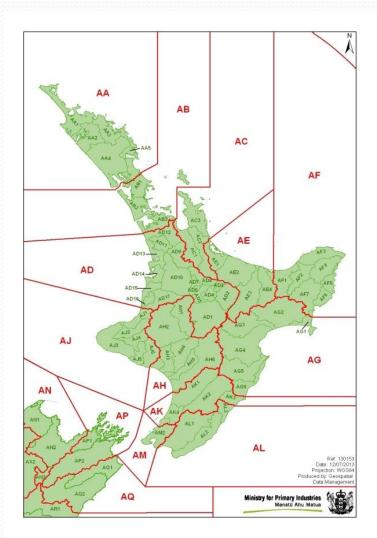
## **CSG** and **EELS**

Tainui, Nicholas Manukau, and Eel Enhancement Co., Mike Holmes

# **Eel Fishery**

- Represents Quota Holders (~ 50% Iwi/Maori)
- Engages with all fishery interests
- Funded from Quota



# EECo = advocacy, for;

- Habitat Quality & Quantity
- QMS & Fishery Management
- Research
- Enhancement



#### Fishery Management; last 10 years

- QMS N. Is. 2004 / 2007 & catch cuts
- Further Area closures ~ ½ North Island
- Larger Net Escape Vents (31mm, was 25mm)
- 4kg upper size (2kg upper size limit Waikato Catchment)
- Release LFE female migrators
- Extra Data Collection
- Key stock indicators positive;
  - CPUE,
  - Size-frequency
  - Juvenile-recruitment.



# Eel Habitat, past and present

#### NZ waterways have been, and are continuing to be;

- channel-ised
- drained
- pumped
- flood-protected/reduced (eg , Waikato Basin, 90% of wetlands gone)
- swamps and ox-bows drained & in-filled
- walled-off
- turbined
- Dehydrated = extraction & irrigation
- willow-denuded
- polluted by;
  - excess nutrients
  - fine sediments
  - toxic algae (eg lakes Waikare, Tutira, Omapere and more)
  - pest fish



# Eel Habitat, Karapiro Stream



# Eel Habitat, Karapiro



# Eel Habitat, Karapiro > Waikato



## Eel Habitat, Karapiro > Waikato



# Eel Habitat, Karapiro > Waikato



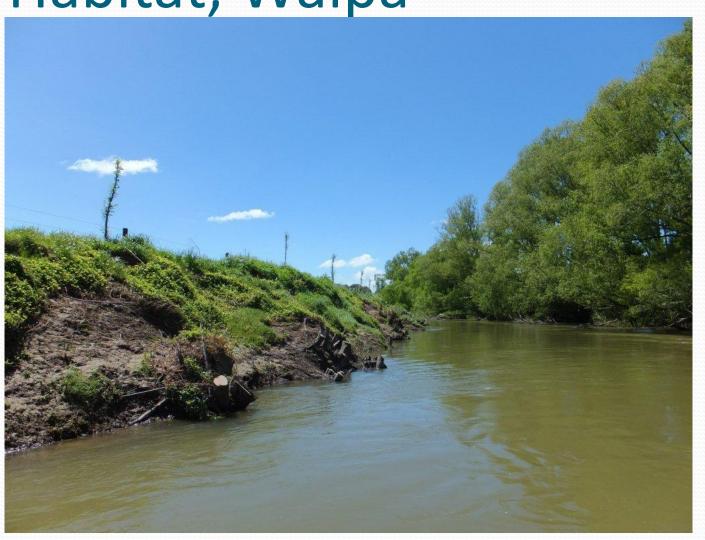
# Eel Feeding, Puniu











# Eel Habitat, Barriers



### Eel Habitat, Lake Waikare, silted & shallow



### Eel Habitat, Lake Waikare, Koi Carp



### Eel Habitat, Lake Waikare, barrier



### Eel Habitat, Lake Waikare, "in-bloom"



#### As bad as it gets? Blue-Green Algae

South Island Lake



North Island River



# Eel Habitat = Eel productivity





WHAT A WHOPPER: Ian Mitchell and his granddaughter, Maddy Smith, return an eel to its home.

PHOTO/DUNCAN BROWN

# Eel + Habitat = Opportunity

- Central Government
  - instruct Councils on good outcomes for Water Quality, eg National Policy Statement (NPS)
- Councils to improve
  - Monitoring
  - Good practice eg recognise benefits of Willow
  - Plans and Consents
- Farmers to improve by
  - better practices, via Regulation & Education
  - if to Irrigate, => use good storage => good for Eel
- EECo = More;
  - Comms. re Environmental Objectives eg Website
  - Involvement in Plans & Consents
  - Monitoring of Eel resource (the Canary in the Coalmine) eg move to Fine Scale reporting by Industry (SIEIA & EECo)
- Better relationships and cooperation between EECo and many Iwi (eg Tainui, Ngati Hine, plus NEA/TOKM/AFL) for better Eel stocks by habitat & stock enhancement.

