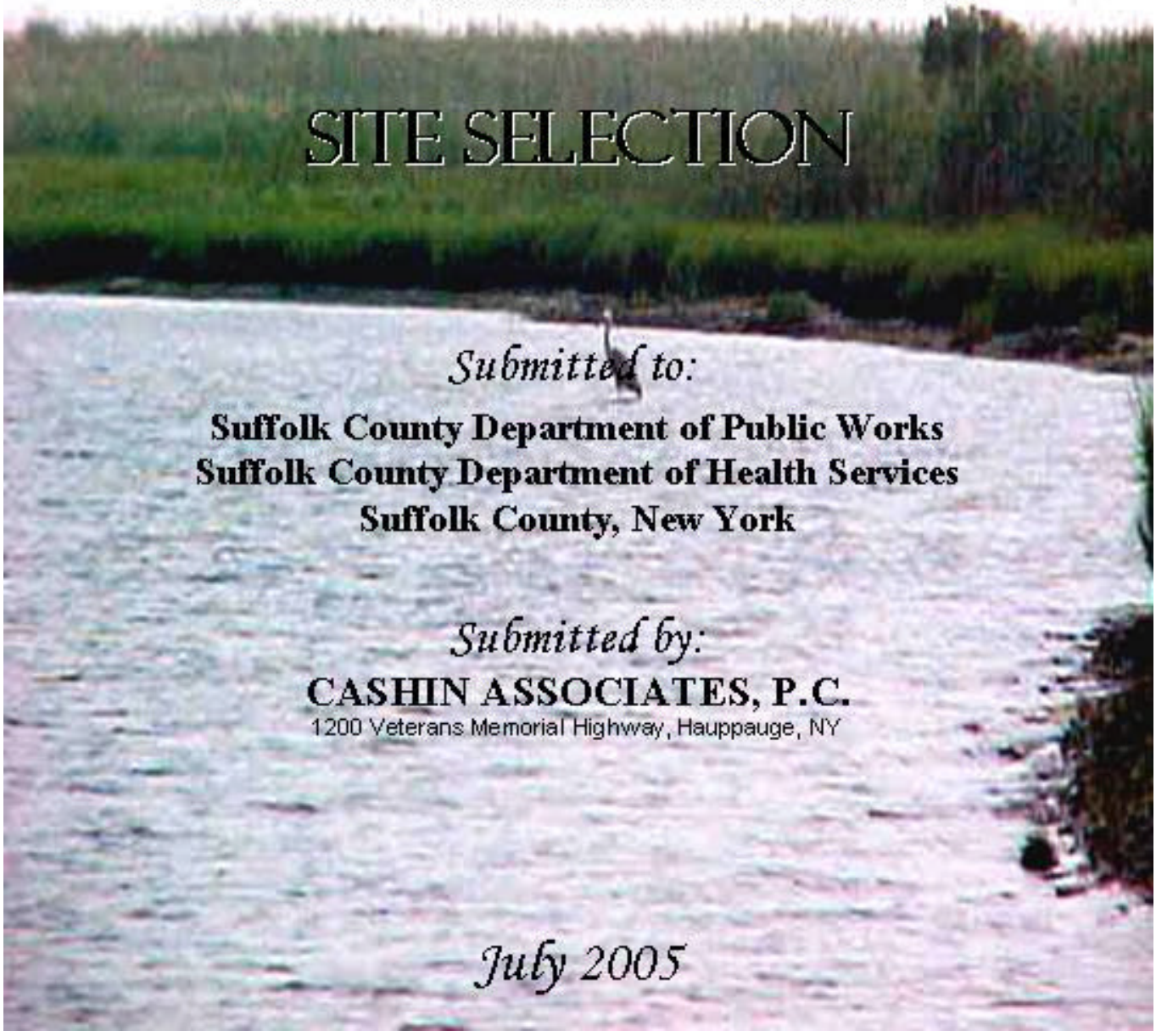
Suffolk County Vector Control & Wetlands Management Long Term Plan & Environmental Impact Statement

TASK 12: EARLY ACTION PROJECTS CAGED FISH EXPERIMENT



SITE SELECTION

Submitted to:

Suffolk County Department of Public Works
Suffolk County Department of Health Services
Suffolk County, New York

Submitted by:

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SUFFOLK COUNTY VECTOR CONTROL AND WETLANDS MANAGEMENT
LONG - TERM PLAN AND ENVIRONMENTAL IMPACT STATEMENT

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LIST OF TABLES AND FIGURES

The purpose of site selection is to locate salt marsh sites likely to receive maximal pesticide input from helicopter sprays and similar non-sprayed sites where survival of caged organisms was high. The goal was to obtain at least two sites each for potential larvicide and adulticide sprays, and appropriate reference sites for each. The search began as soon as the project team was assembled and likelihood of approval and funding was obtained during the end of June 2004 through July 2004.

To determine potential sites, survival trials were done in which cages containing shrimp and fish were placed at each site to ascertain whether or not they could survive for several days. The sites which were evaluated are:

- West Gilgo Beach,
- Gilgo State Park,
- West Captree,
- Johns Neck,
- Havens Point,
- Beaverdam Creek,
- Pepperidge Hall,
- Timber Point,
- Fireplace Nick,
- Old Fort Pond,
- Tanners Neck,
- Speonk,
- Shinnecock Bay (two sites), and

- Flax Pond

There were several criteria that had to be met when selecting a site. These were:

- nearby access by car,
- ditched sites within a marsh,
- sufficient depth to ensure two feet of water at low tide,
- good survival of caged fish and shrimp, and
- reference sites not regularly sprayed.

Many sites examined either had insufficient water depth or did not have sufficient water quality (likely low DO) to support caged organisms. Only one suitable reference site on the South Shore was found.

The New York Department of Environmental Conservation would not approve a scientific permit for helicopter sprays of adulticides. However, they did allow an upgrade from ground application of adulticides to an aerial application at a limited number of sites. Johns Neck, Havens Point, Flax Pond, Timber Point, West Captree Island, Old Fort Pond, Pepperidge Hall and Gilgo State Park were chosen as acceptable sites because of their good fish and shrimp survival rates. Of these sites, Flax Pond, Havens Point, West Captree Island, and Old Fort Pond became reference sites and Johns Neck, Timber Point, Gilgo State Park, and Pepperidge Hall became spray sites.

Table 1. Details of Trial Experiments

Dates of Evaluation:	Sites Evaluated:	Species Type:	Survival:
6/29 - 7/2	West Gilgo Beach	fish & shrimp	all poor
	Gilgo State Park	fish & shrimp	F: poor; S: good
	West Captree	shrimp	good
	John's Neck	fish & shrimp	all good
	Haven's Point	fish & shrimp	all good
7/2 - 7/6	West Captree	fish	poor
	West Gilgo Beach	fish	poor
	Gilgo State Park	fish	poor
7/9 - 7/12	Beaverdam Creek	shrimp	mixed
	Pepperidge Hall	shrimp	good
	Timberpoint	shrimp	poor
	Fireplace Neck	fish & shrimp	poor
	John's Neck	fish	good
	Haven's Point	fish	good
7/15 - 7/19	Beaverdam Creek	shrimp	poor
	Pepperidge Hall	fish & shrimp	F: good; S: mixed
	Fireplace Neck	fish & shrimp	all poor
	John's Neck	fish & shrimp	F: good; S: good
	Haven's Point	fish & shrimp	F: mixed; S: good
7/20 - 7/26	John's Neck	fish	poor
	Timberpoint	fish	good
	Old Fort Pond	fish	good
	Haven's Point	fish	good
7/22 - 7/26	Tanners Neck	shrimp	poor
	Speonk	shrimp	poor
7/26 - 7/30	Old Fort Pond	shrimp	good
	Shinnecock Bay (2 sites)	fish & shrimp	all poor
	Flax Pond	fish & shrimp	all good

Table 2. Summary of Experiments

Experiments	**Dates**	**Spray Type**	**Locations**
Preliminary (Fish only)	7/20	Larvicide	Johns Neck, Timber Point, and Old Fort Pond
1	8/2-8/7	Larvicide	Timber Point, Johns Neck, Havens Point, and Flax Pond
2	8/9-8/14	Larvicide	Timber Point, Johns Neck, Havens Point, and Flax Pond
3	8/17-8/22	Adulticide	Johns Neck and Havens Point
4	8/25-8/29	Adulticide	Johns Neck and Havens Point
5	8/31-9/5	Larvicide	Timber Point and Havens Point

Figure 1. Aerial photograph of Flax Pond field site

Figure 2. Aerial photograph of Havens Point field site