WSNWCB Noxious Weed Committee
Draft Noxious Weed Comparative Analysis Tool

August 3, 2009, updated October 7, 2014

Although we have three clearly defined noxious weed classes, we have not been able to make objective, systematic, comparisons between noxious weed species. The purpose of this analysis tool is threefold: 1) to enable us to use the same criteria when discussing species during the listing process or evaluating current noxious weeds; 2) to complement the scientific written findings in a referenced, abridged document; and 3) to provide a depository for basic noxious weed information that can be elegantly and effectively summarized in tabular or database format.

This draft of the WSNWCB comparable analysis tool was created through collaboration with and inspiration from: Rick Johnson, Bridget Simon, Oregon Department of Agriculture, Washington State Invasive Species Council's Species Prioritization committee, and the WSNWCB staff and Noxious Weed Committee.

Fill in the boxes with your answers from the questions on the proceeding pages.

Species:	Common name:
# Unknowns:	Distribution:
Level of certainty: how confident are you in this analysis? Select one. • High: many peer-reviewed articles published about this species, studying its impacts, spread or other invasive traits. • Medium: few peer-reviewed articles are published on this species; university and extension publications are available along with information from experts such as botanists and land managers. • Low: no peer-reviewed articles are available for this species; few online resources available from credible sources. Comments:	

Summary of Scores—fill in scores from proceeding questions		
	Maximum Score:	Actual Score:
Impact		
Ecological	27	
Economic	30	
Health	15	
Total Impact Score	**72**	
Invasiveness		
Dispersal ability	10	
Spread Rate	10	
Habitat specialization	10	
Invasiveness within genus	3	
Invasiveness elsewhere	10	
Total Invasiveness Score	**43**	
Vectors		
Feasibility of prevention	10	
Management		
Difficulty of control	10	
Maximum Score	**135**	

IMPACTS

_____ Ecological Total

_____ Impact on ecosystem processes

A.	No known impact on ecological processes	0
B.	Causes minor influence on ecosystem processes (e.g., may have a measurable but insignificant effect on soil nutrients, or causes some soil erosion)	3
C.	Causes significant alteration of ecosystem processes (e.g., increases sedimentation rates along aquatic systems, reduces areas of open water, alters water chemistry, significantly alters ecosystem productivity)	7
D.	Causes major, possibly irreversible, alteration of ecosystem processes, i.e., ecosystem transformer (alters geomorphology, hydrology, fire regimes, nutrient cycling, food web dynamics)	10
E.	Unknown	U

Citations, comments:

_____ Impact on ecological interactions

A.	No discernible impact on community composition, structure, and interactions	0
B.	Mainly establishes in disturbed areas and typically does not invade natural areas, or establishes in natural areas at low frequency	3
C.	Invades undisturbed habitats and outcompetes some native species	7
D.	Invades undisturbed habitats and causes major alteration of community composition (e.g., forms monoculture), structure, and interactions structure	10
E.	Unknown	U

Citations, comments:

_____ Impact on genetic integrity of native species/hybridization potential

A.	No impact on genetic integrity of native species	0
B.	Known to hybridize with one or more native species, reducing genetic integrity	5
C.	Known to hybridize with one or more native or nonnative species, resulting in hybrid that is a superior competitor to parent plants.	7
D.	Unknown	U

Citations, comments:

_____ **Economic Total**

_____ Impact on industry (agriculture, timber, horticulture, aquaculture)

A.	No discernible impact on industry	0
B.	Causes minor impacts to industry (some reduction in crop yield or livestock forage, some interference with harvest	5
C.	Causes major impacts to industry (major reduction in crop yield or livestock forage, causes economic loss as contaminate, host of crop pathogens or pests, interferes with water diversion systems)	10
D.	Unknown	U

Citations, comments:

_____ Benefit to industry (agriculture, timber, horticulture, aquaculture)

A.	No known benefit	0
B.	Provides some benefit (e.g., provides nectar source for honeybees, minor role as medicinal herb, minor crop, occasionally sold as an ornamental)	-3
C.	Provides direct benefit to industry (grown as a major crop, commonly sold as an ornamental	-5
D.	Unknown	U

Citations, comments:

_____ Impact on physical infrastructure

A.	No impact on physical infrastructure	0
B.	Has minor impact (minor damage or impediment to dams, right-of-ways, fencing)	5
C.	Has significant impact (major damage or impediment to dams, right-of-ways, buildings, flood control ditches)	10
D.	Unknown	U

Citations, comments:

_____ Impact on recreational sector

A. No impact on recreational opportunities	0
B. Has some detrimental impact (reduced opportunities for camping, hiking, boating, shellfish gathering, birding, hunting, biking)	5
C. Has major detrimental impact (renders recreational sites useless or close to useless)	10
D. Unknown	U

Citations, comments:

_____ **Health**

A. No impact on human health	0
B. Causes physical injury (spines, thorns), or pollen is an allergen	3
C. Contains non-fatal but serious phytotoxins, provides habitat for disease vector or pest organism	5
D. Contains acute or chronic fatal toxins known to kill livestock or other animals	10
E. Contains acute or chronic fatal toxins known to kill humans	15
F. Unknown	U

Citations, comments:

INVASIVENESS

_____ Dispersal ability

A.	Does not disperse far beyond parent plant	0
B.	Few seeds, few effective dispersal vectors; no vegetative reproduction, low viability or longevity	3
C.	Many seeds, few effective dispersal vectors; no vegetative reproduction, moderate viability or seed longevity	5
D.	Many seeds, quickly dispersed by wind, water, vehicles, animals, humans, and other vectors and/or rapid vegetative reproduction through fragmentation and/or extensive rhizome network	10
E.	Unknown	U

Citations, comments:

_____ Spread rate with no management

A.	Unlikely to occur – species does not spread within suitable habitat	0
B.	Actual or potential rate of spread within suitable habitat is slow	3
C.	Actual or potential rate of spread within suitable habitat is moderate	5
D.	Actual or potential rate of spread within suitable habitat is fast (doubling in < 10 years)	10
E.	Unknown	U

Citations, comments:

_____ Habitat specialization

A.	Highly specialized habitat requirement (species typically found in one ecotype)	0
B.	Moderately specialized habitat requirements (species found in 2-3 ecotypes)	5
C.	General habitat requirements (species capable of occupying broad range of ecotypes)	10
D.	Unknown	U

Citations, comments:

_____ Invasiveness within genus

A.	Only invasive species within genus	0
B.	Other species within genus known to be invasive	3
C.	Unknown	U

Citations, comments:

_____ Known invasiveness in other areas

A.	Not known to be invasive elsewhere	0
B.	Known to be invasive in climates dissimilar to Washington's current climates	3
C.	Known to be invasive in geographically similar areas worldwide (similar latitudes)	7
D.	Known to be invasive in adjacent states, provinces	10
E.	Unknown	U

Citations, comments:

VECTORS

_____ Feasibility of prevention/containment

A.	Low – numerous pathways for entry into and transport within Washington	0
B.	Moderate – some entry into and transport within Washington	3
C.	Significant – entry and transport pathways are infrequent and inefficient	7
D.	High – entry and transport pathways are rare, "fluke" occurrences	10
E.	Unknown	U

Citations, comments:

MANAGEMENT

_____ Difficulty to control

A.	Management not necessary; abundance does not exceed threshold requiring control	0
B.	Management relatively easy and inexpensive and provides complete control ; requires a minor investment in time, labor, and/or financial resources (e.g., hand-pulling, competitive plants)	3
C.	Management requires a major short-term investment in time, labor, and/or financial resources or a moderate long-term investment (e.g., hand-pulling, mowing, tilling, competitive planting, herbicide)	7
D.	Management requires a major, long-term investment in time, labor, and/or financial resources (e.g., herbicide or intensive mechanical practices generally required)	10
E.	Unknown	U

Citations, comments:

DISTRIBUTION

_____ Current level of known distribution in Washington

A.	Widely distributed throughout Washington State	Widespread
B.	Regionally distributed and has not spread completely into known suitable habitat	Regional
C.	Limited distribution - one or more isolated infestations identified	Limited
D.	Extent of distribution unknown	Unknown

Where is it found in Washington?

Citations, comments: