

February 14, 2009

Dear Graduate Student,

Thank you for considering becoming a NSF GK-12 Fellow in the 2009 NSF GK-12 program *Project Flowing Waters*. We are all very excited about this wonderful collaboration in scientific research and science education between San Marcos CISD and Texas State University. Eligibility requirements, application instructions, and contact information are listed below.

Eligibility

1. U.S citizen or permanent resident
2. Enrolled full-time in a Ph.D. program in the departments of Biology or Geography
3. Minimum of 3.25
4. Exhibit a commitment to inquiry-based teaching methods
5. Can provide a letter from their advisor supporting their participation

Application requirements

1. 2-page CV with contact information, education (university, degree, year, major advisor), professional work experience, publications and presentations, and activities (grants, awards, service). See Dr. Tim Bonner example below; modify as necessary.
2. Essay (1 page max)
3. A letter from major advisor supporting student participation in the program
4. Roles and Responsibilities for NSF (GK-12) Fellows. Formal signatures will be required as a condition of appointment to the program.

Submission of application

Submit electronic copies of the following to Ms. Janet Wisian (jkwisian@txstate.edu) by Friday, 5:00P, Feb. 27th. In the subject line of email, please write "Graduate Student Application for NSF Project Flowing Waters".

- 1) 2 page CV
- 2) Acknowledgment that you have reviewed and are willing to fulfill the Roles and Responsibilities of a NSF Fellow, if appointed.
- 3) One page essay (pdf preferred)
- 4) Major advisor letter

Please contact Ms. Janet Wisian (512-245-2284) for questions about the application process and online materials.

Contact Program Faculty for questions about the program, activities, expectations, benefits, and roles and responsibilities for NSF (GK-12) Fellows:

Dr. Julie Westerlund (JW33@txstate.edu)
Dr. Tim Bonner (TBonner@txstate.edu)
Dr. Weston Nowlin (wnowlin@txstate.edu)
Dr. Rich Earl (RE02@txstate.edu)

Thank you,
Julie F. Westerlund, PhD
Associate Professor, Biology Department,
Texas State University

Graduate Application Form--Essay

Briefly describe your doctoral research, and how you could incorporate this research into the general theme of "Flowing Waters" and the San Marcos River for Grades 6th -12th science students.

ROLES AND RESPONSIBILITIES OF NSF GK-12 FELLOWS (known as Resident Scientists)

To complete application materials, read and electronic initial each responsibility in the blank provided. Send electronic copy to Janet Wisian with the rest of materials.

I, as a Resident Scientist in *Project Flowing Waters*, will

1. _____ Commit to participate for the entire academic term 2009-2010 by being present in a SMCISD classroom for 10 hours a week and an additional 5 hours planning for *Project Flowing Waters* lessons either at the school or at the university. The first two weeks should be spent observing classroom activities. After first two weeks, you should gradually become more involved in classroom activities
2. _____ Limit my time for GK-12 activities to 15 hours per week. The rest of my time must be spent on my scientific research. Remember the GK-12 fellowship is primarily intended to fund scientific research.
3. _____ Schedule my 10 hours spent at my designated school on-line through logging onto the *Project Flowing Waters* website prior to my scheduled time.
4. _____ Take the course BIO 5100/7100 *Professional Development- Inquiry Science Teaching* during first summer session, **May Mini-Session May 18-June 4 - 2009**, from Dr. Julie Westerlund. (for first year only, second year will present once in course concerning successes in classroom)
5. _____ Commit to attend and participate in 6 days of Project Flowing Waters meetings throughout the year beginning with the 2 day **Headwaters Meeting in May 21-22, 2009**, the 2 day **Confluence Meeting in August 5-6, 2009**, the **Mid-Stream meeting in December 8, 2009** and the **River's End meeting in May 6, 2010**. This represents four meetings over 6 days. The first two meetings are for planning and the last two meetings are for evaluation and for presentation of results/experiences. I will note this on my calendar.
6. _____ **Visit SMCISD classrooms in May 2009** and interact with my science teacher informally through email or telephone over the summer prior to the start of the school year, to foster the partnership and to plan activities well in advance for the coming year. (May SMCISD visits for first year only)
7. _____ Commit to participate in 30-45 minute once-a-week planning sessions with the SMCISD science teacher at the school throughout the academic year. There should be an established set weekly time for a Resident Scientist / SMCISD science teacher conference time.
8. _____ Participate in a collaborative process with the SMCISD science teacher for each lesson beginning with several brainstorming discussions in order to focus on specific topics; Resident Scientists will focus on linking their expertise to the TEKS standards and researching possible activities; presenting to the teacher several possible activity scenarios in which choices are made for the benefits of the students.
9. _____ Attend and participate in short *Project Flowing Waters* briefings every two weeks with 3 other Resident Scientists and a *Project Flowing Waters* faculty member (Drs. Bonner, Nowlin or Earl) to collaborate on ideas and to discuss progress

10. ____ Notify my assigned PI for help (either Drs. Bonner, Nowlin or Earl) if I am having encountering difficulties with my GK-12 activities.
11. ____ Develop lesson plans and units, and, if possible, research projects during the academic year for my classroom. Implement the developed activities with my partnered teacher.
12. ____ Develop at least one activity with my research advisor and implement the activity in the classroom together with my research advisor
13. ____ Invite my research advisor for two visits to the school, one of which occurs when the aforementioned activity is implemented in the classroom.
14. ____ Not do personal work (on my laptop, internet or otherwise) at school sites during class time. Your laptops should only be used at the school when being used as a tool with the students.
16. ____ Work jointly with the SMCISD to deliver instruction as a team modeling professional educator behaviors. Remember you legally cannot be left alone to work with students during class time. However, you can participate and lead classroom activities while the teacher is present.
17. ____ Assist teacher in collecting consent forms from students and parents for permission to participate in Project Flowing Waters if deemed necessary.
18. ____ Journal your weekly activities on-line on the Project Flowing Waters website.
19. ____ Present the collaborative projects at Project Flowing Waters meetings and professional conferences. Travel funds will be provided to present at professional conferences. Disseminate *Project Flowing Waters* activities to other students and faculty.
20. ____ Facilitate grant evaluation activities such as collection of student data, survey instruments and focus groups.
21. ____ Invite my research advisor to the *Mid-Stream* or *River's End* meetings to give a short presentation.
22. ____ Participate in the annual BioBlitz held every Earth Day with Dr. Weston Nowlin.
23. ____ Produce both an on-line portfolio and an organized notebook of all developed activities for teachers to use in future classes. The on-line portfolio of activities should be uploaded into the *Project Flowing Waters* website. The organized notebook of activities should be shown to the partnered teacher and the project faculty upon visiting the school or during meetings.

I have read and understand my roles and responsibilities as a Resident Scientist (NSF Fellow) in *Project Flowing Waters*. I understand that if I am not able to fulfill these roles and responsibilities for any reason, I will relinquish the rest of my stipend determined by a prorated rate based upon the time I have spent within the program.

_____(Print electronic name)

EXAMPLE – 2-page CV

Timothy H. Bonner

Mailing Address:

Department of Biology/ Aquatic Station
Texas State University-San Marcos
San Marcos, Texas 78666

Revised: February 14, 2009

Phone: (512) 245-2284

Fax: (512) 245-7919

E-mail: TBonner@txstate.edu

Education

Texas A&M University; Wildlife and Fisheries Science; B.S. 1992

Texas State University-San Marcos; Biology; M.S. 1996 (Drs. Whiteside and Brandt)

Texas Tech University; Fisheries Science; Ph.D. 2000 (Dr. Gene Wilde)

Professional Work Experience

2007 – present Director of the Aquatic Station, Department of Biology, Texas State University

2007 – present Associate Professor, Department of Biology, Texas State University

2001 – 2007 Assistant Professor, Department of Biology, Texas State University

2000 – 2001 Assistant Professor, Department of Biology, Northwestern State of Louisiana,
Natchitoches

1996 – 2000 Teaching Assistant, Department of Range, Wildlife, and Fisheries Management,
Texas Tech University, Lubbock

Selected Publications and Presentations

1. Perkin, J. S., C. S. Williams, and **T. H. Bonner**. In review. Life history of the chub shiner *Notropis potteri* in the lower Brazos River with comments on its native distribution and conservation status. *American Midland Naturalist*
2. Leavy, T. R. and **T. H. Bonner**. In press. Relationships among swimming ability, current velocity associations, and morphology for freshwater lotic fishes. *North American Journal of Fisheries Management*
3. Kollaus, K. A., and **T. H. Bonner**. 2009. Fish assemblage structure and associations with environmental conditions in a Texas spring-fed river. *American Fisheries Society, Southern Division, New Orleans* (oral presentation).
4. Bean, P. T. and **T. H. Bonner**. 2008. Reproductive ecology and diet of the gray redhorse (Catostomidae) in a Hill Country stream and reservoir. *Journal of Freshwater Ecology* 23:397-404
5. Gaertner, J., P. E. Wheeler, S. Obafemi, J. Valdez, M. R. J. Forstner, **T. H. Bonner**, D. Hahn. 2008. Detection of salmonellae from fish in a natural river system. *Journal of Aquatic Animal Health* 20:150-157

Activities

1. Texas Parks and Wildlife-Inland Fisheries Advisory Board Member
2. President. 2007-2008. Texas Chapter of the American Fisheries Society.
3. Co-Chair of Program Committee and Chair of Instream Flow Symposium, 2006, Southern Division of the American Fisheries Society Annual Meeting.
4. Committee Member, 2005, Implementation and Applicability of EPA Biological Condition Gradient Model to western Gulf Slope streams.
5. Committee Member, 2004, Wildlife and Fish Diversity, Texas Parks and Wildlife Department.
6. Reviewer for journals *Transactions of the American Fisheries Society*, *Ecology of Freshwater Fishes*, *American Midland Naturalist*, *Southwestern Naturalist*, *Aquatic Ecology*, *Hydrobiologia*, *Copeia*