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ENVIRONMENT DEPARTMENT

*Surface Water Quality Bureau*

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RON CURRY  
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Deputy Secretary

September 10, 2008

Arnold R. Atkins, MD  
President, Truchas Chapter Trout Unlimited  
12 Vista Grande Drive  
Santa Fe, NM 87508

Dear Dr. Atkins

On August 26, 2008, the New Mexico Environment Department (NMED) Surface Water Quality Bureau (SWQB) received your letter about an unusual algal bloom in the Pecos River downstream of the confluence with Panchuela Creek.

Dan Davis of the SWQB Monitoring and Assessment staff investigated the matter on Wednesday, August 27, 2008. Mr. Davis collected benthic substrate samples of the algal material at three locations and a water sample to be analyzed for nutrients from the Pecos downstream of the confluence with Panchuela Creek. In addition, Mr. Davis took digital images of the algal bloom area. A reconnaissance report on the site visit is enclosed with the letter. (Enclosure 1)

Based on in-house microscopic review of the algal material, SWQB identified the alga as *Didymosphenia geminata* or "Didymo", a diatom species recently reported to be invading freshwater systems worldwide. The water sample is being processed for nutrients at the State Laboratory Division. The analytical results will not be available for several weeks.

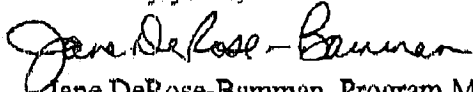
In your letter you wrote that the algal bloom suggests significant point source pollution in the area. Based on literature, *Didymo* thrives in clear, shallow, cool and nutrient-poor water. SWQB staff did not observe potential sources of nutrient load (cabins, camping, outhouses, privies) immediately adjacent to either the Pecos River or Panchuela Creek. Nutrient loading, if this was occurring, is not a likely cause for this bloom. Nations across the world are dealing with *Didymo* infestations. It is not clear what causes the bloom or how *Didymo* spreads from area to area, though it is most likely transported in feathers of migratory waterfowl. Several years ago, NMED staff identified a small amount of *Didymo* in a sample from the San Juan River at Bloomfield, NM. It is possible that *Didymo* has been in the Pecos for years.

This is the first time that SWQB has documented an algal bloom of *Didymo* in New Mexico. Additional investigation is needed to characterize the extent of this algal bloom.

SWQB plans to discuss options for addressing this as well as other invasive aquatic species with other agencies.

I have enclosed for your information two technical research articles about Didymo. (Enclosures 2 and 3) Should you have questions about this matter, please contact Dan Davis, Monitoring and Assessment Section at 505-827-2819 or me at 505-476-3671.

Sincerely yours,



Jane DeRose-Bumman, Program Manager  
Monitoring and Assessment Section

Enclosures