Action Plan to Reduce the Fly Population in Mission Beach

April 9, 2014

Background

This action plan has been developed to help reduce the population of flies in Mission Beach. Actions contained in the plan are based on the study performed by David Faulkner last summer and compiled by members of the Mission Beach community and City of San Diego staff and elected officials.

The overall key to controlling fly populations is to break their life cycle at some point.

If adult flies cannot gain access into the trash where there is moist organic matter available, the adults will have no place to lay their eggs and the cycle will be broken.

Eggs hatch into larva (maggots). If the maggots are unable to exit the containers (torn bags, cracked containers, no lids, etc.) they cannot crawl to a dry place to develop into the next life cycle stage, pupae.

Finally, if the pupae are removed from the alleys by sweeping, they cannot develop into adults.

No individual action will guarantee success in reducing the fly population. However, used together, the following actions will reduce the fly population and should ultimately resolve the problem.

High Priority Actions

1. MAINTAIN INTACT TRASH CONTAINERS WITH FUNCTIONAL LIDS.

If a female fly makes it into a container in which there is wet organic matter and lays her eggs, they will hatch into maggots. The maggots will crawl out of the container to find a dry place to pupate, often in debris (e.g., small leaf litter) or cracks in the alleys. The observations of the researchers suggest that the maggots have a harder time escaping cans that have intact lids and no cracks.

City Responsibility:

- Step up code compliance and require replacement of damaged receptacles.
- Make appropriate receptacles available for purchase.

Community Responsibility:

- Replace damaged receptacles.

2. PREVENT SCAVENGING AND OPENING OF TRASH BAGS THAT ALLOW FLY INFESTATION.

The activity by scavenger activity rips open trash bags making moist organic material available to female flies as a substrate for her eggs.

City Responsibility:

- Step up code compliance activities against scavengers.

Community Responsibility:

- Discourage the practice of putting recyclable materials in the trash by educating residents and tenants. Scavengers open trash bags to find high value recyclable items. If they had less success finding materials of value in the trash, they might reduce the practice of ripping open trash bags.

- Store trash receptacles in a garage or side yard, behind a fence, where they are not accessible to scavengers.

- Lock containers to prevent trash dumping by nonresidents and the overflow and ripping of bagged material. A strict unlocking schedule must be followed because this measure will be counter-productive if the receptacle is not unlocked so that it can be emptied.

3. PROVIDE TWICE A WEEK TRASH PICK-UP DURING THE WARMER MONTHS OF THE YEAR FROM MAY THROUGH SEPTEMBER.

While not as effective as bagging and lining (see below), this would eliminate maggots on refuse within the container. It will not remove maggots clinging to the walls of the container.

City Responsibility:

- Legal and policy constraints do not provide for twice a week collection.

Community Responsibility:

- Hire private haulers for extra service. This may be especially appropriate on move in/move out dates.

4. VACUUM OR HAND SWEEP THE ALLEYWAYS TO PHYSICALLY REMOVE FLY IMMATURE STAGES (LARVAE/PUPARIA) ALONG WITH PUPATION SITES CONTAINING SAND AND DEBRIS.

City responsibility:

- Sweep alleys once a month from May through September.
- Step up ticketing for illegal parking on Mission Boulevard and alleyways so that street sweeping on Mission Boulevard is more effective.
- Require obstacles in alleyways be removed and sweep alleyways.

Community Responsibility:

- Hand sweep alleyways – don't sweep into vegetation. Collect the material that is swept up, bag it, and dispose of it.

Medium Priority Actions

5. MAKE SURE ALL GARBAGE AND WET WASTE IS BAGGED AND SEALED.

When waste is bagged and sealed, adult flies cannot lay eggs, and any eggs that were laid before the bag was sealed cannot escape. However, this technique is not effective if scavengers rip the bags open, exposing the waste to female flies as a substrate for eggs. Using trash container liners (see #10 below) and bagging together will be more effective than using one without the other. Bagging and sealing will only be successful if scavenging is kept to a minimum.

Community Responsibility:

- Purchase and seal trash bags rather than dumping moist organic material into trash receptacles.
- Vacation landlords: Provide trash bags, educate, and encourage visiting guest why and how to use them.
- Landlords/property managers furnish trash bags to tenants.

6. WASH CANS.

Washing cans removes organic residue needed by female flies for laying eggs.

City Responsibility:

- Step up code compliance activities for maintaining receptacles in clean condition.

Community Responsibility:

- Wash receptacles or hire a washing service a washing service such as Container Management Group, dba Clean-A-Can. Please be sure that water is not discharged into the alley. This could lead to a storm water violation as it can be carried to Mission Bay via one of the City's storm drains.

7. SPRAY THE OUTSIDE OF THE LID AND TOP OF THE CONTAINER WITH BLEACH TO DETER FLIES FROM LANDING ON THE SURFACE.

Bleach evaporates quickly but leaves a residue that lasts several days. Even so, researchers noted that bleach must be applied at least weekly, preferably twice per week, to effectively deter females from investigating wet organic matter within a bleach-treated container.

Community Responsibility:

- Apply household bleach around the lid with a spray bottle twice a week.

8. PROVIDE SUFFICIENT CONTAINERS/HAVE ADDITIONAL CONTAINERS AVAILABLE TO ADEQUATELY HOLD TRASH GENERATED DURING THE SUMMER MONTHS. PREVENT OR REDUCE THE RECYCLE CONTAINERS BEING USED FOR GARBAGE AND TRASH.

Researchers noted that inadequate number/volume of containers resulted in overfilled containers. Egg and maggot-infested refuse was documented around and behind containers that were overfilled. In areas with insufficient trash bins the researchers also noted refuse in recycling receptacles. Because recycling receptacles are emptied every other week, any eggs laid on trash that is in recycling receptacles have ample opportunity to hatch and emerge as a flies to continue the cycle.

City Responsibility:

- Step up code compliance for insufficient receptacles and for recyclables in waste receptacles.

- Make appropriate receptacles available for purchase.

Community Responsibility:

- Provide sufficient receptacle volume for trash and recyclables.
- Place recyclables only in receptacles designated for recyclables.
- Educate tenants about the importance of recycling.
- Convert to 3-yard dumpsters; provide dumpster service as frequently as needed.

9. REMOVE TRASH AND VEGETATION AROUND TRASH CONTAINER STORAGE AREAS.

Pupae for the most part were not found in the open where they would be preyed upon by birds and other insect predators. Instead they were under vegetative litter and hidden under piles of litter, as well as in cracks and crevices where bits of detritus accumulated.

City Responsibility:

- Step up code compliance for litter.

Community Responsibility:

- Pick up trash, leaf litter, debris. Prune vegetation around containers.

Lower Priority Action

10. USE TRASH CONTAINER LINERS.

One of the most effective means of maintaining clean, maggot-free cans is to fit the can with a heavy-duty plastic liner immediately after it is emptied. When tied off and sealed after the fourth day, any eggs that are deposited on the trash inside, and any maggots that emerge, are trapped in the liner, and cannot leave the container to pupate and then emerge as an adult. (These "liners" are larger and heavier duty than regular trash "bags.") Even if scavengers break open trash bags that are deposited within the lined container, the heavy duty liner will remain intact, and will break the fly life cycle. After the liner is tied off on the fourth day, additional bagged trash can be piled on top for the next three days. (At this point scavengers ripping open the bags could deposit organic material onto the walls of the container, so anti-scavenging activities should be considered in conjunction with this measure.)

Community Responsibility:

- Purchase appropriately sized receptacle liners (available on-line) and install them before putting any waste in freshly dumped receptacles.

- Vacation landlords: Provide trash bags, educate, and encourage visiting guest why and how to use them.