# Invasive Species Procedure

## 1.0 Introduction

Invasive species may be plants or animals that have invasive traits to the point that they are monitored for expansion into new areas and for their effect on their surroundings. In Nebraska, invasive plant and animal species are listed and tracked by the Nebraska Invasive Species Program, an affiliate of the University of Nebraska-Lincoln (http://neinvasives.com/). Plants on the invasive species list may also be on an adjoining state's weed list or may be affecting agriculture or ecosystems in Nebraska.

Listed noxious weeds have been determined to pose a serious threat to the economic, social, or aesthetic well-being of the residents of the state. Noxious weeds compete with pasture and crops, reducing yields substantially and through State Law, must controlled. Some noxious weeds are poisonous or injurious to people, livestock, and/or wildlife. The losses resulting from noxious weed infestations can be significant, costing residents millions of dollars due to lost production.

NDOT's policy is to control noxious weeds that are identified on its rights-of-way, regardless of the highway funding source. The species identified on the Nebraska Noxious Weeds list (including county-declared noxious plants) (http://www.nda.nebraska.gov/plant/noxious_weeds/index.html) are not included in NDOT's seeding program. Language in NDOT specifications requires that invasive species be controlled. Hay that is being provided for erosion control on construction projects must be certified as Brome and noxious weed free. Specifications also require that equipment be washed prior to entering and leaving the construction site to aid in the prevention of spreading invasive species.

## 2.0 NDOT Vegetation Management

The NDOT Roadside Vegetation Establishment and Management Manual lists the statewide noxious and county-declared noxious weeds in Nebraska. Maps showing distribution, photos of the plants, and recommendations for treatment are provided, as are linked resources created by other organizations.

NDOT, like any landowner, is obligated to control noxious weeds on its properties. The *NDOT Roadside Vegetation Establishment and Management* manual promotes use of an integrated vegetation management approach to vegetation management (including weed control), using a variety of management tools and ecological principles to establish and maintain right-of-way vegetation. The tools available include seeding and planting native species, preventing disturbances to existing vegetation, timely mowing, hand removal of individual weed plants, and wise application of herbicides.

When chemical application is required, NDOT primarily uses the technique of spot spraying. This limits the amount of chemical being applied and targets the specific plant that is being eradicated. NDOT has begun using GPS to locate areas where noxious weed colonies exist. This allows District staff to easily return to the site to verify effectiveness of the treatments.

## 3.0 NDOT Seeding Program

Selection of plant species used in NDOT's seeding program is guided by Executive Order 13112 and Executive Order 13751, along with documents developed by the Environmental Section's Roadside Development and Compliance Unit.

NDOT desires that seeded native species would be the long-term vegetation community on its roadsides. NDOT's roadside seed mixtures are composed primarily of native plant species, and are based on information in NDOT's *Plan for the Roadside Environment*.

NDOT favors the use of native species because of the deep root systems (benefits include anchorage, soil erosion prevention, and drought tolerance) that are characteristic of native species. However, since native species need substantial time to become established and roadside growing conditions are difficult (in terms of soil compaction, soil fertility, temperature and moisture extremes, especially on highway shoulders), use of introduced species may be required to attain time-efficient post-construction soil stabilization.

The term "introduced" should not automatically be equated with "invasive" or "noxious." Introduced species originated in another setting (many are from Europe or Asia), and then were moved to their present location, either intentionally or inadvertently, and currently exist as part of the local flora. The invasive species of Nebraska are described on the University of Nebraska-Lincoln website (https://neinvasives.com/home). While introduced species may be considered within the NDOT planting program, plants that are deemed to be state or county listed noxious weeds or "Priority" invasive species are not planted.

A regulatory team of Nebraska state agencies and federal agencies, together with NDOT, have set a general conservation condition to address compliance with Executive Orders 13112 and 13751 and to guide the species composition of NDOT's seed mixtures:

General Conservation Conditions for All Projects (Responsible Party for the measure is found in parentheses):

A. All permanent seeding and plantings (excluding managed landscaped areas) shall use species and composition native to the project vicinity as shown in the Plan for the Roadside Environment. However, within the first 16 feet of the road shoulder, and within high erosion prone locations, tall fescue or perennial ryegrass may be used at minimal rates to provide quick groundcover to prevent erosion, unless state or federally listed threatened or endangered plants were identified in the project area during surveys. If listed plants were identified during survey, any seed mix requirements identified during resource agency consultations shall be used for the project. (NDOR Environmental)

This conservation condition is added to the Green Sheet. In compliance with the general conservation condition, use of non-native species is limited to shoulder seeding and areas at high risk for erosion (slopes and around culvert ends, for example). Introduced species used in NDOT's seed mixtures are included because of their abilities to become established rapidly and reliably in the harsh roadside environment.

Additionally, any comments related to plants or any plants identified as "plants of concern" through the NEPA or permitting processes, are addressed prior to the development of the project's seed mixtures. An example of this can be found in a 404 permit condition:

1. *Clearing of vegetation shall be limited to that which is absolutely necessary for construction of the project. All areas adjacent (contiguous, bordering neighboring) to jurisdictional waters disturbed by construction shall be revegetated the appropriate perennial, native grasses and forbs and maintained in this condition. Phalaris arundinacea (Reed Canary Grass), Lythrum salicaria (Purple Loosestrife), Bromus inermus (Smooth Brome), Phragmites, sp. (Common Reed, River Reed) and Tamaris, sp. (Salt Cedar), are NOT appropriate choices of vegetation.*

When an entity named within the provisions of E.O. 13751 presents a concern regarding an invasive plant within NDOT's right-of-way, the Environmental Section will coordinate with that entity to attain a mutually favorable goal.

# 4.0 During Construction Commitments

The following specification is included in the 2017 Standard Specifications for Highway Construction and is added to the project contract documents:

107.12 – Invasive Species Control

1. The Contractor shall prevent the transfer of invasive plant and animal species. The Contractor shall wash equipment at the contractor's storage facility prior to entering the construction site. The Contractor shall inspect all construction equipment and remove all attached vegetation and animals prior to leaving the construction site.

During construction, the District Project Manager evaluates projects for environmental compliance. In the event that noxious weeds are seen, they can be eradicated by employing the techniques or chemicals identified in the "NDOT Roadside Vegetation Establishment and Management" manual. Corrective Actions and their resolutions related to noxious weed management are documented in NDOT's ECODatabase system.