

## **7.0 OPTIONS**

This chapter presents the range of options developed by the Planning Team and identifies the preliminary preferred options agreed upon through consensus. The PAC and Steering Committee concurred with the options and preliminary preferred options. This information was then presented to the public at open houses for comment.

Option Development is a process intended to address the issues identified during scoping of the Water Management Plan. The options were developed based on the best available biophysical and socio-economic data and information at the time of this project. The options have taken into consideration that the facilities have been in place and operating for many years and that in many cases, operating regimes have been modified over the years to mitigate issues of the public.

### **7.1 Methodology and Format**

The issues and concerns received from the second phase of public consultation that are presented in Chapter 5 form the basis for development of options. The objectives outlined in section 1.4 were used to categorize and group issues to reduce the large amount of issues to a manageable number of common objectives from which to develop options. For each facility, each issue was categorized under the appropriate objective. Where appropriate, the objectives were sub-divided to account for significant differences for such things as upstream/downstream of a facility or different species.

A chart was produced for each facility to portray the options. The objectives are arranged vertically and the options for each objective are arranged horizontally. Under each objective statement is one or more numbers that represent the issue numbers from Chapter 5. This allows each issue to be traced back to the issues document for more detail. For each option, a target and strategy were developed with benefits and conflicts listed. The preliminary preferred option was then highlighted and the rationale behind the decision was provided in the last column. Target curves were produced for each facility to graphically display all options and then another for the preliminary preferred option.

Realistic, practical and feasible options were developed by facility for each objective based on the best available information. The Planning Team decided that in cases where there were no issues or where current operating plans provided adequate conditions to meet the particular objective and no reasonable or practical option could be developed to make improvements, that no option would be included. This allowed the Planning Team to focus on developing options where appropriate. Option 1 represents the existing operations and options were developed keeping in mind that the WMP is addressing as-built facilities with the attempt to make incremental improvements.

The purpose of using the natural flow regime methodology in water management planning is not to restore pre-development conditions of a regulated river but to set objectives to improve the flow regime from an ecosystem perspective. It is important to note that the existing flows and levels of the regulated system are the new baseline conditions. Natural flow regime data was not available originally during the options development stage, but when the data became available, options development was revisited to consider natural flow regime.

The following are explanations of terminology and the approach taken during options development stage:

**Issue Objectives:** Issue objectives are broad category headings derived from the public issues and concerns received during public consultation. The order of the issue objectives in the options document is not an indication of their priority or importance among the Planning Team. Those issue objectives without corresponding issue numbers (e.g. power generation, public safety and natural flow regime) are generic issue objectives identified through the planning process. Although these categories did not have any issues identified through public consultation, it was decided that if there was the potential to improve the operating regime in these areas, options could be put forward on behalf of the operators or the MNR.

**Option 1:** Targets and strategies listed under Option 1 throughout the document are the current operating practices that correspond directly to the issue objectives. Power generation, public safety and natural flow regime are the exceptions. Targets and strategies under Option 1 of power generation, public safety and natural flow regime (NFR) are occurring but may not be specifically targeted in the current operating regime. For example, Option 1 under NFR for generating stations lists the regulated 80% exceedence flows achieved at the facility as well as the regulated riparian and bankfull flows. These flows are achieved without being actively targeted. They are listed so that a comparison can be made to Option 2, natural 80% exceedence flows.

**Option 2:** Strategies and targets listed under Option 2 throughout the document provide alternative operating strategies to addressing the issue objective. In theory, these will be equal to or an improvement over the current operating regime. In some instances, these proposed options will conflict with the objectives of other options. Final decisions around a revised operating regime will have considered the known or estimated conflicts and impacts associated with those choices.

**Preliminary Preferred Option:** Choosing the preliminary preferred option for each issue objective was determined through consensus of the Planning Team. Options were evaluated using a pre-determined ranking system developed by the Planning Team. Issue objectives were ranked in order of importance. When comparing one option over another, several factors were evaluated to determine the optimum option to choose. The weight of the items listed under the benefits and conflicts of each option were compared, based on their ranking of importance. For instance, public safety was ranked as a number 1 priority with all Planning Team members and so when found to conflict with a proposed option, that option was usually negated. Options will not be chosen as the preliminary preferred when there is an Information Need associated with that option, and so the alternate option is chosen by default. Preliminary preferred options are highlighted in yellow or grey in the options document. Further explanation of this process can be found in the Rationale document.

**Public Safety:** Unless stated otherwise, public safety is analogous to dam safety.

**Targets:** In both Option 1 and 2 the target is the end goal. It will outline measurable levels or flows and implementation dates.

**Strategies:** In all options the strategy will outline the actions to be taken to achieve the target.

**Information Needs:** Information Needs in the options document are described for those options or issues identified by the Planning Team to require further information. The required studies and/or information is outlined in the options document and elaborated on in the Rationale document. These options will not be chosen as the preliminary preferred option and are generally only associated with Option 2 in the options document (Natural Flow Regime accepted).

The following are the options charts, target curves for all options and target curves for the preliminary preferred options for each facility on the river system:

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