



The Noxious and Nuisance Plant Management Information System (PMIS)

Project # 08&09-229

Background:

Many invasive plant species are currently being managed at military installations across the U.S. and the number of species increases annually. The presence of these species adversely impact military operations, equipment, and training readiness; forces the military to implement costly clean-up efforts to prevent further spread; leads to increased erosion and land costs, and exacts a high cost to threatened and endangered species and other ecological concerns. Developing appropriate and ecologically compatible management strategies is difficult, at best, since the large number of species present represents the full range of plant diversity from annual to woody species each requiring the implementation of specific management procedures. Because of the extensive numbers of plants and plant types and the diversity of factors that regulate the use and effectiveness of management options, it is extremely difficult to efficiently determine the full range of management options available. One such remedy is to develop procedures for better access to information on the management of invasive plant species.

entitled the “Noxious and Nuisance Plant Management Information System (PMIS)” to allow military and civilian personnel rapid and efficient access to invasive plant identification, biology and management techniques. This system has had wide acceptance with close to 30,000 copies distributed world-wide. It is used extensively throughout the U.S. by numerous federal, state, and local agencies. In addition, it is recognized by the Armed Forces Pest Management Board as DoD’s official Technical Information Manual (TIM) on invasive plant management. However, invasive plant management and information transfer technologies and strategies change frequently and additions and updates to PMIS are needed to make it even more efficient and useful.

Objective:

The primary goals of this project are to convert the information currently contained in PMIS to a dynamic database-driven website, add information on additional plant species, create a DVD of full-motion videos of a select number of plant species within PMIS, and lastly incorporate these videos into the online system. Once the system is complete, a CD-Rom will be created to install a link to the PMIS website on the user’s desktop and Program menu. To provide users with additional information on other invasive species, links will also be installed to access the U.S. Army Engineer Research and Development Center’s online Aquatic Plant Information System (APIS) and Invasive Species Information System (ISIS) websites. An accompanying DVD will be included with the CD and will contain the full-motion videos.

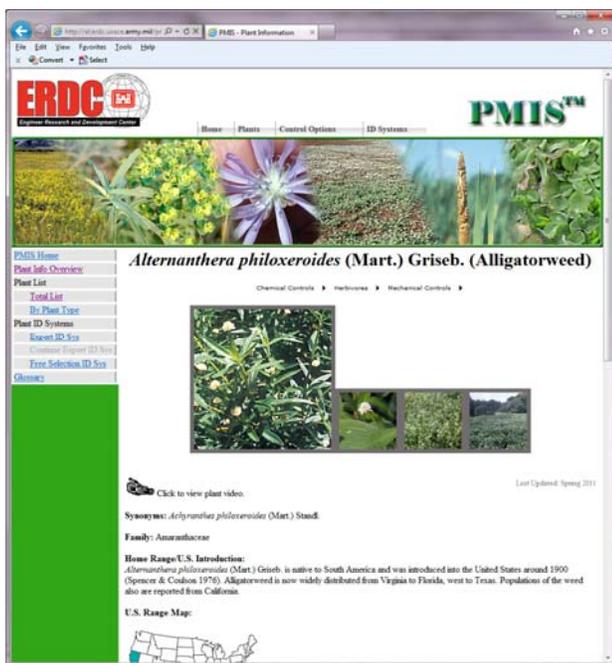


Toward this goal, the U.S. Army Engineer Research and Development Center personnel developed, using Legacy funding, a computer-based information system



Summary of Approach:

While the Noxious and Nuisance Plant Management Information System is highly regarded and in widespread use throughout the military as well as many federal, state, and local organizations, several improvements are necessary to enable enhanced understanding and management of the invasive plant problem for military personnel and to allow for easier information access at remote locations. These first of these improvements is the addition of full motion videos of a selected number of the species. Each video highlights characteristics of the plant species, which can greatly aid in identification. Another major improvement in the PMIS system was the conversion to a database-driven format. This reprogramming will allow for more interactivity, easier updating, and more efficient data sharing. Along with the videos, information on additional species will be added. This will bring the total number of species included in PMIS to 195.



Benefit:

The availability of training lands at military installations is a critical factor in maintaining operational ready units. Invasive plant species have reduced the availability of training lands at a number of DoD facilities thus impairing units training efficiency. A cost-effective method to eliminate or reduce the impact that invasive plant species have on installation

operations is needed. PMIS provides the full range of management methods available to deal with invasive plant problems, and helps reduce the installations dependence on herbicides alone. Installations will decrease their reliance on herbicides and allow access to other more environmentally effective approaches to control noxious plants, thereby increasing the chance of meeting DoD pesticide reduction Measure of Merits, as well as federal and state noxious weed regulatory requirements (Federal Noxious Weed Act).

Accomplishments:

The reprogrammed Noxious and Nuisance Plant Management Information System is now available on-line at <http://el.ercd.usace.army.mil/pmhis/intro.aspx>. A CD is also available that will install a link to the website on the user's desktop. Links to several other systems will also be installed for reference. Along with the CD is an accompaniment DVD containing the full motion plant videos.



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