



Ad Hoc Committee On **CITY OF SANTA ROSA**  
 Clear Water  
 P.O. Box 1878  
 Santa Rosa, CA 95402

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## DEPARTMENT OF

## COMMUNITY DEVELOPMENT

Twelve million dollars to produce an Environmental Impact Report. Copies cost \$1600 for 17 volumes totalling 8000 pages. 001

For **\$12 MILLION** this should be a "magnum opus" answering every conceivable question. Unfortunately, one of the most serious concerns, human health risk from exposure to reclaimed water is treated so inadequately it should be an embarrassment to the City in a \$12 million dollar document.]

Most people fear continued contamination of the Russian River, local wells, the groundwater, and the aquifer. The quality of the wastewater and the reliability of the sewage plant are the main questions. 002

What assurances does the \$12 million document give us?

- They took **one sample** from Delta Pond on **one day** in November 1994 and four samples from the plant on each of four days and drew conclusions regarding **lack** of health risk from that data! That is beyond ridiculous! ]

- The discussion of **coliform** bacteria references **10 year old documents** ignoring completely the outbreak of a "new" strain of pathogenic *E. coli* 0157 in Seattle and the recent epidemic in Osaka affecting 10,000 people! 003

- The utilities department **does not appear to be testing** for viruses, cyclospora, cryptosporidium etc. at present! And, there does not appear to be testing of the effluent in the storage ponds. 004|005

- They admit they do not know the extent of damage and disruption to our endocrine systems caused by **organo-chlorines** in the wastewater, and have no standard by which to assess risk. 006

- The one sample of wastewater taken from Delta Pond had a coliform count over 100 times the maximum allowed by the Department of Health Services for spray irrigation. 007

The "heterotrophic" bacteria count of Delta Pond water was 3100 colonies per mL. (What are heterotrophic" bacteria? They are indicators of the overall bacteria count in water and help assess the cleanliness of the distribution lines and the effectiveness of the disinfection process. "Data on human health effects resulting from exposure to these organisms following ingestion or inhalation of aerosols is lacking." DEIR.) 008

So what do we have? The consultants made assurances based on a piddling five samples taken on only five days in at least four years: assurances regarding the satisfactory quality of the wastewater even though the **one sample from Delta Pond showed extremely high bacteria counts.** The wastewater may have been treated and come out of the plant with few detectable 009

P. O. Box 484 Occidental, Ca. 95465 (707) 874-3855 phone/FAX

bacteria, but after residing in the ponds, the organisms either came back to life or were picked up and carried in the distribution lines and multiplied. **We cannot ignore this.** The quality of the wastewater in the storage ponds must concern us. That is the wastewater that is piped to farms for irrigation. That is the wastewater that is sprayed, and those are the aerosols we breathe as we drive past wastewater irrigation fields around the County 009 (cont.)

- Between 1991 and 1995, the City of Santa Rosa examined its wastewater for giardia, cryptosporidium, legionella and salmonella only four times. That's four days out of 1460. And, a minute, infinitesimal amount of water was analyzed in comparison to the billions of gallons discharged, irrigated and consumed by livestock during that four year period. It is an insult to anyone trying to develop sound municipal policies regarding disposal of wastewater to have tested so little especially considering the exorbitant cost of this study. 010

The data the City does present shows storage pond wastewater has a fecal coliform bacteria count 200 times the maximum allowed to be considered "tertiary". Therefore it is a travesty, a joke, a distortion, and preposterous to claim that they are discharging or irrigating with "tertiary treated water". 011

What can we do? Attack the problem at its core. It is no longer feasible to continue our present sewer system. It is insane to spend \$12 million on studies of waste disposal and disinfection and not one cent on removing the waste and bacteria from the water stream in the first place. 012

- Incinerating and/or composting toilets are the only long-term solution. We must treat our human bodily waste the same way we treat other dangerous toxins. Keep them out of the wastewater stream. 013

- Experiment on irrigating REDWOODS. Redwoods can utilize water and accept irrigation during the rainy season. 014

Sincerely,

Ann Maurice

# NATION

# Bacteria called growing threat to nation's water

develop widely different is becoming

Once seen as threatening little more than a stomach ache, microscopic waterborne bugs are increasingly turning deadly — for public health officials to shift priorities as they try to make drinking water safe for a changing population.

For years, the Environmental Protection Agency has focused on potential cancer-causing chemicals as the main drinking water threat.

But now water agencies and federal health officials concede the more immediate concern are waterborne bacteria, parasites and viruses — with names like cryptosporidium and giardia — some of which were largely ignored, or even unknown, until a few years ago.

For the past week, people in the nation's capital have been reluctant to drink their water. Boiling orders were issued, then canceled. Finally, officials poured more chlorine into the system. The reason: signs that the city's aging water pipes are full of bacteria.

The urgency surrounding waterborne pathogens comes because more and more Americans are susceptible to the illnesses they cause, health experts say.

"Most of these organisms have been around for eons, but we're just now beginning to detect them," said Dennis Juranek, an expert in parasitic diseases at the Centers for Disease Control and Prevention in Atlanta.

Only when people began reporting severe illnesses and even dying from such bugs did they emerge on health officials' radar screens as important, he said.

In most healthy people, the damage is limited to a brief bout of intestinal discomfort, sometimes even mistaken for the flu. But for those suffering from AIDS or HIV infection, cancer patients and the elderly — whose immune systems cannot ward off bacterial attack — drinking water can become deadly, say health officials.

Some of the emerging pathogens are still mostly a mystery to health experts. Some, like cryptosporidium, aren't stymied by chlorine, the most successful and widely used disinfectant in drinking water.

"It is a serious issue, an emerging threat. We think it needs a significant focus," said EPA Administrator Carol Browner. Her agency already has shifted some of its focus in dealing with pollutants and plans a five-year, \$50-million effort to learn more about microbial pollution.

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## ILLNESS OUTBREAK PUZZLES OFFICIALS

Microbe Elusive as It Navigates  
the Nation's Food Supply

By LAWRENCE K. ALTMAN

Federal officials are developing a crash program to test food and other items for an exotic microbe that is known or suspected to have made more than 1,000 people sick in 11 states. Investigators are also shifting the focus of their suspicions from strawberries to raspberries as the source of contamination.

The microbe, known as cyclospora, is a parasite that infects the intestine and can cause intense diarrhea, weight loss and fatigue. It has caused three previous outbreaks of disease in the United States, including one last year in Westchester County, but the ones that started this spring are by far the largest.

The epidemic is yet another in a long line of new and emerging infections like legionnaire's disease and AIDS that have struck this and other countries in recent years.

Despite warnings about such diseases, the current cyclospora outbreak has caught health officials by surprise. They say that parasites are rarely the cause of large food-borne outbreaks and that this is the first major national one in recent years. An outbreak of cryptosporidiosis in the Milwaukee water supply sickened 400,000 people in 1993.

This country's food supply is considered very safe. But Dr. Stephen M. Ostroff of the Centers for Disease Control and Prevention and other Federal officials said that the cyclospora outbreak "highlights the potential vulnerability" of the food supply when a crack appears in the safety walls that protect it.

Even with a crash program, tracking the route by which cyclospora is penetrating the food supply is proving hard because several factors make the parasite elusive.

One is that it takes a week for a person to become sick. Several more

Continued on Page 14, Column 1

### Consumers Told To Wash Fruits

Health departments where cyclospora has been found are advising consumers to wash strawberries and other fruits before eating, but because of the outbreak and as a general food safety measure.

Washing fresh fruits and vegetables close to the time of consumption has been the standard health recommendation for many decades. The health departments, however, because of the outbreak and because of the possibility of contamination by soil, manure or feces, are now recommending that consumers wash fruits and vegetables with a clean vegetable brush can help dislodge soil.

Health authorities believe, but have not documented, that the cyclospora organism stays on the surface of the skin if it is unbroken and undamaged, not in the flesh of any affected fruit. That is true of most other single-cell contaminants, both bacteria and parasites. Nevertheless, produce should be washed even if it is to be peeled before it is eaten.

This outbreak is believed to be the first major outbreak in many years of a food-borne parasite, as opposed to bacterial, disease.



A researcher at Cornell Medical Center in New York examines samples of strawberries, a potential source of an illness-causing parasite.

spora in the outbreaks. He hopes to determine whether there is a pattern, and if so, whether it can help trace the spread of contamination. United States health officials have consulted the Pan American Health Organization, a unit of the World Health Organization, about sending investigators to test water for cyclospora in Latin American countries that export foods to this country.

Among the mysteries of the outbreak are why, except for Texas, only states east of the Mississippi River have been affected and why most cases have involved adults.

If berries are the culprit, health officials said they did not know whether the outbreaks would continue or stop after the berry season ended, only to return next spring. And, with some reluctance, they said they might never determine the source of cyclospora in the outbreak.

would have been if symptoms had developed sooner. Further, when asked about the preparation of food for a shared meal, food handlers often have great difficulty remembering the source of the foods served two or three weeks in the past.

"Recall is a big problem all along the trail," said Dr. Sue Binder, an epidemiologist at the C.D.C. By studying records and retracing each step in the distribution chain of a food implicated in an outbreak, F.D.A. workers are trying to determine whether a common source such as fertilizer or a particular farm is involved. But the accuracy of such investigations is limited by the information patients provide.

Dr. David Relman, a researcher at Stanford University who was consulted by the F.D.A., said he planned to use newer techniques to determine the molecular fingerprints of cyclospora.

## Illness Outbreak Leaves Puzzles for Officials

many that do are not adequately trained in how to detect it. Little is known about cyclospora's life cycle, the ways it spreads and whether birds or animals that feed on berries are involved. This means that experts have little idea how cyclospora reaches the berries, or whether humans are the only hosts.

Adding to the complexity of the medical detective work are the delays in recruiting Federal help to investigate the outbreaks. The C.D.C. can investigate outbreaks only if called on by state health departments. Only this week was the agency invited to send investigators to Texas and the District of Columbia. The outbreaks were on-going before we were called in," said Bob How-

ard, of the C.D.C. In many investigations of disease outbreaks, information obtained in the initial stages often turns out to be wrong. Epidemiologists are looking into the possibility that the initial warning against eating strawberries might have been premature.

On Thursday, the Texas Department of Health and Houston's health department lifted an advisory, issued on June 8, against eating fresh strawberries.

Another difficulty in the investigation is the nature of cyclospora. Food histories are the backbone of the epidemiologic investigations. But with cyclospora, the incubation period is about a week, longer than for many other food-borne infections. Additional days might pass before an infected individual seeks medical attention. Laboratory tests are performed, and an accurate diagnosis is made. By then, many people have forgotten what they ate. Yet the food histories are the backbone of the epidemiologic investigations, and they may be less accurate than they

taken to prevent contaminating lab-

Officials said they were aware of the problems and intended to use the P.C.R. tests initially for screening purposes so suspect foods could undergo more standard tests. Vice President Al Gore said recently that the Clinton Administration was stepping up its battle against infectious diseases. With scientists emphasizing the threat of emerging infections and the Government spending more money to protect the public, why had United States Public Health Service researchers developed a test for cyclospora in foods earlier?

"We've been asking the same

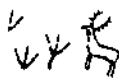
### A new suspect is under scrutiny in a food-borne disease.

question," said Mary Pendergast, a top official of the Food and Drug Administration, which has responsibility for the safety of produce. She and other Federal officials said that cyclospora had received a lower priority than other health problems and that it was unreasonable to assume that scientists could develop such tests only three years after identifying cyclospora as a parasite.

Investigation of the outbreaks has been further complicated by the medical novelty of cyclospora. Most doctors lack experience in diagnosing and treating cyclospora, if they have ever heard of it. Many laboratories do not test for cyclospora, and

Health officials have not found cyclospora in any raw fruit. It might be that so few microbes are required to infect a person that they escape detection by current techniques. Health officials are trying to rush into the field a sophisticated research technique known as polymerase chain reaction, or P.C.R., that could detect even a single microbe. The Food and Drug Administration has asked six laboratories, four of its own, one at the C.D.C. in Atlanta and another at the California Health Department, to use the P.C.R. test to try to detect cyclospora on fruit. The tests are being done on leftovers from implicated meals served in homes and restaurants, and from random samples collected from stores, distributors and grocers.

Testing began on Thursday. But in the rush, some experts expressed concern that the new tests might not be subjected to the usual rigorous scientific process. They also warned that P.C.R. is such a highly sensitive technology that great care must be



Ad Hoc Committee On Clean Water

