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**Profile****Which Boards would you like to apply for?**

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Garner Board of Adjustment: Submitted

**Please select your first Board preference: \***

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☒ Garner Board of Adjustment**Please select your second Board preference: \***

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☒ Garner Planning and Appearance Commission**Please select your third Board preference: \***

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☒ Open Space and Parks Advisory Committee**Please select your fourth Board preference: \***

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☒ Wake County Water Partnership**Please select your fifth Board preference: \***

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☒ Yates Mill Park Advisory Board**Please select your sixth Board preference: \***

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☒ Board of Adjustment

Judith

First Name

A

Middle Initial

Ratcliffe

Last Name

1117 Woodbrook Way

Street Address

Suite or Apt

Garner

City

NC

State

27529

Postal Code

**What district do you live in?**

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☒ District 2

Home: (919) 773-0276

Primary Phone

Mobile: (919) 564-5789

Alternate Phone

jaratcliffe@nc.rr.com

Email Address

NC Natural Heritage Program

Employer

Zoologist

Job Title

If you live in an Extraterritorial Jurisdiction Area, select Yes:

☒ Yes ☐ No

In order to assure countywide representation, please indicate your place of residence:

☒ Unincorporated Wake County

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## Interests & Experiences

Why are you interested in serving on a Board or Commission?

I've been involved in review of various projects for potential for environmental impacts and opportunities for conservation of high quality natural areas. I am equally interested in historical and cultural development and would like to utilize my expertise for the benefit of the community.

## Work Experience

NC Natural Heritage Program 2003-present NC Wildlife Resources Commission Nongame Wildlife Advisory Committee, Vice Chair 2017-present NC Wildlife Resources Commission 1997-2003 Graduate Research Associate, Auburn University 1994-1997 Graduate Fellow, Centre College 1993-1994

## Volunteer Experience

Timber Drive Elementary Parent Teacher Association, Buildings and Grounds Chair 2010-2016

## Education

M.S. Fisheries Auburn University, AL 1997 B.S. Biology Centre College 1993 High School Paducah Tilghman 1989

## Comments

[JAR\\_Resume\\_2018-07-06.doc](#)

Upload a Resume

If you have another document you would like to attach to your application, you may upload it below:

Please upload a file

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## Demographics



Date of Birth

Gender \*

☒ Female

Ethnicity \*

☒ Caucasian

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Other

How did you become aware of Wake County volunteer opportunities?

☒ Other

If you selected "Other" above, how?

Garner Newsletter

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Please upload a file

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## ETHICS GUIDELINES FOR COUNTY ADVISORY BOARDS AND COMMISSIONS

### ETHICS GUIDELINES FOR COUNTY ADVISORY BOARDS AND COMMISSIONS

By submitting this electronic application, if appointed, I pledge by my signature below that I have read and will comply with the ethics guidelines for advisory boards and commissions as adopted by the Wake County Board of Commissioners which are found at the link below.

<http://www.wakegov.com/commissions/Documents/CodeofEthics.pdf>

## **Judith A. Ratcliffe**

1117 Woodbrook Way  
Garner, North Carolina 27529  
(919) 773-0276  
jaratcliffe@nc.rr.com

### **EDUCATION**

**Auburn University**, Auburn, AL  
Master of Science: June 1997  
Major: Fisheries Biology Minor: Ecology  
GPA: 4.0

**Centre College**, Danville, KY  
Bachelor of Science: May 1993  
Major: Biology Minor: Anthropology  
GPA: 3.31

### **RELEVANT COURSE WORK**

**Fisheries:** Population Dynamics, Limnology, Freshwater Biology  
**Ecology:** Principles of Ecology, Stream Ecology, Fish Ecology, Disturbance seminar  
**Systematics and Taxonomy:** Ichthyology, Aquatic Insects, Systematic Botany  
**Statistics:** Introduction to Statistics, Applied Educational Statistics I: descriptive statistics, Applied Educational Statistics II: ANOVA, Multi-variate Analysis in Education I

### **SPECIAL TRAINING**

Supervisory Development Program, NC DENR; Core Heritage Methodology Training, NatureServe; Freshwater Mollusks with an emphasis on the Northeast, Eagle Hill Research Station; Stream Restoration Workshop, NC State University; Minnow, Darter, & Sucker Identification Workshop, American Fisheries Society /NC Museum of Natural Sciences; Workshop on Bioretention, NC State Cooperative Extension; Bird Identification Workshop, NC Partners in Flight; MS Access 97, Levels 1-2, OSP/Wake Tech; HTML, Levels 1-2, OSP/Wake Tech; MS Word, Level 1, OSP/Wake Tech; MS Powerpoint, Level 1, OSP/Wake Tech; Transition to MS Windows 95, OSP/Wake Tech; Adobe Photoshop, Level 1, OSP/Wake Tech; Cumulative and Secondary Impacts Workshop, American Council of Engineering Companies of North Carolina and NC DENR

### **EXPERIENCE**

**Environmental Senior Specialist**, Zoologist, NC Natural Heritage Program  
(December 2015-present)

Provide technical guidance to environmental consulting firms, private industry, and the conservation planning community related to rare animal species, associated ecosystems, and priority natural areas. Participate on USFWS Species Status Assessment Technical Advisory Teams for Atlantic Pigtoe, Carolina Madtom, Neuse River Waterdog, and Yellow Lance; NOAA North Carolina Environmental Sensitivity Index development team, NFWF Cape Fear Resilience Assessment, Atlantic Coast Pipeline consultation, Duke Energy Catawba-Wateree Re-licensing Species Protection Plans, NC Watershed Stewardship Network - Aquatic Monitoring Team, and Lake Waccamaw and White Lake Technical Advisory committees. Serve on NC Wildlife Resources Nongame Wildlife Advisory Council and Executive Committee (Vice Chair). Compile the Natural Heritage Program List of Rare Animal Species of North Carolina. Secure grants to support data management. Interviewed, hired, and supervise a full-time data management staff person and coordinate the work of two additional data managers related to federally listed animal species. Analyze and review significance ratings of NCNHP natural areas. Calculate and review imperilment ranks using NatureServe Rank Calculator. Develop Element Occurrence records representing rare animal species (terrestrial and aquatic) collection data and natural areas using the Biotics and Crystal Reports software. Compile data from NC Wildlife Resources Commission, NC Natural Heritage Program, private consultants, NC Museum of Natural Sciences, and other original sources using ArcView GIS software. Maintain current scientific and common names of terrestrial and aquatic elements, consistent with standard references, as appropriate for each taxonomic group.

**Environmental Senior Specialist**, Freshwater Ecologist, NC Natural Heritage Program  
(December 2010-December 2015)

Provided technical guidance to environmental consulting firms, private industry, and the conservation planning community related to rare aquatic species, freshwater ecosystems, and priority natural areas. Served on Ecological Flows Science Advisory Board, Eastern North Carolina/Southeast Virginia River Technical Advisory Team, Albemarle Pamlico National Estuarine Partnership Flow Team, Eden Area Watershed Assessment Technical Advisory Team. Secured grants to support data management and supervised temporary staff. Actively managed over \$850,000 in contracts from Natural Heritage Trust Fund and Wildlife Resources Commission and maintained the budget for our aquatics program. Compiled the aquatic species portion of the Natural Heritage Program List of Rare Animal Species of North Carolina.

## EXPERIENCE continued

Analyzed and reviewed significance ratings of NCNHP aquatic habitats. Calculated and reviewed imperilment ranks for aquatic species using NatureServe Rank Calculator. Maintained current scientific and common names of aquatic elements, consistent with standard references, as appropriate for each taxonomic group. Developed Element Occurrence records representing rare aquatic species collection data and aquatic significant natural areas using the Biotics Tracker and Mapper database software. Compiled data from NC Wildlife Resources Commission, NC Natural Heritage Program, private consultants, and NC Museum of Natural Sciences and other original sources using ArcView GIS software. Printed reports using Crystal Reports software.

### **Environmental Specialist**, NC Natural Heritage Program

(March 2010-present; July 2006-November 2008; March 2005-April 2006)

Developed Element Occurrence records representing rare aquatic species collection data and aquatic significant natural areas using the Biotics Tracker and Mapper database software. Compiled data from NC Wildlife Resources Commission, NC Natural Heritage Program, private consultants, and NC Museum of Natural Sciences using ArcView GIS software. Printed reports using Crystal Reports software. Consulted with supervisor (staff aquatic biologist) regarding conceptual aspects of aquatic element occurrences and aquatic habitats

### **Environmental Biologist Supervisor I**, NC Natural Heritage Program

(November 2008 – February 2010; June 2003-November 2004)

Supervised 5 staff field biologists and 2 support staff in the development of natural area inventories across the State of North Carolina. Conducted Performance Management reviews. Prepared annual budget, made purchases for NC Natural Heritage program, and processed documentation of monthly expenses. Coordinated natural area inventories with local governments, land trusts, and other state agencies including the NC Wildlife Resources Commission and Division of Parks & Recreation. Contacted landowners to request permission for access to private properties. Arranged editing, publication, and distribution of natural area inventory reports. Worked to increase public awareness of the county natural area inventory process and results through design of a table-top presentation board, re-design of the NC Natural Heritage Program Web site, and development of internet-accessible inventory summaries and maps. Secured grants to support natural area inventories and interviewed and hired additional staff field biologists.

### **Nongame Biologist III**, NC Wildlife Resources Commission

(June 1997 – June 2003)

Surveyed and monitored aquatic species including freshwater mussels, snails, crayfish, and fish listed by the federal and state governments as endangered, threatened, special concern, significantly rare, and stable/status undetermined; responsible for habitat assessments, identification of organisms to species, recording data, database management, and analysis of population status. Supervised one or more field assistants from May through September of each year. Attended on-site meetings and provided written comments on federal state, local, and private projects with the potential to impact listed species. Encouraged conservation of aquatic species and habitats through interaction with other state and federal agencies and non-governmental organizations. Served as Commission representative on several conservation and management advisory committees. Monitored Bald Eagle nesting activities from January to June each year. Wrote and reviewed technical and non-technical reports, including material for Internet-accessible North Carolina Atlas of Freshwater Mussels and Endangered Fish. Developed and secured grant funding to support both permanent and temporary employees.

### **Graduate Research Assistant**, Auburn University, Auburn, AL

(Oct 1994 – May 1997)

Designed and implemented a drainage-wide survey for mussels, snails, and crayfish within the Tallapoosa River basin and examined correlations between the distribution of these organisms and physical and chemical attributes of the system. Responsible for all aspects of the study, ranging from hand collection of mussels and snails, kick seining and trapping for crayfish, preservation and identification of specimens, analysis of water chemistry, statistical analysis of data collected, and supervision of field assistants.

### **Research Technician**, Auburn University, Auburn, AL

(June 1994 - Oct 1994)

Assisted with a number of projects including a long-term pond project investigating interactions between largemouth bass, Micropterus salmoides, and their prey; a study of a federally endangered snail, Tulotoma magnifica, in the Coosa River drainage, and a survey of catfish populations in Alabama reservoirs. Activities included electrofishing, shoreline seining, collection and identification of larval fish, and measurement of habitat variables.

## EXPERIENCE continued

### **Graduate Fellow in Biology**, Centre College, Danville, KY

(Sept 1993 - June 1994)

Managed the biology laboratory and administered practical exams for courses in general biology and biochemistry. Duties included revision of the laboratory workbook, supervision of lab assistants, a brief introduction to weekly lab activities, and grading weekly exams and final laboratory reports.

### **Research Assistant**, Centre College, Danville, KY

(June 1992 - Sept 1992)

\$2500 Grant: Examined physiological stress response in a native minnow, *Fundulus catenatus*, by radioimmunoassay. Experiences included backpack electrofishing, seining, aquarium maintenance, use of anesthetic, and radioimmunoassay of plasma cortisol levels.

## PUBLICATIONS

- McRae, S., A. Romito, E. Rivenbark, and Technical Advisory Team. 2017. Species Status Assessment for the Atlantic Pigtoe (*Fusconaia masoni*). United States Fish and Wildlife Service Region 4. Atlanta, GA.
- McRae, S., A. Romito, E. Rivenbark, and Technical Advisory Team. 2017. Species Status Assessment for the Carolina Madtom (*Noturus furiosus*). United States Fish and Wildlife Service Region 4. Atlanta, GA.
- McRae, S., A. Romito, E. Rivenbark, and Technical Advisory Team. 2017. Species Status Assessment for the Neuse River Waterdog (*Necturus lewisi*). United States Fish and Wildlife Service Region 4. Atlanta, GA.
- McRae, S., A. Romito, E. Rivenbark, and Technical Advisory Team. 2017. Species Status Assessment for the Yellow Lance (*Elliptio lanceolata*). United States Fish and Wildlife Service Region 4. Atlanta, GA.
- Smith, D. R., S. E. McRae, T. Augspurger, J. A. Ratcliffe, R. B. Nichols, C.B. Eads, T. Savidge, and A.E. Bogan. 2015. "Developing a conservation strategy to maximize persistence of an endangered freshwater mussel species while considering management effectiveness and cost," *Freshwater Science* 34, no. 4 (December 2015): 1324-1339. <https://doi.org/10.1086/683121>
- North Carolina Ecological Flows Science Advisory Board. 2013. Recommendations for Estimating Flows to Maintain Ecological Integrity in Streams and Rivers in North Carolina.
- Ratcliffe, J.A. and D.R. DeVries. 2004. The crayfishes (Crustacea:Decapoda) of the Tallapoosa River Drainage, Alabama. *Southeastern Naturalist* 3(3): 417-430.
- Alderman, J. M., J.A. Johnson, L.A. McDougal. 2001. North Carolina Atlas of Freshwater Mussels and Endangered Fish. North Carolina Wildlife Resources Commission. [http://www.ncwildlife.org/Wildlife\\_Species\\_Con/WSC\\_FWMussels\\_EndFish\\_Atlas.htm](http://www.ncwildlife.org/Wildlife_Species_Con/WSC_FWMussels_EndFish_Atlas.htm)
- Johnson, J.A. 2001. Unlikely Partners: North Carolina Wildlife Commission and North Carolina Department of Transportation. *Wildlife in North Carolina* 65(2):41.
- Fullerton, A.H., B.T. Watson, J.A. Johnson. 2001. Montgomery County Aquatic Inventory. Nongame and Endangered Wildlife Program, North Carolina Wildlife Resources Commission. 39 pp.
- Fullerton, A.H., B.T. Watson, J.A. Johnson. 2001. Cumberland County Aquatic Inventory. Nongame and Endangered Wildlife Program, North Carolina Wildlife Resources Commission. 24 pp.
- Johnson, J.A. 1998. Cabarrus County Aquatic Inventory. Nongame and Endangered Wildlife Program, North Carolina Wildlife Resources Commission. 39 pp.
- Johnson, J.A. and D.R. DeVries. 1997. The freshwater mussel and snail species of the Tallapoosa River Drainage, Alabama, USA. *Walkerana* 9:121-137.

## REFERENCES

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