



Metropolitan Water Reclamation District of Greater Chicago

100 East Erie Street
Chicago, IL 60611

Legislation Text

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TRANSMITTAL LETTER FOR BOARD MEETING OF NOVEMBER 7, 2019

COMMITTEE ON STORMWATER MANAGEMENT

Mr. Brian A. Perkovich, Executive Director

Request for approval of methodology for conducting studies on impacts of watershed specific release rates required under Watershed Management Ordinance Article 208

Dear Sir:

Pursuant to Article 208 of the Watershed Management Ordinance (WMO), the District shall initiate a study of certain provisions of and potential amendments to the WMO. The study shall be initiated by the end of 2019 with a targeted completion of May 2022. Article 208.2 addresses the impact of watershed specific release rates on disproportionately impacted communities. Article 208.3 addresses impacts of release rates under existing and future development scenarios in collar counties on watersheds present within the District. Article 208.4 addresses the impact of volume control and watershed specific release rates on stream erosion and related water quality effects such as turbidity and sedimentation.

In 2015, the District contracted with the Illinois State Water Survey (ISWS) to complete a watershed specific release rate study as directed in Article 504.3 of the May 1, 2014 WMO. The goal of the study was to determine the maximum allowable release rates that will not exacerbate flooding due to development. Communities that are located within watershed planning areas with lower watershed specific release rates must provide more detention volume storage compared to communities located within watershed planning areas with higher release rates. According to the Watershed Specific Release Rate Study, it is essential that all communities, regardless of local economic conditions or other factors, comply with the watershed specific release rates to avoid the risk of flooding downstream areas. In light of this, the concern highlighted by Article 208.2 was addressed during the Watershed Specific Release Rate Study. A detailed summary is attached.

The Engineering Department proposes entering into a new agreement with ISWS to complete the studies required under Articles 208.3 and 208.4. As part of the 2015 study, ISWS evaluated release rates by comparing results from the Detailed Watershed Plan base models with results from future scenario models. Future scenarios modeled included 40 percent of land area subject to development complying with stormwater detention requirements under various release rates. Models of future development in Cook County simulated conditions at release rates ranging from 0.15 cfs/acre to 0.30 cfs/acre. Models of future development in portions of collar counties upstream of Cook County simulated conditions at the respective county's current release rate. To study the requirements of Article 208.3, ISWS would model future development conditions in portions of the collar counties upstream of Cook County at various release rates, ranging from 0.15 cfs/acre to 0.30 cfs/acre. However, it is unlikely that collar counties will change their regulations to become less conservative than current conditions.

It should be noted that future development of the Lower Des Plaines River Watershed in Wisconsin is not included in the attached scope of work. The Watershed Specific Release Rate Study found that release rates for development along the main stem of the Des Plaines River in Cook County alone will not mitigate water surfaces elevation increases, even without accounting for the projected impacts of future development in

Wisconsin. Rather, a watershed-wide solution involving flood control and mitigation measures is more likely to reduce flood damages along the main stem.

To meet the requirements of Article 208.4, ISWS will conduct a literature review of the effects of watershed management strategies such as volume control and watershed specific release rates on stream erosion, turbidity, and sedimentation. Based on the results of the review a pilot study may be conducted.

The proposed scopes of work for the studies required under Article 208.3 and 208.4 are attached. These documents have been reviewed by the Technical Advisory Committee (TAC) and comments have been incorporated. Should the Board of Commissioners agree with this proposed methodology, the Engineering Department will request authority to negotiate and enter into an agreement with ISWS to complete the studies.

It is therefore requested that the Executive Director recommend to the Board of Commissioners that it approve this request describing the methodology for conducting studies of impacts of watershed specific release rates required under WMO Article 208.

Respectfully Submitted, Catherine A. O'Connor, Director of Engineering, WSS:MD

Recommended, Brian A. Perkovich, Executive Director

Disposition of this agenda item will be documented in the official Regular Board Meeting Minutes of the Board of Commissioners for November 7, 2019

Attachments