Ontario

Dewatering and Temporary Flow Passage Update

Comments received by TCP			
Comment ID	**Organization**	**Comment**	**Response**
389	**ACEC-Ontario**	There have been issues with the current SP 517F01. The new SP does not seem to make things better: "The temporary flow passage system shall allow the work to be conducted as specified in the Contract Documents. Design flow shall include groundwater discharge and flow resulting from a minimum 2 year return period design storm, except for the work specified in Table 1. For the work specified in Table 1, design flow shall include groundwater discharge and flow resulting from a design storm of the minimum return period specified in Table 1. A longer return period shall be used when determined appropriate for the work. *** For temporary flow passage system item locations, fill-in the minimum return period flow for the site based on MTO Drainage Design Standard TW-1. The return period flow shall not be less than 2 years." The issue it that the temporary system requires a minimum two-year flow, even when it is not practical (the exception is for a longer return period, not a shorter period). It does not allow the contractor to assume the risk and construct something less (based on time of year, actual flow, short time frame, and no rain in the	1) The Temporary Flow Passage System definition has been updated to include both the conveyance capacity of the TFPS devices/facilities and the Operational Plan to address this concern. The Operational plan is to include measures taken to accommodate flows higher than the conveyance capacity of the temporary flow control devices, channels pipes and pumps up to the design storm. Where it is not practicable to design the hydraulic capacity of TFPS devices/facilities to convey the design flow, measures must be included in the TFPS operation plan to meet the performance requirements. Measures may include providing for non-destructive relief flow into the construction area, staging construction during low flow months or dry days, or monitoring of precipitation and removal of the TFPS when exceedance of the TFPS conveyance capacity is predicted. The risk for these measures will rest with the contractor. The intention is to provide them with flexibility in how they achieve their temporary flow passage design. 2) Design Engineer requirements are intended to be a site specific requirement based on the conditions. Including this requirement for all dewatering and temporary flow passage systems would add significant

		forecast, for example). The result is that they must construct something that is not practical, overly conservative, does not get used to capacity, and is very expensive. The flow is listed in the contract and the contractor should be aware of it, but it gets missed. If all contractors account for it, the MTO can be paying a much higher price for something that is not practical. If some contractors account for it while others do not, then the bids are not comparable, and if a contractor with a lower bid on this item wins then they try to claim extra because it is not practical and too expensive. In addition, consideration should be given to specifying Design Engineer Requirements for all systems. This would help to balance the tendering process as all bidders would have to expect engineering input and it would place increased responsibility on the Contractor for the system's function. Typically, when this is not a requirement, MTO ends up with dewatering plans and submissions that are generic, that do not consider the site-specific details and flows, and that inevitably fail at some point during construction. Further, in situations where multiple inlets feed into a culvert, consideration should be given to including a note that the dewatering and temporary flow passage systems shall be designed based on the cumulative flow from all inlets. There have been situations where the Contractor had plugged inlet(s) in order to limit and control flow, which then blew out during a storm event causing the overall system to fail.	costs to ministry contracts and in some cases, such as simple dewatering exercises, little benefit. 3) By the TFPS definition, the blocking of upstream inlets as part of the TFPS design must include the impact of the design storm occurring. In situations where the Hydrotechnical Report has identified an upstream inlet(s) of concern, it is recommended that site specific non-standard special provisions be created to alert the contractor of the potential challenges and include any restrictions on controlling inlet flows.