INVASIVE SPECIES THREATS & OPPORTUNITIES

A Primer for Oregon Policymakers

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OREGON INVASIVE SPECIES COUNCIL

"Invasive species are defined by Oregon Statute as 'nonnative organisms that cause economic or environmental harm and are capable of spreading to new areas of the state.'"
— *ORS 570.750*

ABOUT THE OREGON INVASIVE SPECIES COUNCIL

There is no central authority for managing all invasive species.

The Oregon Invasive Species Council (OISC) was established by Oregon Legislature in 2001 to support a comprehensive and coordinated effort between the many entities that prevent, detect, control, and eliminate invasive species.

AUTHORS / CREDITS

This publication was developed through a collaborative effort of the members of the Oregon Invasive Species Council to provide a briefing of selected serious threats from invasive species and opportunities to address these issues that span jurisdictions.

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OREGON INVASIVE SPECIES COUNCIL 2021 MEMBERSHIP

Confederated Tribes of the Umatilla Indian Reservation
F5 Wildlife Control
Friends of South Slough Reserve
Kenagy Family Farm Inc, Oregon Farm Bureau, Willamette Mainstem Cooperative, & Specialty Seed Growers of Western Oregon
Malheur County SWCD
Member of the Public
Morrow County
Mosaic Ecology
North Coast CWMA & Western Invasives Network
Office of Governor Kate Brown
Oregon Department of Agriculture
Oregon Department of Environmental Quality
Oregon Department of Fish & Wildlife
Oregon Department of Forestry
Oregon Parks & Recreation Department
Oregon Sea Grant & Oregon State University
Oregon State Marine Board
Portland State University
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U.S. Bureau of Reclamation
U.S. Bureau of Land Management
U.S. Fish & Wildlife Service
USDA Forest Service
USDA Natural Resources Conservation Service
USDA Animal and Plant Health Inspection Service

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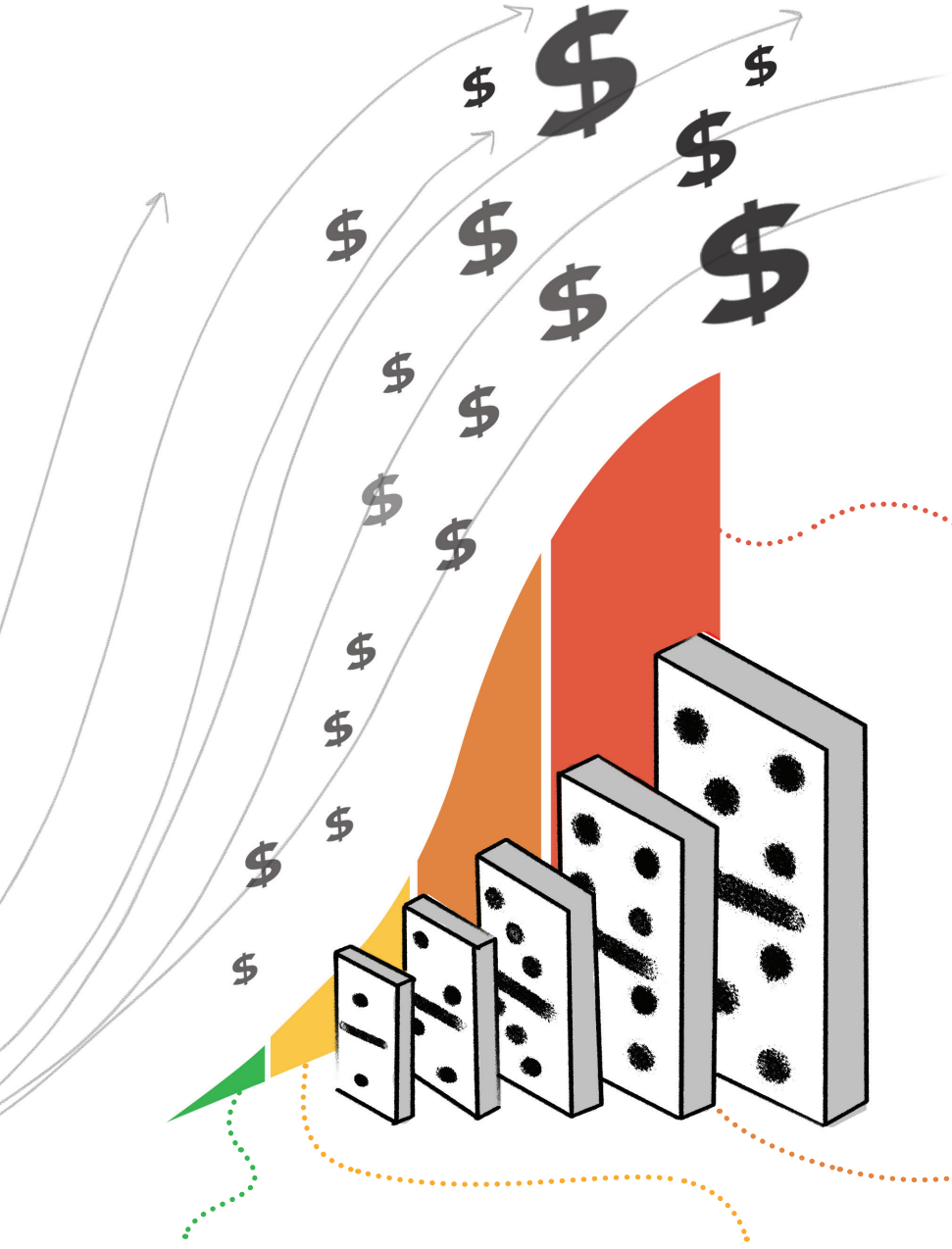
Prevention is the Lowest Cost Investment



The consequences of letting invasive species establish in Oregon are similar to letting dominoes fall. Unchecked, invasive species can cause irreversible impacts on the people, places, and economies of the state.

WIDESPREAD CONSEQUENCES
Once an invasive pest takes hold, it is costly and time intensive to manage the resulting impacts year after year.

PREVENTION IS THE LOWEST COST INVESTMENT

PREVENTABLE

Prevention and early detection programs are low-cost investments to protect Oregon from invasive species' impacts.

ERADICATION POSSIBLE

With coordinated and rapid response, eradication of pests can be possible. Financial and programmatic resources must be available to meet the consistent challenges.

ACCELERATING IMPACTS

Without swift action, invasive pest populations can grow exponentially and spread fast. Opportunities for eradication are lost when control options become more limited and costs quickly rise.

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The time to respond is now

ASIAN GIANT HORNET

WE NEED TO BE READY

Fully funded state programs and strong regional partnerships are fundamental to rapidly respond to detections of new pests. In 2019, the Washington State Department of Agriculture detected the first Asian giant hornet in the U.S. and mobilized tools and personnel that led to the first eradication of a nest a few months later. While this effort has cost nearly $700,000, potential costs to public health and honey bee hives are much higher if left unchecked. Oregon needs to be ready to respond if hornets make their way into the state.

JAPANESE BEETLE

EARLY DETECTION IS CRITICAL

Without early detection programs and expertise in Oregon, eradication of persistent pests would be impossible. Japanese beetles are established in the Midwest and East Coast of the U.S. If the beetles were to become established in Oregon, they would threaten our thriving nursery industry, private property, and natural resources. ODA had kept Japanese beetles out of Oregon for 70 years. In 2016, an expanding population was detected in Washington County. Immediate outreach to the community and aggressive treatment is resulting in reduction of the population, but additional introductions continue to be a high risk.

GORSE

NOXIOUS WEEDS CAN BE FIRE HAZARDS

Land infested with this thick, thorny noxious weed is considered unusable and an extreme fire hazard threatening working lands, homes, and watersheds. If gorse were allowed to spread, the estimated potential annual income loss would be over $200 million. Biocontrol and local removal efforts currently underway are critical to limiting gorse's ability to thrive on the landscape.

YELLOW STARTHISTLE

ONGOING COSTS ADD UP

Yellow starthistle has become abundant in areas of Oregon with serious economic costs up to $1 million annually including lost grazing, livestock injury, and blocked recreation areas. Thick stands of this spiny weed can completely displace desirable forage and cause chewing disease in horses. Noxious weed and biocontrol programs provide critical resources to landowners looking for solutions.

QUAGGA & ZEBRA MUSSELS

PREVENTION IS THE ONLY SOLUTION

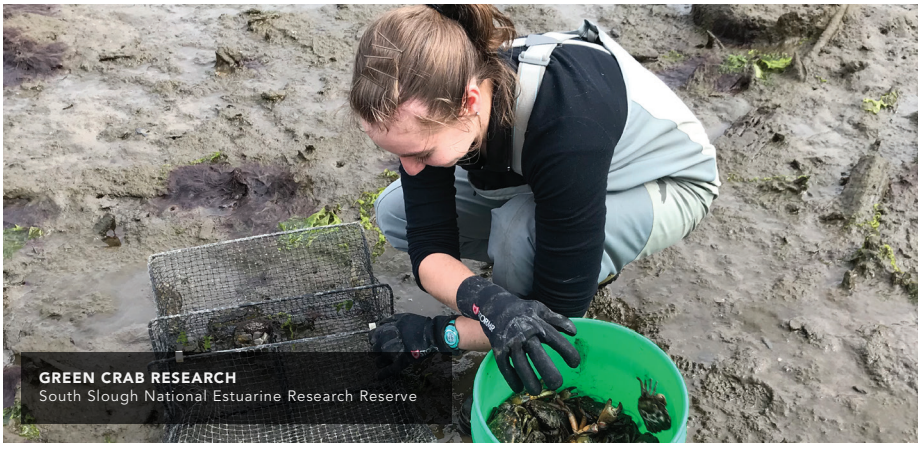
Eradication is not likely if Quagga or Zebra mussels take hold in Oregon's water bodies. In infested states, power plants alone spend millions annually to maintain and clear pipes of the mussels. Oregon's boat inspection program has prevented infested boats from entering the state and raised awareness. We must remain vigilant and enhance our efforts in prevention and rapid response to be successful.

Understanding the critical network protecting the state

Truly successful invasive species programs rely on expert and administrative support provided by government and private institutions, enabling youth and adults, volunteers and professionals, novice and experienced, to implement actions that protect our state from the long-lasting impacts of invasive species. The many participants that prevent, monitor, and control invasive pests make up a complex and effective network when connected and adequately funded.

YOUTH VOLUNTEERS PULLING IVY
Photo Cr. Coos Watershed Assoiation

OUTREACH & EDUCATION
Columbia Gorge CWMA



GREEN CRAB RESEARCH
South Slough National Estuarine Research Reserve

OREGON FOREST PEST DETECTORS
Volunteers learn to ID signs of pests. Photo Cr. ODF

Understanding the critical network protecting the state

There is no central authority for management of all invasive species. **OREGON STATE AGENCIES play critical roles connecting, communicating, and leading the network of many involved in invasive species efforts including:**

FEDERAL GOVERNMENT

Federal partners implement national invasive species programs intended to protect all of North America. They monitor international pathways, establish rigorous sampling protocols, and provide crucial funding to local detection and response efforts.

NON-GOVERNMENTAL ORGANIZATIONS

Non-governmental organizations are connected to and engage diverse stakeholder groups to address specific geographic or social challenges. These efforts rely heavily on the resources provided by federal, state and local programs and their staffs.

PUBLIC

Members of the public are the largest and most diverse part of the network. The strongly held values of Oregonians are informed by a rich history of healthy and vibrant landscapes. Each and every Oregonian serves a crucial prevention role and can effectively report suspected pests.

Working Together

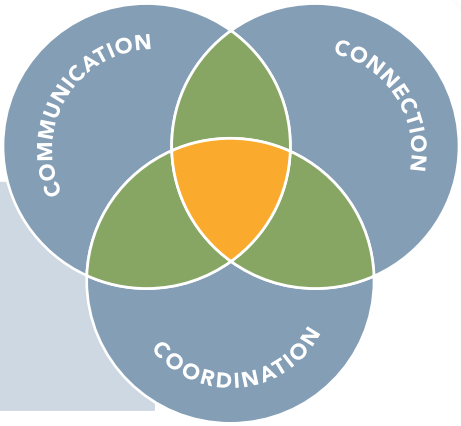
It is critical that Oregon maintains robust state invasive species programs and a network of organizations and individuals to be effective.

INDUSTRY

Many industries are on the front lines of invasive species management through their trade, land or water management, or production activities. Industry representatives are important partners in our efforts to exclude invasive pests through responsible practices, early detection, and reporting.

TRIBES

The sovereign tribes of Oregon provide a robust knowledge base and cultural perspectives that inspire holistic approaches to invasive species management. Tribal programs play an integral role in invasive species detection, response, and management to conserve resources, safeguard the land, and protect first foods.



LOCAL GOVERNMENT

Local governments serve as the implementation arm of many invasive species management projects in Oregon, across taxa. Continued support of these programs, and the agencies that support them, is paramount to accomplishing Oregon's statewide goals for managing invasive species.

RESEARCHERS

Research from both the private and public sectors is an invaluable piece of the puzzle for solving invasive species challenges in Oregon and beyond. Continued commitment to science and monitoring is crucial for long-term success of invasive species management and recovery of resilient ecosystems.

EDUCATORS & EXTENSION

Educators and extension agents address emerging invasive species needs of local communities and translate issues into education, outreach, and research solutions. This effort empowers Oregonians to make informed choices with an understanding of their role in preventing invasive species.

POLICY MAKERS

Policymakers play a critical role through publicizing issues, developing policy, supporting enforcement activities, and funding effective programs.

These state agencies and institutions play critical roles in protecting Oregon from invasive species

OREGON DEPARTMENT OF AGRICULTURE
Oregon State University
Portland State UNIVERSITY
Sea Grant Oregon
OREGON DEPARTMENT OF FORESTRY
OREGON Fish & Wildlife
OREGON STATE PARKS
DEQ
OREGON STATE MARINE BOARD

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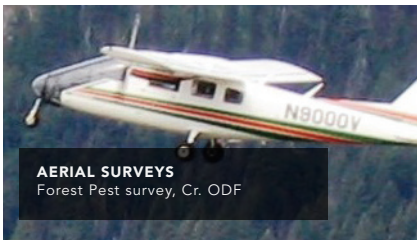
Understanding the critical network protecting the state

WEED WASH STATION
Fire crew washing vehicles. Photo Cr. ODF

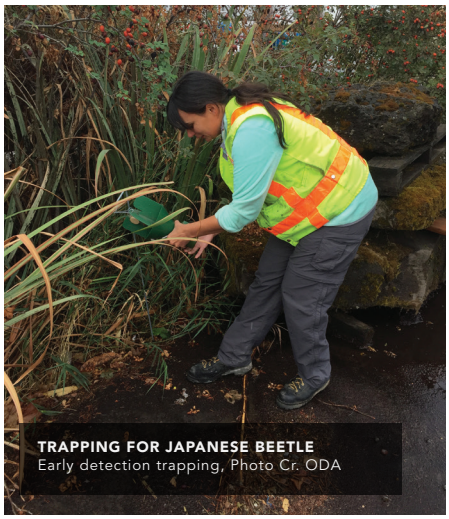
PREVENTION & DETECTION IN ACTION

Oregon state agencies play critical roles connecting, communicating, and leading the network of many involved in invasive species efforts

INSPECTING PEST HOLES IN WOOD
Oregon Department of Agriculture



AERIAL SURVEYS
Forest Pest survey, Cr. ODF



TRAPPING FOR JAPANESE BEETLE
Early detection trapping, Photo Cr. ODA

IDENTIFICATION OF WOOD BORERS
Rick Westcott, Oregon Department of Agriculture. Photo Cr. W.Williams

State Programs Overview

Program	Description & Role	State Agency Leads
BALLAST WATER MANAGEMENT	Over 3 billion gallons of water from around the world are discharged in Oregon waters every year as a result of commercial shipping de-ballasting operations. To prevent the introduction of aquatic invasive species, DEQ's Ballast Water Program establishes high standards of ballast water management and monitors incoming vessels to ensure regulatory compliance and reporting.	Oregon Department of Environmental Quality
CENTER FOR LAKES & RESERVOIRS	The Center for Lakes and Reservoirs was created by Oregon Legislature to address lake management and invasive aquatic species issues in Oregon. PSU faculty and adjunct faculty from federal agencies collaborate with state partners on research and planning.	Portland State University
FOREST HEALTH	Oregon's State & Private Forest Health program provides stand management guidance and identifies insect, weed, and other invasive species issues for private and public forests. The Forest Health team surveys approximately 28 million acres each year to monitor forest insects and tree diseases through a variety of methods including aerial surveys, ground surveys, trapping, and sampling.	Oregon Department of Forestry
INSECT PEST PREVENTION & MANAGEMENT "IPPM"	The IPPM program is nationally recognized for arthropod identification, biological control, monitoring, prevention, and eradication of pest insects. It has successfully kept gypsy moths out of Oregon for at least 47 years and, until the current eradication effort, kept Japanese beetles out of Oregon for 70 years. These efforts support crop and agricultural product export requirements.	Oregon Department of Agriculture
INVASIVE FISH & WILDLIFE CONTROL	Oregon Department of Fish & Wildlife manages non-native fish and wildlife permits. They detect and, if possible, control invasive non-native fish and wildlife to benefit conservation and recreation opportunities.	Oregon Department of Fish & Wildlife

State Programs Overview

Program	Description & Role	State Agency Leads
NOXIOUS WEED MANAGEMENT	The Noxious Weed Control program is instrumental in protecting natural and agricultural resources from the introduction and spread of noxious weeds. Program staff provide critical expertise, conduct inventories and surveys, rapidly respond to new invaders, promote biological control, provide assistance to land managers, and serve as resource specialists to the Oregon State Weed Board that administers grant funding for high priority noxious weed management.	Oregon Department of Agriculture, Oregon State Weed Board
NURSERY & CHRISTMAS TREE PROGRAM	The Nursery and Christmas Tree program protects Oregon's nursery and Christmas tree industries from the introduction and spread of plant pests, disease, and noxious weeds. The program provides services to licensed Oregon nurseries and Christmas tree growers that assist in the production, marketing, and protection of Oregon nusery stock and Christmas trees.	Oregon Department of Agriculture
OREGON FOREST PEST DETECTORS	The Oregon Forest Pest Detector Program is a collaborative extension program that has trained over 500 professionals as "First Detectors" to detect emerald ash borers, Asian long-horned beetles, and other exotic forest insects early when eradication is still feasible.	Oregon State University & Oregon Department of Forestry
OREGON INTEGRATED PEST MANAGEMENT CENTER	The Oregon IPM Center aims to achieve economically sustainable pest management for Oregon's agricultural industries with reduced risks to human health and the environment. The Center also promotes IPM in non-agricultural sectors such as urban areas and natural resource agencies.	Oregon State University
OREGON INVASIVE SPECIES HOTLINE	The Oregon Invasive Species Hotline is a public platform to report invasive species by submitting images, GPS points, and observations using a smart device or computer. Reports can also be made by phone. Subject matter experts are notified of the report for evaluation and response if necessary. oregoninvasiveshotline.org | 1-866-468-2337	Originally created by OISC, managed by Portland State University & Oregon Department of Agriculture

State Programs Overview

Program	Description & Role	State Agency Leads
PLANT HEALTH	The Plant Health program enhances the marketability of Oregon's agricultural and horticultural products and protects Oregon agricultural industries, environment, and quality of life from damaging plant pathogens and parasites. This program provides diagnostic services for plant pest and diseases, conducts field inspections and surveys, and tests ornamental and fruit trees for viruses.	Oregon Department of Agriculture
RESEARCH & EXTENSION SERVICES	With Agricultural and Forest Experiment stations and offices serving all 36 Oregon counties, OSU Extension provides science-based programs addressing agricultural and natural resource needs, including youth education. Oregon Sea Grant integrates research, extension, education, and science communications through "science serving coastal communities" to address the needs of coastal influenced communities and watersheds.	Oregon State University Extension, Oregon Sea Grant
STATE PARK MANAGEMENT	Oregon State Parks and Recreation manages properties covering over 125,000 acres in over 360 park areas. Parks are likely initial points of pest introduction through out-of-state visitors traveling with vehicles, equipment, boats, and other means that convey aquatic and terrestrial pests.	Oregon Parks and Recreation Department
WATERCRAFT INSPECTION STATIONS	Since 2010, Oregon's watercraft inspection stations have inspected 151,551 watercraft and intercepted 141 vessels with Quagga or Zebra mussels. They also intercepted 2,372 vessels with other types of aquatic bio-fouling organisms such as Eurasian milfoil.	Oregon Department of Fish & Wildlife, Oregon State Marine Board
WEED FREE FORAGE	The Oregon Department of Agriculture's Weed Free Forage and Gravel program was established as a voluntary program for producers to certify their forage and gravel as free of noxious weeds. This program helps to limit the spread of noxious weeds and protect Oregon's agriculture.	Oregon Department of Agriculture

Regional Threats

Oregon's diverse, abundant, and inviting natural and cultural resources are vulnerable to invasion by a suite of taxa (animals, plants, insects, shellfish, and plant diseases) that arrive via multiple pathways.

The Oregon Statewide Plan for Invasive Species outlines strategies and implementation measures based on a pathways-approach to invasive species management. Managing a pathway requires invasive species managers to assess risks and develop best management practices to reduce the likelihood of entry and spread of multiple species that move in similar ways.

PATHWAYS

The ways in which invasive species enter into and move about within Oregon

- Forestry / harvesting practices
- Livestock or contaminated feed
- Food & medicinals
- Firewood & wood products
- Passive spread (wind/water)
- Movement of water
- Camping, hunting, and other off trail outdoor activities
- Spread by wildlife
- Hiking, biking & other trail use
- Travel & tourism
- Recreational vehicles
- Recreational watercraft
- Live bait
- Maritime transport
- Cars, trucks, trailers, highway vehicles
- Nursery
- Non-native animal or plant release
- Rail transport
- Household movement
- Air transport
- Aquaculture

EXAMPLES OF REGIONAL THREATS

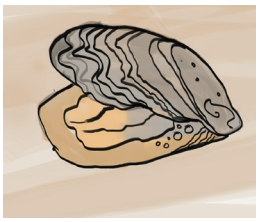
OREGON COAST

THE THREATS

EUROPEAN GREEN CRAB

Status ● **Accelerating Impacts**

Populations have increased with warming of estuary waters. Control measures are needed to reduce their impact on Dungeness crab and other important species.



OsHV-1 VIRUS

Status ● **Preventable**

This virulent herpesvirus is currently not in Oregon. Monitoring of shellfish imports is key to prevent its introduction into our important mariculture operations.

SUDDEN OAK DEATH

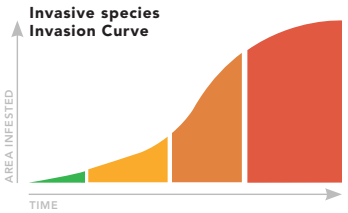
Status ● **Accelerating Impacts**

Found in Curry County, sudden oak death is a plant disease that kills and damages forest species of ecological, cultural, and economic importance. If it spreads to Coos County, the port's forest exports could be impacted.

GORSE

Status ● **Accelerating Impacts**

Gorse is a highly flammable invasive shrub established on Oregon's south coast. It increases fire intensity, degrades timber stands, and reduces access for wildlife and recreation. Without the dedicated efforts of the Gorse Action Group and more than 30 active partner organizations working to contain gorse, the estimated annual income loss would be over $200 million.



EXAMPLES OF REGIONAL THREATS

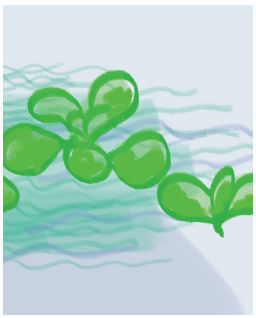
WILLAMETTE VALLEY & SOUTHERN OREGON

THE THREATS

LIGHT BROWN APPLE MOTH

Status ● **Preventable**

LBAM is a pest of grapes, nursery stock, and fresh produce. It can be eradicated if detected early with adequate resources.



WATER PRIMROSE

Status ● **Accelerating Impacts**

Aquatic weeds form dense mats that can double in size in a matter of weeks. These weeds choke waterways, decrease fish habitat and light, create swim hazards, clog boat propellers, and create more mosquito habitat.

SPOTTED LANTERNFLY

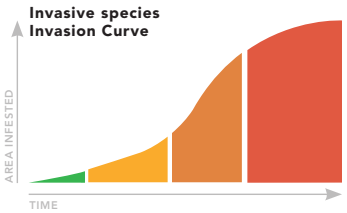
Status ● **Preventable**

Spotted lanterfly is a pest of grapes, hops, and other fruits. This pest will have significant impacts on Oregon exports and lead to increased pesticide use.

SPOTTED WING DROSOPHILA

Status ● **Accelerating Impacts**

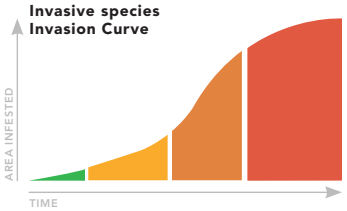
Prior to establishment in 2009, caneberries, blueberries, and cherries required very little pesticides in Oregon. Now, it is hard to find organic cherry production in Oregon.



EXAMPLES OF REGIONAL THREATS

PORTLAND METRO

THE THREATS



JAPANESE BEETLE

Status ● Eradication Possible

ODA is actively working to eradicate populations in Washington County with limited resources. If established, the beetle can severely impact vegetation and lawns in parks, nurseries, farms, and home gardens.

GYPSY MOTH

Status ● Preventable

Gypsy moths cause significant economic, environmental, and health risks including defoliation of trees and plants, rashes and asthma complications, and restrictions on exports of goods.

EMERALD ASH BORER

Status ● Preventable

This pest kills ash trees. Ash are popular street trees and Oregon ash is the only native tree capable of shading and cooling many forested wetlands in western Oregon. If undetected for even a few years they will be unstoppable.

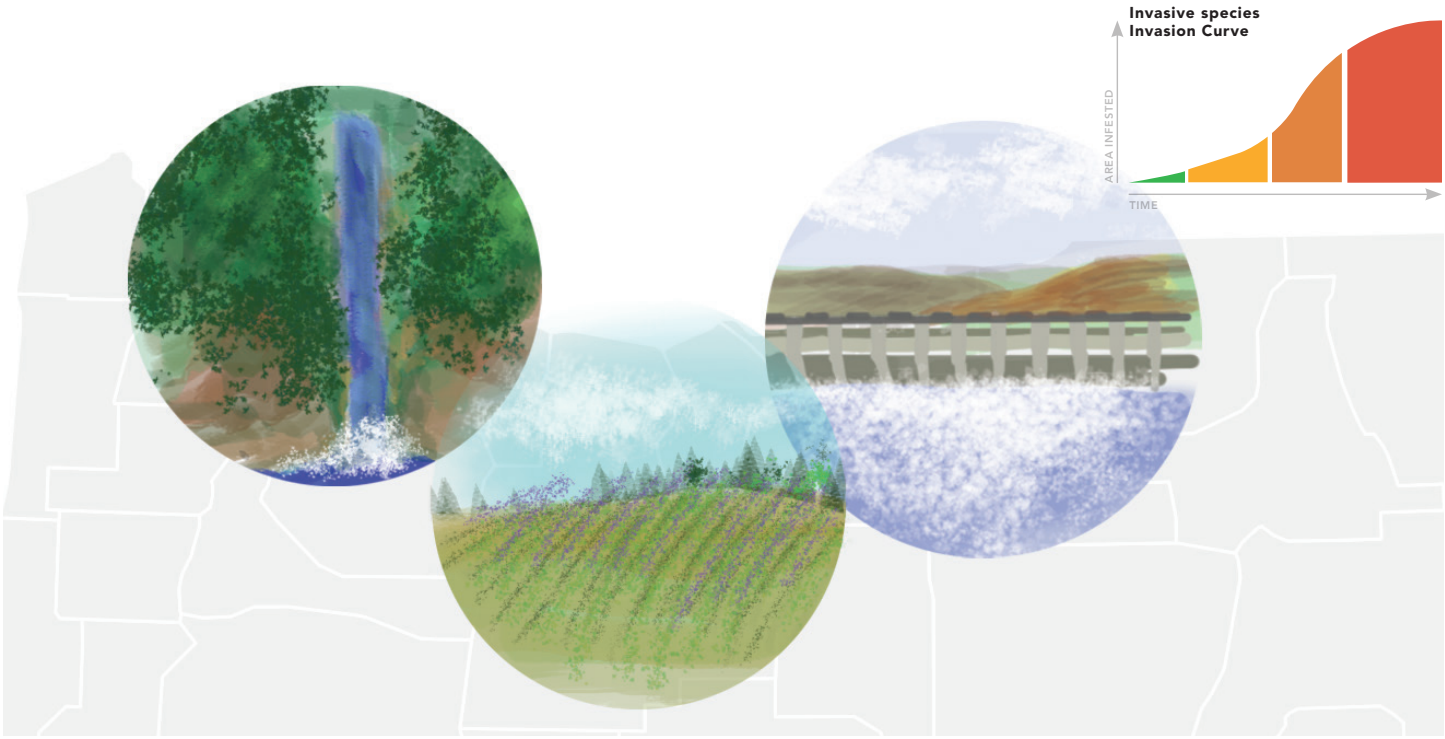
NON-NATIVE ZOOPLANKTON

Status ● Preventable

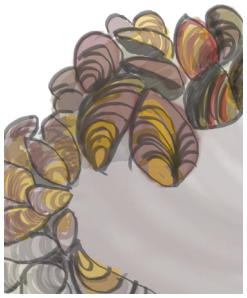
Non-native zooplankton transported from overseas and discharged as ballast water can become established in local waterways and consequently disrupt food webs that native fish species depend upon. Several species have already become established, but there are many more we can prevent.

EXAMPLES OF REGIONAL THREATS

COLUMBIA RIVER GORGE



THE THREATS



QUAGGA MUSSELS

Status ● **Preventable**

Invasive mussels clog waterways, pipes, turbines, and more, threatening Oregon's native fish habitat, recreation, water delivery, and hydropower. As of now, prevention programs have been successful, but risk remains very high.

SPOTTED LANTERNFLY

Status ● **Preventable**

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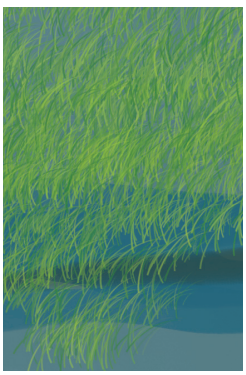
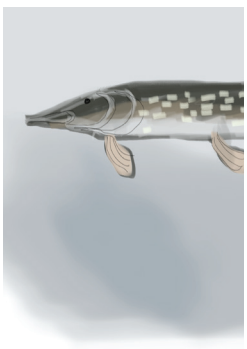


FLOWERING RUSH

Status ● **Eradication Possible**

Flowering rush is found in the Columbia River Basin. Spread of this aquatic weed will choke waterways, decrease native fish habitat, reduce boat access, increase water temperatures, and increase habitat for invasive salmon predators like Northern pike.

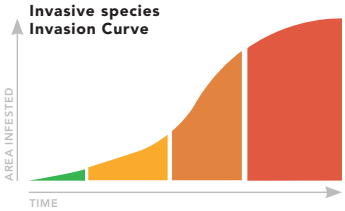


NORTHERN PIKE

Status ● **Preventable**

Northern pike is an invasive fish currently found in neighboring states and Canada. This large voracious predator eats salmon, trout, and anything that crosses its path, including animals such as ducklings and frogs.

EXAMPLES OF REGIONAL THREATS
CENTRAL OREGON



THE THREATS

RUSTY CRAYFISH

Status ● Accelerating Impacts

Often the result of aquarium releases, invasive crayfish can spread quickly. They will decimate aquatic plants, eat fish eggs in spawning grounds, and can compete with native crayfish, amphibians, and other aquatic life.

ANNUAL GRASSES: Ventenata

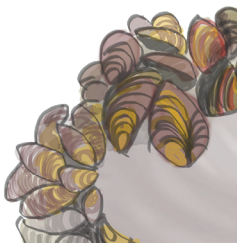
Status ● Accelerating Impacts

Invasive annual grasses shorten the grazing season for livestock by dominating the system with early season grasses and increase fire risk with abundant late season dry fuels. Invasive annual grasses compromise habitat for sage grouse and other wildlife.

FERAL SWINE

Status ● Eradication Possible

Feral swine wreak environmental and economic damage including restriction of timber growth, removal of understory plants, facilitate movement of noxious weeds, and transmit disease to livestock, wildlife, and humans.



QUAGGA MUSSELS

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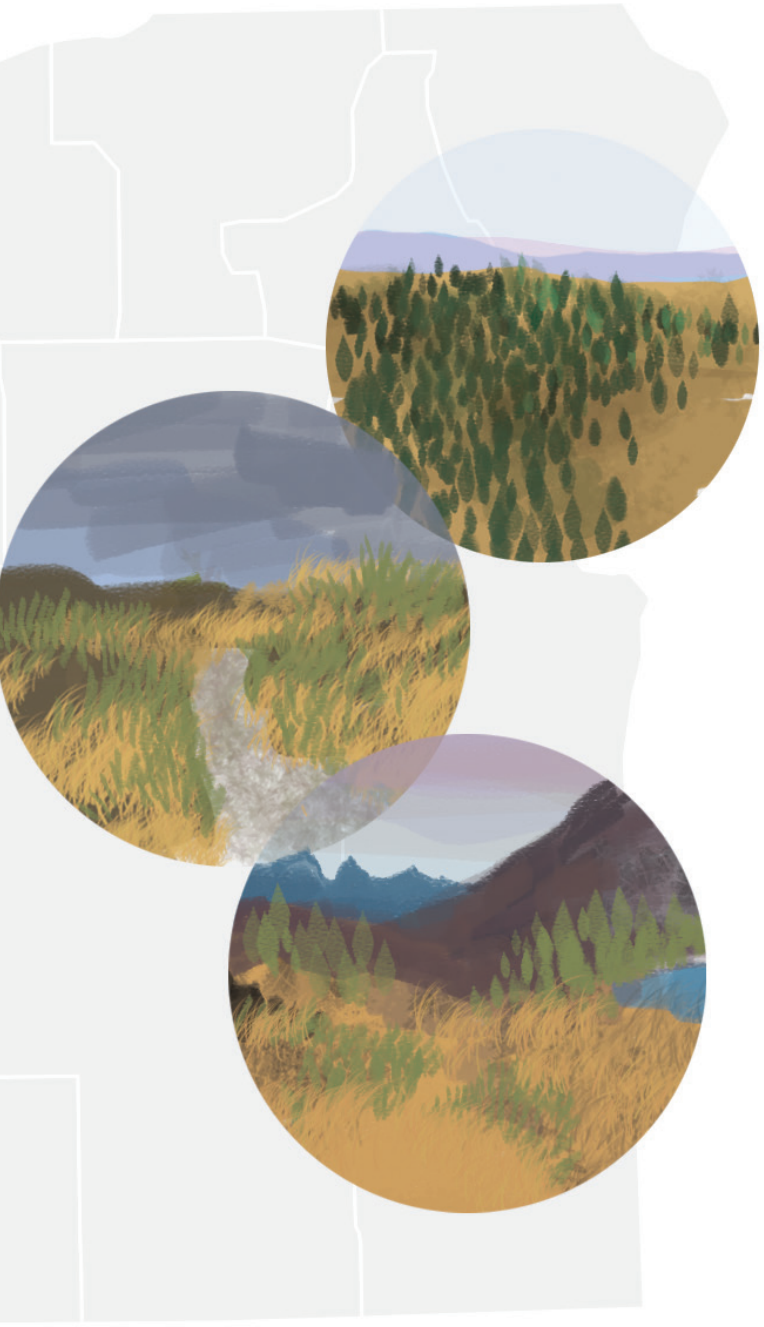
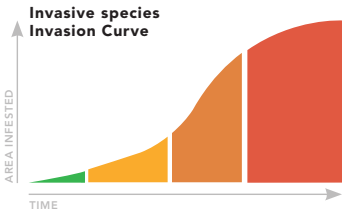
EXAMPLES OF REGIONAL THREATS

EASTERN OREGON



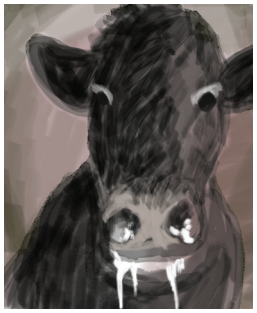


THE THREATS

ANNUAL GRASSES: Medusahead

Status ● **Widespread**

In heavily infested rangelands, medusahead has reduced grazing capacity by up to 80% while disrupting nutrient cycling and modifying fire regimes. These impacts are devastating to native habitats and the people who depend on these landscapes.



FOOT & MOUTH DISEASE

Status ● **Preventable**

This highly contagious viral disease affects cows, pigs, sheep, goats, deer and other divided hoof animals. In 2001, over 6 million cows and sheep were slaughtered in the U.K. to stop its spread costing an est. $8 billion pounds (equal to more than $10 billion USD).

BALSAM WOOLLY ADELGID

Status ● **Widespread**

BWA causes a severe allergic reaction in native sub-alpine fir. Spreading towards the Rockies, it kills important trees impacting snow melt and water availability.

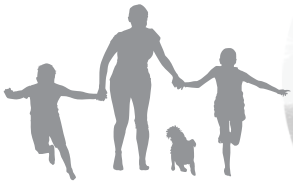
TURKISH THISTLE

Status ● **Eradication Possible**

This weed was recently found in Hells Canyon and spreads easily by outcompeting native plants. Further spread will put high-quality rangelands and cultural resources at great risk. If prioritized, eradication is possible.

ECONOMICS OVERVIEW

How do invasive species impact our economy and way of life?



Increased costs
for land and water management, pest management, plant or tree health management, hazard tree mitigation, infrastructure maintenance, and removal of biofouling.

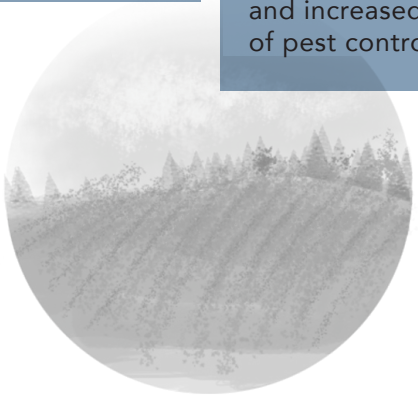
Increased frequency & intensity of fires
threatening lives, homes, working lands, and the resilience of the natural environment.

Lost revenue
such as from land that is infested with noxious weeds or lost access to recreational or harvest opportunities.

Long-term irreversible effects
altering cultural resources and creating lasting impacts to community heritage.

Lost native species
Invasive pests outcompete and reduce native species such as fish, game animals, and other first foods.

Health Concerns
such as allergic reactions, spread of disease, and increased and potentially incorrect use of pest control methods.



ECONOMICS OVERVIEW

Prevention and management of invasive species is worth the investment

EARLY DETECTION

$1 = $34 savings

A 2000 study estimated a savings of $34 for every $1 invested in early detection and rapid response programs[1]

BIOCONTROL

$1 = $23 savings

ARS Biocontrol lab study found $23 benefit for every $1 invested in biocontrol development[2]

CONTAINMENT

1$ = $19 savings

A 2019 study estimated that for every $1 invested in slowing the spread of sudden oak death treatment results in a $19 return in wages[3]

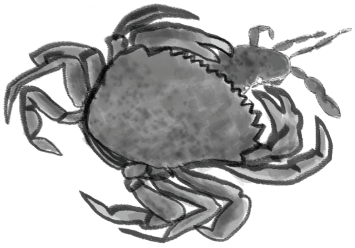
MANAGEMENT

$1 = $13 savings

A 2014 study estimated that biological control of tansy ragwort has a $13 return for every $1 invested[4]

Unfavorable perceptions of popular tourist activities due to the encroachment of invasive pests and a reduction in native species threaten Oregon's

$5.5 billion travel industry.[5]



Dungeness crab remains the primary economic driver of commercial fisheries in Oregon. The value of the 2019-20 season was

nearly $73 million.[6]

Invasive green crabs can outcompete and eat Dungeness crabs and shellfish.

1,200 jobs could be lost and 15% reduction in timber harvest if Port of Coos Bay's timber exports are sanctioned for sudden oak death contamination.[7]

Sources
1. ODA. Economic Assessment. 2000.
2. Sforza. Proceedings of W-4185. 2019
3. MB&G. ODF. Sudden oak death economic impact assessment. 2019
4. ODA. Economic impact from selected noxious weeds in Oregon. 2014.
5. DRAssociates. Oregon Tourism Commission. Oregon Travel Impacts Statewide Impacts 1992-2018. 2019
6. Oregon Department of Fish & Wildlife reporting
7. MB&G. ODF. Sudden oak death economic impact assessment. 2019

▸ POLICY OVERVIEW

THE ISSUE: NOXIOUS WEED CONTROL

A 2014 study found an estimated annual loss of almost $83.5 million in personal income (direct loss and control costs) to the State's economy from only 25 selected weed species, **equivalent to the loss of about 1,900 jobs in the private sector.** If left unchecked and these weeds move into susceptible areas, **there is a potential annual loss of $1.8 billion personal income, the equivalent of 40,800 jobs.**

Funding and support for statewide noxious weed control efforts is essential for protecting valuable natural resources and our natural resource economies now and into the future.

POLICY & ACTION

- ORS 569.175 - 569.195 defines noxious weeds and designates authority to ODA
- ORS 569.190 defines OSU's extension efforts and biocontrol rearing and release
- ORS 569.600 - 569.620 defines Oregon State Weed Board ativities
- ORS 569.520 defines the process for funding designated county weed control districts

SUCCESSES

- Noxious weed control programs have consistently leveraged a small amount of funding into significant results
- Consistent noxioius weed maintenance protects past state & local investments
- Oregon State Weed Board Grant funding supports efficient & effective local weed control
- $15.2 million/year net economic benefit from Oregon's biocontrol program

WHO PAYS

- Oregon Lottery & General Funds
- U.S. Federal Agencies
- Tribes
- District taxpayers where there is a district tax

WHO BENEFITS

- Agricultural producers
- Ranchers
- Recreationists & tourists
- Urban and rural residents

CHALLENGES

- Program funding continues to decline while demand rises for noxious weeds management
- Currently only 23 out of 36 counties have a County Weed Control District or other tax-supported organizations like SWCDs
- Budget cuts have a long-term impact when a control opportunity is missed. A noxious weed can quickly spread and eradication is no longer an option

NEXT STEPS

- Diversify funding stream for more security and sustainability
- Support systems for setting up and sustaining local districts to address noxious weed priorities
- Sustain state funding for the ODA Noxious Weed Control program and Oregon State Noxious Weed Grants to fill needed positions and provide critical grants

► POLICY OVERVIEW

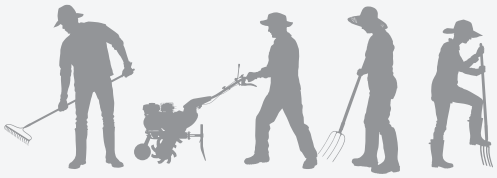
THE ISSUE: SPREAD OF WEEDS THROUGH FORAGE & GRAVEL

Contaminated straw, forage, and gravel products are common pathways for the introduction of invasive weeds. **Annual grasses are some of the worst contaminants and species like Ventenata are already having dramatic and accelerating impacts on the prairies and rangelands of Oregon.**

Oregon's state-level weed-free forage and gravel programs, in addition to local weed-free programs, are crucial intervention points to these invasion pathways. These programs protect natural resources and property while creating the framework for a unique market sector that supports local producers and provides a superior product to end users.

POLICY & ACTION

- Voluntary program
- State program falls under Oregon Department of Agriculture's authority to inspect and certify for market access



SUCCESSES

- Prevention activity that cuts off the spread of weed seeds pathway at the source
- Self-funding program
- Connects producers to a needed market
- Strengthens the local economy with a local market

WHO PAYS

- Producers pay voluntary inspection fees

WHO BENEFITS

- Rancher / Agricultural producers receive higher quality feed and reduced weeds
- Public land managers and recreationists have reduced weeds management on public lands

CHALLENGES

- The program is not used enough
- Lack of awareness and understanding of the value
- Some of the common weeds found in hay are toxic
- No weed free straw reserve to support annual timing of distribution for events such as fire, restoration, or other erosion control activities

NEXT STEPS

- Additional outreach and awareness
- Assist producers in developing a market by working collaboratively and providing incentives that can boost the market
- Research and cooperation with OSU Extension to compare non-certified straw products with certified products
- Develop a weed free straw reserve

▸ POLICY OVERVIEW

THE ISSUE: ZEBRA / QUAGGA MUSSELS BROUGHT IN ON BOATS

In 2011, the annual costs or loss of benefits of a quagga or zebra mussel invasion in the Columbia River Basin was estimated to be $64 million, not including the losses related to fish and wildlife resources which would be significant. In 2020, Oregon's AIS Prevention Program operated with funds from waterway access and AIS prevention permits for watercraft and federal match funds, conducted 23,044 watercraft inspections. They intercepted and decontaminated 12 watercraft carrying zebra or quagga mussels. Left undetected, these contaminated boats could have launched in Oregon, potentially spreading the highly destructive quagga and zebra mussels into Oregon's waters.

POLICY & ACTION

- ORS 830.565(1) establishes the Aquatic Invasive Species Prevention Program funded in part by purchases of boater permits
- Oregon State Marine Board manages the permits, funding, and education of boaters
- Oregon Department of Fish & Wildlife manages the watercraft inspection stations located along interstates entering Oregon

SUCCESSES

- The program is funded by permit fees and federal match through Water Resources Development Act
- Inspection stations intercept and decontaminate multiple mussel-fouled boats per year that would have otherwise launched their boats and spread invasive mussels
- Inspection stations also intercept and decontaminate hundreads of boats for other aquatic invasive species, such as weeds and snails

WHO PAYS

- Motorized and non-motorized boaters
- Federal Agencies

WHO BENEFITS

- Water distributors, users, and consumers
- Hydropower facility operators and electricity users
- Recreationists
- Fisherpeople

CHALLENGES

- There are many waterbodies in the U.S. infested with quagga and zebra mussels
- Boaters move their boats to and from water bodies
- Detection of mussels is a specialized skill
- Boats have multiple areas where mussels and other aquatic invasive species can hide, increasing the risk of contaminated water or biofouling to travel with the boat

NEXT STEPS

- Remain vigilant in the protection of Oregon from quagga and zebra mussels and readiness to respond quickly
- Maintain funding for prevention and early detection program. The pressure of mussel-infested boats coming into the state will continue and possibly increase as other water bodies become less attractive due to the mussel infestation's effect on docks, boat equipment, and recreation opportunties

► POLICY OVERVIEW

THE ISSUE: PREVENTION OF NEW CROP & FOREST PESTS

New pests of agriculture and forestry enter Oregon in numerous ways, including with live plants, wood products and firewood, and on commercial ships, trucks, and planes. These pests drive increased use of insecticides, increase the difficulty of growing crops, and threaten our landscape and natural habitats.

The Oregon Department of Agriculture is tasked with keeping these pests from becoming established in Oregon. **The invasion is constant as an average of nine new pests establish every year in Oregon.**

POLICY & ACTION

- ORS 570.305 defines duties of ODA in preventing the introduction of plant pests
- ORS 570.170 defines ODA's powers to inspect
- ORS 570.225 defines and describes ODA's options for control of plant pests

SUCCESSES

- Survey for 30-40 pests every year, leveraging a modest amount of funds
- Prevented the establishment of Gypsy moths for over 35 years and Japanese beetle for 70 years
- Pushed federal agencies to properly inspect plants imported from Canada as required
- Establish quarantines for pests to protect domestic and international agricultural markets

WHO PAYS

- U.S. Federal Agencies
- Oregon Lottery and General Funds

WHO BENEFITS

- Agricultural producers and foresters
- Home gardeners
- Recreationists and tourists

CHALLENGES

- Funding continues to decline while the risks from invasive pests remain high and constant
- Budget cuts have long-term impacts when a control opportunity is missed. A few years of reduced pest trapping have resulted in millions of dollars of Japanese beetle eradication costs
- Weak national infrastructure and funding mechanisms for state priorities

NEXT STEPS

- Diversify funding stream for more flexibility and sustainability
- Support ODA's National Insect Identification Center
- Increase state funding for state programs to enable focus and monitoring that support Oregon's priorities
- Make changes to Oregon constitution to enable border stations

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