

Washington State
Aquatic Nuisance Species (ANS) Watch List
April 14, 2008

Non-native aquatic nuisance species (ANS) are introduced to the state primarily through human activity. ANS can be highly destructive, competitive, and difficult to control, due to aggressive growth, rapid reproduction, and/or lack of natural predators. Their presence can be costly, and also leads to decreased biodiversity through displacement of native species. Species on this list were chosen by general agreement of the legislatively established Washington State Aquatic Nuisance Species Committee (hereafter called "committee") as established under RCW 77.60.130 and based on professional judgment.

Purpose

The ANS Watch List provides a non-regulatory reference tool to assist agency and public prevention, monitoring, and management decision-making. The list will be used to help manage ANS in conjunction with the committee's Early Detection and Rapid Response, and ANS Management Plans. The list will also help to promote general education, focus monitoring efforts, and increase awareness of various ANS and their impacts. The intent is to have the distribution of all listed species tracked in an ANS database.

What is Included

The list is a continuously evolving document consisting of species the committee considers as posing, or potentially posing, a threat to Washington aquatic ecosystems. It includes species which have been previously established and (for now) eradicated; species not yet here that we want to prevent from entering or establishing in Washington; and species already observed here that we would like to eradicate or otherwise manage. It is not meant to be a complete list of non-native species in Washington and it does not include plant pathogens or detrimental microorganisms. Some species may never have management plans developed at the state level because they are already too widespread, although control at the local level may be of value. These are listed to promote general awareness that they are non-native and are considered detrimental or potentially detrimental to the environment.

Species of Concern

All of the organisms on this list are known to have some level of environmental, economic and/or human health risk, whether in Washington or in other similar parts of the nation or world. However, it is not economically feasible to comprehensively monitor or manage all of them. Therefore, the list categorizes species as either primary or secondary based on the committee's assessment of their risks.

Primary Species of Concern are those species considered have the highest environmental, economic and/or human health risk. Some of these species are already here and some are not. Funding will be prioritized to develop monitoring and management plans for these species, and eradication and/or control measures will be instituted if or when they are found.

Secondary Species of Concern are those species considered to be of lower environmental, economic and/or human health risk. Management of secondary species is expected to vary

depending on the organism, its distribution and numbers, feasibility of management success, and other factors. A risk evaluation panel will review and recommend next steps as appropriate for those already established in Washington. Those not yet established in Washington will be included in existing monitoring programs where possible.

Watch List Format

The list is divided into four ANS parts including freshwater plants, freshwater animals, marine/estuarine plants, and marine/estuarine animals. Each part is further divided into primary and secondary species of concern tables. Tables are composed of columns identifying each species' common name, scientific name, current status, regulatory classification, existing management plans, and the probable pathways suspected of originally introducing or contributing to the continued spread of each species.

Process for List Revisions (Additions or Deletions)

The committee welcomes requests for additions, deletions, or priority changes to the list annually or as needed. Written requests must be made to the Chair or Vice-Chair and include information as noted in the list below. Any proposed committee actions must be noted in the next meeting's agenda and sent out to the committee at least two weeks prior to the meeting at which an action is expected. Written comments from members addressing the action will be incorporated into the meeting discussion if they are unable to attend.

Using scientific facts, and technical information, and best professional judgment, the committee will strive for consensus on whether the request is reasonable for consideration. Where there is consensus, the committee may approve the request or establish a technical subcommittee and/or expert(s) to make a recommendation to the committee on whether the species should be added or deleted. The committee will then follow the standard action agenda and consensus protocols to finalize the Watch List request.

A written request for addition or deletion, or change in concern level for a specific or several species must include the following information, at a minimum and to the known extent available:

1. Contact information;
2. Scientific and common name(s) of the species in question;
3. Specific change requested;
4. Reason for request;
5. Whether the species is regulated/classified by state regulation;
6. Whether the species considered beneficial at some level;
7. The known or potential pathways for introduction;
8. Introduction history and current distribution information –when, where, and how much;
9. Background on the biology and properties of the species – reproduction, distribution, tolerance to various environmental conditions;
10. Evidence of invasive behavior in other locations;
11. Risk factors to Washington State (environmental, economic, human); and
12. Known containment, control, or eradication methods.

CODES FOR THE TABLES

Status in Washington

P	Known to be present in Washington State
E	Previously established but now believed eradicated in WA
M	Currently managed at various state and/or local locations
X	No verified presence in Washington State

Regulatory Classification

D	WDFW Deleterious exotic wildlife (WAC 220-12-01701) [Non native species considered dangerous to the environment or wildlife of the state]
P	WDFW Prohibited aquatic animal species (WAC 220-12-090) [May not be possessed, purchased, sold, propagated, transported, or released into state waters]
U	WDFW Unlisted aquatic animal species (RCW 77.12.020) [May not be released into state waters]
NWA	Class A noxious weeds (WAC 16-750-005) [Limited distribution- eradication required by law]
NWB	Class B noxious weeds (WAC 16-750-011) [Limited distribution- designated for control in various regions where not yet widespread]
NWC	Class C noxious weeds (WAC 16-750-015) [Widespread distribution- local control can be enforced if desired]
NWQ	WA State Wetland & Aquatic or Noxious Weed quarantine listing (WAC 16-752-505 or 16-752-610)
LA	Lacey Act listing (50 CFR 16 or 18 U.S.C. 42) [Listed as Injurious Wildlife Species]

Management Plan

N	National management plan is available for this species
S	Washington State management plan is available for this species
R	Pacific Northwest regional management plan is available for this species
X	There is no known plan at this time

Suspected / Probable Pathway

Aq	Aquaculture (escaped, or brought in as accidental "hitchhiker" on other fish & shellfish imports)
Bd	Birds
Bw	Ballast water
Er	Imported for Educational / Research Institutions (escaped or discarded)
Fc	Imported food for consumption / live seafood (discarded imports or hitchhikers on seafood packaging)
Fp	Introduced for fur production
Hn	Horticulture / nursery trade
In	Internet sales
Lb	Live bait
Pa	Pet / aquarium trade
Rw	Recreational or commercial watercraft - hitchhikers in/on boat hulls, bilge water or field gear/clothing
Sp	Intentionally stocked or planted
X	Unknown

FRESHWATER PLANTS

Priority Species of Concern

Common Name	Scientific Name	Status in WA	Regulatory Classification	Management Plan	Probable Pathway
African waterweed	<i>Lagarosiphon major</i>	X	NWQ	X	Pa, Hn, In
Brazilian elodea	<i>Egeria densa</i>	P/M	NWQ, NWB	X	Pa, Rw, In
Eurasian watermilfoil	<i>Myriophyllum spicatum</i>	P/M	NWQ, NWB	S	Rw
European water chestnut	<i>Trapa natans</i>	X	NWQ	S	Hn
Golden algae (microscopic)	<i>Prymnesium parvum</i>	X	-	X	X
Hairy willow herb	<i>Epilobium hirsutum</i>	P	NWQ, NWC	X	Hn
Hydrilla	<i>Hydrilla verticillata</i>	P/M	NWQ, NWA	S	Rw, Hn, In
Knotweed, Japanese*	<i>Polygonum cuspidatum</i>	P/M	NWQ, NWB	S	Hn
Knotweed, Bohemian*	<i>Polygonum bohemicum</i>	P/M	NWQ, NWB	S	Hn?
Knotweed, giant *	<i>Polygonum sachalinense</i>	P/M	NWQ, NWB	S	Hn
Knotweed, Himalayan *	<i>Polygonum polystachyum</i>	P/M?	NWQ, NWB	S	Hn
Parrot feather	<i>Myriophyllum aquaticum</i>	P/M	NWQ ,NWB	X	Rw, Pa, Hn, In

*Although more terrestrial than aquatic, included here because they significantly impact aquatic resources in riparian areas

Secondary Species of Concern

Common Name	Scientific Name	Status in WA	Regulatory Classification	Management Plan	Probable Pathway
Arrowhead, grass leaved	<i>Sagittaria graminea</i>	P/ M	NWQ, NWB	X	Hn
Arrowhead, delta	<i>Sagittaria platyphylla</i>	P	NWQ	X	Hn
Bladderwort, swollen	<i>Utricularia inflata</i>	P	NWQ	X	Rw, In, Bd
Curly leaf pondweed	<i>Potamogeton crispus</i>	P	NWC	X	Aq, Rw

Secondary Species of Concern – Freshwater Plants (cont.)

Common Name	Scientific Name	Status in WA	Regulatory Classification	Management Plan	Probable Pathway
Didymo “rock snot” algae *	<i>Didymosphenia geminata</i>	P	-	X	Rw?
Eelgrass, freshwater	<i>Vallisneria gigantea sp.</i>	P	-	X	Pa
European frogbit	<i>Hydrocharis morsus-ranae</i>	P	NWQ	X	Hn, Rw, In
Fanwort	<i>Cabomba carolinana</i>	P	NWQ, NWB	X	Hn, Pa, In
Hyacinth, water	<i>Eichornia crassipes</i>	X	-	X	Hn, In
Iris, yellow flag	<i>Iris pseudacorus</i>	P/M	NWC	X	Hn, In
Loosestrife, garden	<i>Lysimachia vulgaris</i>	P/M	NWB	X	Hn, In
Loosestrife, purple	<i>Lythrum salicaria</i>	P/M	NWB	S	Hn, In
Lovegrass sedge	<i>Cyperus eragrostis</i>	P	-	X	Hn
Reed, common	<i>Phragmites australis</i> (exotic genotype)	P	NWC	X	?
Reed, giant	<i>Arundo donax</i>	X	-	X	Hn
Reed, sweetgrass	<i>Glyceria maxima</i>	P/M	NWQ, NWA	X	Hn
Ricefield bulrush	<i>Schoenoplectus / Scirpus mucronatus</i>	P	-	X	?
Salvinia, giant	<i>Salvinia molesta</i>	X	-	X	Hn, In
Senegal tea	<i>Gymnocoronis spilanthoides</i>	X	-	X	Pa
Toxic cyanobacteria (blue-greens)	<i>Cylindrospermopsis raciborskii</i>	X	-	X	X
Flowering rush	<i>Botomus umbelatus</i>	X	NWQ	X	Hn
Water primrose, creeping	<i>Ludwigia peploides</i>	P/M	WA	X	Hn?
Yellow floating heart	<i>Nymphoides peltata</i>	P/M	NWQ, NWB	X	Hn
Salt cedar **	<i>Tamarix ramosissima</i>	P/M	NWQ, NWB	X	Hn, Rw

* Included here because it exhibits undesirable growth in some conditions, possibly the result of a genetic mutation.

** Considered a riparian, rather than aquatic, species, but included here because it has such an impact on aquatic habitats

FRESHWATER ANIMALS**Priority Species of Concern**

Common Name	Scientific Name	Status in WA	Regulatory Classification	Management Plan	Probable Pathway
Carp, Asian bighead	<i>Aristhythes / Hypthalmichthys nobilis</i>	X	P, LA	N	Aq, Fc
Carp, Asian silver	<i>Hypthalmichthys molitrix</i>	X	P, LA	N	Aq, Fc
Carp, black	<i>Mylopharyngodon piceus</i>	X	P, LA?	N	Aq
Carp, grass (diploid)	<i>Ctenopharyngodon idella</i>	X	P	X	Sp
Carp, largescale silver	<i>Hypthalmichthys harmandi</i>	X	U, LA	N?	Aq
Crab, mitten	<i>Eriocheir sinensis</i>	X	D, P	N	Bw
Crayfish, northern	<i>Orconectes virilis</i>	X	P	X	Lb
Crayfish, red swamp	<i>Procambarus clarkii</i>	P	P	X	Er, Lb, Pa
Crayfish, rusty	<i>Orconectes rusticus</i>	X	P	X	Lb, Pa, Fc, Er
Mussel, quagga	<i>Dreissena bugensis</i>	X	D, P, LA?	R	Rw
Mussel, zebra	<i>Dreissena polymorpha</i>	X	D, P, LA	R	Rw
New Zealand mudsnail	<i>Potamopyrgus antipodarum</i>	P	P	N	Rw
Nutria	<i>Myocastor coypus</i>	P/M	P	X	Fc
Snakehead fish	<i>Channa spp.</i>	X	P, LA?	X	Pa, Fc, Rw

Secondary Species of Concern

Common Name	Scientific Name	Status in WA	Regulatory Classification	Management Plan	Probable Pathway
Bass, white	<i>Morone chrysops</i>	P	U	X	Sp
Bass, striped	<i>Morone saxatilis</i>	P	U	X	Sp

Secondary Species of Concern – Freshwater Animals (cont.)

Common Name	Scientific Name	Status in WA	Regulatory Classification	Management Plan	Probable Pathway
Bowfin/grinnel/ mudfish	<i>Amia calva</i>	X	P	X	Sp
Bullfrog	<i>Rana catesbeiana</i>	P	P	X	Pa, In
Catfish	<i>All of family Ictaluridae</i>	X	U	X	Aq, Fc
Catfish, walking	<i>Clarias batrachus</i>	X	P	X	Aq, Fc
Clam, Asian	<i>Corbicula fluminea</i>	P	U	X	Fc
Crayfish, ringed	<i>Orconectes neglectus</i>	X	U	X	Er, Lb, Pa
Crayfish, blue	<i>Procambarus alleni</i>	X	P?	X	Er, Lb, Pa
Frog, spadefoot	<i>Pelobates sp.</i>	X	P	X	In, Pa
Frog, brown & green	<i>Palaearctic Rana sp.</i>	X	P	X	In, Pa
Goby, amur	<i>Rhinogobius brunneus</i>	P	U	X	Bw
Goby, round	<i>Neogobius melanostomus</i>	X	P	X	Bw
Ide/silver orfe/ golden orfe	<i>Leuciscus idus</i>	X	P	X	Pa
Killifish, banded	<i>Fundulus diphanus</i>	P	U	X	Pa, Lb?
Minnow, fathead	<i>Pimephales promelas</i>	P	P	X	Pa
Mudpuppies, nonnative	<i>Necturus and Proteus spp</i>	X	P	X	In, Pa
Mudsnail, eastern	<i>Ilyanassa bsolete</i>	X	U	X	Aq
Mudsnail, Asian	<i>Batillaria attramentaria</i>	P	U	X	Aq
Mute swan	<i>Cygnus olor</i>	X	S	X	Pa
Newts, non-native	<i>(see WAC 220-12-090 (1)(a)(xiii))</i>	X	P	X	In, Pa
Pike, gar	<i>Lepisosteidae</i>	X	P	X	Sp
Pike, northern	<i>Esox lucius</i>	P	P	X	Sp
Piranha, caribe	<i>Pygocentrus, Rooseveltia & Serrasalmus spp.</i>	X	P	X	Pa

Secondary Species of Concern – Freshwater Animals (cont.)

Common Name	Scientific Name	Status in WA	Regulatory Classification	Management Plan	Probable Pathway
Rudd, silver or golden	<i>Scardinius erythrophthalmu</i>	X	P	X	Sp
Ruffe, Eurasian	<i>Gymnocephalus cernuus</i>	X	U	N	Bw
Salamander, non-native	(see WAC 220-12-090 (1)(a)(v-xi))	X	P	X	In, Pa
Snail, Chinese mystery	<i>Cipangopaludina chinensis</i>	P	U	X	Hn?
Sunfish, red-ear	<i>Lepomis microlophus</i>	X	U	X	Sp
Tapeworm, Asian (fish parasite)	<i>Bothriocephalus acheilognathi</i>	X	U	X	Aq
Terrapin, diamond back	<i>Malaclemys terrapin</i>	P	U	X	In, Pa
Turtle, red-eared slider	<i>Trachemys scripta elegans</i>	P	U	X	In, Pa
Turtle, Asian pond	<i>Mauremys spp.</i>	X	P	X	In, Pa
Turtle, Chinese pond	<i>Chinemys spp.</i>	X	P	X	In, Pa
Turtle, European pond	<i>Emys orbicularis</i>	X	P	X	In, Pa
Turtle, snapping	<i>Chelydra serpentine</i>	X	P	X	In, Pa
Turtle, soft shell	<i>Apalone sp.</i>	X	P	X	In, Pa
Waterflea, fishhook*	<i>Cercopagis pengoi</i>	X	P	X	Rw
Waterflea, spiny *	<i>Bythotrephes cederstroemi</i>	X	P	X	Rw

* Also found in brackish water

MARINE / ESTUARINE PLANTS**Priority Species of Concern**

Common Name	Scientific Name	Status in WA	Regulatory Classification	Management Plan	Probable Pathway
Caulerpa seaweed	<i>Caulerpa taxifolia</i>	X	-	N	Pa
Cordgrass, smooth	<i>Spartina alterniflora</i>	P/M	NWQ, NWB	S	Aq
Cordgrass, dense flower	<i>Spartina densiflora</i>	P/M	NWQ, NWA	S	Aq
Cordgrass, common	<i>Spartina anglica</i>	P/M	NWQ, NWB	S	Aq
Cordgrass, salt meadow	<i>Spartina patens</i>	P/M	NWQ, NWA	S	Aq

Secondary Species of Concern

Common Name	Scientific Name	Status in WA	Regulatory Classification	Management Plan	Probable Pathway
Dead man's fingers	<i>Codium fragile tomentosoides</i>	X	-	X	Rw
Japanese kelp	<i>Undaria pinnatifida</i>	P?	-	X	Rw
Sargassum weed	<i>Sargassum muticum</i>	P	-	X	Rw

MARINE / ESTUARINE ANIMALS**Priority Species of Concern**

Common Name	Scientific Name	Status in WA	Regulatory Classification	Management Plan	Probable Pathway
Bamboo worm	<i>Clymenella torquata</i>	P	U	X	Aq
Crab, European green	<i>Carcinus maenus</i>	P/M	D, P	N	Bw
Crab, mitten	<i>Eriocheir sinensis</i>	X	D, P	N	Bw
Tunicate, club (solitary)	<i>Styela clava</i>	P/M	U	X	Bw, Aq, Rw
Tunicate, transparent (solitary)	<i>Ciona savigny</i>	P	U	X	Bw, Aq
Tunicate (solitary)	<i>Molgula manhattensis</i>	P	U	X	Bq, Rw
Tunicate, chain (colonial)	<i>Botrylloides violaceus</i>	P	U	X	Bw, Aq, Rw
Tunicate, golden star (colonial)	<i>Botryllus schlosseri</i>	P	U	X	Bw, Aq, Rw
Tunicate (colonial)	<i>Didemnum sp.</i>	P/M	U	X	Bw, Aq, Rw

Secondary Species of Concern

Common Name	Scientific Name	Status in WA	Regulatory Classification	Management Plan	Probable Pathway
Amphipod	<i>Ampelisca abdita</i>	X	U	X	Bw
Anemone, orange-stripe	<i>Diadumene lineate</i>	P	U	X	Bw
Angelwing, false	<i>Petricolaria pholadiformis</i>	P	U	X	Bw
Bryozoan, spaghetti	<i>Zoobotryon verticillatum</i>	P?	U	X	Bw
Clam, Japanese	<i>Neotrapezium liratum</i>	P	U	X	Bw
Clam, Asian	<i>Potamocorbula amurensis</i>	P?	U	X	Bw
Clam, Atlantic gem	<i>Gemma gemma</i>	X	U	X	Bw

Secondary Species of Concern – Marine / Estuarine Animals (cont.)

Common Name	Scientific Name	Status in WA	Regulatory Classification	Management Plan	Probable Pathway
Clam, Northern quahog	<i>Mercenaria mercenaria</i>	P?	U	X	Bw
Comb jelly, Leidy's	<i>Mnemiopsis leidyi</i>	X	U	X	Bw
Copepod	<i>Pseudodiaptomus inopinus</i>	X	U	X	Bw
Crab, Harris mud	<i>Rhithropanopeus harrisi</i>	P?	U	X	Bw
Crab, Japanese shore	<i>Hemigrapsus sanguineus</i>	X	U	X	Bw
Fan worm, Mediterranean	<i>Sabella spallanzanii</i>	P?	U	X	Bw
Goby, chameleon goby	<i>Tridentiger trigonocephalus</i>	P	U	X	Bw
Goby, Shimofuri	<i>Tridentiger bifasciatus</i>	X	U	X	Bw
Isopod, Griffen's (parasitic)	<i>Orthione griffensis</i>	P	U	X	Bw
Isopod, New Zealand burrowing	<i>Sphaeroma quoianum</i>	X	P	X	Bw
Jellyfish, Black Sea	<i>Maeotias inexpectata</i>	P	U	X	Bw
Jellyfish, spotted	<i>Phyllorhiza punctata</i>	P?	U	X	Bw
Lionfish	<i>Pterois volitans</i>	X	U	X	Bw
Mudsnail, Asian	<i>Batallaria attramentaria</i>	P	U	X	Aq
Mussel, Atlantic ribbed	<i>Geukensia demissa</i> (<i>Ischadium demissum</i>)	P	U	X	Bw
Mussel, New Zealand green	<i>Perna spp.</i>	P	U	X	Bw
Mussel, Japanese	<i>Musculista senhousia</i>	P	U	X	Bw
Oyster drill, Atlantic/Eastern	<i>Urosalpinx cinerea</i>	P	U	X	Aq
Oyster drill, Japanese	<i>Ceratostoma inornatum</i> (<i>Ocinebrellus inornatus</i>)	P	U	X	Aq
Prawn, Siberian	<i>Exopalaemon modestus</i>	P	U	X	Bw
Sea slug, New Zealand	<i>Philine auriformis</i>	X	U	X	Bw

Secondary Species of Concern – Marine / Estuarine Animals (cont.)

Common Name	Scientific Name	Status in WA	Regulatory Classification	Management Plan	Probable Pathway
Shipworm	<i>Teredo navalis</i>	X	U	X	Bw
Snail, Atlantic slipper	<i>Crepidula fornicata</i>	P	U	X	Bw
Sponge, red beard	<i>Clathria prolifera</i>	P	U	X	Bw
Starfish, N Pacific sea	<i>Asterias amurensis</i>	X	U	X	Bw
Whelk, channeled	<i>Busycotypus canaliculatus</i>	P	U	X	Bw
Whelk, veined rapa	<i>Rapana venosa</i>	X	U	X	Bw

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