Mitigation Panel Work Plan & Progress Update

Task Force	Theme Area	Data/Study/Action	Progress Highlights
	Storage, Diversion and Protection	Identify storage options for flood flows on the Bow and Elbow Rivers . Examine ways of enhancing storage capacity of the Glenmore Reservoir through physical or operational changes.	Based on the original Provincial conceptual work for the Elbow River, the Province is proceeding with detailed engineering and the regulatory and engagement process on a storage facility on a tributary to the Elbow. A multi stakeholder working group, including TransAlta has been struck by the Province to examine storage options on the Bow River. The current capacity of the Glenmore Reservoir has been measured and found to have changed very little since 2006. Engineering to consider raising the operating level of the reservoir is underway.
2		Where storage solutions are inadequate look for ways to divert flows away from built up areas.	The Province has provided a grant to the City to conduct a feasibility assessment of a diversion or drain out of the Glenmore Reservoir to the Bow River. This work will begin in December and is expected to take up to three months.
		Assess areas of the city where additional permanent or temporary flood barriers (e.g. berms, flood walls) would be beneficial.	Water Resources staff are making good progress in identifying sites which would be amenable to additional flood protection. Up to 20 sites are considered feasible locations. Preliminary engineering around protecting Sunnyside from river flooding and rain events has identified pumping enhancements as a preferred solution. This will be discussed with the community in January. Analysis of the impact of the 4th Street berm is largely complete with a draft report from the consultant expected December 2. Work is underway to restore and reinforce six critical eroded sites.

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	Changing Climate	Review climate models for the region and determine if current protection standards are adequate (e.g. is an 1:100 return period the right one)	Project team in place. Expert panel identified. Using work carried out by ESM within City as basis for discussion.
1	**Watershed Management**	Evaluate current watershed yield models and determine if yields have been impacted by human activity. Identify possible remedial actions if significant benefits are available. Examine ways in which natural and man made features could reduce peak flows. Work to understand groundwater flows within the City due to flood flows.	Province has taken leadership of multi stakeholder initiative to carry out wide ranging review of watershed and Bow River operating model. Two workshops have been held to obtain and review water management options. Groundwater data from 2013 event is available to compile influence map.
	Event Forecasting	Engage in a review of river forecast models to ensure they give the best possible information. Examine ways forecasts might give more advance warning of weather events. Investigate possible technology solutions to improve interagency information sharing.	Provincial Department of Environment and Sustainable Resource Development (ESRD) and Water Resources staff coordinating on several river engineering modelling studies which will examine and map changed river conditions. Provincial and City emergency management agencies will be involved in joint discussions on event forecasting.

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3	**Infrastructure and Property Resiliency**	Evaluate models and forecasts for impact on existing processes and infrastructure for vulnerability. Identify critical infrastructure and determine additional protective measures. This to include both public and private assets, e.g. Energy, Health, Information, Transportation and more.	Some work has been done as a result of the flood recovery effort to repair and improve infrastructure resilience in future floods. Critical water infrastructure is well understood. More needs to be done with other important facilities not under City control. The Province has agreed to lead the effort in this area with our support.
	Remaining Risk Management	Recognizing that risk can not be reduced to zero, provide information to the public on degree of risk such as flood mapping, probability estimates and worst case scenarios. Investigate financial protection options, land use and building regulation changes.	Meetings have been held with insurance industry officials to understand their perceptions and suggestions around flood and other weather related risks. Joint educational efforts appear to offer an opportunity to increase public risk awareness and resilience. A multi stakeholder team lead by PDA and Law is to examine options for changes to land use bylaws and building regulations.