



Tyler Water Utilities Guidance Document

On Misting Systems

Revised 11/2011

This guidance document is for use of misting systems installed to control pest in and around the City of Tyler Lake's. As with any guidance document care should be given to follow National, State and the City of Tyler Rules and Regulation Governing Lake Tyler and Lake Tyler East standards.

Purpose and Use

An increasing number of Lake Residents have purchased timed-released residential misting systems to control mosquitoes and other insects around residential areas and boathouses. The purpose of this document is to outline guidelines for use of misting systems over, around or near Lake Tyler and Lake Tyler East. This document will assist lake residents and licensed installer/technicians:

- 1. Choose if residential pesticide misting systems are appropriate for their home*
- 2. Recognize safety precautions about using misting systems*
- 3. Find related information on Integrated Pest Management - using a variety of methods for pest control and*
- 4. Understand the role of the City of Tyler, US EPA and Texas Department of Agriculture or other state agencies in regulating outdoor misters.*

Misting System Definition

The Environmental Protection Agency (EPA) defines and note outdoor residential misting systems are application systems designed to spray pesticides in a fine mist to kill mosquitoes and other insects outdoors. Misting systems include spray nozzles that are mounted around the perimeter of a home or boathouse in the lawn or landscaping, or on parts of the house, boathouse or fence. The spray nozzles are connected by tubing to a supply of insecticide. Some misting systems may be turned on at preset intervals using a timer. Others may be turned on using a remote controller, while others may be activated using a switch.

General Misting System Components

Most auto misting systems are fairly simple in design, with basic systems containing a tank to hold the insecticide, a pump, and tubing that connects to the nozzles that spray the insecticide over the areas to be covered. Systems come with an installation manual and can be ***installed only by a licensed installer or technician***. Misting systems are available with stainless steel filters and nozzles, and with the plumbing assembly already connected to the pump. Misting systems also have wind and rain sensor capability. Most systems normally have programmable timers. The selection of the outdoor misting system will be the responsibility of the user and the licensed installer/technician.

General Guidelines for Misting Systems and Installation

When choosing a misty system, the City of Tyler requires a licensed installer or a licensed technician to install the misting system so that the system is calibrated to apply the proper amount of approved insecticide for daily applications in, by or around surface water bodies. Licensed Installers will follow chemical manufactures mixing ratios and equipment installation requirements. When using a misting system, The City of Tyler endorses following a few simple guidelines that will minimize potential exposure to people, pets, and the environment:

- *Always use installers and service technicians that comply with the state's license, certification, and registration requirements. Licensed Installers will calibrate the system to apply no more than the maximum daily application rate as specified on the pesticide label.*
- *Licensed Installers will make sure the nozzles are directed to spray toward the target area and away from eating/cooking areas and any water body including swimming pools (some pesticides are toxic to aquatic organisms).*
- *Installers shall place nozzles no less than 10 ft from the ground this will reduce chemical drift. Chemical drift may affect other people, animals and surrounding environment not in your yard area.*
- *Installers will set nozzles to direct mist away from outside air conditioners or other home air intakes. Licensed Installers will make sure both the reservoir and operating system are securely locked and inaccessible to children at all times to avoid potential poisoning accidents. When practical, install wind, rain, and motion sensors to reduce unnecessary pesticide usage and inadvertent application when people or pets are present.*

Detailed information about misty systems can be obtained by calling the Environmental Protection Agency at 214-666-6772, or Texas Department of Agriculture at 1-800-835-8532.

Safe Use of Insecticides and or Pesticides for Misting Systems

Certain insecticides and or pesticides used have the potential to kill aquatic life and contaminate drinking water supplies in both agricultural and urban settings. The City of Tyler requires all licensed installers to follow these guidelines when using chemicals in outdoor misting systems:

- *All misting system installed should follow manufacture direction on mixing ratios and equipment installation.*
- *Do not apply the pesticide when people, pets, or foods are present.*
- *Set automatic timers for times when people and pets are unlikely to be sprayed. Follow manufacture product directions.*
- *Only use the system when pests are most active. For example, certain varieties of mosquitoes are most active in the early morning and evening hours.*
- *Avoid using the misting system during winds of (<5 mph), rainfall, fog, or when outside air temperatures fall below 50 Fahrenheit or other times when insects are generally not active.*
- *Obtain and READ the pesticide label to know the pesticide precautions and its appropriate use in the system. Follow manufacture label directions.*
- *Be aware of the maximum daily rate specified on the product label and how your system operates. Follow manufacture directions.*
- *Avoid damage or misuse from a leaking or malfunctioning system - regularly maintain and inspect it. Safety shutdown devices are required on all misting systems.*
- *Turn the system off when not needed for extended periods of time.*

General Design Criteria for Outdoor Misting Systems

Section 1.01 Protection of Water Supply

All outdoor misting systems will be installed in such a manner to protect the raw water supply, i.e., Lake Tyler, and Lake Tyler East. No unapproved fogging system will be used in substitution of approved misting systems

Section 1.02 Protection Devices and Requirements

All outdoor misting systems shall include the following:

- A. Equipment Safety Devices** – These devices will shut down the outdoor misting systems when such systems malfunction and thus activating the exterior audible visual alarm system. The safety devices will shut down the misty systems when a break or cut occurs in the outdoor misting system. These safety device shut down devices will protect the water supply from contamination.
- B. Containment Tank** – All misting system pesticide/insecticide chemical supply tanks will be located inside a containment tank. The containment tank shall be one and half time larger than the chemical supply tank sized to capture the pesticide/insecticide should a puncture or crack occur. All misting systems reservoirs will be installed or constructed outside the 100' setback line (100' from the 378' elevation). The only exception will be misting system chemical supply tank built 48" above spillway elevation that are place in a containment tank. Both the containment tank and the chemical supply tank shall be protected

from rain exposure.

- C. **Alarms** – The outdoor misting system and the containment tank (moisture sensor) shall be equipped with an audible and visual alarm device to alert user that a malfunction has occurred. The alarm system will be located on the exterior wall of the boat house.
- D. **Locking Devices** – All systems should be secure in a manner to restrict unauthorized access.
- E. **Set Back Requirements** - All outdoor misting systems reservoirs shall meet set back requirements as established in the City of Tyler Rules and Regulation Governing Lake Tyler, Lake Tyler East.
- F. **Repair Timelines for Damaged/Malfunction Systems** – Damaged or Malfunctioning systems should be repaired with a reasonable amount of time. A reasonable time will not exceed 14 days. Damaged or Malfunctioning systems pose a direct threat to contamination of Lake Waters. If these repairs cannot be completed within this time frame, the misting system must be disabled, until such repairs can be completed.

Section 2.01 [Approved Insecticides for Misty Systems](#)

- A. **General Guidelines** - Tyler Water Utilities does its utmost to assure its water customers have a continuous supply of high quality drinking water. Many of our everyday activities including improper use of herbicides, insecticides, fertilizers and even some household chemicals can pollute our drinking water resources. The purpose of this section is to create uniformity in the insecticide use for outdoor misting systems.

B. **Product Labels** - Do not use broad-spectrum insecticides or chemicals, as these kill beneficial bugs as well as pests. Minimize your pesticide inventory by purchasing only the type and quantity of pesticide required for the season or a specific application. The storage area should be away from all water sources. All misting system users should follow the directions on the label from the chemical manufactures, this will include mixing ratios, equipment needed and targeted pest for elimination.

C. **Approved Pesticides/Insecticides** - Only EPA approved pesticides/insecticides will be approved or allowed for use by the City of Tyler such as but not limited to the following list. Only EPA approved pesticides/insecticides maybe used around the homes and boathouses. The following lists of approved pesticides/insecticides are authorized for use on the Lake:

- EcoExempt MC, EPA Registration No. 2222555-222244
- Sector, MGK, EPA Registration No. 5555666-33333
- Riptide, MGK, EPA Registration No. 444477-55555
- Pyranha, Manufactor – Pyanha, EPA Registration No. 73049-463-211-65

❖ Any pesticides/insecticides must be approved by the City of Tyler prior to its use and is subject to random chemical analysis.

Section 3.01 Inspections

- A. **Installation Requirements** – all misting systems are required to be installed by a licensed technician and or installer as outlined by the Texas Department of Agriculture, Structural Pest Control Division. No exception.
- B. **Administrative Requirements** – Licensed Installers and or licensed technician are required to submit an application for Construction for Approval by the City of Tyler. Misting system will not be approved in conjunction with the initial boathouse construction approvals. Each outside misting system shall require the following:
- 1) Installation Diagram (Schematic of entire misting system)
 - 2) List of Product use and Product Label (MSDS)
 - 3) Targeted Pest
 - 4) Copy of Installation and Maintenance Contract
 - 5) Copy Licensed Issued by State & State Insurance Requirements
 - 6) City of Tyler Issued License (No Fee)
- C. **Inspection Requirements** – All misting system will be inspected prior to and after installation.
1. **Pre-inspections Requirements** – Application will be field verified by City Staff for completeness and to ensure installation diagrams match information submitted.
 2. **Post- Inspection Requirements** – All misting systems will be verified for proper installation while licensed installer is present. No post-inspection will occur without installers/technician onsite. City Staff will verify contact information, as well as, installation completeness as submitted on the application for installation.

- 3. Mandatory Notification** – Licensed Installer or technician will notify City of Tyler when maintenance or schedule service on all misting systems.
- 4. Annual Inspection Requirements** – Annual Inspection will be completed in conjunction with boat house plumbing inspections.
 - a)** Fees – there will be a separate annual fee to inspection the outside misting systems per each occurrence.
 - b)** The City may verify existing documentation on the all misting systems as originally submitted/approved.

D. Notices

- 1. Equipment** – If the City determines the misting system has been modified or is operating outside of its original design a notice of system deficiencies will be issued to the land owner as well as, the licensed installer. The installer will be responsible for correcting these deficiencies within a reasonable amount of time as established earlier within this document.
- 2. Schedule Inspections** – The installer will be responsible for notifying the City of Tyler for all scheduled inspections, and will coordinate such inspections, scheduled maintenance and annual inspections with the land owner and the City of Tyler.

E. Update to Guidance Document

This guidance document is subject to periodic updates based on available information in the industry concerning misting systems.

Works Cited

1. Environmental Protection Agency 1-800- 972-7717
http://www.epa.gov/pesticides/factsheets/misting_systems.htm
2. Texas Department of Agriculture 1-800-835-5832
<http://www.texasagriculture.gov/RegulatoryPrograms/Pesticides/StructuralPestControlService.aspx>
3. City of Tyler, Rules and Regulation Governing Lake Tyler, Lake Tyler East in Smith County
4. National Pesticide Information Center 1-800-858-7378
<http://npic.orst.edu/>
5. Texas Agrilife Extension Service, Smith County (903)-590-2980 Educational Information