

JAN 13 2009



Pennsylvania Department of Environmental Protection

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Northwest Regional Office

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Mr. William O'Donnell, Chief Clerk
Butler County Commissioners
Butler County Court House
124 West Diamond Street
P.O. Box 1208
Butler, PA 16003-1208

Dear Mr. O'Donnell:

Enclosed is a brief report summarizing the Black Fly Suppression Program in Butler County during the summer of 2008. The program was successful at keeping the average number of black fly adults well below the pest level throughout the summer.

Please share this information with any interested parties in your county. If you have any questions or would like to schedule a meeting to discuss the program in more detail, please do not hesitate to contact me at the number listed above. I am excited about the upcoming black fly season and look forward to working with Butler County in 2009.

Thank you for your time and attention.

Sincerely,

William Andrus
Water Pollution Biologist
Watershed Management Program

Enclosure

cc: Andy Kyle, Vector Management
Ron Fodor, Butler County Conservation District
Honorable Jaret Gibbons, District 10
Honorable Daryl D. Metcalfe, District 12
Honorable Scott E. Hutchinson, District 64
Honorable Richard R. Stevenson, District 8
Honorable Brian L. Ellis, District 11
Senator Robert D. Robbins, District 50
Senator Mary Jo White, District 21
Senator Jane Clare Orie, District 40
Senator Donald C. White, District 41
Black Fly Stream File, 2008

Butler County 2008 Year End Black Fly Suppression Program Summary

Introduction

The goal of the Black Fly Suppression Program is to reduce the adult population of black flies, more commonly known as gnats, to tolerable levels during the summer recreational season. In Pennsylvania, treatment operations were conducted in 33 counties under three separate spray contracts in 2008.

Butler County is managed under the Ohio River Basin Contract, which includes twelve counties in the western part of the Commonwealth. This contract includes seventeen streams and rivers in the Allegheny, Clarion, Beaver, Youghiogheny, Conemaugh, and Kiskiminetas River Basins (Figure 1). Helicopter Applicators Incorporated of Gettysburg, Pennsylvania conducted all treatment operations for this contract in 2008. *Bacillus thuringiensis var. israelensis*, more commonly known as *Bti*, was the only larvicide used to control black fly populations in the county. To achieve proper control of larval populations, *Bti* is carefully applied to streams and rivers by helicopter at a rate of approximately 11.5 parts per million. *Bti* does not harm any other organisms, except black flies, when applied at this rate. The purpose of these treatments is to kill black fly larvae before they emerge into adults and become a nuisance to residents and tourists of Butler County.

Treatment Operations

Spray activities began on June 11 and ended August 27 in Butler County for the 2008 spray season. Black fly numbers remained in check for the majority of the summer and no complaints were received from residents in Butler County.

Slippery Rock Creek

Eight treatments were conducted at 12 to 24 sites on Slippery Rock Creek from Keisters downstream to Elliotts Mills, a distance of approximately 13 stream miles. A total of 52 gallons of *Bti* were applied.

Stream and River Monitoring

Intensive monitoring of black fly larval and pupal populations was conducted throughout the season to examine the presence and extent of black flies in the stream. Stream flow conditions, water temperatures, and larval counts determine when and where spraying will occur; as does the type of black fly species found in the stream. In Pennsylvania, the *Simulium jenningsi* (Diptera: Simuliidae) species group is a major pest of humans and the only group targeted by the Black Fly Suppression Program. Additional monitoring occurs after each spray to determine the effectiveness of the treatment and contractor compliance.

In 2008, sixty-nine (69) samples were collected in Slippery Rock Creek to determine the need for treatment and the effectiveness of the spray operations.

Adult Monitoring

Numerous monitoring sites are situated throughout the county to track the progress of black fly suppression efforts (Figure 2). Monitoring of adult black fly populations is done using a collection net to take sweeps at these designated collection sites. In Butler County, there are 20 sites where adult populations are monitored. In addition 5 of these sites were monitored on a weekly basis during the

Figure 1



Pennsylvania Black Fly Suppression Program 2008 County Participation



Ohio River Basin Contract

