

Addendum 1

**Section 1.1.3**

**Additional Comments received on the 2020 Facilities Plan Report  
from Municipalities, Consultants, Non-Governmental Organizations,  
and Advisory Committees on the 2020 Facilities Plan**

Public Comment and Responses

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**DRAFT RESPONSE 08/08/07**

**Begin your comments here.**

Page #	Comment	Response
	Page 2 of 3 - Facilities Plan Chapter 2 - Page 8 - See my suggested language for Page 8 which read, "It is the intention of MMSD to accommodate the potential connection of the leachate generated at the entire landfill facility, as it may be expanded at some future date, even if the expansion area were somewhat beyond the current planning area." It appears the text was changed to say the land is in the planning area, however, that is not the case and our original requested language is still required.	The text in the chapter (final is on Page 2-6) is accurate. Expansion of the planning area and acceptance of new waste streams by MMSD is beyond the scope of the 2020 Facilities Plan and is determined by well documented approval systems between municipalities, the DNR, SEWRPC and MMSD. Thus, statements regarding future actions in these areas are not appropriate for a Facilities Plan.
	Page 1 of 2 - Facilities Plan Chapter 6 - Page 31 - What was requested was an exhibit by watershed depicting the various designations for the types of uses which could be anticipated. It does not seem reasonable to have the reader referred to another agency's document to find such important information.	The MMSD 2020 <i>Facilities Plan</i> and the SEWRPC RWQMPU are companion documents which use the same data and analysis. A conscious effort has been made to avoid duplication of data presentation as some detailed data is more appropriately presented in the 2020 Plan while others are more appropriate for the RWQMPU. The data in question fits more appropriately in the RWQMPU in the opinion of the MMSD and SEWRPC.
	Page 1 of 3 - Facilities Plan Chapter 7 - Pages 19-23 - No response was given to our comment on properly describing MMSD's objectives of their facilities planning effort.	The entire Chapter 7 of the Facilities Plan addresses this comment.

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	<p>Page 1 - 3 - Facilities Plan Chapter 9 (Section 9.1 to 9.5) - Page 2 - My comment was that the reader was referred to Appendix 9-A which was not available. The comment period was closed on November 27, 2006 and the only response offered was that the needed document was posted on January 17, 2007. Since the date at which the comment period was closed was not stated, the response makes it appear the commentor somehow missed the Appendix rather than the Appendix not being available until two months after the comments were due. This type of response to comments on unavailable materials needed in order to properly review the chapters was typical, and therefore my comments for that issue will not be repeated. .</p>	<p>The comment period on the draft facilities plan was extended into June, 2007. The first draft of Appendix 9A was posted on the MMSD's web site on 1/17/07. The final Draft Appendix 9A was posted for public review on 3/19/07. The MMSD stated publicly that any and all comments received on the Facilities Plan will be considered through the Commission approval date of June 11, 2007.</p> <p>The entire Facilities Plan (through Chapter 10) was available for review on 2/23/07. This allowed a comment period of over 100 days from 2/23/07 to 6/11/07. Comments received through 06/29/07 will be addressed in an addendum to the Plan which will be prepared in September, 2007.</p>
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	<p>Page 1 of 3 - Facilities Plan Chapter 9 - Page 10 - It was recommended to add language to state that Alternative B2 "would be compatible with a water quality based permit". The response states that "B2 does not show a water quality improvement and thus would not be compatible with a water quality based permit." This appears to be an incorrect statement based on the data found in the Facilities Plan. First, the sheer volume of overflows to the area waterways would be significantly reduced with a change in the operating strategy and, second, based on the loading data found throughout the report (see Tables 9-83 and 9-84), a revised system operations alternative does have improved water quality without the expenditure of any additional dollars.</p>	<p>The water quality outcome depends on two variables: the volume of overflows and the concentration of pollutants. In response to this comment there are five things that should be noted:</p> <ol style="list-style-type: none"> <li>1. Volume of overflows The discussion of the impact of VRSSI operation on the volume of overflows appears in two places in <i>Facilities Plan</i> Chapter 9. In Table 9-20 the discussion applies to the Preliminary Alternatives B1 and B2. The preliminary estimates of this section are later refined and presented in Section 9.6.8, Table 9-68. If the VRSSI = 0 operation is used, the simulated CSO volume decreases (from 820 MG/yr to 440 MG/yr) and SSO volume increases (from 110 to 280 MG/yr). Thus the simulated total overflow volume is 23% less than the case with a constant VRSSI = 177 MG.</li> <li>2. Concentration The assumptions for modeling are that the fecal bacteria concentration in SSOs is greater than that in CSOs. This issue was covered in three TAT meetings in detail and is documented in a Tech Memo. This entire Tech Memo will be presented in the Facilities Plan addendum which contains the final pollutant loading data.</li> <li>3. Pollutant Load Pollutant load is the net effect of volume and concentration. Table 9-71 (<i>still preliminary data</i>) shows how the Fecal counts for total overflow are impacted by VRSSI. Even though total overflow volumes are somewhat</li> </ol>
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		<p>reduced – the overall annual fecal loads do not change much, if at all, due to the increase in SSO volume compared to CSO volume.</p> <p>4. Cost As stated in Section 9.6.8, the VRSSI = 0 operation would result in filling the ISS and closing the separate sewer gates to the tunnel more frequently, which would increase the risk of more frequent basement backups in the separate sewer area. There would be a capital cost associated with mitigating this risk so that the risk is no greater than that of the baseline operations.</p> <p>5. Permit Risk Section 9.6.5 discusses the regulatory issues. The VRSSI = 0 operation does not achieve the requirements of the current SSO and CSO regulations. Thus the alternative operation presents a known likelihood of violation of the permit requirements.</p>
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	<p>Page 2 of 4 - Facilities Plan Chapter 9 - Appendix A - Page 2 - The original text concluded that full secondary treatment for the additional capacity would be an option, but it would have "minimal additional water quality benefits". It was requested that this same conclusion should be added to the discussion of PCI as the recommended alternative. The response agreed with the observation and stated that a change in the text would be made, but it appears no changes were made.</p>	<p>The response was: “Yes – agree with the statement – will evaluate how to best include in the text.”</p> <p>Upon further evaluation, the overall impact of additional SSO reduction, in general, has been documented and evaluated in many sections of the <i>Facilities Plan</i> – most directly in Chapter 9 in the following:</p> <ul style="list-style-type: none"> <li>• Table 9-19 (page 9-45)</li> <li>• Page 9-126 – item 2) on the page</li> <li>• Page 9-172 and the cited Appendix 9E</li> <li>• Table 9-69 (page 9-185)</li> <li>• Page 9-186</li> <li>• Table 9-70 on Page 9-187</li> </ul> <p>All of these sections of the report deal with the overall impact of SSO reduction and the “minimal additional water quality benefits” of any type of additional SSO reduction. The impact on Fecal Coliform discharge from the SSWWTP would not be reduced at all depending upon which secondary treatment alternative was selected. All alternatives were evaluated and modeled meeting current fecal coliform permit limits. The impact on BOD and TSS would be minimal as shown in the <i>State of the Art Report</i> – Appendix 3A – Figures 3A-58 and 3A-59.</p>
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	<p>Page 2 of 4 - Facilities Plan Chapter 9 - Appendix A - The comment was that data should be included to quantify the volume of CSO and SSO which would be eliminated under Alternatives 1A and 1B for the planning period. The response was that "the data and graphs show both volumes and number of events. The text will be reviewed to assure that the data is noted and highlighted". Neither the data or the graphs show both the volumes and number of events for CSO's and SSO's under any of the alternatives. Also, the data was neither presented or highlighted in the revised Appendix A. Somewhere there should be provided a table listing the yearly CSO and SSO volumes under the existing conditions, the Revised 2020 Baseline conditions, the 2020 alternatives, and the data for the 5 year event, 10 year event and the largest event in the 64 years of modeling.</p>	<p>The information requested about CSO and SSO volumes is presented in <i>Facilities Plan</i> Chapter 9, not in Appendix 9A.</p> <p>For average annual CSO and SSO volumes see Tables 9-61, 9-66, and 9-68.</p> <p>The SSO from the largest event in the period of record is shown in Figure 9-11 along with the simulated SSO volumes for all of the large events that would still have an SSO if the 5-year LOP recommended facilities were built.</p> <p>Further information is provided in <i>Facilities Plan</i> Appendix 9G, which shows the system response to a synthetic 10-year rainfall event with average antecedent conditions that does not result in an SSO under the recommended plan.</p>
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	<p>Page 5 of 6 - Conveyance Report - Appendix CP-1 - Page 44 - The comment submitted pointed out that for the simulations of the model to predict the amount of SSO, the model results consistently resulted in an estimated SSO which was three times greater than the actual measured SSO's. While the same model predicted a CSO amount which was 2.4 times less than the actual measured volume of CSO. The response that the measured SSO and CSO volumes are not totally accurate does not explain why they would vary in such opposite directions (i.e. greatly overestimate the amount of SSO and underestimate the CSO). This discrepancy will have a significant impact on the hydraulic needs of the system to achieve a 5 year level of protection for the separated sewer area, it may cause capital expenditures which are unnecessary and it will cause PR problems in the future if the CSO's are greatly underestimated.</p>	<p>It is not correct to state that “the model results consistently resulted in an estimated SSO which was three times greater than the actual measured SSOs.” This relationship was observed for only one of the seven calibration/validation events. The variation of measured to simulated SSO/CSO values in opposite directions for this single event is purely coincidental. A review of the complete model calibration/validation dataset shows there is no bias in the model results with respect to SSO and CSO estimates (See Conveyance Report Appendix 3C).</p> <p>The facilities plan model was not calibrated to SSO and CSO volumes. Rather, it was calibrated to measured level and flow data at approximately 200 locations throughout the MIS. Although MMSD has made good efforts to make reasonable estimates of volumes of overflows, estimation of actual SSO and CSO volumes is subject to some uncertainty as a result of the indirect methods used to make these estimates. Therefore, the MIS level and flow data were considered more reliable for calibration/validation purposes. The comparison of simulated to MMSD-estimated SSO/CSO volumes was made as simply a <u>qualitative</u> check of the reliability of the model to predict events for which SSOs and CSOs occur.</p>
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<p>Page 6 of 6 - Conveyance Report - Appendix CP-1 - Page 52. The comment was, "The conclusion that significant SSO discharges occurred to relieve the MIS when the gates to the tunnel were closed is not accurate. As shown by the data, only one storm had any real measurable SSO (which was actually 28 to 37 percent of the simulated flow). For all the other events where tunnel closing caused 100 MG of more of CSO's, there was no significant SSO, therefore this statement should be eliminated." The response was that "the ISS gates only closed to the separate sewer area in the April 1999 event." My comment was made to reinforce the point that MMSD is operating an integrated system which has both CSO's and SSO's and that the system should be used to its full potential to reduce the amount of overflows to the waterways. The data presented in the Facilities Plan indicates the frequency of CSO events can be reduced by nearly 50% if the tunnel were fully utilized which should be an objective as we work toward a watershed based permit. To that end, it is not correct to leave language in the report that uses the terms "significant SSO discharges".</p>	<p>The objective of the <i>Conveyance Report</i> Appendix 3C (formerly called Appendix CP-1) is to present the performance of the MOUSE model for the calibration/validation events.</p> <p>In general, SSO volumes are only "significant" when the ISS fills completely and is closed. In the calibration events, the ISS closed to the SSA for the April 1999 event and the SSO volume (both the simulated volume and the estimated actual volume) was significant.</p> <p>The simulated volume and frequency of SSOs and CSOs is presented in Table 9-68. As stated in a response to a comment above, the alternative operations using VRSSI = 0 cause the ISS to fill and close more frequently which reduces the frequency and volume of CSOs and increases the frequency and volume of SSOs.</p>
<p>Page 6 of 6 - Conveyance Report - Appendix CP-1 - Page 63 - The comment was "The summary should discuss the simulation accuracy issues encountered with large events and wet conditions (i.e. overestimated SSO's and underestimated CSO's)" and the response was " As noted in the text the CSO and SSO results are viewed and were not used as a quantitative measure to demonstrate the validation." The comment was made as a request to clarify somewhere that the simulation model was producing SSO predictions three times greater than actual measured volumes and CSO predictions which were nearly one third the actual measured volumes. Without some explanation of this issue, an uninformed reader could easily misuse the simulation data to lobby for capital expenditures for prevention of SSO's that actually may never occur.</p>	<p>See response to Page 5 of 6 above; the response to the comment on that page is equally relevant to this comment.</p>

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	<p>Page 6 of 6 - Conveyance Report - Chapter 4 - Page 17 - The comment was similar to previous comments regarding the accuracy of the model for predicting the actual CSO that would occur during some frequency recurrence interval. I have commented that the model currently overestimates the volume of SSO while at the same time underestimating the volume of CSO. The response was, "as noted in the text, the simulated conditions are not intended to replicate the actual conditions". This statement makes no sense when the data from simulated conditions goes in opposite directions on such a large order of magnitude. If the values for actual flows experienced were in the stated acceptable range of plus or minus 30-35 percent, it would make sense, but when they vary by more than 300% some discussion should be warranted.</p>	<p>See response to Page 5 of 6 above; the response to the comment on that page is equally relevant to this comment.</p>
	<p>Page 3 of 3 - Treatment Report - Chapter 5 - Page 62 - Table 5-18 - The comment was that "it would be very useful to include data to show what SSWTP effluent would be if blending at some level (40-60 MGD) would occur. The response was, "Text will be added directing the reader to Chapter 9 of the Facilities Plan". I have reviewed Chapter 9 and cannot find the data requested. If the data was not going to be provided in Chapter 5 or Chapter 9 of the Facilities Plan, why wasn't that stated in the response?</p>	<p>We believe the question refers to Table 5-17 on page 5-60 of the Treatment Report. The statement is in the report "Use of blending at both treatment plants is reviewed in Section 9.6.5 in Chapter 9, <i>Alternatives Development of the Facilities Plan Report.</i>" As this issue progressed in the combined planning effort, SEWRPC decided to include more detailed information in the RWQMPSU on this issue (see Technical Report no. 50, Chapter X, pages 55-66). The MMSD believes that the issue was covered in enough depth in the discussion in Chapter 9, Section 9.6.5 of the <i>2020 Facilities Plan.</i></p>