

## SEPA ENVIRONMENTAL CHECKLIST

### ***Purpose of checklist:***

Governmental agencies use this checklist to help determine whether the environmental impacts of your proposal are significant. This information is also helpful to determine if available avoidance, minimization or compensatory mitigation measures will address the probable significant impacts or if an environmental impact statement will be prepared to further analyze the proposal.

### ***Instructions for applicants:***

This environmental checklist asks you to describe some basic information about your proposal. Please answer each question accurately and carefully, to the best of your knowledge. You may need to consult with an agency specialist or private consultant for some questions. You may use “not applicable” or “does not apply” only when you can explain why it does not apply and not when the answer is unknown. You may also attach or incorporate by reference additional studies reports. Complete and accurate answers to these questions often avoid delays with the SEPA process as well as later in the decision-making process.

The checklist questions apply to all parts of your proposal, even if you plan to do them over a period of time or on different parcels of land. Attach any additional information that will help describe your proposal or its environmental effects. The agency to which you submit this checklist may ask you to explain your answers or provide additional information reasonably related to determining if there may be significant adverse impact.

### ***Instructions for Lead Agencies:***

Please adjust the format of this template as needed. Additional information may be necessary to evaluate the existing environment, all interrelated aspects of the proposal and an analysis of adverse impacts. The checklist is considered the first but not necessarily the only source of information needed to make an adequate threshold determination. Once a threshold determination is made, the lead agency is responsible for the completeness and accuracy of the checklist and other supporting documents.

### ***Use of checklist for nonproject proposals:***

For nonproject proposals (such as ordinances, regulations, plans and programs), complete the applicable parts of sections A and B plus the [SUPPLEMENTAL SHEET FOR NONPROJECT ACTIONS \(part D\)](#). Please completely answer all questions that apply and note that the words “project,” “applicant,” and “property or site” should be read as “proposal,” “proponent,” and “affected geographic area,” respectively. The lead agency may exclude (for non-projects) questions in Part B - Environmental Elements –that do not contribute meaningfully to the analysis of the proposal.

## **A. Background** [\[HELP\]](#)

### **1. Name of proposed project, if applicable:**

An Ordinance relating to Fossil Fuel Facilities and Nonhydroelectric Generation Facilities, Requiring Proof of Financial Responsibility and Decommissioning Planning. This proposed regulation is referred to throughout this document as the “proposed ordinance.”

### **2. Name of applicant:**

The proposal was initiated by King County.

### **3. Address and phone number of applicant and contact person:**

Nicole Sanders, Green Building Principal Planner  
King County Permitting Division  
35030 SE Douglas Street, Suite 210  
Snoqualmie, WA 98065-9266  
206-263-3000

### **4. Date checklist prepared:**

March 22, 2022.

### **5. Agency requesting checklist:**

King County.

### **6. Proposed timing or schedule (including phasing, if applicable):**

The King County Council anticipates possible action on the proposed ordinance in September 2022.

### **7. Do you have any plans for future additions, expansion, or further activity related to or connected with this proposal? If yes, explain.**

There are no known plans to add or expand the proposed ordinance in the future. If adopted, King County anticipates permit applications for individual developments that will be subject to the proposed regulations.

### **8. List any environmental information you know about that has been prepared, or will be prepared, directly related to this proposal.**

- SEPA checklist for the proposed ordinance.
- Fossil Fuel Risk Bonds report.

### **9. Do you know whether applications are pending for governmental approvals of other proposals directly affecting the property covered by your proposal? If yes, explain.**

The proposal is a nonproject action and applies to all of unincorporated King County. There are no known pending permit applications for individual development projects on properties within unincorporated King

County, where the proposed ordinance would apply. King County maintains a list of pending applications online at <https://aca-prod.accela.com/kingco/Default.aspx>.

**10. List any government approvals or permits that will be needed for your proposal, if known.**

Approval by the King County Council is the only government approval required for adoption of the proposed ordinance. Individual development projects that would be subject to the proposed ordinance would also be subject to all applicable federal, state and local permitting and licensing requirements.

**11. Give brief, complete description of your proposal, including the proposed uses and the size of the project and site. There are several questions later in this checklist that ask you to describe certain aspects of your proposal. You do not need to repeat those answers on this page. (Lead agencies may modify this form to include additional specific information on project description.)**

The goal of the proposed ordinance is to ensure that operators of fossil fuel and nonhydroelectric generation facilities

- have sufficient financial coverage to compensate for potential damages and injuries from an explosion that would affect structures, King County residents and public infrastructure, and
- are adequately planning for facility decommissioning and appropriate hazardous substance cleanup activities.

The proposed ordinance would amend King County Code (K.C.C.) Title 21A Zoning to require developers (applicants) and operators of fossil fuel and nonhydroelectric generation facilities to provide proof that they have adequate financial coverage to compensate for the maximum damages that might occur from an explosion resulting from a worst-case release of flammable gases and liquids. The estimate of costs would be

- based in part on the oils, gases, refrigerants, and other flammable chemicals stored, used or generated within the facility
- developed by a professional with expertise in vapor cloud explosion incidents
- validated by a third party.

Proof of financial coverage may include:

- evidence of insurance
- surety bonds
- qualification as a self-insurer
- other evidence of financial coverage deemed acceptable by the department.

The proposed ordinance requires that financial coverage be maintained for the duration of facility operations, to be verified in five-year periodic reviews.

The proposed ordinance also requires that applicants provide a decommissioning plan for facility closure. The plan is required to include the following:

- A list of the hazardous substances that will be handled or generated in the facility; the range of potential release volumes that could require cleanup; and whether such releases have the potential to contaminate groundwater, or surface waters on or adjacent to the site.
- The cleanup activities required to address such hazardous substances.
- Detailed cost estimates to implement the plan based on the cost of hiring a third party to conduct all activities, and methods for estimating closure costs.

Research associated with development of this ordinance identified three probable types of fossil fuel and nonhydroelectric generation facilities that could be built in unincorporated King County and fall under its

permitting jurisdiction, namely a(n):

- Thermal (gas) electric power plant, a type of nonhydroelectric generation facility.
- Liquefied natural gas (LNG) plant, a type of fossil fuel facility.
- Oil terminal, a type of fossil fuel facility.

As the proposed ordinance may disincentivize the development of these facilities in some instances, the potential results of these facilities not being developed is addressed in this SEPA checklist where applicable.

Compliance with existing federal, state, and local regulations is presumed for purposes of this SEPA checklist, including compliance with the regulations in the proposed ordinance itself, as well as others such as those related to drinking water, stormwater, wastewater treatment, septic systems, critical areas, and zoning requirements. Any noncompliant uses or structures would be subject to code enforcement and would not be considered an impact related to the proposed ordinance.

The King County Council could modify the proposed ordinance and still accomplish the proposal's objective. Depending on the modification, the likelihood, scale, or scope of potential impacts to various elements of the environment could be the same, greater, or less.

As would be the case for any nonproject or project action that undergoes changes after the publication of a SEPA threshold determination, the King County Executive branch, which pursuant to K.C.C 20.44.020 is the Lead Agency for SEPA for King County, would evaluate any modifications that are proposed to be made to the proposed ordinance and would update this environmental review in the case that changes would result in greater or different impacts than those identified in this checklist. The timing of additional environmental review process may vary depending on other variables, including future public processes.

**12. Location of the proposal. Give sufficient information for a person to understand the precise location of your proposed project, including a street address, if any, and section, township, and range, if known. If a proposal would occur over a range of area, provide the range or boundaries of the site(s). Provide a legal description, site plan, vicinity map, and topographic map, if reasonably available. While you should submit any plans required by the agency, you are not required to duplicate maps or detailed plans submitted with any permit applications related to this checklist.**

The proposed ordinance is a nonproject action that would apply to all of unincorporated King County, which totals 1,095,680 acres.

In general, King County is located in western Washington and includes 39 incorporated cities, including Seattle, Federal Way, Kirkland, and Bellevue. Approximately three-quarters of the County is unincorporated and includes areas primarily to the east of the County urban growth area boundary and the urban Puget Sound region, with the exception of Vashon-Maury Island located to the west and some isolated blocks of unincorporated area within the urban growth area.

Nearly 75 percent of unincorporated King County is zoned as Forest (F), particularly the eastern portion of the County. To the west, near the more urban incorporated areas of the County, the predominant zoning category is RA, with some areas zoned A, particularly in the area northeast of Sammamish Valley and the area northwest of Enumclaw. Smaller areas of residential, business, office, and industrial zoning are also located throughout unincorporated King County.

Per the current K.C.C. Title 21A Zoning language:

- Fossil fuel facilities are only allowed on industrial-zoned parcels within the urban growth area, and
- Nonhydroelectric generation facilities are allowed within any zone.

Either would require a special use permit.

## **B. Environmental Elements** [\[HELP\]](#)

### 1. **Earth** [\[help\]](#)

#### **a. General description of the site:**

(circle one): Flat, rolling, hilly, steep slopes, mountainous, other \_\_\_\_\_

Although the proposed ordinance is a nonproject action with no identifiable “site,” the ordinance applies to all of unincorporated King County, which includes areas that are flat, rolling, hilly, and steep slope. King County landforms include saltwater coastline, river floodplains, plateaus, slopes, and mountains, punctuated with lakes and streams.

#### **b. What is the steepest slope on the site (approximate percent slope)?**

Although the proposed ordinance is a nonproject action with no specific site or location, unincorporated King County includes 16,596 acres of steep slope critical areas. It is possible there may be steep slopes on properties to which the proposed ordinance would apply, however any such new development projects would be subject to existing regulations, including critical areas regulations, that would be addressed during permit review.

#### **c. What general types of soils are found on the site (for example, clay, sand, gravel, peat, muck)? If you know the classification of agricultural soils, specify them and note any agricultural land of long-term commercial significance and whether the proposal results in removing any of these soils.**

Although the proposed ordinance is a nonproject action with no specific site or location, soil in unincorporated King County generally reflects geologically recent glacial and alluvial (river and stream) activity, as well as human activity. River valleys are generally occupied by poorly drained, silty loams that commonly have a substantial organic content. Soils on upland areas between valleys typically are coarser-grained sandy and gravelly sandy loams, but soils with high organic content do occur locally in these upland areas and along water bodies. Some areas of unincorporated King County are classified as farmland of statewide importance, prime farmland, and prime farmland with conditions (which means that it is prime farmland if drained, irrigated, protected from flooding, or not frequently flooded). King County’s Farmland Preservation Program restricts use on participating properties to agriculture or open space use and restricts activities that would impair the agricultural capability of the property.

In accordance with the State Growth Management Act (RCW 36.70A.170 and 36.70A.050), King County designated “agricultural lands that are not already characterized by urban growth and that have long-term significance for the commercial production of food or other products.” The lands that meet these criteria are designated as an Agricultural Production District, of which there are five in King County (Enumclaw, Snoqualmie, Upper Green River, Lower Green River, and Sammamish).

Development projects within an Agricultural Production District that are subject to the proposed ordinance may result in the removal of some of these soils. However, existing regulations regarding those soils, and limitations on square footage and impervious surfaces would limit such removal.

#### **d. Are there surface indications or history of unstable soils in the immediate vicinity? If so, describe.**

Although the proposed ordinance is a nonproject action with no specific site or location, geologically hazardous areas, including landslide and erosion-prone areas, some abandoned mining areas, and seismic

risk areas, exist within unincorporated King County. Landslide and erosion-prone areas are associated primarily with steep slopes. Hazardous mining areas that may be subject to surface subsidence are associated primarily with past coal mining that occurred in the area from Newcastle through Renton south to Black Diamond. Any development subject to the proposed ordinance that is located on a parcel where landslide or erosion-prone areas exist would be subject to existing regulations and, for new uses, would be identified and addressed under existing regulations during permit review.

**e. Describe the purpose, type, total area, and approximate quantities and total affected area of any filling, excavation, and grading proposed. Indicate source of fill.**

Although the proposed ordinance is a nonproject action that would not directly authorize any fill, excavation, or grading, individual projects subject to the proposed ordinance could include fill, excavation, or grading. All such development projects would continue to be subject to existing development regulations related to stormwater management, impervious surfaces, critical areas, clearing and grading, and/or landscaping. Unless exempt under state and county requirements, filling, excavation and grading is also subject to SEPA review.

**f. Could erosion occur as a result of clearing, construction, or use? If so, generally describe.**

Although the proposed ordinance would not direct any development activities, potential erosion can result from clearing, construction or use of land for development that is subject to the proposed ordinance. The proposed ordinance does not amend existing regulations on clearing, grading, or construction that could cause erosion. For example, the King County Surface Water Design Manual and shorelines and critical areas regulations, would be unchanged by the proposed ordinance, and would continue to apply to development projects subject to the proposed ordinance.

**g. About what percent of the site will be covered with impervious surfaces after project construction (for example, asphalt or buildings)?**

Although the proposed ordinance is a nonproject action that would not directly result in any additional impervious surfaces, individual projects subject to the proposed ordinance could add impervious surfaces during project construction. All such development projects would continue to be subject to existing development regulations related to impervious surface coverage. Unless exempt under state and county requirements, projects proposing development that would add impervious surfaces would also be subject to SEPA review.

**h. Proposed measures to reduce or control erosion, or other impacts to the earth, if any:**

Because the proposed ordinance is a nonproject action that would not have any direct impacts, no measures to control erosion or other impacts to the earth have been proposed. King County's existing regulations related to erosion and soils would apply to any development to which the proposed ordinance would apply.

**2. Air** [\[help\]](#)

**a. What types of emissions to the air would result from the proposal during construction, operation, and maintenance when the project is completed? If any, generally describe and give approximate quantities if known.**

The proposed ordinance is a nonproject action that would not result in any direct emissions to the air. The proposed ordinance may disincentivize the development of fossil fuel and nonhydroelectric generation facilities in some instances; in such cases, this may result in reduced air emissions potentially

associated with those projects, namely nitrogen oxide and greenhouse gases. Air emissions are discussed in more detail in Part D of this checklist.

**b. Are there any off-site sources of emissions or odor that may affect your proposal? If so, generally describe.**

The proposed ordinance is a nonproject action that would not be affected by off-site sources of emissions or odor, and no known off-site sources of emissions or odor are likely to impact implementation of the proposed ordinance.

**c. Proposed measures to reduce or control emissions or other impacts to air, if any:**

The proposed ordinance is a nonproject action and would not have any direct impacts to air emissions, and the development projects to which it would apply would be subject to existing regulations regarding emissions and reporting requirements. Additional federal, state, and local codes may provide standards and controls for these types of emissions and would not be modified by the proposed ordinance. As a result, no measures to reduce or control emissions or other potential impacts to air are proposed.

**3. Water** [\[help\]](#)

**a. Surface Water:** [\[help\]](#)

- 1) Is there any surface water body on or in the immediate vicinity of the site (including year-round and seasonal streams, saltwater, lakes, ponds, wetlands)? If yes, describe type and provide names. If appropriate, state what stream or river it flows into.**

Although the proposed ordinance is a nonproject action with no specific site or location, numerous streams, lakes, ponds, and wetlands and the Puget Sound are located within unincorporated King County. King County maintains an inventory of water bodies within unincorporated King County, which would be considered during development review.

- 2) Will the project require any work over, in, or adjacent to (within 200 feet) the described waters? If yes, please describe and attach available plans.**

The proposed ordinance is a nonproject action that would not directly require any work over, in, or adjacent to the described waters. State and local shoreline regulations would apply to any development subject to the proposed ordinance that is within 200 feet of waters within unincorporated King County's shoreline jurisdiction (60,451 acres in total countywide). Other state, local and federal regulations, including critical areas regulations, concerning the protection of waterbodies may also apply depending on the proximity of any development to these waters.

- 3) Estimate the amount of fill and dredge material that would be placed in or removed from surface water or wetlands and indicate the area of the site that would be affected. Indicate the source of fill material.**

The proposed ordinance is a nonproject action that would not directly result in placement or removal of fill or dredge material from surface water or wetlands. Individual development projects subject to the proposed ordinance would also be subject to all state, local, and federal regulations, including mitigation requirements, concerning fill or dredge material placed in or removed from surface water or wetlands.

- 4) Will the proposal require surface water withdrawals or diversions? Give general description, purpose, and approximate quantities if known.**

The proposed ordinance is a nonproject action that would not require any surface water withdrawals or diversions. Individual development projects subject to the proposed ordinance would also be subject to existing regulations concerning surface water diversions and withdrawals, including those regarding in-stream flows, if applicable.

**5) Does the proposal lie within a 100-year floodplain? If so, note location on the site plan.**

Although the proposed ordinance is a nonproject action with no specific site or location, several areas of unincorporated King County lie within a 100-year floodplain. Development projects subject to the proposed ordinance would also be subject to King County rules and limitations pertaining to floodplain development and fill.

**6) Does the proposal involve any discharges of waste materials to surface waters? If so, describe the type of waste and anticipated volume of discharge.**

The proposed ordinance is a nonproject action that would not directly involve any discharges of waste materials to surface waters. Development projects subject to the proposed ordinance would also be subject to existing state, local, and federal regulations concerning the protection of and discharge of waste materials to surface waters, including state regulations on water usage, wastewater disposal, and state antidegradation standards. The proposed ordinance may disincentivize the development of fossil fuel and nonhydroelectric generation facilities in some instances; in such cases, this may result in reduced discharges to surface waters. Discharges to surface waters are discussed in more detail in Part D of this checklist.

**b. Ground Water: [\[help\]](#)**

**1) Will groundwater be withdrawn from a well for drinking water or other purposes? If so, give a general description of the well, proposed uses and approximate quantities withdrawn from the well. Will water be discharged to groundwater? Give general description, purpose, and approximate quantities if known.**

The proposed ordinance is a nonproject action and would not directly involve any withdrawals of groundwater or discharge to groundwater. Development projects subject to the proposed ordinance that use groundwater or discharge to groundwater would be subject to all existing state, local, and federal regulations concerning groundwater removal and protection.

**2) Describe waste material that will be discharged into the ground from septic tanks or other sources, if any (for example: Domestic sewage; industrial, containing the following chemicals. . . ; agricultural; etc.). Describe the general size of the system, the number of such systems, the number of houses to be served (if applicable), or the number of animals or humans the system(s) are expected to serve.**

The proposed ordinance is a nonproject action that would not result in any discharge of waste material into the ground. Development projects subject to the proposed ordinance may discharge waste material from septic tanks or other sources, and would be required to treat and dispose of any waste in a manner compatible with state and local regulations.

**c. Water runoff (including stormwater):**

**1) Describe the source of runoff (including storm water) and method of collection and disposal, if any (include quantities, if known). Where will this water flow? Will this water flow into other waters? If so, describe.**

The proposed ordinance is a nonproject action that would not directly generate or affect water runoff. Individual development projects subject to the proposed ordinance may generate some water runoff. As with any development in unincorporated King County, on-site stormwater management would need to comply with the King County Surface Water Design Manual, including applicable Best Management Practices (BMPs) for treatment and flow prior to discharge, and existing maximum impervious surface regulations.

**2) Could waste materials enter ground or surface waters? If so, generally describe.**

The proposed ordinance is a nonproject action that would not directly result in any waste material entering ground or surface waters. Development projects subject to the proposed ordinance may result in waste matter that could enter ground or surface waters, but such projects would be subject to existing state, local, and federal regulations concerning the protection of surface and ground water. The proposed ordinance may disincentivize the development of fossil fuel and nonhydroelectric generation facilities in some instances; in such cases, this may result in reduced discharges to ground and surface waters. Discharges to ground and surface waters are discussed in more detail in Part D of this checklist.

**3) Does the proposal alter or otherwise affect drainage patterns in the vicinity of the site? If so, describe.**

The proposed ordinance is a nonproject action with no specific site or location, and would not alter or otherwise affect drainage patterns. Development projects subject to the proposed ordinance would also be subject to existing drainage regulations, which are unchanged by the subject ordinance.

**d. Proposed measures to reduce or control surface, ground, and runoff water, and drainage pattern impacts, if any:**

The proposed ordinance is a nonproject action that would not have any direct impacts to surface or ground water, runoff water, or drainage patterns. Existing federal, state and local regulations related to surface water discharge and withdrawal, groundwater discharge and withdrawal, runoff water (stormwater), and drainage would apply to any development project that would be subject to the proposed ordinance. Individual development proposals may be required to provide additional measures to reduce or control potential surface, ground, and runoff water and drainage pattern impacts.

**4. Plants** [\[help\]](#)

**a. Check the types of vegetation found on the site:**

- deciduous tree: alder, maple, aspen, other
- evergreen tree: fir, cedar, pine, other
- shrubs
- grass
- pasture
- crop or grain
- Orchards, vineyards or other permanent crops.
- wet soil plants: cattail, buttercup, bullrush, skunk cabbage, other
- water plants: water lily, eelgrass, milfoil, other
- other types of vegetation

Although the proposed ordinance is a nonproject action with no specific site or location, unincorporated King County includes a variety of vegetation types on the various lands that development projects subject to the proposed ordinance would apply to, including those listed above.

**b. What kind and amount of vegetation will be removed or altered?**

Although the proposed ordinance is a nonproject action that would not directly remove any vegetation, the development of individual development projects subject to the proposed ordinance could include the removal or alteration of vegetation (potentially of the types identified in question 4.a). Such development projects would be subject to existing state and local regulations that regulate vegetation removal or alteration, in the same manner as other uses.

**c. List threatened and endangered species known to be on or near the site.**

The proposed ordinance is a nonproject action with no specific site or location. There are no known federally listed threatened or endangered plant species in King County. However, there are several species in King County listed as threatened or endangered according to the Washington State Natural Heritage Program, including clubmoss mountain-heather, Kamchatka fritillary, Pacific peavine, white meconella, choriso bog-orchid, and little bluestem.

**d. Proposed landscaping, use of native plants, or other measures to preserve or enhance vegetation on the site, if any:**

Although, the proposed ordinance is a nonproject action with no specific site or location, landscaping, use of native plants, or other measures to preserve or enhance vegetation could be proposed for individual developments. As with any development in unincorporated King County, development projects subject to the proposed ordinance would be subject to existing regulations governing landscaping, use of native plants, and vegetation preservation on their respective sites.

**e. List all noxious weeds and invasive species known to be on or near the site.**

The King County Noxious Weed Program regulates invasive plant species, and requires eradication or control, or recommends control, for over 150 plant species. Class A noxious weeds, adopted in accordance with RCW 17.10 and WAC 16-750, that are known to or have been located in King County, and require eradication by property owners, include Common Cordgrass, Dyers Woad, Eggleaf Spurge, False Brome, Floating Primrose-Willow, French Broom, Garlic Mustard, Giant Hogweed, Goastrue, Hydrilla, Bighead Knotweed, Reed Sweetgrass, Ricefield Bulrush, Clary Sage, Small-Flowered Jewelweed, Spanish Broom, and Milk Thistle. Class B noxious weeds, that are known to have been located in King County, and require control by property owners, include Blueweed/Viper's Bugloss, Annual Bugloss, Common Bugloss, Common Reed, Dalmation Toadflax, Egeria/Brazilian Elodea, European Coltsfoot, Gorse, Hairy Willowherb, Hawkweeds/Non-native species and hybrids of meadow subgenus, European Hawkweed, Orange Hawkweed, Houndstongue, Brown Knapweed, Diffuse Knapweed, Meadow Knapweed, Spotted Knapweed, Kochia, Garden Loosestrife, Purple Loosestrife, Parrotfeather, Perennial Pepperweed, Poison-Hemlock, Policeman's Helmet, Rush Skeltonweed, Saltcedar, Shiny Geranium, Leafy Spurge, Yellow Starthistle, Sulfur Cinquefoil, Tansy Ragwort, Musk Thistle, Scotch Thistle, Velvetleaf, Water Primrose, Wild Chervil, Yellow Floatingheart, and Yellow Nutsedge.

Although the proposed ordinance is a nonproject action with no specific site or location, a variety of noxious weeds and invasive species exist in unincorporated King County. The proposed ordinance does not change any obligations to control noxious weeds identified by the King County Noxious Weed Control Board.

## 5. **Animals** [\[help\]](#)

### a. **List any birds and other animals which have been observed on or near the site or are known to be on or near the site.**

Examples include:

birds: hawk, heron, eagle, songbirds, other:

mammals: deer, bear, elk, beaver, other:

fish: bass, salmon, trout, herring, shellfish, other \_\_\_\_\_

Although the proposed ordinance is a nonproject action with no specific site or location, a variety of birds, mammals, and fish have been observed in unincorporated King County. There are 221 bird species that are common, uncommon or usually seen on an annual basis in King County. Bird species include hawks, herons, eagles, owls, woodpeckers, songbirds, waterfowl, and shorebirds. There are 70 mammal species that can be found in King County, including shrews, bats, beavers, elk, deer, bears, rabbits, wolves, seals, and whales. There are 50 species of freshwater fish in King County, including 20 introduced species. More information on birds and animals found in King County can be found at <https://kingcounty.gov/services/environment/animals-and-plants/biodiversity/defining-biodiversity/species-of-interest.aspx>.

### b. **List any threatened and endangered species known to be on or near the site.**

Although the proposed ordinance is a nonproject action with no specific site or location, there are a number of federally threatened and endangered species in King County according to the U.S. Fish and Wildlife Service and National Oceanic and Atmospheric Administration. These species include the Canada lynx, gray wolf, grizzly bear, North American wolverine, marbled murrelet, northern spotted owl, streaked horned lark, yellow-billed cuckoo, Oregon spotted frog, bull trout, Puget Sound Chinook salmon, Puget Sound steelhead, bocaccio rockfish, yelloweye rockfish, southern resident killer whale, and humpback whale.

In addition to the federally listed species above, the Washington Department of Fish and Wildlife maintains a list of priority species for which conservation measures should be taken. State threatened and endangered species not included with the federally listed species include the western pond turtle and the fisher.

As with any development in unincorporated King County, development projects subject to the proposed ordinance would have to comply with existing state, local, and federal regulations that protect these species.

### c. **Is the site part of a migration route? If so, explain.**

Although the proposed ordinance is a nonproject action with no specific site or location, King County is within the Pacific Flyway migratory pathway for birds, and there are numerous streams and water bodies within the County that serve as migration routes for anadromous fish. These water bodies could potentially be near or cross through sites where development projects are proposed that could be subject to the proposed ordinance.

### d. **Proposed measures to preserve or enhance wildlife, if any:**

The proposed ordinance is a nonproject action and would not have any direct impacts to wildlife, so no measures to preserve or enhance wildlife are necessary. Any development projects that would be subject to the proposed ordinance would also be subject to existing federal, state, and local wildlife regulations.

**e. List any invasive animal species known to be on or near the site.**

The Washington Invasive Species Council, established by the Washington State Legislature, has identified 16 animal species and 13 insect species that are considered invasive in Washington State. King County is known or suspected to have the following invasive animal and insect species: Apple Maggot, Brown Marmorated Stink Bugs, European Chafer, Gypsy Moth, Scarlet Lily Beetles, Spotted Winged Drosophila, African Clawed Frog, Bullfrog, Invasive Crayfish, Invasive Copepods, New Zealand Mud Snail, Northern Pike, Nutria, Tunicate (*iona savignyi*, *styela clava*, and *didemnum*).

Although the proposed ordinance is a nonproject action with no specific site or location, numerous invasive animal species are known to exist in unincorporated King County. Invasive species may be located on a development project site that could be subject to the proposed ordinance.

**6. Energy and Natural Resources** [\[help\]](#)

**a. What kinds of energy (electric, natural gas, oil, wood stove, solar) will be used to meet the completed project's energy needs? Describe whether it will be used for heating, manufacturing, etc.**

The proposed ordinance is a nonproject action that would not result in any direct usage of energy. Individual development projects subject to the proposed ordinance are expected to use electricity and natural gas as energy sources for heating office buildings and powering turbines. Energy is discussed in more detail in Part D of this checklist.

**b. Would your project affect the potential use of solar energy by adjacent properties? If so, generally describe.**

The proposed ordinance is a nonproject action that would not have any direct impacts to the use of solar energy. Individual development projects subject to the proposed ordinance are unlikely to affect the potential use of solar energy by adjacent properties due to existing setback requirements that would be maintained by the proposed ordinance.

**c. What kinds of energy conservation features are included in the plans of this proposal? List other proposed measures to reduce or control energy impacts, if any:**

The proposed ordinance a nonproject action that would not have any direct impacts to energy use, and therefore no energy conservation features are included. Development projects subject to the proposed ordinance could include energy conservation features or other measures to reduce any energy impacts.

**7. Environmental Health** [\[help\]](#)

**a. Are there any environmental health hazards, including exposure to toxic chemicals, risk of fire and explosion, spill, or hazardous waste, that could occur as a result of this proposal? If so, describe.**

Although the proposed ordinance is a nonproject action that would not directly cause any environmental health hazards, it is possible that development projects subject to the proposed ordinance could result in exposure to toxic chemicals, risk of fire and explosion, spills, or hazardous waste. To the extent any such development created such exposure or risk, those hazards would be regulated by existing state and local regulations.

**1) Describe any known or possible contamination at the site from present or past uses.**

The proposed ordinance is a nonproject action with no specific site or location. Sites with contamination exist within unincorporated King County where development projects subject to the proposed ordinance could be proposed. These sites would be required to meet any remediation requirements prior to grading.

**2) Describe existing hazardous chemicals/conditions that might affect project development and design. This includes underground hazardous liquid and gas transmission pipelines located within the project area and in the vicinity.**

The proposed ordinance is a nonproject action with no specific site or location. Sites with hazardous chemicals/conditions exist within unincorporated King County and development subject to the proposed ordinance could be proposed on them. Such development would be subject to existing federal, state, and local regulations regarding chemical hazards and liquid and gas transmission pipelines.

**3) Describe any toxic or hazardous chemicals that might be stored, used, or produced during the project's development or construction, or at any time during the operating life of the project.**

Although the proposed ordinance is a nonproject action that would not include the storage, use, or production of any toxic or hazardous chemicals, development projects subject to the proposed ordinance could require the use of toxic or hazardous chemicals, such as gasoline or diesel fuel to operate construction equipment or power turbines. Other expected toxic and hazardous materials likely to be stored and used within a facility include cleaning supplies. Individual development projects would be required to store, use, and produce any toxic or hazardous chemicals in accordance with applicable laws and regulations.

As noted in section 7.a. of this checklist, the proposed ordinance may affect design decisions of fossil fuel and nonhydroelectric generation facilities that may alter the type, volume, concentration or flow of gaseous and liquid products used, some of which may be toxic or hazardous. This topic is discussed in more detail in Part D of this checklist.

**4) Describe special emergency services that might be required.**

The proposed ordinance is a nonproject action that would not have any direct impacts, and implementation of the proposed ordinance is not anticipated to generate any additional special emergency services for the development projects to which it would apply.

**5) Proposed measures to reduce or control environmental health hazards, if any:**

The proposed ordinance is a nonproject action that would not have any direct impact on the environment nor create environmental health hazards. No direct measures to reduce or control environmental health hazards are proposed.

However, the proposed ordinance could help reduce environmental health hazards in some facilities, as it requires fossil fuel and nonhydroelectric generation facilities to model the possibility of an explosion based on the oils, gases and refrigerants stored, used or generated within the facility, and provide proof that they have adequate financial coverage to compensate for potential damages. This process may disincentivize the development of fossil fuel and nonhydroelectric facilities in some instances, reducing the risk of fires and explosions if such facilities are not constructed. This analysis may alternatively lead to design modifications that reduce explosion impacts or potential, such as:

- altering site layout to reduce concentration of potentially explosive gases, or move potential

ignition sources

- the addition, removal or alteration of vapor barriers, which can affect the concentration of explosive gases
- altering the type, volume, concentration or flow of gaseous and liquid products onsite, such that products are used with lower explosive potential, or are handled in such a way as to improve safety
- reduce or alter the storage or use of potentially hazardous chemicals onsite such that the degree of hazard is ultimately reduced, either by the type or volume of products used.

The ordinance also requires that applicants provide a decommissioning plan for facility closure detailing the hazardous substances that will be handled or generated in the facility; the range of potential release volumes that could require cleanup; and whether such releases have the potential to contaminate groundwater or surface waters on or adjacent to the site. Such a plan may also result in decisions to reduce potential hazardous chemicals used at a facility.

This topic is discussed in more detail in Part D of this checklist.

## **b. Noise**

### **1) What types of noise exist in the area which may affect your project (for example: traffic, equipment, operation, other)?**

The proposed ordinance is a nonproject action with no specific site or location that can be evaluated for existing noise levels. Various types of noise exist in the areas where the proposed ordinance could apply, including noise from traffic, operation of equipment, and more. These noise sources are not anticipated to affect implementation of the proposed ordinance.

### **2) What types and levels of noise would be created by or associated with the project on a short-term or a long-term basis (for example: traffic, construction, operation, other)? Indicate what hours noise would come from the site.**

The proposed ordinance is a nonproject action that would not have any direct noise impacts. Individual development projects subject to the proposed ordinance are likely to generate noise during construction and may generate noise during operation. As with any development in unincorporated King County, local noise regulations would apply.

### **3) Proposed measures to reduce or control noise impacts, if any:**

The proposed ordinance is a nonproject action that would not have any direct noise impacts. As such, no measures to reduce or control potential noise impacts are proposed.

## **8. Land and Shoreline Use** [\[help\]](#)

### **a. What is the current use of the site and adjacent properties? Will the proposal affect current land uses on nearby or adjacent properties? If so, describe.**

The proposed ordinance is a nonproject action with no specific site or location and would not have any direct impacts on the current land uses on nearby or adjacent properties. As a whole, unincorporated King County is predominantly forestland to the east and predominantly rural to the west, with agricultural areas between. Portions of unincorporated King County also lie within the urban growth area near cities. The proposed ordinance would not change or impact current land use designations or zoning classifications in unincorporated King County. The proposed ordinance does not change the uses allowed on properties in the King County Code land use tables. The proposed ordinance may disincentivize the development of

fossil fuel and nonhydroelectric facilities in some instances. In cases where such developments would impact adjacent or nearby land uses, the ordinance would reduce or mitigate these potential impacts.

**b. Has the project site been used as working farmlands or working forest lands? If so, describe. How much agricultural or forest land of long-term commercial significance will be converted to other uses as a result of the proposal, if any? If resource lands have not been designated, how many acres in farmland or forest land tax status will be converted to nonfarm or nonforest use?**

The proposed ordinance is a nonproject action with no specific site or location and would not have any direct impacts to working farmlands or forestlands. Some sites where a development project is proposed that would be subject to the proposed ordinance could have been or may currently be used as working farmland or forestlands. Existing regulatory limitations on properties enrolled in the Farmland Preservation Program, within the Agricultural Production District or Forest Production District, or in Agricultural (A) or Forestry (F) zones would continue to apply to development projects that would be subject to the proposed ordinance.

**1) Will the proposal affect or be affected by surrounding working farm or forest land normal business operations, such as oversize equipment access, the application of pesticides, tilling, and harvesting? If so, how:**

The proposed ordinance is a nonproject action that would not directly affect or be affected by the normal business operations of working farmland or forestland.

**c. Describe any structures on the site.**

Although the proposed ordinance is a nonproject action with no specific site or location, various structures are located on parcels within unincorporated King County where the proposed ordinance would apply.

**d. Will any structures be demolished? If so, what?**

Although the proposed ordinance is a nonproject action that would not directly result in any demolition, existing structures could be demolished as part of a development project that would be subject to the proposed ordinance. The nature of and extent to which those structures could be demolished is unknown at this time and would be subject to all existing applicable regulations.

**e. What is the current zoning classification of the site?**

The proposed ordinance is a nonproject action with no specific site or location. The proposed ordinance affects fossil fuel facilities and nonhydroelectric generation facilities. Per the current K.C.C. Title 21A Zoning language:

- nonhydroelectric generation facilities could be developed within any zone.
- fossil fuel facilities could only be developed within industrial-zoned areas within the urban growth area.

Both require a special use permit.

**f. What is the current comprehensive plan designation of the site?**

Although the proposed ordinance is a nonproject action with no specific site or location, unincorporated King County includes a variety of land use designations to which the ordinance would apply. The proposed ordinance affects fossil fuel facilities and nonhydroelectric generation facilities. Specifically:

- nonhydroelectric generation facilities could be developed within resource, rural, and commercial /industrial designations.

- fossil fuel facilities could only be developed on sites with industrial designations that are within the urban growth area boundary.

**g. If applicable, what is the current shoreline master program designation of the site?**

Although the proposed ordinance is a nonproject action with no specific site or location, unincorporated King County includes a variety of shoreline master program designations. Individual development projects subject to the proposed ordinance that occurs within or proximate to the County's shoreline jurisdiction would need to comply with the County's shoreline master program.

**h. Has any part of the site been classified as a critical area by the city or county? If so, specify.**

Although the proposed ordinance is a nonproject action with no specific site or location, portions of unincorporated King County where a development project subject to the proposed ordinance could be proposed that are classified as critical areas. Specifically, King County Code designates the following as critical areas: coal mine hazard areas, erosion hazard areas, flood hazard areas, coastal high hazard areas, channel migration zones, landslide hazard areas, seismic hazard areas, volcanic hazard areas, steep slope hazard areas, critical aquifer recharge areas, wetlands and wetland buffers, aquatic areas, and wildlife habitat networks and conservation areas.

**i. Approximately how many people would reside or work in the completed project?**

The proposed ordinance is a nonproject action that would not directly result in a completed project where people would reside or work. Individual development projects that are subject to the proposed ordinance would have employees. The number of persons working in the subject buildings would depend on the individual land uses, business needs, square footages, and regulations affecting those individual development projects.

**j. Approximately how many people would the completed project displace?**

Although the proposed ordinance is a nonproject action and would not directly result in any displacement, it is possible that development projects subject to the proposed ordinance could result in displacement. However, implementation of the proposed ordinance is not anticipated to affect the likelihood of displacement under current K.C.C.

**k. Proposed measures to avoid or reduce displacement impacts, if any:**

Because the proposal is not anticipated to affect the likelihood of displacement under K.C.C., no measures to avoid or reduce displacement impacts are proposed.

**l. Proposed measures to ensure the proposal is compatible with existing and projected land uses and plans, if any:**

The proposed ordinance was drafted to be compatible with existing and projected land uses and plans; it does not change the allowed land uses in existing zoning designations, maintaining consistency with King County land uses as designated in its comprehensive plan.

**m. Proposed measures to reduce or control impacts to agricultural and forest lands of long-term commercial significance, if any:**

The proposed ordinance is a nonproject action and would not directly impact agricultural and forest lands of long-term commercial significance; as such, no measures to reduce or control impacts to such lands are proposed.

## **9. Housing** [\[help\]](#)

### **a. Approximately how many units would be provided, if any? Indicate whether high, middle, or low-income housing.**

Although the proposed ordinance is a nonproject action that will not have direct impacts to housing, the development of a project that would be subject to the proposed ordinance would not result in any additional units of housing above what might occur under existing code.

### **b. Approximately how many units, if any, would be eliminated? Indicate whether high, middle, or low-income housing.**

Neither the proposed ordinance itself nor the development allowed under the ordinance would result in any greater elimination of housing than what might occur if the ordinance were not adopted.

### **c. Proposed measures to reduce or control housing impacts, if any:**

The proposed ordinance is a nonproject action and would not directly impact housing; as such, no measures to reduce or control housing impacts are proposed.

## **10. Aesthetics** [\[help\]](#)

### **a. What is the tallest height of any proposed structure(s), not including antennas; what is the principal exterior building material(s) proposed?**

The proposed ordinance is a nonproject action that does not directly involve the construction of any structures, and does not regulate or change the height requirements of any structures or principal exterior building materials. The height and exterior building material of any development project subject to the proposed ordinance will be subject to existing regulations.

### **b. What views in the immediate vicinity would be altered or obstructed?**

The proposed ordinance is a nonproject action that would not have any direct impacts to views. Any development projects subject to the proposed ordinance would not result in the alteration or obstruction of any views to a greater degree than any other development allowed under existing regulations.

### **c. Proposed measures to reduce or control aesthetic impacts, if any:**

The proposed ordinance is a nonproject action that would not have any direct impacts to views or aesthetics, and as such, no measures are proposed to reduce or control aesthetic impacts.

## **11. Light and Glare** [\[help\]](#)

### **a. What type of light or glare will the proposal produce? What time of day would it mainly occur?**

The proposed ordinance is a nonproject action that would not directly cause any light or glare and any development allowed under the ordinance would not produce any light or glare beyond other development allowed under existing regulations.

**b. Could light or glare from the finished project be a safety hazard or interfere with views?**

The proposed ordinance is a nonproject action that would not have any direct impacts of light or glare. Any development projects subject to the proposed ordinance would have to comply with existing development regulations, including any related to light and glare.

**c. What existing off-site sources of light or glare may affect your proposal?**

The proposed ordinance is a nonproject action with no specific site or location. Various off-site sources of light or glare exist throughout unincorporated King County. It is unlikely that development projects subject to the proposed ordinance would be impacted by any off-site sources.

**d. Proposed measures to reduce or control light and glare impacts, if any:**

The proposed ordinance is a nonproject action that would not have any direct light and glare impacts. No additional measures to reduce or control light and glare impacts are proposed beyond existing development regulations.

**12. Recreation** [\[help\]](#)

**a. What designated and informal recreational opportunities are in the immediate vicinity?**

The proposed ordinance is a nonproject action with no specific site or location. A variety of designated and informal recreational opportunities exist in unincorporated King County where the proposed ordinance would apply.

**d. Would the proposed project displace any existing recreational uses? If so, describe.**

The proposed ordinance is a nonproject action that would not directly displace any existing recreational uses. The ordinance would not result in a greater displacement of recreational uses than what may otherwise occur under current code.

**c. Proposed measures to reduce or control impacts on recreation, including recreation opportunities to be provided by the project or applicant, if any:**

The proposed ordinance is a nonproject action that would not have any direct impacts to recreation; no measures to reduce or control impacts on recreation are proposed.

**13. Historic and cultural preservation** [\[help\]](#)

**a. Are there any buildings, structures, or sites, located on or near the site that are over 45 years old listed in or eligible for listing in national, state, or local preservation registers? If so, specifically describe.**

The proposed ordinance is a nonproject action with no specific site or location. A variety of buildings, structures and sites within unincorporated King County are listed or eligible for listing in national, state, or local preservation registers, and are potentially on sites where development projects could be proposed

that are subject to the proposed ordinance. Such developments would be required to comply with all federal, state, and local regulations related to historic and cultural resources.

- b. Are there any landmarks, features, or other evidence of Indian or historic use or occupation? This may include human burials or old cemeteries. Are there any material evidence, artifacts, or areas of cultural importance on or near the site? Please list any professional studies conducted at the site to identify such resources.**

The proposed ordinance is a nonproject action with no specific site or location. However, landmarks, features, and other evidence of Indian or historic use or occupation exist throughout unincorporated King County, and potentially on sites where development projects could be proposed that are subject to the proposed ordinance. Such developments would be required to comply with federal, state, and local rules related to historic and cultural resources.

- c. Describe the methods used to assess the potential impacts to cultural and historic resources on or near the project site. Examples include consultation with tribes and the department of archeology and historic preservation, archaeological surveys, historic maps, GIS data, etc.**

The proposed ordinance is a nonproject action that will not have any direct impacts to historic and cultural resources. King County's existing regulations related to cultural and historic resources would apply to any proposed development projects subject to the proposed ordinance. Such requirements could include consultation with tribes and associated agencies as well as use of archaeological surveys, GIS data, and historic maps to assess potential impacts to cultural and historic resources if needed. The recognized tribes in King County are regularly notified during the County's SEPA process for proposed development projects.

- d. Proposed measures to avoid, minimize, or compensate for loss, changes to, and disturbance to resources. Please include plans for the above and any permits that may be required.**

The proposed ordinance is a nonproject action that will not have any direct impacts to cultural or historic resources. However, King County's existing regulations related to avoidance, minimization of, or compensation for loss, changes to, and disturbances to cultural and historic resources would apply to any individual development proposals subject to the proposed ordinance.

#### **14. Transportation** [\[help\]](#)

- a. Identify public streets and highways serving the site or affected geographic area and describe proposed access to the existing street system. Show on site plans, if any.**

The proposed ordinance is a nonproject action with no specific site or location. The proposed ordinance would apply to development project sites that are served by a variety of public streets and highways.

- b. Is the site or affected geographic area currently served by public transit? If so, generally describe. If not, what is the approximate distance to the nearest transit stop?**

The proposed ordinance is a nonproject action with no specific site or location. However, unincorporated King County is generally served by public transit. It is unknown how far the nearest transit stop would be for any future development proposals subject to the proposed ordinance.

**c. How many additional parking spaces would the completed project or non-project proposal have? How many would the project or proposal eliminate?**

The proposed ordinance is a nonproject action with no specific site or location. Implementation of the proposed ordinance would not affect the number of parking spaces provided or eliminated by development projects subject to the proposed ordinance.

**d. Will the proposal require any new or improvements to existing roads, streets, pedestrian, bicycle or state transportation facilities, not including driveways? If so, generally describe (indicate whether public or private).**

The proposed ordinance is a nonproject action that would not directly involve any roadway, bicycle, or pedestrian improvements and, when applied to individual development projects, is not anticipated to affect any required or proposed improvements to existing roads, streets, or pedestrian or bicycle transportation facilities.

**e. Will the project or proposal use (or occur in the immediate vicinity of) water, rail, or air transportation? If so, generally describe.**

The proposed ordinance a nonproject action that would not have any direct impacts to transportation facilities. However, individual development projects subject to the proposed ordinance may use or occur proximal to water, rail and air transportation.

**f. How many vehicular trips per day would be generated by the completed project or proposal? If known, indicate when peak volumes would occur and what percentage of the volume would be trucks (such as commercial and nonpassenger vehicles). What data or transportation models were used to make these estimates?**

The proposed ordinance is a nonproject action that would not directly generate any vehicular trips. Development projects subject to the proposed ordinance would likely generate vehicular trips, though the volume of those vehicle trips is unlikely to be greater as a result of implementing the proposed ordinance.

**g. Will the proposal interfere with, affect or be affected by the movement of agricultural and forest products on roads or streets in the area? If so, generally describe.**

Although the proposed ordinance would not have any direct impact on the movement of agricultural and forest products on roads or streets in the area, individual development projects subject to the proposed ordinance could generate additional traffic above existing conditions that could interfere with, affect, or be affected by the movement of agricultural and forest products.

**h. Proposed measures to reduce or control transportation impacts, if any:**

The proposed ordinance is a nonproject action that would not have any direct impacts to transportation facilities or volumes. No additional measures to reduce or control transportation impacts are proposed. Development projects subject to the proposed ordinance will be subject to existing zoning and development regulations, including, to the extent required, transportation analysis and mitigation.

**15. Public Services** [\[help\]](#)

**a. Would the project result in an increased need for public services (for example: fire protection, police protection, public transit, health care, schools, other)? If so, generally describe.**

The proposed ordinance is a nonproject action that would not directly result in an increased need for public services. Development projects subject to the proposed ordinance would need public services to be available at a similar level to what is currently required in the affected zones.

**b. Proposed measures to reduce or control direct impacts on public services, if any.**

The proposed ordinance is a nonproject action that would not have any direct impacts to public services; as such, no additional measures to reduce or control impacts on public services are proposed.

**16. Utilities** [\[help\]](#)

**a. Circle utilities currently available at the site:**

electricity, natural gas, water, refuse service, telephone, sanitary sewer, septic system, other \_\_\_\_\_

The proposed ordinance is a nonproject action with no specific site or location. A variety of utilities are generally available in unincorporated King County depending on the service area of specific utility providers. Municipal sanitary sewer is not likely to be available in most rural and agricultural areas in unincorporated King County, with notable exceptions for the Vashon and Snoqualmie Pass Rural Towns, which do have sanitary sewer service.

**i. Describe the utilities that are proposed for the project, the utility providing the service, and the general construction activities on the site or in the immediate vicinity which might be needed.**

The proposed ordinance is a nonproject action that would not have any direct connection to utilities and is not directly connected to a development site on which general construction activities would occur. Individual development projects subject to the proposed ordinance are likely to install electricity, water, refuse service, telephone, sanitary sewer or a septic; some projects may also connect to natural gas. If developments connected to the electrical grid, the probable utilities providing electrical service would be either Puget Sound Energy (PSE) or Seattle City Light; the natural gas provider would be PSE.

**C. Signature** [\[HELP\]](#)

The above answers are true and complete to the best of my knowledge. I understand that the lead agency is relying on them to make its decision.

Signature: Nicole Sanders

Name of signee Nicole Sanders

Position and Agency/Organization Green Building Principal Planner, King County

Date Submitted: 3/22/2022

## **D. Supplemental sheet for nonproject actions** [\[HELP\]](#)

(IT IS NOT NECESSARY to use this sheet for project actions)

Because these questions are very general, it may be helpful to read them in conjunction with the list of the elements of the environment.

When answering these questions, be aware of the extent the proposal, or the types of activities likely to result from the proposal, would affect the item at a greater intensity or at a faster rate than if the proposal were not implemented. Respond briefly and in general terms.

### **1. How would the proposal be likely to increase discharge to water; emissions to air; production, storage, or release of toxic or hazardous substances; or production of noise?**

Research associated with development of the proposed ordinance identified three probable types of fossil fuel and nonhydroelectric generation facilities that could be built in unincorporated King County and fall under its permitting jurisdiction, namely a(n):

- Thermal (gas) electric power plant
- Liquefied natural gas (LNG) plant
- Oil terminal

As the proposed ordinance may disincentivize the development of these facilities in some instances, the potential results of these facilities not being developed is addressed in this section where applicable. It should be noted, however, that the above facilities could still be developed even with passage of the proposed ordinance. Conversely, existing regulation that is not proposed for amendment in the proposed ordinance allows for the development of multiple types of other facilities that are not fossil fuel and nonhydroelectric generation facilities that could still be developed in the applicable zones. Such facilities might have impacts equal or greater to the potential avoided impacts associated with the facilities affected by the proposed ordinance. This analysis does not evaluate future developments that are not subject to the proposed ordinance. Potential impacts to air emissions, discharges to water, the release of toxic or hazardous substances, and noise production are discussed below.

#### *Air Emissions*

Research associated with development of the proposed ordinance found that thermal electric power plants and LNG plants may result in nitrogen oxide and greenhouse gas emissions, and that oil terminals can result in volatile organic compounds and hazardous air pollutant releases.

Thermal electric power plants combust natural gas to produce electricity. “The combustion of natural gas produces negligible amounts of sulfur, mercury, and particulates”<sup>1</sup> compared to other fossil fuels. The primary air pollutant of concern for thermal electric power plants is nitrogen oxide (NO<sub>x</sub>),<sup>2</sup> which rapidly transforms into nitrogen dioxide (NO<sub>2</sub>) once released into the air.<sup>3</sup>

In Washington state, the Department of Ecology estimates that there are 77,400 metric tons of atmospheric nitrogen emitted annually across all counties within Puget Sound. Of these, 77 percent of emissions stem from transportation, 13 percent stems from the built environment (10,000 metric tons),

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<sup>1</sup> Union of Concerned Scientists (UCS), “Environmental Impacts of Natural Gas,” June 19, 2014. [\[LINK\]](#). Accessed 1/4/2021.

<sup>2</sup> UCS, “Environmental Impacts of Natural Gas,” *ibid.* 1/4/2022.

<sup>3</sup> UCAR Center for Science Education, “Nitrogen Oxides,” 2017. [\[LINK\]](#). Accessed 1/4/2022.

9 percent is from agriculture and 7 percent is from point sources of pollution.<sup>4</sup> A thermal electric power plant would fall within the built environment category.

One can roughly estimate a thermal electric power plant's potential contribution to atmospheric nitrogen contribution in comparison to background nitrogen levels. Approximately 1.7 lbs. of nitrogen oxides are generated per MWh from a thermal electric power plant,<sup>5</sup> and an average plant is approximately 800 MW in size.<sup>6</sup> Using an average capacity factor (i.e., hours in use) of 56.3 percent,<sup>7</sup> such that the plant operated for 4,932 hours out of the 8,760 hours in a year, a new thermal electric power plant could conceivably result in 3,945,600 MWh generated. This would equate to 6,707,520 lbs. of nitrogen oxides emitted per year, or approximately 3,000 metric tons of nitrogen oxide emissions, which would be roughly 3.7% of the total revised atmospheric nitrogen emissions in Puget Sound.

There are a variety of air pollutants that can result from an LNG project, including nitrogen oxides (NOx), particulate matter (PM), volatile organic compounds (VOC), sulfur dioxide (SO<sub>2</sub>), carbon monoxide (CO), and hazardous air pollutants (HAP).<sup>8</sup> Once constituted, LNG is 85% to 95% methane, a few percent ethane, with small amounts of propane, butane and nitrogen.<sup>9</sup> It was unfortunately difficult to find assessments of the absolute or relative emission levels from plants used to create LNG to evaluate the level of these air emissions, as most research on such facilities is focused on emissions from combusting LNG fuels for mobile uses,<sup>10</sup> or at sites that combust LNG as a fuel such as at a power plant.<sup>11</sup>

However, based on some available environmental improvements that could be pursued at LNG plants<sup>12</sup> and critiques of existing gas-fired power plants,<sup>13</sup> one of the primary air pollutants of concern for LNG facilities is also NOx emissions. LNG facility releases of NOx emissions are also substantiated by the use of nitrogen in LNG production, including common use of the reverse Brayton cycle with nitrogen applied in refrigeration to liquefy gas.<sup>14</sup> Nitrogen oxide can also be used for other LNG plant functions beyond refrigeration, including helping maintain fueling arms for marine vessels, and purging pipelines prior to flaring.<sup>15</sup> Although purging reduces some pollutants, nitrogen is not fully eliminated during the

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<sup>4</sup> Washington State Department of Ecology (ECY), "Story Map of Nitrogen in Puget Sound: Nitrogen Sources & Pathways, Atmosphere." [\[LINK\]](#). Accessed 1/4/2022

<sup>5</sup> United States (U.S.) Environmental Protection Agency (EPA), "Air Emissions," last updated December 28, 2007. [\[LINK\]](#). Accessed 1/4/2022.

<sup>6</sup> U.S. Energy Information Agency (EIA), "Power blocks in natural gas-fired combined-cycle plants are getting bigger," February 12, 2019. [\[LINK\]](#). Accessed 1/4/2022.

<sup>7</sup> U.S. EIA, "Average utilization for natural gas combined-cycle plants exceeded coal plants in 2015," April 4, 2016. [\[LINK\]](#). Accessed 1/4/2022.

<sup>8</sup> EPA, "EPA's Liquefied Natural Gas Regulatory Roadmap," November 2006. [\[LINK\]](#). Accessed 9/8/21. Page 5.

<sup>9</sup> U.S.S Department of Energy (DOE), "Liquefied Natural Gas: Understanding the Basic Facts," DOE/FE-0489, August, 2005. [\[LINK\]](#). Accessed 1/11/2022. Page 3 (PDF page 5)

<sup>10</sup> Particularly in the shipping industry. See Afin, Yinka and David Ervin, "An assessment of air emissions from liquefied natural gas ships using different power systems and different fuels," *Journal of the Air & Waste Management Association*, 58(3), pages 404-411, March, 2008. [\[LINK\]](#). Also, Pavlenko, Nikita, et al., "Working Paper 2020-20, The climate implications of using LNG as a marine fuel," *International Council on Clean Transportation (ICCT)*, 2020. [\[LINK\]](#); Swanson, Christina and Amanda Levin, "Sailing to Nowhere: Liquefied Natural Gas is Not an Effective Climate Strategy," *Natural Resources Defense Council (NRDC)*, R-20-08A, December, 2020. [\[LINK\]](#). Accessed 1/6/2022.

<sup>11</sup> Chang-won, Lim, "POSCO Energy demonstrates plasma treatment to reduce NOx at LNG power plant," *Aju Business Daily*, August 13, 2020. [\[LINK\]](#). Accessed 1/6/2022.

<sup>12</sup> McQue, Katie, "QP to spend \$200 million on emissions reduction technology for LNG expansion project," *S&P Global*, June 30, 2021. [\[LINK\]](#). Accessed 1/6/2022.

<sup>13</sup> Clean Air Council, "Action Items: Tell AMS to Reduce Smog-Causing Pollution from PGW's Richmond LNG Plant," 2021. [\[LINK\]](#)

<sup>14</sup> Kochunni, Sarun and Kanchan Chowdhury, "LNG boil-off gas reliquefaction by Brayton refrigeration system – Part 1: Exergy analysis and design of the basic configuration," *Energy*, Volume 176, pages 753-764, June 1, 2019. [\[LINK\]](#). Also, Chang, H.M. et al., "Modified Reverse-Brayton Cycles for Efficient Liquefaction of Natural Gas," *Cryocoolers* 17, 2012. [\[LINK\]](#), and Joseph Pak, "Nitrogen expansion cycle enhances flexibility of small-scale LNG," *Gas Processing & LNG*, 2012. [\[LINK\]](#) Accessed 1/10/2022.

<sup>15</sup> Ecology and Environment, Inc., "Proposed Tacoma Liquefied Natural Gas Project Final Supplemental Environmental Impact Statement," Prepared for Puget Sound Clean Air Agency (PSCAA), March 29, 2019. [\[LINK\]](#). Accessed 1/10/2022. Page 2-4,

flaring process.<sup>16</sup> Some technologies may be applied to lower NOx emissions such as dry low NOx (DLN)<sup>17</sup> or dry low emission (DLE)<sup>18,19</sup> technologies.

It should be noted that both thermal electric power plants and LNG plants release greenhouse gasses (GHGs). For instance, nitrogen oxide is a greenhouse gas (GHG). Too, if LNG is spilled it will regasify primarily into methane, which is another GHG. Although the specific reductions of GHGs are not calculated here, industrial developments that rely on the combustion of a fossil fuel typically result in atmospheric releases of GHGs. Any site development may also result in increased traffic to and from the site, with associated increases in GHG and other air emissions of concern.

Lastly, although oil terminals are not associated with NOx releases, a 2021 State of Maine report evaluating aboveground petroleum storage tank emissions found that VOCs and HAPs can be released into the air from oil terminals. Both VOC and HAP releases come from, “evaporative losses of the product being stored or transferred.”<sup>20</sup>

Given the above potential emissions associated with these facilities, were the proposed ordinance to disincentivize the development of a thermal electric power plant, LNG plant or an oil terminal, and another development were not pursued that exceeded the above emission profiles, the proposed ordinance could result in reduced NOx, VOC, HAP, and GHG releases from future developments.

### Discharges to Water

Research associated with development of the proposed ordinance found that thermal electric power plants and LNG plants may result in increased thermal water pollution, and that oil terminals also carry the potential for oil spills to water bodies.

Thermal water pollution, or wastewater released to water bodies at a higher temperature than intake waters, can, “alter the local fishery composition, aquatic macroinvertebrate (bug) communities, and aquatic plant communities.”<sup>21</sup> Thermal pollution in waterways can also decrease oxygen supply for a variety of biota (also called hypoxia), causing fish die-off.<sup>22</sup> However, various studies have noted that recirculation water systems,<sup>23</sup> dry cooling (refrigerant) systems,<sup>24</sup> or a combination of seawater and air-cooled<sup>25</sup> technology can reduce thermal wastewater impacts.<sup>26</sup> Note that some barges and support

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<sup>16</sup> Agrebe, Azeez, “Natural Gas Flaring – Alternative Solutions,” World Journal of Engineering and Technology, Volume 5, February 2017. [LINK]. Also, U.S. EIA, “Natural Gas Explained,” last updated December 8, 2021. [LINK], and Emam, Emam, “Gas Flaring in Industry: An Overview,” Petroleum and Coal, Vol. 57 (5), 532-555, December, 2015. [LINK]. Accessed 1/10/2022.

<sup>17</sup> General Electric (GE) Gas Power, “DLN 2.6 combustion system upgrades for F-class turbines,” 2021. [LINK]

<sup>18</sup> Kawaski, “New Gas Turbine Combustion Technology for Record Low NOx Emissions,” December 16, 2009. [LINK]. Accessed 1/10/2022.

<sup>19</sup> Siemens, “LNG Fuel Flexibility in Siemens’ Land-Based Gas Turbine Operations,” Electric Power Conference, May 1-3, 2007. [LINK]. Also, Ozawa, Y., “Low NOx combustion technology for LNG combined cycle power plant,” January 2001. [LINK]. Accessed 1/10/2022.

<sup>20</sup> Maine Department of Environmental Protection (DEP), “Measurement and Control of Emissions from Aboveground Petroleum Storage Tanks,” January 1, 2021. [LINK]. Accessed 1/3/22. Page 6.

<sup>21</sup> Public Service Commission (PSC) of Wisconsin, “Environmental Impacts of Power Plants,” [LINK]. Page 8. See also, Whited, Melissa, Frank Ackerman and Sarah Jackson, “Water Constraints on Energy Production: Altering our Current Collision Course,” Prepared for the Civil Society Institute, September 12, 2013. [LINK]. Accessed 1/10/2022. Page vii.

<sup>22</sup> Rosen, Marc, et al., “Evaluating the Thermal Pollution Caused by Wastewaters Discharged from a Chain of Coal-Fired Power Plants along a River,” Sustainability, Volume 7, pages 5920-5943, May 13, 2015. [LINK]. Accessed 1/11/2022. Page 5922.

<sup>23</sup> Bakshi, Bhavik, Brent Sohngen & Khanal Sami, “Final Report: Addressing the Water-Energy Nexus of Fossil Power Generation by Considering Technological, Agro-Ecological, and Economic Options in the Muskingum Watershed,” Ohio State University, July 18, 2019. [LINK]. Page 15; see also U.S. EIA, “2018: Form EIA-923 detailed data,” Schedule 8D. Cooling System Information, 2018. [LINK].

<sup>24</sup> Vaca-Jimenez, S., W. Gernems-Leenes, and S. Nonhebel, “The water footprint of electricity in Ecuador: Technology and fuel variation indicate pathways towards water-efficient electricity mixes,” Water Resources and Industry, Volume 22, 100112, 2019. [LINK]

<sup>25</sup> U.S. Coast Guard (USCG) Office of Operating & Environmental Standards (OES) & Tetra Tech, Inc. “Final Environmental Impact Statement for the Port Delfin LNG Project Deepwater Port Application, Volume I: Main Text,” Docket No.. USCG-2015-0472, November 2016. [LINK]. Accessed 1/11/2022. Page ES-7 (pdf page 10).

<sup>26</sup> Fricko, Oliver et al., “Energy sector water use implications of a 2 °C climate policy,” Environmental Research Letters, Volume 11 (034011), March 4, 2016. [LINK]. Page 3, and, Fleishli, Steve and Becky Hayat, “Power Plant Cooling and Associated Impacts,” NRDC, IB: 14-04-C, April, 2014. [LINK]. Page 3. Accessed 1/11/2022.

vessels visiting LNG facilities can also take in cooling water for vessel boilers; although chemicals are not added to the waters, these discharge waters from some ships can also temporarily raise surrounding water body temperatures.<sup>27</sup>

Note that an LNG spill is typically not of concern as a water discharge. Liquefying natural gas requires extreme refrigeration, cooling the gas to -161 degrees Celsius in a liquid state that is lighter than water, but heavier than air.<sup>28</sup> LNG will float on water, and regasify on its own following a spill once it reaches a temperature of -106.7 degrees Celsius, thereafter dispersing.<sup>29</sup>

Although new development of an oil terminal is not anticipated to be associated with discharges to waterways from its operations, such a facility would increase the risk of potential oil spills to waterways which, despite increased regulation and precautions, still occurs annually in the United States.

*According to the U.S. Department of Energy, 1.3 million gallons (4.9 million liters) of petroleum are spilled into U.S. waters from vessels and pipelines in a typical year...Between 1971 and 2000, the U.S. Coast Guard identified more than 250,000 oil spills in U.S. waters, according to a 2002 report from the U.S. Department of the Interior Minerals Management Service.<sup>30</sup>*

There is little analysis on what portion of oil spills originate from facilities that operate solely as an oil terminal versus from terminals combined with oil refinery operations (which is more common).<sup>31</sup> In general though, oil spills have negative environmental impacts; specifically for biota:

*Oil destroys the insulating ability of fur-bearing mammals, such as sea otters, and the water repellency of a bird's feathers, thus exposing these creatures to the harsh elements. Without the ability to repel water and insulate from the cold water, birds and mammals will die from hypothermia.<sup>32</sup>*

Given the above analysis, were the proposed ordinance to disincentivize the development of a thermal electric power plant, LNG plant or an oil terminal, the proposed ordinance could result in reduced thermal water discharges from operations, or an unintentional spill of oil, being released to local waterways.

#### Production, storage, or release of toxic or hazardous substances

Research associated with development of the proposed ordinance found that LNG plants may sometimes use liquid products that can be hazardous if spilled. Too, both LNG and thermal electric power plants may result in the generation of some hazardous waste on-site.

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<sup>27</sup> Federal Energy Regulatory Commission (FERC), "Gulf LNG Liquefaction Project FEIS," Docket No. CP15-521-000, April 2019. [\[LINK\]](#). Accessed 1/11/2022. Page 4-27 (pdf page 123)

<sup>28</sup> Connecticut Department of Energy and Environmental Protection (C-DEEP), "What is LNG?" last updated May, 2021. [\[LINK\]](#). Accessed 1/11/2022.

<sup>29</sup> C-DEEP, "What is LNG?" *ibid.* Accessed 1/11/2022.

<sup>30</sup> Thompson, Andrea, "FAQ: The Science and History of Oil Spills," Live Science, April 23,2010. [\[LINK\]](#). Accessed 1/24/2022.

<sup>31</sup> Maritime Manual, "What Are Oil Terminals?" last updated August 7, 2021. [\[LINK\]](#). Accessed 12/1/21.

<sup>32</sup> The National Oceanic and Atmospheric Administration (NOAA), "How Does Oil Impact Marine Life?" [\[LINK\]](#). Accessed 1/10/2022.

Many LNG plants store tons of refrigerants<sup>33</sup> and other products onsite that are typically gaseous at room temperature such as: ethylene,<sup>34</sup> propane,<sup>35</sup> butane,<sup>36</sup> isobutane,<sup>37</sup> ethane<sup>38</sup> and nitrogen (which is typically stored as a liquid but returns to a gaseous state at room temperature).<sup>39</sup> However, not all refrigerants and LNG facility products are gaseous, and some liquids are stored onsite that may spill and provide a risk of toxicity to humans or biota, such as aqueous ammonia,<sup>40</sup> isopentane<sup>41</sup> or hexane.<sup>42</sup> The potential impacts of these are as follows:

- Aqueous ammonia biodegrades in soil,<sup>43</sup> though it would still require cleanup if spilled,<sup>44</sup> as ammonia can cause fish kills in aquatic systems.<sup>45</sup>
- Isopentane biodegrades in soil, though it would still require cleanup if spilled as it can be toxic in aquatic systems.<sup>46</sup>
- Hexane is categorized as a VOC<sup>47</sup> and HAP.<sup>48</sup> The primary concerns from a spill would be exposure dosages that can have a neurotoxic effect, and the danger of fire or explosion.<sup>49</sup>

Oil terminals may also increase VOC exposure (see “air emissions” of this same answer section). VOCs can cause health impacts ranging from mild symptoms such as headaches or eye irritation, to more serious impacts such as organ or central nervous system damage. Some VOCs can cause cancer in animals, or are suspected or known to cause cancer in humans.<sup>50</sup>

Separate from the issues associated with products stored on-site, the process of combusting natural gas – either for generation of electricity, or to power LNG processes – may itself result in the creation of hazardous waste. A 2017 report addressing solid waste byproducts from energy plant decommissioning noted that gas-fired plants will have to address, “byproducts from air pollution controls and chemical waste, including the scale, sludge, and

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<sup>33</sup> Englund, Will, “Engineers raise alarms over the risk of major explosions at LNG plants,” Washington Post, June 3, 2021. [\[LINK\]](#). Accessed 9/7/2021.

<sup>34</sup> Verified this chemical is gaseous at room temperature at Carvey, Francis, “ethylene,” Britannica, March 8, 2019. [\[LINK\]](#). Accessed 1/14/2022.

<sup>35</sup> For See FERC, “Gulf LNG Liquefaction...,” *ibid.* Accessed 1/14/2022. Page 4-156 (pdf page 252)

<sup>36</sup> Verified this chemical is gaseous at room temperature at National Library of Medicine, “Butane,” National institute of Health (NIH). [\[LINK\]](#). Accessed 1/14/2022.

<sup>37</sup> Verified this chemical is gaseous at room temperature at National Library of Medicine, “Isobutane,” National institute of Health (NIH). [\[LINK\]](#). Accessed 1/25/2022.

<sup>38</sup> Verified this chemical is gaseous at room temperature at the editors of Encyclopaedia Britannica, “ethane,” Britannica, September 26, 2013. [\[LINK\]](#). Accessed 1/14/2022

<sup>39</sup> Utah State University Environmental Health & Safety, “Liquid Nitrogen.” [\[LINK\]](#). Accessed 1/25/2022.

<sup>40</sup> Proposed for use in Gulf LNG Liquefaction project. See FERC, “Gulf LNG Liquefaction...,” *ibid.* Accessed 1/14/2022. Page 4-156 (pdf page 252)

<sup>41</sup> Verified this chemical is liquid at room temperature at Cameo Chemicals, “Isopentane,” 2016. [\[LINK\]](#) and New Jersey Department of Health, “Hazardous Substance Fact Sheet: Isopentane,” January 2009. [\[LINK\]](#). Page 1. Source: Ecology and Environment, Inc. “Puget Sound Energy Proposed Tacoma Liquefied...,” *Ibid.* Page 2-3 (pdf page 51). Accessed 1/14/2022.

<sup>42</sup> Verified this chemical is liquid at room temperature at Centers for Disease Control (CDC) – Agency for Toxic Substances and Disease Registry (ATSDR), “n-Hexane,” CAS#110-54-3, page last reviewed February 10, 2021. [\[LINK\]](#). Accessed 1/25/2022.

<sup>43</sup> Tanner Industries Inc., “Aqua Ammonia: (SDS) Safety Data Sheet,” 2016. [\[LINK\]](#). Accessed 1/14/2022.

<sup>44</sup> Oregon Department of Environmental Quality (ODEQ), “Strategy Recommendations: NFA Decision Document, Wilbur-Ellis Aqua Ammonia Spill,” ECSI Site ID: 2583, September 6, 2000. [\[LINK\]](#) also, while nonhydrous ammonia is not the same as aqueous ammonia, both require cleanup (though aqueous is less concentrated; see EPA, “1998 EPCRA 313 Q&A, Question # 450,” 1998. [\[LINK\]](#)), the Minot train derailment that spilled almost 150,000 gallons of anhydrous ammonia cost \$8 million in environmental remediation; see National Transportation Safety Board, “Derailment of Canadian Pacific Railway Freight Train 292-16 and Subsequent Release of Anhydrous Ammonia Near Minot, North Dakota January 18, 2002,” March 9, 2004. [\[LINK\]](#) Page vi, (pdf page 8).

<sup>45</sup> U.S. EPA, “Ammonia,” CADDIS Volume 2, last updated January 21, 2021. [\[LINK\]](#). Accessed 1/14/2022.

<sup>46</sup> European Commission Joint Research Centre, “n-pentane,” Special Publication I.03.152, 2003. [\[LINK\]](#). Accessed 1/14/2022. Page 7 (pdf page 13).

<sup>47</sup> CDC-ATSDR, “n-Hexane,” CAS#110-54-3 *ibid.* Accessed 1/25/2022.

<sup>48</sup> U.S. EPA, “Initial List of Hazardous Air Pollutants with Modifications,” last updated January 5, 2022. [\[LINK\]](#). Accessed 1/25/2022.

<sup>49</sup> U.S. EPA, “Hexane Hazard Summary,” last updated January 2000. [\[LINK\]](#) and VelocityEHS, “Understanding the Hazards of Hexane,” November 19, 2014. [\[LINK\]](#). Accessed 1/25/2022.

<sup>50</sup> U.S. EPA, “Volatile Organic Compounds' Impact on Indoor Air Quality,” last updated September 24, 2021. [\[LINK\]](#). Accessed 1/25/2022

scrapings removed from the generator, tanks, and pipelines, that may contain radioactive elements.”<sup>51</sup> These naturally-occurring radioisotopes (NORM) wastes include primarily uranium and thorium; the level of radioactivity depends on the fossil fuel source and how plant layout may concentrate burning processes.

The proposed ordinance requires fossil fuel and nonhydroelectric generation facilities to model the possibility of an explosion based on the oils, gases and refrigerants stored, used or generated within the facility, and provide proof that they have adequate financial coverage to compensate for potential damages. The proposed ordinance also requires that applicants provide a decommissioning plan for facility closure detailing the hazardous substances that will be handled or generated in the facility; the range of potential release volumes that could require cleanup; the potential to contaminate surface waters or groundwater; and develop cost estimates for such cleanup. This process may disincentivize the development of fossil fuel and nonhydroelectric facilities in some instances, or may alternatively lead to design modifications that reduce the potential for explosions or site contamination, such as:

- altering site layout to reduce concentration of potentially explosive gases, or move potential ignition sources
- the addition, removal or alteration of vapor barriers, which can affect the concentration of explosive gases
- altering the type, volume, concentration or flow of gaseous and liquid products onsite, such that products are used with lower explosive potential, or are handled in such a way as to improve safety
- reduce or alter the storage or use of potentially hazardous chemicals onsite such that the degree of hazard is ultimately reduced, either by the type or volume of products used.

Given the toxic and hazardous materials that may be stored or generated by these facilities, the proposed ordinance could result in reduced toxic and hazardous wastes associated with future developments through two primary means, namely if the proposed ordinance:

- Disincentivized the development of a thermal electric power plant, LNG plant or an oil terminal, and another development were not pursued that exceeded the storage or generation of hazardous or toxic products potentially conferred from these fossil fuel and nonhydroelectric generation developments.
- Provided analysis that either:
  - caused the applicant to independently reduce potential hazards associated with development, or
  - enabled the County or the public to require or request design changes through the permitting review process that ultimately resulted in a reduction of potential hazards from the storage or generation of hazardous or toxic products.

### Noise Production

The proposed ordinance is unlikely to result in activities that would cause a greater production of noise than might otherwise occur under the existing code. Any development project that would be subject to the proposed ordinance would be subject to the same development restrictions concerning noise production that is currently in place.

### **Proposed measures to avoid or reduce such increases are:**

Existing regulations that aim to avoid or reduce increased discharges to water, emissions to air, and the production, storage, or release of toxic or hazardous substances, and to limit noise would also apply to development projects subject to the proposed ordinance and are not changed by the proposed ordinance. No additional measures to avoid or reduce such impacts are proposed.

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<sup>51</sup> Brown, Marilyn et al., “Solid Waste from the Operation and Decommissioning of Power Plants,” Oak Ridge National Laboratory, Prepared for the US Department of Energy, ORNL/SPR-2016/774, January 5, 2017. [\[LINK\]](#). Accessed 1/11/2022. Page iv (pdf page 9)

## **2. How would the proposal be likely to affect plants, animals, fish, or marine life?**

There are numerous plants, animals, fish, and marine life within unincorporated King County, but the proposed ordinance is unlikely to result in activities that would cause a greater impact to these resources than might otherwise occur under the current code because the regulations protecting those resources are not changed by the proposed ordinance. For potential avoided impacts to marine life from thermal water pollution or oil spills, please see question one of this supplemental sheet for nonproject actions.

### **Proposed measures to protect or conserve plants, animals, fish, or marine life are:**

Existing regulations that protect and conserve plants, animals, fish, and marine life would apply to development projects subject to the proposed ordinance and are not changed by the proposed ordinance, including the County's Shoreline and Critical Areas Code. No additional measures to avoid or reduce such impacts are proposed.

## **3. How would the proposal be likely to deplete energy or natural resources?**

The proposed ordinance is unlikely to result in activities that would cause a significantly greater impact to these resources than might otherwise occur under the former code.

### **Proposed measures to protect or conserve energy and natural resources are:**

Existing regulations that protect and conserve energy and natural resources would apply to development projects subject to the proposed ordinance. No additional measures to avoid or reduce such impacts are proposed.

## **4. How would the proposal be likely to use or affect environmentally sensitive areas or areas designated (or eligible or under study) for governmental protection; such as parks, wilderness, wild and scenic rivers, threatened or endangered species habitat, historic or cultural sites, wetlands, floodplains, or prime farmlands?**

The proposed ordinance is unlikely to result in activities that would cause a greater impact to environmentally sensitive areas or areas designated as eligible or under study for governmental protection than might otherwise occur under the existing code. Any development project that would be subject to the proposed ordinance would be subject to the same development restrictions concerning environmentally sensitive areas that are currently in place.

### **Proposed measures to protect such resources or to avoid or reduce impacts are:**

Existing regulations that protect such resources would apply to development projects subject to the proposed ordinance, and are not changed by the proposed ordinance. No additional measures to avoid or reduce such impacts are proposed.

## **5. How would the proposal be likely to affect land and shoreline use, including whether it would allow or encourage land or shoreline uses incompatible with existing plans?**

The proposed ordinance does not alter, and is not anticipated to affect, currently allowed land uses or shoreline uses in King County. As noted previously, the proposed ordinance may disincentivize the development of fossil fuel and nonhydroelectric generation facilities in some instances but the absence, or development, of such facilities remains compatible with existing land use plans.

### **Proposed measures to avoid or reduce shoreline and land use impacts are:**

As the proposed ordinance does not alter, and is not anticipated to affect, currently allowed land uses or shoreline uses in King County, no measures to avoid or reduce impacts are proposed.

**6. How would the proposal be likely to increase demands on transportation or public services and utilities?**

The proposed ordinance is not anticipated to result in activities that would cause a greater demand on public transportation, services and utilities compared to what otherwise might occur under the former code.

**Proposed measures to reduce or respond to such demand(s) are:**

Existing regulations addressing demands on transportation, public services and utilities would apply to development projects subject to the proposed ordinance, and are not changed by the proposed ordinance. No additional measures to avoid or reduce such impacts are proposed.

**7. Identify, if possible, whether the proposal may conflict with local, state, or federal laws or requirements for the protection of the environment.**

The proposed ordinance is consistent with local, state, and federal law requirements for the protection of the environment. Existing regulations related to the protection of the environment, including the County's Critical Areas Code, Shoreline Master Program, King County Code (particularly development regulations such as Title 9 Surface Water Management, Title 10 Solid Waste, Title 13 Water and Sewer Systems, Title 21A Zoning, and Title 23 Code Compliance), the Clean Air Act, the Clean Water Act, and others, are not amended by the proposed ordinance. These regulations would still apply to development projects subject to the proposed ordinance in unincorporated King County.