



Dedicated to informing the community about water resource issues that affect the health of the Boulder Creek Watershed

PO Box 18  
Boulder, CO 80306-0018  
bcwi@bcn.boulder.co.us  
www.basin.org/BCWI

Executive Director  
Paul Hempel

Board of Directors  
Larry Barber  
Diane McKnight  
Lee Rozaklis  
Sarah Spaulding

Secretary  
Jennelle Freeston

Treasurer  
Sheila Murphy

Activity Committee  
Eric August  
Curry Rosato

BCWI is a 501(c)3  
non-profit organization

### Greetings Members and Friends of BCWI,

I am honored to be the new Executive Director of the Boulder Creek Watershed Initiative. I will initially be serving in a volunteer capacity to develop the BCWI grants program. This position fills part of my lifelong professional dream to work with non-profit groups in public outreach and environmental science. As Executive Director, my role is to implement the mission and strategic plan of BCWI. Our goals include continuing our successful monthly forum series, educating the community on emerging watershed issues, and increasing monitoring of the health of the Boulder Creek watershed. These activities build a sense of stewardship within the community that is transmitted across generations. I extend gratitude to the volunteers who have given tremendous time and energy to build the organization behind BCWI. I would especially like to mention Jennelle Freeston, secretary of BCWI. Jennelle's contributions are highlighted in this issue of the newsletter.

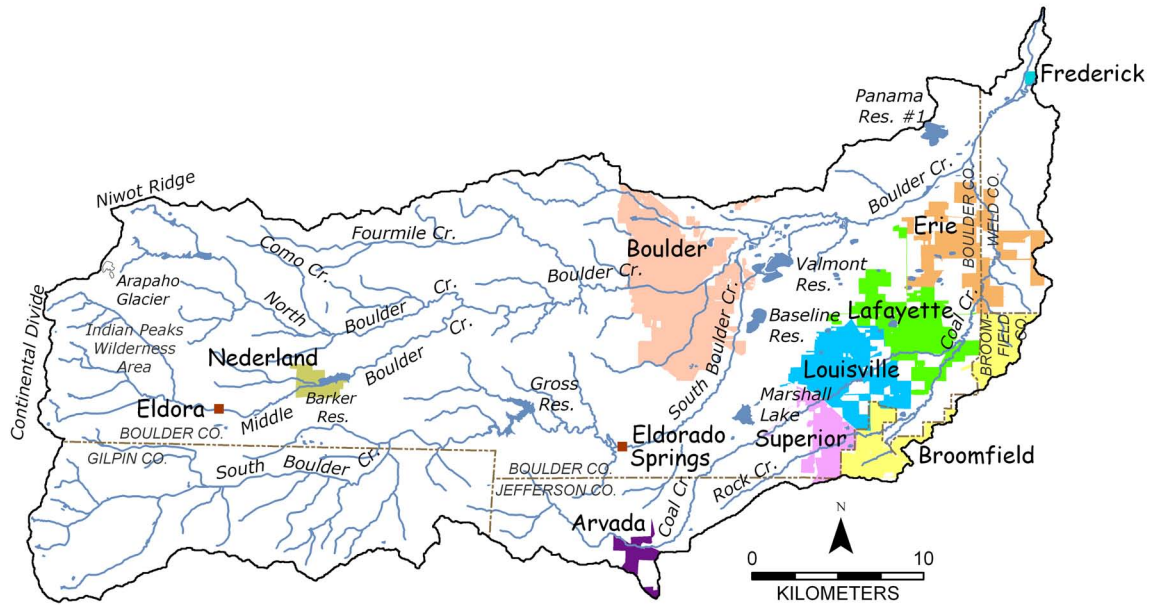
I am looking forward to greeting old and new friends and members of BCWI. See you in the watershed!

Paul Hempel, Executive Director

### Our Home in the Boulder Creek Watershed

The Boulder Creek Watershed is approximately 1160 km<sup>2</sup> (447 mi<sup>2</sup>) in area and includes all the land area that drains into Boulder Creek. Boulder Creek empties into Saint Vrain Creek, which empties into the South Platte River. The water in Boulder Creek eventually reaches the Mississippi River and the Gulf of Mexico. Elevations in the watershed range from 4120 meters at the Continental Divide to 1480 meters at the confluence of Boulder Creek and Saint Vrain Creek. The great variation in topography produces substantial variations in climate, ecology, and land use. Most precipitation falls as snow in the upper watershed. Melting of snow produces high flows in Boulder Creek and its tributaries in spring and summer.

For more information about the Boulder Creek Watershed, visit [www.BASIN.org](http://www.BASIN.org) or [http://wwwbrr.cr.usgs.gov/projects/SWC\\_Boulder\\_Watershed/](http://wwwbrr.cr.usgs.gov/projects/SWC_Boulder_Watershed/)



Map by Sheila Murphy

Boulder Creek Watershed

## Upcoming Boulder Creek Watershed Forums: *Perspectives on Water and Life*

Forums are held at the Boulder Public Library Auditorium at 7:00 PM. Doors open at 6:30 for refreshments.

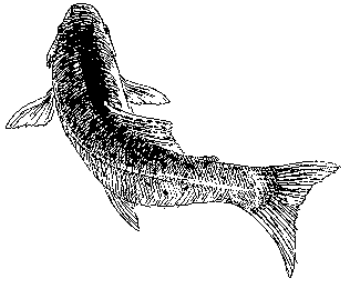
### **JULY 26, Boulder Creek Critters Puppet Show and Environmental Education Expo**

6:30 - 7:00 PM Refreshments & Watershed Expo

7:00 - 7:30 PM Creek Critters Puppet Show

7:30 - 8:00 PM Get Involved in Your Watershed

Visit with local watershed and environmental groups at the Watershed Expo. Organizations will be on hand to provide information and answer your questions about their organizations. Come see the Boulder Creek Critters Puppet show- bring the whole family and join Jasmine and a lively cast of characters on their adventures to learn why clean water is critical to wildlife and people. Following the puppet show, learn how you can get involved in protecting your local water resources.



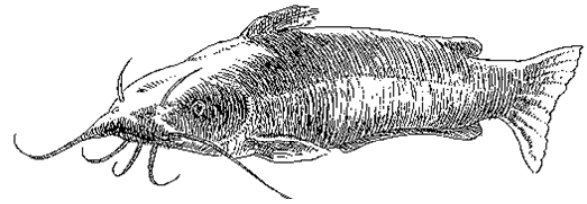
**AUGUST 23, Panel Discussion led by Paul Hempel, Executive Director, BCWI. *Recreation and River Protection*, Gary Lacy, Recreation, Engineering and Planning; Rob Kolanda, Rocky Mountain Anglers; Bill Leuchpen, Front Range Anglers**

Panel discussion covering the impacts of minimum stream flows and pollution on the recreation industry, the economics of recreation, water rights and invasive species.

**SEPTEMBER 27, Long term changes in hydrology of the Boulder Creek Watershed- water rights and ecological issues, Gordon McCurry, Camp Dresser and McKee**

**OCTOBER 25, Panel Discussion, *Invasive species in western streams*, Sarah Spaulding, US Geological Survey, *Harmful algae*; Laurie Dieter, State of Colorado, *Eurasian Water Milfoil*; Peter Walker, Colorado Division of Wildlife, *New Zealand Mud Snail*.**

Over geologic time, plants and animals evolved in isolated geographic regions to become distinct from one another. Now, and at an increasing rate, organisms accompany human commerce and travel across former geographic boundaries. Previous plant and animal distributions are becoming blurred. As a result, we are losing the distinct nature of communities in a process of homogenization. This mixing has dramatic implications to species biodiversity and to the functioning of ecosystems. In this panel discussion, we will consider three invasive species to the Boulder Creek Watershed and the biologic, social, and economic consequences of these invasions.



The BCWI Forum schedule is posted at:

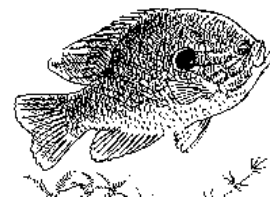
**[www.basin.org/BCWI](http://www.basin.org/BCWI)**

#### **Missed a Boulder Creek Watershed Forum?**

Videotapes of all forums are available at the Boulder Public Library and can be checked out for home viewing.

Forums are also televised on Channel 8:

Wednesday 3 PM  
Saturday 10:30 AM and 7:30 PM  
Sunday 9 PM



The Boulder Creek Watershed Initiative extends a "thank you!" to local businesses for their generous donation delicious food and beverages to our forums in 2005:

**Moe's Broadway Bagels (on Arapahoe)  
Breadworks – pastries  
Caffe Solé – coffee**

## Boulder Creek Watershed Forum Summary Report: *Perspectives on Water and Life*

**Connections between water and life: a tale of a microscopic diatom.** Sarah Spaulding, US Geological Survey.

Historically, *Didymosphenia geminata* (a type of single-celled algae) was found in northern-latitude lakes and streams. This diatom species was considered to be restricted to low-nutrient, low-temperature habitats with little anthropogenic impact. In recent years, its distribution has changed. *Didymosphenia geminata* not only appears to be expanding its geographic range to lower latitudes and elevations, but it increasingly forms extensive masses covering stream beds. This diatom is a native species that has taken on the characteristics of an invasive species, within its native range. *Didymosphenia geminata* forms massive growths in Boulder Creek, from above Barker Reservoir into the City of Boulder, except during spring snowmelt. The spread of *D. geminata* is of concern for stream ecosystems for several reasons: (1) The organism has a large spatial extent. Stalks formed by *D. geminata* may cover almost all available benthic substrates, forming dense mucilaginous mats up to several centimeters thick. This diatom may dominate over 200 km of river reach, as in Montana. (2) Other algal species are excluded from the stream habitat. The dense mats prevent the growth of other diatom species, which are an important source of food for aquatic invertebrates. (3) The diatom has implications for the aquatic food web. Large populations of *D. geminata* are correlated with a decrease in abundance of some aquatic invertebrate species and increases in chironomids. (4) The impact to fisheries is unknown. State fisheries managers and anglers are concerned about the potential negative impact of *D. geminata* to fish populations. (5) The diatom has demonstrated an ability to cross watershed boundaries. It has recently been reported in Tennessee and Arkansas.

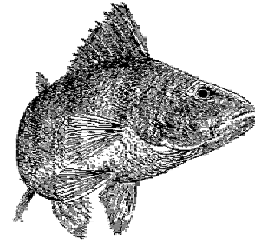
**The role of streams and wetlands in sustaining ecosystem diversity.** Tim Seastedt, University of Colorado's Ecology and Evolutionary Biology Department; Sharon Collinge, University of Colorado's Ecology and Evolutionary Biology Department and Environmental Studies Program; Linda Andes-Georges of the Coal Creek Riparian Corridor Bird Population Study; and David Buckner of ESCO Associates.

Speakers discussed the functions of ecosystems, restoration programs, and local riparian systems, highlighting the importance of the Coal Creek Corridor west of the town of Superior. This corridor is biologically rich with numerous vertebrate and invertebrate species.

The plant species are less diverse, but contain tallgrass species that normally exist in the eastern prairie where the moisture levels are higher. The nearly 2 million year old rocky flats alluvial surface that covers this section of the Coal Creek corridor is defined by coarse topsoil and fine subsoil, which allows moisture to collect. This supports species like Big Bluestem, Little Bluestem and Yellow Indian Grass. This stretch of Coal Creek provides very important ecosystem functions that can be affected by urbanization and is an important piece of the Boulder Creek Watershed to protect.

**Who Owns the Water?** Alexandra Davis, Assistant Colorado Attorney General for Water Rights.

Davis discussed Colorado water law, interstate water compacts, and groundwater/surface water relationships.



**Stealth chemicals and their impact on wildlife and human health.** Theo Colborn, Author of "Our Stolen Future."

Colborn provided an update on recent research revealing widespread exposure to a growing list of chemicals, called endocrine disruptors, and their associated health effects in human and wildlife populations. Colborn's message focuses on the damage these chemicals can cause in the womb environment before birth that leads to long-term chronic disorders later in life.

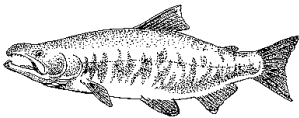
**Decadal to Multi-Decadal Climate Variability.** Greg McCabe, US Geological Survey.

McCabe discussed associations between Pacific and Atlantic Ocean sea-surface temperatures (SSTs) and the hydro-climate of the United States. On inter-annual time scales SSTs of the tropical Pacific Ocean have significant effects on the variability of the country's hydro-climate. However, on decadal time scales sea-surface temperatures in both the Pacific and Atlantic Oceans indicate strong associations with decadal-scale hydro-climatic variability in the U.S. For example, more than half (52%) of the spatial and temporal variance in multi-decadal drought frequency over the conterminous US is explained by decadal-scale variability in Pacific and Atlantic Ocean SSTs.

## BCWI Attends National River Rally and hosts lunch for River Network Directors

In May, BCWI members Curry Rosato, Sheila Murphy, Larry Barber and Paul Hempel attended River Network's sixth annual National River Rally in Keystone. Don Elder, president of River Network, characterized the rally as "the best and biggest National River Rally ever." The event drew participation from 294 organizations from around the country. Workshops were offered on a variety of topics and included two led by BCWI members Curry Rosato and Larry Barber. The River Rally is considered the single best annual source for training, professional development, networking, coalition building, celebration, and personal renewal for leaders of the watershed protection community. The rally has also become the focal point for increased collaboration among River Network and state, regional and national groups. The next National River Rally will be May 5-9, 2006 at Bretton Woods, New Hampshire. For more information, contact River Network at [www.rivernet.org](http://www.rivernet.org).

On Tuesday May 24th, BCWI hosted a lunch at the Boulder Public Library for Dr. Chip Groat, Director of the U.S. Geological Survey, Steve Dickens and Geoff Dates, Board of Directors of River Network, Laurie Giannotti, Director of the Pomperaug River Watershed Coalition, Dr. Marc Taylor, Vice-President of Rivers Alliance of Connecticut, and Doug Cain, Assistant Director of the USGS Colorado Water Science Center. The delicious lunch break, which was generously donated by Peggy Romano and the Mediterranean Restaurant, was a stop on a post River Rally field trip highlighting the Boulder Creek Watershed. The field trip was organized by BCWI members Larry Barber and Sheila Murphy along with their USGS colleague Suzanne Paschke.



## Lefthand Watershed Oversight Group

The mission of the Lefthand Watershed Oversight Group (LWOG) is to assess, protect, and restore the quality of the Lefthand Creek watershed and to serve as a hub of communication on watershed issues through collaborations with stakeholders. Elizabeth Russell, LWOG Coordinator, is building the new organization in order to address mining-related impacts in the Lefthand Creek watershed. The organization has just completed a watershed plan and will soon begin work on a project to assess location and impact of intermittent sources of toxic metals contaminating Lefthand Creek. For more information, go to: [www.lwog.org](http://www.lwog.org)

## BCWI Volunteer Opportunities

- \* Video editor for forums
- \* Contributing writer for newsletter
- \* Forum organizer (refreshments, postcards, advertising)
- \* Volunteer Coordinator for creek cleanups
- \* Creative website modification

### Boulder Creek Cleanup:

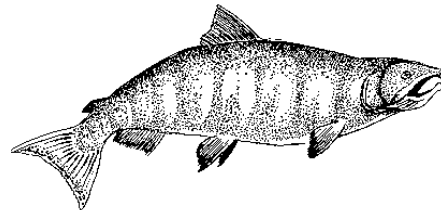
**Saturday, October 1st**

Join us in your work clothes, ready for fun.  
Meet at Scott Carpenter park at 10:00 AM

For more information, contact Eric August, 303-527-0191.

## Contributing to BCWI

For the past seven years, BCWI has brought engaging speakers from academic institutions, government agencies and the local community to exchange science and ideas through the Watershed Forum Series. These efforts have been accomplished largely through in kind donations and volunteer time. We need your help to continue and expand the series and programs of BCWI with your tax-deductible donation.



## Spotlight on Volunteers – Jennelle Freeston

Jennelle Freeston has been a volunteer with BCWI since 1999. Jennelle has served in numerous roles, many of them simultaneously. She is a member of the Boulder Creek Critters Puppet Troup, organizes Boulder Creek Cleanups, plans the BCWI Forum Series, and serves as secretary of BCWI. Thank you, Jennelle, for your commitment and dedication to BCWI. Your contributions have made a positive impact in our watershed and community.

## Newsletter Drawings

Illustrations for this issue of the BCWI came from the U.S. Fish and Wildlife Service website:  
<http://www.fws.gov/pictures/>

**YES! I will make a (tax-deductible) contribution to the Boulder Creek Watershed Initiative!**



My level of support is (check one):

\_\_\_\_\_ \$ 500 & up Belted Kingfisher *Ceryle alcyon*



\_\_\_\_\_ \$ 100 - 499 Greenback Cutthroat Trout *Oncorhynchus clarki stomias*



\_\_\_\_\_ \$ 50 - 99 Tiger Salamander *Ambystoma tigrinum*



\_\_\_\_\_ \$ 20 - 49 Green Darner *Anax junius*



\_\_\_\_\_ \$ 0 - 19 Golden Stonefly *Hesperoperla pacifica*

Enclosed is my check for \$\_\_\_\_\_. The entire watershed thanks you.

*BCWI also needs volunteers! Tasks include video editing, creek cleanup, and outreach events. To get involved, let us know your interests and how to reach you!*

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## **The Boulder Creek Watershed Forum**

*Boulder Creek Critters Puppet Show  
And Environmental Expo*

**6:30 - 7 PM Refreshments and Watershed Expo**

**7 – 7:30 PM Creek Critters Puppet Show**

**7:30 – 8 PM Getting Involved in Your Watershed**

**Tuesday, July 26, 2005**

**Boulder Public Library Auditorium, 1000 Canyon Boulevard**

Free to the public

Refreshments provided by Moe's Broadway Bagels

For more information call Eric August (303) 527-0191 or Sheila Murphy (303) 541-3023  
*Sponsored by: Boulder Creek Watershed Initiative, U.S. Geological Survey,  
City of Boulder, and Boulder Public Library*