November 5, 2010

TO: **EQB Members**
FROM: **Gregg Downing, Environmental Review Coordinator**
SUBJECT: **Briefing information for proposed rulemaking authorization at November 2010 Board Meeting**

Issue before the Board:
The staff is requesting authorization from the Board to begin the formal rulemaking process to make an amendment to the Environmental Review program rules setting a mandatory EAW threshold specific to greenhouse gases ("GHGs"). Under this amendment, a threshold of 100,000 tons per year would apply to GHGs, while the existing threshold of 250 tons per year would continue to apply to other air pollutants. A staff draft of the proposed amendment and of the supporting document, the Statement of Need and Reasonableness, are included in the packet. The need for this amendment is ultimately due to changes in the interpretation and application of the federal Clean Air Act, as described below.

Background: the impending problem with GHG EAWs
The EQB proposes to amend the "Air Pollution" mandatory EAW category, at part 4410.4300, subpart 15, to clarify how greenhouse gases (GHGs) are to be treated. The types of GHGs covered under the rule amendment are the same gases as now regulated under the federal Clean Air Act: Carbon dioxide (CO_2); Methane (CH_4); Nitrous oxide (N_2O); Hydrofluorocarbons (HFCs); Perfluorocarbons (PFCs); and Sulfur hexafluoride (SF_6).

Subpart 15 now requires preparation of an EAW "for construction of a stationary source facility that generates 250 tons or more per year, or modification of a stationary source facility that increases generation by 250 tons or more per year, of any single air pollutant after installation of air pollution control equipment." The Pollution Control Agency (MPCA) is assigned responsibility for preparing all EAWs under this category. The EQB's rules do not define "air pollutant." In practice the MPCA has applied this mandatory category to substances regulated as air pollutants under the federal Clean Air Act. (The MPCA issues Clean Air Act permits for facilities in Minnesota.) In the past, GHGs have not been regulated. However, in 2007 the U.S. Supreme Court found that GHGs were air pollutants under the meaning of the Clean Air Act and, in response, the U.S. Environmental Protection Agency (EPA) issued a regulation in May 2010 under which GHG emissions will be covered by Clean Air Act permits under certain circumstances beginning in January 2011. (For Minnesota, the permits will be issued by the MPCA.) The permits will cover GHG emissions of at least 75,000 tons per year or 100,000 tons per year, depending on other factors, and are intended to cover only the largest types of GHG emitting facilities, such as power plants and refineries. (In a separate rulemaking effort, the MPCA is amending its air permitting rules to align them with the new EPA regulations for GHGs.)

Because "air pollutant" is not defined in the EQB's rules and has historically been taken to mean substances regulated under the Clean Air Act, the fact that GHGs will be regulated under the

Clean Air Act beginning in 2011 raises the issue of whether GHG emissions that exceed the existing EAW threshold of 250 tons per year will require preparation of an EAW. The problem with this is that while the 250 tons per year threshold is very appropriate for "traditional" air pollutants, it is unrealistically low for GHGs. As part of the development of its new GHG permitting regulations, the EPA made an estimate that applying a 250 tons per year permitting threshold to GHGs would require *140 times* as many permits as now issued per year; a similar increase in EAWs would be expected in Minnesota if the 250 tons per year threshold begins to apply to GHG sources. The MPCA estimates that an office building with as little as 8,000 square feet would likely emit at least 250 tons per year of carbon dioxide from heating alone. To avoid an administrative nightmare and significant bottleneck to development projects, something needs to be done to avoid having the 250 tons per year threshold for an EAW apply to GHGs. The EQB proposes to adopt a separate mandatory EAW threshold specific to GHGs which is consistent with the new regulatory scheme for GHGs under the Clean Air Act.

The Proposed Solution: separate EAW threshold for GHGs

There were two alternative methods of achieving the same results as the proposed rule considered by EQB. The first was to amend the rule to exclude GHGs from coverage by the air pollution category. The second alternative method considered was to set a different numerical threshold for GHGs.

The EQB staff has rejected the first alternative because it believes that GHGs should be covered by the rules at some appropriate threshold. Greenhouse gas emissions are now recognized as contributing to important environmental impacts and it is therefore appropriate to bring under review through the Environmental Review program. Also, in view of the fact that the U.S. Supreme Court has found that GHGs are "air pollutants" under federal law, at the least it would be illogical and confusing for Minnesota to exclude them for state purposes. In addition, as noted in at least one comment letter received, it might be impossible to legally defend excluding GHGs from the definition of air pollutants in view of the Supreme Court's ruling. Therefore the EQB staff advocates the second alternative, and to pick the thresholds decided to follow the precedent set for the existing air pollutant threshold, i.e., to set the threshold at the higher of EPA's air permitting thresholds. For GHGs, that level is 100,000 tons per year.

The proposed 100,000 tons per year threshold is intended to apply to the combined GHG emissions from a facility; i.e., if more than one type of GHG is emitted, the total quantity must be considered. However, before adding the quantities of each GHG together, the amendment will require each to be converted into its "carbon dioxide equivalent." This refers to a way to take into account the fact that different GHGs have differing capacities to heat the atmosphere due to their chemical differences. E.g., a molecule of sulfur hexafluoride has almost 23,000 times the effect as a molecule of carbon dioxide. For each GHG there is a factor like this to use to multiply the raw tons of gas emitted to get its equivalent mass of carbon dioxide. To apply the 100,000 ton per year threshold, for each GHG emitted the actual number of tons emitted is multiplied by its carbon dioxide equivalence factor, then the equivalent tons are added and compared to 100,000. The equivalence factors are taken from EPA's ''Inventory of U.S. Greenhouse Gas Emissions and Sinks,'' which is updated annually under existing commitment under the United Nations Framework Convention on Climate Change (UNFCCC).

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Also it should be understood the tons of each GHG to be emitted must be determined as the "potential to emit," rather than the actual number expected to be emitted. The difference is that under the potential to emit concept, it is assumed that the emitting source is run at 100% capacity all the time ("24/7"). This may or may not be how it will be operated in practice, but this is the method used by EPA and MPCA to determine whether permit thresholds are exceeded. As the rule states, it is assumed also that the designed in pollution control equipment is operating when the potential to emit is calculated. These assumptions are used in applying the existing 250 tons per year emission threshold under the current rule; it is proposed that the GHG emissions be treated in the same way.

To determine an appropriate threshold level for GHGs, the EQB used the same rationale as it has in the past to establish the existing air pollution EAW threshold. The existing threshold is set at the higher of the two basic emission levels used under the Clean Air Act to trigger permit requirements. Under the federal air permitting programs, new or expanding facilities can require permits if they have a potential to emit either 100 or 250 tons per year of a single air pollutant, depending on circumstances. Between 1982 and 2006, the air pollution EAW category used a threshold of 100 tons per year of any single air pollutant. In amendments adopted in 2006, the Board revised the threshold upwards to 250 tons per year. Thus, the EAW threshold has long been based on permitting thresholds under the Clean Air Act.

In its newly promulgated regulations (May 13, 2010) for GHG permitting (referred to as the "GHG tailoring rule"), the U.S. EPA sets two GHG emission levels at which permits will now be required: 75,000 and 100,000 tons per year of combined GHG emissions expressed as carbon dioxide equivalents. The 75,000 ton per year threshold will apply until June 30, 2011 only to facilities already requiring a Prevention of Significant Deterioration permit due to emissions of other than GHGs; if they exceed the 75,000 ton per year threshold they will be required to go through additional analysis of GHG emission controls. After June 30, 2011, expanding facilities that increase GHG emission by at least 75,000 tons per year will require PSD permits even if their increased emissions of other air pollutants would not otherwise require PSD review. The 100,000 ton per year threshold will apply to newly constructed projects with GHG emissions above that figure and to operating permits for existing facilities. Thus, the higher number, 100,000 tons per year, will be the more generally applicable permitting threshold for GHGs, at least for the early phases of the regulation of GHG under the Clean Air Act. (EPA has indicated that it intends to further consider changes and that lower thresholds for certain facilities could be adopted in a few years.)

While the EQB could adopt a dual-tier threshold similar to EPA's system, the staff recommends a simpler scheme using just one threshold, the more generally-applicable 100,000 tons per year threshold. Having a multiple threshold makes the rule more complicated to apply and can lead to confusion. At this early stage of taking GHGs into account in environmental review, it does not seem beneficial to try to establish multiple thresholds. Perhaps as experience is gained and more data become available from EAWs prepared reasons for refining the threshold will become evident, in which case the threshold can be amended.

Request for Comments.
The staff issued a Request for Comments about this anticipated rule amendment process on October 4, 2010 and accepted comments through November 3, 2010. The written comments received are included in the Board packet and a summary of the salient comments is included in the Annotated Agenda.

Staff recommendation. The staff recommends that the Board adopt the sample resolution enclosed with the Board packet that would authorize the start of formal rulemaking and direct the Chair, Executive Director, and staff to take the necessary logistical steps for the "dual notice" process. The resolution takes the standard "boilerplate" form recommended for rulemaking authorization. Taking this action does not commit the Board to ultimately adopting any or all of the proposed amendments.

The sample resolution specifically authorizes the initiation of what is referred to as the "dual notice" process. In that rulemaking process, a notice of rulemaking would be issued by the Chair announcing a public hearing but also indicating that the hearing will be cancelled unless at least 25 persons request that the hearing be held. If the hearing is held, an Administrative Law Judge would preside and would ultimate issue a report to the Board based on the hearing about whether to adopt the amendment proposed or to take some other action instead. The staff suspects that a hearing will be needed, but believes that the dual notice process should be used to avoid unnecessary time and cost if a hearing is not needed. By authorizing rulemaking, the Board is not committing itself to adopting the amendment proposed. Up until the time the Board actually adopts final rules the Board may withdraw the amendment, or may modify the amendments prior to adoption (within certain limits).

CC: EQB Technical Representatives