



Manaaki Whenua  
Landcare Research

# Riparian Planner

## Supporting Farmers and Farm Planning

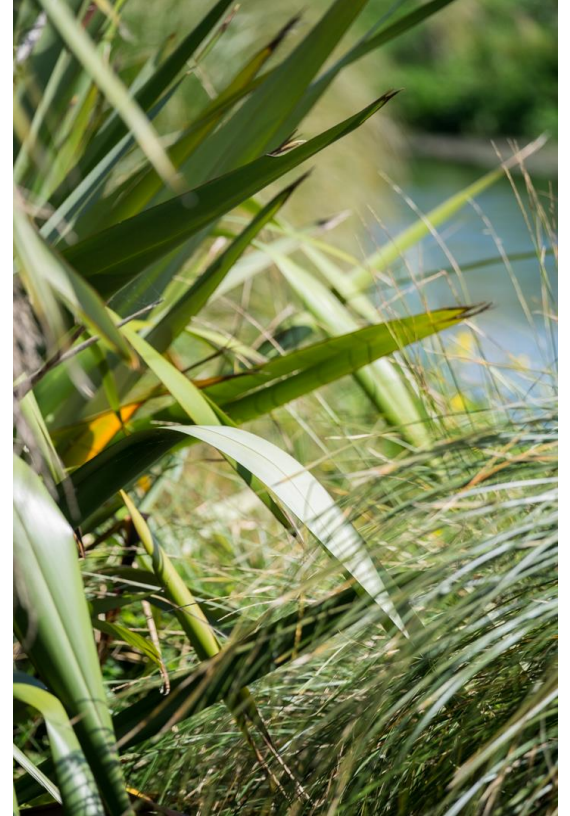
Tom Stephens – DairyNZ

Margaret Watts – Manaaki Whenua – Landcare Research

Nick Spencer - Manaaki Whenua – Landcare Research

## Today's seminar will cover...

- The Riparian Planner – what?
- Context and Background – why?
- Development of Riparian Planner – how and who?
- Where are we now?
- Data sharing with Riparian Planner
- Further opportunities – carbon and biodiversity
- Questions





## Riparian Planner - the vision



Simple to use

Web-based

Farmer-focussed

Less talk – more action

Improve water quality

Free to use

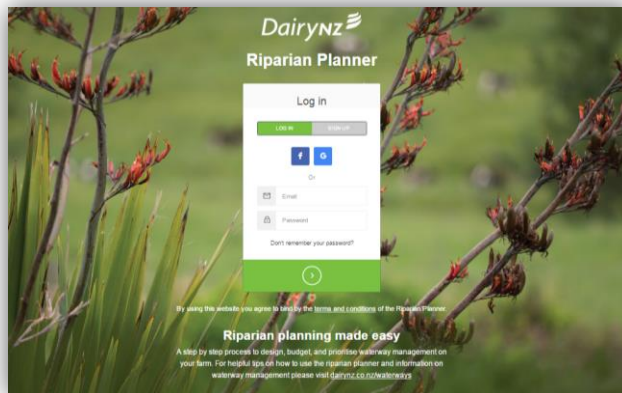
# The What...

The **Planner** = tool for farmers & advisors, to adopt GFP

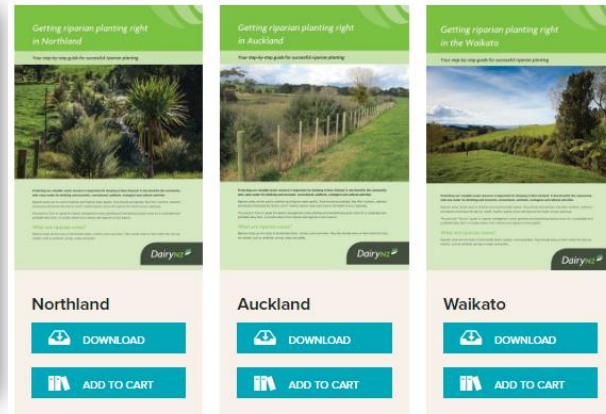
**Origins** = voluntary & riparian only (e.g., Water Accord 2013)

**Now** = regulatory & voluntary mix of riparian & land (e.g., NPS-FM, Clean Water)

**Still GFP, still water quality objective(s)**



## Riparian guides



## Step 1

Plan it out ("Riparian Planner")

## Step 2

Get stuck in ("Planting Right")

# What is **Good Farming Practice?**

## Barriers to avoid...

- Not prioritising ▶
- Not budgeting ▶
- Attempting too much ▶
- Fixed setback ▶
- Wrong plants, wrong spacing ▶
- Generic ▶
- Paper-based (easy to lose, quickly out-dated, wasted effort) ▶



## ... by creating a **Plan**

- Target **critical sources**
- Budget** (\$\$\$, plants, m's)
- Spread the effort** (5-years)
- Vary setback** with priority
- Regionally** consistent, **zoned**
- Tailored** to farm & user
- Digital** (secure, online, easily updated & able to be shared)

# A practical example of GFP



## Seepage wetlands NIWA/DNZ

- Ideal mitigation for N-loss
- N-reductions ~75-98% of mass (load) and concentration
- Performance reliant on stock-exclusion & planting “lower bank”
- Actions = exclude stock, plant & maintain

# Approach

Actively developed with/for regional councils and land managers.

Since guided by collaborative group (regional councils, DNZ, dairy & fert companies, B&L).

Nationally consistent, regionally-tailored guidance.



## With Industry & Regulator Collaboration/Integration

**Value Proposition** – urgent demand for simple, accessible and riparian-focused farmer tool without the complexity or cost

**Vision for Planner** – A farmer-friendly and -driven tool which promotes on-farm actions that reduce contaminant loss to waterways by surface pathways

**Long-term Strategy** – unlock the potential of data to support decision making by feeding into Industry & Commercial whole-farm planning (e.g., adoption supported by data-integration)

# Principles

**Partnership**

**Shared goals**

**Co-innovation**

**Collaborative intent**





# Principles



- **Partnership** - Manaaki Whenua and DairyNZ 2015
  - Chance conversation
- **Shared goals** for water quality outcomes for NZ
  - Sustainable Water Accord
  - Water quality improvements
  - Understanding ecosystem services - agricultural land use context

# Principles



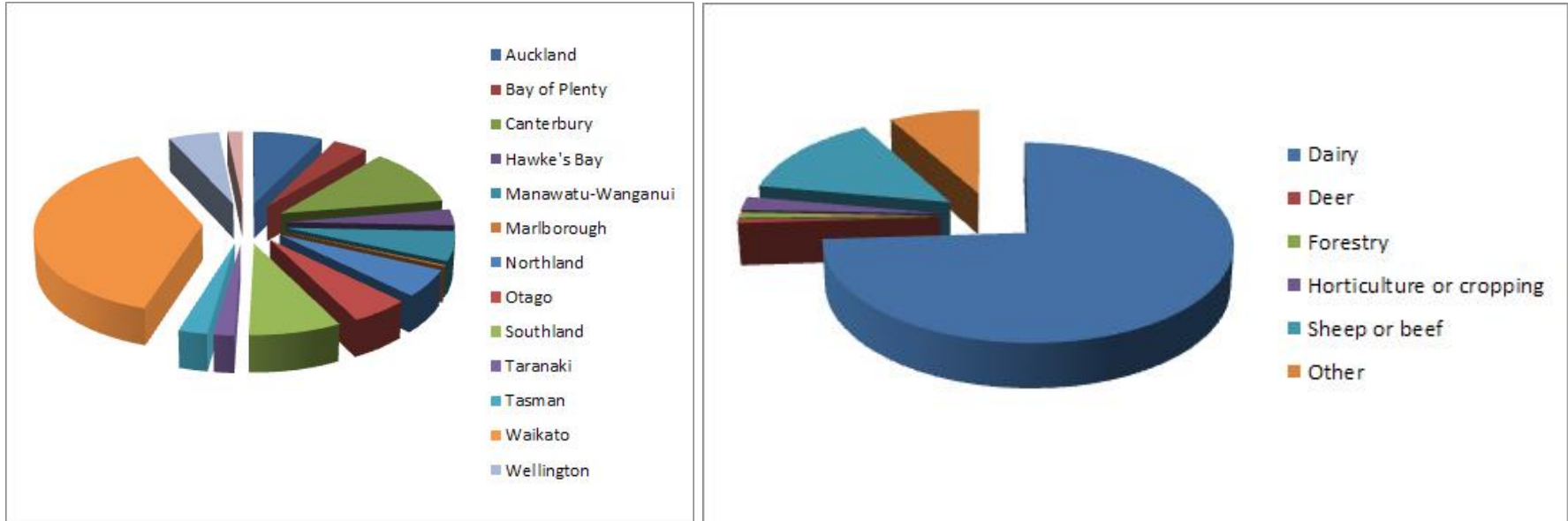
- **Co-innovation** to explore needs and develop the Riparian Planner
  - Design thinking and agile approach
  - Aims: simple, easy to use, farmer-friendly, beyond diary
- **Collaboration** - widen the appeal & input
  - NZ Association of Resource Management
  - Northland Regional Council, and particularly Greater Wellington Regional Council
  - Dairy companies, B&L
  - RC Land Managers Group
  - Wairoa Healthy Waters project
  - 2018 National Agricultural Field days

# The Planner Process





# Riparian Planner Uptake



- Continued, steady uptake since launch (voluntary)
- 40-50 new users per month (annual use)



# Riparian Planner Promotion

stuff National World Business Opinion Sport Entertainment Life & Style Travel

**NZFarmer**.conz

Dairy Beef Sheep Cropping Agribusiness Field Days Opinion Rural Women Advice

## Wetlands hold secret ingredient of future water quality

Wetlands are the kidneys of the land – filtering, absorbing and transforming contaminants before they can affect streams or lakes. DairyNZ's water science team and NIWA experts share how wetlands benefit water quality.

ASLAN WRIGHT-STOW, TOM STEPHENS AND DAVID BURGER, DAIRYNZ AND KIT RUTHERFORD AND CHRIS TANNER, NIWA.  
Last updated 12:53, March 20 2018

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How a sheep works.

stuff National World Business Opinion Sport Entertainment Life & Style Travel

**NZFarmer**.conz

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## Science shows riparian plantings are keeping streams clean

TOM STEPHENS AND ASLAN WRIGHT-STOW  
Last updated 16:12, August 9 2017

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Taranaki has adopted riparian management practices on-farm for nearly two decades, supporting insect health to recover at over half of 57 monitoring stations.

We bet you're thinking that keeping stock out of water, along with grass filters or native plantings along waterways are the equivalent of plastering over the nation's water quality cracks. Looks good, doesn't fix the problem – right? Well this might surprise you then, but no.

We are two of six water quality scientists at DairyNZ. Our jobs are to research how farmers can improve water quality, translating the science into action.

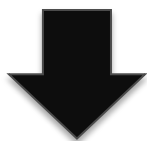


- Promotion by DairyNZ, dairy companies & regional councils
- Future driven by regulators and companies (regulatory)



# Value to DairyNZ, LCR & Users

Adopting land & riparian GFP



**Improved water quality** & reduced **risk** to farm business



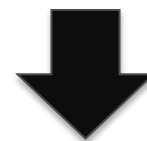
Integration with whole-farm & scenario planning tools



Clear **pathway** to more advanced **Industry** & **Commercial** tools



Uptake of new, robust science



**Consistent** user experience & **meaningful reporting**





### What is Riparian Management?

- Stock exclusion
- Grass fibre plantings
- Maintenance of cover

Stock exclusion  
Grass fibre plantings  
Maintenance of cover





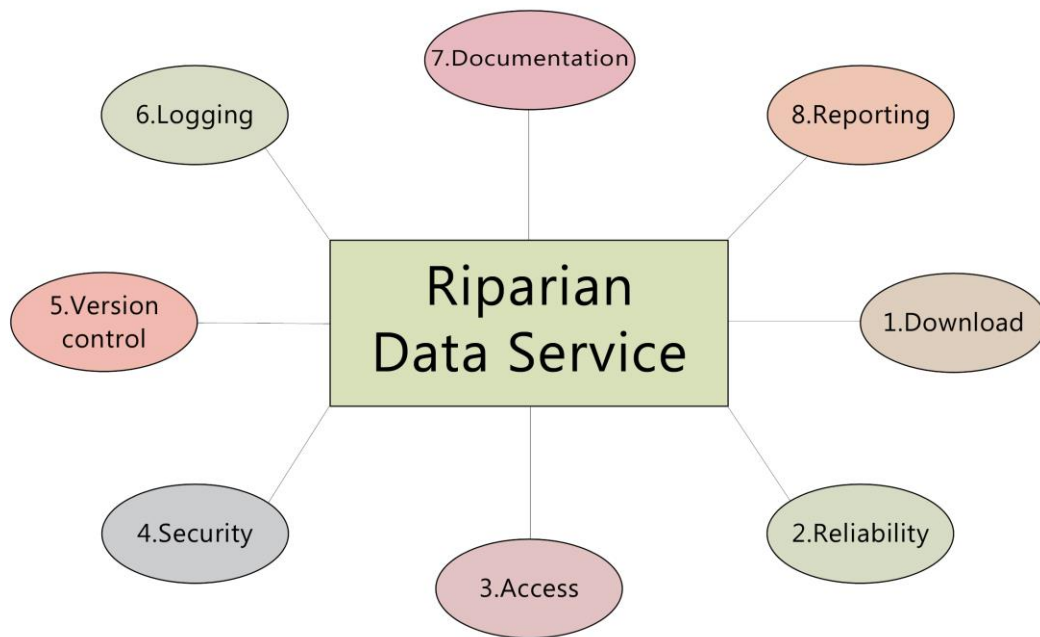
**“Adoption of Riparian Planner is currently handicapped by the inability to directly access the data and re-use it for regulatory and other planning needs.”**





## Data Sharing

- Conversations with stakeholders around the country
- User controls when and where their plan is shared
- Standards based approach
- Data is where the value lies
- One time data entry for multiple re-use





**What are your data sharing needs and experiences?**

# Riparian Management to Optimise Outcomes: from farm to national scale

1. Monitoring
  2. Impacts
  3. Application in primary sector
- Water Quality and Biodiversity
  - Mātauranga Māori
  - Interoperability with multiple platforms

MBIE Proposal submitted March 2018 (with NIWA and ESR)



Water Quality

Carbon

Biodiversity



## Future Opportunities





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**Long-term Strategy** – feed into Industry & Commercial whole-farm planning (e.g., adoption supported by data-integration)

# Questions and discussion

