



NSF Project Flowing Waters
Texas State University-San Marcos

April 9, 2008

Dear Graduate Student,

Thank you for considering becoming a participant in the 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.

Julie F. Westerlund, PhD
Associate Professor

Office: 512-245-3361
Cell: 512-560-8276

I. Eligibility

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

II. 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 example below; modify as necessary.
2. Essay (1 page max)
3. A letter from major advisor supporting student participation in the program
4. Review, but do not initial and sign yet, Roles and Responsibilities for NSF (GK-12) Fellows. Initials and signatures will be required as a condition of appointment to the program. We also ask for applicants to review Roles and Responsibilities for teachers and program advisors.

Submit electronic copy of CV and essay as a single document (.pdf preferred) to Ms. Janet Wisian (jkwisian@txstate.edu) by Friday, 4:59P, on April 25th. In the subject line, please write "Graduate Student Application for NSF Project Flowing Waters".

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)

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 CONTRACT OF NSF GK-12 FELLOWS

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

1. Commit to participate for the entire academic term 2008-2009 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. Complete the course BIO 5100/7100 *Professional Development- Inquiry Science Teaching* during first summer session, Summer I 2008, from Dr. Julie Westerlund.
5. Commit to attend and participate in Project Flowing Waters meetings throughout the year beginning with the 2 day *Headwaters* Meeting on May 21st and 22nd, 2008, the 2 day *Confluence* Meeting on August 12th and 13th, 2008, the *Mid-Stream* meeting on December 10th, 2008 and the *River's End* meeting on May 7th, 2009 after TEKS testing. This represents four meetings throughout the year. The first two meetings are for planning and the last two meetings are for formative and summative evaluations and for presentation of results and experiences.
6. Interact with the SMCISD 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.
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 *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. The briefing time should be an established set time in which all members can meet.
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.
15. 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.
16. Assist teacher in collecting consent forms from students and parents for permission to participate in Project Flowing Waters if deemed necessary.
17. Journal your weekly activities on-line on the Project Flowing Waters website.
18. 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.
19. Facilitate grant evaluation activities such as collection of student data, survey instruments and focus groups.
20. Invite my research advisor to the *Mid-Stream or River's End* meetings to give a short presentation.
21. Participate in the annual BioBlitz held every Earth Day in April.
22. 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.

FELLOWS DO

- Support, respect, cooperate, and rely on each other.
- Communicate other Project Flowing Waters Fellows by sharing and exchanging information.
- Work closely with their teacher and encourage the teacher's active involvement.
- Keep appointments at scheduled work times.
- Show respect for other Fellows and their partner teachers.
- Work to relate to other teams within their school and within the project.
- Discuss concerns/problems/issues directly with the appropriate personnel at the earliest possible time to avoid misunderstandings and hard feelings.
- Follow guidelines set forth by Project Flowing Waters and support the goals of the Grant.

FELLOWS DON'T

- Do personal work (on laptops or otherwise) school sites during class time.
- Serve as substitutes or as graders in the classrooms.
- Work alone on projects or skip college classes to do Project Flowing Waters work.

EXAMPLE – 2-page CV

Timothy H. Bonner

Mailing Address:

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

Revised: April 2008

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. Small, M. F., **T. H. Bonner**, and J. T. Baccus. 2008. Hydrologic alteration of the lower Rio Grande terminus: a quantitative assessment. *River Research and Application* 24:1-12.
2. Bean, M. G., A. Škeříková, **T. H. Bonner**, T. Scholz, and D. Huffman. 2007. First record of *Bothriocephalus acheilognathi* (Cestoda: Pseudophyllidea) in the Rio Grande with comparative ITS2 and V4-18S rDNA sequencing. *Journal of Aquatic Animal Health* 19:71-76.
3. Thomas, C., **T. H. Bonner**, and B. G. Whiteside. 2007. *Freshwater fishes of Texas: A Field Guide*. Texas A&M University Press. 202 pp.
4. Bean, P. T., T. H. Bonner, and B. M. Littrell. 2007. Spatial and temporal patterns in the fish assemblage of the Blanco River, Texas. *Texas Journal of Science* 59:179-200.
5. Littrell, B. M., D. Lutz-Carrillo, **T. H. Bonner**, and L. T. Fries. 2007. Status of an introgressed Guadalupe bass population in a central Texas stream. *North American Journal of Fisheries Management* 27:785-791
6. Williams, C. S. and **T. H. Bonner**. 2006. Habitat associations, life history, and diet of the Sabine shiner *Notropis sabiniae* in an east Texas drainage. *American Midland Naturalist* 155:84-102
7. Lutz-Carrillo, D. J., C. C. Nice, **T. H. Bonner**, M. R. J. Forstner, and L. T. Fries. 2006. Evaluation of microsatellite loci in largemouth bass: resolution of population structure and individual origins. *Transactions of the American Fisheries Society* 135:779-791.

Activities

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