

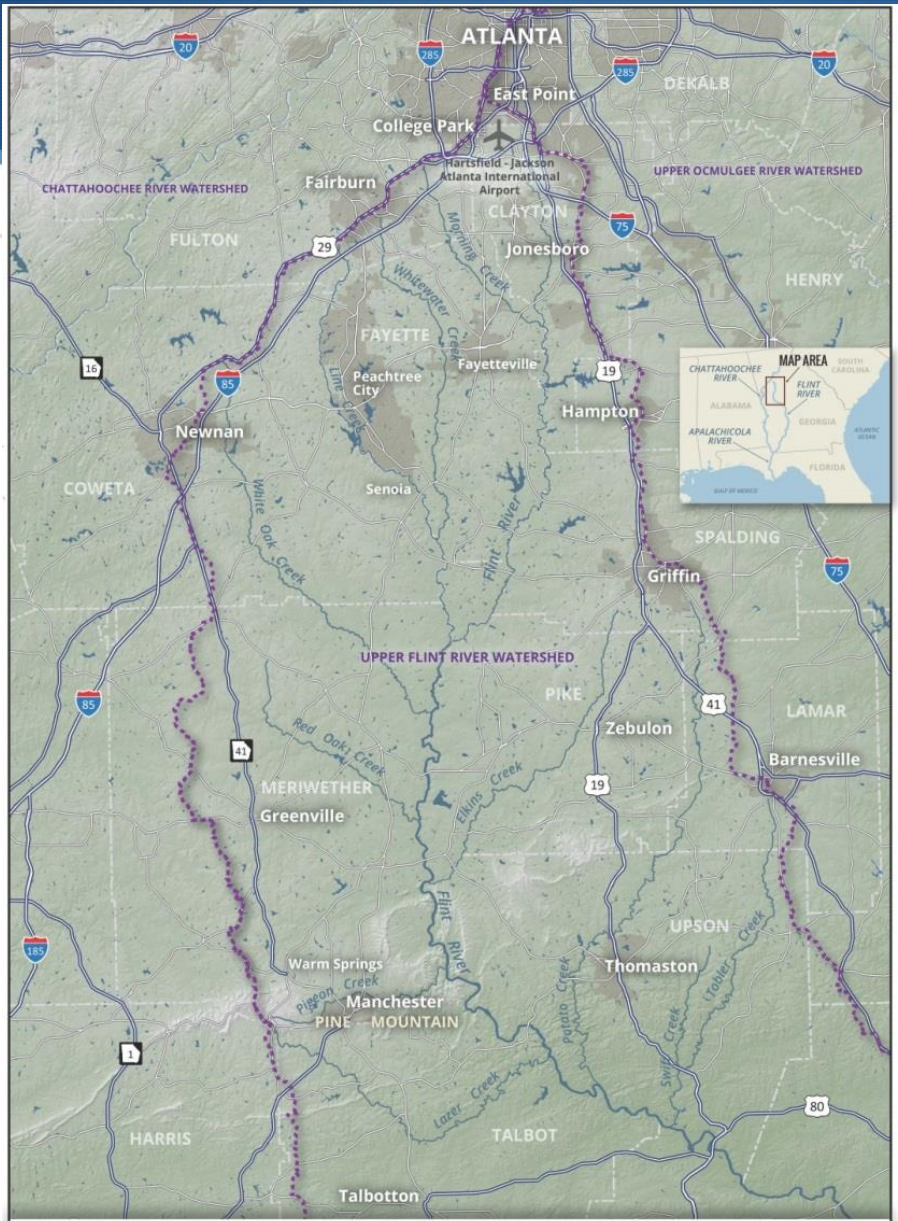
Collaborative Efforts to Restore Healthy Flow Regimes and Drought Resilience in Georgia's Upper Flint River Basin

FLOW 2018

April 26, 2018



American Rivers
Rivers Connect Us®



UPPER FLINT RIVER WATERSHED

- - - - RIVER BASIN BOUNDARY
- = INTERSTATES & HIGHWAYS
- = MAJOR ROADS
- TOWNS, CITIES & DEVELOPED AREAS
- COUNTY BOUNDARIES





Photo: Alan Cressler





Running Dry

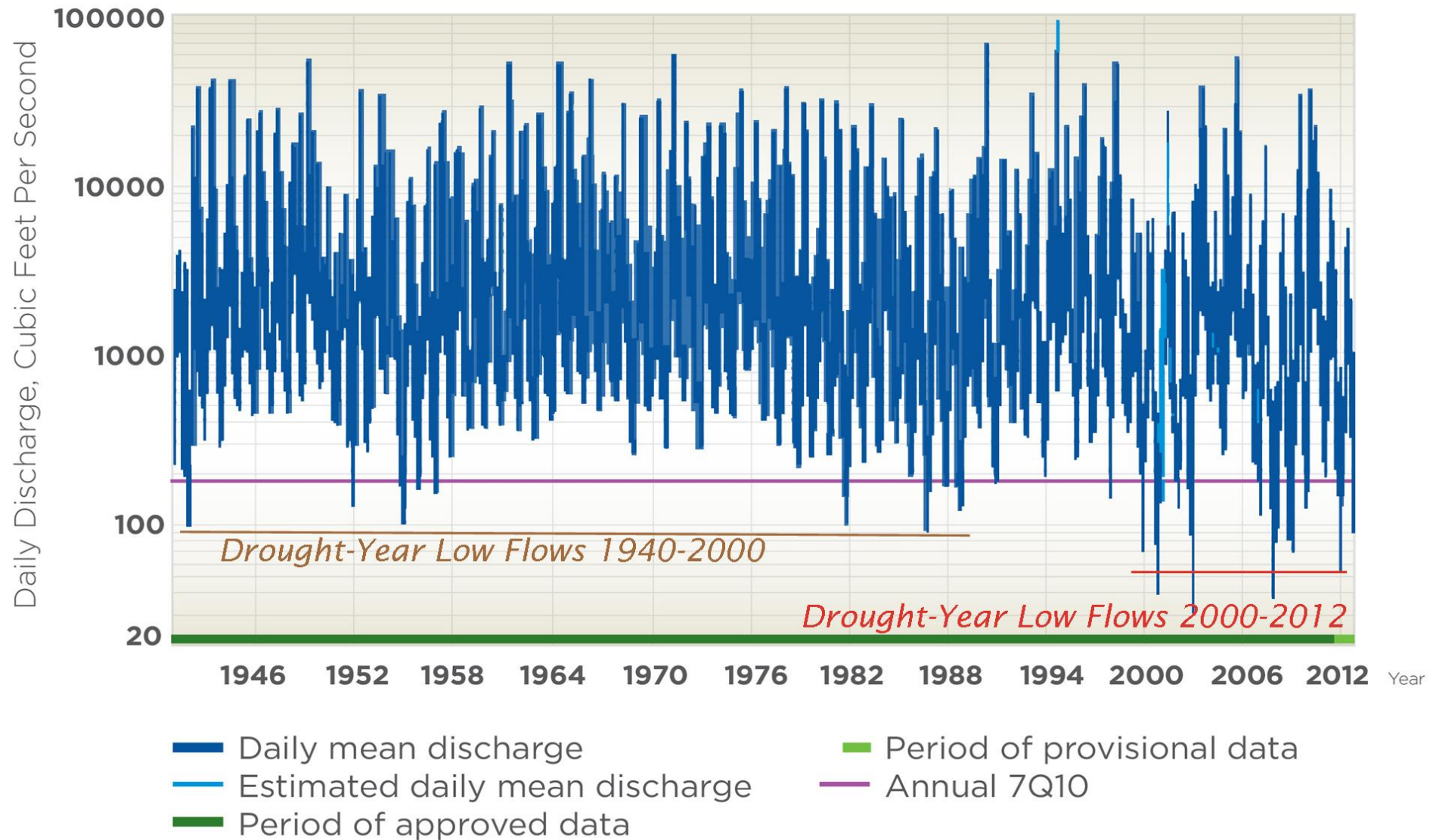
Challenges and Opportunities in Restoring Healthy Flows
in Georgia's Upper Flint River Basin

A Report by American Rivers
and Flint Riverkeeper

April 2013

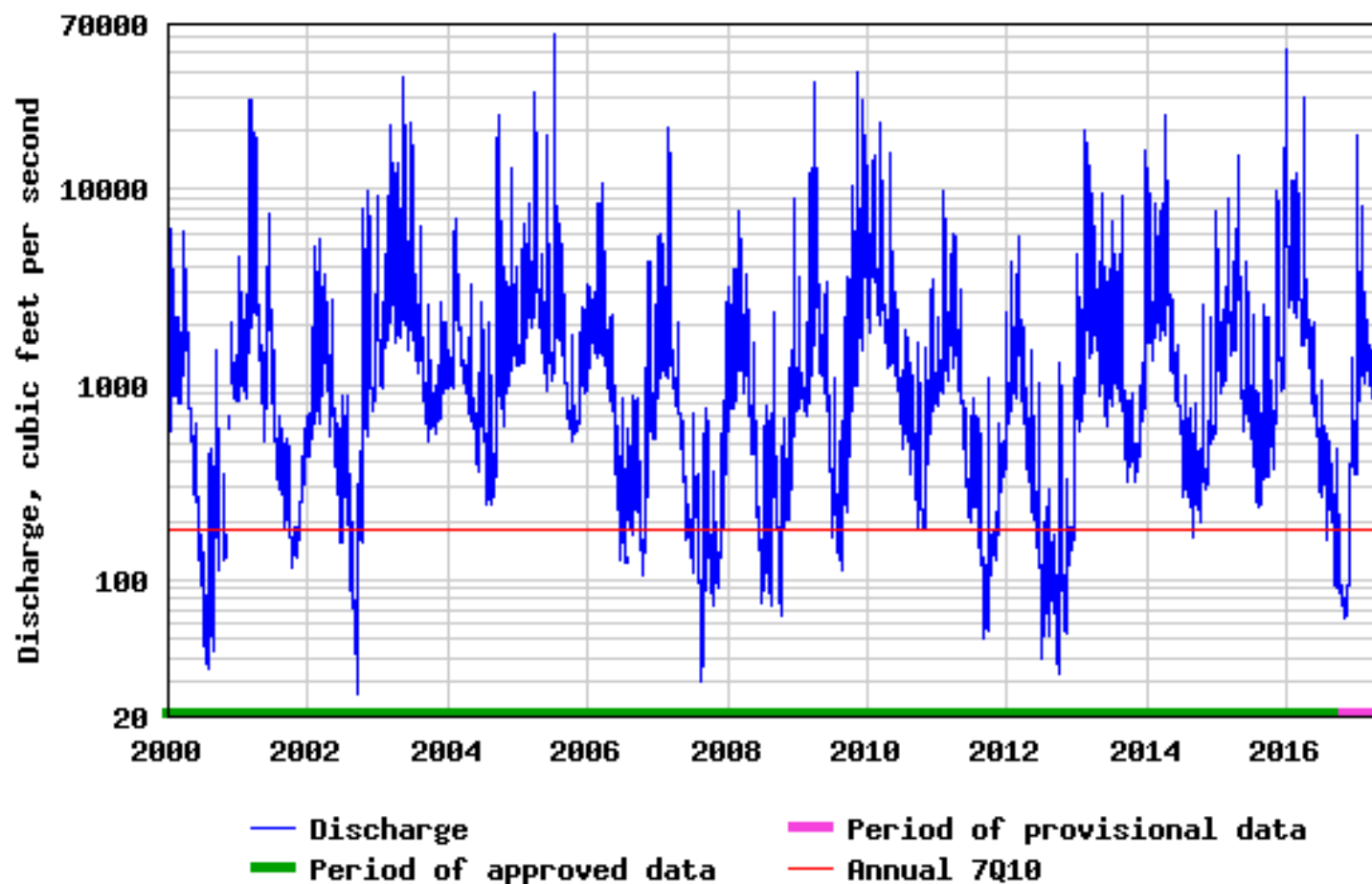
www.AmericanRivers.org/RunningDry

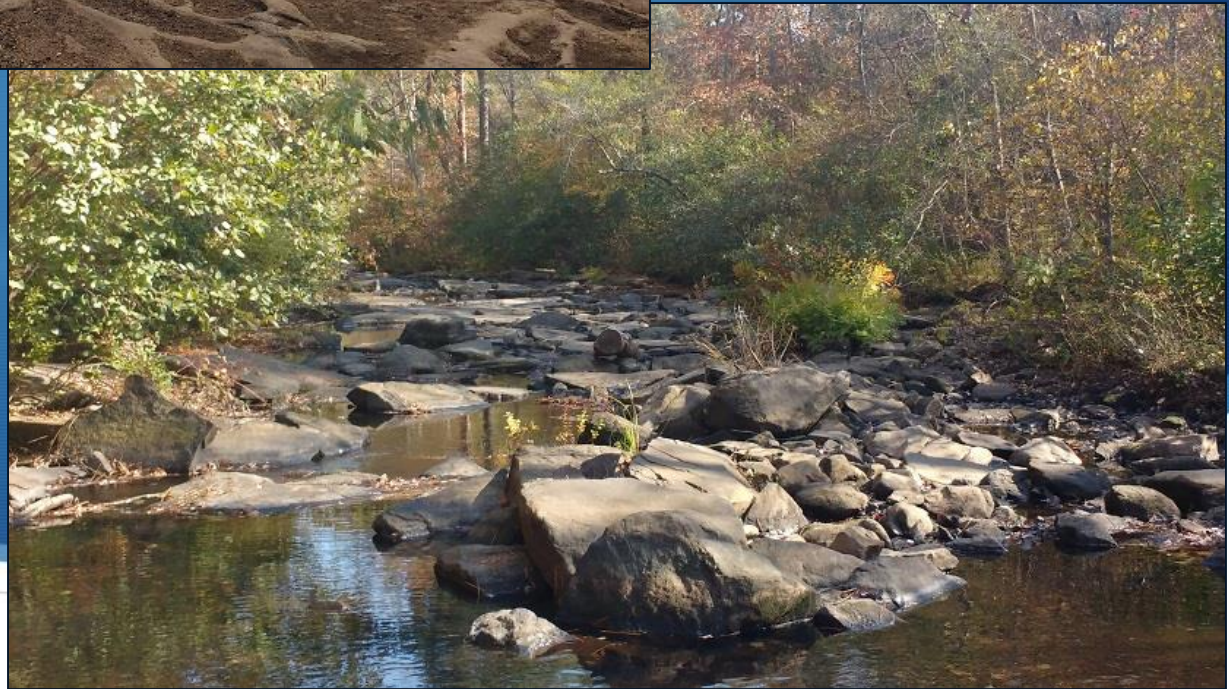
Daily Discharge, Flint River at Carsonville Gauge, 1940-2012





USGS 02347500 FLINT RIVER AT US 19, NEAR CARSONVILLE, GA



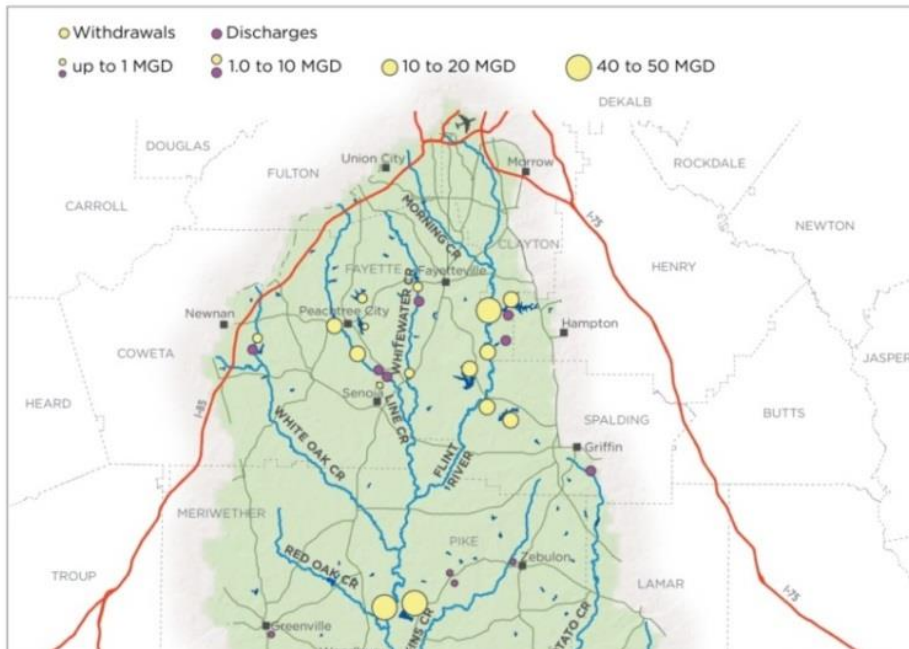




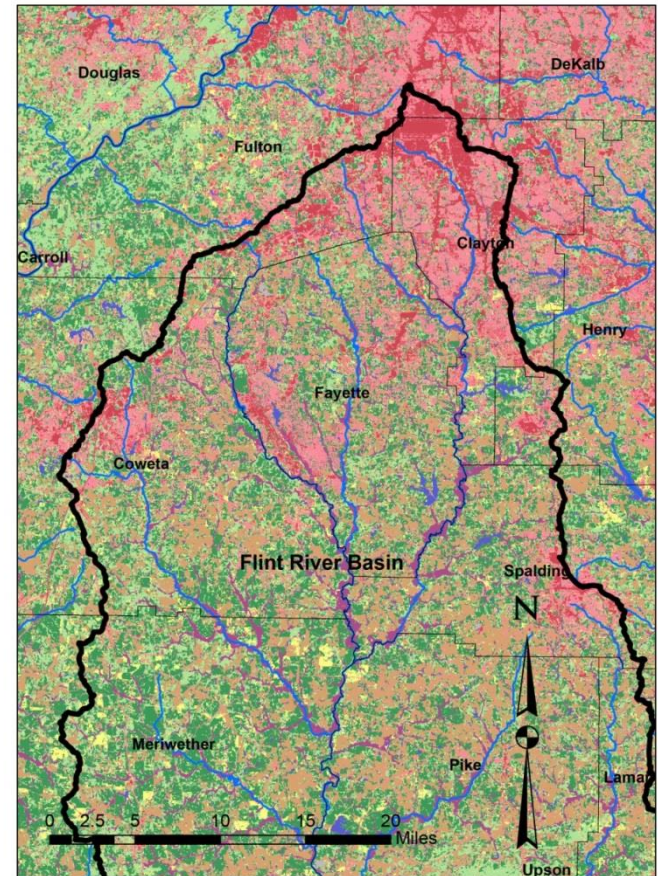


Urbanized Headwaters, Multiple Stressors

Municipal Surface Water Withdrawals and Discharges -
Upper Flint River Basin



Landcover: Upper Flint River Basin - 2008





Upper Flint River Working Group




Upper Flint River Resiliency Action Plan

October 2014



Beyond the natural flow regime? Broadening the hydro-ecological foundation to meet environmental flows challenges in a non-stationary world

N. LeRoy Poff^{1,2} 

¹Department of Biology and Graduate Degree Program in Ecology, Colorado State University, Fort Collins, CO, USA

²Institute for Applied Ecology, University of Canberra, Bruce, ACT, Australia

Correspondence

N. LeRoy Poff, Department of Biology and Graduate Degree Program in Ecology, Colorado State University, Fort Collins, CO, USA.

Email: poff@lamar.colostate.edu

Abstract

1. The natural flow regime concept has contributed significantly to environmental flows (e-flows) science and applications over the last 20 years. Natural flow regimes reflect long-term, historical patterns of flow variability that have shaped riverine species' adaptations and continue to shape community and ecosystem structure and function. This scientific perspective, however, carries with it important assumptions about climatic and ecological stationarity in terms of "reference" conditions that provide a basis for comparing success or outcomes

2018 Upper Flint Workplan: Consensus Goals

- Maintain or Improve Capacity of the River System to Meet Human and Ecological Water Needs
- Ensure Water Availability for Public Water Supply
- Protect and Restore Opportunities for Recreational Use
- Protect the Ecological Function of the River System
- Provide a Platform for a Healthy Regional Economy
- Reduce Frequency and Duration of Extreme Low Flows
- Reduce Incidence of Zero Flow Conditions in Historically Perennial Tributaries
- Reduce Flooding Damage

2018 Upper Flint Workplan: Consensus Strategy Set

1. Working Group participants are already implementing strategies that aid in addressing workplan goals.
2. The Working Group welcomes the implementation of future efforts that address workplan goals, including the following types of activities:
 - Pursue Water Conservation and Efficiency
 - Increase Return Flows of Treated Wastewater
 - Improve Stormwater Management
 - Evaluate the Instream Flow Impact of Non-Discharging Wastewater Treatment
 - Improve Understanding of Ecological Needs, Flow Impacts and Trends, and Innovative Approaches to Addressing Workplan Goals

Convening water utilities and conservation NGOs in effective dialogue: lessons learned

- New Conversations
- Shared Goals
- Adapting to Uncertainty
- Relationships



Ben Emanuel
Director, Clean Water Supply
American Rivers
Atlanta, GA
bemanuel@americanrivers.org



American Rivers
Rivers Connect Us®