

* July 15, 1997
PARASITE CITY
BIRD DROPPINGS IN AREA LAKES BRING ON RASH OF SWIMMER'S ITCH CASES.

By LINDA WEIFORD
Daily News reporter

Thanks to warm Anchorage lakes, a bunch of geese and some tiny snails, thousands of invisible parasites are itching to burrow into your child's skin.

This summer, health and environmental agencies are fielding dozens of calls from parents concerned about the red spots on their children's bodies.

"My kid has a rash. It looks like measles.' That's what parents have been telling me," said Carole Lewis, a public-health nurse with the Municipality of Anchorage.

Lewis starts with a little probing: Other than the rash, does the child look and feel healthy? Do the bumps appear in clusters on the skin? Did the child recently play in a local lake?

If the answers are yes, yes and yes, it's probably another case of "swimmer's itch."

This harmless but annoying condition is caused by a microscopic critter called avian schistosome, and it's packing area lakes in high numbers this summer, said Kristi Bischofberger, water-quality specialist for the city.

"There are more of them in the water, they showed up earlier and will probably last longer," she said.

Since people can't see these parasites wiggling in the water, they don't discover they had swimming companions until several hours later. That's when the rash develops where the parasite entered the skin.

And that's just what's been happening -- especially to the large numbers of children splashing in lakes this summer.

Areas hardest hit are Jewel Lake, off Dimond Boulevard, and Mirror Lake, north of Eagle River, Bischofberger said. Signs have been posted there alerting people they may get swimmer's itch if they go in the water.

"We let people make up their own minds about going in. We've never closed a beach because of swimmer's itch," she said.

What's causing this parasitic frenzy?

First, blame our warm, sunny summer, drawing more people to local lakes.

Then add Anchorage's exploding population of geese and ducks -- many of which are gathered at lakes, caring for their young, said Karen Laing, a waterfowl biologist with the U.S. Fish and Wildlife Service in Anchorage. Those birds pass parasites into the water through eggs in their feces, she said.

Once the eggs hatch, the tiny freeloaders move in with an accommodating little fresh-water snail inching along the bottom of the lake.

When the water temperature gets warm and comfy, up to 1,000 parasites can emerge from a single snail in search of their next host -- preferably another duck or goose, said Bill MacKenzie, a medical epidemiologist and parasite specialist with the Centers for Disease Control in Atlanta, Ga., -- but they'll settle for any warm body that comes along.

Under a microscope, "they'd look like bugs swimming on a mission," he said.

Once they make contact with humans, that mission comes to a screeching halt.

Believing they've found a bird, the parasites burrow into the skin. Then "they crawl around, searching," MacKenzie said. By the time they find out they're in the wrong neighborhood, it's too late: Avian schistosome dies.

The human just ends up with an inflammatory skin problem.

"People exposed (to the parasites) the first time will develop flat, pink spots that go away within 24 hours," said Dr. Bruce Chandler, the city's medical officer. "After that, the body becomes sensitized and the next reaction to exposure is worse."

That's when red bumps and tiny blisters may appear -- and itching can pack a punch for up to a week. When that happens, Chandler recommends applying a nonprescription hydrocortisone cream or taking the oral medicine, Benadryl.

Meanwhile, if the idea of parasites crawling under you or your child's skin gives you the creeps -- and you don't want to ban fun in the water -- try using a towel, Chandler advises.

"People should towel off thoroughly as soon as they get out of the water to prevent the parasites from burrowing into the skin."

ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

1989 NONPOINT SOURCE WATER QUALITY ASSESSMENT

*** WATERBODY ***

Page 1 of 4

Name of Waterbody: Mirror LAKE

Location or Lat/Long: 61°25'44" 149°24'51"

Waterbody Type:	Waterbody Size:	ADEC USE ONLY 304: N L M S WQL: 0 - N 1 - PS 2 - NPS 3 - WQS 4 - Con/Enf ID#: _____
<input type="checkbox"/> River/Stream	_____ Miles	
<input checked="" type="checkbox"/> Lake	<u>131</u> <u>Acres</u> /Hectares	
<input type="checkbox"/> Fresh Wetland	_____ Acres/Hectares	
<input type="checkbox"/> Tidal Wetland	_____ Acres/Hectares	
<input type="checkbox"/> Estuary	_____ Square Miles	
<input type="checkbox"/> Coastal Shoreline	_____ Square Miles	
<input type="checkbox"/> Groundwater	_____	

Segment of Waterbody Addressed:
 From: _____
 To: _____
 Other Description: _____
 Size of Segment: _____

USGS Hydrologic Unit #: AK 190 - 20401 - 401

*** ASSESSMENT ***

Describe Source of Pollution and Documentation Provided:
Urban Runoff Monitored by MOA/DHHS
See back page.

Type of Documentation (Attached If Possible):	Assessment type:
<input checked="" type="checkbox"/> Water quality data	<input checked="" type="checkbox"/> Monitored
<input type="checkbox"/> Documented oil spill	<input type="checkbox"/> Evaluated
<input type="checkbox"/> Enforcement action	<input type="checkbox"/> Written report
<input type="checkbox"/> Photos with documentation	<input type="checkbox"/> Field notes
<input type="checkbox"/> Photos without documentation	<input type="checkbox"/> Overflight
	<input type="checkbox"/> Observation
	<input type="checkbox"/> Other

Violation of Water Quality Standards:	Waterbody Status:
<input type="checkbox"/> Past Violation Documented	<input type="checkbox"/> Impaired - Past
<input checked="" type="checkbox"/> Current Violation Documented	<input checked="" type="checkbox"/> Impaired - Current
<input type="checkbox"/> Current Violation Suspected	<input type="checkbox"/> Suspected
<input type="checkbox"/> Future Violation Projected	<input type="checkbox"/> Unimpaired

Comments: _____

Author of This Assessment: James Cross Affiliation: MOA/DHHS Date: 8/89
CHARIS KENT ADEC/ED/WQM 8/89

Meets Clean Water Act Goals:

- | | |
|--|---|
| <input checked="" type="checkbox"/> Fishable | <input type="checkbox"/> Swimmable |
| <input type="checkbox"/> Not Fishable | <input checked="" type="checkbox"/> Not Swimmable |
| <input type="checkbox"/> Fishable Not Attainable | <input type="checkbox"/> Swimmable Not Attainable |

Impaired Uses:

FRESHWATER

- Drinking
- Agriculture
- Aquaculture
- Industry
- Recreation, Contact
- Recreation, Secondary
- Fish, Shellfish, Wildlife

MARINE

- Aquaculture
- Seafood Processing
- Industry
- Recreation, Contact
- Recreation, Secondary
- Fish, Shellfish, Wildlife
- Harvest of Fish, Shellfish

Support of Designated Uses:

- One or More Uses Not Supported (Impaired)
- One or More Uses Partially Supported (Partially Impaired)
- One or More Uses Suspected to Be Affected (Suspected)
- One or More Uses Projected to Become Affected (Projected)
- All Uses Fully Supported, sources present (Unimpaired)
- All Uses Fully Supported, no sources present (Unimpaired)

Trophic Status:

- Oligotrophic
- Mesotrophic
- Eutrophic
- Hypereutrophic
- Dystrophic
- Unknown

Trophic Trend

- Improving
- Stable
- Deteriorating

*** TOXICS ***

Monitored for Toxics: Yes No

Type of Toxics Monitoring:

- | | |
|---|--|
| <input type="checkbox"/> 1 Organics in water column | <input type="checkbox"/> 10 Metals in sediments |
| <input type="checkbox"/> 2 Organics in sediments | <input type="checkbox"/> 11 Metals in fish tissue |
| <input type="checkbox"/> 3 Organics in fish tissue | <input type="checkbox"/> 12 Metals in discharges |
| <input type="checkbox"/> 4 Organics in discharges | <input type="checkbox"/> 13 Other inorganics in water column |
| <input type="checkbox"/> 5 Pesticides in water column | <input type="checkbox"/> 99 Other inorganics in sediments |
| <input type="checkbox"/> 6 Pesticides in sediments | <input type="checkbox"/> 99 Other inorganics in fish tissue |
| <input type="checkbox"/> 7 Pesticides in fish tissue | <input type="checkbox"/> 14 Other inorganics in discharges |
| <input type="checkbox"/> 8 Pesticides in discharges | <input type="checkbox"/> 15 Toxicity testing of water column |
| <input type="checkbox"/> 9 Metals in water column | <input type="checkbox"/> 16 Toxicity testing of sediments |
| | <input type="checkbox"/> 17 Toxicity testing of discharges |

Fish and Shellfish Contamination:

- 0 None detected
- 1 Contaminated fish
- 2 Fishing advisory
- 3 Fishing ban
- 4 Fish abnormalities
- 5 Shellfish restrictions due to pathogens
- 6 Fish kill

Pollutants: (H = High, M = Medium, S = Slight)

- | | | |
|--|--|---|
| <input type="checkbox"/> 0 Cause Unknown | | |
| <input type="checkbox"/> 1 Unknown toxicity | | |
| <input type="checkbox"/> 2 Pesticides | Type _____ | |
| <input type="checkbox"/> 3 Priority organics | Type _____ | |
| <input type="checkbox"/> 4 Nonpriority organics | Type _____ | |
| <input type="checkbox"/> 5 Metals | Type _____ | |
| <input type="checkbox"/> 6 Ammonia | <input type="checkbox"/> 12 Organic enrichment | <input type="checkbox"/> 18 Radiation |
| <input type="checkbox"/> 7 Chlorine | <input type="checkbox"/> 13 Salinity/TDS/Chlorides | <input type="checkbox"/> 19 Oil and Grease |
| <input type="checkbox"/> 8 Other inorganics | <input type="checkbox"/> 14 Thermal modifications | <input type="checkbox"/> 20 Taste and Odor |
| <input type="checkbox"/> 9 Nutrients | <input type="checkbox"/> 15 Flow alteration | <input checked="" type="checkbox"/> 21 Suspended solids |
| <input type="checkbox"/> 10 pH | <input type="checkbox"/> 16 Habitat alteration | <input type="checkbox"/> 22 Noxious aquatic plants |
| <input checked="" type="checkbox"/> 11 Siltation | <input checked="" type="checkbox"/> 17 Pathogens | <input type="checkbox"/> 23 Filling and draining |

Sources of Pollutants: (H = High, M = Medium, S = Slight)

Point Sources

- 1 Industrial
- 2 Municipal
- 3 Municipal pretreatment
- 4 Combined sewers
- 5 Storm sewers
- 6 Other dischargers

Resource extraction/exploration

- 51 Surface mining
- 52 Subsurface mining
- 53 Placer mining
- 54 Dredge mining
- 55 Petroleum activities
- 56 Mill tailings
- 57 Mine tailings

Nonpoint Sources

- 9 Unspecified

Land Disposal (Permitted Activities)

- 61 Sludge
- 62 Wastewater
- 63 Landfills
- 64 Industrial land treatment
- 65 Onsite wastewater systems
- 66 Hazardous waste
- 67 Septage disposal

Agriculture

- 11 Non-irrigated crop production
- 12 Irrigated crop production
- 13 Specialty crop production
- 14 Pasture land
- 15 Range land
- 16 Feedlots
- 17 Aquaculture
- 18 Animal holding areas
- 19 Manure lagoons

Hydrologic Modification

- 71 Channelization
- 72 Dredging
- 73 Dam construction
- 74 Flow regulation/modification
- 75 Bridge construction
- 76 Removal of riparian vegetation
- 77 Streambank modification
- 78 Draining/filling of wetlands

Silviculture

- 21 Harvest, restoration
- 22 Forest management
- 23 Road construction/maintenance

Construction

- 31 Highway/road/bridge
- 32 Land development

Other

- 81 Atmospheric deposition
- 82 Waste storage/storage tank leaks
- 83 Highway maintenance and runoff
- 84 Spills
- 85 In-place contaminants
- 86 Natural
- 87 Recreational activities
- 88 Upstream impoundment
- 89 Salt storage sites
- 99 Septic tank seepage

Urban Runoff

- 41 Storm sewers
- 42 Combined sewers
- 43 Surface runoff

Source Unknown

- 90 Source Unknown

DESCRIBE POLLUTANTS AND POLLUTANT SOURCES. THE BASIS FOR THE DETERMINATION THAT A WATERBODY IS IMPAIRED MUST BE EXPLAINED IN THIS SECTION. DESCRIBE THE NATURE OF THE VIOLATION OF WATER QUALITY STANDARDS, INCLUDING DATA OR OTHER DOCUMENTATION IN RELATION TO STANDARDS. ALSO DESCRIBE WHETHER THE VIOLATION IS CONSIDERED PAST OR CURRENT, AND OTHER RELEVANT INFORMATION.

Rummel, B. 1985, MANAGEMENT Study OF Mirror LAKE, ALASKA; Proposed For Alaska Dept NATURAL Resources, Div OF Parks and Outdoor Recreation.

May 1989 304(Q) Long List based on posting by city of Anchorage against use due to swimmer's itch

Municipality of Anchorage / DHHS / Water Quality Monitoring Program Annual Report, 1989 - Fecal col. Form 84
E. coli 80

Point Sources:

NPDES Permit Number: _____
NPDES Permit Name: _____
Causes Nonattainment: Yes No
Pollutant: _____

NPDES Permit Number: _____
NPDES Permit Name: _____
Causes Nonattainment: Yes No
Pollutant: _____

Nonpoint Sources:

Nonpoint Source Name: _____
Nonpoint Source Type: _____
Nonpoint Source Description: _____

Nonpoint Source Name: _____
Nonpoint Source Type: _____
Nonpoint Source Description: _____

STATE OF ALASKA

Mirror Lake etc EP
TONY KNOWLES, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION

Division of Air and Water Quality
Watershed Management Section
410 Willoughby Ave., Suite 105
Juneau, Alaska 99801-1795

Phone: (907) 465-5300
Fax: (907) 465-5274

November 27, 1996

Sharon Minsch
President, Chugiak Community Council
P.O. Box 671350
Chugiak, AK 99567

Dear Sharon:

Thank you for bringing to the attention of the Alaska Department of Environmental Conservation (ADEC) your concerns regarding the "listing" and "de-listing" of Mirror Lake as it relates to the state's polluted waterbody list required under Section 303(d) of the federal Clean Water Act.

Mirror Lake was placed on the state's polluted waterbody list in 1988, 1990 and 1992 based on limited information and data. As we discussed on the phone earlier this week, Mirror Lake was not placed on the 1994 or 1996 list because closer analysis of the limited number of water quality samples taken between 1988 and 1992 could not demonstrate "persistent" exceedances of the state water quality standards.

In general, prior to 1994, waterbodies were placed on the polluted waterbody list with any information that indicated any exceedances of water quality standards. The decision not to place Mirror Lake on either the 1994 or 1996 list was approved by the U.S. Environmental Protection Agency.

Although Mirror Lake is currently not on the polluted waterbody list, the process that ADEC follows to re-evaluate available information on a specified waterbody can occur at any time if requested by the public. Enclosed is Alaska's 1996 Water Quality Assessment Report that describes ADEC's waterbody assessment process. A summary of the assessment process is found on page 30 of the report.

You may request that Mirror Lake be placed on ADEC's internal "suspect" list to begin the process to determine if there is a valid water quality pollution issue with the lake. Your request should be in writing and submitted to ADEC with any supporting information you may have. If you take this step, I'll review your request with any supporting information you may submit along with the information in our file, coordinate with Kent Patrick-Riley of our Anchorage ADEC office, and submit a response back to you.

If you have any further questions please call me in Juneau at 465-5305. Thanks again for your interest in Alaska's water quality.

Sincerely,



Eric Decker
Environmental Specialist

Enclosure: Alaska's 1996 Water Quality Assessment Report
cc: Kent Patrick-Riley, ADEC, Anchorage

STATE OF ALASKA

TONY KNOWLES, GOVERNOR

DEPT. OF ENVIRONMENTAL CONSERVATION

Division of Air and Water Quality
Watershed Management
555 Cordova Street
Anchorage, Alaska 99501

Phone: (907) 269-7500
Fax: (907) 269-7652
TTY: (907) 269-7511

November 26, 1996

Sharon Minsch
President, Chugiak Community Council
P.O. Box 671350
Chugiak, AK 99567

Re: Department information on Mirror Lake

Dear Sharon:

I received your letter asking for information on Mirror Lake, in particular, any information available on it being listed as an impaired waterbody and then delisted. In response, I contacted our Juneau office, where such information is filed, and they faxed me a copy of the entire file information. It is attached to this letter. I also discussed the process with Erik Decker (465-5305), the DEC staff involved in the listing process, and asked him to call you.

I hope this information helps. I recognize the terminology in it may be confusing and that the faxed documents may be difficult to read. If so, or if you have any other questions, please feel free to call me.

Sincerely,


Kent Patrick-Riley
Watershed Protection

KPR:jcb (G:AEQ-CLER\KRILEY\MIRR_MIN)

Enclosure: Information from file on Mirror Lake impaired waterbody listing

cc: Keven Kleweno

Eric Decker 



ALASKA DEPARTMENT OF ENVIRONMENTAL CONSERVATION

**ANCHORAGE
WATER QUALITY PROGRAM
555 CORDOVA STREET
ANCHORAGE, AK 99501**

MAIN TELEPHONE: (907) 269-7500

MAIN FAX: (907) 269-7652

TO (Name): Eric Decker
COMPANY: ADec

FROM (Name): Kendrick R. King
SENDER: _____

FAX NO: 269-5277

of pages including cover sheet: _____

DATE: _____

SUBJECT: This is a copy of the letter I received

COMMENTS: Her work number (at a local company)
is 694-4200

Any problems, please call:

at number: (907) 269-

CHUGIAK COMMUNITY COUNCIL
SERVING FIRE LAKE, CHUGIAK, PETERS CREEK, MIRROR LAKE,
THUNDERBIRD HEIGHTS AND EKLUTNA
18530 OLD GLENN HIGHWAY
P.O. BOX 671350 CHUGIAK ALASKA 99567

Kent Patrick Riley
DEC

Sir:

Thank you again for making time to assist me this week with my concerns about the health of Mirror Lake and Mirror Creek. I am a very rational person who is just totally frustrated.

I understood that Mirror Lake was on the list as an impacted water body. I need to know if Mirror Lake is or has ever been identified as impacted.

If you can find out that it has, I need to know why? I am also interested in finding out exactly how it came to be removed from the list if you find that to be the case.

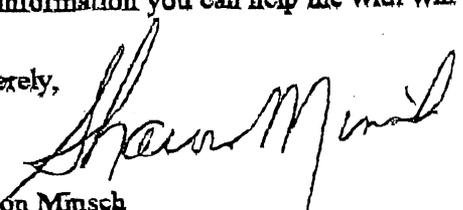
I have read the 1985 Diagnostic Feasibility Study of Mirror Lake and found it very informative. Is there anywhere else that I can check for info on the lake or the creek?

Engineers for the School District have stated the "lowest flow observed was approximately 300 gpm." for Mirror Creek. They further state, "We estimate this was the lowest flow during the year".

The only data I can find indicates that Mirror Creek flows at .5 CFS at best and is totally dry for substantial parts of the year. It is subject to seasonal high water and has in the past caused a fair amount of erosion at tidelands and the railroad tracks.

Any information you can help me with will be greatly appreciated.

Sincerely,



Sharon Minsch

President

Chugiak Community Council

~~WB File #~~
78(b)

Mirror Lake, Anchorage Alaska ID Number 20401-401

A. ADEC Documentation

The 1988 assessment prepared by MOA and a 1989 assessment prepared by C. Kent appear to be the primary data sources on which the listing of Mirror Lake is listed. The pollutants listed are fecal coliform bacteria. The source of these pollutants is listed as urban runoff and surface runoff. The 1989 assessment cites the annual quality report 1989 by MOA/DHHS as documenting violations of these pollutants. The 1989 assessment report lists high fecal coliform counts with the data sources as "Water Quality Monitoring Program Annual Report MOA/DHHS". The 1989 assessment also cites the type of documentation as water quality data and current violations are documented. One or more uses not supported is checked. Under the sources of pollutants section moderate levels of siltation, moderate levels of pathogens, moderate levels of suspended solids, moderate levels of unspecified non-point sources, and moderate levels of surface runoff and storm sewers.

B. Technical Comments

Mirror lake is located approximately 20 miles north of Anchorage near the town of Eagle River. Waterfowl during the late Spring and Summer months are the most likely source of fecal coliform bacteria. Septic tanks are present in surrounding homes, but the available data taken during the Winter months showed very low levels of bacteria in the Winter. Therefore, it is unlikely the septic tanks are affecting the water quality of the lake.

Moderate levels of surface runoff, storm sewers, siltation and suspended solids are not adequately documented and not supported by the facts or the existing data. There are no known storm drain systems emptying into the lake. There are no significant connecting streams. The lake is primarily fed by groundwater. Consequently, it is not significantly impacted by storm drain runoff or surface runoff.

C. Additional Analysis/Comments

The exact sources of data is not referenced other than generally as Water Quality Annual Report, MOA/DHHS. It would be helpful to cite a page number as well as reference a document. If data was used a Xerox of the this information would be helpful. DEC did not specify a reference or data source for this documentation.

D. Conclusions and Recommendations

Short term exceedances of the water quality standards for fecal coliform do occur during the Summer months when concentrations of waterfowl and wildlife are present. Recommend the lake be removed from Section (303)d list as sources of fecal coliform are from unspecified non-point sources probably occurring naturally from waterfowl populations on lake and seasonal runoff.