

AGENDA

Meeting of the Capital Area Regional Planning Commission

March 11, 2010

City-County Building Room 315, 210 Martin Luther King Jr. Blvd., Madison WI

7:00 p.m.

RPC Meeting Procedures and Deadlines

Registering and Speaking at RPC Hearings and Meetings: Persons wishing to speak on any RPC public hearing or agenda item must register and give the registration form to the meeting recorder before the item comes up on the agenda. The time limit for testimony by registrants will be between 3 and 5 minutes as determined by the Chair. Speakers may *not* yield their time to other speakers; however, applicants for USA/LSA amendments may be granted from 10 to 25 minutes which may be allocated to one or more speakers. The RPC may alter the order of the agenda items at the meeting.

Deadlines for Written Communications: Written communications intended to be provided to the Commission and considered as part of the information package for a public hearing or agenda item should be received in the RPC office no later than noon, 7 days prior to the meeting. Written communications received after this deadline will be reported and provided to the Commission at the meeting.

RPC Action Scheduling: If significant controversy or unresolved issues are raised at the public hearing, the RPC will usually defer or postpone action to a future meeting.

1. Roll Call (welcome to Commissioner Imes)
2. **Election of Officers: Chair, Vice-Chair, Secretary, and Treasurer (*actionable item*)**
3. **Selection of Executive Committee membership (*actionable item*)**
4. **Approval of minutes of the February 11, 2010 meeting (*actionable item*)**
5. Review of agenda
6. Public comment for items not on the agenda
7. New business
8. **Consideration of Resolution CARPC No. 2009-15 amending the *Dane County Land Use and Transportation Plan* and *Dane County Water Quality Plan* by revising the Central Urban Service Area boundary and Environmental Corridors in the City of Fitchburg (*actionable item*)**
9. **Consideration of Resolution CARPC No. 2010-1 amending the *Dane County Land Use and Transportation Plan* and *Dane County Water Quality Plan* by revising the Central Urban Service Area boundary and Environmental Corridors in the City of Madison, the Town of Blooming Grove, and the Town of Burke (*actionable item*)**
10. **Consideration of Agreement with the Board of Regents of the University of Wisconsin System, University of Wisconsin-Extension, and WGNHS to update the Regional Groundwater Model (*actionable item*)**
11. **Consideration of *Farmland Loss in Dane County* issue paper (*actionable item*)**
12. **Consideration of convening Budget Workgroup to discuss 2011 budget and work program (*actionable item*)**
13. **Consideration of authorizing staff to submit a letter of comment concerning proposed revisions to State Administrative Code NR 151 on stormwater management (*actionable item*)**
14. Report and Discussion on the FUDA planning process
15. Communications

16. Report of Chair / Discussion
 - a. Report of Executive Committee meeting of March 11, 2010
17. Report of Deputy Director / Discussion
18. Future agenda items (next meeting is scheduled for April 8, 2010)
19. Adjournment

If you need a sign language interpreter, materials in alternate formats, or other accommodations to access this meeting, please contact CARPC staff at 266-4137, or TDD 266-4529, at least 72 hours in advance of the meeting.

Re: Election of Officers: Chair, Vice-Chair, Secretary, and Treasurer

Decision Items:

1. Elect the CARPC officers

This item was deferred for action at the 1/14 and 2/11 meetings. The CARPC Bylaws provide for four officers to be elected by the body, although the Commission may choose to elect other officers if deemed necessary. Members remain in office for one year until the next Annual Meeting, or until they resign or are removed by the body. Other than the Chairperson, who also serves as Chair of the Executive Committee, officers are not automatically members of any committee of the Commission. However, in the past CARPC has set Executive Committee membership with all four officers plus one at-large member selected by the Commission. If CARPC elects to continue this practice, it may also wish to consider continuing the practice of ensuring that all four appointing authorities are represented in the offices.

The following summarizes the duties of each office, as indicated in the bylaws.

Chairperson. The Chairperson presides with full voting rights at all meetings of the Commission and the Executive Committee. The Chairperson is responsible for seeing that the agenda for each meeting of the Commission is prepared, and is authorized to sign or execute documents on behalf of the Commission. The Chair also performs other duties as required by law, the CARPC Bylaws, or as assigned by the Commission, and presents to the body any matters which, in his/her judgment, require its attention.

Vice Chairperson. In the absence of the Chairperson or in the event of his/her inability to act, or in the event of a vacancy in the position of Chairperson, the Vice Chairperson performs the duties of the Chairperson. The Vice Chairperson also performs other duties as assigned by the Commission.

Secretary. The Secretary ensures that all records of the Commission, including its resolutions, transactions, findings, determinations and any other records required by law, the Bylaws and the Commission to be maintained. The Secretary also executes all documents and papers of the Commission required to be countersigned, and performs other duties as assigned by the Commission.

Treasurer. The Treasurer of the Commission ensures that an accurate record of all receipts and disbursements of the Commission are maintained, and performs other duties as assigned by the Commission.

Commissioners should be prepared to nominate and elect its officers at the meeting.

Materials Presented with Item:

1. None

Contact for Further Information:

Chris Gjestson, Administrative Services Manager
266-4138
ChrisG@CapitalAreaRPC.org

Re: Selection of Executive Committee membership

Decision Items:

1. Select Executive Committee members

This item was deferred for action at the 1/14 and 2/11 meetings. The Commission (and the previous RPC) has had an informal practice of selecting five Commissioners to serve on the Executive Committee. The Chairperson of the CARPC is the only automatic Executive Committee member (serving as Committee Chair), the other four have been the other three CARPC officers plus one at-large member selected by the Commission.

Excerpt from the CARPC Bylaws:

Executive Committee. The purpose of the Executive Committee is to provide advice and counsel to the Executive Director on management, budget, and personnel matters to the extent specified in this section. The Executive Committee is not intended to make recommendations on policy matters. The Executive Committee shall be appointed by the Commission. The Chairperson of the Commission shall serve as Chairperson of the Executive Committee. The Executive Committee (i) shall be responsible for seeing that a proposed annual budget is presented to each Commissioner on or about June 1st of each year, and the Budget and Personnel Panel on or about July 1st of each year; (ii) shall have the authority to approve or disapprove disbursements on behalf of the Commission; (iii) shall have the authority to approve transfers between expenditure line items of the adopted Commission budget; (iv) shall lead the performance evaluations of the Executive Director; and (v) shall have only such additional powers and responsibilities as may be specified from time to time by the Commission. In no event shall the powers of the Executive Committee extend to adoption of the annual budget, the amendment of any urban or limited service area, the voting of any appropriation, the adoption of any part of any plan for the Commission's region or the rendering of planning advice on regional problems. The Executive Committee shall report its action on all matters to the Commission at the next meeting of the Commission following the taking of such action. A majority vote of the members when a quorum is present shall be controlling on any matter voted upon.

Materials Presented with Item:

1. None

Contact for Further Information:

Chris Gjestson, Administrative Services Manager
266-4138
ChrisG@CapitalAreaRPC.org

MINUTES

Capital Area Regional Planning Commission

February 11, 2010

City-County Building Rm 315, 210 MLK Jr Blvd, Madison WI

7:00 p.m.

Present: Zach Brandon, Curt Brink, Martha Gibson, Peter McKeever, Ed Minihan, Jeff Miller, John Murray*, Kurt Sonnentag, Susan Studz, Phil Van Kampen

Absent: Kristine Euclide, Steve Hiniker, Larry Palm

Staff Present: Chris Gjestson, David Greene, Mike Kakuska, Kamran Mesbah, Barbara Weber, Attorney John St. Peter

* arrived late

1. Roll Call

Chair Miller called the meeting to order at 7:06 p.m.; roll was recorded. He introduced new members Peter McKeever, appointed by the Dane County Executive, and Susan Studz, appointed by the Dane County Towns Association.

2. Election of Officers: Chair, Vice-Chair, Secretary, and Treasurer

Moved by Mr. Sonnentag, seconded by Mr. Brink, to defer action to the next meeting, due to incomplete attendance. Motion carried unanimously on voice vote.

3. Selection of Executive Committee membership

Moved by Mr. Sonnentag, seconded by Mr. Minihan, to defer action to the next meeting. Motion carried unanimously on voice vote.

4. Approval of minutes of the January 14, 2010 meeting

Moved by Mr. Van Kampen, seconded by Mr. Hiniker, to approve the minutes of the January 14, 2010 meeting. Mr. Gjestson stated the last clause of the second sentence of the last paragraph on page 2 (“...as amended on the agenda cover sheet”) was incorrect and should be deleted. Recognized as a friendly amendment without objection. Motion to approve amended minutes carried unanimously (Mr. McKeever and Ms. Studz abstaining).

5. Review of agenda

There were no changes requested.

6. Public comment for items not on the agenda

Arnold Harris, 3427 County Rd. P, Mt. Horeb, representing Western Dane Coalition for Smart Growth and Environment, stated that the proposal for a county-wide FUDA analysis should supersede the current process, with all potential development areas being analyzed simultaneously. This is a unique opportunity to prioritize areas that take into consideration elements beyond those required by NR 121, and would take out the politicized process of USA amendment reviews. He stated that individual members would be contacted to discuss this approach. He thanked the Chair for his service to CARPC.

Stefi Harris, 3427 County Rd. P, Mt. Horeb, representing Western Dane Coalition for Smart Growth and Environment, requested that the website show developable acres of CUSA and municipalities, and 20-year population forecasts for each USA, and the methodology for how the developable acreage figures were derived. She requested the public be given more than three minutes to speak and give presentations.

Gary Werner 2302 Lakeland Ave., Madison, representing Capital Region Advocacy Network for Environmental Sustainability (CRANES), thanked the Chair for his service to CARPC. He stated that CRANES was not opposed to all development in Dane County; it opposed the current process for reviewing USA amendment requests that were in sensitive areas, which perpetuated the unsustainable auto-dependent growth pattern of the previous 60 years; we can't afford to continue this approach due to climate change, water quality degradation, roads and other infrastructure costs, and loss of farmland. We need to keep farmland that can sustain the local population. He asked for help for communities to get serious about infill development. He stated that LEED standards were eclipsed by International Living Building Institute, which should be promoted. He encouraged dialogue regarding standards for development in Dane County.

Jon Becker, 4233 Kenwood St., Madison, stated that there was momentum to address the gap left by Smart Growth state laws; local government such as Middleton and Westport worked together on development proposals, but adjacent communities and counties were not sufficiently part of the process. He encouraged the conduct of regional economic impact analyses of development proposals such as Bishops Bay. He referred to a news report that REALTORS data indicated a five percent return on local housing stock over a fifteen-year period; he stated that if lost revenue from farmland loss or downstream impacts were factored, there may not be any return on investment. Infill should be encouraged as cost-effective development. He asked how Madison can be stopped from becoming a Waukesha; he described the benefits of living in a bikeable and aesthetically pleasing area. He described the diminishing supply of fossil fuel and the need to plan for its depletion.

Jerry Derr, 1595 CTH V, Columbus, representing Dane County Towns Association, registered to speak (Mr. Murray arrived). Mr. Derr stated that the four appointing authorities and staff needed to be in agreement on how FUDA will proceed; he recognized the difficulties in proceeding without sufficient resources. He read a resolution adopted by the DCTA executive board directing its CARPC representatives to support a policy that will prioritize completion of the FUDA process; DCTA did not advocate a single way to do this, and it did not support a moratorium on development while FUDA is completed.

Harry Read, 2545 Van Hise Ave., Madison, representing Audubon Society, described the dependency of human well-being on natural resources; land should be treated as a finite resource. CARPC was final arbiter of where development would occur; decisions need to make sense on a regional scale, and need to protect its natural resources. When CARPC formed, FUDA was supposed to allow CARPC to make informed decisions on development, but it has proceeded too slowly while large sprawling developments have been approved.

Mr. Miller stated that a discussion on FUDA would take place at the meeting. He asked if the separation of the MPO would preclude a truly effective regional planning entity. Mr. Derr stated that although likely difficult to do, it would be good to discuss its re-integration into RPC.

Don Hammes, 3507 Valley Ridge Rd., Middleton, stated that due to the permanency of urban development, CARPC members should not make decisions on USA amendments until all information had been reviewed. Some USA amendments do not provide enough information to review all water quality impacts, such as those from roadway runoff. He questioned how CARPC could make a decision on a 900-acre proposal without more detail on infrastructure requirements; Mr. Miller requested that comments be limited to items

not on the agenda. Mr. Hammes questioned the accuracy of build-out forecasts. He asked for a pause on USA amendment reviews until FUDA could be completed.

Sally Kefer, 3015 Elm Ln., Middleton, stated that as a former commissioner, she knew that CARPC had worked on policies and criteria for an extended period; it should lead the way in encouraging compact, efficient development without overwhelming existing facilities, rather than large proposals that aren't easily assimilated into existing urban areas. She expressed concern that staff is put into a position to review incomplete proposals which require staff to fill in the blanks. She stated that the future calls for more energy efficiency.

7. New business

None.

8. Re-consideration of Resolution CARPC No. 2009-14 amending the *Dane County Land Use and Transportation Plan* and *Dane County Water Quality Plan* by revising the Central Urban Service Area boundary, the Fox Bluff Limited Service Area boundary and Environmental Corridors in the City of Middleton and Town of Westport

The following individuals registered in support of the proposal: Eileen Kelley, 4626 Mineral Point Rd., representing the City of Middleton; Tom Wilson, 5387 Mary Lake, Waunakee, representing Town of Westport; and Andy Inman, 4206 Savannah Ct., Middleton, representing himself and T-Wall Properties. The following individuals registered in opposition to the proposal: Constance Threinen, 2121 Gateway St. Middleton, representing CRANES; and Mary Anglim, 2134 E. Washington Ave., Madison.

Mr. Miller stated that the item was on the agenda pursuant to CARPC bylaws (Section 7). Mr. McKeever stated that due to his role as an attorney, he was obliged to recuse himself from discussion and consideration of Resolutions 2009-14 and 15.

Moved by Mr. Sonnentag, seconded by Mr. Van Kampen, to approve Resolution CARPC No. 2009-14 with the conditions of the staff analysis dated Nov. 6, 2009. Mr. Sonnentag stated he was disappointed in the outcome of the last vote; he refuted statements made implying that information was lacking. He described the competency of city planning staff, and stated that CARPC staff considered the proposal a model for others.

Ms. Gibson asked if re-consideration would continue to be placed on the agenda until a full body was present. Attorney St. Peter stated that the bylaws provided that as long as there was an absence, re-consideration would be scheduled if adoption failed and the number of absentees plus the number of Aye votes equaled eight or more. Mr. Miller asked staff to address comments made regarding inadequate water supply and impacts on groundwater drawdown. Mr. Mesbah stated that staff estimates of per capita water use were in the upper range in order to be safe, even though planned conservation efforts would likely produce lower usage; the infrastructure plans to meet estimated water demands in the 20-year planning horizon are adequate. Groundwater impacts are a regional issue, and long-term solutions to drawdown included both conservation and recycling efforts. Mr. Miller asked if the proposal provided adequate infiltration; Mr. Mesbah answered yes, and stated that the standards proposed by the applicants were advanced; the proposal was to maintain pre-development volumes and would likely recharge more water than currently occurs due to reduced evapotranspiration after development. Mr. Miller asked if measures would be in place that would prevent lake

impacts similar to the Lake Mendota plume from erosion during the Bishops Bay Golf Course construction; Mr. Mesbah stated that the plume occurred in the late '80's prior to County standards. Construction phasing and mitigation practices by installing stormwater ponds before land disturbing activities, which are required as a condition of approval, would prevent a repeat of such a plume. The proposed measures are above all current standards. Mr. Miller asked how the completion of a county-wide FUDA, rather than proceeding with the current USA-by-USA approach, would better inform the proposal; Mr. Mesbah indicated that a county-wide FUDA was untenable due to the level of collaboration required among 61 units of government. He stated that FUDA needed to eventually be part of a regional plan; the establishment of USA boundaries as part of the county-wide water quality plan is a comparable model. He stated that when staff first presented the approach to FUDA planning, identifying the urban growth boundary based on a county population forecast was the first step, to be followed by a watershed-level plan that establishes the rural elements to be accounted in the process; the *Land Use and Transportation Plan* would then be comprehensively updated through the 2014 – 2019 period creating a regional framework within which FUDA plans would fit. Opening up the process to all municipalities simultaneously would invite inter-municipal competition, which would be detrimental given the Commission's lack of authority as an advisory agency. Mr. Miller asked about impact on the North Mendota Parkway; Mr. Mesbah stated that MATPB staff indicated that the need for the Parkway was driven by regional needs; the proposal alone would not cause the need for the Parkway.

Mr. Minihan stated that the Parkway studies greatly preceded the proposal, and the transportation impacts of the proposal should have been included in the Parkway considerations. He described the need for assurances that the engineered stormwater measures of the proposal would work properly, and would not be paid for by taxpayers. He referenced instances in which municipalities neglected failed stormwater measures. Mr. Miller asked what mechanisms would provide these assurances; Ms. Kelley stated that the Town requires that the deeds for every property in the development have stormwater maintenance provided or paid for by owners, and the City has required maintenance agreements for all stormwater management facilities. She stated that a third party could be authorized to ensure maintenance of stormwater management facilities. Mr. Miller asked if the applicants would agree to provide these assurances as conditions of approval; Ms. Kelley indicated yes dependent upon Plan Commission concurrence, and as long as the standards were objective and all agreed on the third party.

Mr. Wilson suggested that the addition of a condition of approval, which was standard in all Town of Westport development agreements, would provide the requested assurances: "The Dane County Land & Water Resources Department shall have construction and maintenance review and enforcement authority over erosion control and stormwater management structures and facilities in the amendment area." He stated that a second condition could be added to ensure enforcement of the staff conditions of approval: "The City of Middleton and Town of Westport shall condition approval of the development in the amendment area (whether by zoning or land division or both as appropriate) on all of the approval conditions of this Resolution." He stated that the traffic patterns of the proposal were fully considered by the North Mendota Parkway Advisory Committee, as indicated in the map he had distributed at the public hearing (Nov. 12, 2009).

Mr. Miller asked if Mr. Minihan would prefer the two proposed conditions of approval be added to the motion as a friendly amendment; he answered yes. Messrs. Sonnentag and Van Kampen agreed to amend the motion; there were no objections.

Ms. Gibson stated that she had water quality concerns over infrastructure; a proper analysis had not been done regarding the size of the sewer lines, whether they required replacement, and the impacts of replacement and other improvements such as roadway widening. She expressed concern over impacts of drawdown on Dorn Creek, and comments made at the public hearing by Cal DeWitt over inadequate consideration of impacts on threatened species and water. She expressed support for a condition which would require restoration of the wetland to priority 1 and restoration of the lower reaches of Dorn Creek by removing phosphorus and related sediment. She expressed concern for the overall size of the proposal; the proposal met about one quarter of 2030 CUSA land demand, and combined with the Fitchburg and Madison proposals, nearly half of the CUSA demand would be met. She stated that she would be more comfortable approving large USA amendments if there were consensus among the other players that the proposed size was appropriate. Mr. Mesbah stated that the CARPC policy provides that all units of government in the CUSA are solicited for comment when amendments over 300 acres of developable land are proposed. CUSA expansions are considered for those communities which are ready and able to provide services to expanded urban areas. He clarified that the proposal with the other two amendment requests proposed approximately 1,400 developable acres, of about 4,400 acres of demand. The City of Middleton has indicated that this proposal should satisfy its demand to 2030. He stated that the proposals, although large, represent an appropriate pace of forecast development.

Ms. Studz stated that the proposal was large, but other CUSA communities are notified and able to provide input, and the planning and design appeared to support local and regional goals. Opposing the proposal based on unknown issues was problematic. She stated that the location of the proposal seemed reasonable, and the intergovernmental cooperation among communities near the amendment area appeared to be ideal.

Ms. Gibson asked if the applicants would be willing to restore the lower reaches of Dorn Creek. Mr. Inman stated that the referenced amendment area – 40 acres north of Oncken Road – was planned to remain undeveloped except for one wilderness lodge, the wetland and its 300-foot buffer would be protected in environmental corridor. Mr. Mesbah stated that most of the area surrounding the Dorn Creek wetland complex was publicly owned; studies on Dorn Creek indicate that wetland restoration would require addressing the farmland north of the area, a source of silt in the creek. Restoration of the wetland complex would be appropriate if and when the agricultural operations implemented advanced conservation practices and when the other public entities are ready to undertake a system-wide restoration project for the wetland complex. Mr. Mesbah stated that the staff analysis indicated that staff recommended completion of a wetland protection/restoration plan and implementation approach for the Dorn Creek wetland complex. Ms. Gibson requested the recommendation be a condition of approval; Mr. Wilson expressed support. Amendment accepted as friendly without objection.

Motion to adopt carried 8-1 on roll call vote (Ms. Gibson voting no).

9. Consideration of Resolution CARPC No. 2009-15 amending the *Dane County Land Use and Transportation Plan* and *Dane County Water Quality Plan* by revising the Central Urban Service Area boundary and Environmental Corridors in the City of Fitchburg

Mr. Mesbah reported that Mayor Allen had requested that action be deferred to the next meeting. Moved by Mr. Murray, seconded by Mr. Brandon, to defer action to the March meeting. Motion carried unanimously on voice vote (Mr. McKeever recused).

10. Public Hearing: Consideration of Resolution CARPC No. 2010-1 amending the Dane County Land Use and Transportation Plan and Dane County Water Quality Plan by revising the Central Urban Service Area boundary and Environmental Corridors in the City of Madison, the Town of Blooming Grove, and the Town of Burke

a. Staff Presentation

Mr. Mesbah suggested it may be more helpful to the flow of information if the applicant provided a presentation first. There were no objections.

Rick Roll, City of Madison Planning, 215 MLK Jr. Blvd., gave a PowerPoint presentation on the proposal, which was the first phase of the City Northeast Neighborhood Development Plan, a short-term (0-5 years) growth area of the City Comprehensive Plan adopted in 2006. He described cooperative planning with local governments in the amendment area, the proposal's consistency with City sustainability goals, and the geographic boundaries of the request which proposes compact mixed-use land uses which provide a complete range of housing types. The proposal provided transit-oriented development with high residential densities and easy access to park and recreational land; net density of the neighborhood was proposed for 10.7 dwelling units per acre.

CARPC staff made PowerPoint presentations. Ms. Weber described the request, which proposes to add 776 acres (459 acres developable) to the CUSA., including 179 of existing development and 146 acres of environmental corridor. She described the proposed land uses, housing, and the proposal's consistency with local plans, CARPC policies and the goals of the *Land Use and Transportation Plan*. Mr. Kakuska described the natural resources of the amendment area, which drains to the headwaters of Door Creek. He stated that staff recommended that a wetland protection/restoration plan be prepared. He stated that low gradient of the area restricted proper drainage; he described the importance of controlling the impacts on hydrology. Mr. Mesbah described the stormwater conditions of approval as described in the staff analysis dated Feb. 5, 2010, which include control of peak rates of the 1-, 2-, 10- and 100-year storms. The applicant's goal that 25% of infiltration be done by rain gardens was a good goal; however, it didn't address increase in volume due to increase in imperviousness. Staff recommended post-development runoff volume maintained to pre-development runoff for the 1-year rain series. He described the importance of a watershed-wide stormwater strategy. Staff recommended deferral of action; the City-proposed standard was based on City negotiation with landowners of the amendment area, so City staff needed to re-visit the stormwater volume issues with landowners. Staff and City staff responded to questions by commissioners.

Mr. Miller stated that he would be interested if the City would consider the same two conditions added to the Bishops Bay proposal.

b. Open Public Hearing to take testimony from registrants; close Public Hearing

Mr. Miller opened the public hearing. Gary Werner, 2302 Lakeland Ave., Madison, representing CRANES, registered to speak in opposition to the proposal. Mr. Werner stated that the proposal had laudable goals, but CRANES supported the staff recommendation to defer action. He paraphrased from a written letter from CRANES, which had opposed essentially all USA amendments recently because FUDA should be completed prior to considering USA proposals. He stated that many of the ideas for the proposal have come from Madison's sister city in Germany, which is essentially walkable; this does not seem to emulate that model. In terms of infiltration issues, he

urged planning staff to review the International Institute for Living Buildings website, which exceeds LEED standards. He requested that CARPC push the standards in Dane County the best it can.

The following registered in opposition to the proposal: Don Hammes, 3507 Valley Ridge Rd, representing the Wisconsin Wildlife Federation. The following registered in support of the proposal: Rick Roll, City of Madison Planning, 215 MLK Jr. Blvd.; Brian Grady, City of Madison Planning; and Mike Dailey, City of Madison Engineering, 210 MLK Jr. Blvd. There were no other registrants; Mr. Miller closed the public hearing.

c. Consideration of Resolution CARPC No. 2010-1

Moved by Ms. Gibson, second by Ms. Studz, to postpone action to the next meeting or until staff determines the proposal ready for action. Motion to defer carried unanimously on voice vote.

11. Authorization for the Deputy Director to sign agreements with the U.S. Geological Survey, the cities of Middleton and Madison to perform water resources monitoring activities

Moved by Mr. Sonnentag, seconded by Mr. Van Kampen, to authorize the signatures. Motion carried unanimously on voice vote.

12. Report and Discussion on the FUDA planning process

13. Discussion of the CARPC 2010 Unified Planning Work Program

Mr. Miller suggested that items 12 and 13 be combined for the purposes of a seamless discussion; there were no objections. Mr. Miller described the budget limitations placed on CARPC by the petitions for CARPC creation adopted by local units of government, which limited the certifiable budget amount from .3 mils, as allowed by state statute, to .17 mils of equalized property valuation. Mr. Mesbah described the 2010 Work Program and the associated work deadlines; the budget and work program are developed on a rolling basis, starting with the 2008 program. He referred to a two-page timeline which outlined planned work activities for 2008 through 2014, and described the activities and associated deadlines. Mr. Miller asked what work was required; Mr. Mesbah stated that all the water quality planning activities, other than the FUDA-related work, were required by law; the FUDA work was required by local agreement. With the increased FUDA responsibilities staffing levels remained unchanged, including one employee in effect serving two roles. Questions and discussion continued. Mr. Mesbah made a PowerPoint presentation on the FUDA process and the relevant issues. Discussion followed. Mr. Miller asked about the legal requirements of FUDA; Attorney St. Peter stated that he would provide the Commission with his formal opinion prior to the next meeting.

Mr. Miller asked members to think about how FUDA can be carried out, and to discuss with their local officials their thoughts on FUDA. Ms. Studz suggested a meeting be held solely to discuss FUDA; Mr. McKeever agreed, perhaps meeting as a committee of the whole, but goals of the meeting should be identified and materials provided prior to the meeting. Mr. Miller stated he would work with staff to identify an appropriate time.

14. Consideration of Resolution CARPC No. 2010-2 amending the 2010 Budget by increasing the "Recruitment" operating expense line item from \$0 to \$23,000, and allocating \$23,000 from Operating Reserves as a revenue line item entitled "Operating Reserve Allocation for Recruitment" and authorizing Chair to sign

Agreement with The Mercer Group Inc. to conduct the recruitment of the Executive Director position

Motion by Mr. Van Kampen, seconded by Ms. Studz, to adopt Resolution CARPC No. 2010-2. Mr. Murray stated that it would be important for Panel members to agree in writing on a position description; motion amended to require Panel agreement on the position description prior to recruitment, without objection. Amended motion carried unanimously by voice vote.

15. Consideration of letter in response to Environmental Protection Agency solicitation of comments to provide input on modifying federal stormwater regulations

The proposed letter of comment dated February 11, 2010, was provided at members' places. Motion by Mr. Sonnentag, second by Mr. Minihan, to submit the letter. Motion carried unanimously on voice vote.

16. Consideration of Resolution CARPC No. 2010-3 expressing appreciation to Sally Kefer for her service and contribution to the Capital Area Regional Planning Commission

Motion by Mr. Brandon, second by Ms. Gibson, to adopt Resolution CARPC No. 2010-3. Motion carried unanimously on voice vote.

17. Consideration of Resolution CARPC No. 2010-4 in honor of and appreciation to Harold Krantz for his service and contribution to the Capital Area Regional Planning Commission

Motion by Mr. Brandon, second by Ms. Studz, to adopt Resolution CARPC No. 2010-4. Mr. Derr thanked members on behalf of Mr. Krantz, and described the satisfaction Mr. Krantz had felt in serving on the Commission. Motion carried unanimously on voice vote.

18. Communications

The following were placed at members' places: a memo dated Feb. 11, 2010, from Sally Kefer, indicating opposition to the Bishops Bay proposal; and memo dated Feb. 11, 2010, from CRANES urging deferral on the City of Madison "Northeast Neighborhood" CUSA amendment request.

19. Report of Chair / Discussion**a. Report on Executive Committee meeting of February 11**

The meeting had been cancelled due to lack of quorum.

20. Report of Deputy Director / Discussion

None.

21. Future agenda items

Mr. Murray suggested that members gather informally with family in order to encourage a more effectively communicative body; there was general agreement.

22. Adjournment

Moved by Ms. Gibson, seconded by Mr. Sonnentag, to adjourn; motion carried at 11:13 p.m.

Recorded by Chris Gjestson

Re: Consideration of Resolution CARPC No. 2009-15 amending the *Dane County Land Use and Transportation Plan and Dane County Water Quality Plan* by revising the Central Urban Service Area boundary and Environmental Corridors in the City of Fitchburg

Decision Items:

1. Consideration of Resolution CARPC No. 2009-15

The public hearing for this item was initially scheduled for Dec. 10, 2009, but was cancelled due to weather-related commissioner absences. The staff analysis for the request was provided with the Dec. 10 materials, and is available online at http://danedocs.countyofdane.com/webdocs/PDF/capd/SA_Fitchburg_McGaw_12.04.09.pdf. The public hearing was held at the meeting of Jan. 14, 2010, when action was deferred. Action was again deferred at the Feb. 11 meeting upon request of the applicant. The following was included in the Feb. 11 meeting materials, and remains unchanged EXCEPT for the additional paragraph added on page 7 (underlined text), regarding consideration of less stringent stormwater volume standards if subsequently adopted by CARPC.

Synopsis

The proposed amendment will add 397.7 acres to the Central Urban Service Area in the McGaw Neighborhood, east of U.S. Highway 14 and south of Lacy Road, in the City of Fitchburg. The amendment request proposes a total of 90.6 acres of residential development, including an existing residential subdivision of 22.0 acres. The 68.6 new residential acres are proposed to be developed with 951 new housing units accommodating approximately 2,092 persons, including an estimated 160 school-aged children. The development proposal also includes 4.3 acres of retail use, 16.6 acres of office use, a transit station on 4.8 acres, a 61.8 acre business park, 91.8 acres of street right-of-way, 8.7 acres for stormwater management and 119.2 acres of parks and open space. An existing corn processing plant occupying 29 acres is to be redeveloped, and the amendment area includes 24.5 acres of existing street right-of-way. 115.2 acres of parks and open space are proposed to be designated as environmental corridors. Therefore the proposed amendment will add a net total of 207.1 developable acres to the Central Urban Service Area.

Background

The proposed amendment is within the twenty-year service area land demand for the Central Urban Service Area. It is part of a well-planned neighborhood, providing the full range of urban services, and is consistent with ten of the CARPC goals. The sensitive natural resources of the area have been included in environmental corridors. These resources include woodlands, wetlands, shoreland buffers, floodplains, intermittent streams, and expanded (300-foot) wetland buffers.

The City should be commended for the extensive site characterization conducted as part of the McGaw Neighborhood Plan. It should be regarded as a model for excellent natural resource assessment.

The amendment areas include soils with the potential for seasonal high groundwater tables as shown in Map 9. These areas may have limited suitability for development due to a seasonal high water table (zone of soil saturation), which can cause problems with groundwater induced flooding. On-site soils investigations should be conducted from April to June to determine the actual extent of seasonal high groundwater in the amendment area to prevent future problems. Staff recommends that field confirmed problem areas be zoned to restrict buildings with basements *or* be protected from development by inclusion in environmental corridors. If buildings with basements and sump pumps are allowed, the stormwater management plan must account for this additional water volume in the design of the stormwater management facilities.

The existing stormwater ordinances in the City of Fitchburg and the McGaw Neighborhood Plan include performance standards that are more stringent than those in NR 151 and the Dane County Chapter 14 in some areas. These standards will help mitigate the adverse impacts of the proposed development. However, the emerging science indicates that to more fully mitigate the impact of development on the natural resources in this area warrants even more stringent standards in some areas. Staff recommends the performance standard of maintaining pre-development runoff volumes and groundwater recharge rates with no cap on infiltration areas. These higher standards are to protect and restore the natural resources in the area and to prevent the development from further increasing the high lake levels in Lake Waubesa.

The peak flow rate control requirement in the City of Fitchburg stormwater ordinance for this watershed covers a larger design storm (100-yr 24-hr) than required by NR 151 or Dane County Chapter 14. Increased peak flow rates from smaller storms can also result in erosive velocities and flashier stream flows. Therefore, CARPC staff recommends that the 1-yr 24-hr storm also be included in the range of design storms used for peak flow rate control. This has also been proposed by WDNR as a change to NR 151. Some communities, such as the Cities of Middleton and Verona, have adopted more protective maximum predevelopment runoff curve numbers for peak rate control than those required by NR 151 or Dane County Chapter 14. The City of Fitchburg should also consider adopting more protective maximum predevelopment runoff curve numbers, at least for sensitive watersheds.

An important resource objective identified in the City's McGaw Neighborhood Plan is maintaining base flow discharge to Swan Creek and water supply to the associated springs and wetlands. Staff recommends a performance standard based on the WGNHS study pre-development groundwater recharge rates for the amendment area, currently established as 9 to 10 inches per year.

Controlling increased runoff volumes is important for preventing increases in sediment and nutrient transport as well as higher water levels. Therefore staff recommends a performance standard of controlling post development runoff volumes to be equal to or less than pre-development runoff volumes for the one-year average annual rainfall period, as well as the five-year average rainfall period.

About forty percent of the amendment area has sub-soils with the potential for good rates of infiltration. Evapo-transpiration and rainwater collection for beneficial use are also potential volume control practices. A post development volume control standard should be feasible

within the amendment area. If necessary, retrofit practices could be implemented in other areas of the sub-watershed to meet a volume control standard on a sub-watershed basis.

It is important to note that the objective of controlling high water levels on Lake Waubesa cannot be realized by limiting urban development in the amendment area alone. The amendment area comprises less than 1% of this watershed and water levels are significantly affected by stormwater management practices in the upstream Yahara Lakes. Therefore staff also recommends that a standard of no increase in runoff volume be required for all future development in the Yahara Lakes watersheds. A watershed level intergovernmental agreement should be facilitated by the CARPC to develop a consensus among all the stakeholders regarding the best approach for managing stormwater runoff contributions to the lakes. A volume control standard may be the only approach that would help control further increases in the water levels of the lakes. The Commission has already referred the issue of volume control to its Environmental Resources Technical Advisory Committee for discussion and recommendation.

CARPC staff have met with City of Fitchburg officials, staff, and consultants. The City accepts and commits to meeting the conditions of approval recommended below by the CARPC staff.

At the January 14, 2010 meeting of the CARPC a number of questions were raised and Commission decided to refer these questions to staff for comment, and for the item to be brought back to the Commission.

Issues Concerning Community Development

Needs Assessment

NR 121 requires that CARPC base sewer service area planning on a planning horizon of a minimum of 20 years (NR 121.05(1)4.(g)2.b.), using state approved forecast methodologies (the CARPC forecast methodology was approved by the Wisconsin Department of Administration and is tied to WDOA county population forecasts per NR 121.05(1)(c)3.b.). As we enter 2010, that requires a planning horizon beyond 2030. The next timeframe for which Wisconsin Department of Administration (WDOA) population figures are available is 2035, so 2035 forecasts are used for the analysis. The current CARPC land demand forecast identifies a need for 4,628.6 additional developable acres to be added to the Central Urban Service Area to satisfy the needs of the forecasted 2035 population. All lands within the existing Central Urban Service Area, including vacant, undeveloped lands within the CUSA in Fitchburg, have been taken into account in the land demand calculations. The McGaw amendment proposes to add 207.1 developable acres to the Central Urban Service Area, far less than the amount calculated to be needed to serve the population within the required planning horizon. Therefore, the requirement of establishing need for the McGaw amendment is satisfied on the basis of land demand.

The Central Urban Service Area is viewed by the CARPC as a single urban area. Population and land demand are not calculated for individual communities within multi-jurisdictional urban service areas. With respect to the land demand calculated for a multi-jurisdictional urban service area, amendments have always been allowed on a first-come, first-served basis. This policy is intended to support an important basis of USA planning in the region, namely that expansion should be based on the willingness and readiness of the requesting unit of government to plan for and provide the full range of services for the proposed expansion area. Each community sharing the urban service area is notified of any proposed amendment to the service area and given ample opportunity to comment on the amendment proposal.

The City of Fitchburg volunteered detailed information about the developable lands within the urban service area within their city because they keep close track of the inventory of land as part of the growth management strategy included in their comprehensive plan. The City should not be penalized for the thorough knowledge they have of their community, which is an essential component of the detailed plan they have developed for managing growth.

Farmland Preservation

Fitchburg is unique among Dane County cities in that it has a large area of agriculture within city borders which is not planned for urban development. The City has a plan for farmland preservation that is incorporated into the current Dane County Farmland Preservation Plan. The Fitchburg plan is currently being updated to be consistent with the new Wisconsin Working Lands Initiative and to be incorporated into the updated Dane County Farmland Preservation Plan. As a result, the agricultural lands in the City of Fitchburg have the same protections as Dane County towns, and have the added protection that the potentially encroaching urbanized area has adopted and supported these protections and put in place growth management policies that direct and contain future growth. In the process of updating the Farmland Preservation Plan, the City's Agricultural and Rural Affairs Committee is proposing that all agricultural production land outside of the 15 year development demand area be included in the Farmland Preservation Area and be zoned Exclusive Agriculture. The amendment area has been identified in the City's Comprehensive Plan as within the 15-year development area.

Issues Concerning Natural Resources

Swan Creek

The amendment area drains to Swan Creek, Lake Waubesa, continuing downstream through the Yahara River system. Swan Creek is designated a Warm Water Forage Fishery primarily due to its low baseflow (approximately 1cfs), which limits the habitat to forage fish populations – largely Brook Stickleback, Johnny Darters, and Bluntnose Minnows. These are classified as native pollution-tolerant pioneer species. Water quality in the stream is very good. Montgomery Associates Resources Solutions, LLC conducted a stream habitat assessment as part of the McGaw Park Neighborhood Plan. Overall, the stream has the desirable characteristics typical of a small headwater stream. However, the stream is susceptible to erosion and siltation.

Stormwater management requirements have been suggested by CARPC staff and accepted by the City of Fitchburg to protect Swan Creek based on the noted susceptibilities of this resource.

Environmental Corridors

The significant natural resources in the area have been included in the environmental corridors. These resources include ecologically significant woodlands, wetlands, wetland and shoreland buffers, floodplains, and streams.

The delineated corridors exceed the guidelines of the *Dane County Water Quality Plan* for establishing environmental corridors.

Endangered Species

There are four Endangered Plant species that have the potential to occur in the amendment area, if the appropriate habitat were to exist. A field survey conducted as part of the McGaw Park Neighborhood Plan did not find endangered species, and concluded that appropriate habitat is not present in the amendment area.

Wetlands

Natural Resources Consulting, Inc. conducted a wetland determination and delineation. There are two wetland areas in the amendment area. The first is a diverse riparian wetland complex located on the eastern boundary of the amendment area associated with the south branch of Swan Creek. It include four communities including wet meadow, shrub-carr, floodplain forest, and farmed wetland. The quality of the wetland warrants a more protective buffer. The City of Fitchburg has committed to a 300 ft. buffer in this case, as opposed to the minimum 75 feet.

The second wetland is an isolated wetland consisting of wet meadow and shrub-carr. The wetland is much lower in quality and isolated, so the min. 75 ft. buffer would be sufficient.

It should be noted that vegetative buffers in environmental corridors are not intended to provide stormwater runoff treatment from developed areas. Vegetative buffers provide room for natural expansion and provide habitat enhancement and separation from active development areas. Stormwater runoff from developed areas is intercepted and directed to stormwater management and treatment facilities.

State Natural Area – South Waubesa Wetlands

Swan Creek drains to the South Waubesa Wetlands located approximately 1.5 miles downstream from the amendment area. It is a wetland complex of more than 400 acres. It is one of several important large peat deposits in the Yahara River system and one of the County's most outstanding wetlands. The DNR and Nature Conservancy have purchased 538 acres of land in and around the Waubesa Wetlands – and cooperatively manage the land as a designated State Natural Area (one of a dozen or so in Dane County)

The fens and sedge meadows found here are extremely susceptible to changes in water levels and groundwater supply. Therefore, maintaining the storm “bounce,” or water level fluctuation and duration, to the wetlands will require the control of stormwater volumes from the development in the amendment area. This volume control will also maintain the groundwater supply to these wetlands.

The City of Fitchburg has accepted the volume control standard and has committed to its implementation as part of the proposed development.

Lake Waubesa

Lake Waubesa is the smallest of the Yahara Chain of Lakes. Because of its relatively small size, shallow depth, and upstream contributions, it is particularly vulnerable to re-suspension of phosphorus in the sediments, resulting in poor water quality. Flooding is also a problem, as it is for the other Yahara Chain Lakes. Water levels frequently exceed summer maximum lake levels, approaching the 100-yr. flood level three (3) times in the nine (9) years represented by the graph shown on page 11 of the staff analysis of this amendment. This is because of the increased volumes of stormwater runoff, combined with the limited capacity of the system to move or convey water. It is the low gradient (flat) profile, combined with weed growth, which restricts proper drainage

In order to address the impacts of increased runoff volumes on water levels, it will be necessary to control post-development runoff volumes to predevelopment levels. Note that this same volume standard is necessary for the entire watershed, including Lakes Monona and Mendota – just to maintain the present situation. Any *improvement* in the situation will require retrofitting stormwater volume controls in areas that have already been urbanized.

The City of Fitchburg has accepted the volume control standard and has committed to its implementation as part of the proposed amendment.

Shallow Groundwater

The amendment area includes soils with seasonal high groundwater levels. Shallow depth to groundwater can cause problems with groundwater induced flooding. Therefore, on-site soil investigations should be conducted from April to June. Problem areas should be confirmed in the field and zoned to restrict buildings with basements. If buildings with basements and sump pumps are allowed, the stormwater management plan must account for this additional water volume.

The City of Fitchburg has accepted this condition on stormwater management and plat design.

Baseflow

An important resource objective in the McGaw Neighborhood Plan is maintaining baseflow discharge to Swan Creek, its associated wetlands, and springs. The recharge areas for Swan Creek extend south and west of the McGaw Neighborhood Planning area. Staff recommends a performance standard of maintaining pre-development recharge rates of between 9-10 inches per year (Wisconsin Geological and Natural History Survey 2009).

That effectively deals with recharge loss. It does not address the impact of pumping and diversion of wastewater to Badfish Creek. In terms of scale, modeling conducted by Montgomery Associates indicates that pumping could reduce baseflow to Swan Creek by <5% under a high demand scenario. It appears that the Eau Claire shale layer or confining unit is limiting the impact of deep well withdrawals on surface water bodies – tapping into the deep regional supplies instead. This should not be dismissed, however, since the impacts are cumulative. As such they should be more properly considered in the context of a regional groundwater protection strategy, along with other municipalities in the Madison metropolitan area. Fitchburg has offered to participate in a project to update the regional groundwater model to better evaluate alternative management practices to reduce the regional groundwater recession. One strategy shows much promise: that of exceeding natural infiltration rates by collecting and focusing precipitation as groundwater recharge. However, the conditions need to be right and there are also potential groundwater quality and quantity problems, such as groundwater mounding. These need to be taken into account as part of an overall regional collaborative effort.

It is also important to note that because of the presence of the Eau Claire shale layer under the amendment area, recharge practices required by volume control and stormwater management standards to be implemented by the City of Fitchburg will serve to enhance stream baseflow through shallow groundwater seeps along the stream.

Summary

In summary, the water resource impacts of development are largely due to an altered hydrologic balance; in other words, a groundwater-dominated system transitioning to one dominated by surface-water. As the hydrologic balance of the system becomes altered, it establishes a new/usually diminished equilibrium or state. The impacts are clear:

- Flashier stream flows (sudden higher peaks)
- Increased frequency and duration of bankfull flows
- Reduced groundwater recharge and stream base flow
- Greater fluctuations in wetland water levels
- Increased frequency, level, and duration of flooding

- Additional nutrients and contaminants entering the receiving water bodies
- Geomorphic changes in receiving streams and wetlands

So in this regard, maintaining pre-development hydrology, or volumes and rates of stormwater runoff, can be seen as an effective approach to protecting our water resources, the biological communities that depend on them, as well as all the other resource amenities like outdoor recreation, scenic beauty, and other quality of life experiences.

Staff Recommendation

The City accepts the following conditions of approval proposed by the CARPC staff, with the provision that if the Commission adopts a less stringent stormwater volume control standard based on the recommendations of its Environmental Resources Technical Advisory Committee (ERTAC), then the City would have the option to request the Commission to consider this less stringent standard for the amendment area.

This suggestion by the City is consistent with current CARPC processes. Adopted conditions of approval by the Commission become elements of the *Dane County Water Quality Plan*, and are therefore subject to subsequent amendments through a formal plan amendment process. It is possible that more data and predictive models will be available at a future date, allowing a detailed and predictive analysis that can better quantify the impacts of increases of runoff volume on receiving water resources, thus providing a more exact mitigation standard than currently available.

The proposal reflects a well planned neighborhood with transit oriented high density development that can be used as a showcase for future development in the region. The City is in agreement with the findings of the staff analysis and is committed to implementing measures to achieve the stringent performance standards proposed by staff, intended to address the potential adverse impacts of urbanization in the amendment area.

Staff recommends approval of this amendment, based on the land uses and services proposed by the City of Fitchburg, and conditioned on the City of Fitchburg pursuing the following:

1. Submit a detailed stormwater management plan for each phase of development to CARPC and DCL&WCD staff for review and approval prior to any land disturbing activities in that phase of the amendment area. The stormwater management plan shall meet the following performance standards *throughout* the amendment area:
 - a. Install stormwater practices in each phase prior to other land disturbing activities in that phase, and protect these practices from compaction and sedimentation during land disturbing activities or restore them after land disturbing activities are completed
 - b. Provide at least 80% sediment control for the amendment area in accordance with existing ordinances
 - c. Control peak rates of runoff for the 1, 2, 10, and 100-year 24-hour design storm to “pre-development” levels (i.e. maximum Runoff Curve Number = 68 for hydrologic soil group B)
 - d. Control post development runoff volumes to be equal to or less than pre-development runoff volumes for the one-year average annual rainfall period as well as the five year average rainfall period as defined by WisDNR

- e. Maintain, at least, the WGNHS pre-development groundwater recharge rates (currently identified as 9 to 10 inches per year for the amendment area) with no caps on the extent of infiltration areas
- f. Provide deep tilling to restore all areas compacted during construction
- g. Stormwater practices are to be publicly managed, or have a perpetual legal maintenance agreement finalized with the local municipal authority

It is also recommended that the City of Fitchburg pursue the following:

1. Prepare a wetland protection/restoration plan and implementation approach for the Swan Creek wetlands in the project area and provide a copy of the report for CARPC staff review and comment. Consider including the hydric soils areas adjacent to the existing wetlands in the wetland restoration area.
2. Continue to work with other municipalities in mitigating regional groundwater declines resulting from municipal well withdrawals and diversion of wastewater, including participating in the update of the regional groundwater model, enhanced recharge, water conservation and reuse practices.
3. Further study is needed regarding the extension of Nobel Drive east of Syene Road to Lacy Road and the design of the intersection of Nobel Drive extended with the new roadway connection to the planned USH 14 interchange. MPO staff supports the position of WisDOT that the roadway connection to the USH 14 interchange be designed as relocated Lacy Road with a free flow design to existing Lacy Road to the west rather than flowing directly into Nobel Drive. Through traffic (except for the small amount traveling south) will want to use Lacy Road because that is the most direct route. While a roundabout has been suggested as an alternative at this intersection, travel demand modeling is recommended to make sure that this is a workable solution. A roundabout with a free flow movement from relocated Lacy Road to existing Lacy Road may be an option. MPO staff is also concerned about the proposed design of the intersection of Nobel Drive and Syene Road due to the safety issues related to the skewed angle of the intersection and the proximity of the rail line to the intersection.

Materials Presented with Item:

1. City of Fitchburg letter dated January 27, 2010, responding to the issues raised at the public hearing.
2. City of Fitchburg letter dated March 4, 2010, agreeing to the proposed stormwater standards, but requesting CARPC to approved lower stormwater standards if adopted by CARPC and requested by the City

Contact for Further Information:

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MEMORANDUM

City of Fitchburg Planning/Zoning Department

5520 Lacy Road
Fitchburg, WI 53711
(608) 270-4258

TO: Barbara Weber, CARPC Senior Community Planner
FROM: Jason J. Schmidt, Resource/Project Planner
DATE: January 27, 2009
SUBJECT: Additional Information for CARPC Commissioners

At the January 14 CARPC meeting, a number of questions and concerns were posed relative to the City of Fitchburg USA Amendment Application. This memorandum is a response to those questions and concerns.

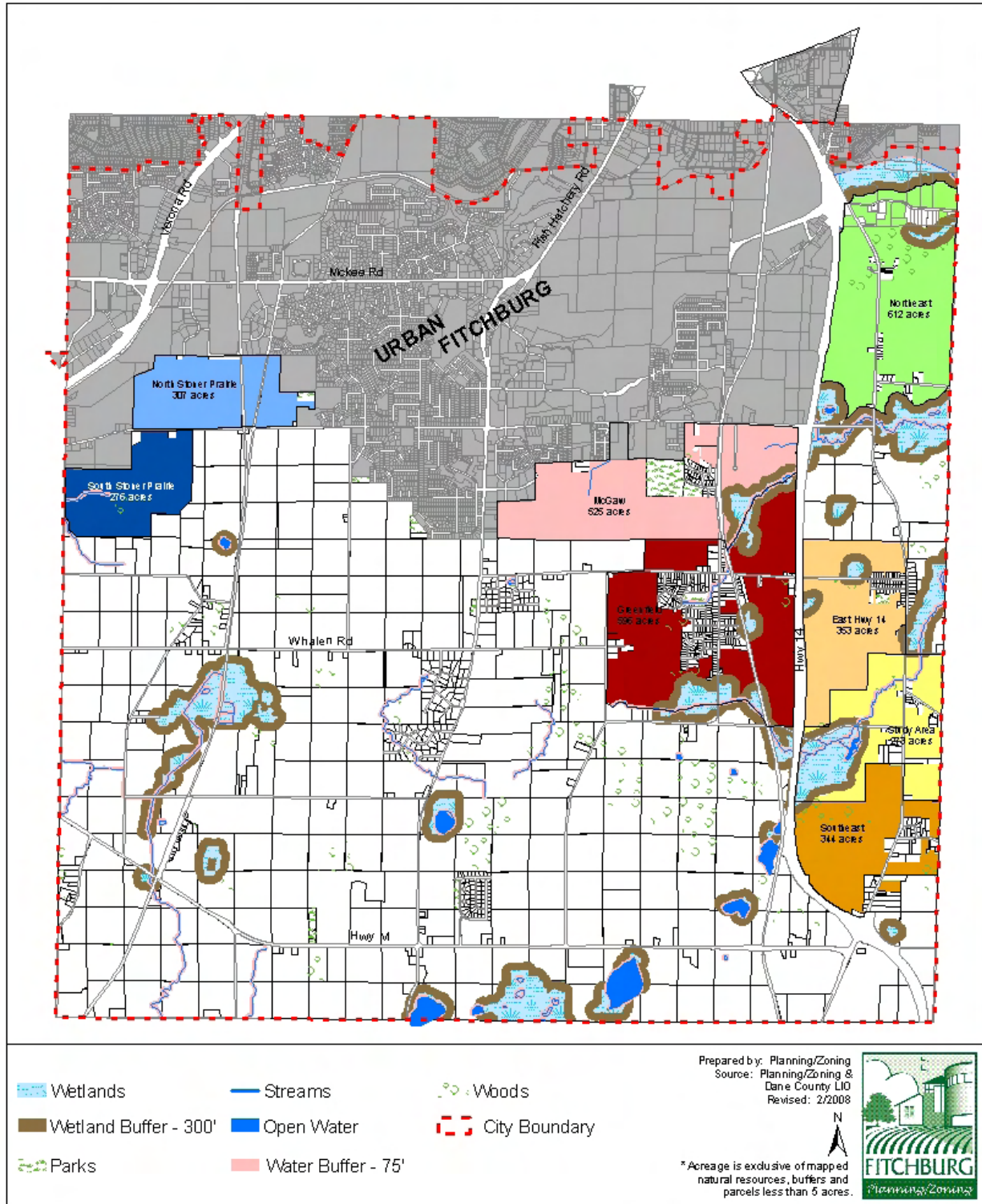
Future Urban Development Area – As part of the City’s Comprehensive Plan, a future urban development boundary (50+ years worth of developable land) was created around the goals of maintaining the coexistence of the urban and rural areas, creating attractive highly intensive transit oriented neighborhoods and improving the quality of older areas through maintenance and redevelopment, while maintaining the natural resources and high quality farmland that resembles the history of the City. The Common Council offered the following guidelines to be used in identifying the future growth boundary were:

- It will be assumed that streams will be protected by a 75-foot or wider buffer zone, that wetlands within the current urban services area will be protected by a 75-foot or wider buffer zone, and that wetlands outside the current (2007) urban service area will be protected by a 300-foot or wider buffer zone.
- The proposed future urban development area (FUDA) boundary will favor development of land along the Fitchburg-Oregon rail corridor.
- The proposed FUDA boundary will favor protection of groundwater recharge areas.
- The proposed FUDA boundary will favor protection of high-quality agricultural lands.
- All parts of the current FUDA will be considered for inclusion in the proposed FUDA.
- The proposed FUDA boundary favors areas that can be sewered by gravity.

In creating the future urban development boundary, the Plan Commission and Common Council, took into consideration the above factors, along with community input and found that the devised long-term growth boundary represents the best balance of the competing issues. The boundary focuses the majority of future development along the eastern rail corridor within the City for future high density transit oriented development and southern extensions of both the Fitchburg Commerce Park and Fitchburg Technology Campus, as seen in Figure 1 below.

Figure 1:

FUTURE URBAN GROWTH AREA NEIGHBORHOODS



Farmland Mitigation – As stated above, the City of Fitchburg identified a future urban development boundary on favoring protection of high-quality agricultural lands, favoring protection of groundwater recharge areas and other major factors. After balancing competing issues, the adopted FUDA boundary established a long term agricultural protection area in the south central/western portions of the City. This protected contiguous area, Figure 2 (land outside the existing CUSA and FUDA), has 8,115.61 acres of land in agriculture production, with 5,294.17 acres categorized as prime agricultural soils.

Currently, the City of Fitchburg has 10,718.82 acres of agriculture production land outside of the existing urban service area. Of the agriculture production land outside the urban service area 7,080.36 acres is categorized as prime agricultural soils. With the addition of the Amendment Area, agriculture production land would be reduced by 258.90 acres or 2.4% and agriculture production land with prime soils by 205.08 acres or 2.9%.

Agriculture within Fitchburg	
<i>Description</i>	<i>Acres</i>
Agriculture Production Land outside existing CUSA	10,718.82
Agriculture Production Land in the Amendment Area	258.90
Prime Soils on Agriculture Production Land outside existing CUSA	7,080.36
Prime Soils on Agriculture Production Land in the Amendment Area	205.08
Agriculture Production Land outside existing CUSA and FUDA boundary	8,115.61
Prime Soils on Agriculture Production Land outside existing CUSA and FUDA boundary	5,294.17

The City of Fitchburg also participates in the Dane County Farmland Preservation Plan. The goal of the Farmland Preservation Plan is to identify areas to protect and maintain as agriculture within the City of Fitchburg for the use and benefit of current and future generations. The plan is intended to meet the farmland preservation criteria created by the State of Wisconsin as outlined in Chapter 91 of the Wisconsin Statutes, qualifying Fitchburg farmers with certified agricultural zoning to participate in the state farmland preservation tax credit program.

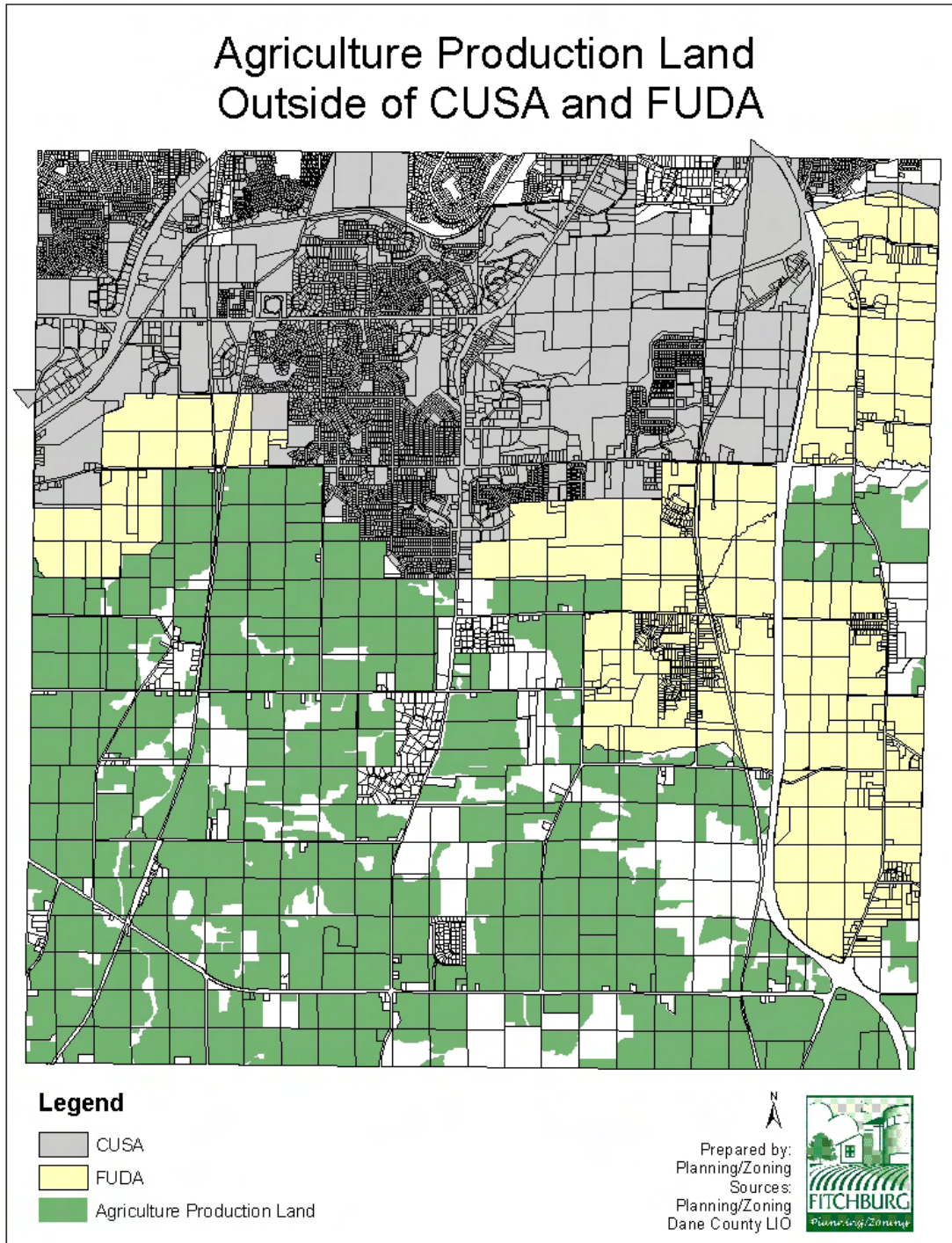
Currently, the City of Fitchburg is in the process of updating its Farmland Preservation Plan to be consistent with the new Wisconsin Working Lands Initiative and to be incorporated into the updated Dane County Farmland Preservation Plan. Requirements of the Working Lands Initiative for the farmland preservation areas include:

- The preserved area must be planned for agricultural and agriculture-related uses
- May include undeveloped natural resource and open space areas
- May not include any area that is planned for nonagricultural development within 15 years.
- Must be consistent with the Comprehensive Plan
- Must be updated once every 10 years

The City of Fitchburg’s Agricultural and Rural Affairs Committee is currently proposing that all agricultural production land outside of the 15 year development demand be included in the Farmland Preservation Area and to be zoned Exclusive Agriculture. The City of Fitchburg’s

Comprehensive Plan has identified the Amendment Area as a location to accommodate the 15-year development demand, placing this area outside of the farmland preservation area. Updates to the Farmland Preservation Plan and Map will be consistent with the Comprehensive Plan in following the 75 acres per year development policy.

Figure 2:



Demand Analysis – The CARPC Staff Analysis, dated December 4, 2009, indicates on page 22, “the proposed addition of 207.1 developable acres is within the forecasted 2030 land demand for the Central Urban Service Area. The January 2009 land demand calculations for the CUSA forecasted a need for 2,624 additional developable acres by 2030. Since that time, the CARPC has approved two additions to the CUSA. . . . With these amendments taken into account, the unsatisfied 2030 land demand for the CUSA is 2,271.6 developable acres.”

In addition, the City of Fitchburg established within its Comprehensive Plan a policy that limits the amount of developable land within the urban service area, for the 20 year demand, to 1,875 acres (20 years plus 5 year flexibility factor each at a rate of 75 acres per year). The 5 year flexibility factor is taken into account for landowners, within the urban service area, that may not want to develop their land during that time period. The proposed addition of 207.1 developable acres would bring Fitchburg’s urban service area to 1,034.1 acres of developable land. The developable acres would be phased in as the market demands different types of land use and not to exceed the City policy of a maximum average of 75 acres per year of development on a rolling five year average. Map 10 within CARPC Staff Analysis report depicts the phasing plan for the Amendment Area.

Why additional land within CUSA – The City currently has 827 acres of developable land within the existing urban service area proposed for a number of diverse land uses and markets, with 310 acres planned for Transit-Oriented Development (TOD), 83 acres land locked, 57 acres adjacent to operating quarries and a number of acres where landowners are content on farming the land versus developing at this time. The existing land inventory and proposed land use plans are not able to meet the demand for science and technology companies near the existing Fitchburg Technology Campus. The western portion of the Amendment Area provides 51 developable acres of Business Park to accommodate the demand for expansion needs for science and technology companies as well as office, light manufacturing, lab space and supported commercial. This business park will be the first phase of development of the proposed Amendment Area.

The second phase will be the eastern portion of the Amendment Area. This area is slated to be a high density, TOD, and Business Park, with a proposed transit station along the rail line. Development within this area is proposed to begin after development commences within Green-Tech Village (just north of this site).

The Nine Springs Green-Tech Village is the largest undeveloped area, with 310 acres unplatted. Green Tech Village is planned as a technology based, mixed use, sustainable urban campus. With a rail corridor traversing through this campus this high density transit-oriented development will include a mix of science and biotechnology companies, neighborhood oriented service uses and attached housing options. Green Tech Village will be the location of the first of three rail stations, a Madison Metro bus transfer point, a park and ride facility and bicycle lockers. Development within this area is contingent upon construction of the Highway 14 interchange and an operational multi modal transportation system to accommodate the high density.

While the current market is at a low point, especially for transit-oriented development, the City of Fitchburg is planning for two compact, walkable, vibrant, and mixed-use areas around rail

stations along the eastern rail corridor that will help meet the future transportation demand, alleviate transportation congestion and meet the long term growth projections. Extension of the Central Urban Service area to cover the McGaw Park Neighborhood TOD, in addition to the western Business Park where demand is present, will enable the City and developers to continue investments on infrastructure, enhance grant applications for financial assistance and assist in the transit studies in getting the rail line active for commuter traffic within Green-Tech Village and McGaw Park Neighborhood. As stated above, phasing of the area will follow the City policy of maximum average 75 acres per year of development, not to over-extend infrastructure.

Stormwater Management/Water Resource Issues – The CARPC Staff Analysis, dated December 4, 2009, page 31 and the CARPC Staff presentation to the Commission provided several potential impacts of development on water resources, if proper mitigation measures are not taken. The noted impacts with proposed mitigation measures are described in the following table:

Potential Impacts of Development	Fitchburg Mitigation Measures
Flashier stream flows (more sudden, higher peaks)	<ul style="list-style-type: none"> - Low impact development strategies greatly reduces runoff frequency - Peak rates of runoff for the 1, 2, 10 and 100-year 24-hour design storm at pre-development levels
Increased frequency and duration of bankfull flows	<ul style="list-style-type: none"> - 100% pre-development stay on volume - Peak rates of runoff for the 1, 2, 10 and 100-year 24-hour design storm at pre-development levels
Reduced groundwater recharge and stream baseflow	<ul style="list-style-type: none"> - Pre-development groundwater recharge rates with no caps on the extent of infiltration areas
Greater fluctuations in wetland water levels	<ul style="list-style-type: none"> - Avoided through maintenance of recharge - 100% pre-development stay on volume
Increased frequency, level and duration of flooding	<ul style="list-style-type: none"> - 100% pre-development stay on volume - Peak rates of runoff for the 1, 2, 10 and 100-year 24-hour design storm at pre-development levels
Additional nutrients and contaminants	<ul style="list-style-type: none"> - Typical urban development has a lower Phosphorus level entering the water bodies than typical production agriculture - Requirements of water quality treatment with low impact development - Water flow paths through buffer
Associated physical, chemical and biological changes	<ul style="list-style-type: none"> - Measures listed above mitigate the changes
Geomorphic changes in receiving streams and wetlands	<ul style="list-style-type: none"> - Driven by runoff volume - 100% pre-development stay on volume

To effectively mitigate these potential impacts, the City of Fitchburg will be implementing various stormwater best management practices that are designed and constructed at or above local, state and federal stormwater requirements and has agreed to all of the conditions recommended by CARPC staff, page 39.

To control the implications to Swan Creek from smaller, more frequent storms that produce most of the runoff reaching streams, the City has agreed to CARPC recommendations to include the 1-yr 24-hr storm with the 2, 10 and 100-year 24-hr storm to control peak rates of runoff and pre-development levels.

The CAPRC Staff analysis, page 32, states that current minimum stormwater standards do not adequately address increasing volumes of runoff or increasing peak flow rates from annual rain events. An effective mitigation measure that the CARPC is recommending and the City has agreed to is to maintain 100% pre-development stay on volume, which CARPC staff states will promote the goal of maintaining existing hydrology and the biological communities that they support. This recommendation is significantly higher than the CARPC Environmental Resources Technical Advisory Committee draft Runoff Volume Control Performance Standards of 90% pre-development stay on volume and exemptions.

Water Temperature – Swan and Murphy’s Creeks are not regulated as thermally sensitive streams by Dane County and are classified as warm water forage fisheries by the WDNR; however their headwaters are cold due to groundwater inflow and warm downstream as they approach Lake Waubesa. Thermal protection of streams during runoff events will be accomplished through the high stormwater infiltration standards and the 300-foot wetland buffer along the South Branch. Stormwater infiltration facilities will provide considerable thermal benefit by capturing the hot “first flush” from paved surfaces and augments baseflow which is what keeps the streams cool. A USGS study in Cross Plains, WI demonstrated that low-impact design practices mitigate temperature associated with runoff by retaining and infiltrating majority of stormwater runoff. The 300-foot buffer provides an additional flow path for water to cool as it flows toward the South Branch. In addition, the McGaw Park Neighborhood standards also calls for “in-line” wet ponds in areas of perennial streamflow or spring flow to be avoided to provide thermal protection for streams during dry weather (baseflow) conditions. If a pond captures groundwater, it warms the water in the pond during summer (or gets colder in winter) before being released downstream.

Groundwater Impacts – To mitigate the groundwater impacts from development, the City will be meeting existing state, county and municipal standards, in addition to the CARPC recommendation of maintaining, at least, the WGNHS pre-development groundwater recharge rate (currently identified as 9 to 10 inches per year for the amendment area) with no caps on the extent of the infiltration areas. CARPC staff states that this will make up for the amount of recharge loss resulting from impervious development, but not water lost due to well water withdrawals, which is a regional issue.

Town of Dunn Correspondence – The City of Fitchburg has reached out to the Town of Dunn from the creation of the Future Urban Development Boundary to the development of the

Comprehensive Plan, McGaw Park Neighborhood Plan and the CUSA Amendment Application process.

- From May 15 to June 8, 2007 the City of Fitchburg sought comments on the Draft Urban Development Boundary Map created by the Plan Commission identifying areas of possible future urban growth, which included the McGaw Park Neighborhood with a 300 foot buffer around the wetlands.
 - Town of Dunn Chair, Edmond Minihan sent a letter on June 5, 2007 stating his concern with the Northeast Neighborhood and the impacts development within this area may have to the flooding of Meadowview subdivision and the runoff to Lake Waubesa. No comment was referenced to other areas of the draft urban development boundary area.
- An e-mail was sent on September 3, 2008 to the Town of Dunn seeking comments regarding the draft Intergovernmental Cooperation Element of the City of Fitchburg Comprehensive Plan, in addition to a link for the on-going draft Comprehensive Plan.
 - No comment was received from the Town of Dunn.
- A letter was sent on February 20, 2009 to the Town of Dunn seeking comments and questions on the City of Fitchburg Comprehensive Plan, prior to the adoption by the Common Council on March 24, 2009.
 - No comment was received from the Town of Dunn.
- A letter was sent on April 22, 2009 to the Town of Dunn seeking comments on the McGaw Park Neighborhood Plan, prior to the adoption as an amendment to the City's Comprehensive Plan by the Common Council on June 9, 2009.
 - No comment was received from the Town of Dunn.
- Mayor Jay Allen met with the Town of Dunn Chairman, Ed Minihan on July 16, 2009 to discuss a future boundary agreement between the Town and City and Fitchburg.
- An e-mail was sent on August 5 to the Town of Dunn seeking comments on the draft Central Urban Service Area Amendment Application.
 - The Town of Dunn responded with three comments regarding the application:
 1. Limit development to within the boundaries of the existing USA –
 - As stated above, in the demand analysis and need, future development within the USA will be phased in with the development of the Amendment Area. The City of Fitchburg forecasted land use demand of 1,500 acres for the next twenty years based on past growth trends and new policy. The proposed amendment of 235 developable acres is within the forecasted 2030 demand of 1,048 additional developable acres within the urban service area. The City of Fitchburg has been very consistent in requiring new growth to be in the USA, limiting development outside of the Urban Service Area to follow the Rural Residential Development

Criteria. The City's Comprehensive Plan also has strong language for redevelopment and infill of properties within the USA.

2. The Stormwater Management Plan seems well developed and research appears thorough. The Town of Dunn appreciates Fitchburg's efforts to meet City and State criteria.
 - The City of Fitchburg is planning to follow the standards established in the McGaw Park Neighborhood Plan that meet or exceed the City and State criteria and the higher recommendations by CARPC staff as stated on page 39 of the staff analysis.
3. Concern with the Groundwater Plan is that it does not give specific solutions on how the City will address the potential groundwater problems the plan details.
 - The Stormwater Management Plan was developed to maintain a pre-development state to the natural resources within the area. The McGaw Park Neighborhood Plan identified different options to maintain the water balance, which are identified in this document under the "Groundwater" Section. Continued periodic monitoring of Swan Creek, Murphy's Creek and local springs will be evaluated as development occurs within the neighborhood to evaluate the success of the water management goals. Adjustments to the Stormwater Management Plan may occur based on the monitoring results and determinations. In addition, the City of Fitchburg has agreed to CARPC staff recommendations to maintain, at least, the WGNHS pre-development groundwater recharge rates (currently identified as 9 to 10 inches per year for the amendment area) with no caps on the extent of infiltration areas.

Arnold Harris comment regarding Section 27.06 of the City of Fitchburg Ordinance – Section 27.06 of the City of Fitchburg Ordinance is titled "Exemptions and Clarifications" within the Erosion Control and Stormwater Management chapter and provides language consistent with Dane County Chapter 14.47 of the same title. The cited subsections correlate directly verbatim with Dane County's Chapter 14 ordinance, last revised July 31, 2009. The City of Fitchburg staff could find no CARPC staff recommendations that conflict with the cited subsections.



CITY OF FITCHBURG

Planning Department

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March 4, 2010

Kamran Mesbah
Capital Area Regional Planning Commission
City-County Building, Room 362
210 Martin Luther King, Jr. Blvd.
Madison, WI 53703

RE: City of Fitchburg Urban Service Amendment application

Dear Kamran:

The City understands that the Environmental Resources Technical Advisory Committee has drafted storm water standards that are more modest than those which are intended to be applied to the McGaw urban service amendment application. The City has previously agreed to the conditions recommended by CARPC staff, and we continue to support the staff recommendations. However, if there is difficulty in applying the agreed standards to portions of the amendment area the City reserves the right to appear before the Commission for application of more modest standards, provided the more modest standards have been approved by the Commission.

Thank you for the time and effort you and your staff have provided during the review of the amendment application. We look forward to Commission action on the amendment next Thursday.

Sincerely,

Thomas D. Hovel
Zoning Administrator/City Planner

cc: Mayor Allen
Paul Woodard, Director of Public Works

Re: Consideration of Resolution CARPC No. 2010-1 amending the *Dane County Land Use and Transportation Plan* and *Dane County Water Quality Plan* by revising the Central Urban Service Area boundary and Environmental Corridors in the Northeast Neighborhood portion of the City of Madison, Town of Burke and Town of Blooming Grove

Decision Items:

1. Consideration of Resolution CARPC No. 2010-1

A public hearing was held on this request at the February 11 meeting of the CARPC. Action on the item was postponed to allow the staff of the City of Madison to evaluate the practicability of the conditions of approval recommended by the CARPC staff, and to consult with the land owners in the amendment area regarding these conditions of approval.

The City has prepared a letter of comment (attached) concerning the conditions of approval proposed by the CARPC staff, and additional issues brought up by Commissioners at the public hearing. The City accepts the conditions of approval proposed by the CARPC staff, with the provision that if the Commission adopts a less stringent stormwater volume control standard based on the recommendations of its Environmental Resources Technical Advisory Committee (ERTAC), then the City would have the option to request the Commission to consider this less stringent standard for the amendment area.

This suggestion by the City is consistent with current CARPC processes. Adopted conditions of approval by the Commission become elements of the *Dane County Water Quality Plan*, and are therefore subject to subsequent amendments through a formal plan amendment process. It is possible that more data and predictive models will be available at a future date, allowing a detailed and predictive analysis that can better quantify the impacts of increases of runoff volume on receiving water resources, thus providing a more exact mitigation standard than currently available.

The City has also addressed two issues that were raised by the Commission at the public hearing concerning maintenance and inspection/enforcement. The City indicates that these issues are already addressed as part of the City review, approval, and inspection protocol. Further discussion by the Commission may be warranted to ensure that the concerns have been adequately addressed.

The staff analysis was provided at the February hearing, and is available online at http://danedocs.countyofdane.com/webdocs/PDF/capd/2010_postings/SA_Northeast_Madison_2.5.10.pdf

Materials Presented with Item:

1. City of Madison letter of comment dated March 2, 2010

Contact for Further Information:

Kamran Mesbah, Deputy Director
266-9283
KamranM@CapitalAreaRPC.org



Department of Planning & Community & Economic Development
Planning Division

Website: www.cityofmadison.com

Madison Municipal Building, Suite LL100
215 Martin Luther King, Jr. Boulevard
P.O. Box 2985
Madison, Wisconsin 53701-2985
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PH 608 266-4635

March 1, 2010

Jeff Miller, Chair
Capital Area Regional Planning Commission
City-County Building, Room 362
210 Martin Luther King, Jr. Blvd.
Madison, Wisconsin 53703

Dear Mr. Miller:

I am writing in regards to the City of Madison's Northeast Neighborhoods Central Urban Service Area (CUSA) amendment application. The City respectfully requests that the application be placed on the agenda for CARPC's March 11 meeting.

At the last CARPC meeting on February 11, 2010, City of Madison staff received favorable comments on the application, but asked for more time to consider the conditions that CARPC staff is recommending. We were primarily concerned about conditions 1.d. and 1.e. in the staff analysis.

- d. Control post development runoff volumes to be equal to or less than pre-development runoff volumes for the one-year average annual rainfall period, as defined by the WDNR
- e. Maintain pre-development groundwater recharge rates based on the WGNHS study (generally 9 to 10 inches per year for this area) or site specific data with no caps on the extent of infiltration areas

We have used this time to give additional consideration to the conditions and discuss them with CARPC staff and property owners in the amendment area. As a result of these discussions, the City is willing to accept CARPC staff's recommended conditions of approval, with the following in mind:

We understand that there will be additional discussions about these conditions (stormwater volume control standard of 100% of pre-development volume and maintain pre-development recharge rates). If the Commission adopts more modest standards we would then ask that those standards apply to the amendment area. We understand that any future changes to the conditions of approval would require approval from the Commission.

In regards to stormwater runoff volume control, the Commission's Technical Advisory Committee (TAC) has recommended a standard that falls in between the current City and County requirements and recent CARPC staff recommendations for amendment requests. We agree with the TAC recommendation and encourage the Commission to support it. These more stringent standards require additional land area which further reduces the net developable area and land available for higher density and mixed-use development. It is possible that these more stringent standards will incentivize lower density development and work against other CARPC goals.

Also at the February 11 meeting, you asked City staff to consider whether the City would be amenable to accepting two additional conditions of approval (listed below). These conditions were placed on the approval of the Bishop's Bay amendment.

1. The DCL&WCD shall have construction and maintenance review and enforcement authority over erosion control and stormwater management structure and facilities in the amendment area.
2. The [City of Madison] shall condition approval of the development in the amendment area (whether by zoning or land division or both as appropriate) on all of the approval conditions of this resolution.

The City already incorporates these mechanisms into the development approval process and ongoing maintenance procedures.

In regards to #1, the City of Madison has the appropriate professional staff within the Engineering Division who complete the necessary inspection and enforcement for erosion control and stormwater management (whereas the City of Middleton contracts with Dane County staff for these services). Chapter 37 of Madison General Ordinances provides City Engineering staff with the necessary authority to complete these tasks which they currently do as a routine part of their duties. One Registered Professional Engineer provides coverage for the East side of Madison and a second Registered Professional Engineer provides coverage for the West side of Madison. Both Positions are supervised and backed by additional Professional Engineering staff. Current City Ordinance goes further than existing County Code in requiring annual reporting on private stormwater management facilities to City Engineering. If the City determines that a facility is not functioning properly, the City will require the facility be repaired or the City will repair the facility and bill the property owner(s) for the work. During the present downturn in new permits, staff has put an emphasis on enforcement of the maintenance provisions for permitted facilities. We believe this is one of the few communities in Wisconsin with ongoing, active maintenance enforcement of private permitted facilities.

The vast majority of stormwater management facilities required to serve new development are owned by the City of Madison Stormwater Utility, whether constructed by developers or the City. The City of Madison Stormwater Utility generates funds for the maintenance of these facilities through an annual utility rate payer fee on the impervious surface area of properties within the City.

We respectfully request that condition #1 not be applied as it would be redundant and an inefficient use of City and County resources.

In regards to #2, this is already a standard part of the City's development approval process. The development within the amendment area will be subject to the requirements of the adopting CARPC resolution as has been the case in the past. This is accomplished through the City's subdivision regulations and is now stressed in the Madison General Ordinances under Section 37.09(3)(i), which reads as follows:

- (i) CARPC Requirements. Where, as a condition of approval of an urban service area extension, the Capital Area Regional Plan Commission (CARPC) requires compliance with additional stormwater management standards, the applicant shall comply with the resolution approval for this urban service area as issued by CARPC and approved by the Wisconsin Department of Natural Resources (WDNR) and / or the Madison Metropolitan Sewerage District (MMSD)>

We look forward to continued discussion of our CUSA amendment application on March 11th. Please feel free to contact me if you have any questions regarding this matter.

Sincerely,



Rick Roll, AICP
Senior Planner

- c. CARPC Commissioners
- CARPC staff
- Mayor David J. Cieslewicz
- Ald. Lauren Cnare, District 3
- Ald. Joseph Clausius, District 17
- Mark Olinger, Director, Department of Planning & Community & Economic Development
- Bradley J. Murphy, Planning Division Director
- Robert Phillips, City Engineer

Re: Authorization for the Deputy Director to sign agreement with the Wisconsin Geological and Natural History Survey to Update the Dane County Regional Groundwater Model.

Decision Items:

1. Authorize the Deputy Director to sign agreement with the WGNHS in the amount of \$162,151.

Dane County residents are entirely dependent on the county's groundwater supplies. Groundwater is also critically important in providing clean, cold discharge to streams, wetlands, and lakes, which nourishes these resources – especially the plants and animals that live there. This is the first in a two year effort to update and improve the Dane County Groundwater Model. Computer technology and our understanding of hydrogeology have improved significantly since the original groundwater model was developed in the early 1990s. As a result, the tool developed over a decade ago no longer reflects the current state of technology, our knowledge and understanding, which can limit its utility for current and future uses. While the current groundwater model has served us well over the last decade, an updated model is needed to help answer the kinds of difficult questions being asked today. This effort is being coordinated with the Wisconsin Geological and Natural History Survey and the U.S. Geological Survey, who will perform the work, as well as various local units of government, who have committed to funding the two-year project. Because of local annual budgeting cycles, the agreement covers the first-year activities in the overall two-year project. It is expected that an amendment to extend the agreement into 2011 (year 2) will be made once budgets have been approved and funding has been secured to fund year 2 activities, expected later this year.

Materials Included with the Item:

1. Services Agreement: *2010 Proposal to Update the Dane County Regional Groundwater Model (Year 1 of 2)*

Contact for Further Information:

Mike Kakuska
266-9111
MikeK@CapitalAreaRPC.org

SERVICES AGREEMENT

2010 PROPOSAL TO UPDATE THE DANE COUNTY REGIONAL GROUNDWATER MODEL (YEAR 1 OF 2)

Services Agreement dated this ____ day of _____, 2010 (“Agreement”) by and between the Capital Area Regional Planning Commission (“CARPC”) and the Board of Regents of the University of Wisconsin System, University of Wisconsin-Extension, Wisconsin Geological and Natural History Survey (“WGNHS”).

Recitals

A. CARPC and the WGNHS desire to enter into an agreement for the performance by WGNHS of professional services in connection with programs of research and development and other activities of CARPC.

B. The WGNHS represents that it has sufficient knowledge and experience to perform the services described in this Agreement.

C. CARPC and the WGNHS intend to be bound by the terms and conditions of this Agreement.

NOW, THEREFORE, in consideration of the above recitals and for other good and valuable consideration, the parties agree as follows:

1. **Services.** The WGNHS will provide the services described in the attached scope of work, which is marked **Exhibit A** and which is incorporated by reference (“Scope of Work”). The WGNHS shall have the complete professional, managerial, or technical responsibility for the validity, accuracy and reliability of the Scope of Work. CARPC and the WGNHS will cooperate with each other and provide timely information and timely status to the other parties regarding their efforts in order to facilitate the success of the Scope of Work. The WGNHS’ services shall include all activities necessary to its performance of the Scope of Work. CARPC shall have the right, from time to time, by written supplement, to make changes in or additions to the Scope of Work, and WGNHS agrees to comply with such changes. If such changes cause a material increase or decrease in the WGNHS’ cost or in the time for performance, an equitable adjustment in the price and time for the performance shall be made. Any claims for adjustment must be asserted by WGNHS in writing within 30 days after the cause of such claim has occurred. If a dispute arises as to the equitable adjustment, the WGNHS shall, at the direction of CARPC, proceed with the Scope of Work, as adjusted, pending resolution of the dispute.

2. **Payment.** CARPC shall pay the WGNHS for its performance in accordance with **Exhibit B** (attached). Invoices will be submitted to CARPC on a quarterly, cost-reimbursable basis. Any additional compensation for services performed by WGNHS outside the Scope of Work must be approved in advance by CARPC in writing. CARPC will pay the

WGNHS within 30 days of the receipt of the WGNHS' invoice. To the extent that the WGNHS is paid on the basis of an hourly rate, the WGNHS shall maintain an accurate time log of the WGNHS' work, which shall be available for review if requested by CARPC. The WGNHS is responsible for the cost of any subcontractors, materials, supplies or disbursements necessary for the WGNHS to perform the Scope of Work.

3. **Term.** This Agreement shall commence upon execution by the parties and, unless terminated as described below, shall continue in full force and effect for a period of two years (or longer if mutually agreed upon by both parties) until completion of the Scope of Work has been achieved by the WGNHS. Regardless of the above, CARPC retains the right to terminate this Agreement, with or without cause, upon the giving of 30 days' written notice to the WGNHS. CARPC is responsible for fees and authorized reimbursable expenses incurred by the WGNHS through the date of its termination notice. Upon completion of WGNHS' services, or at such other time as may be requested by CARPC, WGNHS shall provide CARPC a copy of all documents, records, notebooks, whether prepared by WGNHS or others, in the WGNHS' possession relating to the Scope of Work..

4. **Standard of Performance.** WGNHS shall perform its services with care, skill and diligence, in accordance with the applicable professional standards currently recognized by the WGNHS' profession, and shall be responsible for the professional quality, technical accuracy, completeness, and coordination of all reports, designs, drawings, plans, information, specifications, and other items and services furnished under this Agreement. WGNHS shall also comply with all applicable federal, state, and local laws, ordinances, codes, and regulations in performing its services. If WGNHS fails to meet applicable professional standards, WGNHS shall, without additional compensation, correct or revise any errors or deficiencies in its reports, drawings, specifications, designs and other items or services.

5. **Independent Contractor.** It is the intention of the parties that WGNHS shall be an independent contractor in the performance of the Scope of Work, and that nothing contained in this Agreement shall be construed to be inconsistent with the WGNHS' status as an independent contractor. It is understood that the fees or any other amounts CARPC pays WGNHS under this Agreement shall not be considered salary for pension purposes, and WGNHS will not be entitled to any of the other fringe and supplemental benefits of CARPC nor will CARPC withhold any social security (FICA) or similar contributions from WGNHS' fee. WGNHS is responsible for the payment of all payroll taxes or contributions to its personnel performing services hereunder, and shall be liable for failure to do so and, to the extent allowable under Wisconsin State law, hereby indemnifies and agrees to hold CARPC harmless from and against any loss, cost or expenses incurred by CARPC due to the WGNHS' failure to withhold any such taxes or to make such contributions in respect of any fee CARPC pays to WGNHS.

6. **Intellectual Property.** All rights, title and interest in and to the work performed under the Scope of Work shall remain the property of WGNHS. WGNHS hereby grants to CARPC a non-exclusive, royalty-free and irrevocable license to use, distribute, reproduce and otherwise authorize others to use such work for non-commercial purposes. Prior to any publication of such work, WGNHS shall provide CARPC with a copy of any proposed

publication in advance of publication and grant CARPC thirty (30) days to review and comment. Within this period, CARPC may request WGNHS to delay publication for an additional sixty (60) days in order to protect the potential patentability of any invention described therein. Such delay shall, however, not be imposed on the filing of any student thesis or dissertation.

7. **Liability.** The Board of Regents of the University of Wisconsin System agrees to hold harmless CARPC, its officers, agents and employees from any and all liability, including claims, demands, losses, costs, damages, and expenses of every kind and description (including death), or damages to persons or property arising out of or in connection with or occurring during the course of this Agreement where such liability is founded upon or grows out of the acts or omissions of any of the officers, employees or agents of the University of Wisconsin System while acting within the scope of their employment where protection is afforded by secs. 893.82 and 895.46(1), Wis. Stats..

8. **Insurance.** The State of Wisconsin, and consequently the Board of Regents of the University of Wisconsin System as an agency of the State, is self-funded for liability (both public and property) under ss. 893.82 and 895.46(1), Wis. Stats. As a result, such protection as is afforded under respective Wisconsin Statutes is applicable to officers, employees and agents while acting within the scope of their employment or agency. Since this is statutory indemnification, there is no liability policy as such that can extend protection to any others..

9. **Public Announcement.** Neither party shall use the name of CARPC, the WGNHS, nor of any member of the WGNHS' staff in connection with any products, promotion, or advertising without the prior written approval of the other party. This shall not include internal documents available to the public that identify the existence of the Agreement..

10. **Non-Assignability.** WGNHS shall not subcontract or assign this Agreement, or otherwise dispose of its right, title or interest therein, without obtaining the prior written consent of CARPC. CARPC retains the right to approve or disapprove the assignment at its discretion.

11. **Equal Employment Provisions.** In performing the service hereunder, WGNHS agrees to comply with all applicable local, state and federal laws, regulations and orders relating to fair and equal employment opportunity practices and policies.

12. **Severability.** The invalidity, illegality, or unenforceability of any provision of this Agreement shall not affect the validity, legality or enforceability of any other provision of this Agreement, which shall remain in full force and effect.

13. **Attorneys' Fees.** If any action at law or inequity is brought to enforce or interpret the provisions of this Agreement, the prevailing party will be entitled to its reasonable attorneys' fees, which may be set by the court in the same action or in a separate action brought for that purpose, in addition to any other relief to which that party may be entitled subject to Wisconsin state law.

14. **Entire Agreement.** This Agreement, together with **Exhibits A and B**, supersedes any previous agreement or undertakings. It may not be modified except in writing executed by both parties.

Dated as of the date set forth on the first page, above.

BOARD OF REGENTS OF THE
UNIVERSITY OF WISCONSIN
SYSTEM, WISCONSIN GEOLOGICAL
AND NATURAL HISTORY SURVEY

CAPITAL AREA REGIONAL
PLANNING COMMISSION

By: _____
Authorized Representative

By: _____
Authorized Representative

EXHIBIT A

SCOPE OF WORK

2010 PROPOSAL TO UPDATE THE DANE COUNTY REGIONAL GROUNDWATER MODEL (YEAR 1 OF 2)

I. BACKGROUND

Dane County residents are entirely dependent on its groundwater supplies. Groundwater is also critically important in providing clear, cold discharges to streams, wetlands, and lakes which nourishes these resources, especially the plants and animals that live there. This is the first year in a two year effort to update and improve the Dane County Groundwater Model. The effort is being coordinated with the Wisconsin Geological History Survey (WGNHS) and the U.S. Geological Survey (USGS), who will perform the work, as well as various local units of government who have committed to funding the two-year project.

Dane County was the initial pilot project for groundwater modeling in Wisconsin in the early 1990s. Groundwater modeling is now being routinely conducted by other communities around the state. The original Dane County Regional Hydrologic Study¹ and associated groundwater model have provided important tools and information for inter-jurisdictional groundwater planning and management for over the last decade. Construction of the model has also fostered important independent research investigations by the USGS, WGNHS, and University of Wisconsin scientists and students. These investigations have added to an even greater understanding of our ground and surface water resources.

Computer technology and our understanding of hydrology have improved significantly since the original groundwater model was developed in the early 1990s. As a result, the tool developed over a decade ago no longer reflects the current state of our understanding, which can limit its utility for current and future use. An updated model is needed to help answer the kinds of difficult questions being asked today. An updated groundwater model will also allow us to continue to build upon and leverage past efforts and successes as we move our planning, policies, and development practices forward into the Twenty First Century.

II. PROPOSED WORK

1. Re-evaluate county hydrogeology and hydraulic properties based on both old and recently-acquired data
2. Re-compile and evaluate water use and pumping rates in the county, with more emphasis on transient use and non-municipal wells
3. Re-evaluate recharge rates using recently published soil water balance techniques
4. Conduct laboratory and field evaluations of effective porosity
5. Construct improved groundwater flow model
 - add new wells; update pumping rates to latest estimates
 - refine grid spacing and add more model layers to allow more spatial detail
 - provide better simulation of rivers and lakes to address lake level and streamflow issues
 - provide more detailed depiction of recharge
 - use most recent version of MODFLOW (faster, more powerful computer code)
 - calibrate the model using PEST and other inversion tools and associated utilities (sophisticated parameter estimation codes)
 - add transient capabilities (allows seasonal predictions of water levels and streamflow)

¹ Dane County Regional Planning Commission. *Dane County Regional Hydrologic Study Modeling and Management Program Reports*. 1997-2004

6. Conduct simulations for interested communities (currently Verona, Fitchburg, Madison have immediate needs).
7. Prepare reports and conduct public education and outreach

III. WORK SCHEDULE

Year 1:

1. Re-evaluate the thickness, extent, and hydraulic properties of the Eau Claire aquitard in and around Dane County. Develop isopach and top and bottom elevation maps in digital format.
2. Re-evaluate and delineate the hydrostratigraphy of rocks of the Tunnel City Group, with emphasis on the extent of interconnected near-horizontal fracture zones. This step will require integrating of all available data, including geophysical logs, packer tests, and spring locations.
3. Update and consolidate hydrogeologic database for Dane County, with emphasis on hydrostratigraphic data. Incorporate data from consultants and recent exploratory drilling (Hydrite Site, Femrite Drive area, Verona development, etc).
4. Conduct miscellaneous streamflow and water level measurements to obtain transient model calibration targets.
5. Conduct water sampling of deep and shallow wells and surface water to update and improve the geochemical database for use in model calibration.
6. Compile data (water levels, basin configuration, stage/discharge relations, bottom sediments, etc.) for major lakes to be used as input for the model lake-stage package.
7. Prepare summary report, maps, and cross sections describing the hydrostratigraphy of Dane County.

Year 2:

1. Develop three-dimensional, transient model structure (grid, boundaries, layering scheme).
2. Incorporate the Dane County hydrostratigraphy into the model structure.
3. Select steady and transient calibration targets, and calibration criteria.
4. Calibrate model by the USGS parameter estimation group using PEST and other inversion tools.
5. Conduct base model runs in both steady and transient modes.
6. Conduct forward predictive runs for specific issues (wellhead protection, well siting, land use change, climate change, etc).
7. Prepare final report on model development and use.
8. Plan for future use, maintenance, and updates of the model.

**EXHIBIT B
TERMS OF COMPENSATION**

Project Title: DANE COUNTY GROUNDWATER MODEL UPDATE

BUDGET PERIOD: 1/1/10 -12/31/11

	Year 1	Year 2	PROJECT TOTALS
A. Personnel	\$74,250	\$74,250	\$148,500
1. PI - Ken Bradbury, WGNHS			
2. Dave Hart, WGNHS			
3. Project Hydrogeologist			
4. Support Staff			
a. Pete Chase - Geotechnician			
b. Pete Schoephoester - GIS			
5. Driller's Assistant			
6. Student Help			
7. Student help for porosity testing			
B. Supplies	\$5,000	\$3,500	\$8,500
1. Dataloggers - Solinst Leveloggers			
2. Bottles, tubing, filters, reagents, bentonite, etc.			
3. Computer, Software, and support			
C. Geotechnical Services	\$4,000	\$2,000	\$6,000
1. Shallow well installation			
2. Geophysical logging and equipment rental			
3. Miscellaneous (stream gauging, water level measurements, etc)			
D. Lab Analyses	\$5,120	\$5,120	\$10,240
1. Major Ions			
2. Chloride, Nitrate			
3. Tritium			
4. Oxygen 18			
6. Deuterium			
F. Travel	\$300	\$300	\$600
1. Vehicle			
E. Other Costs	\$50,000	\$50,000	\$100,000
1. USGS subcontract			
G. Report Preparation, graphics, publication charges	\$0	\$4,000	\$4,000
H. Total Direct Charges (TDC)	\$138,670	\$139,170	\$277,840
I. Indirect Costs (15% of TDC)	\$20,801	\$20,876	\$41,676
J. Total Project Cost	\$159,471	\$160,046	\$319,516

Re: Consideration of *Farmland Loss in Dane County Issue Paper*

Decision Items:

1. Consider approval of final draft of the first Farmland Loss Mitigation Issue Paper

At the October 8 meeting, the draft FLM 1: Characterizing Farmland Loss issue paper as prepared at the direction of the FLM Workgroup, and as modified through peer review, was approved by the Commission to distribute for public review and comment. After that meeting, staff e-mailed a link to the paper to local units of government and interested parties, soliciting input.

The paper characterizes the loss of crop and pasture lands, the increase of developed lands, and future land development projections. The analysis considers four key issues: quantity, quality, diversity, and ecological functions of agricultural lands that serve as the basis for preserving agriculturally productive lands. The paper also examines these trends in the York, Dane, Dunn and Windsor Townships. The paper is the first in a series of papers focused on agricultural land preservation. Subsequent issue papers will analyze agricultural based systems, how CARPC activities can affect them, and explore and develop viable solutions for preserving these lands and the viability of farming in the region.

Comments received during public review include comments 21-37 on the “Peer and Public Review Comments and Responses: FLM 1” document included with this cover sheet.

Staff recommends approval of the report.

Materials Presented with Item:

1. Download report at [password: FLM])
http://danedocs.countyofdane.com/webdocs/PDF/capd/FLM-1_Characterizing_Farmland_Loss_12.09.pdf
2. Peer and Public Review Comments and Responses: FLM 1

Contact for Further Information:

Bridgit Van Belleghem
266-4637
BridgitVB@CapitalAreaRPC.org

Peer and Public Review Comments and Responses: FLM 1 Jan 2010

Public Comments

Comment 1

In general, I noticed that much of the data is referenced to a database labeled “Dane County and Community Data, 1970-2000.” However, nowhere is there a description of the sources, accuracy and limitations of the data elements which comprise this database. I would suggest that you include an appendix for this, particularly in reference to measurement of agricultural and other open or undeveloped lands.

- *See Appendix A revision. “It should be noted that the findings of this paper are based on historic land use data which were collected to evaluate changes in the use of land, not the present purpose and level of analysis, which poses limitations on the accuracy of the analysis. This data is presented in the Dane County and Community Data 1970-2000 report. The numbers published in the report are based on data collected and assembled for the Land Use Inventory every ten years. The data from this report presents various complications, especially when comparing figures across decades, due to changes in methodology in measuring acreages and categorizing land uses. These limitations have been adjusted for to the greatest extent possible and include:..” All of the limitations listed in Appendix A are based on the data from this report. I clarified that this report is the source of the data and continued with what was already written about the limitations of the data.*

Comment 2

On p.2-3, you indicate that information on small and medium-sized family farms is limited. What are the available sources of information on these operations, and how might they be supplemented by Dane County?

- *See page 18 for added text on this data area. “Land use and operation characteristic data on small and medium-sized family farms. The next issue paper will attempt to gather and assemble or create data on these operations. Informational resources include Dane County, UW Extension, and the 2007 Agricultural Census.”*

Comment 3

On p.3, you say that “By comparing these jurisdiction types we can determine where the majority of crop and pasture lands are being lost, and can further investigate why and to what uses they are being lost.” Could you elaborate on exactly what method you use to make such determinations? Is the land use conversion being examined at the parcel level, or are you inferring conclusions from use of aggregate data at the minor civil division level? If you are inferring things from aggregated data, please explain what assumptions went into the decision procedure you used.

- *I added text to clarify as follows: “Table 1 illustrates the acreage changes in land uses for the county as a whole, all cities, all villages, and all towns, each of which is a compilation of changes made at the parcel level within that jurisdiction. Parcel level changes are illustrated in the maps accompanying this document. By comparing these jurisdiction types we can determine where the*

majority of crop and pasture lands are being lost, and can further investigate why and to what uses they are being lost through a decadal analysis of the land use inventory data.

Comment 4

At the top of p.5, you note that “significant agricultural acreage is being transferred to land uses such as vacant/unused, environmental corridors, wetland restoration, or open space.” Could you offer some guidance as to why such conversion is likely to occur in these cases?

- See footnotes 4-11.

Comment 5

On p.5, you state that “in 2000 all agricultural land within USAs were categorized as vacant”. Could you explain why this was the case?

- *See footnote 4: In 2000, the City of Madison land use was created by using a conversion table from their existing parcel dataset. Those lands that were annexed and not yet platted were coded as being vacant rather than agricultural in nature. The assumption is that at the time the City of Madison did not have a land use code for agricultural uses. The City of Madison is the only community in Dane County (2000 and 2005) that maintains their own parcel coverage and land use coverage. A conversion is necessary for all comprehensive land use datasets. The 2005 land use dataset corrected for this “vacant” error as detailed analysis identified these areas and errors in the conversion.*

Comment 6

On p.5, you also mention the “recategorization of large areas of pasture into the other open lands category, which increased by just over 42,000 acres in the twenty year period. Determining exactly how much of this land use changed as a result of re-categorization is beyond the scope of this report.” Even though a quantitative estimate is beyond the report’s scope, it would be helpful if you could at least lay out some of the major qualitative reasons why pasture might have been placed in the open lands category, and some of the difficulties posed in trying to identify the ag lands there.

- *See Footnote 7: For the purposes of land use categorization, lands were categorized as being agricultural in nature if they were cultivated, had fenced animals on them or agricultural buildings on them. Fallow farm fields were categorized as open land because they were not being cultivated. Fields used for grazing were coded as open land since they were also not being cultivated.*

Comment 7

On p.6, you indicate at the top that 37,000 acres of developed acreage were added in Dane Co. from 1980 to 2000. Yet in paragraph 2 on that page, the sum of acreages converted to development that are cited there only add up to 32,700 acres. Could you explain the source of the discrepancy? Also, could you explain for each category of land converted to developed use, how these figures were specifically derived? What method was used?

- *Numbers for outdoor recreation, institutional, and communications/utilities uses were not included in this paragraph. I have added them.*
- *There were derived differently for each year using a combination of aerial photos, site visits, surveys, and questionnaires for 1970, 1980, and 1990. The details of this will not be incorporated into the report, as it is quite complicated. The 2000 and 2005 land use totals were measured using a comprehensive GIS dataset of land use categories based on detailed site by site analysis of every parcel in Dane County. These parcels were often split into multiple categories. For example a 40 acre farm field might have a small (2 acre) grove of trees in one corner, a pond in another and a cell tower in another corner. This one parcel would be split three times creating four polygons each with a different land use code. The woodland, water and farm field would be considered undeveloped while the cell tower would be considered developed.*

Comment 8

In Appendix A, you indicate that in most cases, the adjustments to the land use inventory methodology from one decade to the next decade resulted “in lower numbers for crop and pasture acreages, revealing that crop and pasture acreage numbers prior to 2000 were higher than what actually existed on the land.” It would be useful if you summarize for each decadal change, the total amount of the nominal farmland acreage change, or net decline, in crop and pasture acreage, that was due to reclassification/redefinition, rather than **actual** decline in such land use/cover. This would include all of the various individual adjustments you point out were made to crop and pasture lands based on re-definitions of the categories for open space, vacant and undeveloped land, farm residences, woodlands, and farm pools in Appendix A. I didn’t see this included anywhere in the report.

- *At this point it is not possible to do this. Accurate data does not exist. Efforts are underway to work backwards and recreate these land use years. This is identified in the ‘data needed’ section of the report and will potentially be worked on by an intern hired to complete the coding for the 2010 Land Use Inventory.*

Comment 9

In Appendix A, you point out that farm dwellings were counted as residential uses in 1980 and 1990, but counted as agricultural land in 2000. To make the figures commensurable between decades, you say farm dwelling acreage was removed from the residential category in 1980 and 1990, and inserted into the ag land category for those years. However, since it would be more exact and involve less error to make adjustments to the year 2000 digitized data, wouldn’t it make more sense to subtract the farm dwelling acreage from the year 2000 agricultural land acreage instead? Arguably, in terms of actual use, the farm dwellings should be included in the residential land category anyhow, and not in the farmland categories. Also, which farmland category did you add the farm dwelling acreage to – cropland or pastureland? And what rationale did you use for distributing farm dwelling acres to either cropland or pasture?

- *In 2000, farm dwellings were not measured separately from agriculture, therefore it is not possible to subtract farm dwelling acreages from this number.*
- *In terms of actual use, the farm dwellings are being used by the farmer who farms the land therefore his home is used to directly support the farm. This is not true for the second, third or more homes associated with the farm which likely could be sold off to someone not related to the*

farm owner. Considering some of the farm homes are embedded deep within numerous barns and buildings it would be rather difficult to tease out the acreage of the land used for farm dwellings and not for agricultural use. Sheds or detached garages were considered to be associated with their single family homes despite being separate. Farm dwellings (primary) are considered in the agricultural land use category. In 1990 and prior farm dwellings were identified by a simple point and it is assumed that a standard multiplier was used to calculate the size of each rather than digitizing the boundary of farm dwellings.

- *“Crop” and “pasture” are one category, therefore it does not matter whether the number went to either one. They were not added to “other open space,” which contains large swaths of pasture.*

Comment 10

You indicate in Appendix A that farm dwelling acreage was typically one or two acres per farm in the 1980 and 1990 data. Since the data was not digitized for those years, and hence not measurable directly, what assumptions were used to make such an estimate?

- *In 1990 and prior farm dwellings were identified by a simple point and it is assumed that a standard multiplier was used to calculate the size of each rather than digitizing the boundary of farm dwellings. This assumption is supported by zoning rules for on-site septic systems that typically require a minimum of 1 to 2 acre lots. Also in digitizing and coding every single acre of land in Dane County for 2005, it was found that the majority of the farm dwellings are near the road with agricultural buildings behind and a 50-100 foot driveway, typically amounting to 1-2 acres.*

Comment 11

In Appendix A, you indicate that some woodlands were counted as agricultural land prior to 2000. Please give an estimate of this acreage.

- *See page 19: I estimate 5-10,000 acres, but state no more than 13,400 acres in the report and no less than 4,000 acres. Land uses prior to 2000 did not have rural lands digitized into the GIS and therefore blanket categories were applied. Work will be completed to deal with this limitation in the work for completing the 2010 Land Use Inventory.*

Comment 12

In Appendix A, you indicate that “large areas of pasture were categorized as other open land in 2000.” Could you provide some background on why this was the case, and estimate the amount of such acreage? I would think this acreage should be added back into the Crop/Pasture category, especially since you have digitized data to work with for year 2000.

- *See page 20: An estimate is not available since the cows were not in the pasture fields at the time of aerial flight nor did the farmers indicate which of their lands were pasture and which were for cultivation. For the purposes of land use categorization lands were categorized as being agricultural in nature if they were cultivated, had fenced animals on them or agricultural buildings on them. Fallow farm fields were categorized as open land because they were not being cultivated. Fields used for grazing were coded as open land since they were also not being cultivated.*

Comment 13

In Appendix A, you indicate that certain lands within the CUSA previously categorized as agricultural were reclassified as “vacant/unused” in year 2000. You state that this was done “to reflect the intent of urban service areas as areas that are planned to be developed”. You indicate that no adjustment was made for this since you didn’t know the acres so affected. I would argue that it is highly flawed to classify lands in current agricultural use based on assumptions about their future use. A survey of existing land use should be consistent at only describing lands based on such existing uses. I would strongly advise that you make a concerted effort to identify all vacant/unused lands in the CUSA that were classified as ag in 1990 and shift them back to the agricultural category if they are still in agricultural cover/use in year 2000.

- *One purpose of the Land Use Inventory is to measure vacant developable land area in Urban Service Areas, which are by definition planned for urban development within the planning period. Therefore, this assumption make sense under this purpose of the Inventory.*
- *In 2000 the City of Madison’s land use was created by using a conversion table from their existing parcel dataset. Those lands that were annexed and not yet platted (mostly on the periphery) were coded as being vacant rather than agricultural in nature. The assumption is that at the time the City of Madison did not have a land use code for agricultural uses. The City of Madison is the only community in Dane County (2000 and 2005) that maintains their own parcel coverage and land use coverage. A conversion is necessary for all comprehensive land use datasets. The 2005 land use dataset corrected for this “vacant” error as detailed analysis identified these areas and errors in the conversion. However, the 2005 methodology of coding lands based on their use not the City of Madison use is being employed for all previous land use datasets. A corrected 2000 land use could be issued if time can be allocated into redoing this project.*

Comment 14

You indicate that farm ponds were counted as agricultural land uses in 1990, but reclassified as water in year 2000. Explain why farm ponds were shifted out of ag use in year 2000. I would argue that the decisive criterion for classifying ponds on farm parcels should be whether the use of the water was an integral part of the farm operation, or not. For example, farm ponds used for aquaculture, for irrigation, or for farm animals in a dedicated way should be included within the agricultural use category.

- *The GIS boundaries did not exist in 1990 and prior. The redo of these datasets will incorporate farm ponds. Water on the surface of the land was coded as water for land use regardless of what the water was used for. Perhaps future land use inventories can identify whether the water body is for agricultural or not, and maintain this as a sub-set of water that could be easily added to agriculture, although this information maybe difficult to gather. Simply adding it to agriculture maybe misleading and the data would be compromised yet again.*

Comment 15

On page 3, paragraph 4.: “It also discusses the roles of annexation and residential development and how they impact farmland consumption.”, and the subsequent discussion of annexation on page 5, paints urban density development as the enemy, rather than the friend of farmland preservation. This approach perpetrates the myth that annexation is necessarily bad, when it generally is really helpful. To be specific, Table 1

identifies 63,197 acres of developed acres in the Towns in the year 2000 – compared to an aggregate Town population of 74,740 (and these numbers include urban towns – which should be broken out separately). This is a density of 1.18 persons per developed acre. Compare this to a density of 4.59 in the Villages and 5.74 in the Cities. (Note also, that the “developed acres” measurement includes employment and institutional uses, enjoyed by all County citizens, which are much more predominant in urban areas. Although annexation certainly results in farm land loss, it is loss to development that is at least between 4 and 5 times more efficient than farm land lost to development in lands that are not annexed. Please consider providing a more appropriate emphasis on where we are being most wasteful with converted farmland; and consider differentiating between predominantly urban and rural towns and between Madison and the smaller cities. I think this is a very important issue, and if left unaddressed, will severely undermine the traction these efforts attain at the city and village level, and ultimately at the county board.

- *See changes made to pages 6-7*

Comment 16

In terms of metrics, please clarify how the measurement of “developed acres” is done for rural residential lots. Specifically, is there an assumed area of development – say one acre?

- *In 1990 and prior farm dwellings were identified by a simple point and it is assumed that a standard multiplier was used to calculate the size of each rather than digitizing the boundary of farm dwellings. This assumption is supported by zoning rules for on-site septic systems that typically require a minimum of 1 to 2 acre lots. Also in digitizing and coding every single acre of land in Dane County for 2005, it was found that the majority of the farm dwellings are near the road with agricultural buildings behind and a 50-100 foot driveway, typically amounting to 1-2 acres.*
- *Rural residential lots are digitized based on the portion of land that being mowed or used with playgrounds etc. If the property is dense woods then it was coded as such. If a 10 acre lot had a house on the corner and the rest was not mowed, not forest, not cultivated, not water, then it was likely coded as open land. No assumed area of development. Some residential lots in heavily wooded areas might be only one acre in size despite the land owner having 10 acres.*

Comment 17

The open lands re-categorization issue looks like a gaping loophole in the analysis. The following paragraph (p. 5) makes it sound like 94,000 acres was lost to agriculture but almost half (42,000) is some kind of statistical typo. This needs to be polished a little so it's not so glaring. One radical option would be to combine crop, pasture and open land throughout.

- *Not almost half. That would assume that all of the growth was due to the re-categorization, where land use did not actually change, when in some cases it did. This would also combine crop/pasture with open lands that are not agriculturally related, such as environmental corridors.*
- *I changed the text as such so that this limitation is not so glaring and is more indicative of what may have actually taken place on pg. 5 “Towns have seen the largest decline in crop and pasture*

lands, about 94,500 acres¹ in the county between 1980 and 2000. This loss in crop and pasture is greatly affected by the re-categorization of large areas of pasture into the other open lands category in 2000². Determining exactly how much of this land use changed as a result of re-categorization is beyond the scope of this report, however an estimate is that no more than 32,900 acres (the total gain in open lands from 1990 to 2000) were transferred from crop/pasture to the open land category in 2000. It is likely that this number is considerably smaller if previous conversion trends continue, as about 15,200 acres of open land were converted from another land use between 1980 and 1990 before the re-categorization took place.”

Comment 18

A very minor point. On page 14, I think you want the word "tract" to refer to expanses of ag land.

- *Fixed. Thanks.*

Comment 19

Be consistent with your numerical notations in the text, round to the nearest 100 or 500 or 1000. With the actual numbers listed in nearby tables you can round more readily. Example: p5. 2nd paragraph under annexation.

24,000 acres, 16,000 acres, 8,050 acres- there appears to be something odd about the 8,050...like there some an implied precision that didn't exist with the other 2 numbers.

- *All number were rounded to the nearest hundred, unless exact or previously published (this is the case with the land demand projection, which was previously published as 42,450 in the Regional Transportation Plan 2030).*

Comment 20

The numbers of prime agricultural land converted between 2000 and 2005 seems really high compared to the other time intervals in the analysis. Can you please explain why this might be?

- *The main reason for such high numbers is the Highway 12 expansion, which converted significant portions of prime agricultural land into transportation. In fact, only about 13,000 total acres were developed in that time period across the county and most was that project. A similar impact occurred with the expansion of Hwy 151 in the T. of York, which is discussed in the Town section of the report. A few large parks that were also created, and quite a few subdivisions in towns were built-out.*

Public Comments

Comment 21

Windsor adopted its first land use plan in 1978 with several subsequent major revisions. To comply with the Wisconsin Comprehensive Planning Law (“Smart Growth”) Windsor adopted its 2006 Windsor Comprehensive Plan; this Plan contains the strongest possible provisions for farmland preservation in our designated preservation area. In most basic terms, the 2006 Windsor Comprehensive Plan carefully designates a limited

¹ Number was reduced to account for changes in water re-categorization. See appendix A for more details.

² See footnote 7.

area for non-farm economic development, while placing by far the largest area of the Town in a permanent agricultural preservation classification (this latter area also contains nearly all of Windsor's best agricultural lands and the bulk of our very vibrant farming community).

- *This paper looks only up to the year 2000. This paper does not address changes effective in 2006.*

Comment 22

Windsor has exclusive agricultural zoning. Non-farm conversions are limited under the 2006 Comprehensive Plan to either the area of Windsor served by public utilities or in an additional area southern tier of the Town that, as a result of history, already contains pre-regulation residential development.

- *The following language was added to page 11: "All four towns have farmland under ag-exclusive zoning as part of the Dane County Farmland Preservation Program. This zoning is administered by the County and certified by the State. Land under this zoning designation receives tax credits, a major incentive to remain in agriculture and maintain the minimum lot size of at least 35 acres. The Town of York has a minimum of 1 split per 75 acres, instead of 35. Often, splits made under this zoning required a deed restriction against non-farm divisions of the remaining land."*

Comment 23

Windsor has Dane County's second Purchase of Development Rights (PDR) Program: We have been awarded federal funding assistance for our PDR program and anticipate completing our first PDR purchase shortly, in cooperation with Dane County and the Natural Heritage Land Trust. Furthermore, Windsor is in active negotiations on future possible PDR conservation easements, and has also been awarded State Stewardship Fund grant to facilitate a conservation easement on a working farm adjacent to the Token Creek Conservancy. To assist in these efforts, Windsor contracts with Natural Heritage Land Trust for professional assistance. In total, these actual and pending PDR projects will result in 479 PDR-protected acres in Windsor in the program's initial phase.

- *This paper looks only up to the year 2000. This paper does not address changes effective in 2006. These accomplishments; however, will be used and referred to in the next paper in this series focusing on solutions.*

Comment 23

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- *This paper looks only up to the year 2000. This paper does not address changes effective in 2006. These accomplishments; however, will be used and referred to in the next paper in this series focusing on solutions.*

Comment 24

Within Windsor's farmland preservation district where one split per 35 acres is permitted by law, Windsor requires that remaining farmland be deed restricted against further non-farm land divisions as a condition of approval for such splits. Since implementing the policy over 920 additional acres of Windsor farmland have been so protected. It should be noted that when one larger-than-average farmer recently decided to exercise the one split per 35 acres option, Windsor required (with the cooperation of the City of Sun Prairie) that nearly all of the new residential splits be located in cluster development to minimize agricultural impacts and future service costs.

- *The following language was added to page 11: "All four towns have farmland under ag-exclusive zoning. This zoning is administered by the County and certified by the State. Land under this zoning designation receives tax credits, a major incentive to remain in agriculture and maintain the minimum lot size of at least 35 acres. The Town of York has a minimum of 1split/75 acres, instead of 35. Often, splits made under this zoning required a deed restriction against non-farm divisions of the remaining land."*
- *This paper looks only up to the year 2000. This paper does not address changes effective in 2006.*

Comment 25

Windsor's Land Division Ordinance and Comprehensive Plan do not permit subdivisions in our designated farmland preservation district. Windsor does have a public record of going to court, if necessary, to defend such policies.

- *This paper looks only up to the year 2000. This paper does not address changes effective in 2006.*

Comment 26

Windsor became the first community in the state to adopt an enabling resolution authorizing application for an Agricultural Enterprise Zone Designation under the Working Lands Initiative.

- *This paper looks only up to the year 2000. This paper does not address changes effective in 2009. This accomplishment; however, will be used and referred to in the next paper in this series focusing on solutions.*

Comment 27

Windsor is in the final stages of planning with both the City of Sun Prairie and Village of Deforest on cooperative plans that include boundary agreements providing safeguards against further urban encroachment on Windsor's designated farmland protection area.

- *This paper looks only up to the year 2000. This paper does not address changes effective in 2009 or after. This accomplishment; however, will be used and referred to in the next paper in this series focusing on solutions.*

Comment 27

In its non-farm economic development area served by public utilities, Windsor is working with developers to have residential density levels greater than typically found in suburban Dane County to mitigate areas farmland losses.

- *This report looks only up to the year 2000. This report does not address changes effective in 2009 or after. This accomplishment; however, will be used and referred to in the next paper in this series focusing on solutions.*

Comment 28

Windsor is also a leader in Dane County on park development and protection of unique conservancy areas of exceptional importance:...[specifics omitted]

- *This paper looks only at agricultural land that is in agricultural use.*

Comment 29

Page 5, footnote 8 [actually 9]: This footnote is important and warrants more prominence in the Report. For Windsor, the single greatest reason for loss of farmland to non-farm uses has been annexation to adjacent municipalities or annexation-fueled development pressure that often produces pressure to convert land to non-farm uses, even when such annexation-derived farmland losses are still attributed to the town under the data provided, then such statistics present only a “half picture” of the dynamics involved, for often the subject town has little or no control over such annexations under present Wisconsin law.

- *The language was removed as a footnote and added as a paragraph on page 5 to read “ Due to the nature of the Land Use Inventory and the timing of annexations and development, agricultural lands that a city or village develops may not have been counted as agriculture in that city/village in the previous inventory, but rather in the town from which it annexed the land. For example, say that in 1990, five acres of cropland are counted for the Town of Black Earth. In 1991, the Village of Black Earth annexes the five acres and begins to develop the land prior to 1999. In 2000, the Land Use Inventory counts five new acres of development in the village and five less acres of agriculture in the town. This explains, in part, why the calculations show a large gap between the 2,000 agricultural acres cities lost and the 15,000 acres they developed and why the towns are attributed with such a large portion of the agricultural losses. This warrants a closer examination of annexation trends in cities and villages.”*

Comment 30

Page 6, paragraph 3: While statistics generally do indicate that development often occurs at higher densities within municipalities than within towns (particularly with Madison factored in and given the fact that many towns without urban services must comply with state on-site sewer system standards), this is still a very broad generalization that obscures local exceptions. Windsor, for example, has recently had several developments, proposed or actual, served by public facilities that are more dense than those in some nearby municipalities. Where Windsor, over the past 20

years, has permitted less dense development in carefully designated areas, it has been confined to areas that cannot readily be served by public utilities and are in “urbanization pressure areas” already close to existing or planned development. [Note: Some of these factors are noted further in the Report on page 7].

- *Added language on page 6, paragraph 3 reading “This is of particular importance in urbanizing towns such as Middleton, Blooming Grove, Westport and Windsor that typically develop land at lower densities, especially in areas outside an urban service area following state on-site septic density guidelines. The following section addresses development densities in greater detail.”*
- *This report looks only up to the year 2000. This paper does not address changes effective in 2009 or after. This accomplishment; however, will be used and referred to in the next paper in this series focusing on solutions.*

Comment 31

Page 8, paragraph 1: It should be noted that there two primary reasons why even towns with strong farmland preservation policies still permit some planned, typically, residential lower density development. First, in the case of Windsor, some such development as been allowed as essentially infill. Due to its history and location, Windsor has a number of large rural subdivisions in its southern tier served by on-site facilities whose pre-1979 approvals pre-date Windsor land use regulations. Windsor’s 2006 Comp. Plan allows some limited new residential development near these areas because there are not core agricultural parcels and have little long-term viability as modern production resources. Second, the realities of Wisconsin’s local government financial system, particularly, levy limits, virtually compel towns to have some limited non-agricultural development in order to have the fiscal resources necessary to pay for always increasing service costs and, ironically, valuable protection efforts like PDR programs. It is not accident that only Dunn and Windsor each with significant non-farm revenue sources, are the only two communities in Dane County with PDR programs.

- *Added language on page 8, end of preceding paragraph reading “Town development may occur as infill and towns often have to allow development to supply revenue needed to provide public services and programs, especially if villages or cities annex lands generating revenue for a town.”*

Comment 32

It should be noted that Windsor, in addition to Dunn also has a funded PDR program- a fact omitted in the draft text.

- *The Town of Windsor’s PDR program came after 2000. This paper looks only up to the year 2000. This accomplishment; however, will be used and referred to in the next paper in this series focusing on solutions.*

Comment 33

Page 16, paragraphs 1 and 2: These paragraphs contain rather sweeping generalizations that Windsor feels are simplistic. It is difficult to make a straight comparison between Dunn and Windsor simply on the basis of land consumption data. Compared to Windsor, Dunn is fortunate in that most of its residential development has been confined to areas close to its lake resources, the cost and finite availability thereof

greatly confines and keeps compact such development activity. The high unit value of lakefront residences has also allowed Dunn to have above-average financial resources to pursue planning initiatives like PDR programs without resorting to additional, more conventional economic development such as has been the case in Windsor. Contrary to the Report text, the differences between Windsor and Dunn have more to do with geography than land use policy differences between the two communities, with both towns actually having very similar regulations and planning goals. Windsor has perhaps also been under more actual annexation and urbanization pressure from adjacent municipalities when one looks at annexation data.

- *Added and reworked language on page 15, paragraph 2 reading “The Kegonsa “limited service area” in the Town of Dunn provides public sanitary sewer and is not intended for future growth. Development in Dunn is limited primarily to lake front development. The Northern Urban Service Area covering a part of Windsor and some surrounding municipalities provides a full range of urban services and anticipates future urban growth. Moreover, the Town of Windsor may compete with the Village of DeForest for growth and may be showing the effects of “competitive sprawl” –where local governments plan, promote, and subsidize edge development in an effort to capture vacant lands before competing neighboring municipalities. In general, Windsor experiences a greater threat of annexation and losses attributed to the town may be cause by municipal development (recall how land use change numbers do not fully account for lands lost to annexation). Also, water features limit development in the Town of Dunn, a feature unique to this Town. All four towns participate in the Farmland Preservation Program, and the Town of Dunn additionally instituted a successful Purchase of Development Rights (PDR) Program in 1997³. The Town of Dunn is able, in large part, to implement a PDR program because of high-value lake development.*
- *Added language to page 17 reading “Dunn is under development pressure like Windsor, but Dunn has consumed less land. This indicates differences due to geographic characteristics, growth pressure, and growth management and agricultural preservation policies that warrant further examination in future reports.”*
- *Some policies similarities developed after 2000. This paper looks only up to the year 2000. This accomplishment; however, will be used and referred to in the next paper in this series focusing on solutions.*

Comment 34

Map 1.4 Town of Windsor 2: while recognizing the limitations inherent with small maps, nonetheless Map 1.4 would benefit from refinement. First, while it is accurate that some of the rural homes are indicated on the map as non-agricultural conversions, in fact a significant number of these lots/homes are personal residences of farm families. Second the jurisdictional lines (and growth patterns) between Windsor and DeForest are difficult to discern on this map; this is important for illustration purposes since Windsor has lost large amounts of acreage to DeForest over the past 20 years.

- *Only the first farm-residence on a parcel will county as a farm dwelling. Any additional residence, family or otherwise, are not counted as farm dwellings for the purposes of the Land Use Inventory.*
- *See Map 1.4 for above improvements.*

³ The Town of Windsor established a Purchase of Development Rights program in 2006. They were the second jurisdiction to establish this program in the County. The affects of this program are outside the time frame of this issue paper and will be discussed in the next issue paper in this series.

Comment 35

Miscellaneous: While this information has alluded to these factors in various other places, the Report contains insufficient analysis of the following:

- (1) The role of Wisconsin's local government financial system and unbalanced annexation laws in promoting non-farm conversion of lands. Namely, development is one of the few ways to grow a local budget and meet service costs under the levy limit and property tax-based system, leaving many local governments with little choice than to pursue non-farm development (towns and municipalities alike). Particularly with the rise of cooperative and partnership service programs, towns and municipalities alike need the financial resources to meet the costs of services requested by their residents. Under the present system, municipalities have little or no incentive to support farmland preservation policies and sometimes seem to fear curbs on their future utilization of those properties as a "land bank."
 - (2) Transportation resources and geography play a significant role in farmland loss. The proximity of major highways, railroads, airports, etc. inevitably place development pressure on towns so placed compared to areas without such factors.
 - (3) Wisconsin's antiquated incorporation laws make it difficult for large, semi-urbanized towns to secure protections available to municipalities only (often municipalities that have much smaller populations than such towns) that would provide additional important planning, zoning and farmland preservation tools.
- *Thank you. These factors are very important and are equally applicable across the county. Changes to state laws maybe discussed in the third paper in this series focusing on potential solutions. Still, the RPC, County, and local jurisdictions are currently acting under these laws are they stand.*

Comment 36

This looked quite good to me with some interesting ideas being set up for future reports. Nice work.

- *Thank you.*

Comment 37

T. of Dunn "commercial development" changes numbers are off.

- *Fixed.*

Re: Consideration of letter in response to Wisconsin Department of Natural Resource solicitation of comments to provide input on modifying state stormwater regulations

Decision Items:

1. Authorize staff to submit letter of comment to WDNR

The Wisconsin Department of Natural Resources has been holding public hearings regarding proposed revisions to NR 151, the administrative rule that establishes runoff pollution performance standards for both agricultural and urban stormwater runoff. In doing so, WDNR is soliciting stakeholder input on the proposed rules to help improve its stormwater program and reduce stormwater impacts. Written comments must be submitted on or before March 12, 2010.

Staff has drafted a letter of comment in response to the WDNR request for input.

Materials Included with this Item:

1. Letter of comment to WDNR

Contact for Further Information:

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March 11, 2010

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RE: Proposed Revisions to NR 151

The Capital Area Regional Planning Commission (CARPC) appreciates the opportunity to comment on the WDNR's proposed revisions to NR 151, Wis. Adm. Code. The Commission serves as the regional planning and area-wide water quality management planning entity for the region, which includes Dane County, Wisconsin, and the cities and villages with incorporated areas in the county.

CARPC is in support of WDNR's efforts to make regulatory improvements to strengthen its administrative rules to reduce runoff pollution and achieve water quality standards. Watershed-wide standards are critical to the effective protection and restoration of the biological functions of receiving waters. The concept of standards that mimic a natural hydrologic balance is a necessary element of these regulatory improvements. CARPC recommends that the requirements include performance standards for peak flow rate control, sediment and nutrient control, volume control, thermal control, and groundwater recharge to address the full range of adverse impacts from stormwater runoff. Any state standards should allow state and local agencies to implement more protective standards that they determine are necessary to protect water quality based on local conditions.

Agricultural Performance Standards

Phosphorus Index

CARPC is in support of the addition of a Phosphorus Index (PI) performance standard. Agricultural nonpoint pollution sources have a significant adverse impact on water quality in our region. Phosphorus is a major contributor to blooms of both algae and blue-green algae (cyanobacteria) in surface waters. Some forms of cyanobacteria can be extremely toxic. In addition, as algae decay they create odor problems and cause oxygen depletion in the waters. The proposed performance standard of an average maximum PI of 6 is consistent with the Natural Resources Conservation Service Conservation Practice Standard 590 for Nutrient Management. However, information on the Wisconsin Phosphorus Index available from the University of Wisconsin Department of Soils Science states that a PI range of 4 to 6 has a high to excessive potential for phosphorus delivery to nearby surface waters. We encourage the DNR to reduce the proposed average maximum PI performance standard to a level that will be more protective of water quality and human health.

Tillage Setback

CARPC is in support of the addition of the 20-foot tillage setback performance standard to protect the structural integrity of streambanks and shorelines.

Non-Agricultural Performance Standards

CARPC shares the concerns expressed by the findings of the National Research Council report on *Urban Stormwater Management in the United States* that inadequately controlled stormwater discharges result in the scouring of rivers and streams; degrading the physical integrity of aquatic habitats, stream function, and overall water quality.

Peak Flow Control

CARPC is in support of the inclusion of the 1-year 24-hour design storm in the peak flow rate control standard. We have often placed this requirement as condition of approval for expanding sewer service areas. Research indicates that the present 2-year 24-hour standard does not adequately protect stream channels from erosion because the bank-full, channel forming discharge for most streams has a recurrence interval of between 1 and 2 years.

We also encourage the DNR to evaluate the continued use of the SCS Type II rainfall distribution curve for determining *pre-development* flow rates. The SCS Type II curve represents the most intense storm pattern, which tends to overestimate peak flow rates. Overestimating peak flow rates is conservative for *post-development* flows, which are used to size infrastructure. However, it is not conservative to overestimate *pre-development* peak flows used to determine the allowable release rates of detention basin outlet structures. Real time distributions of actual rainfall events vary over a wide range of possible patterns. They have a strong central tendency that is nearly uniform. Thus, overestimating *pre-development* peak flow rates can result in detention basin release rates that exceed *actual pre-development* conditions during a majority of storm events. This may be contributing to increases in stream channel erosion.

Infiltration Performance Standard

CARPC is in support of increasing the non-residential development infiltration standard from the current 60%. Experience has shown that this standard is so low that it does not require non-residential development to implement any infiltration practices in many cases. We do not support the proposed reduction in the infiltration standard for medium and high-density residential development from 90% down to 75%. The proposed reduction is based on the assumption that a high percentage of open space must be available to meet the higher standard. This does not account for the availability of a wide variety of practices including green roofs, porous pavement, rain barrels / cisterns, infiltration planter boxes, and subsurface infiltration systems, that can be used to meet a higher infiltration standard in high density areas. Site-specific conditions, such as soil types, can often limit the feasibility of some best management practices (BMPs). CARPC encourages DNR to take a watershed approach to developing performance standards, rather than site-based standards. This allows needed flexibility for regional BMPs and the possibility of locating BMPs where conditions are most suitable and outcomes most beneficial. We also encourage DNR to adopt a minimum 90% pre-development infiltration standard regardless of type of development or impervious conditions. CARPC has often placed a requirement for greater than 90% of pre-development infiltration as a condition of approval for expanding sewer service areas. The Commission's Environmental Resources Technical Advisory Committee has also drafted recommendations for a 90% pre-development infiltration standard for all development types.

We also encourage the DNR to change the name of the standard from an infiltration performance standard to a stay-on or volume control standard. It is misleading and confusing to the general public to call it an infiltration standard, this implies that the runoff must be infiltrated to meet the standard, which is not the case. It is more accurate to call it a stay-on or volume control standard since the standard can be met by evapo-transpiration as well as collection and storage for beneficial use.

Other Standards

Since the infiltration standard can be met by evapo-transpiration and beneficial reuse without infiltration, we also recommend that a separate groundwater recharge standard be developed. Groundwater recharge is essential to maintaining stream baseflow, groundwater fed wetlands, springs, and drinking water aquifers in many parts of the state. CARPC has often placed a requirement for maintaining pre-development groundwater recharge rates as a condition of approval for expanding sewer service areas. In 2009, the Wisconsin Geological and Natural History Survey published a report, *Groundwater Recharge in Dane County, Wisconsin, Estimated by a GIS-Based Water-Balance Model*, which we use to estimate the annual pre-development recharge rates for our region. A similar methodology could be used to estimate the recharge rates throughout the state. RECARGA modeling can be used to demonstrate compliance with the standard, although improvements to the model are necessary to better account for early season and late season infiltration.

CARPC recommends that the DNR also develop a thermal standard to reduce the temperature of runoff for sites located within the watershed of a river or stream identified as a cold-water community or trout stream.

Sincerely,

CARPC Staff