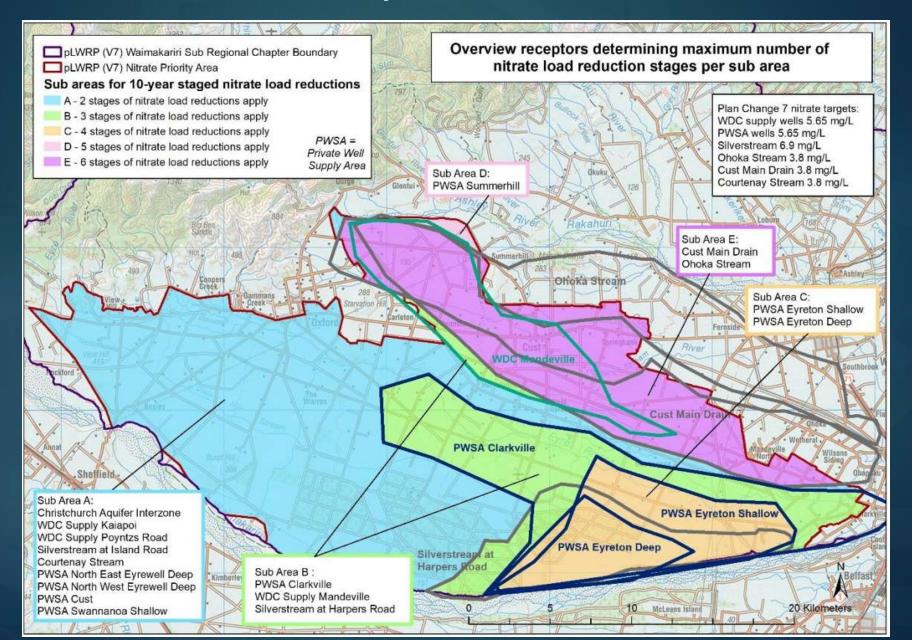
Presentation to the PC7 Hearing Panel

JEREMY SANSON, GROUNDWATER SCIENTIST, ON BEHALF OF WAIMAKARIRI
IRRIGATION LIMITED





Environment Canterbury's Solution





The WIL Solution Package

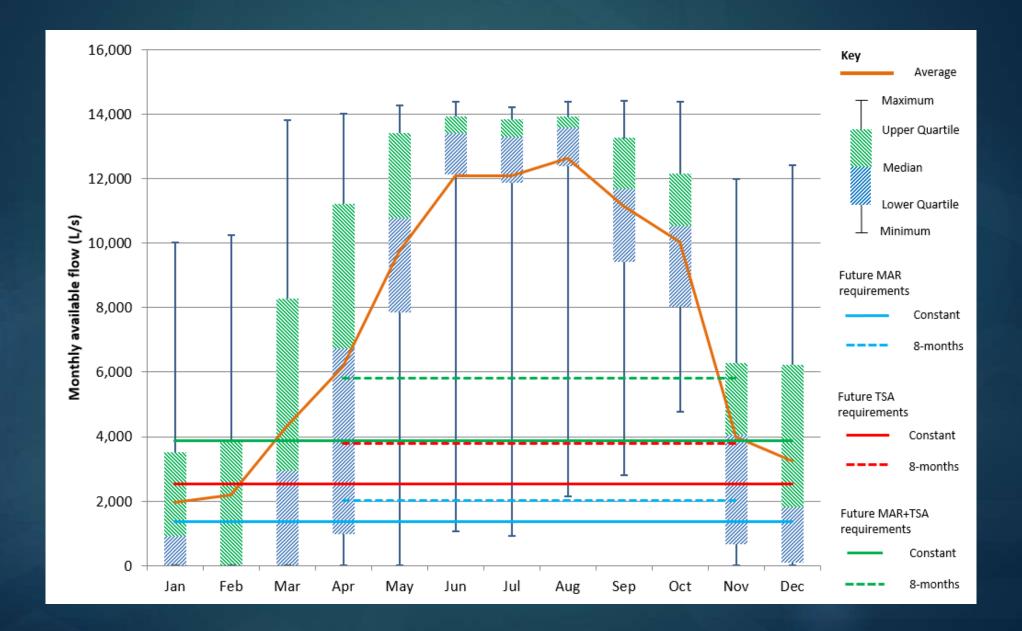
A SUSTAINABLE APPROACH TO IMPROVING WATER QUALITY

Environment Canterbury has recently notified Plan Change 7 to the Canterbury WIL is very clear that improvements sought in Plan Change 7 can only be brought about by a combination Land and Water Regional Plan. The goal of this plan change is to eventually reduce of both reduction in farming nitrogen losses and wider catchment interventions. nitrate levels, improve drinking water quality and provide cleaner waterways Waimakariri Irrigation Limited (WIL) is putting forward a solutions package as part of its submission to for fish and other aquatic species in the Waimakariri district. Plan Change 7 to ensure that farming can continue in a sustainable manner. **≋**WIL WIL's on-farm environmental . The availability of mahinga Safe drinking water initiatives will be consistent kai improves in the lowland available for all with community goals sought for freshwater management, Indigenous biodiversity which are: The Waimakiriri rivers braided is protected and improved channel is protected and its recreation opportunities Vibrant and resilient economy sustained There is a reliable supply The Ashley river is safe for of water to allow efficient contact recreation and its irrigation river habitat improves All fertiliser and irrigation use meets industry good practice standards and every farm has an audited farm environment plan WIL ON-FARM ENVIRONMENTAL INITIATIVES WIL's solutions package will ensure good management practices and wider environmental improvements, while maintaining viable farming operations. On-farm and wider catchment initiatives include (see back of map for detailed information) Managed Aquifer Recharge (MAR) **Biodiversity project** Silverstream denitrification wall trial Targeted Stream Augmentation (TSA) Cutting-edge technology - Regen Silverstream infiltration trial Farm Environment Plans (FEPs) Kaiapoi River

- MAR + TSA
- 2. Achievable reductions from farms
- Biodiversity projects
- 4. Improved monitoring



MAR and TSA





Achievable Reductions from Farms

Table 8-9: Nitrate Priority Area Staged Reductions in Nitrogen Loss for Farming Activities, Farming Enterprises and Irrigation Schemes

	Farming type	Cumulative pPercentage reductions in nitrogen loss and dates by which these are to be achieved					
		By 1 January 2030	By 1 January 2040 (if required in accordance with Policy XXXX)	By 1 January 2050	By-f-January 2060	By 1 January 2070	By 1 January 2060
Sub Area A	Dairy	15%	Up to 30%	-	(=)	_	Ε.
	All other	5%	Up to 10%	(=)	£ = .	1=	# 1
Sub Area B	Dairy	15%	30%	45%	(E.	_	=
	All other	5%	10%	15%	£ = ,	1=	Ξ.
Sub Area C	Dairy	15%	30%	45%	60%	-	<u> </u>
	All other	5%	10%	15%	20%	1-	81
Sub Area D	Dairy	15%	30%	45%	60%	75%	=
	All other	5%	10%	15%	20%	25%	81
Sub Area E	Dairy	15%	30%	45%	60%	75%	90%
	All other	5%	10%	15%	20%	25%	30%

^{1.} The starting point for applying each percentage reduction in nitrogen loss in Table 8-9 is generally the Baseline GMP Loss Rate, calculated using OVERSEER or an equivalent model approved by the Chief Executive of Environment Canterbury, except as otherwise provided for in Policy 8.4.26 for individual farming activities and farming enterprises, and in Policy 8.4.29 for irrigation schemes.

⁴ As set out in Policy XXXXX, the percentage reduction to be achieved by 1 January 2040 shall only be required to the extent that the nitrate nitrogen limits and targets in Tables 8-5, 8-7 or 8-8 are not met, or on the pathway to being met, by 1 January 2030.



^{2.} For the purposes of applying the nitrogen reductions in Table 8-9, 'Dairy' farming does not include 'Dairy Support' activities. 'Dairy Support' is classified under 'All other' farming activities.

³ The percentage reductions required by Table 8-9 are only to be applied to farming activities that require resource consent for farming land use and where the required reduction for each stage is greater than 3 kg nitrogen per hectare for dairy, and 1 kg per hectare for all other farming activities.