

general

ACTION G-01

Direct government staff members to develop their technical expertise and skills to prepare for and respond to climate change impacts.



general

ACTION G-02

Create hazard recovery plans and prioritize the restoration of vital public safety facilities and other essential community assets (e.g., hospitals and major bridges).













general

ACTION G-03

Pursue funding to implement highest-priority actions identified in the adopted Hazards Mitigation Plan for the Thurston Region.





general

ACTION G-04

Factor climate impacts into the planning of operations and the coordination of disaster response and recovery activities among firstresponders, including public health, law enforcement, fire, and emergency medical services personnel.











general

ACTION G-05

Assess potential climate changeinduced population migration within and to the Thurston Region, and evaluate response strategies.









general

ACTION G-06

Create a household preparedness plan and store of food, water, and other supplies (lanterns, bicycles, etc.) to use in case a flood or other hazard cuts off access to goods, services, and emergency responders.









general

ACTION G-07

Identify a neighborhood site (e.g., a school or other location that's safe. accessible, and well-known) to serve as a temporary coordination center for local hazard response and recovery efforts, and publicize the hubs location widely.











general

ACTION G-08

Encourage neighborhoods to become familiar with residents who have skills and tools to assist others with special needs (e.g., elderly or disabled), should residents need to provide emergency response in the event that police and fire personnel cannot provide immediate assistance.





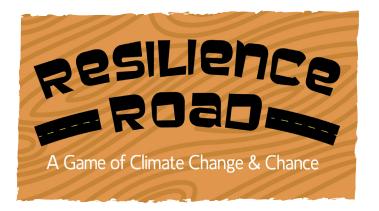


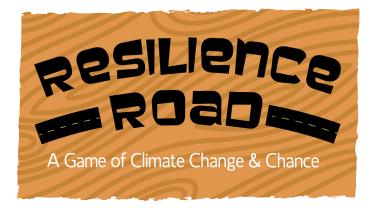






















general

ACTION G-09

Encourage residents to organize or participate in regular emergency preparedness, response, and recovery planning and training events.











general

ACTION G-10

Increase the number of residents who receive Community
Emergency Response Team
(CERT) training to improve local hazard preparedness, response, and recovery efforts. Ensure such efforts are ongoing.











general

ACTION G-11

Factor climate impacts into the full life-cycle costs of roads, buildings, parks and other assets – from their initial siting and design to their ongoing operations and maintenance.











general

ACTION G-12

Increase incentives to make urban infill and redevelopment projects more viable financially.









general

ACTION G-13

Align land use, hazard mitigation, transportation, capital improvement, and other plans so that they take into account climate change and work toward the same goals.











general

ACTION G-14

Expand ability to predict drought and flood events by tracking soil moisture, streamflow, precipitation, groundwater levels, tide levels, well levels, reservoir levels, and weather forecasts.













general

ACTION G-15

Create a website that details health risks exacerbated by climate change and provides information that helps residents prepare for and respond to drought, poor air quality, extreme heat, disease vectors, and other threats.













general

ACTION G-16

Develop a countywide disaster debris management plan with actions to efficiently dispose of or recycle materials (organic and artificial) after a disaster.



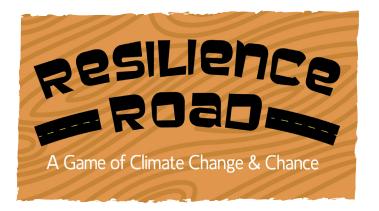


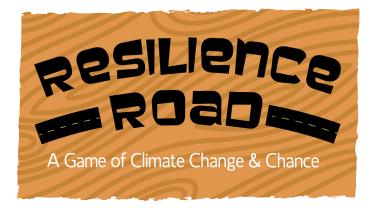






















general

ACTION G-17

Advocate for expanding the eligibility of federal disasterassistance funding to allow for the replacement or relocation of aging or vulnerable infrastructure before it fails.











general

ACTION G-18

Limit access to parks, lakes, and other outdoor recreation areas when natural hazards (e.g., algal blooms, wildfires, floods) pose risks to public safety.





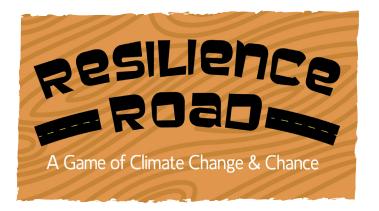


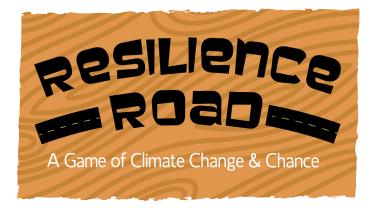






















DROUGHT & Water quality



ACTION D-01

Develop and implement a comprehensive drought-response strategy that sets action levels for different drought stages.



DROUGHT & **Water** Quality

ACTION D-02

Evaluate and secure sustained funding to support long-term monitoring of ground and surface water quality and quantity.













DROUGHT & Water Quality



ACTION D-03

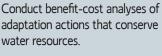
Increase reuse of reclaimed water for irrigating plants, supplementing low streamflow, and other purposes.

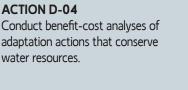


DROUGHT & Water quality











DROUGHT & Water Quality



ACTION D-05

Assess potential climate changeinduced population migration within and to the Thurston Region, and evaluate response strategies.



ACTION D-06

DROUGHT &



Set up a water bank in Thurston County's watersheds to enable water rights trading that supports conservation.

Water Quality





DROUGHT & Water Quality



ACTION G-07

Implement tiered water pricing.



DROUGHT & Water quality



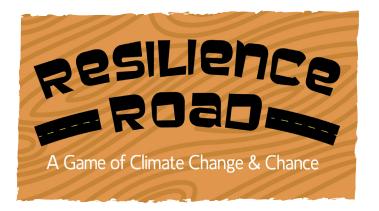
ACTION G-08

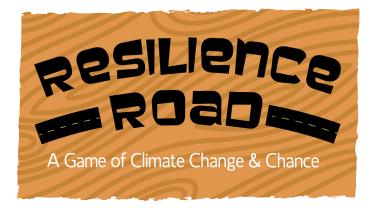
Increase incentives for water conservation during dry months.





















DROUGHT & Water quality

ACTION D-09

Incentivize new commercial construction to include on-site rainwater harvesting facilities.









DROUGHT & Water quality

ACTION D-10

Install efficient plumbing fixtures and equipment in buildings so as to conserve water.







DROUGHT & **Water Quality**

ACTION D-11

Evaluate and offer new incentives for residents to install rain gardens on well-draining soils and plant drought-tolerant landscaping (e.g. xeriscaping) to adapt to changes in seasonal precipitation.







DROUGHT & **Water Quality**

ACTION D-12

Construct new water-storage systems (e.g., large cisterns, water towers and reservoirs) to provide back-up water supplies during droughts.







DROUGHT & **Water Quality**

ACTION D-13

Expand Thurston County's septic system operation and maintenance education and outreach programs.









DROUGHT & **Water Quality**

ACTION D-14

Reduce zoning density for parcels (i.e., "downzone") and lower limits for impervious surfaces near streams and lakes with nutrientloading problems.













DROUGHT & Water Quality

ACTION D-15

Facilitate new residential water connections to municipal sources, where feasible.







DROUGHT & Water quality

ACTION D-16

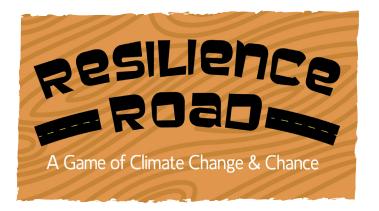
Incentivize water metering for all wells.

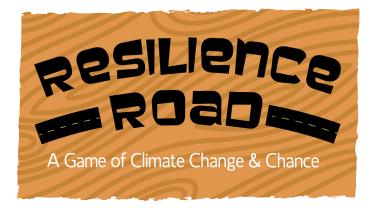






















DROUGHT & water quality



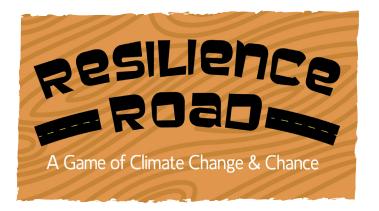


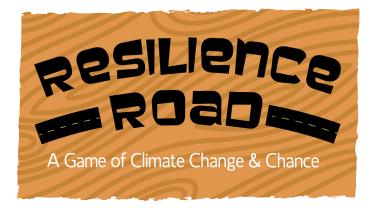
Establish a local non-regulatory entity to provide technical assistance to private well owners regarding conserving water and detecting leaks and pollution.





















fLOOD & erosion

ACTION F-01

Evaluate and secure sustained funding to restore and protect riparian vegetation along freshwater and marine shorelines.













FLOOD & PROSION

ACTION F-02

Incorporate projected sea-level rise and flooding information into the designation of regulatory hazard areas.





fLOOD & erosion

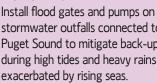
ACTION F-03

Design new and replacement stream culverts and other drainage infrastructure to accommodate projected higher peak flows associated with more frequent and intense heavy precipitation events.



fLOOD & erosion

ACTION F-04







Install flood gates and pumps on stormwater outfalls connected to Puget Sound to mitigate back-ups during high tides and heavy rains



FLOOD & erosion

ACTION F-05

Build floodwalls or other protective structures around critical facilities located in areas vulnerable to flooding as a result of sea-level rise and heavy precipitation.





fLOOD & erosion

ACTION F-06

Require that new or renovated buildings utilize flood-protection measures (such as raised finished-floor levels and temporary flood barriers) to accommodate projected sea-level rise over the structures' lifespan.







fLOOD & erosion

ACTION F-07

Increase education and enforcement efforts to ensure that commercial and residential building owners properly maintain low-impact development (LID) facilities that treat stormwater runoff on site









FLOOD & erosion

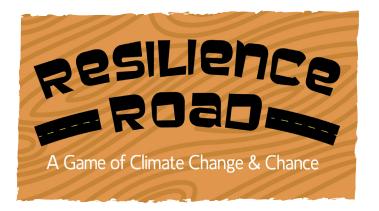
ACTION F-08

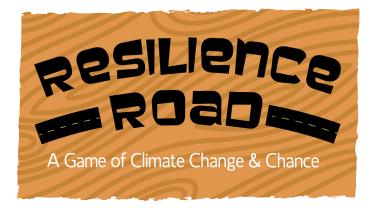
Assess drinking water wells' vulnerability to saltwater intrusion and inundation from rising sea levels, and develop adaptation measures (e.g., relocating wells).





















FLOOD & PROSION





ACTION F-09

For sites where elevating or relocating a building is not a viable option in response to flood risks, acquire the property, use the land for appropriate uses (e.g., flood storage or agriculture), and help the occupants resettle in the community.



FLOOD & PROSION



ACTION F-10

Implement brownfield clean-up strategies/planned actions for low-lying sites that are most vulnerable to sea-level rise.



fLOOD & erosion







ACTION F-11

Protect important historical or cultural sites that are at risk of coastal or inland flooding, erosion, and wildfires.



ACTION F-12



Limit construction of buildings and roads in areas where flood and landslide risks are highest.



FLOOD & erosion



ACTION F-13

Identify where and how the region could support the natural inland transition of coastal lowlands to estuaries as sea levels rise.



FLOOD & erosion



ACTION F-14

Construct flood-storage facilities (e.g., wetlands or artificial ponds) upstream of concentrated development areas that are at risk of flooding.



fLOOD & erosion





ACTION F-15

Minimize development, disturbance, and vegetation removal on or near steep slopes (>25% gradient) adjacent to waterbodies.

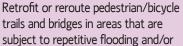


fLOOD & erosion



ACTION F-16

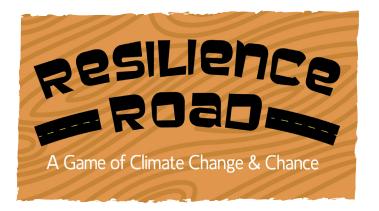
landslides.

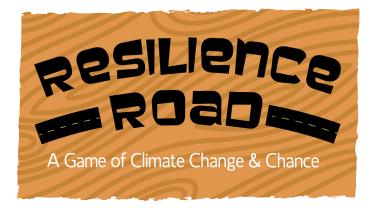






















FLOOD & erosion

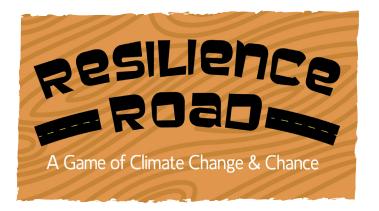


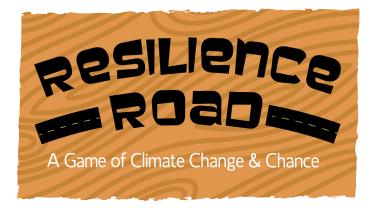
ACTION F-17

Decouple remaining combined storm and sewer systems, where costeffective, so as to add capacity and mitigate back-ups and water-borne disease outbreaks.



















PLants & animals



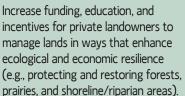
















ACTION P-02

Use best-management practices, such as installing large woody debris in rivers, to improve water temperature, streamflow, and channel conditions.





PLants & animals

ACTION P-03

habitat.

Create/Update basin plans that

protecting natural resources and

integrate climate impacts, and

include goals and targets for

















PLants & animals









Implement monitoring practices that provide early detection of invasive species on land and in water, and expand biological control and manual removal of such plants and insects.



PLants & animals





ACTION P-06

PLants &

animals



Expand efforts to monitor the cause and extent of changes in native and invasive plant distribution.









Evaluate additional assisted migration of vulnerable plant and animal species to suitable habitat.





PLants & animals

ACTION P-07











PLants & animals

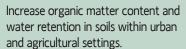
ACTION P-08

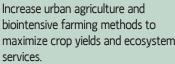


Increase urban agriculture and biointensive farming methods to maximize crop yields and ecosystem



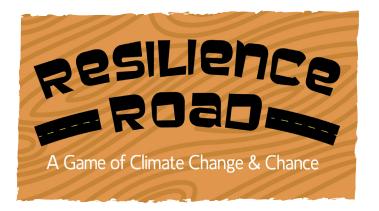


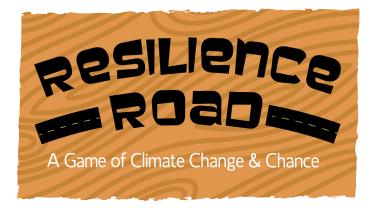






















PLants & animals





ACTION P-09

Protect and enhance marine vegetation, such as eelgrass, so as to help clean water, sequester carbon dioxide, and improve fish habitat and survival.



PLants & animals

Educate waterfront property owners

about the benefits of voluntary oyster

seeding and other shellfish production,

and encourage such practices.

ACTION P-10















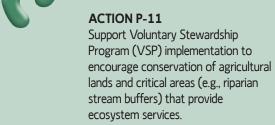




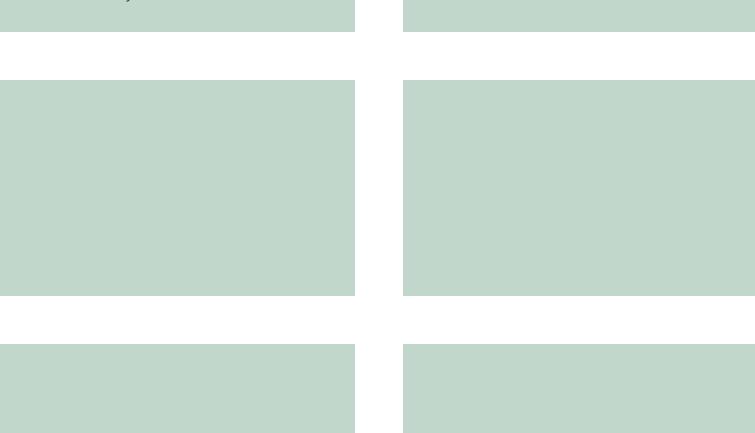


Grow woody perennial crops that help conserve water, store carbon, and provide other ecosystem services.s.



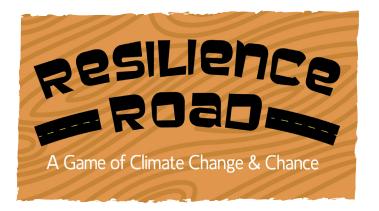


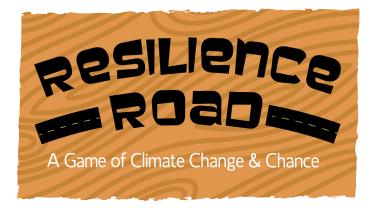






















TRANSPORTATION & energy













ACTION T-02

& energy





Provide additional utility incentives to support energy efficiency and renewable energy investments in buildings.

TRANSPORTATION



distribution, monitoring, and storage infrastructure to support more on-site renewable energy generation.

Expand and retrofit the region's energy





TRANSPORTATION & energy













Elevate, reinforce or relocate important electrical equipment that is within critical areas at risk of flooding and/or landslides



ACTION T-03

ACTION T-01

Offer additional utility rebates or bill credits to induce residents to buy and install energy-efficient appliances and other equipment.





TRANSPORTATION & energy





ACTION T-06



Relocate or retrofit low-lying roads

TRANSPORTATION



ACTION T-07

Map transportation infrastructure that is vulnerable to repeated floods and/or landslides, and designate alternative travel routes for critical transportation corridors when roads must be closed because of natural hazards.



& energy



vulnerable to coastal or inland flooding.



TRansportation & energy

Increase the energy efficiency of the

region's water infrastructure.











ACTION T-08

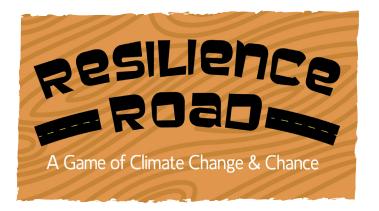


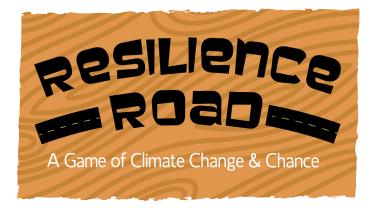
Build additional large-scale renewable energy projects (e.g., utility-scale solar arrays and wind farms) in Thurston County.



















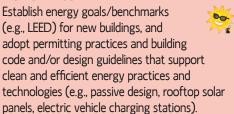


TRANSPORTATION & energy





ACTION T-09





TRANSPORTATION & energy



ACTION T-10

Expand utility outreach to and education of commercial and residential power customers about the benefits of clean and efficient energy technologies and practices.



TRANSPORTATION & energy



ACTION T-11

Develop and adopt policies that require residential and commercial properties to undertake an energy audit at the time of sale or during a substantial remodel.



TRANSPORTATION & energy



ACTION T-12



Generate additional energy from waste products (e.g., woody biomass and sewage) in Thurston County.



TRANSPORTATION & energy







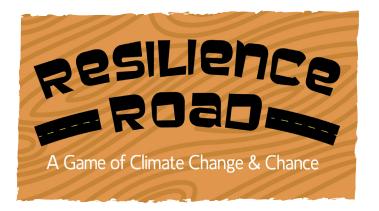
ACTION T-13

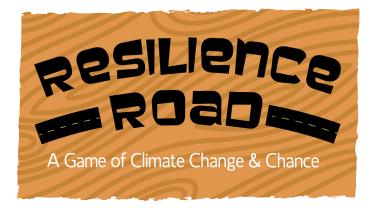
Increase resources to monitor air quality, and enforce regulations to reduce the health risks of air pollution (e.g., surface ozone and particulate matter) exacerbated by warmer temperatures and automobile emissions.

















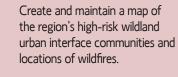




WILDFIRE & **extreme** Heat



ACTION W-01





WILDFIRE & **extreme** Heat



ACTION W-02

Require new developments in high-risk wildfire areas to submit a fireprotection plan during site plan review.





WILDFIRE & **extreme** Heat



ACTION W-03

Provide private forestland owners and residents living in Wildland-Urban Interface (WUI) areas information about fire prevention/Firewise practices, and encourage application of such practices.



WILDFIRE & **extreme** Heat



ACTION W-04

Plant drought- and pest-resistant trees, shrubs, and grasses in parks, landscaping strips, and other urban areas.









WILDFIRE & **extreme** Heat



ACTION W-05

Adopt wildfire hazard overlay districts with development regulations (for new structures) based on factors such as slope, structure, and fuel hazards.



WILDFIRE & **extreme** Heat



ACTION W-06

Lower the density of development allowed in areas with the highest risk of wildfire.



WILDFIRE & **extreme** Heat



ACTION W-07

Extend and enforce the rural burn ban when wildfire risks are high.



WILDFIRE & **extreme** Heat



ACTION W-08

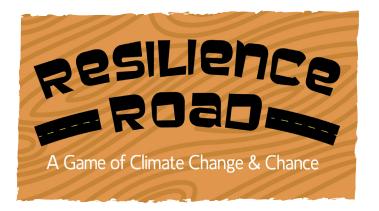
Modify building codes, where necessary, to require fire sprinkler systems and enable emergency access/egress in all new residential and commercial construction.

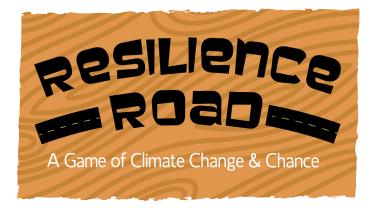






















WILDFIRE & EXTREME HEaT



ACTION W-09

Account for the inclusion of defensible spaces into future developments (e.g., designing roads, pathways, sidewalks, and landscaping to create firebreaks) in areas where there is high wildfire risk.



WILDFIRE & EXTREME HEAT



ACTION W-10

Enhance training and financial support for wildfire response.



WILDFIRE & extreme Heat



ACTION W-11

Expand the region's urban tree canopy and manage forests responsibly.



WILDFIRE & EXTREME HEAT

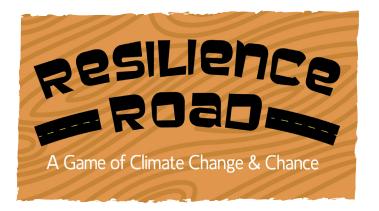


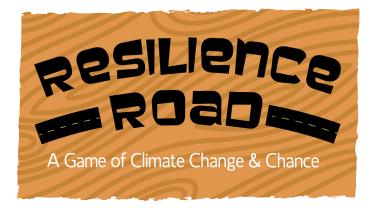
ACTION W-12

Install reflective and/or vegetated roofs to reduce building energy consumption and the urban heat island effect.



















STRESSOR SETBACK

Increasing Drought

Move your pawn to the stressor Increasing Drought – the region's dry spells becoming more frequent and intense.



STRESSOR SETBACK

Ocean Acidification

Move your pawn to the stressor Ocean Acidification – Puget Sound's seawater becoming more acidic and corrosive due to greater absorption of carbon dioxide.



STRESSOR SETBACK

Increasing Drought

Move your pawn to the stressor Increasing Drought – the region's dry spells becoming more frequent and intense.



STRESSOR SETBACK

Intensifying Precipitation

Move your pawn to the stressor Intensifying Precipitation – the region's heavy rain events becoming more frequent and intense.



STRESSOR SETBACK

Warmer Winter

Move your pawn to the stressor Warmer Winter – the Puget Sound region's cool months (October-March) being warmer than they have been historically.



STRESSOR SETBACK

Sea-Level Rise

Move your pawn to the stressor Sea-Level Rise – Puget Sound's seawater rising due to increasing temperatures and melting land ice.



STRESSOR SETBACK

Population Change

Move your pawn to the stressor Population Change – temporary or permanent population displacement and migration within and/or to the Puget Sound region due to climate impacts.



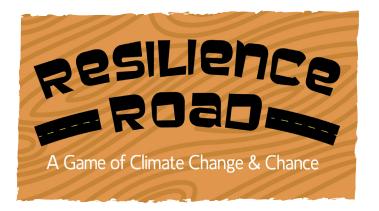
STRESSOR SETBACK

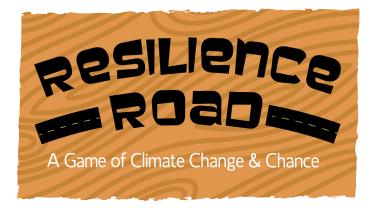
Warmer Water

Move your pawn to the stressor Warmer Water – warming affecting the chemical, biological and/or physical characteristics of the Puget Sound region's fresh and marine waterbodies during any season.



















STRESSOR SETBACK

Increasing Drought

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STRESSOR SETBACK

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STRESSOR SETBACK

Sea-Level Rise

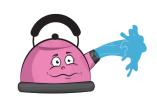
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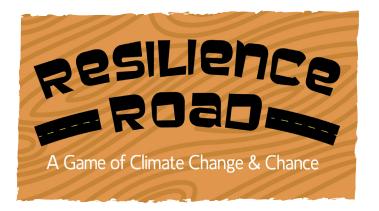
STRESSOR SETBACK

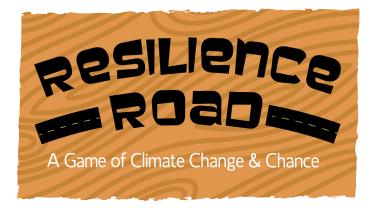
Warmer Water

Move your pawn to the stressor Warmer Water – warming affecting the chemical, biological and/or physical characteristics of the Puget Sound region's fresh and marine waterbodies during any season.





















WILD CARD









WILD CARD

Stuck? Well, you're in luck. ... Please create

an adaptation action for a climate stressor





Stuck? Well, you're in luck. ... Please create an adaptation action for a climate stressor of your choosing.













of your choosing.









WILD CaRD









WILD CARD





Stuck? Well, you're in luck. ... Please create an adaptation action for a climate stressor of your choosing.















Stuck? Well, you're in luck. ... Please create an adaptation action for a climate stressor of your choosing.













wild card









WILD CaRD

Stuck? Well, you're in luck. ... Please create

an adaptation action for a climate stressor





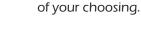
Stuck? Well, you're in luck. ... Please create an adaptation action for a climate stressor of your choosing.

































Stuck? Well, you're in luck. ... Please create

an adaptation action for a climate stressor





Stuck? Well, you're in luck. ... Please create an adaptation action for a climate stressor of your choosing.







of your choosing.





















