D.C. Drinking Water at Issue

The Washington Post, in an article published July 11, 1996 reported, that the Environmental Protection Agency (EPA) will look closely at the management of the District's drinking water system and will establish "a five-step plan to restore public confidence in city tap water and to avoid further contamination problems."

The Corp of Engineers, managers of the Delacarlia Water Treatment facility, initiated an increase in chlorine treatment recently to combat increased levels of bacteria which exceeded federal standards.

The Washington Post indicated that; "Federal involvement was necessary because city officials were not moving quickly enough to remedy contamination problems, according to Michael McCabe, Administrator for the EPA's Mid-Atlantic Region, which includes the District, Maryland and Virginia.

In addition to a telephone hot line (202-260-6100), EPA plans a new series of water sampling and analysis and will be sending, "a team of water quality experts to the District." "The EPA and District officials will also sign the consent decree for long term maintenance of new city's water distribution system."

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The District's water supply is in urgent need of major upgrades. Capital improvements needed total $176 million to $336 million. The estimated cost of improved operation and maintenance is $4.6 to $8.5 million.

Pathogens in Drinking Water

Increasingly the drinking water supply systems in many cities are revealing high levels of bacteria, and pathogens such as Giardia and Cryptosporidium, which are resistant to chlorine, and other contaminants. Below are some facts about Cryptosporidium.

Cryptosporidium parvum, sometimes written C. parvum, is an enteric protozoan that causes the diarrheal disease cryptosporidiosis and can be life threatening to people with compromised immune systems. The biggest outbreak of cryptosporidiosis (disease caused by the pathogen) in the US so far is the Milwaukee outbreak in April of 1993 that took a toll of more than 40 deaths and an estimated 400,000 cases of fever, diarrhea, occasional vomiting, nausea, and intestinal cramps.

Once ingested by a suitable host, C. parvum disrupts the ability of the epithelial cells of the gastrointestinal tract to absorb water and nutrients. Consequently, water and food ingested by the host passes straight through the host's digestive system.

In the environment, i.e., outside the host organism, C. parvum exists as a very resistant, infective spherical oocyst approximately 4 -7 gm in diameter (Giardia cysts averages 8.6 gm in width and 12.3 gm in length). More than half of the surface water tested in the United States showed the prevalence of this pathogen. The Cryptosporidium is very hard to detect and highly resistant to disinfectants commonly used to treat drinking water. An efficient filtration plant can remove 99 to 99.7% of total number. If it is detected occasionally in the drinking water, the best way to prevent its infectivity is to boil water before potable usage.
WRRC COMPLETED PROJECTS

Institutional and Financial Management of the District's Water Resources: Trend Analysis - Dr. Choi, University of D.C.

A few years ago the ambient water quality of the Anacostia River and its tributaries were the major concerns in the District of Columbia. However, recently, the District of Columbia water supply issues appeared to be more pressing.

Local authorities in the United States have spent millions of dollars to provide safe drinking water. Washington, D.C. is not the exception. Despite a severe budget crisis, this study looked at the institutional and financial management aspects of the water resources of the District of Columbia. It has compared the District's water and sewer rates to neighboring countries. It has examined water bill collection and conservation issues.

Chesapeake Bay Water Quality Management
Dr. Lieber, American University

This project assessed current programs and policies of the Chesapeake Bay Program (CBP), from its initiation as a 1975 U.S.A. Environmental Protection Agency (EPA) study to the current multifaceted, intergovernmental program.

It reviewed the 1983 Chesapeake Bay Agreement signed by the states of Maryland, Pennsylvania, Virginia, the District of Columbia and the EPA and the subsequent agreements and programs of these signatories. As the CBP evolved it grew and changed from a point source water pollution program to one which covers land use, habitat and wetlands restoration and all forms of living resources.

Water Resources Research Act Reauthorized

On Friday, May 24th, President Clinton signed into law the Water Resources Research Act Reauthorization [HR 17431]. It's taken a while, but we did it because all of you got involved in the process.

The World Wide Web (WWW or "Web" for short) affords access to the Internet, an extraordinary universe of information. It is a world of computer connections unfettered by national borders and boundaries.

Addresses are arranged as follows: protocolllmachine.domain.namelsubdirectory/file. Many organizations provide information online. The following are a few Web sites that supply environmental and drinking water information. The addresses below are good starting points; however, this is by no means a comprehensive list.

Nerd World http://www.nerdworld.comlusers/dstein/nw199.html
U.S. Environmental Protection Agency http://www.epagovl
U.S. Department of Agriculture http://www.usdagovl
University Water Information Network http://www.uwin.siu.edu/
American Water Works Association http://www.awwagovl
U.S. Water News Online http://www.mother.com/uswatemews
Natural Resources Defense Council http://www.igc.org/hrndc
National Institutes of Water Resources http://wrri.eng.clemson.edu

**Waterborne Diseases May Rise**

New York (AP) -- Growing populations and decaying infrastructure have so compromised the safety of drinking water that disease outbreaks are increasingly likely even in developed countries, a report says.

Unless something is done, the report said, Americans can expect more incidents like the 1993 contamination of Milwaukee water with the microorganism Cryptosporidium, which affected 25 percent of the city's population and was blamed for 100 deaths. The report by a 65-member panel of experts was released at a meeting of the American Society for Microbiology.
LIQUID ASSETS: A summertime perspective on the importance of clean water to the nation’
economy was released by the EPA on May 24, 1996. This report states that clean water
contributes billions of dollars to the economy each year by supporting tourism, shellfishing,
manufacturing, irrigation, and technology. According to the EPA Administrator Carol Browner,
"economic prosperity and environmental protection go hand in hand."

* The public takes more than 1.8 billion trips to beaches, rivers, and lakes
  $380 billion recreation and tourism.
* The value of real estate along desirable water areas is nearly 30% greater than at
  similar inland properties.
* The $45 billion commercial fishing and shellfishing industries need clean water to
  survive.
* Manufacturers use about 13 trillion gallons of water each year, including the soft
  drink industry, which uses more than $12 billion gallons of water annually to make
  products valued at more then $50 billion.
* The water technology industry has sales of more than $64 billion annually in the
  United

D C WRRC Recent Meetings

Some of the points highlighted in the report are:
States and more than $170 billion abroad.
Interstate Commission on the Potomac River Basin (ICPRB)

The ICPRB held its FY 1996 Third Quarter Business Meeting at the University of the
District of Columbia (UDC) on Thursday, June 20, 1996.
Representatives from states in the Northeast region met on June 27-28, 1996 at the University of the District of Columbia to review the institute program proposals for the FY 1996 funding cycle.

This is the first time that the proposals have been reviewed on a regional basis at the request of Congress. Reviewers came from different parts of the northeast region and were composed of representatives from academia, government agencies and the private section.
Organization for Economic Cooperation and Development Program (OECD)

We are announcing the 1997 OECD Fellowship program. This OECD program entitled "Biological Resource Management for Sustainable Agricultural Systems" consists of four independent themes. Each theme sponsors fellowships and workshops between participating countries (Australia, Austria, Belgium, Canada, Denmark, Finland, France, Germany, Greece, Hungary, Ireland, Italy, Japan, Netherlands, New Zealand, Norway, Portugal, Spain, Sweden, Switzerland, Turkey, United Kingdom, and the United States).

Scientists interested in either the fellowship or workshop program can refer to the following information for the theme of interest:

E-mail: pmillner@asrr.arsusda.gov

**Theme 2:** Quality of Animal Production. National Correspondent: Dr. Barbara F. Glenn, Room 124, Bldg. 200, BARC-East, Beltsville, MD 20705. Phone: 301-504-9100, Fax: 301-504-8162.  
E-mail: bglenn@ggpl.arsusda.gov

**Theme 3:** Utilization and Ecology of New Organisms. National Correspondent: Dr. Richard Soper, Room 102, Bldg. 005, BARC-West, Beltsville, MD 20705. Phone: 301-504-5605, Fax: 301-504-5298.  
E-mail: rsoper@nal.usda.gov

E-mail: jscheper@unlininfo.unl.edu
Application materials **will** be distributed upon request (fax or e-mail preferred). The four page fellowship application form must be postmarked by October 24, 1996. Please contact the appropriate correspondent to request the application forms or if you have specific questions contact **Tom Bahr**, Director of the New Mexico Water Resources Research Institute. 3167 New Mexico State University Box 30001. Las Cruces, NM 88003-8001. Phone: 505-646-4337, Fax: 505-646-6418. On the WEB: [http://wrxi.nmsii.edu](http://wrxi.nmsii.edu)

### Environmental Justice Grant Program

The Environmental Protection Agency (EPA) is soliciting grant proposals to support national or regional environmental justice organizations that will provide financial or technical assistance to community-based, grassroots groups, or Tribal organizations for projects that use pollution prevention approaches to address-environmental ice concerns. The solicitation appeared in the FEDERAL REGISTER (61 FR 30063, June 13, 1996).

### Coming Events

September 22-25, 1996, Rivertech '96, Chicago, IL, for more information write: Rivertech 96', International Water Resources Association, University of Illinois, 1101 West Peabody Drive,

September 22-26, 1996, AWRA 32nd Annual Conference and Symposium on GIS & Water Resources, Fort Lauderdale, Florida, Bonaventure Resort & Spa, for more information, contact, The American Water Resources Association at (703) 9041225 or fax, (703) 904-1228

October 7-8, 1996, 2nd Annual Pacific Northwest Water Issues Conference, Red Lion-Columbia River, Portland, Oregon, for more information, contact, The Oregon Water Resources Institute at (541) 747-4022 or fax, (541)737-2735

October 7-10, 1996, Instrument Society of America '96, Chicago, IL., for more information, contact, Ionics Incorporated at (617) 926-2500

September 1-6, 1997, IX World Water Congress, Montreal, Canada, for more information, contact, Aly M. Shady at (819) 994-4098 or fax, (819) 953-3348
The DC WRRC Wishes you a great summer!