

# Washington State Aquatic Nuisance Species (ANS) Watch List (8/8/07)

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<sup>1</sup> and based on professional judgment.

**Purpose.** The ANS Watch List provides a quick reference tool to assist agency and public prevention, monitoring, and management decision making. The list is useful for managing ANS in conjunction with the ANS Committee's state Early Detection and Rapid Response and ANS Management Plans. The list will also help to focus monitoring efforts and will promote general education and awareness of various aquatic nuisance species and their impacts. Distribution of all listed species will be tracked in an ANS database. Control or eradication will depend on risk, opportunity, and resource availability, and may, therefore, never be initiated for some species.

**What is Included.** The list is designed to be a continuously evolving document consisting of species the ANS Committee considers to pose, or potentially pose, 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; species already observed here that we would like to eradicate or otherwise manage; and species that are regulated by the state for recreation, aquaculture, or other management purposes, but which require controlled distribution. 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 have some level of environmental and/or economic 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 assessment of their risks.

*Primary Species of Concern* are those species considered most likely to cause environmental and/or economic damage. 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/when they are found.

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<sup>1</sup> RCW 77.60.130

*Secondary Species of Concern* are those species considered to be of lower environmental and/or economic risk than the primary species. Management of secondary species is expected to vary depending on the organism, its distribution and numbers, feasibility of management success, and other factors.

*Regulated Species of Concern* are species classified by the Washington Department of Fish & Wildlife (WDFW) as regulated aquatic animal species. These species are considered to have some beneficial use along with a moderate, but manageable risk of becoming an invasive species<sup>2</sup>. They are managed for recreational, aquaculture, and biocontrol purposes on designated water bodies, and may not be released into other state waters except under WDFW permit. The biggest problem with these species comes from indiscriminate stocking outside of designated water bodies by “bucket biologists”, which can cause significant harm to aquatic ecosystems. No management is expected to be taken on regulated species in permitted locations, but regulated species are generally unwanted outside of containment or designated locations, and management plans may be considered in these situations.

**Watch List Format.** The list is categorized by primary, secondary, and regulated species of concern, and divided into columns indicating current presence/absence, regulatory status, existing management plans, and the probable pathways suspected of originally introducing or contributing to the continued spread of each species.

**List Revisions.** The ANS Committee will appoint a review panel for any new species reported or considered to be a threat to waters of the state, to determine its risk and evaluate it for possible inclusion on the Watch List. The ANS Committee also welcomes comments on the list and submission of additional names for consideration at any time. The list will be reviewed at least annually and updated as necessary.

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<sup>2</sup> RCW 77.12.020(8)(b)

## CODES FOR THE TABLES

### Status in Washington

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

### Regulatory Status

- D On WDFW Deleterious Species List (WAC 220-12-01701) [Non native species considered by the Director to be dangerous to the environment or wildlife of the state]
- F Classified under WAC 220-12-010 as food fish
- G Classified under WAC 232-12-019 as game fish
- P On WDFW Prohibited list (WAC 220-12-090) [Considered by the commission to have a high risk of becoming invasive; may not be possessed, purchased, sold, propagated, transported, or released into state waters]
- R On WDFW Regulated Species list (WAC 220-12-090) [Considered by the Commission to have some beneficial use along with moderate but manageable risk of becoming invasive...may not be released except as provided in RCW 77.15.253]
- S Classified under WAC 220-12-020 as shellfish
- U Unlisted aquatic species (RCW 77.12.020) [Not designated as prohibited species, regulated or unregulated species ...but may not be released into state waters]
- NWA Class A noxious weeds: limited distribution- eradication required by law (WAC 16-750-005)
- NWB Class B noxious weeds: limited distribution- designated for control in various regions where not yet widespread. (WAC 16-750-011)
- NWC Class C noxious weeds: widespread distribution- local control can be enforced if desired (WAC 16-750-015)
- NWQ WA State Wetland & Aquatic or Noxious Weed quarantine listing (WAC 16-752-505 or 16-752-610)
- LA Lacey Act listing [Listed as Injurious Wildlife Species, 50 CFR 16 or 18 U.S.C. 42]

### 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)
- Bw Ballast water
- Fc Imported food for consumption / live seafood (discarded imports or hitchhikers on seafood packaging)
- Er Imported for Educational / Research Institutions (escaped or discarded)
- 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
- Bd Birds
- X Unknown

Note: Pathways shown are the most likely expected pathways, but pathways are often varied and pathway information is often anecdotal.

## FRESHWATER PLANTS

**Priority Species of Concern** (*Monitoring and management plans will be developed for these species, and eradication and/or control measures will be instituted if/when they are found.*)

Common Name	Scientific Name	Status in WA	Regulatory Status	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 riparian than aquatic, included here because they so heavily impact aquatic resources

**Secondary Species of Concern** (*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 monitoring programs where possible, and if detected, a risk evaluation panel will review and recommend next steps as appropriate.*)

Common Name	Scientific Name	Status in WA	Regulatory Status	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>Pomatogeton crispus</i>	P	WC	X	Aq, Rw
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** (*Monitoring and management plans will be developed for these species, and eradication and/or control measures will be instituted if/when they are found.*)

Common Name	Scientific Name	Status in WA	Regulatory Status	Management plan	Probable Pathway
Carp, Asian bighead	<i>Aristhythes / Hypothalmichthys nobilis</i>	X	P, LA	N	Aq, Fc
Carp, Asian silver	<i>Hypothalmichthys 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>Hypothalmichthys 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 clarkia</i>	X	P	X	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 -** (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 monitoring programs where possible, and if detected, a risk evaluation panel will review and recommend next steps as appropriate.)

Common Name	Scientific Name	Status in WA	Regulatory Status	Management plan	Probable Pathway
Bass, white	<i>Morone chrysops</i>	P	U	X	Sp
Bass, striped	<i>Morone saxatilis</i>	P	U	X	Sp
Bowfin/grinnel/mudfish	<i>Amia calva</i>	X	P	X	Sp
Bullfrog	<i>Rana catesbeiana</i>	P	P	X	Pa, In
Catfish	All of family Ictaluridae	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?
Minnnow, fathead	<i>Pimephales promelas</i>	P	P	X	Pa
Mudpuppies, nonnative	<i>Necturus and Proteus spp (non-native)</i>	X	P	X	In, Pa
Mudsnail, eastern	<i>Ilyanassa obsoleta</i>	X	U	X	Aq
Mudsnail, Asian	<i>Batillaria atramentaria</i>	P	U	X	Aq
Mute swan	<i>Cygnus olor</i>	X	S	X	Pa
Newts, non-native (many spp)	(see sp. Listed in WAC 220-12-090 (1)(a)(xiii))	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 &amp; Serrasalmus spp.</i>	X	P	X	Pa
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 (many spp.)	(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

**Regulated Species** (*Species may be commercially raised and/or released under permit in specific locations. Despite some benefits they may provide they are, nevertheless, known to adversely impact aquatic ecosystems, and they are generally unwanted outside of containment or designated locations. No action is expected to be taken on regulated species in designated locations.*)

Common Name	Scientific Name	Status in WA	Regulatory Status	Management plan	Probable Pathway
Bass, largemouth	<i>Micropertus salmoides</i>	P	R/G	X	Sp
Bass, small mouth	<i>Micropertus dolomieu</i>	P	R/G	X	Sp
Carp, common / koi	<i>Cyprinus carpio</i>	P	R	X	Pa
Carp, grass (triploid)	<i>Ctenopharyngodon idella</i>	P	R	X	Sp
Crappie, black	<i>Pomoxis nigromaculatus</i>	P	R/G	X	Sp
Goldfish	<i>Carassius auratus</i>	P	R	X	Pa
Mosquito fish	<i>Gambusia affinis</i>	P	R	X	Sp
Muskellunge (triploid)	<i>Esox masquinongy</i>	P	R/G	X	Sp
Perch, yellow	<i>Perca flavescens</i>	P	R/G	X	Sp
Pike, sander vitreous walleye	<i>Stizostedion vitreum</i>	P	R/G	X	Sp
Shad, American	<i>Alosa sapidissima</i>	P	R	X	Sp
Sunfish, green	<i>Lepomis cyanellus</i>	P	R/G	X	Sp
Sunfish, pumpkinseed	<i>Lepomis gibbosus</i>	P	R/G	X	Sp
Sunfish, bluegill	<i>Lepomis macrochirus</i>	X	R/G	X	Sp
Tilapia	<i>All members of genera. Tilapia, Oreochromis, &amp; Sartheradon</i>	X	R	X	Sp
Tench	<i>Tinca tinca</i>	P	R	X	Sp
Trout, brook	<i>Salvelinus fontinalis</i>	P	R/G	X	Sp
Trout, brown	<i>Salmo trutta trutta</i>	P	R/G	X	Sp
Trout, lake	<i>Salvelinus namaycush</i>	P	R/G	X	Sp

## MARINE / ESTUARINE PLANTS

**Priority Species of Concern** (*Monitoring and management plans will be developed for these species, and eradication and/or control measures will be instituted if/when they are found.*)

Common Name	Scientific Name	Status in WA	Regulatory Status	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** (*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 monitoring programs where possible, and if detected, a risk evaluation panel will review and recommend next steps as appropriate.*)

Common Name	Scientific Name	Status in WA	Regulatory Status	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

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Common Name	Scientific Name	Status in WA	Regulatory Status	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 savignyi</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</i> sp.	P/M	U	X	Bw, Aq, Rw

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Common Name	Scientific Name	Status in WA	Regulatory Status	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
Clam, Northern quahog	<i>Mercenaria mercenaria</i>	P?	U	X	Bw
Comb jelly, Leidy's	<i>Mnemiopsis leidy</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	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</i> spp.	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>Ocenebrellus 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
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

**Regulated Species** (May be commercially raised and/or released under permit in specific locations.

Despite some benefits they may provide they are, nevertheless, known to adversely impact aquatic ecosystems, and they are generally unwanted outside of containment or designated locations. No action is expected to be taken on regulated species in designated locations.

Common Name	Scientific Name	Status in WA	Regulatory Status	Management plan	Probable Pathway
Clam, purple varnish	<i>Nuttallia obscurata</i>	P	S	X	Bw
Mussel, gallo	<i>Mytilus galloprovincialis</i>	P	S	X	Aq
Oyster, Japanese	<i>Crassostrea gigas</i>	P	S	X	Aq
Salmon, Atlantic (escaped)*	<i>Salmo salar</i>	P	(F)	X	Aq

\* Data on presence of escaped populations and their ability to reproduce is still somewhat contested .