



Memorandum

October 3, 2019

TO: The Whatcom County Planning Commission
FROM: Matt Aamot, Senior Planner *MA*
THROUGH: Mark Personius, Director *MP*
RE: Cherry Point Amendments (PLN2018-00009)

The County Council worked with the Cascadia Law Group to develop proposed Comprehensive Plan and Whatcom County Code (WCC) amendments primarily relating to fossil fuel and renewable fuel facilities in the Cherry Point Area (some of the amendments apply on a countywide basis). The Council approved Resolution 2019-037 on August 7, 2019 forwarding the proposed amendments to the Planning Commission for review.

The Planning Commission hosted a Town Hall meeting on September 12, 2019 to listen to public comments on the proposal. The Planning Commission also held a work session on September 26, 2019 to consider the proposal, including discussion with a representative of Cascadia Law Group. At this meeting, the Planning Commission approved a motion requesting the Planning and Development Services Department to meet with industry representatives to obtain input. The Planning Commission also raised a number of policy issues and decided to continue with its deliberations on the Council's proposed amendments.

At the October 10, 2019 work session, the Planning and Development Services Department would like to request Planning Commission direction on several of greenhouse gas (GHG) emission issues, as shown below:

- GHG Mitigation for Renewable Projects
- Threshold for Requiring GHG Mitigation in the Zoning Code
- Local Mitigation
- Federal, State, Regional, and County Regulation of GHG Emissions

1. **GHG Mitigation for Renewable Projects**

The Council proposal contains two different provisions relating to GHG mitigation for renewable fuel refineries and transshipment facilities.

- a. *State Environmental Policy Act (SEPA)* – The proposed SEPA provisions (WCC 16.08.160.F.1.b.ii) state:

. . . The applicant shall demonstrate that the lifecycle greenhouse gas reductions associated with the renewable fuels provide a net reduction even when considering transportation and upstream emissions. If there is a net increase in emissions locally, the SEPA Responsible official may require mitigation. . .

- b. Heavy Impact Industrial (HII) Zone – The proposed HII regulations (WCC 20.68.801(2)(b)) state “Facility emissions, defined in WCC 20.97.124.1, shall be quantified for each expansion of refining and storage capacity . . .” Additionally, proposed WCC 20.68.801(3) indicates that “Local mitigation of greenhouse gas emissions shall be required, whenever calculated greenhouse gas emissions increase above the baseline . . .”

The SEPA provisions for renewable facilities relate to “lifecycle” emissions but the HII regulations relate to “facility emissions.” These two terms are defined differently. Facility emissions basically include upstream emissions from extraction and transportation of the raw products to the facility, refining and processing, and transportation within the boundaries of Whatcom County. Lifecycle GHG emissions include all of these things, but also include distribution and use of the finished fuel by the consumer.

The U.S. Environmental Protection Agency (EPA) website has an article entitled “Overview of Greenhouse Gases.” This article identifies carbon dioxide, methane, nitrous oxide, and fluorinated gases as main GHGs. This article states that: “. . . All of these gases remain in the atmosphere long enough to become well mixed, meaning that the amount that is measured in the atmosphere is roughly the same all over the world, regardless of the source of emissions. . .” (<https://www.epa.gov/ghgemissions/overview-greenhouse-gases>).

Policy Question: A question for the Planning Commission is whether renewable facilities should be required to provide mitigation if they result in reductions of “lifecycle emissions” but increase “facility emissions”?

For example, a renewable fuel refinery would create GHG emissions in the process of producing the fuel at the refinery. But, if you consider the lower GHG emissions emitted from use of the fuel by the driving public (tailpipe emissions), it would reduce overall GHG emissions on a global scale (when compared to use of fossil fuels). Should a renewable fuel refinery be required to mitigate GHG emissions if it would reduce global GHG emissions but increase local emissions?

2. Threshold for Requiring GHG Mitigation in the Zoning Code

The proposed Heavy Impact Industrial zoning regulations require mitigation for fossil fuel or renewable fuel facilities that increase GHG emissions above the baseline emissions (proposed WCC 20.68.801(3)). In a letter of September 25, 2019, the Northwest Clean Air Agency (NWCAA) stated:

. . . The NWCAA recognizes that currently there is no de minimus threshold for when the County will require local mitigation. So, it's unclear whether even 1 pound of increase in GHG emissions triggers an analysis. Technically, it may be difficult to calculate whether emissions increased by a pound or two from the baseline. . . GHGs are generally counted in tons of emissions. . . Given the large scope of these numbers, it could be helpful to establish a de minimus threshold in tons of GHG emitted. . . (p. 4).

As mentioned in the NWCAA letter, one pound of GHG emissions above the baseline levels would theoretically require mitigation under the proposal. For comparison, a U.S. EPA website states "A typical passenger vehicle emits about 4.6 metric tons of carbon dioxide per year. . ." (<https://www.epa.gov/greenvehicles/greenhouse-gas-emissions-typical-passenger-vehicle>).

GHG emissions from refineries vary from year to year based upon a variety of factors. Both the BP Cherry Point Refinery and the Phillips 66 Ferndale Refinery have reduced their GHG emissions since 2010. According to the EPA website, GHG emissions for these refineries are as follows:

| Refinery | 2010 GHG Emissions (metric tons) | 2017 GHG Emissions (metric tons) | % Change (2010-2017) |
|-------------------------------|---|---|-----------------------------|
| BP Cherry Point Refinery | 2,538,364 | 2,132,646 | -16% |
| Phillips 66 Ferndale Refinery | 881,224 | 748,775 | -15% |

Policy Question: A question for the Planning Commission is whether there should be a threshold established so that projects under the threshold do not require GHG mitigation. This could be achieved in one of two ways.

- a. Set a metric ton threshold. The Washington Clean Air Act states:

The department [of Ecology] shall adopt rules requiring persons to report emissions of greenhouse gases as defined in RCW 70.235.010 where those emissions from a single facility, source, or site, or from fossil fuels sold in Washington by a single supplier meet or exceed ten thousand metric tons of carbon dioxide equivalent annually. . . (RCW 70.94.151(5)(a)).

The proposed zoning code amendments could exempt a project from GHG mitigation if it is under a certain GHG emission tonnage threshold, such as emitting less than 10,000 metric tons of carbon dioxide equivalents per year.

- b. Modify the proposal so that permitted uses don't require GHG mitigation under the zoning regulations. The proposed zoning amendments currently do not require GHG mitigation for certain permitted uses (such as accessory buildings, office space, parking lots, etc.) under WCC 20.68.802(1). However, other permitted uses (such as replacement, safety upgrades, and environmental improvements) are subject to GHG evaluation and, potentially, mitigation under WCC 20.68.802(2).

An option would be to simply exempt all permitted uses from GHG analysis and mitigation under the proposed zoning provisions, and require GHG analysis and mitigation for proposals that require a conditional use permit.

In this scenario, permitted uses such as equipment replacement, safety upgrades, and environmental improvements would still be subject to SEPA review (unless categorically exempt) and subject to NWCAA permitting requirements (if applicable) just as they are today. Mitigation for GHG emissions could be required if the SEPA lead agency determined the level of emissions creates a significant adverse impact. However, under the zoning code, mitigation would not automatically be required for emission increases.

3. **Local Mitigation**

The proposed Heavy Impact Industrial Zoning regulations require that "Local mitigation of greenhouse gas emissions shall be required, whenever calculated greenhouse gas emissions increase above the baseline for a 3-year average . . ." (proposed WCC 20.68.801(3)). The proposal also states that "The County may, upon request by the Applicant, approve a fee in-lieu of providing a local mitigation project. The County shall use collected fees in-lieu of mitigation for local greenhouse gas mitigation projects . . ." (proposed WCC 20.68.801(3)(b)). In either case, the mitigation must be "local," which is not defined.

The Northwest Clean Air Agency (NWCAA), in a letter dated September 25, 2019, stated:

. . . The NWCAA questions whether the mitigation required is actually possible to achieve locally. If the County's mitigation is required under SEPA, it's unclear whether such conditions are reasonable and capable of being accomplished. GHG emissions are a global concern, and there may be more cost-effective mitigation projects outside of Whatcom County. There are also existing GHG credit markets that could provide an alternative mitigation strategy. It may be useful to consider other strategies beyond mitigation projects locally. . . (pp. 3 and 4).

State law requires that any mitigation measures imposed pursuant to SEPA authority must be "reasonable and capable of being accomplished" (RCW 43.21.C.060). Additionally, state law generally prohibits counties from imposing ". . . any tax, fee, or charge, either direct or indirect, on the construction or reconstruction of residential buildings, commercial buildings,

industrial buildings. . ." (RCW 82.02.020). There are some exceptions, one of which requires the funding to be used to "mitigate the identified, direct impact" of the project within a five year time period. There may be legal arguments about the application of these statutes, and we will defer to the legal experts on questions about the law. However, there are also practical issues relating to the proposed zoning code's "local" mitigation language.

NWCAA's September 25, 2019 letter references GHG mitigation fees it received for a hydrogen plant at Cherry Point, which was estimated to create 438,537 tons/yr of CO2 equivalents (p. 4). In 2012, NWCAA received a one-time payment of \$4 million in GHG mitigation fees for this project. NWCAA has been looking for mitigation projects in their three-county jurisdiction (Whatcom, Skagit, and Island counties) and "have found it difficult to find projects with significant GHG offsets." They still have \$500,000 of the mitigation fees left and are still searching for mitigation projects (seven years later).

Under the County Council's proposed code amendments, if the fee in-lieu option was used, the mitigation fee (\$60/ton of carbon) for the above referenced hydrogen plant would be \$26.3 million per year for the life of the project (e.g. over any given seven year period, this would equate to \$184 million). As mentioned, NWCAA received a one-time payment of \$4 million in GHG mitigation fees and is still looking for projects in the three-county region seven years after receiving the fee. Given this experience, Planning Commission should consider whether the County required mitigation would be "capable of being accomplished" (if imposed under SEPA) or could be expended within five years (if imposed under RCW 82.02.020) if such fees could only be expended for "local" projects.

Policy Question: A question for the Planning Commission is whether the term "local" should be removed from the proposed code (or replaced with a larger geography).

4. **Federal, State, Regional, and County Regulation of GHG Emissions**

The Northwest Clean Air Agency (NWCAA) letter of September 25, 2019 summarizes State Department of Ecology and NWCAA regulation of GHG emissions as follows:

. . . Ecology regulates GHG emissions when a project triggers the requirement for a Prevention of Significant Deterioration permit for another regulated air pollutant and the GHG emissions exceed 75K tons per year. WAC 173-400-110(5)(b). In such instances, Ecology establishes the Best Available Control Technology (BACT) for the GHG emissions.

Historically, if the amount of GHG emissions have been between 75K tons and 25K tons per year, NWCAA has required mitigation for GHG emissions relying on its SEPA authority – implemented and enforced through a NWCAA issued permit. If the amount of GHG emissions is less than 25K tons, the NWCAA has not historically required mitigation under its SEPA authority. . . (p. 1).

There are a number of provisions in the proposal, shown below, that address the relationship between Department of Ecology, NWCAA, and County regulation of GHG emissions (the text below is from the County Council proposal with previous PDS additions shown with underlining):

Proposed WCC 16.08.160.E (SEPA provisions)

Many of the environmental impacts addressed by these SEPA policies are also the subject of federal, state and regional regulations. In deciding whether these regulations provide sufficient impact mitigation, the County shall consult orally or in writing with the responsible federal, state or other agency with jurisdiction and environmental expertise and may expressly defer to that agency. The County shall base or condition its project decision on compliance with these other existing regulations, rules, laws, or adopted enforceable plans. The County shall not so defer if such regulations did not anticipate or are otherwise inadequate to address a particular impact of a project.

Staff Comment: What constitutes “inadequate” regulation under federal, state, and/or regional regulations? If State Department of Ecology and/or NWCAA requires an air quality permit for an industrial project in the Cherry Point area, and requires Best Available Control Technology to bring down potential emissions but does not require mitigation of the remaining emissions, is that a situation of “inadequate” regulation where the County would step in to require GHG mitigation?

Proposed WCC 16.08.160.F.1.a (SEPA provisions)

. . . Mitigation of criteria pollutant impacts will normally be the subject of air permits required by the Northwest Clean Air Agency (NWCAA) and/or State Department of Ecology (DOE) and no further mitigation by the County shall be required. However, where a project being reviewed by the County generates public nuisance impacts, odors or greenhouse gas emissions impacts not addressed through the regulations of NWCAA or DOE, the County may require mitigation under SEPA.

Staff Comment: The NWCAA indicated, in an e-mail of September 30, 2019, that EPA’s definition of criteria pollutants does not include the entire group of greenhouse gases (for example, carbon dioxide and methane are not criteria pollutants, while nitrous oxide is a criteria pollutant). Therefore, this proposed code addresses at least one type, but not all types, of GHG emissions.

This proposed SEPA provision states that mitigation would “normally” be subject of Department of Ecology or NWCAA permits and, therefore, no further mitigation by the County will be required for criteria pollutants (which include nitrous oxide, a GHG). However, this proposed SEPA provision does potentially address other GHG emissions (carbon dioxide and methane). Additionally, the Heavy Impact Industrial Zoning provisions require mitigation for projects that increase GHG emissions above baseline. How do these provisions fit together?

Proposed WCC 16.08.160.F.1.b (SEPA provisions)

. . . Mitigation may be achieved through the provisions contained in County zoning regulations or through the State Environmental Policy Act where zoning code provisions do not address mitigation of greenhouse gas emissions impacts.

Staff Comment: The SEPA provisions default to/rely upon the Zoning GHG mitigation requirements when applicable. As currently proposed, the Zoning regulations would require GHG mitigation for fossil fuel or renewable fuel projects that cause any increase in GHG emissions over the baseline emissions.

Proposed WCC 16.08.160.F.1.b.i(c) (SEPA provisions)

Greenhouse gas emissions impacts may be offset for proposals subject to WCC 20.68.801 through either code requirements or, if not addressed through code requirements, through mitigation projects that provide real, additional and quantifiable greenhouse gas mitigation. Such mitigation must not be required by any other regulatory mechanism and there shall be no double counting of emission reductions where identified as mitigation of greenhouse gas emissions impacts for permits subject to WCC 20.68.801.

Staff Comment: The double counting language should be clarified. It seems to indicate that, if mitigation is required by a different agency, then the mitigation under the County Code will be different and additional. How does this fit with the concept that, if another agency requires adequate mitigation, County mitigation is not required?

Proposed WCC 16.08.160.F.1.c (SEPA provisions)

. . . Federal, state, regional, and county regulations and programs cannot always anticipate or adequately mitigate adverse air quality impacts. If the decision-maker makes a written finding that the applicable federal, state, regional, and/or County regulations did not anticipate or are inadequate to address the particular impact(s) of the project, the decision-maker may condition the proposal to mitigate its adverse impacts or, if impacts cannot be mitigated, may deny a project under the provisions of the State Environmental Policy Act.

Staff Comment: This provision addresses air quality in general, which includes GHG emissions and other emissions.

Proposed WCC 20.68.801(3)(a) (Zoning Provisions)

. . . Greenhouse gas mitigation proposed by the applicant shall be additional, real and quantifiable and shall not be required under any other regulatory mechanism.

Staff Comment: This is similar to the SEPA language in proposed WCC 16.08.160.F.1.b.i(c). See comment above.

Proposed WCC 20.68.801(3)(c) (Zoning Provisions)

Should a national or state greenhouse gas mitigation requirement be adopted that pre-empts or would cause duplication through local greenhouse gas mitigation, the County shall defer to the national or state program.

Staff Comment: Staff assumes that the federal Clean Air Act and the Washington Clean Air Act (RCW 70.94) are not considered existing national or state GHG mitigation programs under the proposed County Code above. If they were, then the County's proposed GHG provisions would be unnecessary. Therefore, this provision preventing duplicative mitigation would not be operative at the current time (but could be at a future date).

Policy Question:

- In summary, there are a number of questions relating to how the various governmental rules and regulations relate to one another. Should the provisions outlining the relationship between federal, state, regional, and County GHG emission rules be clarified and/or simplified?

Thank you for considering these issues. We look forward to discussing them with you.