

U.S. Department of the Interior  
National Park Service  
Natural Resource Stewardship and Science Directorate  
Geologic Resources Division



# Chattahoochee River National Recreation Area Shoals and Water Hazard Areas Map

## *GRI Ancillary Map Information Document*

Produced to accompany Geologic Resources Inventory (GRI) Digital Geologic Data  
for Chattahoochee River National Recreation Area

chsh\_geology.pdf

Version: 6/10/2015

# Geologic Resources Inventory Map Document for Chattahoochee River National Recreation Area

## Table of Contents

<b>Geologic Resources Inventory Map Document.....</b>	<b>1</b>
<b>About the NPS Geologic Resources Inventory Program.....</b>	<b>2</b>
<b>GRI Digital Map and Source Map Citation.....</b>	<b>4</b>
<b>Photograph Localities.....</b>	<b>5</b>
Photograph DSC00001.....	5
Photograph DSC00002.....	6
Photograph DSC00003.....	7
Photograph DSC00004.....	8
Photograph DSC00005.....	9
Photograph DSC00006.....	10
Photograph DSC00007.....	11
Photograph DSC00008.....	12
Photograph DSC00009.....	13
Photograph DSC00010.....	14
Photograph DSC00011.....	15
Photograph DSC00012.....	16
Photograph DSC00013.....	17
Photograph DSC00014.....	18
Photograph DSC00015.....	19
Photograph DSC00016.....	20
Photograph DSC00017.....	21
Photograph DSC00018.....	22
Photograph DSC00019.....	23
Photograph DSC00020.....	24
Photograph DSC00021.....	25
Photograph DSC00022.....	26
Photograph DSC00023.....	27
Photograph DSC00024.....	28
Photograph DSC00025.....	29
Photograph DSC00026.....	30
Photograph DSC00027.....	31
Photograph DSC00028.....	32
Photograph DSC00029.....	33
Photograph DSC00030.....	34
Photograph DSC00031.....	35
Photograph DSC00032.....	36
Photograph DSC00033.....	37
Photograph DSC00034.....	38
Photograph DSC00035.....	39
Photograph DSC00036.....	40
Photograph DSC00037.....	41
Photograph DSC00038.....	42
Photograph DSC00039.....	43
Photograph DSC00040.....	44
Photograph DSC00041.....	45

Photograph DSC00042..... 46

Photograph DSC00043..... 47

Photograph DSC00044..... 48

Photograph DSC00045..... 49

Photograph DSC00046..... 50

Photograph DSC00047..... 51

Photograph DSC00048..... 52

Photograph DSC00049..... 53

Photograph DSC00051..... 54

Photograph DSC00052..... 55

Photograph DSC00053..... 56

Photograph DSC00054..... 57

Photograph DSC00055..... 58

Photograph DSC00056..... 59

Photograph DSC00058..... 60

Photograph DSC00059..... 61

Photograph DSC00060..... 62

Photograph DSC00061..... 63

Photograph DSC00062..... 64

Photograph DSC00063..... 65

Photograph DSC00064..... 66

Photograph DSC00065..... 67

Photograph DSC00066..... 68

Photograph DSC00067..... 69

Photograph DSC00068..... 70

Photograph DSC00070..... 71

Photograph DSC00071..... 72

Photograph DSC00072..... 73

Photograph DSC00073..... 74

Photograph DSC00074..... 75

Photograph DSC00075..... 76

Photograph DSC00076..... 77

Photograph DSC00077..... 78

Photograph DSC00078..... 79

Photograph DSC00079..... 80

Photograph DSC00080..... 81

Photograph DSC00081..... 82

Photograph DSC00082..... 83

Photograph DSC00083..... 84

Photograph DSC00084..... 85

Photograph DSC00085..... 86

Photograph DSC00086..... 87

Photograph DSC00087..... 88

Photograph DSC00088..... 89

Photograph DSC00089..... 90

Photograph DSC00090..... 91

Photograph DSC00091..... 92

Photograph DSC00092..... 93

Photograph DSC00093..... 94

Photograph DSC00094..... 95

Photograph DSC00095..... 96

Photograph DSC00096..... 97

Photograph DSC00097..... 98

Photograph DSC00098..... 99

Photograph DSC00099.....	100
Photograph DSC00100.....	101
Photograph DSC00101.....	102
Photograph DSC00102.....	103
Photograph DSC00103.....	104
Photograph DSC00104.....	105
Photograph DSC00105.....	106
Photograph DSC00106.....	107
Photograph DSC00107.....	108
Photograph DSC00108.....	109
Photograph DSC00109.....	110
Photograph DSC00110.....	111
Photograph DSC00111.....	112
Photograph DSC00112.....	113
Photograph DSC00113.....	114
Photograph DSC00114.....	115
Photograph DSC00115.....	116
Photograph DSC00116.....	117
Photograph DSC00117.....	118
Photograph DSC00118.....	119
Photograph DSC00119.....	120
Photograph DSC00120.....	121
Photograph DSC00121.....	122
Photograph DSC00122.....	123
Photograph DSC00123.....	124
Photograph DSC00124.....	125
Photograph DSC00125.....	126
Photograph DSC00126.....	127
Photograph DSC00127.....	128
Photograph DSC00129.....	129
Photograph DSC00130.....	130
Photograph DSC00131.....	131
Photograph DSC00132.....	132
Photograph DSC00133.....	133
Photograph DSC00134.....	134
Photograph DSC00135.....	135
Photograph DSC00136.....	136
Photograph DSC00138.....	137
Photograph DSC00139.....	138
Photograph DSC00140.....	139
Photograph DSC00141.....	140
Photograph DSC00142.....	141
Photograph DSC00143.....	142
Photograph DSC00144.....	143
Photograph DSC00145.....	144
Photograph DSC00146.....	145
Photograph DSC00147.....	146
Photograph DSC00148.....	147
Photograph DSC00149.....	148
Photograph DSC00150.....	149
Photograph DSC00151.....	150
Photograph DSC00152.....	151
Photograph DSC00153.....	152
Photograph DSC00154.....	153

Photograph DSC00155.....	154
Photograph DSC00156.....	155
Photograph DSC00157.....	156
Photograph DSC00158.....	157
Photograph DSC00159.....	158
Photograph DSC00160.....	159
Photograph DSC00161.....	160
Photograph DSC00162.....	161
Photograph DSC00163.....	162
Photograph DSC00164.....	163
Photograph DSC00165.....	164
Photograph DSC00166.....	165
Photograph DSC00167.....	166
Photograph DSC00168.....	167
Photograph DSC00169.....	168
Photograph DSC00170.....	169
Photograph DSC00171.....	170
Photograph DSC00172.....	171
Photograph DSC00173.....	172
Photograph DSC00174.....	173
Photograph DSC00175.....	174
Photograph DSC00177.....	175
Photograph DSC00178.....	176
Photograph DSC00179.....	177
Photograph DSC00180.....	178
Photograph DSC00181.....	179
Photograph DSC00182.....	180
Photograph DSC00183.....	181
Photograph DSC00184.....	182
Photograph DSC00185.....	183
Photograph DSC00186.....	184
Photograph DSC00187.....	185
Photograph DSC00189.....	186
Photograph DSC00190.....	187
Photograph DSC00191.....	188
Photograph DSC00192.....	189
Photograph DSC00193.....	190
Photograph DSC00194.....	191
Photograph DSC00195.....	192
Photograph DSC00196.....	193
Photograph DSC00197.....	194
Photograph DSC00198.....	195
Photograph DSC00199.....	196
Photograph DSC00200.....	197
Photograph DSC00201.....	198
Photograph DSC00202.....	199
Photograph DSC00203.....	200
Photograph DSC00204.....	201
Photograph DSC00205.....	202
Photograph DSC00206.....	203
Photograph DSC00207.....	204
Photograph DSC00208.....	205
Photograph DSC00209.....	206
Photograph DSC00210.....	207

Photograph DSC00211.....	208
Photograph DSC00212.....	209
Photograph DSC00213.....	210
Photograph DSC00214.....	211
Photograph DSC00215.....	212
Photograph DSC00216.....	213
Photograph DSC00217.....	214
Photograph DSC00218.....	215
Photograph DSC00219.....	216
Photograph DSC00220.....	217
Photograph DSC00221.....	218
Photograph DSC00222.....	219
Photograph DSC00223.....	220
Photograph DSC00224.....	221
Photograph DSC00225.....	222
Photograph DSC00226.....	223
Photograph DSC00227.....	224
Photograph DSC00228.....	225
Photograph DSC00229.....	226
Photograph DSC00230.....	227
Photograph DSC00231.....	228
Photograph DSC00232.....	229
Photograph DSC00233.....	230
Photograph DSC00234.....	231
Photograph DSC00235.....	232
Photograph DSC00236.....	233
Photograph DSC00237.....	234
Photograph DSC00238.....	235
Photograph DSC00240.....	236
Photograph DSC00241.....	237
Photograph DSC00242.....	238
Photograph DSC00243.....	239
Photograph DSC00244.....	240
Photograph DSC00245.....	241
Photograph DSC00246.....	242
Photograph DSC00247.....	243
Photograph DSC00248.....	244
Photograph DSC00249.....	245
Photograph DSC00250.....	246
Photograph DSC00251.....	247
Photograph DSC00252.....	248
Photograph DSC00253.....	249
Photograph DSC00254.....	250
Photograph DSC00255.....	251
Photograph DSC00256.....	252
Photograph DSC00257.....	253
Photograph DSC00259.....	254
Photograph DSC00260.....	255
Photograph DSC00261.....	256
Photograph DSC00262.....	257
Photograph DSC00263.....	258
Photograph DSC00264.....	259
Photograph DSC00265.....	260
Photograph DSC00266.....	261

---

Photograph DSC00267.....	262
Photograph DSC00268.....	263
Photograph DSC00269.....	264
Photograph DSC00270.....	265
Photograph DSC00271.....	266
Photograph DSC00272.....	267
Photograph DSC00273.....	268
<b>GeoCorps unpublished map.....</b>	<b>269</b>
Data Collection Information.....	269
Source Metadata Information.....	270
<b>GRI Digital Data Credits.....</b>	<b>274</b>

## Geologic Resources Inventory Map Document



# Chattahoochee River National Recreation Area, Georgia

## Document to Accompany Digital Geologic-GIS Data

[chsh\\_geology.pdf](#)

Version: 6/10/2015

This document has been developed to accompany the digital geologic-GIS data developed by the Geologic Resources Inventory (GRI) program for Chattahoochee River National Recreation Area, Georgia (CHAT).

Attempts have been made to reproduce all aspects of the original source products, including the geologic units and their descriptions, geologic cross sections, the geologic report, references and all other pertinent images and information contained in the original publication.

National Park Service (NPS) Geologic Resources Inventory (GRI) Program staff have assembled the digital geologic-GIS data that accompanies this document.

For information about the status of GRI digital geologic-GIS data for a park contact:

Tim Connors  
Geologist/GRI Mapping Contact  
National Park Service Geologic Resources Division  
P.O. Box 25287  
Denver, CO 80225-0287  
phone: (303) 969-2093  
fax: (303) 987-6792  
email: [Tim\\_Connors@nps.gov](mailto:Tim_Connors@nps.gov)

For information about using GRI digital geologic-GIS data contact:

Stephanie O'Meara  
Geologist/GIS Specialist/Data Manager  
Colorado State University Research Associate, Cooperator to the National Park Service  
1201 Oak Ridge Drive, Suite 200  
Fort Collins, CO 80525  
phone: (970) 491-6655  
fax: (970) 225-3597  
e-mail: [stephanie.omeara@colostate.edu](mailto:stephanie.omeara@colostate.edu)

## About the NPS Geologic Resources Inventory Program

### Background

Recognizing the interrelationships between the physical (geology, air, and water) and biological (plants and animals) components of the Earth is vital to understanding, managing, and protecting natural resources. The Geologic Resources Inventory (GRI) helps make this connection by providing information on the role of geology and geologic resource management in parks.

Geologic resources for management consideration include both the processes that act upon the Earth and the features formed as a result of these processes. Geologic processes include: erosion and sedimentation; seismic, volcanic, and geothermal activity; glaciation, rockfalls, landslides, and shoreline change. Geologic features include mountains, canyons, natural arches and bridges, minerals, rocks, fossils, cave and karst systems, beaches, dunes, glaciers, volcanoes, and faults.

The Geologic Resources Inventory aims to raise awareness of geology and the role it plays in the environment, and to provide natural resource managers and staff, park planners, interpreters, researchers, and other NPS personnel with information that can help them make informed management decisions.

The GRI team, working closely with the Colorado State University (CSU) Department of Geosciences and a variety of other partners, provides more than 270 parks with a geologic scoping meeting, digital geologic-GIS map data, and a park-specific geologic report.

### Products

**Scoping Meetings:** These park-specific meetings bring together local geologic experts and park staff to inventory and review available geologic data and discuss geologic resource management issues. A summary document is prepared for each meeting that identifies a plan to provide digital map data for the park.

**Digital Geologic Maps:** Digital geologic maps reproduce all aspects of traditional paper maps, including notes, legend, and cross sections. Bedrock, surficial, and special purpose maps such as coastal or geologic hazard maps may be used by the GRI to create digital Geographic Information Systems (GIS) data and meet park needs. These digital GIS data allow geologic information to be easily viewed and analyzed in conjunction with a wide range of other resource management information data.

For detailed information regarding GIS parameters such as data attribute field definitions, attribute field codes, value definitions, and rules that govern relationships found in the data, refer to the NPS Geology-GIS Data Model document available at: <http://science.nature.nps.gov/im/inventory/geology/GeologyGISDataModel.cfm>

**Geologic Reports:** Park-specific geologic reports identify geologic resource management issues as well as features and processes that are important to park ecosystems. In addition, these reports present a brief geologic history of the park and address specific properties of geologic units present in the park.

For a complete listing of Geologic Resource Inventory products and direct links to the download site visit the GRI publications webpage [http://www.nature.nps.gov/geology/inventory/gre\\_publications.cfm](http://www.nature.nps.gov/geology/inventory/gre_publications.cfm)

GRI geologic-GIS data is also available online at the NPS Data Store Search Application: <http://irma.nps.gov/App/Reference/Search>. To find GRI data for a specific park or parks select the appropriate park

(s), enter "GRI" as a Search Text term, and then select the Search Button.

For more information about the Geologic Resources Inventory Program visit the GRI webpage: <http://www.nature.nps.gov/geology/inventory>, or contact:

Bruce Heise  
Inventory Coordinator  
National Park Service Geologic Resources Division  
P.O. Box 25287  
Denver, CO 80225-0287  
phone: (303) 969-2017  
fax: (303) 987-6792  
email: [Bruce\\_Heise@nps.gov](mailto:Bruce_Heise@nps.gov)

The Geologic Resources Inventory (GRI) program is funded by the National Park Service (NPS) Inventory and Monitoring (I&M) Division.

## GRI Digital Map and Source Map Citation

An additional GRI digital GIS map for Chattahoochee River National Recreation Area, Georgia (CHAT):

### **Digital Shoals and Water Hazard Areas Map of Chattahoochee River National Recreation Area, Georgia (*GRI MapCode CHSH*)**

Produced from the following source digital data and map.

Hundley, Jeffrey Britton, 2014, Shoals Map of Chattahoochee River National Recreation Area, Georgia: GeoCorps of America, unpublished map, scale 1:24,000 ([GeoCorps unpublished map](#)). (*GRI Source Map ID 76002*).

## Photograph Localities

Present in the digital GIS data are numerous GPS localities where a photograph was taken. Each photograph locality is assigned a ID or station number (e.g., DSC0001). Included with the GIS data for each locality is also the azimuth or direction the photograph was taken. Below are the photographs for each locality.

Note that a few photographs are "too blurry from movement (taken on a kayak while drifting) and a couple had water droplets on the lense obscuring the image. I took the photos with my GPS' integrated camera and they were fairly difficult to quality check in the field (due to glare from sun and low resolution display screen) (personal communication from source author, June 6, 2015). This also explains why several station numbers in the number sequence are missing (e.g., DSC0050 is not present). These station numbers are also omitted from the digital GIS data.

### Photograph DSC00001



Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00002**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00003**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00004**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00005**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00006**

*Extracted from:* ([GeoCorps unpublished map](#)).

**Photograph DSC00007**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00008**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00009**

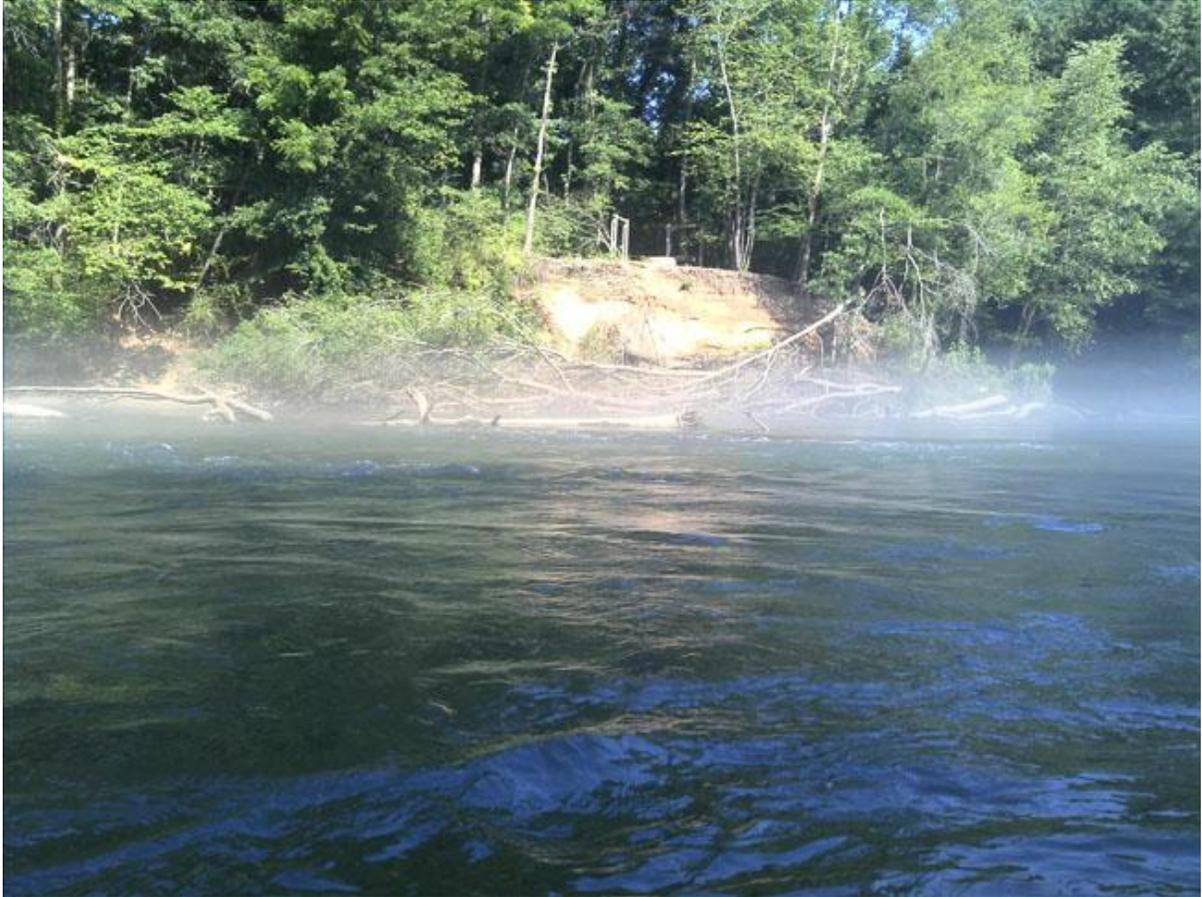
Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00010**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00011**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00012**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00013**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00014**



*Extracted from: ([GeoCorps unpublished map](#)).*

**Photograph DSC00015**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00016**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00017**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00018**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00019**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00020**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00021**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00022**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00023**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00024**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00025**

Extracted from: ([GeoCorps unpublished map](#)).

Photograph DSC00026



Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00027**

Extracted from: ([GeoCorps unpublished map](#)).

Photograph DSC00028



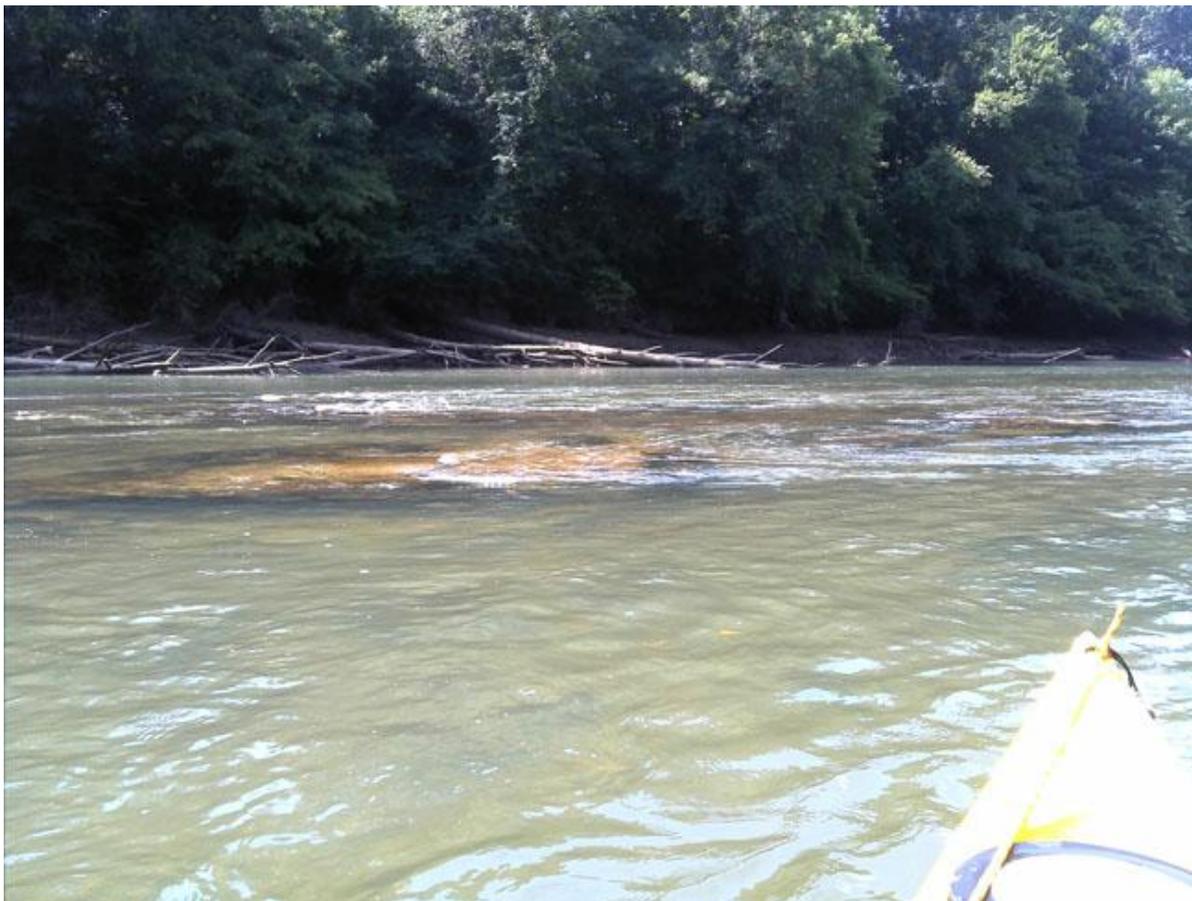
Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00029**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00030**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00031**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00032**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00033**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00034**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00035**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00036**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00037**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00038**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00039**

Extracted from: ([GeoCorps unpublished map](#)).

Photograph DSC00040



Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00041**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00042**

*Extracted from:* ([GeoCorps unpublished map](#)).

**Photograph DSC00043**

Extracted from: ([GeoCorps unpublished map](#)).

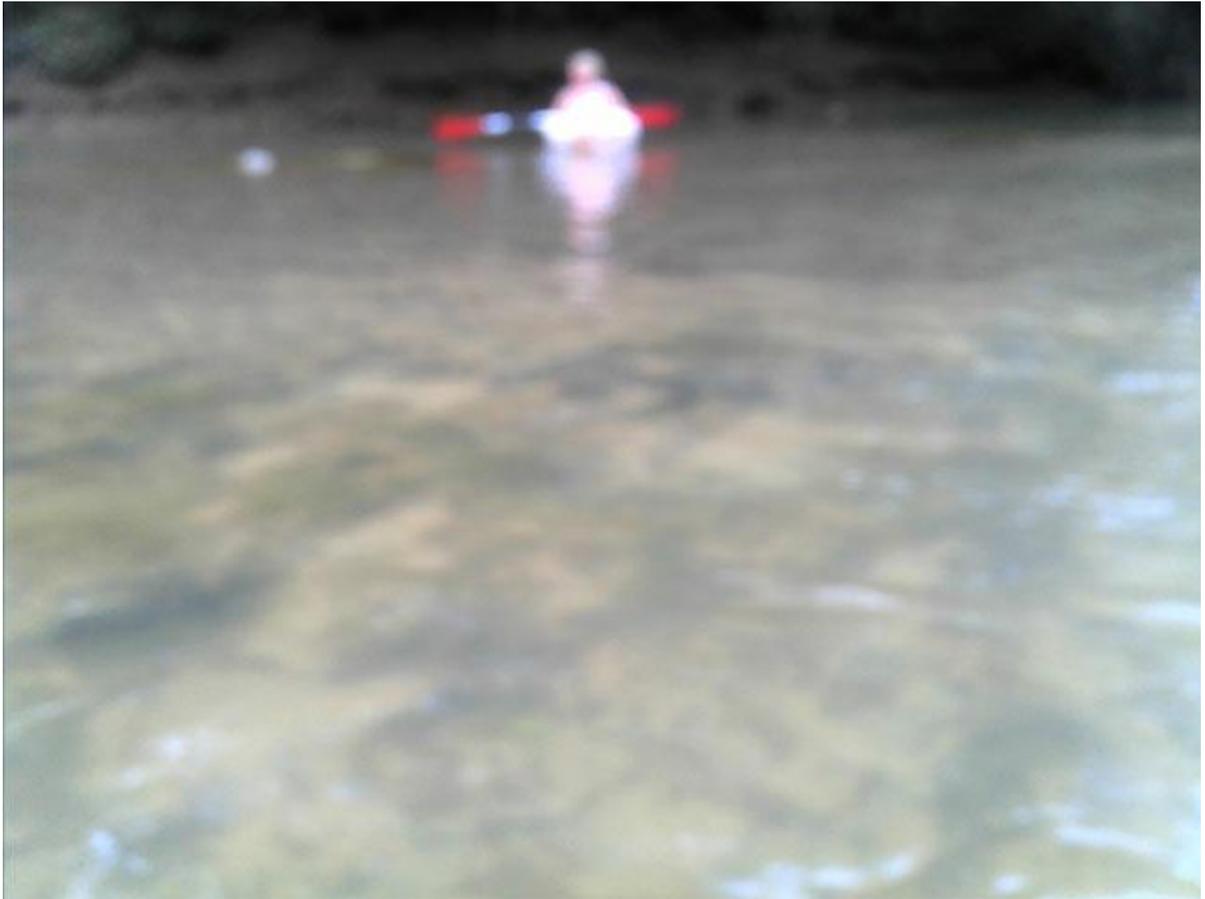
**Photograph DSC00044**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00045**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00046**



*Extracted from: ([GeoCorps unpublished map](#)).*

**Photograph DSC00047**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00048**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00049**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00051**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00052**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00053**

*Extracted from: ([GeoCorps unpublished map](#)).*

**Photograph DSC00054**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00055**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00056**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00058**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00059**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00060**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00061**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00062**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00063**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00064**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00065**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00066**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00067**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00068**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00070**

Extracted from: ([GeoCorps unpublished map](#)).

Photograph DSC00071



Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00072**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00073**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00074**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00075**

*Extracted from:* ([GeoCorps unpublished map](#)).

**Photograph DSC00076**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00077**



Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00078**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00079**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00080**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00081**

*Extracted from:* ([GeoCorps unpublished map](#)).

**Photograph DSC00082**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00083**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00084**

\*



Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00085**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00086**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00087**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00088**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00089**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00090**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00091**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00092**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00093**



*Extracted from: ([GeoCorps unpublished map](#)).*

**Photograph DSC00094**

Extracted from: ([GeoCorps unpublished map](#)).

Photograph DSC00095



Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00096**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00097**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00098**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00099**

*Extracted from:* ([GeoCorps unpublished map](#)).

**Photograph DSC00100**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00101**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00102**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00103**



*Extracted from:* ([GeoCorps unpublished map](#)).

**Photograph DSC00104**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00105**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00106**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00107**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00108**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00109**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00110**

Extracted from: ([GeoCorps unpublished map](#)).

Photograph DSC00111



Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00112**

Extracted from: ([GeoCorps unpublished map](#)).

Photograph DSC00113



Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00114**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00115**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00116**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00117**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00118**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00119**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00120**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00121**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00122**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00123**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00124**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00125**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00126**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00127**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00129**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00130**



*Extracted from: ([GeoCorps unpublished map](#)).*

**Photograph DSC00131**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00132**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00133**

Extracted from: ([GeoCorps unpublished map](#)).

Photograph DSC00134



Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00135**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00136**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00138**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00139**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00140**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00141**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00142**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00143**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00144**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00145**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00146**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00147**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00148**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00149**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00150**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00151**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00152**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00153**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00154**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00155**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00156**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00157**



*Extracted from: ([GeoCorps unpublished map](#)).*

**Photograph DSC00158**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00159**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00160**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00161**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00162**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00163**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00164**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00165**



*Extracted from: ([GeoCorps unpublished map](#)).*

**Photograph DSC00166**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00167**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00168**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00169**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00170**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00171**

Extracted from: ([GeoCorps unpublished map](#)).

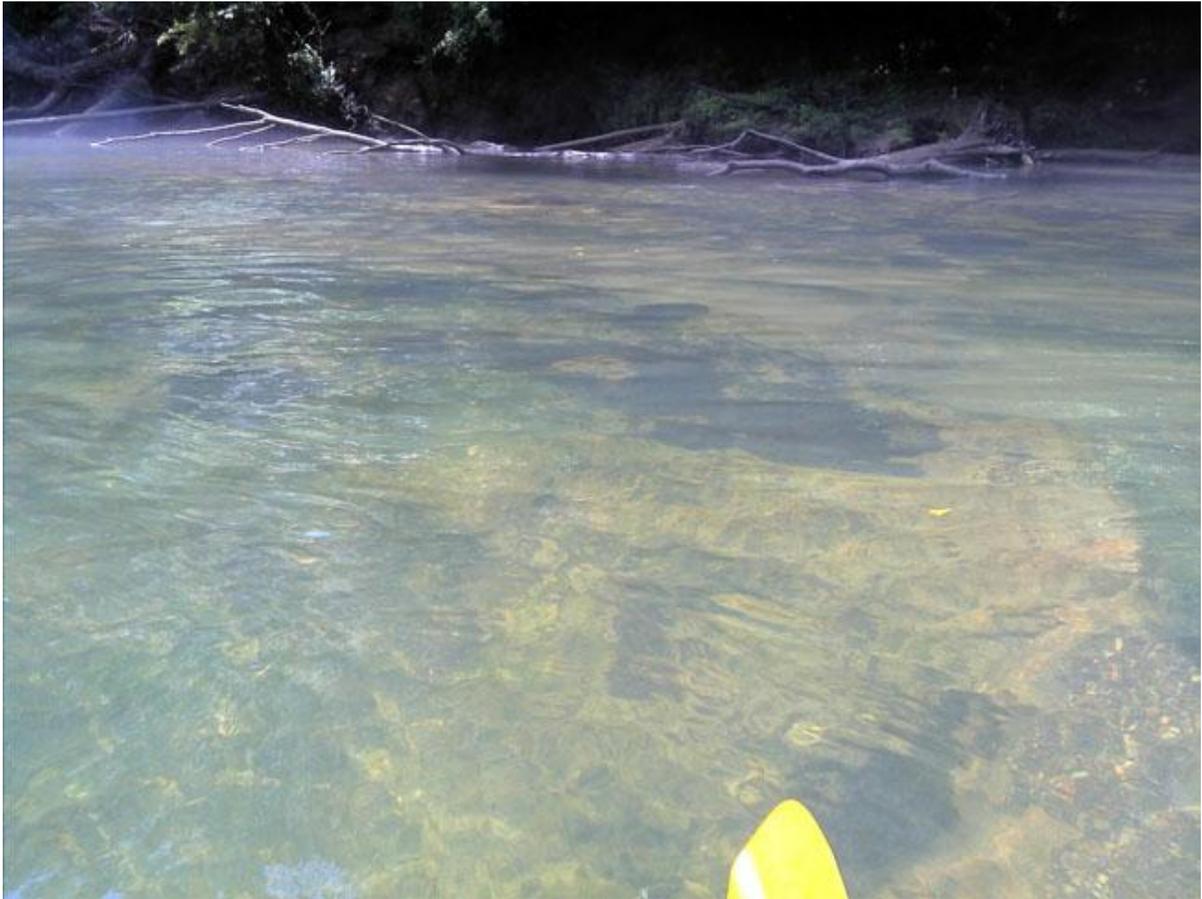
**Photograph DSC00172**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00173**



*Extracted from: ([GeoCorps unpublished map](#)).*

**Photograph DSC00174**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00175**



*Extracted from: ([GeoCorps unpublished map](#)).*

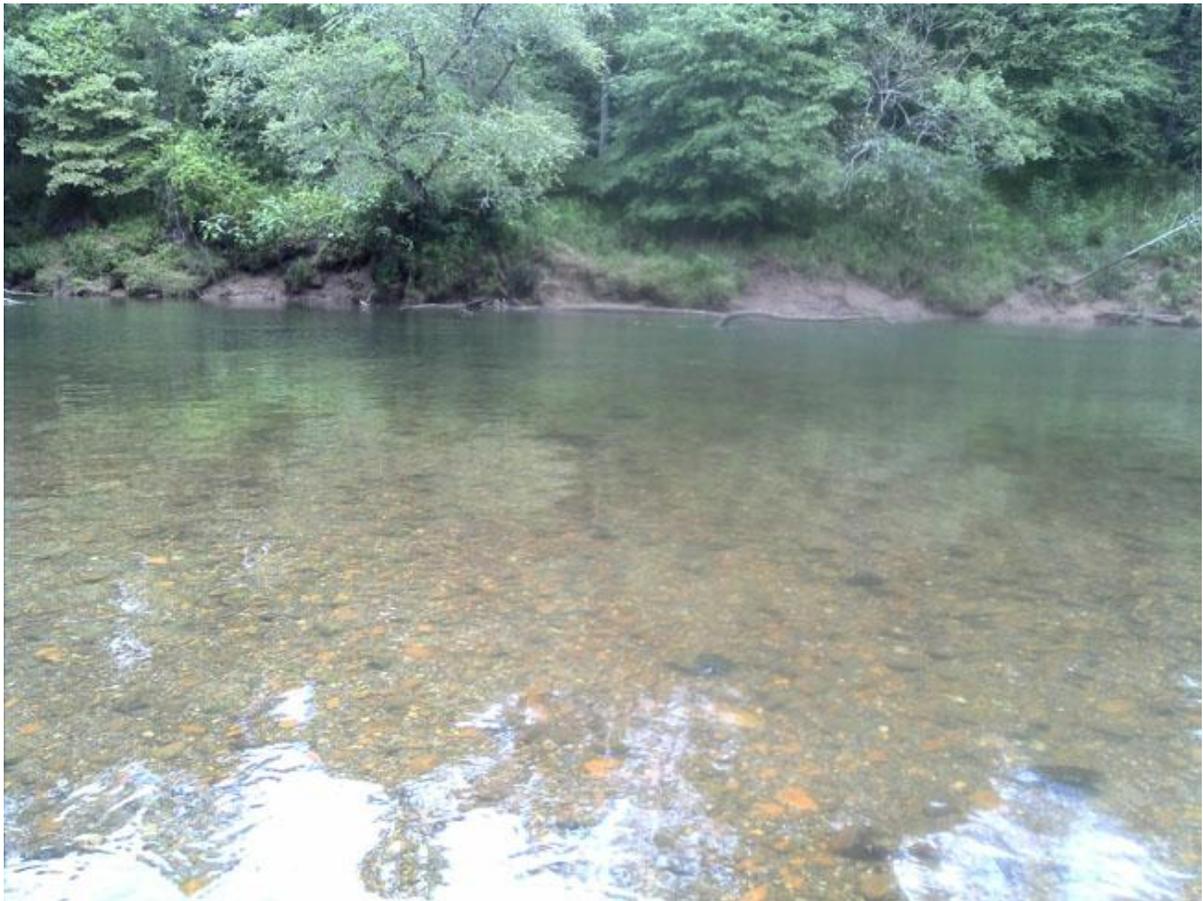
**Photograph DSC00177**

Extracted from: ([GeoCorps unpublished map](#)).

Photograph DSC00178



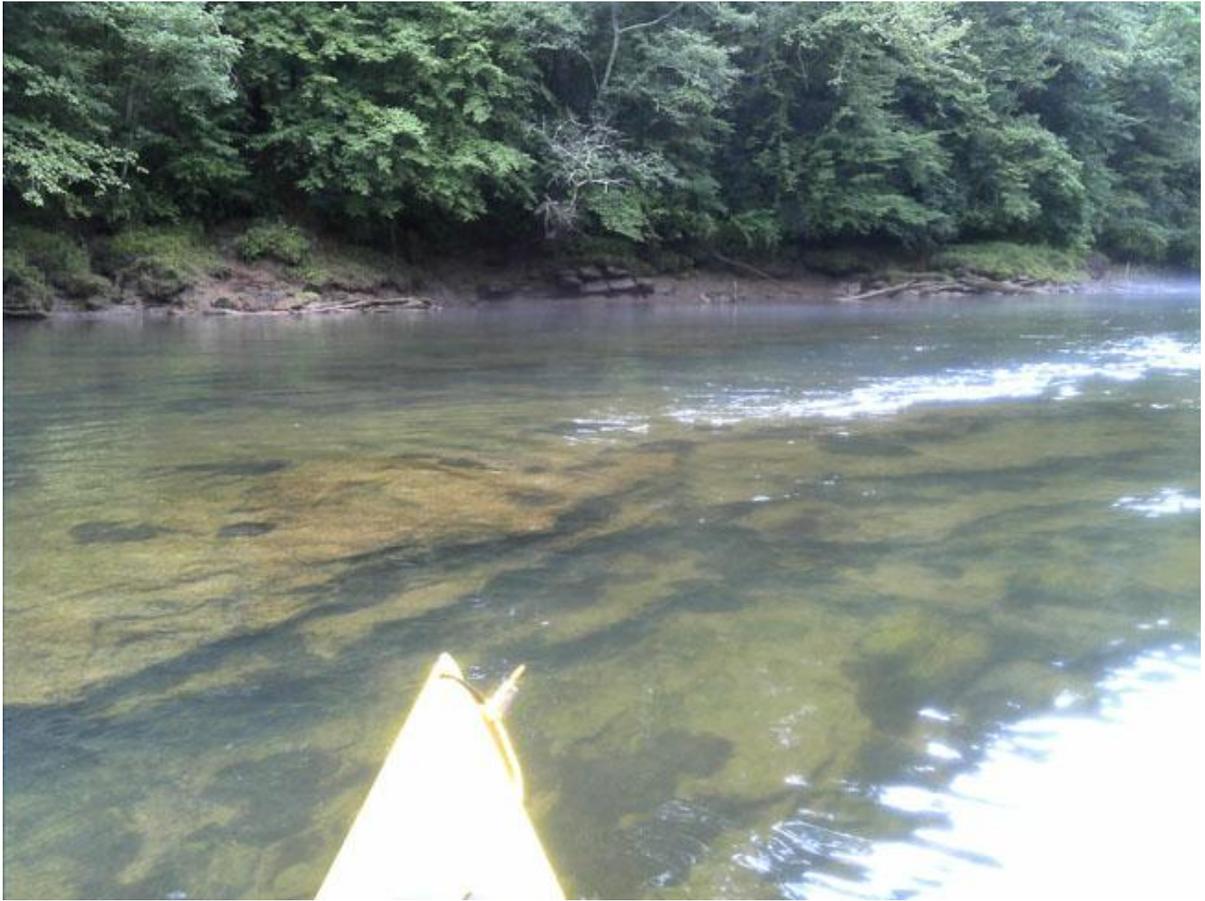
Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00179**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00180**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00181**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00182**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00183**

Extracted from: ([GeoCorps unpublished map](#)).

Photograph DSC00184



Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00185**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00186**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00187**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00189**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00190**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00191**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00192**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00193**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00194**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00195**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00196**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00197**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00198**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00199**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00200**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00201**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00202**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00203**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00204**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00205**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00206**

Extracted from: ([GeoCorps unpublished map](#)).

Photograph DSC00207



Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00208**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00209**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00210**

Extracted from: ([GeoCorps unpublished map](#)).

Photograph DSC00211



Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00212**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00213**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00214**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00215**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00216**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00217**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00218**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00219**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00220**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00221**

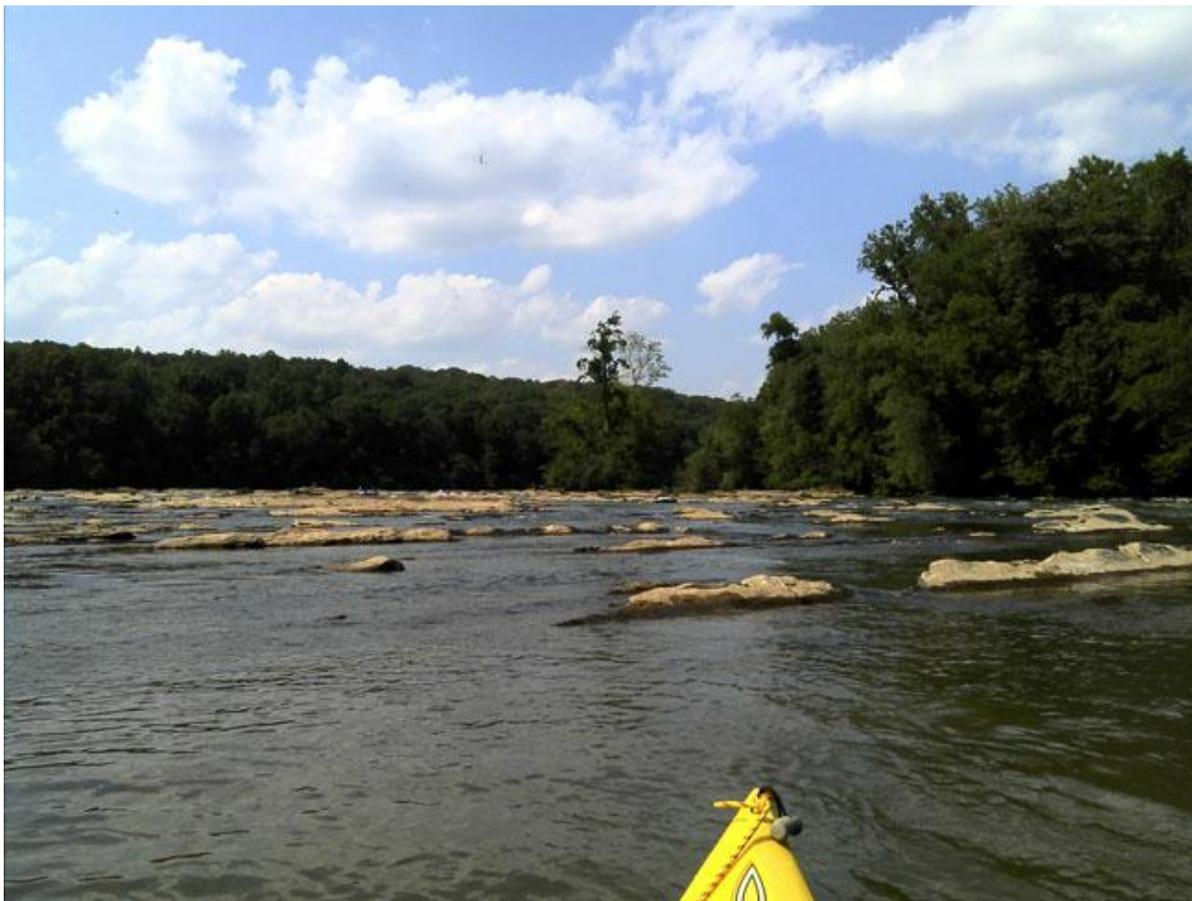
Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00222**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00223**

*Extracted from: ([GeoCorps unpublished map](#)).*

**Photograph DSC00224**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00225**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00226**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00227**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00228**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00229**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00230**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00231**

*Extracted from:* ([GeoCorps unpublished map](#)).

**Photograph DSC00232**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00233**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00234**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00235**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00236**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00237**



*Extracted from: ([GeoCorps unpublished map](#)).*

**Photograph DSC00238**

Extracted from: ([GeoCorps unpublished map](#)).

Photograph DSC00240



Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00241**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00242**



*Extracted from:* ([GeoCorps unpublished map](#)).

**Photograph DSC00243**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00244**



*Extracted from: ([GeoCorps unpublished map](#)).*

**Photograph DSC00245**

Extracted from: ([GeoCorps unpublished map](#)).

Photograph DSC00246



Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00247**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00248**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00249**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00250**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00251**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00252**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00253**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00254**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00255**

Extracted from: ([GeoCorps unpublished map](#)).

Photograph DSC00256



Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00257**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00259**

Extracted from: ([GeoCorps unpublished map](#)).

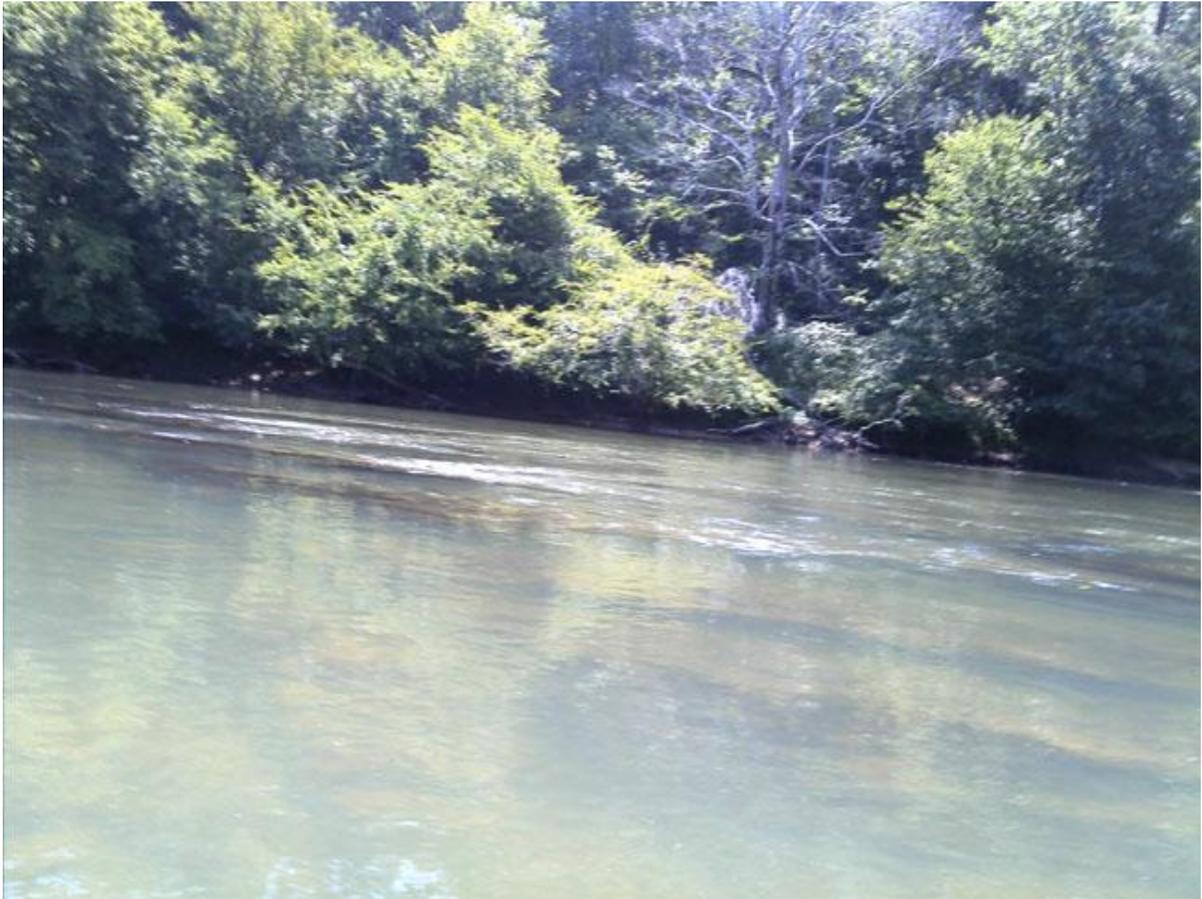
**Photograph DSC00260**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00261**



*Extracted from: ([GeoCorps unpublished map](#)).*

**Photograph DSC00262**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00263**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00264**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00265**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00266**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00267**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00268**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00269**



*Extracted from:* ([GeoCorps unpublished map](#)).

**Photograph DSC00270**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00271**



*Extracted from: ([GeoCorps unpublished map](#)).*

**Photograph DSC00272**

Extracted from: ([GeoCorps unpublished map](#)).

**Photograph DSC00273**

Extracted from: ([GeoCorps unpublished map](#)).

## GeoCorps unpublished map

Hundley, Jeffrey Britton, 2014, Shoals Map of Chattahoochee River National Recreation Area, Georgia: GeoCorps of America, unpublished map, scale 1:24,000 (*GRI Source Map ID 76002*).

### Data Collection Information

GPS Locations and georeferenced images (photographs) collected using a Garmin GPSmap 62stc. Map Datum/Spheroid: WGS 84

Water flow conditions, start and end points, and waypoints and photographs (images) taken are listed for each day of data collection.

**Date:** Sunday, 7/13/2014

**Flow Conditions:** USGS Gauge #02334653 reports ~630cfs

**Start:** Settles Bridge (mi 344)

**End:** Abbots Bridge (mi 355)

**Waypoints:** 001 - 045

**Images:** DSC00001.jpg - DSC00051.jpg

**Date:** Monday, 7/14/2014

**Flow Conditions:** USGS Gauge #02334653 reports ~680cfs

**Start:** Abbots Bridge (mi 355)

**End:** Jones Bridge (mi 329)

**Waypoints:** 046 - 068

**Images:** DSC00052.jpg - DSC00076.jpg

**Date:** Tuesday, 7/15/2014

**Flow Conditions:** USGS Gauge #02335000 reports ~800cfs

**Start:** Jones Bridge Park (mi 329)

**End:** Island Ford (mi 320)

**Waypoints:** 069 - 125

**Images:** DSC00077.jpg - DSC00134.jpg

**Date:** Friday, 7/18/2014

**Flow Conditions:** USGS Gauge #02335450 reports ~890cfs

**Start:** Island Ford (mi 320)

**End:** Morgan Falls (mi 313)

**Waypoints:** 126 - 137

**Images:** DSC00135.jpg - DSC00147.jpg

**Date:** Tuesday, 7/22/2014

**Flow Conditions:** USGS Gauge #02334430 reports ~629cfs

**Start:** Buford Dam (mi 348)

**End:** Settles Bridge (mi 344)

**Waypoints:** 138 -172

**Images:** DSC00148.jpg - DSC00184.jpg

**Date:** Sunday, 7/27/2014

**Flow Conditions:** USGS Gauge #02335815 reports ~1060cfs

**Start:** Morgan Falls (mi 312)

**End:** Paces Mill (mi 304)

**Waypoints:** 173 - 234

**Images:** DSC00185.jpg - DSC00251.jpg

**Date:** Monday, 7/28/2014

**Flow Conditions:** USGS Gauge #02336000 reports ~1010cfs

**Start:** Paces Mill (mi 304)

**End:** Stamps Sand Company (mi 300)

**Waypoints:** 234 - 255

**Images:** DSC00252.jpg - DSC00273.jpg

## Source Metadata Information

### Image Locations (Geologic Observation Localities (CHSHGOL) in the GRI digital GIS data):

#### Summary

Locations of images taken of shoal hazards. Correlates with shoal locations in Waypoints.shp

#### Description

Point data representing the location of the camera or focal point at the time the image was taken. The symbology indicates the location of the camera with the circular point. The azimuthal direction the camera was facing (ie. upstream/downstream) is indicated by the line or tail coming off of the point.

#### Credits

Data collected by Jeffrey Britton Hundley, Jr. with assistance from Israel Blue Phillips. Under the supervision of Bruce Heise and Paula Capece of the National Park Service. Part of the Geological Society of America GeoCorps Program.

#### Use limitations

Exclusively for scientific research purposes.

#### Extent

West -84.460485

East -84.076551

North 34.158059

South 33.824872

#### Scale Range

Maximum (zoomed in) 1:5,000

Minimum (zoomed out) 1:500,000

### Shallow Subsurface Hazard (Underwater Hazard Area Feature (CHSHUHA) in the GRI digital GIS data):

#### Summary

Polygonal representation of shallow hazard zones.

#### Description

Areas of shallow water hazards such as point bars or mid-channel bars. Including shallow sand or gravel bars. Not hard rock shoals, but an accumulation of sediments causing hazardous shallow areas.

### Credits

Data collected by Jeffrey Britton Hundley, Jr. with assistance from Israel Blue Phillips. Under the supervision of Bruce Heise and Paula Capece of the National Park Service. Part of the Geological Society of America GeoCorps Program.

### Use limitations

Data exclusively for scientific research purposes. Not to be used for navigation, depths to shoals may vary with flow conditions and location.

### Extent

West -84.438590  
East -84.101356  
North 34.109535  
South 33.919483

### Scale Range

Maximum (zoomed in) 1:5,000  
Minimum (zoomed out) 1:500,000

## **Shoal Area (Shoal Area Feature (CHSHSAF) in the GRI digital GIS data):**

### Summary

Polygonal representation of shoal locations or zones.

### Description

Polygonal data of concentrated shoal areas derived from field notes supplemented by aerial photography and satellite imagery.

### Credits

Data collected by Jeffrey Britton Hundley, Jr. with assistance from Israel Blue Phillips. Under the supervision of Bruce Heise and Paula Capece of the National Park Service. Part of the Geological Society of America GeoCorps Program.

### Use limitations

Data exclusively for scientific research purposes. Not to be used for navigation, depths to shoals may vary with flow conditions and location.

### Extent

West -84.461279  
East -84.075634  
North 34.159163  
South 33.824568

### Scale Range

Maximum (zoomed in) 1:5,000  
Minimum (zoomed out) 1:500,000

**Study Area (Map Boundary contacts in the Shoal Area Feature Boundaries (CHSHSAFA) in the GRI digital GIS data):****Summary**

Rough outline of park boundaries around the Chattahoochee River from Buford Dam to Peachtree Creek. General study area.

**Description**

There is no description for this item.

**Credits**

Jeffrey Britton Hundley, Jr.

**Use limitations**

General extent of study area, not exact boundary of Chattahoochee National Park and Recreation Center.

**Extent**

West -84.503745

East -84.058619

North 34.170646

South 33.800829

**Scale Range**

Maximum (zoomed in) 1:5,000

Minimum (zoomed out) 1:500,000

**Waypoints (Geologic Observation Localities (CHSHGOL) in the GRI digital GIS data):****Summary**

Map of shoal locations on the Chattahoochee River within the National Park Service Chattahoochee National Park and Recreation Center. Explicitly for scientific research documenting present shoal locations.

**Description**

GPS location data of shoals, rapids, or underwater hazards within the bounds of the National Park Service Chattahoochee National Park and Recreation Center. This data encompasses 56 miles of the Chattahoochee River through the North Atlanta area from the Buford Dam at Lake Sidney Lanier in the north down to the input of Peachtree Creek to the south. The collection of this data was the target of an Geological Society of America GeoCorps Internship Program in collaboration with the National Park Service program "Geoscientists in the Parks" in the summer of 2014.

**Credits**

Data collected by Jeffrey Britton Hundley, Jr. with assistance from Israel Blue Phillips. Under the supervision of Bruce Heise and Paula Capece of the National Park Service. Part of the Geological Society of America GeoCorps Program.

**Use limitations**

Data exclusively for scientific research purposes. Not to be used for navigation, depths to shoals may vary with flow conditions and location.

### Extent

West -84.460177

East -84.076117

North 34.157943

South 33.824895

### Scale Range

Maximum (zoomed in) 1:5,000

Minimum (zoomed out) 1:500,000

## GRI Digital Data Credits

This document was developed and completed by Georgia Hybels (Colorado State University) for the NPS Geologic Resources Division (GRD) Geologic Resources Inventory(GRI) Program. Quality control of this document by Stephanie O'Meara (Colorado State University).

The information in this document was compiled from the GRI source map, and intended to accompany the digital GIS map and other digital data for Chattahoochee River National Recreation Area, Georgia (CHAT) developed by Georgia Hybels and Stephanie O'Meara (Colorado State University) (see the [GRI Digital Map and Source Map Citation](#) section of this document for the source used by the GRI in the completion of this document and related GRI digital GIS map).

GRI finalization by Stephanie O'Meara(Colorado State University).

GRI program coordination and scoping provided by Bruce Heise and Tim Connors (NPS GRD, Lakewood, Colorado).