



## SCOPE & INTENDED USE

This document is intended to describe the method that should be used to select and establish sites suitable for active or passive fly trapping during New World Screwworm (NWS) control and eradication activities.

## PHASES OF FLY SURVEILLANCE

### Phase 1: Assessing the population of NWS

Phase 1 begins upon confirmation of NWS myiasis within the United States and continues until the incident screwworm subject matter expert (SME) determines that NWS establishment is unlikely, or sterile NWS fly releases begin. The purpose of fly surveillance in Phase 1 is to collect data to assess the population size and distribution of NWS flies surrounding the premises where NWS infestation was found.

### Phase 2: Verifying adequate ratio of sterile to fertile NWS

Phase 2 begins when the sterile fly releases begin and continues until the incident screwworm SME determines that an adequate ratio of sterile to fertile NWS flies are present in the Infested Zone (and/or Control Area). Fly surveillance during Phase 2 provides data to monitor the efficacy of SIT and the decline and disappearance of fertile NWS flies.

### Phase 3: Assessing distribution of sterile NWS

In the final phase, fly surveillance is used to evaluate the dispersal of sterile NWS flies and provide evidence of absence of fertile NWS flies to help establish NWS-free zones. Factors such as time since last detection of NWS myiasis, local weather, seasonal climate, and ecological conditions should be considered in determining when to discontinue fly surveillance.

## TRAPPING OPTIONS

This site selection method can be used to identify surveillance sites for both active and passive methods of fly trapping. See *Active Fly Trapping Standard Operating Procedure (SOP)* and *Passive Fly Trapping SOP* for more detail on those procedures.

### Active Trapping

In this method, a person trained to identify and trap NWS flies observes flies that are lured to rotten liver bait. The trapper catches suspect NWS flies in a hand net, and securely contains and transports the live flies to a laboratory for identification and dissection using microscopy.

### Passive Trapping

In this method, a wind-oriented sticky trap is baited with the chemical NWS attractant Swormlure. The trap is suspended in a suitable location and periodically checked for entrapped flies. The trapper extracts suspect NWS flies from the surface of the sticky trap, securely contains the flies, and transports them to a laboratory for identification and dissection.

## SITE SELECTION

Sites that are suitable for either active or passive fly trapping activities are

- ◆ located in suitable NWS habitat,
- ◆ are positioned so that the predominant wind direction carries lure scent into NWS-preferred vegetation,
- ◆ are not adjacent to human or domestic animal habitations,
- ◆ are permissible by land owner(s) to trap there, and
- ◆ are safe for fly surveillance team members to enter during daytime.

### Suitable NWS Habitat

NWS flies prefer well-wooded and well-shaded sites, and areas close to high concentration of potential hosts. Ideal sites for sampling are isolated trees in pastures, or at the interface between pasture and wooded area.

### Desirable Wind Direction

Consider the predominant or current wind direction in sample site selection. The wind plume should carry the attractant odor into the wooded area where NWS flies may be resting.

### Geospatial Analysis

Satellite imagery is useful in identifying suitable vegetation, host density, accessibility, and predominant wind direction. Potential sites selected by geospatial analysis should be examined by field workers to verify suitability with regard to accessibility, distance from residences, and worker safety concerns.

### Sites to Avoid

Avoid sampling near residences or other locations where people, pets, and livestock may be troubled by trap odor and flies.

Before sampling on privately owned land, obtain permission to sample from the property owner.

Avoid sites that may be hazardous to workers, such as sites with high vehicle traffic, debris, and/or dangerous wildlife.

## SITE DOCUMENTATION

Once a suitable surveillance site has been identified, obtain latitude and longitude using a GPS receiver and record the coordinates in decimal degrees to 5 decimal digits on the Fly Surveillance Form (separate document).

Record a unique name for the site, as well as comments that will be helpful to other personnel using the site, such as "permission to access site obtained from \_\_\_\_\_", or "alligator resting nearby."

Submit the form to the Operations Section in the Incident Command after the field activity is completed for the day. The Operations Section will provide the forms to the Planning Section for data entry in the Emergency Management Response System 2.0 (EMRS2).

## SITE REVISITS AND ROUTE

Selected sites can be revisited at intervals of several days to obtain data about NWS populations over time. The time interval for revisiting sites should be based on incident specific conditions,

such as weather and new myiasis cases, and on incident resources, such as the number of available surveillance personnel.

Surveillance personnel can visit multiple sites during a day. For worker safety and efficiency, a route to visit multiple sites should be planned in advance, based on the day's weather, wind direction, and expected vehicle and pedestrian traffic in the area. Choose a cluster of sites in relatively close proximity to each other to reduce travel time between sites. These routes can be mapped and designated (e.g., "Southwest Route" or "Route A") for the duration of the incident, facilitating efficient revisits by different surveillance team members.