

**A**  
**Compiled**  
**History of**  
**PEI Fish**  
**kills**  
**1962-2011**



This document offers an approximate history of fish kills on Prince Edward Island:

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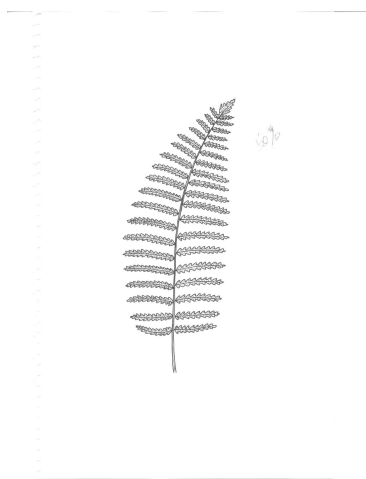
- Introduction
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- Timeline of Fish kills on P.E.I.
- News Articles on past Fish kills on P.E.I.

**Introduction**

Prince Edward Island has suffered from hundreds of years of neglect and often outright abuse. Though this is slowly changing, at one time people thought nothing of ploughing right up to the edge of a waterway, allowing silt and pesticides to freely move into the

water, or to drive harvesting machines right across a brook.

The provincial government has brought in minimal buffer zone legislation, but in many cases the riparian zones do not adequately protect the waterways.



Water quality and quantity has become a number one priority for watershed groups across Prince Edward Island. Since 1962, there have been at least 50 documented fish kills in Island waterways. Over the past two decades, we have seen marked increases in nitrate and sediment inputs into watercourses. Increased nitrate levels are causing

hypoxia and anoxia in many estuaries with alarming frequency. This lack of oxygen in the water causes severe habitat degradation for fish and other wildlife and has a dramatic effect on recreational and commercial uses of our waterways.

### **Fish kill Facts:**

**Number of fish kills on P.E.I. :** 50 fish kills.  
Over 50 years = 1 fish kill per year on average

**First reported fish kill:** August 4, 1962.  
Pesticides were recently invented by 1962. It didn't take long for pesticides to find Island waters.

**Earliest time of year for a reported fish kill:** June 19, 1971 on the West River.

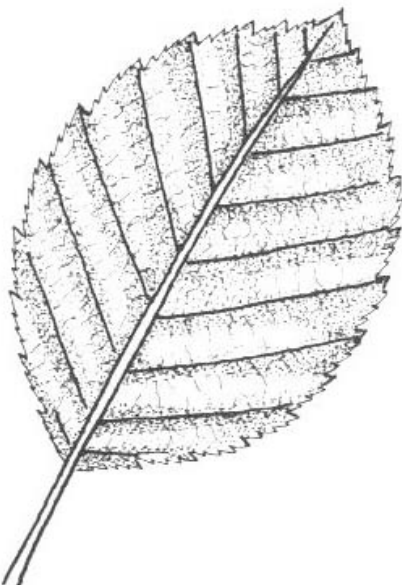
**Latest time of year for a reported fish kill:** September 3rd, 2004 on the Dunk River

**Fish kills are most likely to occur:** July 19th to the 25th.  
During those calendar dates, there have been a total of 18 reported fish kills.

**Worst year for reported fish kills:** 1999.  
There were 8 reported fishkills in 1999. This was repeated in 2002 with another eight reported fish kills. The third worst year for reported fish kills would be 1967 with six.

**Highest number of reported fish kills:** Dunk and Westmoreland Rivers.  
Both rivers have had five fishkills over the years. The Trout River in Coleman follows with 4 reported fishkills. The Big Pierre Jacques, Orwell and Tyron River are tied with 3 reported fish kills each.

**Most likely pesticide found associated with a reported fish kill:** Azinphos methyl.  
It was found in 11 reported fish kills. The next likely pesticide found was endosulfan with nine reported fish kills finding that substance. Chlorothalonil rounds out the top three with five fish kills reporting that substance found.



**Worst fish kill:** Arguably the Profit's Pond fish kill in 1995.

Profit's Pond was a semi-natural pond used for raising salmon during that time and up to 40,000 salmon smolts were lost. The farmer responsible for this fish kill was fined \$200. The next year, in 1996, another fish kill happened in Long Creek, which feeds Profit's pond. Again, up to 40,000 salmon smolts were lost. Today, Profit's Pond is no longer a semi-natural fish rearing facility.

**Timeline:**

Date	Location	Cause
1962 August	Mille River	Pesticide spill, nabam and endrin
1966 August	Tryon River (east branch)	Pesticide dithane (mancozeb) can found nearby
1967 June	Trout River (Coleman)	unknown
1967 July	Black Pond (Greenvale)	unknown
1967 August	North River	Pesticide: endrin
1967 August	Newton River	unknown
1967 August	Bradshaw River	unknown
1967 August	Morell River	unknown
1968 August	Dunk River	Pesticides
1968 August	Orwell River (Kinross)	Pesticides
1968 August	Morell River	Pesticides

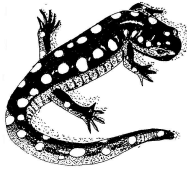
<b>Date</b>	<b>Location</b>	<b>Cause</b>
1969 August	DeSable River	Pesticide: Dithane M-45 and DDT
1971 June	West River	Pesticide: endrin
1975 August	Valleyfield River	Pesticides
1975 August	Dunk River (North Brook)	Pesticide spill: endosulfan
1977 June	Dunk River	Pesticide: 3 DinitroAmine containers found nearby
1990 Summer	Westmoreland River (Murphy's Bridge)	Pesticide: endosulfan
1994 July	Big Pierre Jacques River	Pesticide: carbofuran and azinphos methyl
1994 Summer	Westmoreland River	unknown
1995 July	Big Pierre Jacques River	Pesticide: carbofuran and azinphos methyl
1995 July	Long Creek (Profit's Pond)	Pesticide spill: mancozeb
1996 July	Long Creek (Profit's Pond)	Pesticide: chlorothalonil
1998 July	Huntley River	Pesticide: endosulfan and azinphos methyl
1999 July	Souris River	Pesticides: endosulfan and dithiocarbamate
1999 July	Valleyfield River	Pesticides: azinphos methyl and endosulfan
1999 July	Orwell River	Pesticides: azinphos methyl and endosulfan
1999 July	Orwell River	Pesticides: azinphos methyl and endosulfan

<b>Date</b>	<b>Location</b>	<b>Cause</b>
1999 July	Clyde River	Unknown
1999 July	Westmoreland River	Pesticides: chlorothalonil and endosulfan
1999 July	Tryon River (West Branch)	Pesticide: azinphos methyl
1999 August	Trout River (Tyne Valley)	Pesticides: azinphos methyl and endosulfan
2000 July	Profit's Pond	Pesticides:metribuzin, chlorothalonil and metribuzin
2000 August	Souris River	Pesticides: dithiocarbamates and metribuzin
2000 August	Indian River	Pesticides: azinphos-methyl and endosulfan
2000 August	French River	Unknown
2000 August	Mount Herbert	Pesticides: chlorothalonil, linuron and prometryn
2002 July	Wilmot River (Murphy's Bridge)	Pesticide: azinphos methyl
2002 July	Wilmot River	Pesticide: azinphos methyl
2002 July	North River	unknown
2002 July	Clyde River	unknown
2002 July	Trout River (Coleman)	unknown
2002 July	Huntley River	unknown
2002 August	Westmoreland River (west branch)	unknown
2002 August	Westmoreland River (east branch)	unknown
2007 July	Dunk River	Metribuzin

Date	Location	Cause
2007 July	Tryon River	Chlorothalonil
2010 July	Montrose River	Unknown
2011 July	Big Pierre Jacque River	Under Investigation
2011 July	Mill River	Under Investigation
2011 July	Trout River	Under Investigation

### **News Articles on past Fish kills on P.E.I.**

#### **PEI Fishkill July 25, 2011**



Once again PEI has suffered a massive fish kill of trout and salmon in some of our best waterways. It has been referred to as catastrophic, where the rivers will take decades to recover from. The affected rivers are Big Pierre Jacques River, Mill River and the Trout River. The Trout river was recently recognized as one of the best Brook Trout fishing areas in Canada.

Once again, pesticides have been found in samples taken during the investigation and heavy rains have been blamed. Trying to blame it on the rain is a very poor excuse.

Once again, we are waiting for action on this constant scourge on our island waterways. This has not been the first time a river has had all of it's live wiped out.

#### **Timeline of Events:**

July 25th

[Two West Prince fish kills under investigation](#)

[Two fish kills reported in western P.E.I.](#)

[A devastating sight](#)

July 26th

Fish kill worst in decades

Two rivers closed to angling after fish kills

July 27th

P.E.I. river fish kills called 'catastrophic'

Hatchery to help replenish rivers from fish kill

July 28th

Recent fish kill devastating

July 29th

Ag sector looking for answers in P.E.I. fish kill

August 2nd

P.E.I. sport fishermen demand fish kill review

We need action to protect our waterways

August 5th

Pesticides found in fish kill water samples

August 10th

Electroshocking will help determine damage from fish kills

Two farmers charged in connection with fish kills

## **2010-07-14 Montrose River**

The following news release from PEI Gov E-Mail List.

*The Department of Environment, Energy and Forestry and Environment Canada are investigating a reported fish kill in West Prince.*

*Dead fish were discovered on a two kilometre section of the east branch of the Montrose River on Tuesday.*

*The incident was reported by the Huntley-Montrose-Kildare Watershed Association.*

*Heavy rain fell on P.E.I. on Saturday and Sunday.*

*Environment officials have been on site collecting samples of fish, water and soil for analysis.*

*Officials are on site today continuing their investigation.*

### ***P.E.I. fish kill being investigated***

<http://www.theguardian.pe.ca/News/Local/2010-07-14/article-1564982/P.E.I...>

Later that day, the government released a followup. Note how the reporter remarks on the push by officials on the heavy rain theme. You will notice with every news release, there will be mention of heavy rains

## ***Environmental investigators probing discovery of dead fish on P.E.I. river***

*Published on July 14th, 2010*

*CHARLOTTETOWN - Federal and provincial investigators are looking into the discovery of dead fish along a two-kilometre section in the West Prince area of Prince Edward Island.*

*Dead fish were discovered along a stretch of the east branch of the Montrose River on Tuesday.*

*Officials at the province's Department of Environment, Energy and Forestry and Environment Canada were called in by a local watershed group.*

*Samples of fish, water and soil have been collected for analysis.*

*The department noted that heavy rain fell on P.E.I. on Saturday and Sunday, raising the possibility that something may have flushed into the water.*

<http://www.theguardian.pe.ca/Canada---World/Society/2010-07-14/article-1...>

*P.E.I. environment officials are investigating a kill of what may be thousands of fish in the Montrose River on the western end of the Island.*

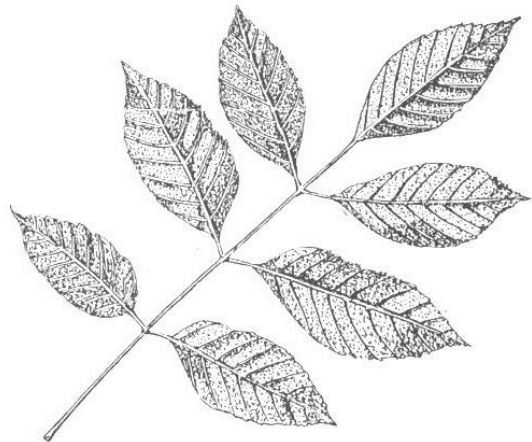
*Rosanne MacFarlane, freshwater fisheries biologist for the province, told CBC News on Wednesday a section of the stream just under two kilometres in length was affected, on the east branch of the Montrose River upstream from Marchbank Pond. The river runs into the Kildare River, which runs into the Gulf of St. Lawrence south of Tignish.*

*The Montrose runs into the Kildare River in western P.E.I. The Montrose runs into the Kildare River in western P.E.I. (canmaps.com)*

*The kill was reported by the local watershed management group Tuesday, but could be related to Sunday's heavy rains.*

*"The fish are starting to decompose. They've been dead for a couple of days at least, and so it's getting harder to pick them up," MacFarlane said.*

<http://www.cbc.ca/news/canada/prince-edward-island/story/2010/07/14/pei-...>



***Government investigating Montrose fish kill***



Department officials collected water and soil samples from in and around the stream on Tuesday.

*“General water chemistry, water quality in the stream itself and any sites of possible land wash are sampled for chemicals in the soil and standing water,” she noted.*

*The samples are sent to Environment Canada for analysis. Results won’t be known for at least a week.*

*The enhancement crew collected about 70 dead trout Tuesday and Wednesday, many of them already badly decomposed. It was anticipated many more fish, possibly even in the thousands, died. Small ones could go undetected and other ones might have floated out of the stream.*

*MacFarlane was back at the stream Wednesday.*

*“Today we’re going to try to get an estimate on the population of fish in the section of the stream which is unaffected, where there’s still live fish,” she said. “We’ll just do some electro-fishing. We’ll find the density of fish in typical habitat above and it will give us an idea on the number of fish that would have been throughout the section that was affected. “*

<http://www.theguardian.pe.ca/News/Local/2010-07-15/article-1567527/Gover...>

## **2007-07-23 Dunk River**

The Dunk River suffered a very significant fish kill over the weekend of July 21-22, 2007. However, there was another fish kill over the weekend, on the Tryon River. The Tryon river fish kill was reported first and environmental officials were investigating that fish kill, when the Dunk River fish kill was reported. As it turns out, the Dunk river fish kill was much worse.

### ***Department Investigating Incident of Dead Fish***

*CHARLOTTETOWN, PEI -- The Department of Environment, Energy and Forestry is investigating an incident where dead fish were discovered in an Island stream Sunday.*

*The incident occurred in the east branch of the Tryon River in the Maple Plains area. A local resident called in the report at approximately 5 p.m. Sunday. Gerald MacDougall, Manager of Fish and Wildlife, says it appears the fish have been dead at least a couple of days.*



*Investigators were onsite Sunday evening and returned first thing Monday morning. They are taking water and fish samples for analysis, collecting dead fish, and working to identify the area of stream affected. During the initial stage of the investigation Sunday, investigators collected about 225 dead fish, including rainbow trout and brook trout.*

*The provincial Department of Environment, Energy and Forestry is continuing the investigation in co-operation with Environment Canada.*

<http://www.gov.pe.ca/news/getrelease.php3?number=5260>

Later the same day, a followup news release

### ***Department Updates Investigations Regarding Fish Mortalities***

*CHARLOTTETOWN, PEI -- The Department of Environment, Energy and Forestry is investigating a second incident of fish mortalities in an Island waterway. Gerald MacDougall, Manager of Fish and Wildlife, provided an update late Monday afternoon on the two incidents that are under investigation.*

*The second incident occurred in a tributary of the Dunk River in the Emerald area. It was discovered late Monday morning. Mr. MacDougall said the initial investigation suggests more than six kilometres of stream and thousands of fish have been affected. He said there are a significant number of large fish including salmon and rainbow trout. Fish samples were sent to the laboratory for analysis Monday afternoon and investigators were collecting other samples as the investigation continued.*

*The other incident of dead fish occurred in the upper east branch of the Tryon River. Mr. MacDougall said approximately four kilometres of stream were affected. Cleanup crews collected about 725 fish in total between Sunday evening and Monday. Investigators collected water, soil and vegetation samples, as well as dead fish. Samples have been sent to the laboratory for analysis.*

*In the case of both incidents, Mr. MacDougall said it appeared the fish were dead for at least a couple of days. The water temperature and dissolved oxygen readings in the streams were within the normal range for this time of year.*

*The provincial Department of Environment, Energy and Forestry is continuing to investigate the incidents.*

*The Department of Fisheries and Oceans will be making arrangements to close the affected areas to angling. It's expected the closures will include the east branch of the Tryon River and the Dunk River upstream from Walls Road, including Scales Pond.*

<http://www.gov.pe.ca/news/getrelease.php3?number=5262>

The next day, the province released another announcement:

### ***INVESTIGATIONS CONTINUE***

*CHARLOTTETOWN, PEI -- As the cleanup continued on the Dunk River Tuesday, provincial crews checked several other major river systems in Prince Edward Island for*

dead fish. Gerald MacDougall, Manager of Fish and Wildlife, says there are no signs of fish mortalities on the other rivers.

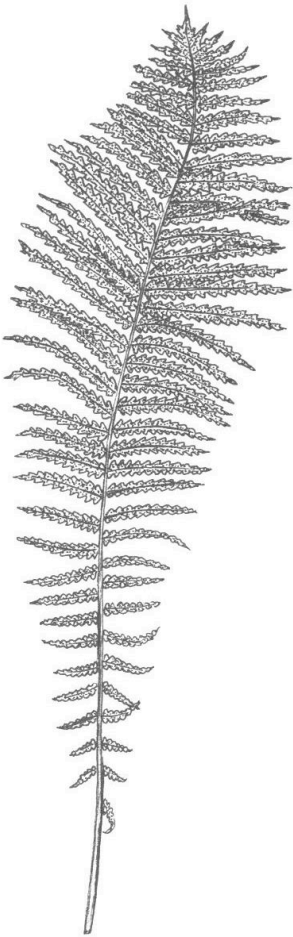
The department is continuing to investigate an incident on the upper east branch of the Tryon River and one on the Dunk River. The first incident, reported Sunday evening, affected approximately four kilometres of stream. Cleanup crews collected about 725 dead fish Sunday and Monday.

Most of the cleanup on the Dunk River is expected to be completed Wednesday. That incident affected more than 12 kilometres of stream from the Emerald area to Scales Pond. Crews walked the river Tuesday to identify the area affected, take additional samples, and collect dead fish. About 500 fish have been picked up so far, however, Mr. MacDougall said the incident affected thousands of fish including many large rainbow and speckled trout and salmon. The water is very cloudy so the cleanup effort has been difficult and slow, he said.

The Dunk River and east branch of the Tryon River are closed to angling. While the Department of Fisheries and Oceans initially planned to close just a portion of the Dunk River, it was decided Tuesday to close the entire river to angling as a precautionary measure until more is known about the impact on the river. At this point, the closures are in effect for the remainder of the year.

The provincial Department of Environment, Energy and Forestry is continuing to investigate the incidents in co-operation with Environment Canada. Water, soil and vegetation samples, as well as dead fish, have been sent to the laboratory for analysis. Mr. MacDougall said it will be at least two to three weeks before results are received.

<http://www.gov.pe.ca/news/getrelease.php3?number=5264>



From CBC News on Tuesday July 24, 2007.

### ***Fish kill 'unfortunate,' says minister***

*Buffer zone legislation is working to prevent fish kills, despite two incidents in P.E.I. rivers on the weekend, says Environment Minister George Webster.*

*Webster calls the two major fish kills this week on the Tryon and Dunk Rivers "unfortunate and disappointing," but also said he believes buffer zone legislation has resulted in fewer fish kills in recent years. The province is making progress in protecting waterways, he said, but the Island received very heavy rain on the weekend and the current systems didn't hold up.*

*"As a result we have an issue that's under investigation and we will determine what happened in the end here. It will take us several weeks but we will find the answer that we need on this particular issue," he said.*

*Webster said all buffer zones in the area of the fish kills will be inspected to ensure buffer zone regulations were met. The province will do whatever it can to ensure the rivers rebound quickly.*

<http://www.cbc.ca/news/canada/prince-edward-island/story/2007/07/24/fish...>

By August 1, 2007, the full extent of the fishkill on the Dunk River was known

### ***'Thousands' affected by fish kill***

*Gerald MacDougall, manager of P.E.I.'s fish and wildlife section, told CBC News on Tuesday that fisheries officers picked up 550 fish after the kills were discovered July 22 and 23, but that represents only a fraction of what was killed.*

*"We do estimate there's thousands of fish that would have been affected," said MacDougall.*

*"Dead fish were found over 12 kilometres of the stream, and the large size of the fish picked up would also indicate that there were more fish killed. Almost all were over five centimetres, so we're missing the smaller fish, which could represent over two-thirds of the population."*

*Of the fish recovered, 263 were brook trout, 140 were rainbow trout, and 85 were salmon. Officials will return to the two rivers Wednesday to find out if there are any fish left alive.*

<http://www.cbc.ca/news/canada/prince-edward-island/story/2007/08/01/fish...>

Darryl Guignon, former professor at the University of Prince Edward Island was interviewed by the CBC.

### ***Buffers not enough to stop fish kills: biologist***

*Buffer zones intended to protect P.E.I. waterways from pesticide runoff need to be enhanced with other measures, says the biologist who reported the first of two fish kills discovered in eastern Prince County this week.*

...

*Guignon suspects a buffer zone around a potato field may have been breached by the heavy rain last Saturday, carrying pesticide into the Dunk and Tryon rivers. Provincial officials said Tuesday they had hoped buffer zone laws would prevent this.*

*When fields are sloped, said Guignon, terracing, strip cropping and wider grass waterways should be used to help block the flow of water. Right now, these are voluntary measures only. Guignon believes they should be mandatory.*

*But Environment Minister George Webster says it's too early to say what recommendations, if any, may be made after the latest incidents.*

<http://www.cbc.ca/news/canada/prince-edward-island/story/2007/07/25/fish...>

### ***Dunk River fish kill shocks biologist***

*Now Guignon, after visiting the Dunk River only a few hours after scooping scores of trout from a tributary in the Tryon River, says he fears the worst.*

*The latest kill happened on the Dunks main branch, above Scales Pond.*

*Gerald MacDougall, provincial manager of fish and wildlife, says the toll could be in the thousands.*

*He also many large trout, three and half pounds or larger, had been found dead.*

*Guignon said trout were likely lying there for a couple of days. Many dead fish will be found for several kilometers along the river, he predicted.*

*What is especially distressing is the number of Atlantic salmon parr discovered, said Guignon.*

*There are only a few producing salmon rivers on the Island and the Dunk River is one of the best.*

<http://www.journalpioneer.com/Outdoor-activities/2007-07-23/article-1398...>

### **GOVERNMENT TO STRENGTHEN THE ENVIRONMENTAL PROTECTION ACT**

*CHARLOTTETOWN, PEI -- Provincial enforcement officials have directed six farm operations to remove potato headlands in nine fields. As a result of the investigations, Government is taking action to strengthen the Environmental Protection Act. The changes to the act will correct deficiencies in the existing legislation.*

*John Clements is head of the Investigation and Enforcement Section in the Department of Environment, Energy and Forestry. He said one field under investigation is on the Valleyfield River in Kings County and the others are on the Dunk River, in the area of the border between Prince and Queens Counties.*



*Mr. Clements said some of the fields do not have the proper buffer zone in place; and in all cases, there are problems with the headland, which is the area at the bottom of a field that is planted in a row crop such as potatoes. When the headland is within 200 metres of a watercourse, Mr. Clements said it should be planted in a perennial grass to help capture runoff. In these cases, Mr. Clements said the rows end in clay and there is then a potato headland – that is rows of potatoes planted across the bottom of the field.*

<http://www.gov.pe.ca/news/getrelease.php3?number=5297>

### **Webster calls for wider buffer zones**

*A new plan to prevent future fish kills in Island waterways could include wider buffers zones between farm fields and waterways, P.E.I. Environment Minister George Webster said on Friday.*

*Speaking on CBC Radio One's Island Morning, Webster said his plan goes beyond changing the Environmental Protection Act. He said it's a four-pronged approach to protect Island streams and rivers from pesticide runoff from farmers' fields.*

*"We are currently looking at buffer zone widening. I personally think that's something that has to be done," said Webster. He also noted Armand DesRoches has been appointed to head up a commission to look at nitrates in the environment.*

<http://www.cbc.ca/news/canada/prince-edward-island/story/2007/09/14/webs...>

### **Farmer named in buffer zone dispute**

*P.E.I.'s Department of Environment has ordered the brother of the provincial environment minister to remove a potato crop deemed to be too close to a water course.*

*The order comes as part of an investigation into major fish kills on the Dunk and Tryon rivers. If he does not comply, Webster faces a fine of \$220 a day.*

*The province asked nine farmers to pull crops, and all of complied except for Webster. Provincial officials told CBC News earlier this week Webster disputes that there is a problem in his field. Webster is refusing to comment on the issue.*

*To date there's been no connection made between any of the fields in question and the fish kills.*

<http://www.cbc.ca/news/canada/prince-edward-island/story/2007/08/24/webs...>

### **Farmer denies contamination claims**

*A P.E.I. farmer accused of breaking environmental regulations said Friday his fields pose no threat to the environment, but he will consider pulling up part of his crop.*

...

*As part of their investigation, officials did aerial surveys of the province, looking for fields adjacent to waterways that did not provide a sufficient buffer zone.*

*The initial survey identified nine farms and the farmers were asked to comply with regulations and pull up some of their crops and replace them with grass. Webster was given 72 hours to comply or face fines of \$220 a day*

<http://www.cbc.ca/news/canada/prince-edward-island/story/2007/08/24/webs...>



## **Can't pin down cause of fish kills: officials**

*Environment Canada cannot determine what caused two major fish kills in central P.E.I. in July, the department announced Monday.*

*In a news release, Environment Canada said the amount of time that passed before the dead fish were discovered — probably about two days — made it impossible to determine any certain cause, because pesticides in the river would have degraded in that time.*

*Because the cause of the kills cannot be determined with certainty, there will be no charges laid*

<http://www.cbc.ca/news/canada/prince-edward-island/story/2007/10/15/fish...>

## **Laboratory Test Results Regarding Fish Kills Announced**

*DARTMOUTH, NS, October 15, 2007- Environment Canada announced today that it has completed its testing of samples taken after fish kills at Dunk River and Tryon River, Prince Edward Island, in July 2007 and it concluded that it cannot determine the exact cause of either incident.*

...

*The pesticide Chlorothalonil was found in samples taken from the Tryon River and the pesticide Metribuzin was found in samples taken from the Dunk River. The levels of both pesticides detected were not high enough to cause fish kills.*



*The low amount of pesticide found in the fish tissue samples is not surprising given the amount of time between when the fish kills occurred and when the samples were gathered. The Tryon River fish kill was reported two days after it took place, and the Dunk River fish kill was reported three days after it occurred. Government officials gathered samples immediately after each kill was initially reported. However because the fish were dead for at least two days before the sampling began, the amount of pesticide in them may have degraded in that time.*

<http://www.ec.gc.ca/default.asp?lang=en&n=714D9AAE-1&news=68CA9BC9-9371-...>

*Details About the Analyses of Samples Taken Regarding the Fish Kills on the Tryon River and Dunk River in July 2007*

*The results for the water samples from the Tryon River showed levels of the pesticide Chlorothalonil five times higher than the Guideline for Protection of Freshwater Aquatic Life, established by the Canadian Council of Ministers of the Environment. These samples, however, did not contain levels of Chlorothalonil sufficient to kill fish. Officials*

*believe that the pesticide was present at higher levels immediately after the rainfall event, which occurred three days before the samples were collected.*

*No Chlorothalonil was detected in the Dunk River water samples, nor in any of the fish tissue samples. Water samples taken at the Dunk River contained the pesticide Metribuzin, at levels three times higher than the Guideline for Protection of Freshwater Aquatic Life. However, Metribuzin is less toxic than Chlorothalonil and is not considered the cause of the fish kill in the Dunk River.*

*The pesticide Linuron was also detected in very small amounts in Dunk River and Tryon River water samples. These detections were in amounts much lower than the Guideline for Protection of Freshwater Aquatic Life and the amounts detected would not be considered toxic to fish. Linuron was also found in fish tissue samples, but also at levels that would not be considered toxic to fish. Additionally, three other pesticides, Carbofuran, Metalaxyl and B-Endosulfan, were also found in trace amounts in some water and sediment samples, at levels that would not be toxic to any aquatic life.*

## **2002 Eight Fishkills**

2002 was a particularly bad year for fishkills, with 8 being reported.

### **DEPARTMENT INVESTIGATING FISH MORTALITIES**

*July 11, 2002*

*CHARLOTTETOWN, PEI -- The Department of Fisheries, Aquaculture and Environment is investigating an incident of fish mortalities discovered Wednesday.*

*The Department received a report late Wednesday afternoon of dead fish in the upper end of the Wilmot River in Norboro. Spokesperson Jim Young, Director of the Water Resources Division, said the call came from a member of a conservation group which was doing habitat improvement work in the area of Murphy's Bridge.*

*Young said investigators collected approximately 200-300 dead fish including sticklebacks and brook trout. Investigators have not yet determined the extent of the incident due to a lack of clarity in the water.*

*"At this point, we do not know the cause of death. It appears that water temperature and dissolved oxygen were not factors, but beyond that we cannot make any determination until we receive lab results," Young said.*

*Investigators collected water and sediment samples, as well as dead fish to be sent to the Environment Canada laboratory in Moncton for analysis. It is expected to be a couple of weeks before results are back.*

*The Department of Fisheries, Aquaculture and Environment is continuing to investigate the incident in cooperation with Environment Canada and the federal Department of Fisheries and Oceans.*



## **Department Updates Investigation into Fish Mortalities**

*July 15, 2002*

*CHARLOTTETOWN, PEI -- The Department of Fisheries, Aquaculture and Environment provided an update Monday on an incident of fish mortalities discovered last Wednesday, July 10.*

*The incident occurred in the upper end of the Wilmot River in Norboro. It was reported by a member of a conservation group which was doing habitat improvement work in the area of Murphy's Bridge. Spokesperson Jim Young, director of the Water Resources Division, said results of autopsies on six of the dead fish were received Monday from the Atlantic Veterinary College.*

*"According to the autopsy report, the fish were in good condition. They were feeding well at the time of death and there were no signs of an infectious disease," Young said. "The report indicates that the condition of the fish was consistent with either acute anoxia or lack of oxygen, which the investigation has ruled out, or a toxic exposure."*

*Water, sediment and fish tissue samples were sent last week to the Environment Canada laboratory in Moncton for analysis. It is expected to take two to three weeks. Until they receive results of the lab analysis, Young said investigators cannot make any further determination as to the cause of death.*

*Meanwhile, the initial cleanup on the river was completed Monday. Young reported that investigators collected approximately 4,500 fish in total. The majority of the fish are brook trout. There are also some sticklebacks and a small number of rainbow trout.*

*"The affected area appears to be a five-kilometre stretch ending in the area of Miller's Pond in Kelvin Grove. Investigators have found live fish in the area between Miller's Pond and Freetown Bridge," Young added.*

*Approximately 25 people have been working the last several days on the river cleanup. They include members of local conservation groups, a crew with the Young Environmentalists Program, and staff of the Departments of Fisheries, Aquaculture and Environment and Transportation and Public Works.*

*The Department of Fisheries, Aquaculture and Environment is continuing to investigate the incident in cooperation with Environment Canada and the federal Department of Fisheries and Oceans.*

## **Department Investigating Fish Mortality**

*July 19, 2002*

*CHARLOTTETOWN, PEI -- The Department of Fisheries, Aquaculture and Environment is investigating an incident of fish mortalities in the Milton area.*

*The report of dead fish was called into the toll-free Environmental Emergency Response number Friday morning. Spokesperson George Somers of the Water Resources*

*Division said the area affected is a tributary of the North River located north of Route 2 in Milton.*

*"During the initial stage of the investigation Friday, investigators observed approximately 200 dead fish over a 3.5-kilometre section of the stream," Somers said, adding that they were mostly brook trout and some sticklebacks.*

*Somers said investigators have determined that the water temperature and dissolved oxygen readings were within the normal range for this time of year.*

*"We do not know the cause of death at this point. Water and sediment samples, and dead fish have been sent to the Environment Canada laboratory in Moncton for analysis. That is expected to take two to three weeks," Somers said.*

*The Department of Fisheries, Aquaculture and Environment is continuing to investigate the incident in cooperation with Environment Canada and the federal Department of Fisheries and Oceans.*

### ***Department Updates Investigations***

*July 22, 2002*

*CHARLOTTETOWN, PEI -- The Department of Fisheries, Aquaculture and Environment received reports of three incidents of fish mortalities over the weekend, bringing the number of investigations to five.*

*The department received reports Friday evening of dead fish in the Wilmot River in Wilmot Valley and a tributary of the Clyde River in the Kingston area. A call Sunday night alerted the department to dead fish in a tributary of the Trout River in the O'Leary area.*

*Spokesperson Bruce Raymond, of the department's Water Resources Division, said the incident in the Wilmot River affected a four-kilometre area east of Cairns Road through Marchbank's Pond in Wilmot Valley.*

*"Approximately 6,100 fish were collected over the weekend. That includes mostly brook trout and a small number of rainbow trout and sticklebacks," he said.*

*The second incident reported Friday night involved a tributary of the Clyde River in the Kingston area. Raymond said approximately 300 fish were collected at that site, with roughly an equal number of sticklebacks and brook trout.*

*In both incidents reported Friday, Raymond said water temperature and dissolved oxygen did not appear to be factors in the fish mortalities.*

*"Water and sediment samples and dead fish were collected at each site and sent to the Environment Canada laboratory in Moncton for analysis. Until we receive those results, we cannot make any further determination as to the cause of death."*

*The incident reported Sunday night involved a three-kilometre area in a tributary of the Trout River above Leard's Pond. Raymond said the fish were quite decomposed, indicating that they most likely died last week.*

*"Because of the condition of the fish and the time that has elapsed, it is impossible to get an accurate count or to collect samples for analysis," he added. The cleanup is continuing at the site of the three weekend incidents.*

*Updating the status of earlier incidents of fish mortalities, Raymond said the initial cleanup of the North River was completed over the weekend. The incident there was reported Friday morning. The area affected is a 3.5-kilometre section of the stream north of Route 2 in Milton.*

*Raymond said approximately 1,400 fish were collected, mostly brook trout and sticklebacks.*

*Raymond said the department hopes to receive results later this week of laboratory analysis of water, sediment and fish tissue samples from an earlier incident of fish mortalities in the Wilmot River. That event, reported July 10, involved a five-kilometre stretch in the upper end of the river above Miller's Pond. Approximately 4,500 dead fish were collected at that time.*

*Raymond said results of analysis from samples taken at the three incidents reported Friday are expected to take two to three weeks.*

### **Department Provides Update on Investigation into Fish Mortalities**

*July 25, 2002*

*CHARLOTTETOWN, PEI -- The Department of Fisheries, Aquaculture and Environment provided an update Thursday on investigations into recent incidents of fish mortalities in Island streams.*

*The department received a final report from the Environment Canada laboratory in Moncton Thursday afternoon on analysis of water samples collected during the initial investigation into the incident of fish mortalities in Wilmot River July 10. Approximately 4,500 dead fish were collected over a five-kilometre stretch in the upper end of the Wilmot River from Norboro to the area of Miller's Pond in Kelvin Grove.*

*Spokesperson Bruce Raymond, of the department's Water Resources Division, said lab results indicate the insecticide azinphos-methyl was detected in high concentrations in water samples taken from pools of standing water at the edge of fields adjacent to the stream. The department is still awaiting results of sediment and fish tissue samples from the July 10 incident in the Wilmot River.*

*In another incident, Raymond said the department is investigating fish mortalities at Huntley River in West Prince. A local watershed crew discovered the dead fish and notified the department Wednesday afternoon. The area affected is above Gordon's Pond in Huntley.*

*"To date, investigators have collected 90 dead brook trout in a 1.5-kilometre section; however, there were also live fish seen in the same area," he said.*

*Raymond said temperature and dissolved oxygen readings were within the normal range. Water, sediment and fish samples were collected and sent to the Environment Canada laboratory for analysis and dead fish were taken to the Atlantic Veterinary College for autopsies. Department staff were continuing to investigate areas further upstream Thursday.*

*Meanwhile, the Minister of Fisheries, Aquaculture and Environment, Chester Gillan said the department's Investigation and Enforcement Section is inspecting fields throughout the province to ensure compliance with buffer zone legislation.*

*"Enforcement officers surveyed some of the Island's river systems by helicopter Wednesday, including those where we have had fish mortalities this year," the Minister said. "They have identified a number of areas where there appear to be violations and are continuing to investigate those cases."*

*Minister Gillan said where a buffer zone violation is noted, the landowner may be charged and/or ordered to remove rows of crop to bring the field into compliance with the legislation.*

## **Department Receives Results of Water Sample Analysis**

*August 2, 2002*

### **DEPARTMENT RECEIVES RESULTS OF WATER SAMPLE ANALYSIS**

*CHARLOTTETOWN, PEI -- The Department of Fisheries, Aquaculture and Environment has received results of water sample analysis from three incidents of fish mortalities last month.*

*The water quality results reported by Environment Canada concern samples collected during the investigation into incidents of fish mortalities in the North, Wilmot, and Clyde Rivers, which were reported on July 19.*

*Spokesperson Bruce Raymond noted that the department is awaiting results of analysis of sediment and fish tissue samples from all of the incidents, as well as results of analysis of the water samples taken from North River.*

*Looking at the report to date from North River, Raymond said lab results indicate the fungicide chlorothalonil was detected in a water sample taken from a pool of standing water at the edge of a field adjacent to the stream, and in water samples taken from the stream. The incident in North River affected a 3.5-kilometre section of stream north of Route 2 in Milton. Approximately 1,500 dead fish were collected.*

*In the results from the incident in the Wilmot River July 19, Raymond said the Environment Canada report indicates that the insecticide azinphos-methyl was detected in water samples from the steam system. In that incident, 6,500 dead fish were*

*collected in a four-kilometre area east of Cairns Road through Marchbank's Pond in Wilmot Valley.*

*Turning to the Clyde River, Raymond said the laboratory results show chlorothalonil was present in water samples taken from pools of standing water at the edge of fields adjacent to the stream. In this case, approximately 300 dead fish were collected over a 3.5-kilometre section of stream in the Kingston area.*

*The Department of Fisheries, Aquaculture and Environment is continuing to investigate all of the incidents of fish mortalities in cooperation with Environment Canada and the federal Department of Fisheries and Oceans.*

### ***Department Investigating Fish Mortalities***

*August 21, 2002*

*CHARLOTTETOWN, PEI -- Minister of Fisheries, Aquaculture and Environment Chester Gillan reported today that his department is investigating three incidents of fish mortalities discovered Tuesday and Wednesday.*

*The department received a call Wednesday of dead fish in a pond in the east branch of the Westmoreland River in Westmoreland. Investigators who responded to the call observed 30 dead fish in and below the pond.*

*"An environmental response team was sent to the site Wednesday afternoon. As part of the investigation, they will be taking water temperature and dissolved oxygen readings and collecting water, soil and fish samples to be sent for analysis," said Minister Gillan.*

*Meanwhile, environment officials collected approximately 200 dead fish from an incident in the west branch of the Westmoreland River in the Crapaud area. That incident was discovered Tuesday. Investigators collected water and sediment samples, as well as dead fish to be sent to the Environment Canada laboratory in Moncton for analysis.*

*Another incident was reported Tuesday afternoon in the east branch of the Tryon River between North Tryon and Gamble's Corner. Investigators collected 33 dead fish over the last two days but were having difficulty determining the extent of the situation because of poor water clarity.*

*"Investigators will continue to check on the site, and once the stream clears they will be able to get a better assessment of the situation," said Minister Gillan.*

*Water and sediment samples and dead fish were collected from the Tryon River site Tuesday to be sent for analysis. In both incidents reported Tuesday, water temperature and dissolved oxygen levels were normal for this time of year.*

*The Department of Fisheries, Aquaculture and Environment is investigating the three incidents of fish mortalities in cooperation with Environment Canada and the federal Department of Fisheries and Oceans.*

## **Department Receives Final Laboratory Results**

November 8, 2002

CHARLOTTETOWN, PEI -- The Department of Fisheries, Aquaculture and Environment has received the last of the laboratory analysis from nine incidents of fish mortalities this summer.

Minister of Environment Chester Gillan said results of fish tissue analyses have been received from the Environment Canada laboratory in Moncton. Minister Gillan said the lab report indicates the insecticide azinphos-methyl was detected in fish collected during the initial investigation into the incident in the Wilmot River July 10. That event saw 4,500 fish collected over a five-kilometre stretch in the upper end of the Wilmot River, from Norboro to the area of Miller's Pond in Kelvin Grove. Results of water sample analyses reported in August also indicated that azinphos-methyl was detected in high concentrations in water samples taken from pools of standing water at the edge of fields adjacent to the stream.

Minister Gillan said there were no pesticides detected in the fish tissue from the other incidents of fish mortalities; however, he cautions that result is not unexpected.

"Pesticide products continue to degrade in fish tissue even after the fish has died, so from the time an incident occurs until investigators collect the samples and the laboratory is able to properly preserve them, any products that may have been in the fish tissue continue to break down," said Minister Gillan. "Beyond that, the analysis itself is difficult. There are so many organic compounds in a fish tissue sample as compared to a water sample, that it is much more difficult for laboratory technicians to extract any one particular product."

Looking at the results of the laboratory analysis of water and sediment samples, as well as the circumstances surrounding the incidents, Minister Gillan said experts in the Department of Fisheries, Aquaculture and Environment have concluded that pesticides were the likely cause of at least seven of the nine incidents of fish mortalities this summer.

"If we look at the circumstances of these incidents, they followed periods of heavy rainfall where there was evidence of runoff," he said. "As well, the water temperature and dissolved oxygen readings were normal in all cases, and there were no signs of infectious disease. And finally, pesticides were detected in water samples taken during the investigations."

Because the number of fish collected was relatively small and limited to a short length of stream, Minister Gillan said there is some question about the cause of the fish mortalities which occurred in the Tryon River and the east branch of the Westmoreland River on August 20.

"While pesticides may have been the cause of the fish mortalities, investigators have not been able to determine that conclusively in these two incidents," the minister added.

Minister Gillan said Environment Canada is continuing to consider charges in four of the incidents of fish mortalities: the incidents reported July 10 and July 19 in the Wilmot

*River, and the incidents reported July 19 in the Clyde and North Rivers. He said the investigation has been closed on the other cases, either because the cause of the fish mortalities is not clear or there is insufficient evidence to proceed.*

## **2000 Four Fishkills**

2000 was another bad year for fish kills on PEI.

### ***Profit's Pond Test Results Released***

*July 28, 2000*

*CHARLOTTETOWN, PEI -- The Department of Fisheries, Aquaculture and Environment released results Friday of pesticide analysis of samples collected from the Profit's Pond semi-natural salmon and trout rearing facility in West Prince.*

*Samples were collected as part of an investigation into fish mortalities that occurred earlier this month in two holding tanks which draw water from the pond.*

*Clair Murphy, Director of the Department's Water Resources Division, released the results of the pesticide analysis. He said a sample collected from the fish tank where approximately 1,500 four to six-inch brook trout died showed low levels of metribuzin, a pre and post-emergent herbicide used for weed control; and chlorothalonil, a commonly-used fungicide. A second sample collected from the centre of Profit's Pond, where some 39,000 salmon par are kept, showed a low concentration of metribuzin.*

*Murphy said the concentration of both chemicals was low compared to the acute toxicity levels for trout.*

*"The Canadian Water Quality Guidelines for the Protection of Freshwater Aquatic Life indicate that the acute toxicity level for metribuzin is 42,000 to 76,000 parts per billion (ppb). The highest concentration of this compound was found in the fish tank at 0.6 ppb. A concentration of 0.3 ppb was found in the pond."*

*With regard to chlorothalonil, Murphy said the acute toxicity threshold for trout is 250 parts per billion. The concentration found in the fish tank was 3.3 ppb, and there was no detection of the fungicide in the pond water.*

*"Based on the Aquatic Life Guidelines, the concentrations of pesticides found in the samples analyzed would not represent a health risk to fish," Murphy said.*

*Workers at Profit's Pond discovered the fish mortalities the morning of July 18. Somewhere in the range of 5,000 to 6,000 fish were lost. Murphy noted there was a heavy rain July 17 which resulted in the water having high suspended sediment content.*

*Results of autopsies conducted on the dead fish at the Atlantic Veterinary College earlier this month indicated that the primary cause of death was acute gill disease.*

*Where the functional capacity of gill tissue to transfer oxygen from the water into the blood stream is impaired by gill disease or some other factor, the fish eventually suffocate. Murphy explained any environmental factors such as high levels of suspended sediment or reduced dissolved oxygen levels in the water would further reduce the gill efficiency.*

*"Both fish tanks, as well as the pond water, showed high levels of suspended sediment during the event. There was also some evidence to suggest the dissolved oxygen levels may have been somewhat reduced," he said.*

*Murphy indicated the investigation of cropping activities in the Long Creek watershed upstream of Profit's Pond has not revealed clear evidence of serious runoff from any particular location.*

*"Investigators have talked with several farmers in the watershed and have received excellent cooperation," he added.*

*The investigation is continuing.*

### **Souris River Tests Results Released**

*August 3, 2000*

*The Department of Fisheries, Aquaculture and Environment released results Thursday of pesticide analysis of water samples taken from the Souris River where several hundred fish died last month.*

*A stream enhancement crew discovered the dead fish in the east branch of the Souris River in the Harmony Junction area the morning of July 20. Investigators collected approximately 300 fish in excess of four inches, including rainbow trout, speckled trout and salmon. A number of smaller fish were also lost but were not counted.*

*Bruce Raymond, head of rivers and estuaries in the Department's Water Resources Division, released the results of the pesticide analysis. "Two agricultural pesticides were detected in water samples collected during the investigation," Raymond stated in a news release.*

*Lab results from the Atlantic Veterinary College toxicology lab showed a concentration of dithiocarbamates and metribuzin in the water samples.*

*Raymond explained dithiocarbamates are a group of pesticides which include mancozeb, the active ingredient in a fungicide which was reported to have been sprayed in the area the morning before the fish mortalities were discovered.*

*"The maximum concentration of dithiocarbamates in the water samples, which were collected 30 hours after a rainfall, was 131 parts per billion(ppb). Concentrations may have been higher at the time of death," he said. "Compared to reported toxicity values, this concentration is of concern for fish health."*



*With regard to metribuzin, a herbicide used for weed control, Raymond said the lab results showed a maximum concentration of 9 ppb in the water samples. He added this concentration is below that considered to be of concern for fish health.*

*Raymond noted there was heavy rain in the Souris area the morning of July 19, the day before the fish mortalities were discovered. "Between 9 and 10 a.m., there was 7 mm of rainfall, with 6.2 mm of rain falling in the short span of nine minutes," he said.*

*Raymond said a farmer in the area reported he had applied mancozeb immediately prior to the rainfall. The farm weather forecast for Souris that morning was a 29 per cent probability of rain between 5 and 8 a.m. with zero per cent probability after that.*

*In other results of the investigation, Raymond indicated water temperature and dissolved oxygen levels in the water were normal.*

### **Department Investigating Fish Mortalities**

*August 10, 2000*

*CHARLOTTETOWN, PEI -- The Department of Fisheries, Aquaculture and Environment is investigating three separate incidents of fish mortalities discovered Wednesday.*

*The department received reports of dead fish in Indian River and French River Wednesday afternoon and a third report of dead fish in Mount Herbert that evening.*

*Spokesperson Bruce Raymond, head of the Department's Rivers and Estuaries Section, said reports of the incidents in Indian River and French River came in at approximately 2 pm. Raymond said a watershed crew discovered the dead fish in Indian River, while a member of the public reported the incident in French River.*

*The report of fish mortalities in Mount Herbert came in the form of an anonymous call to the toll-free Environmental Emergency Response number (1-800-565-1633).*

*In all three incidents, Raymond said investigators have collected water samples as well as dead fish to be taken to the Atlantic Veterinary College for analysis. The first samples were collected in Indian River at approximately 2:30 pm.*

*"At this point, it appears water temperature and dissolved oxygen were not factors in the fish mortalities in either Indian River or French River. It is still too early to make that determination in Mount Herbert," Raymond said.*

*"Beyond that, until we receive the results of the fish autopsies and water sample analysis by the Atlantic Veterinary College we cannot determine what was the cause of death in any of the incidents," he added.*

*The provincial Department of Fisheries, Aquaculture and Environment is continuing the investigations in cooperation with Environment Canada.*

## **Results of Pesticide Analysis Released**

*August 31, 2000*

*CHARLOTTETOWN, PEI -- The Department of Fisheries, Aquaculture and Environment has received results of pesticide analysis of samples collected during the investigations into three incidents of fish mortalities earlier this month.*

*The department received reports of dead fish in Indian River, French River and Mount Herbert August 9.*

*In Indian River, approximately 2,500 trout were collected over a two-kilometre stretch of stream. There was a heavy rainfall in the area the day before the fish were discovered, with the weather station in Kensington reporting 16.2 mm of rain.*

*As part of the investigation into the fish mortalities, water, sediment and fish samples were collected and taken to the Atlantic Veterinary College (AVC) for analysis.*

*Clair Murphy, director of the department's Water Resources Division, said results from the AVC toxicology lab indicate pesticides were detected in water samples taken from two locations in Indian River.*

*At the uppermost sampling location, Murphy said a number of pesticides were detected in a sample taken from a pool of standing water adjacent to the stream. However, the concentrations were all well below levels which would be toxic to fish.*

*The second samples were taken from a pool of standing water at the base of a large drainage area approximately 350 metres above the main stream. Murphy said a number of products were detected with two insecticides, azinphos-methyl and endosulfan, being present at high concentrations.*

*Murphy said the concentration of azinphos-methyl was measured at 73.2 parts per billion (ppb), which is several times greater than reported toxicity values. The concentration of endosulfan at 8.2 ppb was also several times higher than reported toxicity levels.*

*"Given the concentrations of these insecticides in the pool of standing water, it is quite probable surface water runoff containing pesticides reached the main stream," Murphy said.*

*Samples collected from the stream itself did not show any significant levels of pesticides, but Murphy said that is to be expected.*

*"The dead fish were discovered approximately 24 hours after the heavy rainfall so anything that was present in the stream water would have been flushed through the system by the time the investigation could be initiated," he explained.*

*Murphy said the autopsies of the fish specimens did not provide conclusive information as to the precise cause of death. Although the fish had begun to decay prior to their collection, autopsy observations were consistent with death by anoxia or a toxic event, he said.*

*"The examination of the stomach contents did suggest that the fish were eating normally prior to death," Murphy noted. "In addition, the lab report indicates that there was no evidence of infectious disease in the fish."*

*In Mount Herbert, the report of dead fish came to the toll-free Environmental Emergency Response number late in the evening of August 9. A total of 58 fish were collected: 42 trout, from four to 23 cm in length, and 16 sticklebacks.*

*Murphy said the investigation focused on a carrot field on Fullerton's Creek which showed evidence of runoff and erosion. There was no standing water from which to take samples during the initial investigation. However, investigators took sediment samples from the field, the buffer zone between the field and the stream, and the stream itself.*

*As well, Murphy said a thunder storm moved through the area when investigators were on site and they were able to collect samples of runoff water.*

*Murphy said the report from the AVC toxicology lab indicates that three compounds, one fungicide and two herbicides, were detected in both the sediment samples and runoff water samples.*

*"The fungicide, chlorothalonil, was found at moderate to high concentrations in relation to its toxicity levels, while the herbicides, linuron and prometryn, were detected at low concentrations relative to their toxicities to fish," he added.*

*No pesticides were detected in the water samples taken from the stream.*

*Murphy said autopsies of the fish specimens from Fullerton's Creek indicate that the deaths were sudden, most likely the result of anoxia or the introduction of a toxic substance. There was no sign of infectious disease, he said.*

*In the case of the fish mortalities in French River, a total of 50 trout, from five to 40 cm in length, were collected August 9. Two kilometres east of where the dead fish were discovered, more than 50 mm of rainfall was recorded over a period of approximately 35 minutes the previous evening.*

*Murphy said the lab reports on French River indicate trace amounts of pesticides were detected in sediment samples and samples of foliage taken from a suspect field. No pesticides were detected in the water samples or sediment samples taken from the stream.*

*Murphy said autopsies of the fish specimens from French River again indicate the deaths were sudden, most likely the result of anoxia or the introduction of a toxic substance.*

*The Department of Fisheries, Aquaculture and Environment is continuing the investigation into all three incidents of fish mortalities.*

## **1999 Eight Fish kills**

1999 was a very bad year for fish kills on PEI with eight fish kills reported and investigated.

### ***Fish Kill Investigation Continues***

*Wednesday, July 14, 1999*

*CHARLOTTETOWN, PEI -- Water, sediment, fish and plant tissue samples are currently being analyzed to determine the cause of the death of over one thousand fish found earlier this week in the Valleyfield River. Results from the tests are expected in two weeks. Due to the heavy losses of fish stocks, angling in the affected section of the river has been closed for the remainder of the 1999 angling season. This closure is in effect immediately and covers the section of the Valleyfield River below Egolf's Pond downstream to where the Valleyfield River joins the Montague River at Montague.*

*Officials from the Department of Technology and Environment have been on the scene investigating since Monday morning when the first dead fish were reported. "We are continuing our investigation and while results from the analysis should identify the cause of death in the fish, we are also looking into all circumstances surrounding the incident," said Bruce Raymond, Manager of the Surface Water Section.*

*Early findings from the investigation point to the presence of residual chemicals from nearby potato fields as a possible source of contamination in the river. There appears to have been severe landwash from nearby potato fields following heavy rain fall over the weekend and it is suspected that residual chemicals adhering to soil particles flowed into the river. Dead fish*

*have been discovered over a lengthy portion of the Valleyfield River, starting in the Heatherdale area, and continuing to head of tide in Montague.*

*"Once our investigation is complete and the sample analysis available, a full report on the incident will be released," noted Mr. Raymond.*

## **Hammill Expresses Concern over Fishkills**

Thursday, July 22, 1999

CHARLOTTETOWN, PEI -- Agriculture and Forestry Minister Eric Hammill today expressed major concerns over the number of recent fishkills in Prince Edward Island streams, and said action is being taken to help prevent similar incidences.

"This is a very significant problem and we are taking it very, very seriously," said Mr. Hammill. "I want to make it perfectly clear that this is totally unacceptable, and government and industry are taking steps to address the problem."

The minister said government and industry have been working closely together to protect Island watercourses. He said measures such as the establishment of the new Agriculture and Environmental Conservation program, the Environmental Farm Plan program, and the hiring of an Integrated Pest Management specialist to work with the industry in support of its goal to reduce pesticide use, along with a greater recognition among producers of the importance of soil conservation, are all steps in the right direction. "The implementation of the new buffer zone legislation in the next crop year will also result in better protection to fish and wildlife habit," he said, while acknowledging that more must be done now to deal with problem.

Mr. Hammill said that during a meeting with Technology and Environment Minister Mitch Murphy this week, Ministers directed that an action plan be developed involving both levels of government and the industry. He said further details will be announced in the near future.



## **Action Plan Responds to Fishkills**

Monday, July 26, 1999

CHARLOTTETOWN, PEI -- Ministers of the Department of Technology and Environment and the Department of Agriculture and Forestry today announced an action plan to both understand the facts of recent fish kills in several Island streams and identify the steps required to reduce the risk to aquatic life.

Ministers Mitch Murphy and Eric Hammill identified a five-point plan which acknowledges that runoff containing agricultural pesticides was likely the source of the recent fish mortalities.

*"Island farmers and our government have both recognized the necessity of establishing sustainable production systems for all agricultural products. The fish kills of last week are completely unacceptable to everyone, so we must find solutions," said Mr. Hammill.*

*The five-point plan includes:*

- 1. Completing a detailed assessment of the circumstances around each fish kill and identifying common factors and causal agents.*
- 2. Identifying agronomic practices which were successful in preventing watercourse contamination during heavy rainfall events.*
- 3. Identifying and recommending crop protection products with low toxicity to reduce risk to aquatic life.*
- 4. Utilizing the Department of Agriculture & Forestry's geographic information system (GIS) to identify high-risk watersheds and establish specific plans for protection of aquatic life.*
- 5. Establishing a joint Action Committee consisting of industry and provincial and federal government representatives to oversee the work and ensure implementation. The committee includes Scott Howatt and John Phillips, Potato Producers Association; Mette Ching, Federation of Agriculture; Alan Rennie, Soil and Crop Improvement Association; David Thompson, Crop Protection Institute of Canada; Ralph Yeo, Farm Practices Review Board; Christiane DesLaurier, Agriculture and Agri-Food Canada; Peter Johnson, Environment Canada; Gordon Fairchild, Eastern Canada Soil and Water Conservation Centre; Claire Franklin, Pesticide Management Regulatory Agency; and Richard Veinot, Clair Murphy and George Trainor representing the provincial departments of agriculture, environment and transportation respectively.*

*The Action Committee will be chaired by Dr. Carl Willis, chair of the Province's Pesticides Advisory Committee. He is the former director of the Agriculture and Agri-Food Canada research centre in Charlottetown.*

*"I am very pleased with the response we have had from industry and government agencies in agreeing to support immediate work on this problem," said Mr. Murphy. "The buffer zone legislation and the Agriculture and Environmental Resource Conservation Program are steps in the right direction, but we need to understand the factors leading to these fish mortalities so we don't miss any necessary step."*

*Work to implement the Action Plan will begin immediately. The Committee will meet on Friday of this week.*

### ***Toxic Amounts of Pesticides Found in Lord's Pond in Tryon River***

*Tuesday, August 3, 1999*

*CHARLOTTETOWN, PEI -- Initial results have been received on samples collected during the investigation into fish kills in both the Tryon and Westmoreland River systems. Results from the Atlantic Veterinary College indicate that the sudden death of*

*the fish is consistent with a toxic insult to the fish, and dissolved oxygen and temperature were not believed to be a significant factor.*

*"Examination of the fish from both sites by the Atlantic Veterinary College indicates that the fish appeared healthy prior to death," said Mitch Murphy, Minister of Technology and Environment.*

*In Tryon, a number of water and sediment samples were collected and preliminary results indicate the presence of azinphos methyl and carbofuran in water samples from Lord's Pond. Azinphos methyl was found at concentrations that would be considered toxic to fish, while carbofuran concentrations were below aquatic water quality guideline values. Azinphos methyl was also found at toxic concentrations in a pool of standing water collected from a washout gully below a potato field located at the origin of the fish kill. Pesticides were not detected in the preliminary analysis of water or sediment samples from a pool of standing water located a short distance upstream from the suspected field.*

*In the Westmoreland River, four pesticide products were detected in a standing water sample taken from a gully that was created as a result of runoff from a suspected field. The four products detected were carbofuran, chlorothalonil, endosulfan and metribuzin. Chlorothalonil, endosulfan and carbofuran were all above aquatic water quality guideline values. Chlorothalonil and azinphos methyl were also detected in sediment samples collected during the Westmoreland investigation.*

*During the investigations, farmers in the affected areas have cooperated fully, and all of the pesticides that were detected in the samples were reported to be used by the farmers.*

*In the Westmoreland River, stream water samples were not analysed as there had been a significant time lapse between the likely timing of the fish kill and the time the Department of Technology and Environment became aware of the kill.*

*"The only way to get really good test results is to get samples as soon as possible when there is a fish kill," added Murphy. "I would encourage anyone noticing a number of dead fish to notify the Department's Environmental Emergency Response number at 1-800-565-1633, which is printed in the front of the Telephone Directory."*

*Additional test results from the various fish kill investigations are expected by late next week.*

### **1962-1977 Fishkills**

Two biology professors from U.P.E.I. released a study on the recovery of a stream after a pesticide related fishkill in 1977.

*Johnson, CE and JC Cheverie. 1980. Repopulation of a Coastal Stream by Brook Trout and Rainbow Trout after Endosulfan Poisoning, The Progressive Fish Culturist, 42(2): 107-110*

