

Brief Summary

Technical report: Review of conditions for opening Waituna Lagoon

by Nick Ward

The report was prepared for the Whakamana Te Waituna Trust and provides technical information to support the development of resource consent conditions for opening Waituna Lagoon to the sea. It presents the rationale for specific lagoon opening triggers aimed at maintaining and restoring the ecological and cultural health of the lagoon ecosystem.

Waituna Lagoon is one of the best remaining examples of a natural coastal lagoon in New Zealand and is recognised for its diverse ecological characteristics and cultural values nationally and internationally. It is highly valued for its aesthetic appeal, rich native biodiversity, waterfowl hunting, fishing, boating, bird watching, walking and scope for scientific study.

The state of native aquatic plants is critical to the overall ecosystem health of Waituna Lagoon. These plants are vulnerable to different things when the lagoon is open and closed to the sea. When closed, too many nutrients and poor water clarity impact the plants; and when open, salt water that comes in. When closed to the sea the lagoon also tends to accumulate nutrients and muds, which reduces water quality. The result of all this is a balancing act to try and get the best outcome by opening the lagoon at the right time.

The technical review involved four key steps:

1. The identification of Ecological and Cultural Values
2. A review of existing consent conditions and monitoring information
3. Proposition of new consent conditions
4. Assessment of the impact of proposed conditions on other values

For the last 100 years or so the lagoon has been opened when the lagoon water level impeded on land drainage, typically with bulldozers or excavators. In 2020-21, the Whakamana Te Waituna Trust initiated a work stream to develop an ecologically based opening regime for Waituna Lagoon; with a view to it ultimately becoming part of a resource consent. This involved reviewing the available information on openings of the Lagoon to the sea and considering a broad range of ecological and cultural values associated with the lagoon. Once the values were defined, it was possible to identify how the different values are affected by human pressures, particularly lagoon opening, and what an ideal opening regime would aim to achieve with respect to specific values.

The key proposed amendments for an opening regime are an increase in the lagoon opening trigger level to 2.5m to enhance ecological health and cultural values; inclusion of new conditions to facilitate fish passage; and refinement of the conditions providing for emergency lagoon opening in order to mitigate risks from water quality.