RIVER DERWENT

water quality improvement plan

Summary of Scoping Project July 2017

Background

In late 2016 and early 2017, the Derwent Estuary Program and NRM South conducted a scoping project for the development of a plan for improving water quality in the River Derwent and estuary. Workshops were held in Hobart, Hamilton and New Norfolk for stakeholders with interests in the catchment, with a community forum, an online survey, numerous one-on-one consultations and a literature review further serving to inform the project.

It was found that a significant information gap exists for the River Derwent and its estuary. Past studies have specifically focused on individual parts of the system but have not given us sufficient understanding of the upper estuary system, its specific habitats and values at risk.

Scope of the plan

Several options about the scope and complexity of the plan were identified. Depending on the size of the geographical area to be included, the type of model selected and the extent of consultation required, the estimated cost of plan development ranges between $210,000 and $750,000 with time frame between two and four (plus) years. A decision on scope will be made based on the budget available and return-on-investment criteria, including the extent to which community ownership of proposed actions would influence impact. The water quality improvement plan itself is envisaged to cover a 20-year period, with reviews to be conducted every five years.

Several key indicators were identified as the primary focus for developing the water quality improvement framework, including nutrient and sediment impact on estuary condition. Pathogens may be included, but only if budget allows. It was noted that there are significant gaps in the data, particularly in the upper estuary. There is no comprehensive, well-integrated catchment-estuary study that considers the role of catchment inputs to estuary processes and condition.

Governance

It is proposed that the plan's development will be directed by a steering committee comprising the Derwent Estuary Program, NRM South, the Department of Primary Industries, Parks, Water and Environment, the Environmental Protection Agency, TasWater, Hydro Tasmania and local government representatives. Further technical support will come from CSIRO, the University of Tasmania, The Institute for Marine and Antarctic Science, and Tasmanian Irrigation. Industry players and advisory groups as well as local community organisations will play an important role in consultation and in the subsequent implementation of the plan.

Feedback from consultation

Consultation from this scoping phase of the project a list of values for the river and its catchment were identified, including recreational, agricultural, environmental and aesthetic values. Concerns about environmental changes to the estuary and the impacts of future industry activity, and actions to address them, were also documented.

Literature Review

Eriksen et al (2011) was the primary source for compilation of data regarding the river and catchment's values, current and future management issues, and suggested actions for the future, many of which aligned with comments arising from consultation. They included implementing actions in Rivercare and River Recovery plans, excluding livestock from streams, and restoring wetlands.

Outcomes of the plan

When completed, the plan will provide a whole-of-catchment picture of water quality in the River Derwent catchment. Our understanding of the drivers of water quality issues and the levers we can use to address them will be greater. We will have a series of adoptable actions and nutrient load reduction targets to improve and protect water quality. The plan can be used to inform an investment strategy for the catchment to protect it into the future.

Modelling

Hydrodynamic, sediment and biogeochemical models developed by CSIRO have been developed in the past but have focused on the estuary and not the catchment, and much is outdated.

It was therefore recommended that scoping of a well-integrated catchment and receiving water modelling program be undertaken, including a review of available data sets.

Stages of plan development

The main stages of the plan development – some of which may proceed concurrently – are:

1. Consultation

Consultation to identify the assets and values of the catchment, their condition, and the nature and sources of potential pollutants (threats) to be considered in the plan

2. Modelling

Data analysis and development of a catchment water quality model

3. Action planning

Evaluation and prioritisation of management actions based on cost, feasibility and potential for impact

Development of management modules for the various activities/industries in the catchment area.

Review, feedback, revision

4. Launch and promotion

Challenges and risks

Management of such a broad geographical area is complex. There are many variables at play and numerous stakeholders involved. To reverse the trend of declining water quality and protect the river and estuary in the long term will take extensive cooperation and a carefully-coordinated action plan.

Scope creep was identified as a concern. The plan should focus on water quality, while factors such as runoff, environmental flow and in-storage processes considered but not included as part of core planning and action. Similarly, the extent to which engagement occurs needs to be carefully balanced to ensure stakeholders understand the scope and limitations, whilst still having the opportunity to be involved in decision making.

From an IP perspective, access to existing data and models might be difficult. Management of intellectual property arising from the project also needs to be considered.

The full scoping report recommended that selection of the desired scope option and commencement of plan development occur as soon as possible

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