

TECHNICAL NOTES

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PLANT MATERIALS - 1

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CONSERVATION SEEDING AND PLANTING GUIDE FOR WASHINGTON STATE

Gary Kuhn, Plant Materials Specialist, NRCS, Spokane, Washington
Martha Chaney, Pasture Mgmt Specialist, Olympia, Washington
Mark Stannard, PMC Manager, NRCS, Pullman, Washington
Wayne Crowder, PMC Soil Conservationist, Pullman, Washington
Tim Dring, Biologist, NRCS, Spokane, Washington

WASHINGTON GUIDE for CONSERVATION SEEDINGS and PLANTINGS



Table of Contents

Introduction

How to Use the Guide
Conservation Planning
Reclamation vs. Restoration
Technical References & Resource Links

Master Species Characteristics, Adaptation, and Attributes Spreadsheet

Western Washington Seeding and Planting Recommendations Seed Rate Calculator

Eastern Washington Seeding and Planting Recommendation Spreadsheets:

- Forage,
- Erosion,
- Habitat Improvement/Restoration,
- Filtration
- Precipitation Zones:
 - 6-9",
 - 9-12",
 - 12-15",
 - 15-18",
 - 18-25",
 - 25"+,
 - Irrigated

Introduction

How to Use the Guide

This guide is intended to be used as a tool to select suitable plant species for conservation plantings for erosion control, forage production, forestry uses, habitat improvement or restoration, and filtration.

The guide is partitioned into separate Excel spreadsheets. The Master Species Adaptation and Characteristics spreadsheet contains a state-wide list of species. This master spreadsheet lists several species characteristics and adaptability criteria. In addition, a drop-down table is included which can be printed out, showing characteristics and adaptation information for the selected species.

For specific species selection and seeding rates for Western and Eastern Washington separate references are used.

Western Washington: The publication *Pasture and Hayland Renovation for Western Washington and Oregon* can be accessed and downloaded via web site under respective title below. Also, a more general guide for calculating seeding rates for grasses and forbs in western Washington is available (see below).

Eastern Washington: A series of spreadsheets respective of precipitation zones has been developed. Each precipitation zone has suitable species and seeding rates listed for forage production, erosion control, habitat improvement/restoration, and filtration.

Conservation Planning

The principles of conservation planning should be used in conjunction with this seeding guide. Identifying resource concerns, landowner objectives, inventorying resources, alternatives development, landowner decision, implementation, and evaluation are the foundation for effective conservation plantings. Determining on-site factors (soil, climate, existing vegetation), resource concerns, planned management and landowner objectives are essential before developing seeding or planting alternatives. Proper site preparation, planting technique, and maintenance are critical for stand establishment.

Reclamation versus Restoration

These two terms can have completely different meanings which will lead to different seeding/planting and management recommendations. It is important to understand the on-site factors and landowner objectives to determine an appropriate planting plan.

Reclamation is the process of using conservation practices to restore a site from a deteriorated condition (invasive/noxious weeds, erosion). Restoration is the process of restoring a site to a pre-determined natural ecological condition. In reclamation, both native and/or non-invasive introduced species can be used when they would be the most suitable to compete against invasive weeds or to stabilize a severely eroded site. In restoration, only native species, which are identified to originally exist on the site, would be used.

NRCS, through the Plant Materials Program, has developed grass, tree, shrub, and forb cultivars and they are the preferable choices to use in reclamation or restoration projects. Recently, there has been an extensive effort to use “source identified” seed or cutting stock. Native seed or cutting stock is collected near the site to be restored. This stock is grown by a contract nursery and put back on the site. In all cases, it is important to know where the seed or stock came from, and their site adaptability ranges.

Technical References and Resource Links

Washington Major Land Resource Areas (MLRAs) –
<http://soils.usda.gov/survey/geography/mlra/index.html>

NRCS Technical Notes in EFOTG Sec. I – Forestry, Range, Agronomy, and
Plant Materials – Item B. Technical Notes by Discipline
<http://www.wa.nrcs.usda.gov>

USDA Plants Website – <http://plants.usda.gov>

USDA NRCS Plant Materials Website - <http://plant-materials.nrcs.usda.gov>

USDA WA NRCS Plant Materials Website – (for Idaho, Oregon, and
Montana PMC websites insert idpmc, orpmc, or mtpmc)
<http://plant-materials.nrcs.usda.gov/wapmc/>

Washington State Noxious Weed Control Board – current list of noxious
weeds, weed brochures, laws, control, etc.
<http://www.nwcb.wa.gov>

PNW Insect Control Handbook – <http://pnwpest.org/pnw/insects>

PNW Weed Control Handbook – <http://pnwpest.org/pnw/weeds>

Landowner's Guide for Restoring and Managing Oregon White Oak
Habitats –
order <http://www.or.blm.gov/salem>
download electronically – <http://www.oregonoaks.org>

Master Species Characteristics, Adaptation and Attributes Spreadsheet

The Excel spreadsheet file is contained in [Masterspecies.xls](#). It alphabetically lists tree, shrub, grass, forb, and wetland species found in Washington. Plant characteristics, adaptation, and attribute information is tabulated and can be printed out when using the dropdown table. It also contains a MLRA table identifying key native plants per MLRA.

Western Washington Seeding and Planting Recommendations

Access the web site below to access and print the following publication: “Pasture and Hayland Renovation for Western Washington and Oregon”, EB1870, Steven C. Fransen and Marty Chaney.

<http://cru.cahe.wsu.edu/CEPublications/eb1870.pdf>

Seed Rate Calculator - Excel spreadsheet, [seeding species & rate calculator 2005.xls](#), aids in planning seeding mixtures and determining seeding rates for different conservation uses.

Western Washington Native Woody Plants for Wildlife – Excel spreadsheet, [western WA Trees & Shrubs.xls](#), describes soil/climate suitability and wildlife attributes of native trees and shrubs in Western Washington.

Eastern Washington Seeding and Planting Recommendations

A series of spreadsheets respective of precipitation zone gives seeding recommendations relative to forage production, erosion control, habitat improvement/restoration, and filtration. Seeding rates are given for sites with no limitations, rocky or shallow, sandy, wetland/riparian and saline.

- [6 to 9 in. precip.xls](#)
- [9 to 12 in. precip.xls](#)
- [12 to 15 in. precip.xls](#)
- [15 to 18 in. precip.xls](#)
- [18 to 25 in. precip.xls](#)
- [25+ in. precip.xls](#)
- [irrigated.xls](#)

Seeding rates are for drilled rates using Pure Live Seed (seed purity x seed germination)/100.

When seed is broadcast, double the listed seeding rate.

Using certified seed is recommended to assure purity and germination standards.