

Powerline Rights-of-Way Vegetation Studies

Maintaining a safe, economical power supply with wildlife interests in mind

Recognizing the unique habitat within power line rights-of-way (ROW), Conectiv Power Delivery (CPD) and CWH have partnered for more than 15 years in various research projects. Most research efforts have concentrated on utility company clearing, access and management methods along power line ROWs throughout the Eastern Shore of Maryland, Delaware and New Jersey and the effect wrought upon different plant communities. The goal is to create stable and enduring native grass meadows for the center access line and low-growth shrub communities along the buffer zone margins.

Last year the direct association with CPD came to an end when their forester, Rick Johnstone, with whom we have had the prime collaboration, left the utility and formed his own non-profit, Integrated Vegetation Management Partnership (IVMP). CWH's collaboration is now with IVMP.

In 2007, Atlantic City Electric and CWH commenced completion of the long-term study of plant succession in the Corson ROW, which is located on the edge of the New Jersey Pine Barrens near Millville, NJ. During the study a partnership was formed with Rutgers University. Since the inception of the study in 2001, CWH's Wildlife Ecologist, Robin Haggie, has been comparing the herbicide-treated ROW adjacent to the Pine Barrens with mechanically cut areas within the Pine Barrens. Mechanical cutting is particularly damaging to sensitive wetland ecosystems, leaving tire tracks which may be evident for years, and is indiscriminate in its timing and mode of operation. Many slow-moving wildlife species, such as turtles and snakes, are killed by rotary mowers and brush axes. Also, the plant food species for many insects, as well as nesting cover for birds, are destroyed at those critical times of the year, since mowing can occur at any time. Selective herbicides, initially broadcast, can be used later to spot treat escaped target species, modifying the plant community slowly without the often catastrophic effect of mechanical cutting.

The data from these studies has shown that a well planned and carefully thought out management plan, using integrated vegetation management, can have great applicability in utility ROW management, keeping wildlife and their habitat in mind as a foremost objective, while maintaining a safe reliable energy source.

An important result from the study showed that undesirable species (tall trees that interfere with overhead wires) are not properly managed through mowing, while with the judicious use of herbicides, relatively stable plant communities can be created. Furthermore, under certain circumstances, herbicides act like natural wildfire and may initiate rare plant recurrence. In 2007, CWH found large colonies of rose pogonia orchids establishing themselves in the ROW after

at least 10 years absence. Their seeds had been in the soil bank and remained there, dormant, until the right germinating conditions occurred. Dormancy may be for many decades.

Branching Out to Help our National Wildlife Refuge System

Controlling invasive weed species that are usurping our native wildlife

In 2007, Eastern Neck National Wildlife Refuge (ENNWR) near Rock Hall, Maryland, requested that IVMP initiate control of six invasive weed and tree species (IWS) on the refuge. ENNWR also asked CWH to conduct a series of studies to follow plant succession before, during, and after the control measures.

Tree-of-heaven, multi-flora rose, Japanese stilt-grass, mile-a-minute weed, Paulownia and garlic mustard are the main targets. Survey plots and control sites were laid out in late 2006. The areas (except for the controls) were grubbed early in 2007 using a Geo-boy (a hideous machine that grinds up almost anything in its path to a depth of several inches). Vegetation was allowed to re-grow and then was herbicide treated in late summer. In the winter of 2007, the sites were burned and again allowed to regenerate.

Depending on the type of re-growth, herbicide spot treatment by backpack may be necessary. Species that are annuals are likely to be very difficult to control; however, to date, all species have demonstrated significant reduction in population. The studies are planned to continue through 2012, but funding is dependent on annual Congressional approval.

Phragmites Control

Controlling invasive, noxious weeds in wetlands

Phragmites (*Phragmites australis*) continues to invade the Eastern Shore and other parts of Maryland at an alarming rate. Not only does it grow so tall that it blocks the shoreline view, more importantly, it grows so thick it can destroy a wetland's fragile ecosystem by choking out the beneficial and native wetland plants, becoming a monoculture with practically no wildlife habitat value.

CWH initiated its Phragmites Control Program to slow the rapid spread of this invasive wetland plant and restore diverse wetland ecosystems. A five-year research study by CWH documented that once a pure stand of Phragmites was eliminated, 61 different species of plants emerged from the existing wetland seedbed.

In the fall of 2007, CWH sprayed 200 properties in Talbot, Queen Anne's, Kent, Dorchester and Anne Arundel counties to improve the biodiversity of more than 105 acres of wetlands. Phragmites will never disappear from Maryland's shoreline, but by controlling its spread, wetlands can be saved from further destruction.