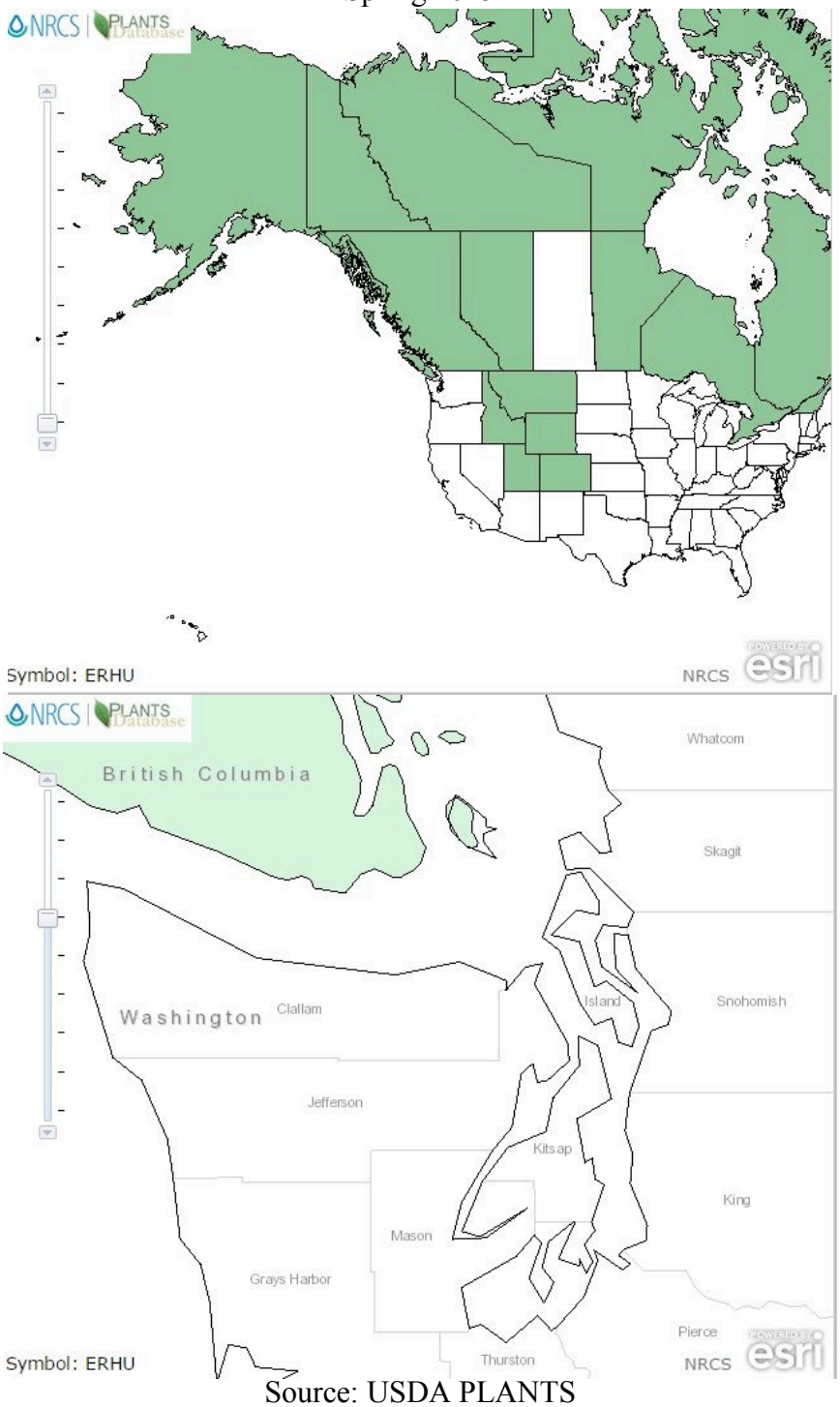
Plant Propagation Protocol for *Erigeron humilis*
ESRM 412 – Native Plant Production
Spring 2015



Source: USDA PLANTS

TAXONOMY	
Plant Family	
Scientific Name	Asteraceae

Common Name	Sunflower family
Species Scientific Name	
Scientific Name	*Erigeron humilis* Graham
Varieties	
Sub-species	
Cultivar	
Common Synonym(s)	*Erigeron unalaschensis* Vierh
Common Name(s)	Arctic-alpine daisy
Species Code (as per USDA Plants database)	ERHU
GENERAL INFORMATION	
Geographical range	E. humilus is a North American boreal species that reaches its southern most limit in Glacier National Park. It is found in talus and scree slopes above treeline.
Ecological distribution	Pacific Northwest and southeastern British Columbia.
Climate and elevation range	Dry and sunny, middle elevation, Alpine scree slope
Local habitat and abundance	Adundant in dry and sunny environment
Plant strategy type / successional stage	
Plant characteristics	
PROPAGATION DETAILS	
Ecotype	Alpine scree slopes, southeastern British Columbia
Propagation Goal	Plants
Propagation Method	Seed
Product Type	Container (plug)
Stock Type	160 ml conetainers
Time to Grow	9 Months
Target Specifications	Height: 6 to 10 true leaves, 1.5 cm Caliper: n/a Root System: Firm plug in container.
Propagule Collection Instructions	Seeds are hand collected in late August when achenes separate easily from the receptacle. Seeds are collected in paper bags and kept in well ventilated drying shed prior to cleaning.
Propagule Processing/Propagule Characteristics	Seeds are hand cleaned at the nursery. Seed longevity is unknown. Seed dormancy is classified as non-deep physiological dormancy. Seeds/Kg: 1,980,000/kg % Purity: 100% % Germination: 55%
Pre-Planting Propagule Treatments	Seeds are placed into an outdoor 150 day cold, moist

	stratification.
Growing Area Preparation / Annual Practices for Perennial Crops	Outdoor nursery growing facility. Sowing Method: Direct Seeding. Seeds are lightly covered with medium. Growing medium used is milled sphagnum peat, perlite, and vermiculite with Osmocote controlled release fertilizer (13N:13P2O5:13K2O; 8 to 9 month release rate at 21C) and Micromax fertilizer (12%S, 0.1%B, 0.5%Cu, 12%Fe, 2.5%Mn, 0.05%Mo, 1%Zn) at the rate of 1 gram of Osmocote and 0.20 gram of Micromax per 160 ml conetainer. Conetainers are filled and sown in late fall and irrigated thoroughly prior to winter stratification.
Establishment Phase Details	Seeds germinate uniformly in 10 to 15 days when day temperatures reach 22C during the day. Germination to true leaf stage is 35 days. Root development is very rapid during this stage. After seedlings are well established, they must dry down between irrigations.
Length of Establishment Phase	4 weeks
Active Growth Phase	The root system will fill containers in as little as 8 weeks following establishment. Shoot growth is minimal the first year and appears as a small, compressed rossette of leaves less than 1.5 cm tall. The plants are fertilized with 20-20-20 liquid NPK at 100 ppm occasionally.
Length of Active Growth Phase	12 weeks
Hardening Phase	Plants are fertilized with 10-20-20 liquid NPK at 200 ppm in early fall; pots are flushed with water, irrigation is gradually reduced through September and October.
Length of Hardening Phase	4 weeks
Harvesting, Storage and Shipping	Total Time To Harvest: 9 months Harvest Date:September Storage Conditions: Overwinter in outdoor shadehouse under insulating foam and snow.
Length of Storage	5 months
Guidelines for Outplanting / Performance on Typical Sites	E. humilis produces a small rosette of leaves and an expansve root system. Most growth is allocated into the root system the first year and seedlings fill containers 8 weeks after germination. Plants held over in the nursery were flowering 13 months after germination
Other Comments	
INFORMATION SOURCES	
References	See below
Other Sources Consulted	

Protocol Author	Jiannan Huang
Date Protocol Created or Updated	5/20/2015, 6/7/2015

Work Cited Page

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