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Published by: North Dakota State University, Fargo, ND.

Development of a GIS database for the TEAM Leafy Spurge Project

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Abstract:

The value of a geographic information system (GIS) lies in its ability to link spatial data (the location of leafy spurge on the earth's surface) with descriptive data (the characteristics of the infestation, controls, history) and analyze to answer complex questions. During the past three years, Theodore Roosevelt National Park staff has developed GIS data for the TEAM Leafy Spurge (TLS) project area – a land base of 17 million acres. Project staff have acquired and processed over 1,000 individual data layers including: federal, state and county boundaries; digital elevation models (DEM); digital ortho-quarter quads (DOQQ); land use; leafy spurge biological control sites; leafy spurge infestations; public land survey; soils; streams; topographic contours; transportation and wetlands. The layers are organized into a logical structure and contain Federal Geographic Data Committee (FGDC) compliant metadata. Map products have been produced and distributed illustrating leafy spurge infestations and controls by all cooperating agencies. All processed GIS data have been distributed on CD-ROM including free GIS software for viewing data and producing maps. This project has established the GIS data foundation for technology transfer into the future. Land managers and the research community now have a valuable set of data to analyze leafy spurge and develop techniques for its long-term control.