

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:

Amending King County Code (KCC) Title 21A Zoning to require the installation of electric vehicle (EV) infrastructure in association with certain development activities in unincorporated King County and set standards for the installation and placement of that infrastructure. This proposed regulation is referred to throughout this document as the “proposed ordinance.”

2. Name of applicant:

The proposal was initiated by the King County Executive and King County Council.

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

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35030 SE Douglas Street, Suite 210
Snoqualmie, WA 98065-9266
206-263-3000

4. Date checklist prepared:

May 4, 2021.

5. Agency requesting checklist:

King County.

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

The King County Council anticipates possible final action on the proposed ordinance in July 2021.

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 certain applications for building developments 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.

- This SEPA checklist for the proposed ordinance.
- [Electric Vehicle Charging Infrastructure Options Report, November 2020.](#)
- [2015 King County Strategic Climate Action Plan.](#)
- [Proposed 2020 King County Strategic Climate Action Plan.](#)
- [Staff Report for Ordinance 19052.](#)

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.

Numerous permit applications are pending for projects on properties within unincorporated King County, where the proposed ordinance would apply. However, there are no permits pending directly related to the proposed ordinance. The types of development projects to which the proposed ordinance would apply include townhouses, multifamily developments, group residential uses, temporary lodging uses, nonresidential uses, commuter parking lot uses, and automotive parking uses.

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 requirements.

11. Give a 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 EV ordinance proposes to amend the King County Code Title 21A Zoning to require the provision of EV charging and associated EV infrastructure for certain new and substantially improved development project parking areas in unincorporated King County.

The goals of the proposed EV parking ordinance are to:

- Establish new definitions related to EV charging and associated EV infrastructure.
- Add parking requirements that support new and/or future EV charging.
- Create new EV charging opportunities located at a variety of types of development, such as:
 - One parking space equipped to support future installation of EV chargers (EV-ready space) per new townhouse dwelling unit.
 - Ten percent of total parking spaces to have EV chargers installed (Electric vehicle Supply Equipment or “EVSE” spaces), and twenty-five percent to have EV-ready spaces for new or substantially improved apartment buildings or substantial expansion of existing apartment parking lots.
 - Five percent of total parking spaces to have EVSE spaces, and ten percent to have EV-ready spaces for the following uses or substantial expansion of existing parking lots for these uses:
 - New or substantially improved buildings for group residential or temporary lodging uses.
 - New or substantially improved buildings for nonresidential uses.
 - New commuter parking lot or automotive parking.
- Allow for accessible EVSE spaces.
- Allow EV parking requirement reductions for certain uses, such as townhouse developments containing nine or fewer dwelling units.
- Allow for use of EV load management system technology.

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 potable water, stormwater, wastewater treatment, septic systems critical areas, building and electrical codes, 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 non-project or project action that undergoes changes after the publication of a SEPA threshold determination, the King County Executive branch, which pursuant to KCC 20.44.020 is the Lead Agency for SEPA in 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 any additional SEPA 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's 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 Rural Area (RA), with some areas zoned Agricultural (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. The proposed ordinance would apply to certain residential and non-residential uses in these areas as outlined in Part A.11 of this checklist., such as:

- some multifamily and townhouse developments, some group residential uses, and some temporary lodging uses, which are all allowed under certain conditions in the following zones: Rural Area (RA), Urban Reserve (UR), Residential one to eight dwelling units per acre (R1-8), Residential 12 to 48 dwelling units per acre (R12-48), Neighborhood Business (NB), Community Business (CB), Regional Business (RB), and Office (O);
- some non-residential uses, which are allowed under certain conditions in all zones;
- some commuter parking lot uses which are allowed under certain conditions in the following zones: Rural Area (RA), Urban Reserve (UR), Residential one to eight dwelling units per acre (R1-8), Residential 12 to 48 dwelling units per acre (R12-48), Neighborhood Business (NB), Community Business (CB), Regional Business (RB), Office (O), and Industrial (I); and
- some automotive parking uses which are allowed under certain conditions in the following zones: Neighborhood Business (NB), Community Business (CB), Regional Business (RB), Office (O), and Industrial (I).

Some zones may have fewer types of buildings subject to the proposed ordinance, and hence would be less affected by the proposed ordinance. This would include areas that predominantly feature single-family residential buildings and some common-wall residential buildings meeting specific design requirements. These factors are discussed more under Part B.8.e and B.8.f of this checklist.

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 proposed 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; the proposed ordinance could apply to lands with some of these features if the proposed development falls under the scope of the proposed ordinance. The proposal is most likely to apply in areas more conducive to constructing buildings; so, impacts in steeply sloped and mountainous terrain would likely be reduced.

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

Although the proposed ordinance is a nonproject action with no identifiable “site,” 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 and be addressed under existing regulations 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 identifiable “site,” 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). The proposed ordinance would apply to certain non-residential uses on these lands. Existing regulations regarding those soils, and limitations on square footage and impervious surfaces would limit removal of agricultural soils. For new development, inclusion of EV infrastructure in the underlying development proposal would only cause nominal, if any, increased removal of agricultural soils. For substantial redevelopments, it is possible that removal minor amounts of agricultural soils would occur as a result of inclusion of EV infrastructure. However, it is anticipated that such soil removal would be infrequent and would have a minimal environmental impact.

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 identifiable “site,” 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. It is not anticipated that the inclusion of EV infrastructure in an underlying development proposal would cause increases in landside or erosion risks.

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. For new development, inclusion of EV infrastructure in the underlying development proposal would only cause nominal, if any, increased filling, excavation, and grading. For substantial redevelopments, it is possible that minor amounts of increased filling, excavation, and grading would occur as a result of inclusion of EV infrastructure. However, it is anticipated that such activity would be infrequent and would have a minimal environmental impact.

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

Although the proposed ordinance would not directly cause any erosion, potential erosion could 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 K.C.C. Chapter 21A.24, which regulates critical areas, 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)?

The proposed ordinance would not have any direct impacts to impervious surface percentages. Development projects subject to the proposed ordinance may choose to run conduit for EV charging infrastructure through landscaping areas; this is more probable in substantial improvements to an existing building to avoid or reduce removing or replacing concrete and asphalt. Conduit lines are not considered an impervious surface, but alter drainage patterns mildly as water moves around the conduit line. This change is likely minor enough that, even if conduit lines were counted among impervious surfaces, it would likely not alter development project impervious surface coverage percentages.

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. Development projects subject to the proposed ordinance may experience slightly reduced air emissions from vehicular operations to and from the site, assuming an increase in the proportion of EVs visiting the site and a reduction in the number of gas-powered vehicles visiting the site. 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 itself 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. Generally, increasing access to EV charging via the proposed ordinance will eventually increase the use of EVs, which will, over time, result in improvements to air quality.

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 identifiable “site,” numerous streams, lakes, ponds, and wetlands 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 development regulations, including

critical areas regulations, concerning the protection of waterbodies may also apply depending on the proximity of any development to non-shoreline 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 have any direct impacts. 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 identifiable “site,” several areas of unincorporated King County, where the proposed ordinance would apply, 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.

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. The inclusion of EV infrastructure in an underlying development proposal is not expected to affect the need for groundwater withdrawals.

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. The inclusion of EV infrastructure in an underlying development proposal is not expected to affect discharges of waste material into the ground.

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 affect water runoff. Individual development projects subject to the proposed ordinance may result in some water runoff. As with any development in unincorporated King County, on-site stormwater management for such facilities 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 inclusion of EV infrastructure in an underlying development proposal is not expected to contribute to the level of waste materials entering ground or surface waters.

- 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 identifiable “site,” and development projects subject to the proposed ordinance would also be subject to existing drainage regulations, which are unchanged by the subject ordinance. The inclusion of EV charging pads and/or conduit lines in an underlying development proposal could affect drainage patterns, but the impact is expected to be minimal.

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. No additional measures to reduce or control any potential surface, ground, and runoff water and drainage pattern impacts are proposed.

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 identifiable “site,” 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 Part B.4.a of this checklist). 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. For new development, inclusion of EV infrastructure in the underlying development proposal would only cause nominal, if any, increased removal or alteration of vegetation. For substantial redevelopments, it is possible that removal or alteration of minor amounts of vegetation would occur as a result of inclusion of EV infrastructure. However, it is anticipated that such removal or alternations would be infrequent and would have a minimal environmental impact.

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

The proposed ordinance is a nonproject action with no identifiable “site.” 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, chorisobog-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 identifiable “site,” 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.

Although the proposed ordinance is a nonproject action with no identifiable “site,” 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 identifiable “site,” a variety of birds, mammals, and fish have been observed in unincorporated King County.

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 identifiable “site,” there are a number of 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 identifiable “site,” 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 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 proposed ordinance would also be subject to existing federal, state, and local wildlife regulations. The inclusion of EV infrastructure in an underlying development proposal is not expected to affect wildlife.

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

Although the proposed ordinance is a nonproject action with no identifiable “site,” 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.

Although the proposed ordinance is a nonproject action that would not have direct energy needs, any development project subject to the proposed ordinance would require electricity to power the required EV charging infrastructure, as well as other building needs, such things as lighting, heating/cooling, and operation of equipment. Any such development project would be subject to existing energy codes and regulations.

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. Implementation of the proposed ordinance in individual development projects is unlikely to affect the potential use of solar energy by adjacent properties. Currently available freestanding EV charging stations have a range in heights, but research has failed to locate any model that exceeds eight feet in height. The structures would have to gain significant height to result shading that would impede roof- or ground-mounted solar photovoltaic energy generation on adjacent properties.

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. Energy conservation is discussed further in Part D of this checklist.

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 or fire and explosion, spill, 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. The inclusion of EVSE charging infrastructure in an underlying development proposal and/or increased presence of batteries in EV cars parked on the site post-construction would have some risks of toxic chemical exposure, fire, and/or explosion. However, these risks are anticipated to be lower than existing risks from gas cars parked on site post-construction. Potential hazardous chemical impacts are discussed in more detail in Part D of this checklist.

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

The proposed ordinance is a nonproject action with no identifiable "site." Sites with contamination exist within unincorporated King County where development projects could be proposed that are subject to the proposed ordinance.

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 identifiable “site.” Sites with hazardous chemicals/conditions exist within unincorporated King County and development could be proposed on them that is subject to the proposed ordinance. 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, the construction 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. Individual development projects would be required to store, use, and produce any toxic or hazardous chemicals, such as cleaning supplies, in accordance with applicable laws and regulations.

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 add 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; so, no measures to reduce or control environmental health hazards are proposed.

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 identifiable “site” 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. It is not anticipated that the inclusion of EV infrastructure in an underlying development proposal would cause increases in construction noise. There is no post-construction noise from EV chargers and associated infrastructure. Noise from increased EVs parked on the site post-construction are anticipated to be the same or less than gas cars parked on site. Noise impacts are discussed in more detail in Part D of this checklist.

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 identifiable “site” and would not have any direct impacts on the current land uses on nearby or adjacent properties. The proposed ordinance does not change the uses allowed on properties in the King County Code land use tables. As a whole, unincorporated King County is predominantly forestland to the east and predominantly rural to the west, adjacent to more urban incorporated areas of the county, with agricultural areas between. The proposed ordinance would not change or impact current land use designations or zoning classifications in unincorporated King County.

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 identifiable “site” 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. However, 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 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 identifiable “site,” 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 identifiable “site;” development projects subject to the proposed ordinance would occur across a variety of zones that allow the construction of buildings. The

proposed ordinance would apply to certain residential and non-residential uses as outlined in Part A.11 of this checklist., such as:

- some multifamily and townhouse developments, some group residential uses, and some temporary lodging uses, which are all allowed under certain conditions in the following zones: Rural Area (RA), Urban Reserve (UR), Residential one to eight dwelling units per acre (R1-8), Residential 12 to 48 dwelling units per acre (R12-48), Neighborhood Business (NB), Community Business (CB), Regional Business (RB), and Office (O);
- some non-residential uses, which are allowed under certain conditions in all zones;
- some commuter parking lot uses which are allowed under certain conditions in the following zones: Rural Area (RA), Urban Reserve (UR), Residential one to eight dwelling units per acre (R1-8), Residential 12 to 48 dwelling units per acre (R12-48), Neighborhood Business (NB), Community Business (CB), Regional Business (RB), Office (O), and Industrial (I); and
- some automotive parking uses which are allowed under certain conditions in the following zones: Neighborhood Business (NB), Community Business (CB), Regional Business (RB), Office (O), and Industrial (I).

The proposed ordinance would apply to a wide range of building types allowable throughout most zoning classifications within King County. Some zones may have fewer types of buildings subject to the proposed ordinance, and hence would be less affected by the proposed ordinance. This would include zones that predominantly feature:

- Single-family residential buildings (primarily Rural Area (RA), Urban Reserve (UR), and Residential one to eight dwelling units per acre (R1-8) zones); and
- Common-wall residential buildings meeting specific design requirements (primarily Residential 12 to 48 dwelling units per acre (R12-48) zone). This would include townhouse developments, apartment developments, and group residential or temporary lodging uses that:
 - Consist of four or fewer units,
 - Do not exceed two stories in height,
 - Are less than 5,000 square feet in area, and
 - Have a one-hour fire-resistive occupancy separation between units.

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

The proposed ordinance is a nonproject action with no identifiable “site,” unincorporated King County includes a variety of land use designations to which the proposed ordinance would apply. The proposed ordinance would apply to certain residential and non-residential uses as outlined in Part A.11 of this checklist., such as:

- some multifamily and townhouse developments, some group residential uses, and some temporary lodging uses, all of which are allowed under certain conditions in some areas with the following land use designations: Unincorporated Activity Center, Community Business Center, Neighborhood Business Center, Commercial Outside of Centers, Urban Planned Development, Urban Residential High, Urban Residential Medium, Urban Residential Low, Urban Growth Area for Cities in the Rural Area, Rural Town, Rural Neighborhood Commercial Center, Rural Area, Greenbelt/Urban Separator, King County Open Space System, and Other Parks/Wilderness;
- some non-residential uses, which are allowed under certain conditions in areas with any land use designation;
- some commuter parking lot uses, which are allowed under certain conditions in some areas with the following land use designations: Unincorporated Activity Center, Community Business Center, Neighborhood Business Center, Commercial Outside of Centers, Urban Planned Development, Urban Residential High, Urban Residential Medium, Urban Residential Low, Urban Growth Area for Cities in the Rural Area, Rural Town, Rural Neighborhood Commercial Center, Rural Area, Industrial, Greenbelt/Urban Separator, King County Open Space System, Other Parks/Wilderness; and

- some automotive parking uses, which are allowed under certain conditions in some areas with the following land use designations: Unincorporated Activity Center, Community Business Center, Neighborhood Business Center, Commercial Outside of Centers, Urban Planned Development, Rural Town, and Industrial.

The proposed ordinance would apply to a wide range of building types that would be allowed per the regulations that apply to most King County comprehensive plan land use designations. Some designated land use areas may have fewer types of buildings subject to the proposed ordinance, and hence would be less affected by the proposed ordinance. This would include comprehensive plan land use designations that predominantly feature:

- Single-family residential buildings, and
- Common-wall residential buildings meeting specific design requirements (primarily Residential 12 to 48 dwelling units per acre (R12-48) zone). This would include townhouse developments, apartment developments, and group residential or temporary lodging uses that:
 - Consist of four or fewer units,
 - Do not exceed two stories in height,
 - Are less than 5,000 square feet in area, and
 - Have a one-hour fire-resistive occupancy separation between units.

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

Although the proposed ordinance is a nonproject action with no identifiable “site,” 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 applicable shoreline regulations.

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 identifiable “site,” portions of unincorporated King County are classified as critical areas where a development project could be proposed that would be subject to the proposed ordinance. 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 or residents, or both. The number of persons living or working in the subject buildings would depend on the individual land uses, 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 King County Code.

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

No measures to avoid or reduce displacement impacts are proposed.

I. 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.

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. Some sites could have a development project that would be subject to the proposed ordinance could have been or may currently be used as working farmland or forestlands. However, 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 apply to development projects that would be subject to the proposed ordinance. For new development, inclusion of EV infrastructure in the underlying development proposal would only cause nominal, if any, increased impacts to such agricultural and forest lands. For substantial redevelopments, it is possible that minor amounts of impacts would occur as a result of inclusion of EV infrastructure during construction. However, it is anticipated that such impacts would be infrequent and would have a minimal environmental impact; so, no additional measures to reduce or control impacts 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.

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 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:

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 any exterior building material of any development project subject to the proposed ordinance will be subject to existing regulations. Research has failed to locate any EV

charging infrastructure model that exceeds eight feet, which would limit the potential aesthetic impacts of EV charging infrastructure. As such, implementation of the proposed ordinance is not anticipated to produce aesthetic impacts beyond what is allowed under the current code.

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 the current code. For new development, inclusion of EV infrastructure in the underlying development proposal would only cause nominal, if any, increased view impacts. For substantial redevelopments, it is possible that removal minor amounts of view impacts would occur as a result of inclusion of EV infrastructure. However, it is anticipated that this would have a minimal impact.

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. Aesthetic impacts caused by inclusion of EV infrastructure in the underlying development proposal are anticipated to be minimal; so, no additional measures to reduce or control impacts are proposed.

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. Although EV charging equipment is composed of some materials with reflectivity that could contribute to daytime glare, such as glass and metal, the anticipated added EV charging equipment would not be noticeably greater than such materials already allowed by development projects under code. As such, implementation of the proposed ordinance is not anticipated to produce any additional levels of light or glare beyond what is allowed under the current code.

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. Any development projects subject to the proposed ordinance would have to comply with existing development regulations, including any related to light and glare. Any glare from the EV charging equipment itself is not anticipated to be a safety hazard or interfere with views.

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

The proposed ordinance is a nonproject action with no identifiable “site.” Various off-site sources of light or glare exist throughout unincorporated King County. It is unlikely that any off-site sources would affect the new EV parking infrastructure that would be required in the proposed ordinance.

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 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 identifiable “site.” 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 identifiable “site.” 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 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 rules related to 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 identifiable “site.” However, landmarks, features, or 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 projects would continue to be required to comply with federal, state, and local rules related to 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.

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 identifiable “site.” 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 identifiable “site.” 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 identifiable “site.” Implementation of the proposed ordinance would not affect the number of parking spaces provided by development projects subject to the proposed ordinance, but it would alter the nature of those parking spaces such that it would be illegal for gas-powered cars to park in EV-designated parking spaces per state law. Depending on the nature of the development project, between five and ten percent of parking spaces could be designated for EV parking with electric vehicle supply equipment (EVSE). When EVSE spaces are required, at least five percent, and no less than one EVSE space, would also be designated as accessible parking.

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 on the area, individual development projects subject to the proposed ordinance could generate some additional traffic that could interfere with, affect, or be affected by the movement of agricultural and forest products. However, impacts from such development projects are not anticipated to be greater as a result of implementing the proposed ordinance.

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 volumes; so, 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 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.

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 identifiable “site.” These utilities are generally available in unincorporated King County. Municipal sanitary sewer service is typically available within urban unincorporated King County, such as for many areas within the West King County Community Service Area. Municipal sanitary sewer service is generally not available in rural and resource 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 “site” on which general construction activities would occur. Development projects subject to the proposed ordinance would require connection to the electrical grid, onsite power generation, or battery power to provide EV charging. If such developments connected to the electrical grid, the probable utilities providing electrical service would be either Puget Sound Energy (PSE) or Seattle City Light. Utilities are discussed in more detail in Part D of this checklist.

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: 5/4/21

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?**

The proposed ordinance is unlikely to increase the production, storage, or release of toxic or hazardous substances, or to increase discharges to water. Potential impacts regarding air emissions, release of toxic or hazardous substances, and noise impacts are discussed below.

Air Emissions

Overall, the proposed ordinance is projected to provide support for increased use of EVs, which is in turn projected to help reduce air emissions. Gas-powered vehicles emit multiple air pollutants, including volatile organic compounds (VOCs), fine particulate matter, over 55 percent of the nitrogen oxide emissions in the U.S.,¹ as well as carbon monoxide, sulfur dioxide,² and approximately 26 percent of the greenhouse gas emissions of King County.³ Requiring the provision of EV infrastructure that helps power EVs supports their increased use among King County residents; EVs do not exhaust air emissions, dramatically reducing the air emission impacts of EVs, and have reduced air impacts compared to gas vehicles.^{4, 5, 6}

Some studies have debated whether increased EV penetration achieves air emission reductions overall for specific air pollutants, namely sulfur dioxide and particulate matter (PM), due to the air emissions associated with the generation of power that fuels EVs and the nature of PM emissions.

- Some studies have noted that, if increased EV charging relies on power grids using increased coal power production, the vehicle charging can result in more sulfur dioxide emissions from coal plants.^{7, 8} Although others have debated some of the underlying assumptions of such studies,⁹ the relatively cleaner energy grids in Washington state indicated there would still be greater net air pollution reductions through increasing adoption of electric vehicles.¹⁰ Air pollution benefits will also increase with vehicles moving to energy grid fueling as the energy grid becomes cleaner; the 2019 Clean Energy Transformation Act in Washington state requires utilities providing power within the state to eliminate coal from their portfolios by 2025, ultimately resulting in reduced sulfur dioxide emissions.¹¹

Note: Some studies have also evaluated varying EV particulate matter impacts, detailed more below, from power generation dependent on coal.¹² The related impacts are not discussed in greater detail for the reasons reviewed above.

- Some studies have also contended that EVs will not significantly reduce particulate matter (PM), a larger localized contributor to respiratory disease, because PM is largely sourced from the erosion of tires, brake pads and road dust.¹³ However, literature indicates two counterpoints to this claim stemming from EV production details and the nature of PM.

¹ U.S. Environmental Protection Agency (EPA), “Smog, Soot, and Other Air Pollution from Transportation,” [\[LINK\]](#). Accessed 4/2/2021.

² Union of Concerned Scientists, “Cars, Trucks, Buses and Air Pollution,” July 23, 2008. [\[LINK\]](#). Accessed 4/1/2021.

³ ICLEI USA, “GHG Emissions in King County: 2017 Inventory Update, Contribution Analysis and Wedge Analysis,” July 2019. [\[LINK\]](#). Accessed 4/2/2021. Page 7.

⁴ Choma, Ernani F., John S. Evans, James K. Hammitt, José A. Gómez-Ibáñez, and John D. Spengler. “Assessing the health impacts of electric vehicles through air pollution in the United States,” *Environment International*, Volume 144, November 2020, 106015. [\[LINK\]](#). Accessed 4/5/2021

⁵ American Lung Association, “The Road to Clean Air: Benefits of a Nationwide Transition to Electric Vehicles,” 2020. [\[LINK\]](#). Accessed 4/5/2021

⁶ Northwestern University. “Electric vehicle adoption improves air quality and climate outlook: Ozone pollution reduced even when electricity is produced by combustion sources,” *Science Daily*. April 12, 2019. [\[LINK\]](#). Accessed 4/5/2021

⁷ Jaffe, Eric. “Where Electric Vehicles Actually Cause More Pollution Than Gas Cars,” *Bloomberg City Lab*. June 29, 2015. [\[LINK\]](#). Accessed 4/2/2021.

⁸ Tessum, Christopher W., Jason D. Hill, and Julian D. Marshall, “Life cycle air quality impacts of conventional and alternative light-duty transportation in the United States,” *Proceedings of the National Academy of Sciences of the United States of America (PNAS)*, 111 (52), December 30, 2014. [\[LINK\]](#) Accessed 4/5/2021. Pages 18490-18495.

⁹ Hwang, Roland. “Clearing the Air on Electric Cars and Pollution,” *Natural Resources Defense Council (NRDC) Expert Blog*, January 24, 2014. [\[LINK\]](#). Accessed 4/2/2021.

¹⁰ Jaffe, Eric. “Where Electric Vehicles Actually Cause More Pollution Than Gas Cars,” *Bloomberg City Lab*. June 29, 2015. [\[LINK\]](#). Accessed 4/2/2021.

¹¹ Washington State Department of Commerce, “CETA: A Brief Overview.” [\[LINK\]](#). Accessed 4/2/2021.

¹² Northwestern University. “Electric vehicle adoption improves air quality and climate outlook: Ozone pollution reduced even when electricity is produced by combustion sources,” *Science Daily*. April 12, 2019. [\[LINK\]](#). Accessed 4/5/2021

¹³ Dr. Muelaner, Jody. “This is why electric cars won’t stop air pollution,” *Institution of Mechanical Engineers*. November 4, 2019. [\[LINK\]](#). Accessed 4/5/2021.

- While conventional gas cars typically use disc brakes that emit particles, EVs use regenerative braking to derive additional power for the car battery, which reduces the need to apply the brakes, and in turn reduces their relative PM emissions.¹⁴ EVs are heavier than their gas-counterparts, which could theoretically increase vehicle wear, but EVs are typically equipped with tires to address the heavier EV weights, in turn reducing wear.¹⁵
- The origins of particulate matter are also not wholly dependent on tire wear and brake dust. While primary PMs stem from the physical outputs of brakes, tires and exhaust, there are also secondary emissions from the chemical combination of other emissions after they have been exhausted from the vehicle, including nitrogen oxides (NO_x), hydrocarbons (HC) and ammonia (NH₃).¹⁶ These secondary emissions can compose up to 29 percent of a vehicle's total PM emissions.¹⁷ Adoption of EVs can reduce the associated PM levels by between four and nineteen percent depending on particulate size and the weight of EVs being assessed.¹⁸

Review of the above the literature indicates that the EVs do have reduced air emission impacts compared to gas vehicles as a whole, and especially with existing and future regulations for electricity supplies in Washington state, and their increased adoption would result in positive outcomes regarding air emissions.

Toxic or Hazardous Substances

Increased use of EVs has the potential to reduce spills of environmental contaminants such as petroleum, car oil, and transmission fluid, as EVs do not require these fluids to operate.¹⁹ However, EVs do use rechargeable batteries with the potential to introduce different contaminants in cases of battery rupture. Also, while EV charging infrastructure currently is commonly connected to the electrical grid, there is the potential for EV charging infrastructure to also be connected to onsite battery storage in the future.

There are five common types of rechargeable batteries, with varying chemical components:

Lead acid	Combines lead or lead sulfate and sulfuric acid. ²⁰
Nickel Cadmium (NiCd)	Nickel oxide hydroxide and metallic cadmium. ²¹
Nickel Metal Hydride (NiMH)	Nickel oxide hydroxide and potassium hydroxide. ²²
Lithium-ion	There are many lithium batteries; the most common uses cobalt oxide. ²³
Lithium-ion polymer	Similar to lithium batteries, save that these use a solid or gel electrolyte. ²⁴

¹⁴ Barisone, Matteo. "Electric vehicles and air pollution: the claims and the facts," European Public Health Alliance (EPHA), March 5, 2021. [[LINK](#)]. Accessed 4/5/2021

¹⁵ Barisone, Matteo. Ibid. [[LINK](#)]. Accessed 4/5/2021

¹⁶ Krajinska, Anna. "Electric vehicles are far better than combustion engine cars when it comes to air pollution. Here's why," Transport & Environment, March 4, 2021. [[LINK](#)]. Accessed 4/5/2021.

¹⁷ Krajinska, Anna. Ibid. [[LINK](#)]. Accessed 4/5/2021.

¹⁸ Amato, Fulvio, Alexandros Dimitropoulos Katherine Farrow and Walid Oueslati, "Non-exhaust Particulate Emissions from Road Transport : An Ignored Environmental Policy Challenge," Organisation for Economic Co-operation and Development (OECD), December 2020. [[LINK](#)]. Accessed 4/5/2021.

¹⁹ Turner, Brian. "Troubleshooter: Yes, Electric Vehicles Still Need Maintenance," Driving Postmedia Network, October 10, 2019. [[LINK](#)]. Accessed 04/28/21

²⁰ Common in gas-powered vehicles. Reference: Caceres, Al. "Risk Considerations for Battery Energy Storage Systems," Gallagher Energy Practice white paper, 2019. [[LINK](#)]. Accessed 4/28/21.

²¹ Note: Cadmium is a toxic element; this battery was mostly banned by the European Union in 2004. Nickel-cadmium batteries have been almost completely replaced by nickel-metal hydride (NiMH) batteries. Reference: Caceres, Al. Ibid.

²² "NiMH Nickel metal Hydride Battery Technology," Electronics Notes. [[LINK](#)]. Accessed 4/28/21.

²³ Clean Energy Institute, "Lithium-Ion Battery," University of Washington, 2020. [[LINK](#)]

²⁴ Sabatini, Matthew. "Lithium-ion vs lithium-polymer: What's the difference," Android Authority. [[LINK](#)]. Accessed 4/28/21

Today, most EVs use lithium-ion batteries.²⁶ Although research has not indicated concerns with leaking liquids from lithium-ion battery, these battery types can catch fire when ruptured, typically during vehicle collisions.²⁷ While lead batteries do not normally burn because they use water electrolytes, lithium ion batteries use an organic solvent that can burn.²⁸ Although the battery types vary between gas-powered and electric vehicles, gas-powered vehicles remain a significant source of car fires; a majority of the 174,000 vehicle fires in the U.S. in 2015 involved gasoline-powered vehicles.²⁹ A 2017 National Highway Traffic Safety Administration study assessed the risk between vehicle types and concluded,

... the propensity and severity of fires and explosions from the accidental ignition of flammable electrolytic solvents used in Li-ion battery systems are anticipated to be somewhat comparable to or perhaps slightly less than those for gasoline or diesel vehicular fuels.³⁰

As such, although these battery systems associated with EVs pose a different type of risk than the risks associated with vehicle fires, this difference does not appear to increase the frequency or severity of the associated risk when compared to the gas-powered vehicles that EVs would be replacing.

EV charging infrastructure powered by, or supplemented with, battery power is beginning to be deployed; these installations may provide insights into the likelihood of batteries used in conjunction with EV charging infrastructure, the types of batteries used, and their risks. Stationary battery installations for EV charging infrastructure is typically associated with “level three” or “fast charger” charging hubs,³¹ rather than the “level two” charging required to in the proposed ordinance. Several articles exploring battery applications to reduce charging costs, or reduce electrical demand for utilities during peak energy usage times, also typically explore these applications with level three charging.^{32, 33} As such, their use for level two charging is less likely, though not infeasible. Although, the number of existing installations are relatively new, and may not definitely indicate future trends. Some of these installations incorporate Vanadium, which is being targeted more for stationary applications due to lower energy density, but also has no fire risk like lithium-ion batteries.³⁴ Although vanadium flow batteries are promising for large-scale utility applications, realistically they may not be deployed for smaller level two EV infrastructure applications given its relatively higher cost, though these prices may also drop through future innovation.³⁵ Otherwise, many of the stationary battery installations are using lithium-ion batteries, which would have similar risks as lithium-ion applications detailed above.³⁶

²⁵ Rapier, Robert. “Why Vanadium Flow Batteries May be the Future of Utility-Scale Energy Storage,” Forbes, October 24, 2020. [\[LINK\]](#). Accessed 4/58/21

²⁶ U.S. Department of Energy, “Batteries for Hybrid and Plug-In Electric Vehicles,” Alternative Fuels Data Center. [\[LINK\]](#). Accessed 4/28/21

²⁷ Sun, Peiyi, Roeland Bisschop, Huichang Niu, Xinyan Huang. “A Review of Battery Fires in Electric Vehicles,” Fire Technology, January 2020. [\[LINK\]](#). Accessed 4/28/2021

²⁸ Battelle Insider, “Electric-Powered Vehicle Fires Make Headlines,” July 25, 2018. [\[LINK\]](#). Accessed 4/28/21

²⁹ Isidore, Chris. “Are electric cars more likely to catch fire,” CNN Business. May 17, 2018. [\[LINK\]](#). Accessed 4/28/21

³⁰ National Highway Traffic Safety Administration (NHTSA), “Lithium-ion Battery Safety Issues for Electric and Plug-in Hybrid Vehicles,” U.S. Department of Transportation, DOT HS 812 418. October 2017, Page xvii. [\[LINK\]](#). Accessed 4/28/21

³¹ Grundy, Alice. “Guidehouse: Energy storage to support electric vehicle charging could reach 1,900MW by 2029,” Energy Storage News, August 4, 2020. [\[LINK\]](#). Accessed 4/28/21

³² Knupfer, Stefan, Jesse Noffsinger and Shivika Sahdev. “How Battery Storage Can Help Charge the Electric-Vehicle Market,” McKinsey & Company, February 23, 2018. [\[LINK\]](#)

³³ De Simone, Davide and Luigi Piegari. “Integration of Stationary Batteries for Fast Charge EV Charging Stations,” Energies. December 6, 2019. [\[LINK\]](#)

³⁴ Rapier, Robert. Ibid. Accessed 4/58/21

³⁵ Conca, James. “Can Vanadium Flow Batteries beat Li-ion for Utility-Scale Storage,” Energy Post EU, September 4, 2019. [\[LINK\]](#). Accessed 4/28/21

³⁶ Grundy, Alice. Ibid.

It should be noted that other technologies may emerge that reduce concerns from battery discharges either from electric vehicles, or from EV infrastructure connected to batteries, including advances in non-toxic “blue batteries” that use saltwater combined with other materials for energy storage.³⁷

Production of Noise

Overall, the proposed ordinance is projected to support increased use of EVs. The operation of EV charging infrastructure required to be installed by the proposed ordinance is not anticipated to result in any additional noise. However, one of the issues with EVs themselves is not their production of excess noise, but rather their lack of noise production. At least two studies found that pedestrians are 40 percent more likely to be hit by a hybrid or electric car.^{38,39} The issue has been associated with reduced noise when EVs are stationary, reversing, or traveling at speeds under 20 miles per hour; when traveling above 20 miles per hour, tire friction on the road and aerodynamic factors increase noise levels adequately for pedestrians and the blind.⁴⁰

Federal regulation has already begun addressing the potential issue of quieter EV travel compared to gas vehicles. In 2016, the National Highway Traffic Administration (NHTSA) announced a rule requiring new EVs and hybrids to emit sound below and at speeds of 18.6 miles per hour.⁴¹ The original compliance date was September 2019, though that was extended to September 2020, with 50 percent compliance required by September 2019.⁴²

The NHTSA also studied the noise impacts of the rule, which was created in response to the 2010 Pedestrian Safety Enhancement Act.⁴³ The Final Environmental Assessment determined that,

“As compared to the No Action Alternative, the environmental impacts of the action alternatives are less than 3 dB, which is not noticeable to humans, except in one case, that of a single vehicle pass-by in a non-urban environment. For this case, impacts would range from 3.1 to 10.4 dB, which is considered noticeable; however, the difference is comparable in scale to the variation among ICE vehicles on the road today. Even with added sound, the sound level of the individual EV/HV would still be lower than an average ICE vehicle, and single vehicle pass-by events are anticipated to be relatively infrequent. In addition, neither action alternative is likely to adversely impact wildlife.”⁴⁴

Given existing federal regulation and analysis, no adverse levels of noise production, or absence, are anticipated as a result of the proposed ordinance.

Proposed measures to avoid or reduce such increases are:

³⁷ Unwin, Jack. “What are Lithium batteries and how do they work,” Power Technology, Updated February 6, 2020. [\[LINK\]](#). Accessed 4/28/21

³⁸ Rozell, Daniel. “Electric Vehicles & Loud Pipes,” Clean Technica. December 17, 2018. [\[LINK\]](#). Accessed 4/5/2021. References a 2009 National Highway Traffic Safety Administration (NHTSA) report.

³⁹ Tangermann, Victor. “Bring the Noise: Why Electric Vehicles Need to Make More Sound, Right Now,” Futurism. May 10, 2018. [\[LINK\]](#). Accessed 4/5/2021. References a 2013-2014 Guide Dogs for the Blind Association [study](#).

⁴⁰ Gianratana, Chris. “The U.S. is Shifting Gears to Electric Vehicles,” Safety Resource Center. May 6, 2019. [\[LINK\]](#). Accessed 4/5 2021

⁴¹ Matousek, Mark. “Electric cars are eerily quiet — and US regulators are worried this could make them dangerous,” Business Insider. April 25, 2018. [\[LINK\]](#). Accessed 4/5/2021

⁴² Matousek, Mark. Ibid. [\[LINK\]](#). Accessed 4/5/2021

⁴³ U.S. Department of Transportation, “NHSTA Sets “Quiet Car” Safety Standard to Protect Pedestrians,” November 14, 2016. [\[LINK\]](#). Accessed 4/5/2021.

⁴⁴ National Highway Traffic Safety Administration (NHSTA), “Minimum sound requirements for hybrid and electric vehicles: Final environmental assessment,” Docket Number NHTSA-2011-0100. Report No. DOT HS 812 347. November, 2016. [\[LINK\]](#). Accessed 4/5/2021. Page 27.

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.

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 negative 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. As the proposed ordinance may support increased adoption of EVs, the ordinance would also support reductions in air and water pollution that may have a positive impact on wildlife. Outreach efforts supported by the Washington State Department of Ecology indicate that, “approximately 7 million quarts of vehicle fluids, including motor oil, fuel, lubricants and more into the Puget Sound watershed. Oil and other petroleum products can harm wildlife and habitat.”⁴⁵ Air emission impacts are detailed under Part D.1 of this checklist.

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 requires the installation of EV charging infrastructure which will require electrical power to operate. Although the EV infrastructure could be powered by battery power or onsite power via renewable power generation or a generator, most developments will likely connect to the utility energy grid. The range of electricity needs is discussed in more detail under Part D.6 of this checklist.

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. Additionally, the proposed ordinance includes measures allowing load management, which can reduce or respond to potential increased demands on utilities. Load managing encompasses various technologies allowing several vehicles to charge on the same electrical circuit by altering charging rates and their timing. This has the potential to reduce the total electrical capacity needs of a particular site, and also to reduce electrical draws during peak charging times, so as to avoid increasing demand when demand may be increasing throughout an electrical grid.

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. Additionally, limitations imposed on properties in the Farm

⁴⁵ Don’t Drip and Drive, “About Us,” 2020. [[LINK](#)]. Accessed 4/28/21

Preservation Program or the Agricultural Production District would extend to any potential development proposed to locate on an applicable farmlands.

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. As no additional impacts are anticipated to be created by the proposed ordinance, no measures to avoid or reduce 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.

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 increase demand on public transportation or government-provided services in the unincorporated area. However, some of the EV charging infrastructure required to be installed by the proposed ordinance will require electrical power to operate. Although the EV infrastructure could be powered by battery power or onsite power via renewable power generation or a generator, most developments will likely connect to the utility energy grid and, hence, affect utility-provided electricity.

The below analysis evaluates the potential electricity demands associated with increasing EV usage among the general population. Requiring the installation of additional EV charging equipment is anticipated to increase EV use among individuals using development project sites subject to the proposed ordinance. However, the impacts of the proposed ordinance on the overall demand for EVs in King County are anticipated to be minor compared to the larger influences of federal and state regulations, automaker trends, and market factors. As such, the below analysis provides the potential impacts of general trends of increasing EV electrical demand. The amount that can be attributed to the passage of the proposed ordinance is likely a fraction of the below.

Additional Energy Generation

As noted above, this section assesses the potential impacts of general trends of increasing EV electrical demand, and only a fraction of this impact could likely be attributed to implementation of the proposed ordinance. The following data were collected to estimate the electricity demands associated with EVs in unincorporated King County:

- The Puget Sound Regional Council (PSRC) estimates there were 47,809,411 vehicle miles traveled (VMT) per day in King County in 2018.⁴⁶
 - Unincorporated King County’s estimated population in 2020 was 249,100, which was 11.0 percent of the total population of King County including incorporated areas (2,260,800).⁴⁷

⁴⁶ Puget Sound Regional Council (PSRC), “Vehicle Miles Traveled per Person Continues to Decline in Region,” November 19, 2019. [[LINK](#)]. Accessed 4/1/2021.

⁴⁷ Office of Financial Management, “April 1, 2020 Population of Cities, Towns and Counties Used for Allocation of Selected State Revenues,” [[LINK](#)]. Accessed 4/1/2021.

- Assuming the VMT associated with unincorporated King County is roughly equivalent to its 11 percent proportion of the population, the associated unincorporated daily VMT would be 5,259,035 miles.
- According to the US Department of Energy, the electricity demand for charging cars range from 24 to 50 kilowatt-hours (kWh) for every 100 miles for new 2020-2021 EV car models.⁴⁸ The average is estimated to be 30 kWh for every 100 miles.⁴⁹
- Dividing the 5,259,035 miles estimated daily VMT associated with unincorporated King County by the 30 kWh electricity required for every 100 miles indicates that 1,577,711 kWh would be required to electrically charge 100 percent of the miles currently driven by unincorporated area drivers, or roughly 1.6 Gigawatts (GW).
 - However, even assuming statewide action (independent of the proposed ordinance) that bans the sale of new gas-powered vehicles between 2035-2040, full conversion to electric vehicles likely wouldn't occur until after 2050. Assuming a statewide ban of new gas vehicle sales in 2035, although electric vehicles would increasingly matriculate into and through the used car market, gas vehicles would continue to circulate barring additional government or market action.
 - The total EV vehicles on the road is projected to be two percent in 2022, 15 percent by 2035, and 53 percent by 2045. This is conservatively assuming a seven percent current EV market share for new vehicles, two percent EV market share growth through 2023 when price-parity with gas vehicles is presumed, and three percent market share growth for each year following, with conversion to 100 percent EV market share for new vehicles in 2035.
 - As such, the projected per-year impacts are
 - 0.03 GW/day in 2022, or 11.5 GW/year.
 - 0.24 GW/day in 2035, or 86.4 GW/year.
 - 0.82 GW/day in 2045, or 299.4 GW/year.
 - Note that vehicles on the road are will likely take several decades to fully convert from gas-powered vehicles to electric vehicles, which this assessment does not attempt to delineate.
- The 2019 annual load of 20,833 GWh for Puget Sound Energy (PSE)⁵⁰ translates to approximately 57.08 GWh per day.
 - As such, the projected per-year impacts are
 - 0.06 percent in 2022.
 - 0.41 percent in 2035.
 - 1.44 percent in 2045.
 - Note: Unincorporated area energy delivery services are currently provided by PSE and Seattle City Light (SCL). Power impacts were compared to PSE as it serves a larger proportion of the unincorporated area in terms of square miles. The data reviewed as a course of developing this SEPA checklist is not of a scale that permits estimates of the VMT associated with either electrical service territory, or the proportion of the unincorporated area served by SCL.

While less specific, a phase one analysis of high rates of EV adoption on the western power grid concluded that, generally, there was probable sufficient levels of resource adequacy under a high level of EV penetration through 2028, and that, “EV resource adequacy can be doubled with managed charging strategies.”⁵¹

⁴⁸ U.S. Department of Energy, “New All-Electric Vehicles: EPA combined City/Hwy MPG,” [\[LINK\]](#). Accessed 4/1/2021.

⁴⁹ Plug In America, “How Much Does it Cost to Charge an Electric Car,” April 17, 2014. [\[LINK\]](#). Accessed 4/1/2021.

⁵⁰ Puget Sound Energy (PSE), “Updated 2020 Annual Renewable Portfolio Standard Report Docket UE-200504,” July 22, 2020. [\[LINK\]](#). Accessed 4/1/2021.

⁵¹ Kintner-Meyer et. al, “Electric Vehicles at Scale – Phase I Analysis: High EV Adoption Impacts on the Western U.S. Power Grid,” PNNL-29894, Pacific Northwest National Laboratory (PNNL). July 2020. [\[LINK\]](#). Accessed 4/2/2021.

Review of the PSE Integrated Resource Plan (IRP) integrated the high and low EV penetration numbers from the “Electric Vehicles at Scale..” study referenced above,⁵² forecasting a ten-fold growth of EVs between 2022 and 2045, representing 83 GW and 1,960 GW annually, respectively.⁵³ As such, Puget Sound Energy is planning for advanced EV penetration, and passage of the proposed ordinance is not anticipated to spur EV adoption at a faster rate beyond PSE’s anticipated EV penetration rates. This also holds true for Seattle City Light, which is actively pursuing and planning for accelerated vehicle electrification, detailed in its Transportation Electrification Strategy.⁵⁴

Finally, it should be reiterated that, while the EV ordinance may spur some additional EV purchases, it is not by itself responsible for the larger trend of increasing EV purchases by the general population. Hence, a majority of the energy demand detailed above will likely occur with or without implementation of the proposed ordinance.

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

The proposed ordinance includes measures allowing load management, which can reduce or respond to potential increased demands on utilities. Load managing encompasses various technologies allowing several vehicles to charge on the same electrical circuit by altering charging rates and their timing.⁵⁵ This has the potential to reduce the total electrical capacity needs of a particular site, and also to reduce electrical draws during peak charging times, so as to avoid increasing demand when demand may be increasing throughout an electrical grid.

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.

⁵² Kintner-Meyer et. al, “Electric Vehicles at Scale...” Ibid. [\[LINK\]](#). Accessed 4/2/2021

⁵³ PSE, “2021 PSE Integrated Resource Plan,” April 2021. [\[LINK\]](#). Accessed 4/2/2021. Page 6-48 (261).

⁵⁴ Daniels, Lynn and Brendan O’Donnell, “Seattle City Light Transportation Electrification Strategy,” Rocky Mountain Institute (RMI), 2019 [\[LINK\]](#). Accessed 4/2/2021. Page v (7).

⁵⁵ Richmond, Canada. Residential Electric Vehicle Charging: A Guide for Local Governments, 2018. [\[LINK\]](#). Accessed 7/30/2020. Page 6.