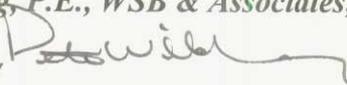


MEMORANDUM

To: *Mr. Tae Kim, VRWJPO Engineer*
Mr. Jack Frost, Metropolitan Council
Mr. Russ Matthys, City of Eagan

Copy: *Mr. Tom Lawell, City of Apple Valley*
Mr. Scott Thureen, City of Inver Grove Heights
Mr. Andy Brotzler, City of Rosemount
Ms. Shelly Monson, Independent School District No. 196
Dr. Deirdre Wells, Superintendent Independent School District No. 199
Mr. Tim Collins, Superintendent Independent School District No. 200
Mr. Eugene Rotty, Township of Vermillion
Mr. Ryan Schroeder, City of Cottage Grove
Ms. Sherri Lefley, City of Coates
Mr. Terry Holmes, Empire Township
Ms. Lynn Moratzka, Dakota County Office of Planning
Mr. Robert Rotty, Township of Nininger
Mr. Tom Link, City of Inver Grove Heights

From: *Pete Willenbring, P.E., WSB & Associates, Inc.*

Date: *August 14, 2007* 

Re: *City of Rosemount Stormwater Management Plan*
Responses to Comments
WSB Project No. 1668-12

Based on comments received from review agencies on the final draft of the City of Rosemount's Comprehensive Stormwater Management Plan dated June 2007, please find response to the comments received. Comments were received from the following agencies/local entities:

- Comments from Mr. Tae Kim, VRWJPO, dated July 19, 2007.
- Comments from the Metropolitan Council, dated July 25, 2007.
- Comments from Mr. Russ Matthys, City of Eagan, dated July 24, 2007.

Revisions to the Plan are included with this memo and have been incorporated as necessary into the attached final Plan pursuant to MS 103B. This response memo and updated sections and figures of the final Plan are being forwarded to you for final approval. Please approve the Plan at the August 23, 2007, VRWJPO meeting and send correspondence back to the City for their records.

Comments from the Met Council

Comment #1: The Mississippi River is impaired in the stretch that borders Rosemount. Spring Lake is impaired for nutrients and mercury and also borders Rosemount. The Minnesota Pollution Control Agency is completing the total maximum daily load study (TMDL) for Lake Pepin which should also include recommendations for Spring Lake. The results of the TMDL study may have a major impact on all NPDES permittees in the metro area. The city should be engaged in the TMDL efforts for these waterbodies and be aware of the potential need to amend their local water management plan based on the implications and requirements of the Lake Pepin TMDL.

Response: The City looks forward to continuing to follow the status and becoming engaged in the Lake Pepin TMDL and will consider methods to address additional requirements if needed pursuant to the Lake Pepin TMDL when these requirements become formally identified within these reports. Section IV subsection IV-A has been revised to reference the ongoing TMDL studies.

Comment #2: Related to bullet #1 above, section IV, page 1 states that there are no impaired waters in Rosemount. Both the Mississippi River and Spring Lake border the city and have been listed as impaired. The plan should be changed to reflect this.

Response: Section IV-A.1 has been revised to identify the ongoing TMDL's including the following updated text, "As necessary, consider the need to collect data and conduct water quality monitoring related to anticipated implementation of Total Maximum Daily Load (TMDL) studies and reports when and if they are required by the MPCA."

Comment #3: The *2030 Water Resources Management Policy Plan* requires local water management plans to incorporate information required in their SWPPP on nondegradation into local water management plans. This information is not in the plan.

Response: A summary of the City's SWPPP is provided in Appendix L and has been referenced in Sections IV and V of the Plan. The Nondegradation Report has been identified in Subsection A of Section IV and the water quality treatment subsection of Section V.

Comment #4: It is suggested that the city use the infiltration rates recommended in Chapter 12 of the Minnesota Stormwater Manual as a guide for sizing infiltration practices.

Response: Infiltration rates have been revised pursuant to VRWJPO standards. (See Section V, page 10)

Comment #5: The plan does not include specific quantifiable goals for the lakes in the community. The city is strongly encouraged to establish numerical standards for each lake in the city. Numerical standards are needed to provide quantifiable goals for the water resources in the community.

Response: Plan has been revised to include MPCA's ecoregion eutrophication standards in Appendix S. Section V of the Plan has been revised to establish a process for the City to consider development of waterbody Eutrophication standards (see Section V, page 10).

Comment #6: The city has plans to monitor lake levels in Keegan Lake. Council staff encourages the city to gather water quality information for Keegan Lake and any other lakes where lake goals are established. The Council's Citizen Assisted Monitoring Program (CAMP) is a very inexpensive way to gather water quality information for lakes. For more information about CAMP, contact Kent Johnson of my staff at 651-602-8117.

Response: The Plan already includes a program to consider establishment of a cost-share program for volunteer monitoring program on critical waterbodies (Table VI-2, SMP 12)

Comment #7: The plan does a good job of assessing the problem areas and including corrective actions needed to fix the identified problems.

Response: Thank you for the acknowledgement.

Comment #8: The city's current code requires peak runoff rates for proposed development to not exceed the 10 and 100 –year storm events. It is recommended that the code be amended to require peak runoff rates to not exceed the 1- year storm event as well as the 10 and 100 – year storm events, which would be consistent with the Minnesota Stormwater Manual guidelines and the Vermillion River Joint Powers Organization's requirements.

Response: The Current City requirement to store runoff from the 100-year, 24-hour storm event (without discharge) for new development exceeds the VRWJPO standard for Peak Runoff Rate Control Criteria 2.

Comments from the City of Eagan

Comment #1: Section IV, Part B, 13. Identify the storm water improvements state in the Lebanon Hills Stormwater Management Plan (LHSMP) not being implemented under the Joint Powers Agreement (JPA).

- Wetland 940 form Rosemount (Figure M in LHSMP) – \$184,000
- Bridge Pond and Pond 1009 (Figure T in LHSMP) - \$54,000

Response: Information related to Lebanon Hills Stormwater Management Plan (LHSMP) and Joint Powers Agreement (JPA) will be added to appendix of Plan (and thereby adopted by reference into the Plan) upon approval of agreement by all parties.

Comment #2: Section VI, CIP. Same as comment #1 above

Response: Information related to Lebanon Hills Stormwater Management Plan (LHSMP) and Joint Powers Agreement (JPA) will be added to appendix of Plan upon approval of agreement by all parties.

Comment #3: Section VI, CIP Item 11. Update the amount of the \$639,046 as stated in the JPA for storm drainage improvements within LHRP. This amount is only an estimate; actual Rosemount responsibility will be determined by taking the total cost of the Core Improvements identified in the JPA, subtracting out the County and Eagan's fixed contributions and multiplying 86.92 % to the balance.

Response: Information related to Lebanon Hills Stormwater Management Plan (LHSMP) and Joint Powers Agreement (JPA) will be added to appendix of Plan upon approval of agreement by all parties.

Comment #4: Appendix A. Include a copy of the JPA between the City of Eagan, Dakota County, City of Apple Valley and City of Rosemount for storm drainage improvements within LHRP.

Response: Copy of JPA will be added to appendix.

Comments from VRWJPO

Comment #1: In the List of Appendices, include VRWJPO Standards. Appendix J, Erosion Control Ordinance, duplicates Section 10-1-12 of Appendix Q, City Ordinances.

Response: Section 10-1-12 of City ordinance is also included in Appendix J.

Comment #2: In Section III, a sub-section that explains existing/proposed drainage patterns separately with appropriate maps that incorporate subwatershed boundaries, sanitary/storm sewer systems, channels, storage facilities, outfalls, lift stations and flow arrows needs to be inserted between Sub-Sections B and C. These maps should show all the locations of the areas discussed for assessment of problems and issues in Section IV.

Response: Figure III-4 has been revised to include additional delineated subwatersheds and now includes the direct tributary subwatershed for the larger basins within the City. The text within Section III has been revised to include a description of existing and proposed drainage patterns between subsections A and B. Figure III-4 has also been revised to include locations of existing lift stations. The text located on page 1 of section III includes the following updated language: "Storm water runoff from the City is land-locked as the City has no positive outlet. The drainage in the City is characterized by a number of deep depressions, the majority of these depressions are landlocked with no natural overflow out of the direct subwatershed of the basin. The specific drainage areas, which depict topography for areas within the City, are shown on the subwatershed delineation map on Figure III-4 and are further illustrated in the stormwater trunk system map in Appendix B."

Comment #3: In Section III-H, the locations of the unnamed water bodies in the table are not identified in Figure III-6.

Response: Figure III-6 has been updated to include this information.

Comment #4: In Section III, a sub-section for High Value Natural Areas in the City boundary identified by the Minnesota Land Cover Classification System (MLCCS) and Dakota County's Farmland & Natural Areas Program (FNAP) needs to be included (See Figure 1.12 of the VRWJPO Plan. The Dakota SWCD provides a more refined map entitled "Vermillion River Watershed Critical Buffer Habitat") The City has a considerable acreage of high quality natural areas. It is a goal of both the City and VRWJPO to protect and enhance fish and wildlife habitat and VRWJPO's Plan requires local communities to conserve the High Value Natural Areas during development (See Section 4.4, Wetland and Habitat Objective 4 of the VRWJPO Plan, Page 4-20).

Response: The information from referenced figure in VRWJPO Plan has been incorporated into Section III (Figure III-17). The City will incorporate a policy to conserve High Value Natural Areas and other Sensitive and Natural Areas into the City's Comprehensive Land Use Plan. Section III and wetland subsection of Section V has been revised to include the following text for High Value Natural Areas: "The Sensitive and Natural Areas as identified in Figure 1-12 of the VRWJPO Plan has been incorporated into Figure III-15 of the Plan which includes the locations of the High Value Natural Areas, the Minnesota National River and Recreation Area, and the Dakota County Regional Park within the City. The City will consider policies related to the conservation of these sensitive and natural areas including the identified High Value Natural Areas during development of the City's Comprehensive Land Use Plan consistent with Metropolitan Council requirements."

Comment #5: In Section III-I, Figure III-10 shows the DNR permitted ground appropriation sites within the City. The County has additional information that can augment the information available from the DNR as follows:

Wells with Appropriations permits, but mislocated more than 1000 ft. -
Unique No. 243774, DNR Appropriations permit 766199
– Unique No. 475934, DNR Appropriations permit 896010 -
Unique No. 207611, DNR Appropriations permit 976141

Irrigation wells without Sealing Records or Appropriations Permits.
– Unique No. 441480 -
Unique No. 451563

Terminated Appropriations permits that do not have a Well Sealing Permit.
– Unique No. 216365, DNR Appropriations permit 745003 -
Unique No. 256084, DNR Appropriations permit 776188

Recently constructed Public Water Supply Wells that are not shown in the figure include -
Unique No. 706804
(Contact Source Water Protection at the MDH for others.)

Irrigation Pivots located more than 2000 feet from a known irrigation well or Appropriations Permit.
- Abrahamson, Between the NE 1/4 of Section 31 and NW 1/4 of Section 32, Twp 115, Rng 18.
–Pine Bend Development, In the NE of the SE of Section 29, Twp 115, Rng 18.
- Fox, In the W 1/2 of the SW 1/4 of Section 33, Twp 115, Rng 18

Response: Above-referenced information has been added to Figure III-10

Comment #6: In Section IV, the problems and key issues need to be explained in detail utilizing available data and results of analyses in order to ensure documentation for continuous management and evaluation. Detailed explanations are especially needed for Items A-3, 5 and 6; B-5, 11, 12, 13-3, 17 and 19; F-3 (show locations), and G-2 (explain about MS4 nondegradation requirements). In the Corrective Action of Item E-1, include "Implement public education program consistent with the City SWPPP."

While Ferric Chloride and Alum systems have been shown in some cases to improve water quality, it seems that the Corrective Action in Item A-6 is a premature conclusion given Item A-3 that states that the City needs additional water quality data. Use of Ferric Chloride and Alum systems and their success are very much site specific depending on water quality characteristics. It is generally accepted that these types of systems need to be based on detailed study and proof that more traditional water quality Best Management Practices will not achieve water quality goals. This is particularly true given the potential toxicity associated with aluminum and increasing concerns with waters impaired due to chloride. Before VRWJPO staff could recommend approval of a statement that these types of systems are needed, we would need to see additional proof regarding their need and that other more traditional practices will not work.

In addition, Stormwater Management Studies SMS-2 and SMS-10 listed in Table VI-3 should be included in the appropriate items in Section IV.

Response:

- **A-3 (A- 2.2 in revised plan)** – Text has been changed to identify that a water quality program will be developed as required by state and federal requirements. Text in (**SMP 5** in revised plan) has been modified to identify that the City will implement a water quality monitoring program as necessary to comply with state and federal requirements.
- **A-5** – Text regarding need to address overall drainage issues on Umore property has been revised in Plan and incorporated into **Section IV B.6.3** (for the western portion of the Umore property) and **B.9.1** for the central /eastern portion of the Umore property.
- **A-6** – Text was revised to identify that chemical treatment is one option to address water quality treatment standards for compliance with state or federal requirements (see **Section IV Subsection A.4.1**).
- **B-5 –Policy B-5** of revised plan (**Sect. IV – page 4**) includes consideration of a feasibility study as proposed under **SMS -7** within table **VI-3** to further study the possibility for the 153 acre area in the far southeast corner of the City to be redirected into the City proposed overflow stormwater trunk system.
- Previous identified policy **B-11** –The “Twin Puddles” overflow project, is an ongoing project implemented as part of the 2007/08 City street reconstruction project and will be removed from the Plan.
- **B-12** – This issue has been included in into **table VI-1(CIP-7)** of plan. Text within the revised plan (**Subsection B.10.1**) now includes the following text: “The City currently contains approximately 100-150 landlocked depressions (as identified in

Figure III-4) the majority of which do not have natural overflows out of the direct subwatershed of the basin.”

- **B-13-3** – Revised Plan subsection **B.11** states that as part of Rosemount’s responsibilities associated with the proposed agreement, the City will implement lateral drainage improvements along 120th Street within the Lebanon Hills Watershed consistent with this agreement and the City’s Comprehensive Plan. In addition, the City will require infiltration systems to be constructed consistent with its storm water policies as part of any redevelopment in the area to reduce the volume of runoff generated from the watershed in the future. (Key Issue No. 2 in Figure III-8)
- Previous policy **B-17** - This item is an ongoing BMP program related to the City’s NPDES requirement and has been removed from the revised version of the Plan.
- **B-19** – (**B-16 in revised plan**) description of issue has been revised to describe issue in more detail. This project will be investigated as part of feasibility study (**SMS-2**) and proposed project identified in **CIP 10**.
- **F-3** – This item has been eliminated from the plan.
- **G-2** – The City’s non-deg. requirements have been identified in within **Section IV - Subsection G, Subsection A of Section VI** and the **water quality treatment section of Section V**.
- **E-1**- Text public education program has been added to reference the SWPPP public education section in Appendix L).
- **SMS-2**. The City continues ongoing discussion with Flint Hills Resources related to use and longevity of the proposed regional infiltration area located at or near the Flint Hills Property. Given that this is an ongoing program the feasibility study for this issue was removed.
- **SMS 10** will be added to Section IV. This program is grant dependent.

Comment #7: In Section IV, an overview discussion of the infiltration sites needs to be included. Infiltration related actions such as a LID program, maintenance of infiltration ponds, education, and monitoring are discussed in Sub-Sections F through I. In contrast, the specific issues described in Sub-Sections A and B do not typically describe their relationship to infiltration, and the Corrective Actions do not in general utilize infiltration except that in Sub-Section B-9, where diversion to an infiltration area is proposed - but then only as a *temporary* solution. The level of importance and priority the City will be placing on the infiltration basins for stormwater management needs to be clearly stated.

Response: An introduction to Subsection B, Section IV has been incorporated (Flooding and storm water rate control concerns) stating that “it should be noted that actions identified in this subsection (flooding and stormwater rate control subsection) are not meant to diminish the high level of importance the City places on infiltration.”

Comment #8: In Section IV-D, it is noted that degraded storm water quality has been identified as an impact on wildlife resources, but no Corrective Action is proposed because the City does not contain any major waterways. This conclusion appears to be in conflict with the proposed overflow system to the Mississippi River. Section IV-A.2 notes that the Mississippi River is an impaired water body with an ongoing TMDL study/plan under development by the MPCA. The City's Plan

should address a corrective action for degraded water quality of stormwater that will be discharged to the Mississippi River.

Response: The City is not aware of degraded water quality of stormwater impacting wildlife resources. The City will consider methods to address additional requirements if needed pursuant to the TMDL studies and NPDES non-degradation requirements when these requirements become formally identified within these reports. The City currently complies with the NPDES MS 4 program.

Comment #9: In Section V-A (Page 3), the phrase, "...and does not anticipate the need to submit development reviews or site variances to the VRWJPO for review" must be revised to be "...and does not anticipate the need to submit proposed land development plans to the VRWJPO for review and permitting unless an application for the use and development of land requires an amendment to or variance from the City's adopted Surface Water Management Plan or implement program." (See VRWJPO Standards/Rules, Pages 4-5.)

Response: Proposed text has been added to the Plan at the located specified.

Comment #10: In Section V, include a policy to protect the High Value Natural Areas consistent with the VRWJPO Plan Section 4.4, Wetland and Habitat Objective 4, Actions 1 through 6. Also include City's intention of implementing this policy in Sections V and VI of the City's final Plan.

Response: The information from referenced figure in VRWJPO Plan has been incorporated into Section III (Figure III-17). The City will incorporate a policy to conserve High Value Natural Areas and other Sensitive and Natural Areas into the City's Comprehensive Land Use Plan. Section III and wetland subsection of Section V has been revised to include the following text for High Value Natural Areas: "The Sensitive and Natural Areas as identified in Figure 1-12 of the VRWJPO Plan has been incorporated into Figure III-15 of the Plan which includes the locations of the High Value Natural Areas, the Minnesota National River and Recreation Area, and the Dakota County Regional Park within the City. The City will consider policies related to the conservation of these sensitive and natural areas including the identified High Value Natural Areas during development of the City's Comprehensive Land Use Plan consistent with Metropolitan Council requirements."

Comment #11: In Section VI, include implementation plan of the problems/issues and corrective actions identified in Section IV for Items A-5-3, B-5, B-6, B-8, B-9-1 & 2, B-10, B-11 and B-18 unless already addressed by the listed CIPs/Programs/Studies. If it is the City's intention to implement these items after 2015, it should be addressed in this Section.

Response:

- **A-5-3** - Text regarding need to address overall drainage issues on Umore property has been revised in revised plan and incorporated into **Section IV B.6.3** (for the western portion of the Umore property) and **B.9.1** for the central /eastern portion of the Umore property. Item has been included in **Table VI-1 in CIP 5 and 14**.

- **B-5** – Policy B-5 of revised plan (**Sect. IV – page 4**) includes consideration of a feasibility study proposed under **SMS -7** within table VI-3 to further study the possibility for the 153 acre area in the far southeast corner of the City to be redirected into the City proposed overflow stormwater trunk system.
- **B-6** – The subsection referenced in B-6 of previous Policy section has been deleted
- **B-8** – The need to address drainage issues in the western portion of the Umore property has been identified in **Section IV B.6.3** and in **Table VI-1, CIP 5**.
- **B-9-1 & 2** – As revised, **Section IV subsection B.7** the Plan text now includes a detail description of the overflow for Wachter Pond overflow system with the corrective action identified in **CIP 6**.
- **B-10** – Has already been incorporated into **CIP 5** and the revised Plan includes a more detailed description of the corrective action in **Section IV Subsection B8.1**.
- **B-11** – The “Twin Puddles” overflow project is part of ongoing 07/08 street reconstruction project and has been removed from the Plan.
- **B-18** – In **Section IV Subsection B.15**, of the revised plan includes more details regarding the description of the issue. The corrective actions have been identified in **SMP -12**.

Comment #12: In Section VI, the 16 key issues/projects summarized in Figure III-8 should be highlighted or discriminated in priority from other projects.

Response: Figure III-8 has been updated to incorporate all site-specific issues identified in Section IV. City wide/ policy issues are also listed in Section IV but not included in Figure III-8 to maintain clarity. The issues identified in Figure III-8 have been specifically identified within each subsection of Section IV. Please note that issues identified in Figure III-8 are not necessary of higher priority than those not listed, but rather are those issues that can be identified by a single location /area within the City.

Comment #13: The City addresses the need of additional water quality data in Section IV-A-3 and implements a water quality monitoring program for high quality waterbodies (SMP-6) and a cost-share volunteer monitoring program (SMP-15) in Section VI. This is consistent with the VRWJPO policy and objectives (See VRWJPO Plan Section 4.1, Objectives 2 & 4, Section 4.3, Objective 1.) In Section IV and/or Section VI, the monitoring approach, locations, and frequency need to be described in detail.

Response: The City will consider establishment of a cost share program for volunteer monitoring program on critical waterbodies. Text has been changed to identify that a water quality program, as identified in SMP-5 and details related to monitoring frequency, location and procedure will be developed and implemented as required by state and federal requirements.

Comment #14: The City's Ordinances and Design Guidelines need to be revised to be consistent with the VRWJPO Standards addressed in the comments below. Following VRWJPO approval of the local plan, the local unit of government must amend its official controls within 180 days of plan approval (Minnesota Statutes 103B.235 Subd. 4). In Section VI of the City's Plan, include a statement of the City's plan to change its official controls.

Response: Plan text in Section VI will be revised to include this statement.

Comment #15: The VRWJPO Floodplain Alteration Standards apply to areas outside of FEMA-designated floodplain areas, including major waterways (intermittent and perennial streams), public waters, public waters wetlands, or other wetlands. The City's floodplain zoning ordinance (City Code Section 11-4-19, Appendix Q of the City's draft Plan) applies only to FEMA-designated floodplain areas. The City's ordinances need to be revised to meet the VRWJPO's broader application.

Response: The high water elevation (or 100-year high water elevation) would be for any adjacent pond or water body regardless if it is in a FEMA floodplain. The City will begin the process to revise their ordinances once the Plan is adopted.

Comment #16: The VRWJPO Standards require "no net loss of storage" under 100-year critical flood elevation. This standard is addressed in the Flood Control Regulation Item 1 in Section V of the City's draft Plan, which prohibits activities within the 100-year floodplain unless compensatory mitigation is provided at a 1:1 ratio by volume. The VRWJPO Standards also require the minimum elevations of new structures to be consistent with Minnesota Rule Chapter 6120 and Dakota County Ordinance 50. The minimum building opening or basement floor elevation standards listed in Flood Control Regulation, Section V of the City's draft Plan seem to exceed VRWJPO Standards. The City Code Section 11-4-19 needs to be revised to include all of these Flood Control Regulations listed in Section V of the City's draft Plan. In addition, the "100-year flood elevation" in the City's Plan and City Code Sections 10-1 and 11-4 must reflect "100-year critical flood elevation" to be consistent with the VRWJPO Standards.

Response: Section V of the Plan has been updated to include the word "critical". The high water elevation (or 100-year high water elevation) would be for any adjacent pond or water body regardless if it is in a FEMA floodplain. The City will begin the process to revise their ordinances once the Plan is adopted.

Comment #17: The City's current Comprehensive Wetland Management Plan (CWMP) is a BWSR-approved plan and was adopted prior to the adoption of the VRWJPO Standards. In this situation, VRWJPO allows the City's current ordinance to govern wetland alteration and buffer requirements until the VRWJPO completes its second generation Watershed Plan in 2015 (See VRWJPO Buffer Standards/Exceptions). Therefore, the BWSR-approved plans are accepted as compliant with the Wetland Alteration and Wetland Buffer portions of the VRWJPO Standards and no changes are required at this time. If the City's CWMP is revised before the second generation VRWJPO Plan is complete, the revisions will need to include the VRWJPO Standards.

Response: No response needed.

Comment #18: The VRWJPO Buffer Standards apply to all wetlands, public waters wetlands, and major waterways. As stated in Item 13, the buffer standards for wetlands and public waters wetlands in the City's CWMP govern until the VRWJPO completes its second generation Watershed Plan in 2015. If the City revises its CWMP before the second generation VRWJPO Plan is complete, the revisions will need to include the VRWJPO Buffer Standards. The City has a small portion of a

major waterway (an intermittent stream) near the east end of the City boundary (Township 115 North, Range 18 West, NE & SE ¹/₄ Section 28) which is classified as Water Quality Corridor (See Map 1 "Vermillion River Watershed Stream Classifications and Buffer Standards" accompanying the VRWJPO Standards). This stream is required to maintain a buffer width of 30 feet measured from the centerline of channel. The City's draft Plan and relevant Ordinances should be revised to include the VRWJPO buffer standard for this reach of the stream.

Response: City will incorporate VRWJPO Buffer standards for the water quality corridor located in the far eastern portion of the City as identified in Map 1 of the VRWJPO standards titled Stream Classification and Buffer Standards - Vermillion River Watershed and incorporated into **Figure III-15** of this Plan.

Comment #19: The VRWJPO Standards require that erosion and sediment controls and stormwater runoff quality shall meet the standards for the General Permit Authorization to Discharge Storm Water Associated With Construction Activity Under the National Pollutant Discharge Elimination System/State Disposal System Permit Program Permit MN R 100001 (NPDES General Construction Permit) issued by the Minnesota Pollutant Control Agency (MPCA), August 1, 2003, as amended for projects disturbing more than 1 acre. This standard must be clearly stated in Section V and the City Code Section 10-1-12, Appendix Q, of the City's draft Plan.

Response: Text in the erosion and sediment control section of Section V has been updated to reflect language identified in comment.

Comment #20: The VRWJPO Standards include the voluntary use of turbidity measurements as an indicator of potential non-compliance with its erosion control standards (See VRWJPO Stormwater Management Standards/Construction Erosion Control Criteria 7). This may be incorporated into the City Code and the City's final Plan.

Response: The City will consider this issue as further clarification is provided related to state and federal requirements.

Comment #21: The VRWJPO Standards require temperature control for all areas of the watershed discharging to the trout streams and their tributaries. Because the City has no proposed discharges to the Vermillion River, the temperature standards will not apply. However, if the City should propose a discharge to the Vermillion River, the VRWJPO thermal standards will apply and regulations would need to be expanded to include those standards.

Response: No response needed.

Comment #22: The VRWJPO Standards require that peak runoff rates for proposed activities and development shall not exceed existing runoff rates for the 1-year, and 10-year critical duration storm events (See VRWJPO Stormwater Management Standards, Peak Runoff Rate Control Criteria 2). The current City Storm Water Management Criteria (City Code Section 10-1-9) address this standard for 10-year, and 100-year storm events. The current City Code needs to be extended to include 1-year, and 10-year critical duration storm events.

Response: The Current City requirement to store (without discharge) runoff from the 100-year, 24-hour storm event for new development exceeds the VRWJPO standard for Peak Runoff Rate Control Criteria 2.

Comment #23: The VRWJPO Standards require that development that creates one acre or more of new impervious surface must incorporate volume control practices into the design sufficient to hold the runoff volume for the 2-year 24-hour storm at predevelopment conditions. The City's current NURP guidelines for the design of stormwater treatment basins and the City's policy that regulates new development areas to provide storage and infiltration of the runoff from a 100-year 24-hour storm event exceed the VRWJPO standards for runoff volume control. The City's intention to encourage or require infiltration and the use of alternative/low impact development (LID) BMPs and stormwater management techniques is clearly stated in Sections IV, V, and VI, and Appendix D of the City's draft Plan. This policy is consistent with the VRWJPO policy and standards. The VRWJPO has developed a 1/2-inch runoff credit system for 10 alternative/LID stormwater management practices in its Standards and Rules (See VRWJPO Standards Pages 24-25, and Rules Pages 34-39). Taking these credits and infiltration technologies may reduce the water quality control volumes necessary to meet the NPDES General Construction Permit. The City's draft Plan includes two implementation programs for ordinance changes and education for promoting LID design and practices (SMP-7 and 8) in Table VI-2. The VRWJPO acknowledges the efforts of the City and recommends incorporating a credit system in the City's Stormwater Management Ordinance and stormwater facility design guidelines.

Response: Thank you for the acknowledgement. The City's existing LID /infiltration program exceeds VRWJPO standards.

Comment #24: The VRWJPO Standards require that infiltration facilities be sized pursuant to the Minnesota Stormwater Manual (MPCA 2006, Chapter 12-INF) using saturated infiltration rates of the least permeable horizon within the first 5 feet below the bottom of the infiltration practice: 0.30 inches/hour for hydrologic soil group (HSG) A, 0.15 inches/hour for HSG B, and 0.07 inches/hour for HSG C. Usage of these reduced infiltration rates seems to be justified by the observation reported in the Rosemount Stormwater Evaporation and Infiltration Study (WSB, June 4, 2007). The infiltration rates for those hydrologic soil groups A, B, and C in Section V and Appendix C in the City's draft Plan need be revised to be consistent with the VRWJPO Standards. In addition, the VRWJPO Standards specify that infiltration system shall be capable of infiltrating the required volume in 72 hours and that infiltration facilities cannot be used on areas with less than 3 feet vertical separation from the bottom of the infiltration system and the seasonal high groundwater table (See VRWJPO Stormwater Management Standards/ Runoff Volume Control Criteria 4 & 5). These standards should be included in the City's final Plan and Ordinances.

Response: Section V of the Plan (Section V page 10) has been updated to include VRWJPO required infiltration rates. Different infiltration rates will be considered by the City Engineer on a site-by-site basis (up to a maximum of 3.0 in/hour) based on percolation tests or other pertinent information conducted by a professional soil scientist or Professional Engineer. The City will be continuing its infiltration monitoring program in the future with the objective of creating a larger dataset. The City will be regularly evaluating results of this study to determine if the current infiltration rates should be modified.

Comment #25: The City plans to construct lateral improvements along 120th Street and outlets for areas within the Lebanon Hills Regional Park (LHRP) subwatershed within the City (Section IV, B-13-3 and Section VI, CIP-12 in Table VI-1 of the City's draft Plan). This project will change inflow to the LHRP from the City. The City needs to reach an agreement with the Cities of Apple Valley and Eagan concerning the changes this project will bring for future stormwater management including financing of the LHRP Stormwater Management Project.

Response: The Lebanon Hills Stormwater Management Plan (LHSMP) and Joint Powers Agreement (JPA) will be incorporated into appendix of Plan (and into the Plan by reference) upon approval by all parties.

Comment #26: The regulation in Section V-C of the City's draft Plan allows for landlocked areas to create outlets to prevent damage to existing properties. This is consistent with the VRWJPO Standards. However, the City's policy and regulation should be expanded to include the specific VRWJPO Standards that apply to discharges from land locked basins including the peak runoff rate control criteria, the runoff volume control criteria, and the low floor requirements of new structures adjacent to the landlocked basins (See VRWJPO Drainage Alteration Standards Policy 3 and Criteria 1).

Response: Sections IV and V of the Plan have been revised to identify that landlocked depressions that presently do not have a defined outlet and do not typically overflow may be allowed a positive outlet to prevent damage to adjacent properties. Any overflows from landlocked depressions will comply with the City's rate control, runoff volume control and low floor requirements including storing runoff from the 100-year, 24-hour storm event for new development and restricting discharge to .05 cfs per acre for longer duration storm events. These above-mentioned City standards assure that proposed overflows will comply with VRWJPO standards, including but not limited to the drainage alternation standards identified in Policy 3 and Criteria 1 of the VRWJPO rules.