURTHER PROVISIONS OF SAID DEVELOPMENT AND OTHER COUNTY REGULATIONS.



2562 BUFORD HIGHWAY
SUITE 200
DALLUTH, GEORGIA 30024
(770) 825-0357

PLANS PREPARED UNDER THE SUPERVISION OF
JENNIFER ANN WELLS
REGISTERED PROFESSIONAL ENGINEER
NO. 10,100,000
ISSUED AND IN ACCORDANCE WITH THE PROVISIONS OF THE GEORGIA PROFESSIONAL ENGINEERING ACT OF 1967, AS AMENDED.

DATE: 04/16/03

SCALE: AS SHOWN

DATE: 04/16/03

SCALE: AS SHOWN

CITY MANAGER: _____ DATE: _____
CITY OF SUGAR HILL
THIS CERTIFICATE EXPIRES TWELVE MONTHS FROM THE DATE OF APPROVAL UNLESS A DEVELOPMENT PERMIT IS ISSUED



































Volunteers

Workday #	Date	Total hours	Total # of volunteers
1	3/7/2020	132	44
2	11/12/2020	84	28
3	1/30/2021	108	36
4	2/27/2021	63	21
5	11/5/2021	66	11
6	11/6/2021	102	17
7	11/18/2021	84	14
8	11/19/2021	120	20
9	11/20/2021	210	35
10	12/4/2021	60	10
11	12/18/2021	108	36
12	2/18/2022	54	9
13	2/19/2022	210	35
14	3/5/2022	294	69
Total Hours / Volunteers		1695	385



Keys to Success

1. Clear objectives and consistent messaging
 - Communicated regularly and use the power of social media
2. Numerous and diverse stakeholders
 - Sharing the load was essential
 - Project leadership was volunteer based
3. Partners with subject matter expertise (NPS, DNR, Columbia)
4. Scaled goals based on available funds
 - Started small (Initial goal: \$15,000 & 1-2 50 ft. locations)
5. Army of volunteers from diverse backgrounds
 - Scout, School organizations, TU, NPS, etc.





Can we find opportunities to leverage small seed grants to take advantage of larger program dollars for restoration?