

December 2022 version

# Environmental Assessment Worksheet

This most recent Environmental Assessment Worksheet (EAW) form and guidance documents are available at the Environmental Quality Board's website at: <https://www.egb.state.mn.us/> The EAW form provides information about a project that may have the potential for significant environmental effects. Guidance documents provide additional detail and links to resources for completing the EAW form.

**Cumulative potential effects** can either be addressed under each applicable EAW Item or can be addressed collectively under EAW Item 21.

**Note to reviewers:** Comments must be submitted to the RGU during the 30-day comment period following notice of the EAW in the *EQB Monitor*. Comments should address the accuracy and completeness of information, potential impacts that warrant further investigation and the need for an EIS.

**1. Project title:**

**2. Proposer:**

Contact person:  
Title:  
Address:  
City, State, ZIP:  
Phone:  
Fax:  
Email:

**3. RGU:**

Contact person:  
Title:  
Address:  
City, State, ZIP:  
Phone:  
Fax:  
Email:

**4. Reason for EAW Preparation: (check one)**

Required:

- EIS Scoping
- Mandatory EAW

Discretionary:

- Citizen petition
- RGU discretion
- Proposer initiated

If EAW or EIS is mandatory give EQB rule category subpart number(s) and name(s):

**5. Project Location:**

- County:
- City/Township:
- PLS Location ( $\frac{1}{4}$ ,  $\frac{1}{4}$ , Section, Township, Range):
- Watershed (81 major watershed scale):
- GPS Coordinates:
- Tax Parcel Number

**At a minimum attach each of the following to the EAW:**

- County map showing the general location of the project;
- U.S. Geological Survey 7.5 minute, 1:24,000 scale map indicating project boundaries (photocopy acceptable); and
- Site plans showing all significant project and natural features. Pre-construction site plan and post-construction site plan.
- List of data sources, models, and other resources (from the Item-by-Item Guidance: *Climate Adaptation and Resilience* or other) used for information about current Minnesota climate trends and how climate change is anticipated to affect the general location of the project during the life of the project (as detailed below in item 7. Climate Adaptation and Resilience).

**6. Project Description:**

- a. Provide the brief project summary to be published in the *EQB Monitor*, (approximately 50 words).
- b. Give a complete description of the proposed project and related new construction, including infrastructure needs. If the project is an expansion include a description of the existing facility. Emphasize: 1) construction, operation methods and features that will cause physical manipulation of the environment or will produce wastes, 2) modifications to existing equipment or industrial processes, 3) significant demolition, removal or remodeling of existing structures, and 4) timing and duration of construction activities

c. Project magnitude:

Description	Number
Total Project Acreage	
Linear project length	
Number and type of residential units	
Residential building area (in square feet)	
Commercial building area (in square feet)	
Industrial building area (in square feet)	
Institutional building area (in square feet)	
Other uses – specify (in square feet)	
Structure height(s)	

- d. Explain the project purpose; if the project will be carried out by a governmental unit, explain the need for the project and identify its beneficiaries.
- e. Are future stages of this development including development on any other property planned or likely to happen?  Yes  No  
If yes, briefly describe future stages, relationship to present project, timeline and plans for environmental review.
- f. Is this project a subsequent stage of an earlier project?  Yes  No  
If yes, briefly describe the past development, timeline and any past environmental review.

**7. Climate Adaptation and Resilience:**

- a. Describe the climate trends in the general location of the project (see guidance: *Climate Adaptation and Resilience*) and how climate change is anticipated to affect that location during the life of the project.
- b. For each Resource Category in the table below: Describe how the project’s proposed activities and how the project’s design will interact with those climate trends. Describe proposed adaptations to address the project effects identified.

<b>Resource Category</b>	<b>Climate Considerations</b> (example text provided below is to be replaced with project-specific information)	<b>Project Information</b>	<b>Adaptations</b>
Project Design	For example, aspects of the building architecture/materials choices and site design that may negatively affect urban heat island conditions in the area considering changing climate zones, temperature trends, and potential for extended heat waves	Climate change risks and vulnerabilities identified include:	
Land Use	For example, any critical facilities (i.e. facilities necessary for public health and safety, those storing hazardous materials, or those with housing occupants who may be insufficiently mobile) that are proposed in floodplain areas and other areas identified as at risk for localized flooding; describe the risk potential considering changing precipitation and event intensity	Climate change risks and vulnerabilities identified include:	
Water Resources	Address in item 12	Address in item 12	Address in item 12
Contamination/ Hazardous Materials/Wastes	For example, how current Minnesota climate trends and anticipated climate change in the general location of the project may	Climate change risks and vulnerabilities identified include:	

<b>Resource Category</b>	<b>Climate Considerations</b> (example text provided below is to be replaced with project-specific information)	<b>Project Information</b>	<b>Adaptations</b>
	influence the potential environmental effects of generation/use/storage of hazardous waste and materials		
Fish, wildlife, plant communities, and sensitive ecological resources (rare features)	Address in item 14.	Address in item 14.	Address in item 14.

8. **Cover types:** Estimate the acreage of the site with each of the following cover types before and after development:

<b>Cover Types</b>	<b>Before (acres)</b>	<b>After (acres)</b>
Wetlands and shallow lakes (<2 meters deep)		
Deep lakes (>2 meters deep)		
Wooded/forest		
Rivers/streams		
Brush/Grassland		
Cropland		
Livestock rangeland/pastureland		
Lawn/landscaping		
Green infrastructure TOTAL (from table below*)		
Impervious surface		
Stormwater Pond (wet sedimentation basin)		
Other (describe)		
<b>TOTAL</b>		

<b>Green Infrastructure*</b>	<b>Before (acreage)</b>	<b>After (acreage)</b>
Constructed infiltration systems (infiltration basins/infiltration trenches/ rainwater gardens/bioretenion areas without underdrains/swales with impermeable check dams)		
Constructed tree trenches and tree boxes		
Constructed wetlands		
Constructed green roofs		
Constructed permeable pavements		
Other (describe)		
<b>TOTAL*</b>		

<b><u>Trees</u></b>	<b><u>Percent</u></b>	<b><u>Number</u></b>
Percent tree canopy removed or number of mature trees removed during development		
Number of new trees planted		

**9. Permits and approvals required:** List all known local, state and federal permits, approvals, certifications and financial assistance for the project. Include modifications of any existing permits, governmental review of plans and all direct and indirect forms of public financial assistance including bond guarantees, Tax Increment Financing and infrastructure. *All of these final decisions are prohibited until all appropriate environmental review has been completed. See Minnesota Rules, Chapter 4410.3100.*

<b>Unit of Government</b>	<b>Type of Application</b>	<b>Status</b>

Cumulative potential effects may be considered and addressed in response to individual EAW Item Nos. 10-20, or the RGU can address all cumulative potential effects in response to EAW Item No.22. If addressing cumulative effect under individual items, make sure to include information requested in EAW Item No. 21.

## **10. Land use:**

- a. Describe:
  - i. Existing land use of the site as well as areas adjacent to and near the site, including parks and open space, cemeteries, trails, prime or unique farmlands.
  - ii. Plans. Describe planned land use as identified in comprehensive plan (if available) and any other applicable plan for land use, water, or resources management by a local, regional, state, or federal agency.
  - iii. Zoning, including special districts or overlays such as shoreland, floodplain, wild and scenic rivers, critical area, agricultural preserves, etc.
  - iv. If any critical facilities (i.e. facilities necessary for public health and safety, those storing hazardous materials, or those with housing occupants who may be insufficiently mobile) are proposed in floodplain areas and other areas identified as at risk for localized flooding, describe the risk potential considering changing precipitation and event intensity.
- b. Discuss the project's compatibility with nearby land uses, zoning, and plans listed in Item 9a above, concentrating on implications for environmental effects.
- c. Identify measures incorporated into the proposed project to mitigate any potential incompatibility as discussed in Item 10b above and any risk potential.

## **11. Geology, soils and topography/land forms:**

- a. Geology - Describe the geology underlying the project area and identify and map any susceptible geologic features such as sinkholes, shallow limestone formations, unconfined/shallow aquifers, or karst conditions. Discuss any limitations of these features for the project and any effects the project could have on these features. Identify any project designs or mitigation measures to address effects to geologic features.
  - b. Soils and topography - Describe the soils on the site, giving NRCS (SCS) classifications and descriptions, including limitations of soils. Describe topography, any special site conditions relating to erosion potential, soil stability or other soils limitations, such as steep slopes, highly permeable soils. Provide estimated volume and acreage of soil excavation and/or grading. Discuss impacts from project activities (distinguish between construction and operational activities) related to soils and topography. Identify measures during and after project construction to address soil limitations including stabilization, soil corrections or other measures. Erosion/sedimentation control related to stormwater runoff should be addressed in response to Item 12.b.ii.
- NOTE: For silica sand projects, the EAW must include a hydrogeologic investigation assessing the potential groundwater and surface water effects and geologic conditions that could create an increased risk of potentially significant effects on groundwater and surface water. Descriptions of water resources and potential effects from the project in EAW Item 12 must be consistent with the geology, soils and topography/land forms and potential effects described in EAW Item 11.

## 12. Water resources:

- a. Describe surface water and groundwater features on or near the site in a.i. and a.ii. below.
  - i. Surface water - lakes, streams, wetlands, intermittent channels, and county/judicial ditches. Include any special designations such as public waters, shoreland classification and floodway/floodplain, trout stream/lake, wildlife lakes, migratory waterfowl feeding/resting lake, and outstanding resource value water. Include the presence of aquatic invasive species and the water quality impairments or special designations listed on the current MPCA 303d Impaired Waters List that are within 1 mile of the project. Include DNR Public Waters Inventory number(s), if any.
  - ii. Groundwater – aquifers, springs, seeps. Include: 1) depth to groundwater; 2) if project is within a MDH wellhead protection area; 3) identification of any onsite and/or nearby wells, including unique numbers and well logs if available. If there are no wells known on site or nearby, explain the methodology used to determine this.
- b. Describe effects from project activities on water resources and measures to minimize or mitigate the effects in Item b.i. through Item b.iv. below.
  - i. Wastewater - For each of the following, describe the sources, quantities and composition of all sanitary, municipal/domestic and industrial wastewater produced or treated at the site.
    - 1) If the wastewater discharge is to a publicly owned treatment facility, identify any pretreatment measures and the ability of the facility to handle the added water and waste loadings, including any effects on, or required expansion of, municipal wastewater infrastructure.
    - 2) If the wastewater discharge is to a subsurface sewage treatment systems (SSTS), describe the system used, the design flow, and suitability of site conditions for such a system. If septic systems are part of the project, describe the availability of septage disposal options within the region to handle the ongoing amounts generated as a result of the project. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall frequency, intensity and amount with this discussion.
    - 3) If the wastewater discharge is to surface water, identify the wastewater treatment methods and identify discharge points and proposed effluent limitations to mitigate impacts. Discuss any effects to surface or groundwater from wastewater discharges, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects.
  - ii. Stormwater - Describe changes in surface hydrology resulting from change of land cover. Describe the routes and receiving water bodies for runoff from the project site (major downstream water bodies as well as the immediate receiving waters). Discuss environmental effects from stormwater discharges on receiving waters post construction including how the project will affect runoff volume, discharge rate and change in pollutants. Consider the effects of current Minnesota climate trends and anticipated changes in rainfall

frequency, intensity and amount with this discussion. For projects requiring NPDES/SDS Construction Stormwater permit coverage, state the total number of acres that will be disturbed by the project and describe the stormwater pollution prevention plan (SWPPP), including specific best management practices to address soil erosion and sedimentation during and after project construction. Discuss permanent stormwater management plans, including methods of achieving volume reduction to restore or maintain the natural hydrology of the site using green infrastructure practices or other stormwater management practices. Identify any receiving waters that have construction-related water impairments or are classified as special as defined in the Construction Stormwater permit. Describe additional requirements for special and/or impaired waters.

- iii. Water appropriation - Describe if the project proposes to appropriate surface or groundwater (including dewatering). Describe the source, quantity, duration, use and purpose of the water use and if a DNR water appropriation permit is required. Describe any well abandonment. If connecting to an existing municipal water supply, identify the wells to be used as a water source and any effects on, or required expansion of, municipal water infrastructure. Discuss environmental effects from water appropriation, including an assessment of the water resources available for appropriation. Discuss how the proposed water use is resilient in the event of changes in total precipitation, large precipitation events, drought, increased temperatures, variable surface water flows and elevations, and longer growing seasons. Identify any measures to avoid, minimize, or mitigate environmental effects from the water appropriation. Describe contingency plans should the appropriation volume increase beyond infrastructure capacity or water supply for the project diminish in quantity or quality, such as reuse of water, connections with another water source, or emergency connections.
- iv. Surface Waters
  - a) Wetlands - Describe any anticipated physical effects or alterations to wetland features such as draining, filling, permanent inundation, dredging and vegetative removal. Discuss direct and indirect environmental effects from physical modification of wetlands, including the anticipated effects that any proposed wetland alterations may have to the host watershed, taking into consideration how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. Identify measures to avoid (e.g., available alternatives that were considered), minimize, or mitigate environmental effects to wetlands. Discuss whether any required compensatory wetland mitigation for unavoidable wetland impacts will occur in the same minor or major watershed and identify those probable locations.
  - b) Other surface waters- Describe any anticipated physical effects or alterations to surface water features (lakes, streams, ponds, intermittent channels, county/judicial ditches) such as draining, filling, permanent inundation, dredging, diking, stream diversion, impoundment, aquatic plant removal and riparian alteration. Discuss direct and indirect environmental effects from physical modification of water features, taking into consideration how current Minnesota climate trends and



anticipated climate change in the general location of the project may influence the effects. Identify measures to avoid, minimize, or mitigate environmental effects to surface water features, including in-water Best Management Practices that are proposed to avoid or minimize turbidity/sedimentation while physically altering the water features. Discuss how the project will change the number or type of watercraft on any water body, including current and projected watercraft usage.

### **13. Contamination/Hazardous Materials/Wastes:**

- a. Pre-project site conditions - Describe existing contamination or potential environmental hazards on or in close proximity to the project site such as soil or ground water contamination, abandoned dumps, closed landfills, existing or abandoned storage tanks, and hazardous liquid or gas pipelines. Discuss any potential environmental effects from pre-project site conditions that would be caused or exacerbated by project construction and operation. Identify measures to avoid, minimize or mitigate adverse effects from existing contamination or potential environmental hazards. Include development of a Contingency Plan or Response Action Plan.
- b. Project related generation/storage of solid wastes - Describe solid wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from solid waste handling, storage and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of solid waste including source reduction and recycling.
- c. Project related use/storage of hazardous materials - Describe chemicals/hazardous materials used/stored during construction and/or operation of the project including method of storage. Indicate the number, location and size of any new above or below ground tanks to store petroleum or other materials. Indicate the number, location, size and age of existing tanks on the property that the project will use. Discuss potential environmental effects from accidental spill or release of hazardous materials. Identify measures to avoid, minimize or mitigate adverse effects from the use/storage of chemicals/hazardous materials including source reduction and recycling. Include development of a spill prevention plan.
- d. Project related generation/storage of hazardous wastes - Describe hazardous wastes generated/stored during construction and/or operation of the project. Indicate method of disposal. Discuss potential environmental effects from hazardous waste handling, storage, and disposal. Identify measures to avoid, minimize or mitigate adverse effects from the generation/storage of hazardous waste including source reduction and recycling

**14. Fish, wildlife, plant communities, and sensitive ecological resources (rare features):**

- a. Describe fish and wildlife resources as well as habitats and vegetation on or in near the site.
- b. Describe rare features such as state-listed (endangered, threatened or special concern) species, native plant communities, Minnesota Biological Survey Sites of Biodiversity Significance, and other sensitive ecological resources on or within close proximity to the site. Provide the license agreement number (LA-\_\_\_\_) and/or correspondence number (MCE\_\_\_\_\_) from which the data were obtained and attach the Natural Heritage Review letter from the DNR. Indicate if any additional habitat or species survey work has been conducted within the site and describe the results.
- c. Discuss how the identified fish, wildlife, plant communities, rare features and ecosystems may be affected by the project including how current Minnesota climate trends and anticipated climate change in the general location of the project may influence the effects. Include a discussion on introduction and spread of invasive species from the project construction and operation. Separately discuss effects to known threatened and endangered species.
- d. Identify measures that will be taken to avoid, minimize, or mitigate the adverse effects to fish, wildlife, plant communities, ecosystems, and sensitive ecological resources.

**15. Historic properties:**

Describe any historic structures, archeological sites, and/or traditional cultural properties on or in close proximity to the site. Include: 1) historic designations, 2) known artifact areas, and 3) architectural features. Attach letter received from the State Historic Preservation Office (SHPO). Discuss any anticipated effects to historic properties during project construction and operation. Identify measures that will be taken to avoid, minimize, or mitigate adverse effects to historic properties.

**16. Visual:**

Describe any scenic views or vistas on or near the project site. Describe any project related visual effects such as vapor plumes or glare from intense lights. Discuss the potential visual effects from the project. Identify any measures to avoid, minimize, or mitigate visual effects.

**17. Air:**

- a. Stationary source emissions - Describe the type, sources, quantities and compositions of any emissions from stationary sources such as boilers or exhaust stacks. Include any hazardous air pollutants, criteria pollutants. Discuss effects to air quality including any sensitive receptors, human health or applicable regulatory criteria. Include a discussion of any methods used assess the project's effect on air quality and the results of that assessment. Identify pollution control equipment and other measures that will be taken to avoid, minimize, or mitigate adverse effects from stationary source emissions.

- b. Vehicle emissions - Describe the effect of the project’s traffic generation on air emissions. Discuss the project’s vehicle-related emissions effect on air quality. Identify measures (e.g. traffic operational improvements, diesel idling minimization plan) that will be taken to minimize or mitigate vehicle-related emissions.
- c. Dust and odors - Describe sources, characteristics, duration, quantities, and intensity of dust and odors generated during project construction and operation. (Fugitive dust may be discussed under item 17a). Discuss the effect of dust and odors in the vicinity of the project including nearby sensitive receptors and quality of life. Identify measures that will be taken to minimize or mitigate the effects of dust and odors.

**18. Greenhouse Gas (GHG) Emissions/Carbon Footprint**

- a. GHG Quantification: For all proposed projects, provide quantification and discussion of project GHG emissions. Include additional rows in the tables as necessary to provide project-specific emission sources. Describe the methods used to quantify emissions. If calculation methods are not readily available to quantify GHG emissions for a source, describe the process used to come to that conclusion and any GHG emission sources not included in the total calculation.

The following tables are examples; other layouts are acceptable for providing GHG quantification results

**Construction Emissions**

Scope	Type of Emission	Emission Sub-type	Project-related CO <sub>2</sub> e Emissions (tons/year)	Calculation method(s)
Scope 1	Combustion	Mobile Equipment		
Scope 1	Land Use	Conversion		
Scope 1	Land Use	Carbon Sink		
<b>TOTAL</b>				

**Operational Emissions**

Scope	Type of Emission	Emission Sub-type	Existing facility CO <sub>2</sub> e Emissions (tons/year)	Project-related CO <sub>2</sub> e Emissions (tons/year)	Total CO <sub>2</sub> e Emissions (tons/year)	Calculation method(s)
Scope 1	Combustion	Mobile Equipment				
Scope 1	Combustion	Stationary Equipment				
Scope 1	Combustion	Area				
Scope 1	Non-Combustion	Stationary Equipment				

Scope	Type of Emission	Emission Sub-type	Existing facility CO <sub>2</sub> e Emissions (tons/year)	Project-related CO <sub>2</sub> e Emissions (tons/year)	Total CO <sub>2</sub> e Emissions (tons/year)	Calculation method(s)
Scope 1	Land Use	Carbon Sink				
Scope 2	Off-site Electricity	Grid-based				
Scope 2	Off-site Steam Production	Not applicable				
Scope 3	Off-site Waste Management	Area				
<b>TOTAL</b>						

b. GHG Assessment

- i. Describe any mitigation considered to reduce the project’s GHG emissions.
- ii. Describe and quantify reductions from selected mitigation, if proposed to reduce the project’s GHG emissions. Explain why the selected mitigation was preferred.
- iii. Quantify the proposed projects predicted net lifetime GHG emissions (total tons/#of years) and how those predicted emissions may affect achievement of the Minnesota Next Generation Energy Act goals and/or other more stringent state or local GHG reduction goals.

**19. Noise**

Describe sources, characteristics, duration, quantities, and intensity of noise generated during project construction and operation. Discuss the effect of noise in the vicinity of the project including 1) existing noise levels/sources in the area, 2) nearby sensitive receptors, 3) conformance to state noise standards, and 4) quality of life. Identify measures that will be taken to minimize or mitigate the effects of noise.

**20. Transportation**

- a. Describe traffic-related aspects of project construction and operation. Include: 1) existing and proposed additional parking spaces, 2) estimated total average daily traffic generated, 3) estimated maximum peak hour traffic generated and time of occurrence, 4) indicate source of trip generation rates used in the estimates, and 5) availability of transit and/or other alternative transportation modes.
- b. Discuss the effect on traffic congestion on affected roads and describe any traffic improvements necessary. The analysis must discuss the project’s impact on the regional transportation system. *If the peak hour traffic generated exceeds 250 vehicles or the total daily trips exceeds 2,500, a traffic impact study must be prepared as part of the EAW.* Use the format and procedures described in the Minnesota Department of Transportation’s Access Management Manual, Chapter 5 (available at: <http://www.dot.state.mn.us/accessmanagement/resources.html>) or a similar local guidance,

- c. Identify measures that will be taken to minimize or mitigate project related transportation effects.

**21. Cumulative potential effects:** (Preparers can leave this item blank if cumulative potential effects are addressed under the applicable EAW Items)

- a. Describe the geographic scales and timeframes of the project related environmental effects that could combine with other environmental effects resulting in cumulative potential effects.
- b. Describe any reasonably foreseeable future projects (for which a basis of expectation has been laid) that may interact with environmental effects of the proposed project within the geographic scales and timeframes identified above.
- c. Discuss the nature of the cumulative potential effects and summarize any other available information relevant to determining whether there is potential for significant environmental effects due to these cumulative effects.

**22. Other potential environmental effects:** If the project may cause any additional environmental effects not addressed by items 1 to 19, describe the effects here, discuss the how the environment will be affected, and identify measures that will be taken to minimize and mitigate these effects.

**RGU CERTIFICATION.** *(The Environmental Quality Board will only accept **SIGNED** Environmental Assessment Worksheets for public notice in the EQB Monitor.)*

**I hereby certify that:**

- The information contained in this document is accurate and complete to the best of my knowledge.
- The EAW describes the complete project; there are no other projects, stages or components other than those described in this document, which are related to the project as connected actions or phased actions, as defined at Minnesota Rules, parts 4410.0200, subparts 9c and 60, respectively.
- Copies of this EAW are being sent to the entire EQB distribution list.

Signature \_\_\_\_\_

Date \_\_\_\_\_

Title \_\_\_\_\_