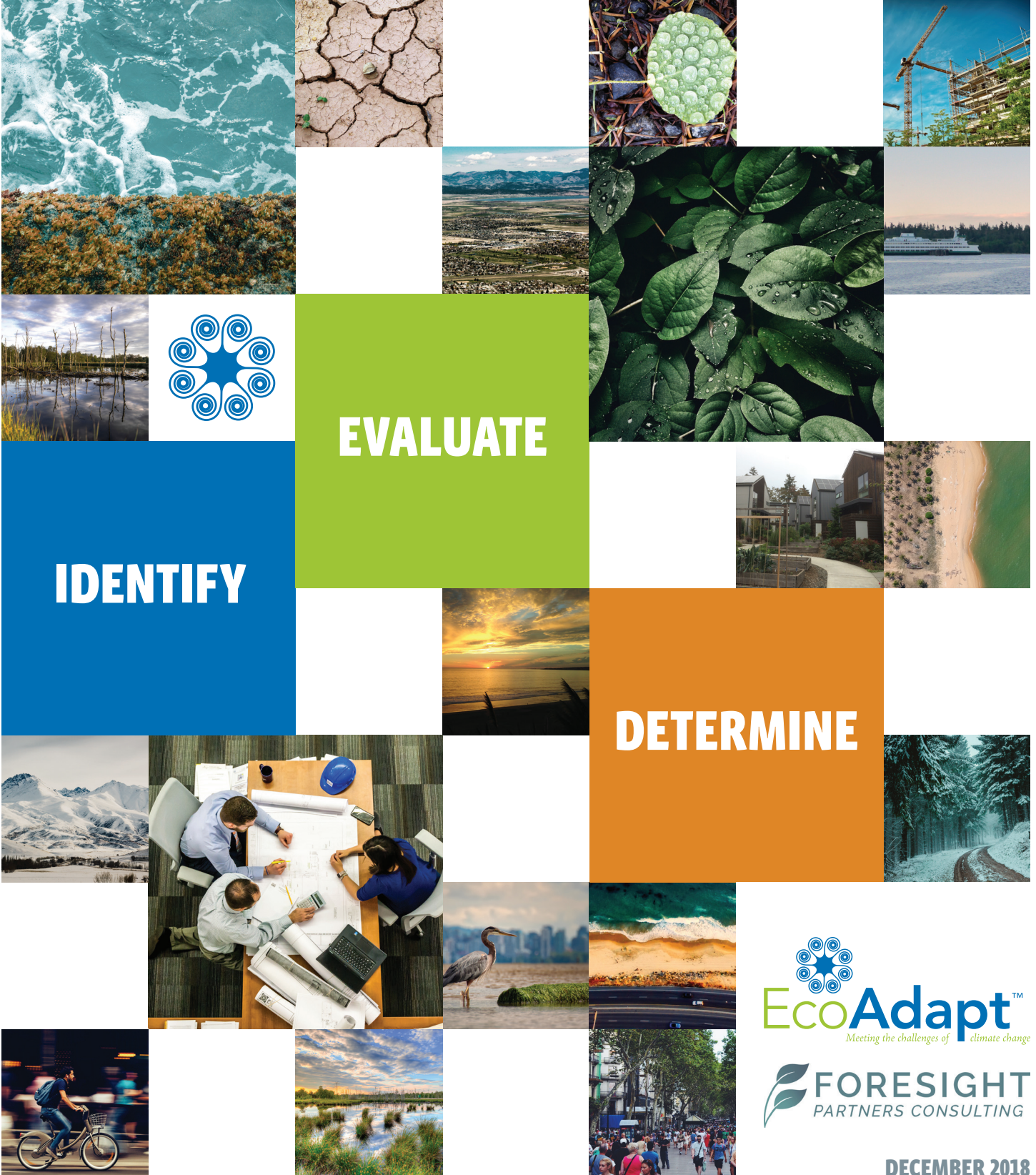


Climate Change Adaptation Certification Tool: Moving communities from planning to implementation



EVALUATE

IDENTIFY

DETERMINE


EcoAdapt™
Meeting the challenges of climate change


FORESIGHT
PARTNERS CONSULTING

DECEMBER 2018

Climate Change Adaptation Certification Tool

Climate change has implications for both the effectiveness and hazard potential of many of the projects undertaken by local and regional governments today. Failing to properly evaluate the potential vulnerability of any project prior to approval can lead to missed opportunities to improve design, optimize siting or avoid risk.

The **Climate Change Adaptation Certification (CCAC) Tool** is for use during regulatory or procedural review processes being carried out as a matter of regular, ongoing community business. It is recommended that the CCAC become embedded as a regulatory requirement; alternatively, the CCAC could be a discretionary review tool used to evaluate an idea and inform all parties of expected impacts from a changing climate on a project during its lifecycle. Potential liabilities associated with a course of action could be identified prior to permitting or funding, which should enable decision makers to drive climate savvy and sustainable choices.

Using the CCAC will enable community services, infrastructure, ecosystems (and thereby local economies) to better anticipate and respond to climate change impacts by protecting public funds from climate risk or future community exposure to risk under altered conditions.

What “project” should apply the CCAC?

The CCAC should be applied to any decision that uses public funds, has a life cycle of greater than five years and can impact public good. This includes, but is not limited to:

- Fiscal Expenditures
- Capital Planning
- Permitting
- Infrastructure Design and Siting

The objective of applying the CCAC to these decisions is to:

- Explicitly evaluate the implication of future conditions on project function and longevity
- Understand the long-term sustainability of a project at the funding or permitting phase
- Reduce community risk from actions today that become a liability under future conditions

Who should apply the CCAC?

The CCAC can be used by local government, elected officials, businesses and individuals to enable climate savvy decision making. The CCAC informs any proponent of a publicly funded capital project, fiscal decision or privately-funded development of the climate change risks faced by the project, and to guide them toward reducing that risk.

The CCAC process includes the following:

STEP 1: Identification of Climate Change Risk Factors

Completing this step will identify if climate change impacts could affect a project over its lifetime. Step 1 provides a series of impact indicators that steer a proponent to think about how eight anticipated change factors have the potential to affect a project area. If any indicator is marked as present, then the change factors could be relevant to a project’s long-term success. Therefore, it will have a “Yes” for that factor, requiring Step 2.

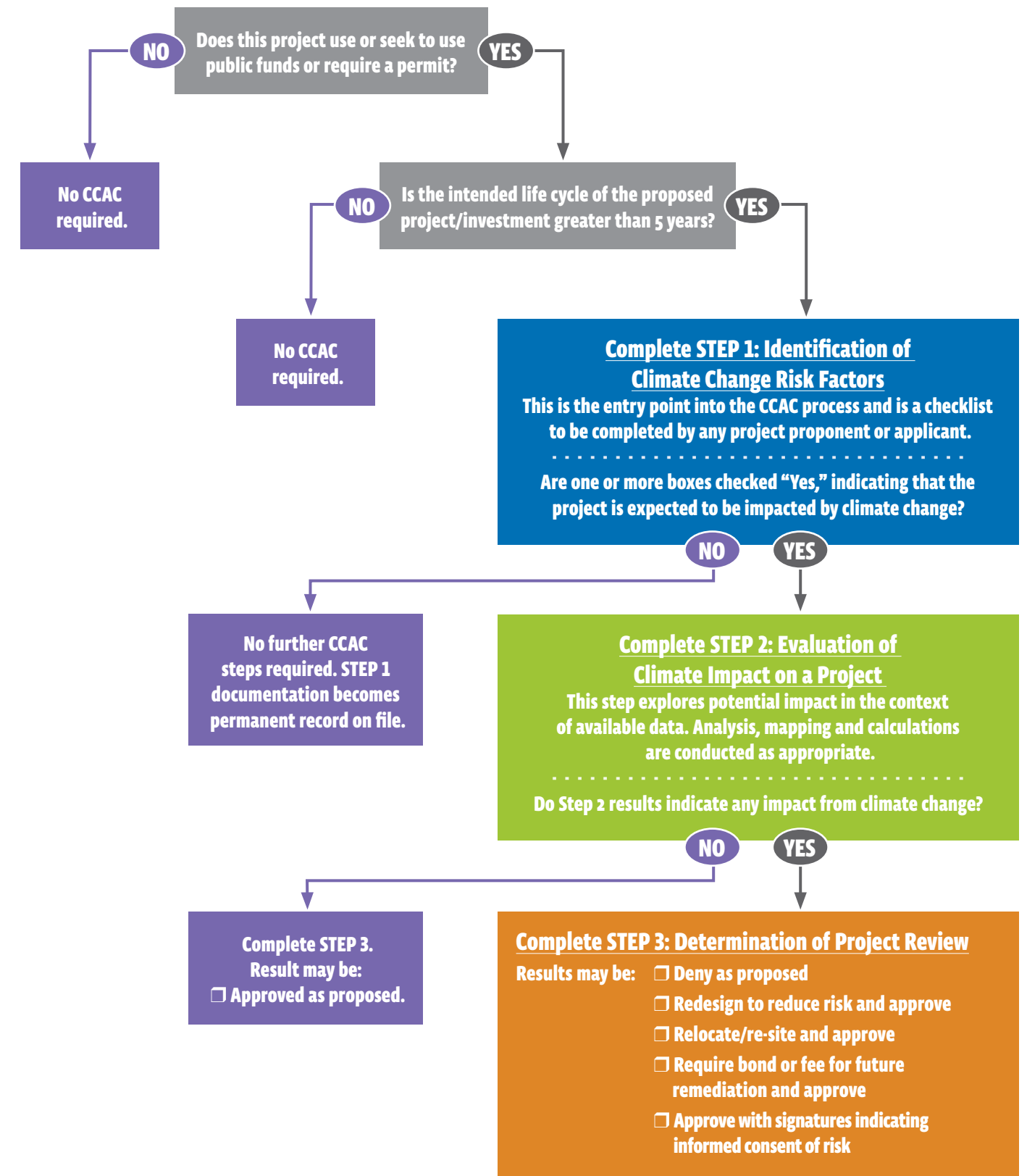
STEP 2: Evaluation of Climate Impact on a Project

If Step 1 detects likely impacts from climate change risks to a project area, then Step 2 asks a project proponent to dive deeper into existing climate data. Narratives, mapping and calculations will be sought to evaluate the project relative to future conditions and assess whether, as proposed, the project will involve (and should therefore avoid) future risk. Results of Step 2 are used by decision makers in Step 3 to inform a determination for the project.

STEP 3: Determination of Project Review

The CCAC review steps should allow a project to move forward only when it is expected to function sustainably over time; in other words, if it has avoided, minimized or mitigated future negative performance. A project should only proceed when awareness and accountability of risk is accepted. Thereby, a community will not be blindly on the hook for the costs to replace, retrofit, decommission or litigate responsibility for future damage, harm or poor project performance. Step 3 provides evidence that responsible parties are aware of climate change impacts and implication to the project they are either allowing or undertaking.

Climate Change Adaptation Certification (CCAC) Pathway to Climate Savvy Planning



STEP 1: Identification of Climate Change Risk Factors

STEP 1 will determine applicability of further CCAC review of a project. It should be completed by a project proponent with review by the appropriate project review authority.

Climate Change Risk Factors	<ul style="list-style-type: none"> Identify if the following issues could affect the project over its lifetime. Check all that apply. If one or more of these boxes is checked, check YES in Column 3. 	Climate Change Risk Identified For
PRECIPITATION Changing patterns will result in different and greater extremes, duration, and intensity.	My project or access to it: <ul style="list-style-type: none"> involves proper sizing of stormwater infrastructure to treat and accommodate run-off. involves diversion or impoundment of surface water. involves culverts, bridges, retaining walls or other structures within a riparian area to convey water or prevent flooding. relies on a predictable and reliable water supply. is within or near a mapped flood zone. is affected by nuisance, localized or chronic flooding that is known generally to occur, though not mapped. may be vulnerable to erosion or landslides. relies on a predictable, reliable, and affordable power supply and other utilities. is located within a Wildland-Urban Interface boundary or may be vulnerable to wildfire. relies on sanitary sewers or community/private septic systems. intersects with the multimodal transportation system. other possible effects of precipitation changes (attach information and explanation). 	PRECIPITATION <input type="checkbox"/> YES <input type="checkbox"/> NO
TEMPERATURE Changes will include more extremes and prolonged highs or lows.	My project or access to it: <ul style="list-style-type: none"> relies on a predictable and reliable water supply. may be vulnerable to wildfire. uses energy generated by fossil fuel combustion (on site or from a power utility). will have a maintenance budgets for repairs and replacements. relies on good air quality. intersects with the multimodal transportation system. involves habitat creation, restoration, or enhancement that relies on current temperature levels for successful implementation. other possible effects of temperature changes (attach information and explanation). 	TEMPERATURE <input type="checkbox"/> YES <input type="checkbox"/> NO
SEA LEVEL RISE Relative sea level changes will result in intermittent or permanent inundation.	My project or access to it: <ul style="list-style-type: none"> is located within the coastal zone. relies on a stable shoreline. is within or adjacent to a mapped flood zone. is within or may be affected by an area known to be vulnerable to flooding. involves dock or harbor infrastructure. relies on groundwater that may suffer from saltwater intrusion over time. requires healthy and properly functioning tidal marsh, estuaries, or other tidal ecosystems. relies on proper functioning of a sanitary sewer system regulated by the National Pollution Discharge Elimination System (NPDES). relies on a septic system that is within or near the coastal zone. intends to enhance tidal ecosystems. other possible effects of sea level rise (attach information and explanation). 	SEA LEVEL RISE <input type="checkbox"/> YES <input type="checkbox"/> NO

Climate Change Risk Factors	<ul style="list-style-type: none"> Identify if the following issues could affect the project over its lifetime. Check all that apply. If one or more of these boxes is checked, check YES in Column 3. 	Climate Change Risk Identified For
VEGETATION CHANGES Long-term temperature and precipitation changes will cause shifts in regional vegetation.	My project or access to it: <ul style="list-style-type: none"> could be affected by changes in vegetation. could be affected by changes to transportation corridor buffers and impacts to roadways (brush fires, deadfall, water flow, etc.). could be affected by increased fuel load and wildfire risk (e.g., potential for dead-wood and detritus as die-off occurs increasing the fuel load and risk for wildfires). has energy demands for heating and cooling that could increase if the percentage of tree-cover/canopy changes. other possible effects of vegetation changes (attach information and explanation). 	VEGETATION CHANGES <input type="checkbox"/> YES <input type="checkbox"/> NO
SLOPE STABILITY Sea level and precipitation changes compromise once stable slopes.	My project or access to it: <ul style="list-style-type: none"> relies on the integrity of nearby slopes. proposes development or investment on or near a slope. other possible effects of slope instability (attach information and explanation). 	SLOPE STABILITY <input type="checkbox"/> YES <input type="checkbox"/> NO
OCEAN ACIDIFICATION Changes in ocean pH will have implications on permitted discharge and ocean health.	My project or access to it: <ul style="list-style-type: none"> relies on sanitary sewer that is subject to a NPDES permit. relies on or affects shellfish within our local water. other possible effects of ocean acidification (attach information and explanation). 	OCEAN ACIDIFICATION <input type="checkbox"/> YES <input type="checkbox"/> NO
POPULATION CHANGES Climate migration and regional population changes may have local/regional implications.	My project or access to it: <ul style="list-style-type: none"> relies on a stable population. is designed and built to serve the current population. could be adversely affected if population were to increase or decrease in our region. could be affected by future climate migrants. other possible effects of population changes (attach information and explanation). 	POPULATION CHANGES <input type="checkbox"/> YES <input type="checkbox"/> NO
GREENHOUSE GAS EMISSIONS Mitigation of future greenhouse gas emissions and fossil fuel dependence are driven in part by local/regional permitting decisions.	My project or access to it: <ul style="list-style-type: none"> does not take cars off the road or decrease idling times. neither improves nor increases access to non-motorized transportation options. is dependent on fossil fuel and does not use renewable energy sources sufficient to cover demand. other possible effects of greenhouse gas emissions (attach information and explanation). 	GREENHOUSE GAS EMISSIONS <input type="checkbox"/> YES <input type="checkbox"/> NO

CHECK ALL YOUR "YES" FACTORS			
<input type="checkbox"/> PRECIPITATION	<input type="checkbox"/> SEA LEVEL RISE	<input type="checkbox"/> SLOPE STABILITY	<input type="checkbox"/> POPULATION CHANGES
<input type="checkbox"/> TEMPERATURE	<input type="checkbox"/> VEGETATION CHANGES	<input type="checkbox"/> OCEAN ACIDIFICATION	<input type="checkbox"/> GREENHOUSE GAS EMISSIONS
<ul style="list-style-type: none"> For each Climate Change Risk Factor that indicated "YES" to climate risk, evaluation of the project is now required. Proceed to STEP 2 and answer each Evaluation Question marked as Required. If you did not check any "YES" factors, no further CCAC steps are required. STEP 1 documentation becomes permanent record on file. 			

STEP 2: Evaluation of Climate Impact on a Project

STEP 1 concluded that your project is subject to impacts from at least one of eight Climate Change Risk Factors (evidenced by a “YES”).

Next, complete STEP 2 to evaluate any potential long-term climate change impact to your project’s success.

- Use this chart below to determine which evaluation questions are required to be answered.
- In Column One check all Climate Change Risk Factors that had a “YES” result in STEP 1.
- Complete Evaluation Questions A-J accordingly.

Check your “YES” factors from STEP 1	Climate Change Risk Factor	Complete the Evaluation Questions for Each Checked Factor									
		A	B	C	D	E	F	G	H	I	J
<input type="checkbox"/>	PRECIPITATION	X		X	X	X		X	X		
<input type="checkbox"/>	TEMPERATURE			X		X	X	X	X		
<input type="checkbox"/>	SEA LEVEL RISE	X	X								
<input type="checkbox"/>	VEGETATION CHANGES	X			X		X	X	X		
<input type="checkbox"/>	SLOPE STABILITY				X						
<input type="checkbox"/>	OCEAN ACIDIFICATION					X				X	
<input type="checkbox"/>	POPULATION CHANGES										X
<input type="checkbox"/>	GREENHOUSE GAS EMISSIONS						X	X			

Once submitted to the appropriate Project Review Authority (permitting agency, board or other personnel authorized to act on or allow the project to proceed), responses to STEP 2 Evaluation Questions will provide the information necessary for them to make a climate savvy determination in STEP 3.

STEP 2: Evaluation Questions

A Evaluate project susceptibility to flooding and determine impact.

- 1. Map your project area** (inclusive of its access corridors, key utility infrastructure, and associated multimodal transportation infrastructure) in relation to **flood zones and frequently flooded areas** (both episodic and chronic) using:
 - Local flood zone data;
 - Local wetland data;
 - Project site assessment data;
 - Regional flood zone data;
 - Regional flood mapping tools:
 - The NOAA Coastal Flood Exposure Mapper online visualization tool (<https://coast.noaa.gov/floodexposure/#/map>) supports communities that are assessing their coastal hazard risks and vulnerabilities by creating a collection of user-defined maps that show the people, places, and natural resources exposed to coastal flooding. The tool is currently unavailable for the west coast (see <https://coast.noaa.gov/digitalcoast/tools/flood-exposure.html> for more information). Use if available to your project area;
 - Use FEMAs Flood Map Service Center (MSC) portal (<https://msc.fema.gov/portal/search>) by entering your project address and reviewing maps it produces to identify any potential flooding impacts. MSC is the official public source for flood hazard information produced in support of the National Flood Insurance Program.

- 2. Provide a narrative review** explaining your projects’ overlap with mapped flood areas. Also, document that you have contacted City or County engineering and public works’ staff and incorporate their knowledge of whether your project area is affected by **nuisance, localized or chronic flooding** that is generally known to occur, though not necessarily mapped.

RESULT:

- Project unaffected by flooding or flood zones.
- Assessment indicates climate change risk to project that cannot be avoided.
- Assessment indicates climate change risk to the project, but risk could be minimized by (explain here or in attachment):

B Evaluate local sea level rise projections relevant to project area and determine impact.

- 1. Get local sea level rise projections for 2100:**
 - If options exist, use high greenhouse gas emissions scenarios (e.g., RCP8.5 or similar), likely or 50% assessed probability of exceedance for 2100. Also consider the impact of the 99 and 0.1% values because, while these have a lower likelihood, they are assumed possible and a project should know these potential risks. Examples include:
 - Washington Coastal Resilience Project: <http://www.wacoastalnetwork.com/wcrp-documents.html>
 - State of California Sea Level Rise Guidance: opc.ca.gov/webmaster/ftp/pdf/agenda_items/20180314/Item3_Exhibit-A_OPC_SLR_Guidance-rd3.pdf
 - Unified Sea Level Rise Projections- South Florida Compact: southeastfloridaclimatecompact.org/wp-content/uploads/2015/10/2015-Compact-Unified-Sea-Level-Rise-Projection.pdf
- 2. Apply these values on a sea level rise viewer:**
 - NOAA Sea Level Rise Viewer: <https://coast.noaa.gov/slr>. NOAA’s tool only shows estimates up to 6 feet. If your scenario shows >6 feet, use Surging Seas: <https://riskfinder.climatecentral.org>.

3. Compare the sea level rise viewer output(s) with project site map or local GIS data layers to evaluate vulnerability of:

- project footprint
- project related dock and harbor infrastructure
- transportation corridors needed to access your project
- utilities (e.g., power transmission, sewer/septic, stormwater/drainage, water/wells)
- any other essential elements of the project

- 4. Provide a narrative review** explaining inundation, interaction with tides, erosion with or without slope stability issues, and any interaction with upstream flows.

RESULT:

- Project unaffected by sea level rise.
- Assessment indicates climate change risk to project that cannot be avoided.
- Assessment indicates climate change risk to the project, but risk could be minimized by (explain here or in attachment):

STEP 2: Evaluation Questions

C Evaluate project stormwater infrastructure design and its ability to accommodate future hydrological conditions.

1. Calculate stormwater design based on:

- Projected flow rates for 2050.
- Because most hydrological models (e.g., 2012 Western Washington Hydrology Model) used for development of local Stormwater Manuals are based on historical and not future flows, project proponents must calculate flows with future precipitation flow rates as inputs.

2. Provide a narrative review comparing infrastructure sizing requirements to accommodate historical flows versus anticipated future flows. Show your understanding of the likely future precipitation changes that will affect your project and its infrastructure.

RESULT:

- Project unaffected by future hydrologic conditions.
- Assessment indicates climate change risk to project that cannot be avoided.
- Assessment indicates climate change risk to the project, but risk could be minimized by (explain here or in attachment):

D Evaluate project vulnerability to landslides and other geologic hazards.

1. Map your project and its access corridors (project area) using local Geological Hazardous Areas Maps for slope stability or landslide (e.g., Washington Department of Natural Resources Geologic Information Portal: https://geologyportal.dnr.wa.gov/#natural_hazards) to produce a map with landslide data layers overlaying your project area.

2. Provide narrative review of your project in relation to slope stability. Understanding that resilient infrastructure relies on slope stability, if mapping shows your project area could be affected by landslides explain how you plan for it in design and/or avoid steep slopes for location of critical infrastructure or public investment where an alternative is possible.

RESULT:

- Project unaffected by landslides and other geologic hazards.
- Assessment indicates climate change risk to project that cannot be avoided.
- Assessment indicates climate change risk to the project, but risk could be minimized by (explain here or in attachment):

STEP 2: Evaluation Questions

E Evaluate project dependence on and access to the reliable provision of basic utilities (water supply, septic/sewer) that function over time without compromising the health of relevant ecosystems.

1. Map your project area and show it in relation to:

- Regional and/or local aquifer recharge area maps (e.g., Critical Aquifer Recharge Areas maps)
- Wellhead Protection Area mapping
- Watershed boundaries
- Identify National Pollution Discharge Elimination System (NPDES) permitted outfalls or discharges

2. Provide a narrative review that:

- Demonstrates a predictable, reliable and affordable water supply for the lifespan of your project under future predicted precipitation and temperature patterns.
- Explains any water saving measures your project employs.
- Explains your leach field or sewer outfall drainage basin in the context of its over-saturation or dehydration (either of which can render a septic/sewer ineffective).
- If your project will utilize a discharge facility subject to an NPDES permit, explain your understanding of the relationship between stormwater and sewage discharge permits and ocean acidification, which may compromise stormwater and sewage discharge compliance making capital projects/ investment for additional siting or capacity necessary.

RESULT:

- Project unaffected by either the provision or failure of basic utilities.
- Assessment indicates climate change risk to project that cannot be avoided.
- Assessment indicates climate risk to the project, but risk could be minimized by (explain here or in attachment):

F Evaluate project dependence on and access to the reliable provision of a power supply and its source.

1. Calculate:

- Insulation requirements based on projected future winter lows and summer high temperatures;
- Anticipated maintenance budget for items (e.g., HVAC systems) vulnerable to unplanned heavy service demands due to more extreme weather (e.g., if future use becomes greater than currently budgeted, what will be the cost to future owners/operators?).

2. Provide a narrative review explaining:

- A comparison of insulation requirements and effectiveness due to calculations based on historical versus future temperature projections;
- All sources of energy upon which your project will depend, including back-up generators;
- Use of renewable energy, or site design/features that enable renewables to be used or later installed (e.g., is your energy generated by fossil fuel combustion? Is there an opportunity to produce power on site and is your project designed to facilitate that? Did you situate/orient structures on site to maximize its ability to employ on-site renewable energy generation such as passive or active solar?);
- If relying on tree canopy for passive heating or cooling, explain your energy needs as they may change over time with changes in tree-cover/canopy (e.g., active heating and cooling needs will increase as vegetation on-site matures or dies off);
- How your project will decrease idling times, improve access to non-motorized transportation, or otherwise improve the transit system itself;
- Any existing greenhouse gas inventories to which your proposed project would be a contributor (positive or negative).

RESULT:

- Project unaffected by changes in energy demand, access, or cost.
- Assessment indicates climate change risk to project that cannot be avoided.
- Assessment indicates climate change risk to the project, but risk could be minimized by (explain here or in attachment):

STEP 2: Evaluation Questions

G Evaluate project connection to multimodal transportation.

Provide a narrative review explaining how motorized and non-motorized transit will be influenced by your project. Will non-motorized and/or public transit be increased or supported by this project (e.g., creation of bike lanes, sidewalks, or non-motorized paths)? Will this project increase automotive miles driven or idle times?

RESULT:

- Project will facilitate multimodal transportation.
- Assessment indicates no accommodation of multimodal transit.
- Assessment indicates that multimodal transit could be accommodated by:

I Evaluate project connection to a healthy ocean environment.

Provide a narrative review explaining your project as it relates to:

- Marine discharge permits. Altered seawater pH may adversely affect compliance if discharge cannot be adjusted under these changing water chemistry conditions.
- Locally managed or harvested shellfish and whether the decline in shellfish populations affect your project or deem it unsustainable.
- Any other marine activities that affect or are affected by altered pH or related water chemistry changes.

RESULT:

- Project unaffected by changes in ocean chemistry.
- Assessment indicates climate change risk to project that cannot be avoided.
- Assessment indicates climate change risk to the project, but risk could be minimized by (explain here or in attachment):

H Evaluate project area susceptibility to wildfire.

1. Map your project's proximity to the Wildland Urban Interface and/or wildfire hazard areas. Overlay the following data layers on your project area:

- Regional or local GIS layers showing Wildfire Hazard Area or any available wildfire risk mapping

2. Provide a narrative review demonstrating your understanding of how long-term temperature and precipitation trend changes may cause shifts in vegetation and habitats affecting your project area's vulnerability to wildfire.

RESULT:

- Project unaffected by wildfire risk.
- Assessment indicates climate change risk to project that cannot be avoided.
- Assessment indicates climate change risk to the project, but risk could be minimized by (explain here or in attachment):

J Evaluate the connection between the project and local and regional population.

Provide a narrative review explaining how your project will function over time relative to population change. Will either increases or decreases (possibly due to climate migration) affect the long-term success of your project? Do your anticipated outcomes depend on certain local or regional population statistics?

RESULT:

- Project unaffected by population.
- Assessment indicates climate change risk to project that cannot be avoided.
- Assessment indicates climate change risk to the project, but risk could be minimized by (explain here or in attachment):

STEP 3: Determination of Project Review

STEP 2 results indicate climate change risk to the project during its expected life cycle. Complete STEP 3 to decide conditions of approval.

1. **Proponents assessment** of the proposed project under future conditions:

2. **Staff assessment** of the proposed project under future conditions (include reference to any existing local, regional, and state natural hazard vulnerability assessments, climate vulnerability assessments, and/or climate action plans):

3. **CCAC Determination:**

Project approved as proposed. Low risk from future climate conditions.

Project denied. High risk that cannot be minimized or avoided with project alterations.

Project redesigned to reduce risk and approved.

- Explain how risk was reduced due to the components of the redesign.

Project relocated/sited in alternate location and approved.

- Explain how risk was reduced because of this move. Explanation should include a review of new site to ensure vulnerabilities do not exist at the new location.

Project approved with conditions. Applicant required to assume responsibility for anticipated future remediation necessitated due to permitting/funding/approving this now despite the known vulnerabilities.

- Bond required in the amount of \$_____.
- Fee required in the amount of \$_____.
- Explain and document the expected remediation.

Project approved with informed consent regarding the risk.

- Describe the risk.

Project Review Authority

Name:

Date:

Project Proponent

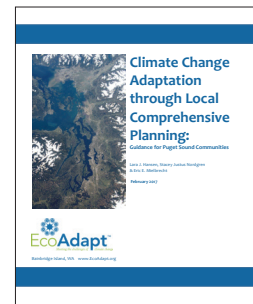
Name:

Date:

Climate Change Adaptation Certification Resources and Acknowledgments

EcoAdapt and Foresight Partners Consulting developed the Climate Change Adaptation Certification project, process, and 3-Step Tool in order to advance nascent local conversations around climate change adaptation to tangible implementation actions. This work began in the Puget Sound region of Washington where they also developed guidance for anyone wanting to understand why and how to incorporate climate considerations into local Comprehensive Planning—addressing planning for both adaptation and mitigation. This guidance is also available:

Climate Change Adaptation through Local Comprehensive Planning: Guidance for Puget Sound Communities.
Hansen, L.J., S.J. Nordgren and E.E. Mielbrecht. 2017. EcoAdapt. Bainbridge Island, WA.
www.CAEx.org/documents/climate-change-adaptation-through-local-comprehensive-planning-guidance-puget-sound-communities



The Climate Change Adaptation Certification Tool was developed to support communities beyond planning—helping them implement their updated Comprehensive Plan. Using this 3-Step CCAC Tool for rapid implementation of climate savvy planning goals and policies will enable community services, infrastructure, ecosystems, and economies to better anticipate and respond to the effects of climate change.

We would like to thank Jennifer Sutton (City of Bainbridge Island), James Rufo Hill (Seattle Public Utilities) and James B. Hansen (California Fish and Wildlife) for their time and insight as reviewers of this tool and its applicability to planning processes across a variety of circumstance.

In order to make this product useful and used, the authors surveyed community adaptation efforts and interviewed local, regional, and state employees around the Puget Sound to identify regulatory or discretionary processes already in place where one could integrate climate change adaptation into permitting—something beyond planning goals and policies. We would also like to thank (in alphabetical order) all those who took the time to inform us through interviews, including Mike Burnham (Thurston Regional Planning Council), Eileen Canola (Snohomish County), Christy Carr (City of Bainbridge Island), Ryan Dicks (Pierce County), Lisa Dulude (Snohomish County), Gary Idleburg (Washington State Department of Commerce), Jennifer Lee (Puget Sound Partnership), Kelly McGourty (Puget Sound Regional Council), Tracy Morgenstern (City of Seattle), Phillip North (Tulalip Tribes), Allison Osterberg (Thurston County), Joyce Phillips (City of Olympia), Jennifer Pouliotte (Puget Sound Partnership), Carol Lee Roalkvam (Washington State Department of Transportation), Dara Salmon (Snohomish County), Joseph Tovar (Tovar Planning), Lara Whitely-Binder (King County), and Manuela Winter (Snohomish County).

Sample resource they shared included:

- Washington State Department of Transportation (WSDOT)—Guidance for Project-Level Climate Change Evaluations for NEPA and SEPA demonstrates how WSDOT should address climate change in its environmental documents/reviews
- King County—Sustainable Infrastructure ScoreCard used to meet the requirements of Seattle's Green Building and Sustainable Development Ordinance
- Seattle Public Utilities—Stage Gate process used internally by employees during project development
- Snohomish County's Puget Sound Initiative—Climate Change Decision Support Tool used by public works employees to consider climate change related impacts in their own project planning

This project was made possible by generous support from:



Recommended Citation:

Justus Nordgren, S., and L.J. Hansen. 2018. Climate Change Adaptation Certification Tool: Moving Communities from Planning to Implementation. EcoAdapt. Bainbridge Island, WA. www.CAEx.org/adaptation-certification



EcoAdapt provides support, training, and assistance to make planning and management less vulnerable and more Climate Savvy. EcoAdapt, founded by a team of some of the earliest adaptation thinkers and practitioners in the field, has one goal—creating a robust future in the face of climate change. We bring together diverse players to reshape planning and management in response to rapid climate change. www.EcoAdapt.org



Foresight Partners Consulting works to build societies' capacity to proactively address the effects of a changing climate. We work with practitioners to help them incorporate climate change considerations into programs, planning, and decision-making processes. We specialize in comprehensive community planning for climate change · hazard mitigation planning · philanthropic program strategy development and portfolio review. www.ForesightOnline.org