

CENTRAL PLAINS WATER - OVERVIEW OF EFFECTS				
CPW TOPIC	ISSUES	SIGNIFICANCE	OFFICER	APPLICANT WITNESS
				(subject to change)
<b>Engineering</b>				
Technical overview				
Scheme Engineering	Effects of taking water on public safety	RPS Ch 10 Policy 7	SDC, Keri Johnston	Walter Lewthwaite
	Effects of bywash discharges on public safety	RPS Ch 10 Policy 7	Keri Johnston	Walter Lewthwaite
	Effects of bywash discharges on water quantity/flood carrying capacity and erosion of the receiving waterbody	RPS Ch 10 Policy 4, 5, 6	Keri Johnston	Walter Lewthwaite
	Effects of works on natural and physical resources; ecosystems, habitats and species	RPS Ch 8, Policy 3, 4; Ch 10 Policy 1, 2, 3; PNRRP Objective BLR1	Keri Johnston	Paul Kennedy, Greg Burrell, Richard Allibone, Gordon Glova, Rob Jessop
	Effects of works on the flood carrying capacity and erosion of the bed and banks and on artificial structures	RPS Ch 10 Policy 4, 5, 6; PNRRP Objective BLR1	Keri Johnston	Mark Mabin
	Effects of works on amenity values, people and communities	RPS Ch8 Policy 3, 5; Ch 10, Policy 7	Keri Johnston	Nick Taylor
	Effects of works on public safety and access from use of berms		SDC	Walter Lewthwaite
	Effects of discharging stormwater, sediment and hazardous substances to land and water during construction	RPS Ch 7 Policy 7; Ch 8 Policy 1, 2; Ch 9 Policy 9, 14	Keri Johnston	Paul Kennedy, Walter Leuthwaite
	Effects of discharging contaminants, principally dust, to air during construction	RPS Ch 13. Policy 1, 3; PNRRP Rule: AQL57	Keri Johnston	Walter Lewthwaite
Geotechnics	Effects of tunneling on structures and land		SDC	Walter Lewthwaite
	Effects from interception of groundwater during tunneling	RPS Ch 9, Policy 12 : PNRRP: WQL62	Howard Williams	Walter Lewthwaite
Dam Engineering	Effects of inundation on landowners within the reservoir area	RPS Ch 16 Policy 3, 4, 7	SDC	Nick Taylor
Dam peer review	Effects of dam failure	RMA s5; RPS Ch 10 Policy 7, Ch16 Policy 1, 4, 5, 7	Keri Johnston	Dick Davison
Traffic				
<b>Farming</b>				
Farm economics				
Regional economics				
Sustainability protocol	Effects of inefficient use of water	RPS Ch 9 Policy 3; PNRRP Policy WQN17	Keri Johnston	
Farm plan auditing				
<b>Groundwater</b>				
Groundwater Modelling	Effects on groundwater levels around base of dam and reservoir	RPS Ch 7 Policy 6	Howard Williams	Tim McMoren
	Effects of use of water on groundwater levels	RPS Ch 7 Policy 6	David Scott	John Bright, Julian Weir
	Effects on flows in Selwyn and lowland streams	RPS Ch 9 Policy 8, 10, 11	Howard Williams	
	Effects on Te Waihora from increased flows	RPS Ch 9 Policy 8, 10, 11	Shirley Hayward	
	Effects on other water users from reduced recharge of groundwater	RPS Ch 9 Policy 1, 2, 5	David Scott	John Bright, Julian Weir
Lowland drainage	Effects of use of water on flooding of land, operation of septic tanks, crop selection and other issues.	RPS Ch 8; Ch 9 Policy 8, 9	Howard Williams	Walter Lewthwaite
Pesticides and pathogenic micro-organisms	Effects on public health	RMA s5; RPS Ch7 Policy 7; Ch 9 Policy 11	Carl Hanson	Murray Close

Nitrate Leaching	Effects on nitrate concentration in groundwater	RPS Ch 9, Policy 11	Carl Hanson	Cliff Tippler
Water Quality	Effects from change in direction of groundwater flow towards Christchurch	RPS Ch 9 Objective 3; May compromise the basis upon which the recharge protection zone has been established -	David Scott	John Bright, Julian Weir
<b>Rivers and ecology</b>				
River morphology	Effects of take on fluvial processes	RPS Ch9 Policy 1, 2 Ch 10 Policy 1	Maurice Duncan	Mark Mabin
River hydrology	Effect of take on hydrological processes	RPS Ch9 Policy 1, 2 Ch 10 Policy 1	Maurice Duncan	
	Effects of bywash discharges on hydrological processes	RPS Ch 10 Policy 1	Maurice Duncan	
Water quality				
	Effects of inundation on quality of water within the reservoir	RPS Ch 9 Policy 9, 14; PNRRP Policy WQN21	Adrian Meredith	Paul Kennedy
	Effects on Waianiwaniwa River ecosystem	RPS Ch 8, Policy 3, 4	Adrian Meredith	Richard Allibone, Rob Jessop
	Effects of bywash discharges on water quality and ecosystem health	RPS Ch 9, Policy 9, 14	Adrian Meredith and Shirley Hayward	Paul Kennedy
	Effects of poor quality water in canals	RPS Ch 9 Policy 9; PNRRP Policy WQN21	Shirley Hayward	Paul Kennedy
	Effects from increase in nitrate concentration in lowland streams and Selwyn	RPS Ch 9, Policy 11	Shirley Hayward	Paul Kennedy, Greg Burrell
	Effects from increase in total nitrogen entering lowland streams and Te Waihora	RPS CH 8, 9 Policy 10	Shirley Hayward	Paul Kennedy, Greg Burrell
	Effects of use of water on flows in Selwyn and lowland streams	RPS Ch 9 Policy 8, 9, 10, 11	Howard Williams	John Bright, Julian Weir
	Effects on Te Waihora from increased flows	RPS Ch 9 Policy 8, 9, 10, 11	Shirley Hayward	Mark Mabin, Paul Kennedy, Greg Burrell
Algae and invertebrates	Effects of taking water on instream ecosystems	RPS Ch 8 Policy 4	Adrian Meredith	Greg Burrell, Rob Jessop
Native fish	Effects on mudfish habitat	RPS Ch 8, Policy 4	Adrian Meredith	Richard Allibone
Introduced fish	Effects of taking water on fisheries	RPS Ch 8 Policy 4	Adrian Meredith	Richard Allibone, Gordon Glova
<b>Other</b>				
Landscape				
Social and Recreation				
Archeology, cultural	Effects of bywash discharges on tangata whenua	RPS Ch 9, Policy 14, Ch 8 Policy 5	Leo Fietje	
Land ecology and birds	Effects on terrestrial ecology and wetlands within Waianiwaniwa Valley	RPS Ch 8 Obj 1 Policy 1, 2,3	Philip Grove	Richard Allibone, Rob Jessop
	Effects of works in riverbed on terrestrial ecology and wetlands	RPS Ch 8 Policy 1, 3, 4	Philip Grove	
	Effects of taking water on terrestrial ecology and wetlands	RPS Ch 8 Policy 1, 3, 4	Philip Grove	
	Effects of taking water on birds	RPS Ch 8 Policy 4	Philip Grove	Rob Jessop
	Effect of water use on terrestrial ecology and wetlands	RPS Ch 8 Policy 1, 3, 4	Philip Grove	
Noise and Vibration				
<b>Planning</b>				
	Effects of taking water on other takes	RPS Ch9 Policy 1, 2, 5	Leo Fietje	Mark Mabin
	Effects of taking water on Conservation Order and Waimak Plan	RPS Ch 9 Policy 1, 2	Leo Fietje	Cliff Tippler