

DATE: January 29, 2016

TO: FILE

FROM: TIM ASPLUND

SUBJECT: Fitchburg Northeast Neighborhood Urban Service Area Amendment  
Staff Analysis - Discussion

### **DISCUSSION**

DNR is responsible for approval of Areawide Water Quality Management (WQM) Plans (and plan amendments) in designated areas. In the case of Dane County, the DNR contracts with CARPC for analysis and review of proposed amendments to the Dane County WQM Plan. WDNR and CARPC have established standard procedures for the review and approval process for plan amendment requests. This process consists of CARPC working directly with applicants to develop acceptable amendment proposals. CARPC then submits a recommendation to WDNR for approval, or conditional approval, of the request. CARPC staff work with the applicant upfront to modify initial proposals to improve compliance with local, regional and state regulations before the proposals are reviewed by the regional commission and the DNR.

### **Procedure**

In the case of the City of Fitchburg NEN request, after the municipality received the decision from CARPC recommending denial of the request, the City made a direct request to the DNR to review the amendment proposal and requested that DNR provide an administrative decision under ch. NR121, Wis. Adm. Code. The City of Fitchburg submittal to WDNR regarding the proposed amendment contained a portion of the record of the applicant's request. Additional supporting information was included in the applicant's submittal and analyses to CARPC.

The WDNR's review included CARPC technical reports, correspondence, commission meetings, public hearing proceedings, the staff analysis report and CARPC resolution, as well as subsequent correspondence and materials created by the DNR. The review file also includes a detailed description of how applicable review criteria have been addressed as well as a map of the urban service area change including the delineation of environmentally sensitive areas which include but are not limited to springs, wetlands, rivers/streams, lakes, groundwater recharge areas/open space lands, and buffers.

Following the review, WDNR issued a decision on April 14, 2015 approving a portion of the application area. As part of the decision, the WDNR included a number of conditions that were intended to be applicable to the approved area and as a means of gathering additional information to make a decision on the remaining areas.

Following the April 14, 2015 decision, Fitchburg Lands, LLC, filed a petition for judicial review challenging the decision as being beyond the authority of the WDNR because the decision's conditions were unclear, and that the decision was not made on the entire area sought to be approved in the City's application. The Town of Dunn intervened as a party in the case. On its own review, and upon discussions with the parties, the WDNR determined that in the interest of resolving the judicial review action and issuing a decision that would not be subject to challenge, several conditions of the approval should be made more clear as to scope and timing, as well as making more clear the description of the applicability of the conditions to the City. In support of this effort, additional clarification and explanation of the application was provided by the City and an owner of land within the proposed urban service area amendment area that was lacking at the time of the April 14, 2015, approval.

As part of the litigation process, additional conditions and settlement terms were proposed and agreed to by all the parties. These provided assurances to DNR that water quality would be protected and it allowed for additional areas to be included in the approval. Specifically, the landowner agreed to the following: 1) collection of additional data to support and inform design of stormwater features; 2) additional data that provide the public with specific information about stormwater quantity and quality associated with pre- and post-development conditions; 3) expansion of the wetland area buffer zone that exceed the layout proposed and accepted in the initial application; and 4) measurable performance criteria as a condition precedent for subsequent development phases. These terms and conditions are further explained below.

**Stormwater Management - management actions required to remove or reduce impacts to water resources from the development action.**

Stormwater management in the proposed development area, compared with other areas of the county, is complicated. The development, as initially proposed, appeared to use wetlands as stormwater receiving waters, potentially resulting in increasing stormwater flow to Swan Creek and its corridors. Currently, portions of the land area are in agricultural use with varying levels of soil compaction. Existing land uses deliver excess nutrients and sediment to downstream resources. The variable terrain and differential water table (reflecting the perched aquifer in the eastern portion of the proposal) complicate stormwater retention in a residential development scenario. Conversely, protection of the southern riparian wetlands and downstream resources precludes channeling stormwater from newly developed areas to these resources as well.

The release of dissolved and particulate nutrients and sediment, and a potential to increase the existing spread of aquatic invasive species (reed canary grass, phragmites, and cattails) due to hydrologic modifications resulting from a development's discharge to sensitive areas are of concern. Increased stormwater flow to Swan Creek and its riparian corridor, which feeds the Waubesa Wetlands, poses a potential significant risk to the resource. Due to this concern, a detailed stormwater plan that works in concert with, but avoids the treatment within, natural surface water features such as existing springs and wetlands, is recommended for the long-term health of the regional wetlands.

The CARPC staff analysis suggested stormwater control measures that, in some aspects, exceed the applicable state requirements of ch. NR 151, Wis. Adm. Code. The City of Fitchburg has agreed to comply with infiltration of 90% of the pre-development infiltration volume for all land uses. A site-specific stormwater management plan which delineates specific control measures will be required prior to construction. Stormwater management actions that involve using natural surface water features such as wetlands or streams as receiving waters require compliance with applicable local, regional and state regulations including chs. NR102 and NR103, Wis. Adm. Code, state water quality standards. More details regarding stormwater management are found in the conditions of the amendment decision.

In addition to the conditions of approval, and as part of the litigation process, the landowner agreed to include additional provisions in the storm water management plans for all of the land within the approved area under its ownership. The additional provisions include the following:

1. Design and maintain the storm water management system to provide post development stay-on volume to at least 90% of the predevelopment stay-on volume for the one-year average annual rainfall period, as defined by WDNR. The limit on the area of the site devoted to infiltration will not apply, and the exemption from infiltration requirements for areas of soil with infiltration rates of less than 0.6 in. /hr. will not apply.
2. The storm water management system will be designed and maintained to provide a reduction in off-site phosphorus runoff load of at least 50% compared to current land-use.

3. The storm water management facilities shall be maintained in accordance with good storm water management practices
4. The green space buffer adjacent to the regulatory wetland near Larsen Road will be at least 300 feet, except for the side of the wetland adjacent to Larson Road.

The landowner further committed to maintaining storm water management facilities in accordance with good storm water management practices and to comply with stormwater design standards and performance criteria listed in Conditions of Approval and the settlement agreement reached as part of the litigation process.

Finally, prior to construction, the landowner also agreed to conduct stormwater monitoring for one year at the outlets of 4 sub-watersheds in the Northeast Neighborhood. Two of these watersheds will subsequently be developed, whereas the other two watersheds will remain in agricultural or open space use. After the bulk of this “Phase 1” development is complete, storm water from these same 4 watersheds will be monitored for one year. Comparison and analysis of the predevelopment and post-Phase 1 development runoff data will be conducted to determine whether the stormwater management systems are consistent with the conditions of approval, and the additional terms agreed to by the parties in the litigation negotiations. If so, then the development will proceed for the remaining area.

#### **Land Use Needs – Compliance with DOA approved population projections**

The original Fitchburg Northeast (NEN) Neighborhood Amendment proposed adding 985.9 acres of land and water resources to the Central Urban Service Area of the Dane County Water Quality Management Plan. The proposal identified 273.5 acres of environmental corridor and used demographics based on 2003 population projections. CARPC has subsequently provided updated land use needs based on 2013 population projections from the US Census and provided a letter from DOA indicating support of the projections used, as required under ch. NR121, Wis. Adm. Code (see Wis. Adm. Code NR 121.05)

#### **Environmentally Sensitive Areas – Delineate Areas Inappropriate for Sewered Development**

Sewer service area plans require the delineation of environmentally sensitive areas that are prohibited from sewered development. In addition, the proposed development shall not impact the quality of these surface water features under the state’s water quality standards. In the case of wetlands, the applicable standard is ch. NR103, Wis. Adm. Code the state’s functional wetlands water standard.

The initial amendment request includes lands with hydrologically complex features in the northern, eastern and southern areas. The initial proposal identified 273.5 acres of environmentally sensitive areas; however, only a portion of the wetland features had been professionally inventoried. There is a need for professional wetland delineations and buffers that correspond to protections requisite to maintain water quality standards for all wetland features. Additionally, a new inventory of springs conducted by WGNHS identified features that shall be identified as environmentally sensitive areas. These springs have not been delineated on the development map.

With this action, the DNR approves approximately 454 acres of developable and non-developable lands to the USA for the City of Fitchburg. Fine scale analysis of environmentally sensitive area delineations both within the approval area as well adjacent to and downstream will be developed and published for the record and future USA amendment applications.

## **Wetland Quantity and Quality Protection - Impacts to Regionally Significant Resources: Waubesa Wetlands**

Hydrologically connected downstream resources include the regionally important and unique Waubesa Wetlands complex. Statements by numerous experts and advocates have outlined the value of these resources and the importance and need for protection of these resources. Significant investigation regarding the specific sources and flows of surface and groundwater feeding these wetlands is warranted.

To ascertain the condition of surface water features in and around the approved amendment area, wetlands are to be field delineated and a quantitative wetland condition survey of riparian and isolated wetlands conducted as part of the conditions of approval. In addition, the areas within the USA as approved that are owned by Fitchburg Lands and designated as "green space" in the final ESA map will be permanently dedicated through an enforceable real estate restriction that will be recorded in the office of the Register of Deeds to ensure that such lands shall not be subject to industrial, commercial or residential development, but may be used for park-related facilities (e.g., shelter) or infrastructure and storm water management.

In addition, the Department recommends that the DNR, City of Fitchburg, Town of Dunn, CARPC and others should conduct a watershed-based study to provide recommendations for management actions and protection areas focusing on the Waubesa Wetlands. This study should use updated groundwater model data, storm event data, and nutrient and sediment runoff projections for areas feeding the Waubesa Wetlands. This is included as an Additional Recommended Action in the decision.

A special study of the Waubesa Wetlands should also be conducted by DNR and partner agencies through the WQM Planning Program as staff and fiscal resources allow. These studies will apply the Floristic Quality Assessment and the WI Wetland Rapid Assessment Methodology to assess impacts to wetland functional values as part of compliance with chs. NR102 and NR103, Wis. Adm. Code. DNR will actively seek partners to participate on a collaborate study of the wetlands and to identify management actions to protect these regionally significant resources.

## **Impacts to Regionally Significant Resources: Groundwater**

Initial discussions between DNR and the WGNHS regarding the application of the Dane County Hydrological Model for analysis of this amendment revealed that a previous, coarser-scale version of the model was applied to the proposed amendment. The 2013 model results indicated that source water areas for the Waubesa Wetlands are primarily located in western portion of the county, where hydraulic conductivity and therefore permeability to the deep aquifer is high.

In the east just southwest of Lake Waubesa, a geologic irregularity in the Eau Claire Shale (which acts as an aquitard where it is present), results in the deep aquifer-fed spring that helps form the Waubesa Wetlands. This information is combined with well-documented and increasing issue of aquifer drawdown in the Madison Metropolitan area ("cone of depression") and 2035 model projections hypothesizing the loss of Starkweather Creek along with significant flow reductions in numerous other surface features. Therefore, while not a requirement for this specific application, the **DNR requests that the City of Fitchburg use the updated Dane County Hydrologic Model for future application proposals (including evaluation of areas not approved in this DNR decision document)**, as well as any additional significant land use change scenarios in the region.

In addition, CARPC technical staff, DNR, and the WGNHS, should **complete the Dane County WQM Plan: Groundwater Status and Protection Plan by December 2016**. The report will provide recommendations for source water protection areas to reduce cone of depression impacts and to protect areas that feed surface water features such as the perched fen located west of Lake Waubesa. This study will provide more detail regarding

current and future well placement. The plan will help identify needed areas for detailed studies of groundwater flow and surface and groundwater interaction areas in the southern reaches of Dane County. And in addition, this report should identify water quantity mitigation actions that may alleviate groundwater use pressure. This is included as an Additional Recommended Action in the decision. The completion of this report is not a requirement for the development of the subject urban service area approval issued in this decision document. However, this and subsequent amendments should be considered in light of the long-term impacts on groundwater resources in Dane County.

### **Public Participation**

Extensive public participation on the proposed amendment was offered at the local level during the CARPC meetings which serve as part of the local public hearing for amendment requests. These public input sessions extended over two meetings in late 2014 became part of the official record for this decision.

On March 12, 2015, DNR issued a press release notifying the public that the Department was reviewing the City's request for the NEN Amendment. The press release directed the public to a DNR webpage where the city's cover letter, amendment request, and supporting documentation were posted. As part of the public participation process, the DNR accepted public comment from March 12 - April 3, 2015. Two subsequent Gov Delivery notices were issued. During the public comment period, DNR received 71 written comments against the proposed amendment and 8 comments supporting the proposal. During this time, 5 persons/entities requested a public hearing on the matter. In addition, the DNR met with the Town of Dunn and its legal representatives, as well as wetlands experts residing in the Town, to provide detailed comments for consideration during decision making. These public comments are available on the DNR's website.

### **NEED TO ADD PARAGRAPH FOR REVISION PUBLIC COMMENTS.**

The WDNR considered all public comments in its final decision.