

Weeds Requirements

Informix database: Evaluate the current INFORMIX data base. It is our intention to have all of our data in INFORMIX using SDE. The purpose of the application is to provide a tool for weed infestation inventory and the treatment of those infestations, both spatially and tabular. It is an interagency application. BLM has the lead to host the application but it is to be accessible to the general public. The field offices will be responsible for maintaining the data as collected by the field office. The database will be housed at the SO. The SO will populate the SDE data sets. The state/county/private agencies can provide data either digitally or in manual format. The SO BLM will enter the data for the state/county/private entities. A trust fund grant reimburses BLM for the maintenance of the state/county/private data. MT has SDE running. We have ArcIMS. The requirement is that the application is written utilizing 8.1 and SDE technology, that display and maintenance capabilities run efficiently from a remote field office (example Malta, Montana) and accessibility is provided to the general public. There are no requirements as to the use of ArcIms/MapObjects/ or VB, etc.

Informix database input: Forms need to be accessible to all field offices. Forms need to be accessible directly in INFORMIX as well as updating capabilities during spatial displays.

Input screens needed:

- Pesticide use report (example attached)
- Pesticide application record (example attached)
- Pesticide use proposal (example attached)
- Biological control agent release record (example attached)
- Noxious Weed Management Report (example attached)

Informix Tables: Table Layout has already been provide by Donna Degner.

Infest	general infestation data
Weed	weed species within infestation
Btweed	weeds treated biologically
Btreat	biological treatment information
Ctweed	chemically treated weed species
Ctreat	Chemical treatments
Treatchem	Treatment chemicals used
Dtweed	domestic animal treated weed species
Dtreat	domestic animal treatments
Mtweed	mechanically treated weed species
Mtreat	mechanical treatment

Reveg revegetation
Revegspec revegetation species

Spatial data Input: Current program weeds.sh. The program needs to walk the user through the conversion of gps and digitized weed data to ArcInfo format. After the initial conversion the data needs to be edited within Arcedit and added to the statewide library. It needs to store and access the data from SDE.

Arcedit work that is usually needed to be completed:

New data needs to be compared to existing data to verify that infestation does not exist within the current data set.

To insert data into the library, existing data must be pulled and merged with new data and reinserted into the library to avoid data loss.

Data type: Polygon/regions

points are captured and buffered. They are put into categories based on the size of the infestation <.1 acres, .1-1 acres, and 1 - 5 acres. The buffered polygon has a total area of .1 acres, .5 acres, and 2.5 acres respectively.

line are captured and then are buffered. The captured lines have a bufferwidth value that denotes the width of the buffer to be created. There is also a bufferunits value that denotes whether the width is in feet or meters. The other value of importance is the dirfrmline value that denotes whether the capturer walked down the center of the infestation or down the right or left side of the infestation to denote the direction of the buffer.

polygons - Each infestation/polygon represents only 1 species.

Attributes: Each region has an infestation number that is generated from the INFORMIX weeds database, and a fiscal year value to denote the fiscal year of the data collection. An infestation number must be established prior to any associated treatment data being added.

Symbols: Point data <= .01 is denoted by the use of an "x".

.1 - 1 Acre is a triangle

1 - 5 Acres is a box/square.

Each separate species is a separate color. Major species and associated Colors are denoted in the weed mapping handbook.

Spatial reference: At statewide display the required detail is:
State boundary

County boundary
Infestations differentiated by species
Table of total acres by species

At the infestation area of interest the required detail is:

Infestation is outlined and the associated records within Informix data tables are highlighted (ability to toggle between treatment and infestation).

Transportation

Streams

Lakes

Land net

Ownership

Query Capabilities: Search by unique Infestation Number

Need to be able to create a polygon (screen digitized) that encompasses numerous infestation sites and creates an output file that contains the weed infestation number, latitude and longitude of the center point and/or the albers coordinates of the center point

The database will house multiple years worth of data. Quite possibly, an infestation may be available for more than one year. The application should allow for options to display the latest year as well as a step-through process of historic development/treatments.

Output:

Reports to be generated:

Pesticide use report (example attached)

Pesticide application record (example attached)

Pesticide use proposal (example attached)

Biological control agent release record (example attached)

Noxious Weed Management Report (example attached)

Maps to be generated:

One option is a needs to display the entire state or any area of interest with infestations displayed on all jurisdictions excluding private lands. The display would include a table that lists by species total acres of infestations by jurisdiction of the area of interest, including private.

Statewide map all species

Statewide map by individual species

By infestation

Map needs to include:

Title: Either species, infestation number

Data Source: Montana Noxious Weed Survey and
Mapping System

Disclaimer:

Scale:

Legend: with species and acre totals

North arrow