

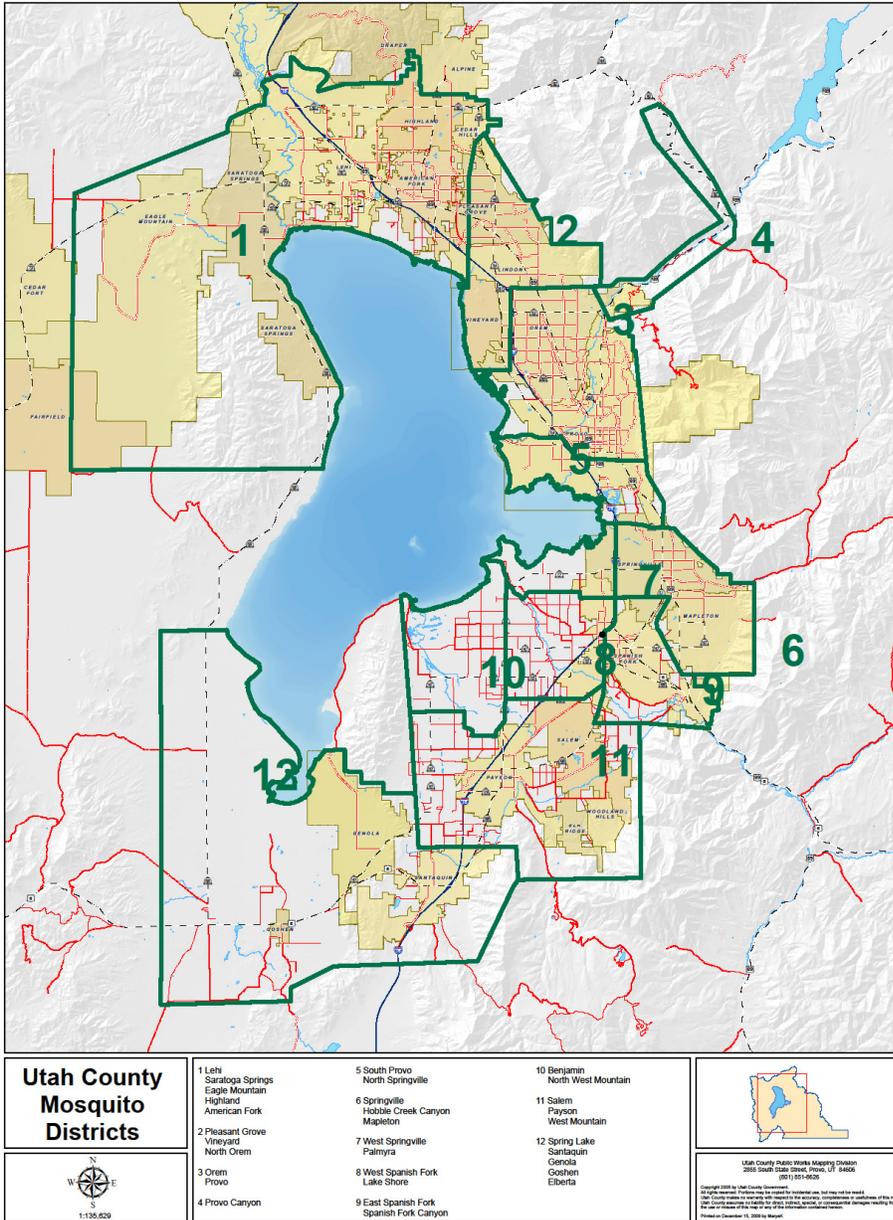
Larval Mosquito Control

The area of Utah County comprises over 2,000 square miles, a population of half million and Utah Lake is the largest fresh water lake in the state. These factors create the ingredients for a mosquito problem. The water sources of springs, wells, irrigation, high water table, stream flooding, precipitation and man made water traps provide adequate habitat for many mosquitoes. The most effective means of controlling mosquitoes is before they become adults. These sources require

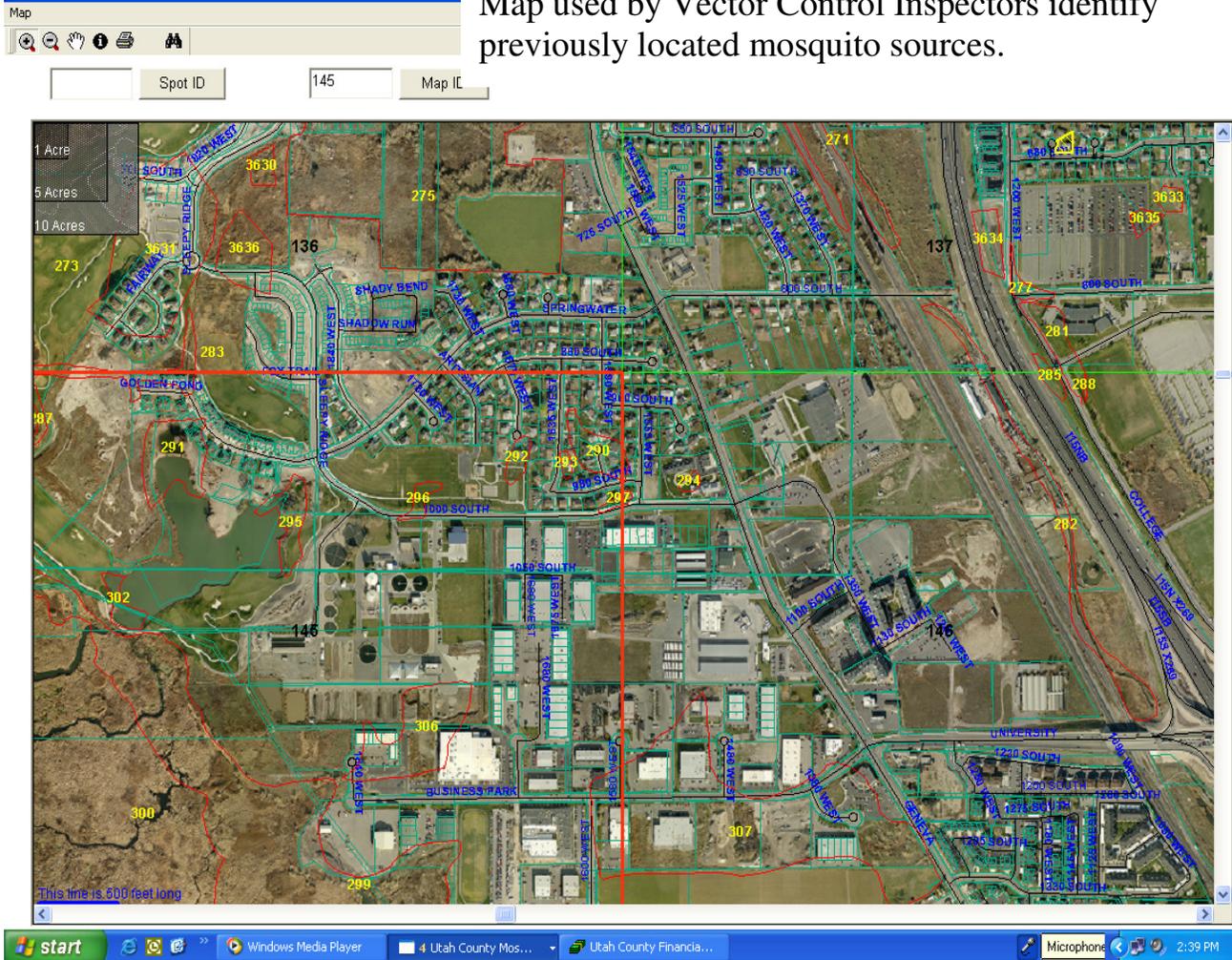
monitoring on a regular basis in order to reduce the potential harassment and diseases that mosquito can inflict. Personnel are required to obtain a non commercial pesticide license to apply chemicals.

The county has been divided into twelve districts which are monitored by a vector control inspector regularly. Current districts boundaries are shown in the adjacent map.

Inspectors use maps identifying permanent and temporary water sources to record their daily surveillance. Note **yellow** numbers identify the water sources outlined in **red** in the following map. On the back of this map is a data sheet to record information on all activities.



Map used by Vector Control Inspectors identify previously located mosquito sources.



When water is encountered, it is sampled for mosquito larvae. Larvae are placed in small, labeled bottles containing 70% alcohol for preservation, and then taken to the lab for identification.



The species and stage of development are all important in determining what treatment will be implemented. See Utah species for differences.

Evaluating potential problems and water characteristics are all important factors.

Often temporary water from irrigation and precipitation will dry up before mosquitoes can complete their development. If not, there are several options available.

Vector Control Inspectors will evaluate the situation and treat the water source with one of these products as needed.



- **Agnique**, Monomolecular Surface Film, this liquid product puts a thin layer on the surface of water that is effective on controlling mosquito larvae and pupa for about 1 week. It can be sprayed on shallow water and is ideal for treating catch basins, storm drains, tires, ornamental ponds, rain barrels, etc., where stagnant water has accumulated. It can be



dispensed by a hand pump sprayer or mounted on ATV and is safe to use around birds, fish and wildlife.

- **Altosid**, This product contains a growth regulator that prevents mosquito development from reaching the adult stage. It must be applied in the larval stage before 3-5 days of pupation. It is a great product for ornamental ponds and catch basins. It is available in charcoal colored pellets, briquets, water soluble

packets or liquid. Pictured below by the green package is one packet effective for up to 30 days and very environmentally friendly.

- **VectoBac**, Spores or crystalline toxins derived from the bacterium, *Bacillus thuringiensis*, is the active ingredient of this product coated on ground up corn cob. Larvae must ingest the product and it becomes activated by the pH in the gut of the mosquito. Here it creates holes in the digestive tract causing death. Effective in controlling many mosquito species and black flies for 1-2 weeks. We distribute it with whirly bird seeders.



persistent water sources. The packet pictured in the blue labeled container is one used in residential drainage treatments.

- **VectoLex**, *Bacillus sphaericus* derived spores and crystalline toxins which must be ingested by mosquito larvae. These spores have the ability to replicate producing more spores and toxins which add to the effectiveness of this bacterium. Effective in controlling most species of mosquitoes, particular *Culex* for up to 30 days. Safe to be used around animals and aquatic life. We use it in more

ProVect, active ingredient is 1% temephos, an organophosphate, coated on a sand granule. This larvicide is effective on most species of mosquitoes. Small areas may be treated with a seeder filled



with larvicide granules. If the product needs to be distributed 10-30+ feet away from worker, such as drainage along train tracks or heavily vegetated mosquito source, a small engine powered backpack dispenser may be used as shown below. The sand granules allow this product to settle through vegetation better than the lighter corn cob based products.

ProVect is not labeled for water containing fish and provides short term control of 1-2 weeks.



Larger acreage in pastures and edges of marshes may be treated using ATV's outfitted with granule and/or liquid dispensers.



This dense, invasive *Phragmites* grass near Utah Lake becomes an almost impenetrable barrier to effectively treat mosquito larvae.

