

IN THE MATTER OF
AND

the Resource Management
Act 1991 ("The Act")

IN THE MATTER OF

Canterbury Regional
Council Regional Plan:
Land and Water
Plan Change 4 (Omnibus)

Form 5 – Submission on a Publicly Notified Proposed Regional Plan under Clause 6 of
Schedule 1 of the Resource Management Act 1991.

SUBMISSION BY THE DIRECTOR GENERAL OF CONSERVATION

TO: Canterbury Regional Council
Box 345
CHRISTCHURCH 8140
Attn : Brett Aldridge

Submission on: Canterbury Regional Council
Regional Plan: Land and Water
Proposed Change 4 (Omnibus)

Name of submitter: Director General of Conservation.

Address for service: South Island RMA Planning
Operations Group
Department of Conservation
Private Bag 4715
Christchurch, 8140
Phone: (03) 371 3751 or (027) 2906025
facsimile: (03) 365 1388

Contact person: Herb Familton, RMA Planner, hfamilton@doc.govt.nz

Trade Competition:

Pursuant to Clause 6 of Schedule 1 of the Resource Management Act 1991, a person who could gain an advantage in trade competition through the submission may make a submission only if directly affected by an effect of the proposed policy statement or plan that:

- (a) adversely affects the environment;
- (b) does not relate to trade competition or the effects of trade competition.

I could not gain an advantage in trade competition through this submission.

The specific parts of the proposed Plan Change 4 to which this submission relates, along with the submission (with reasons) and the decisions sought, are set out in Attachment A.

GENERAL MATTERS

The general reasons for the submission are that the decisions sought are necessary for the proposed Regional Plan: Land and Water Plan Change 4 to achieve the purpose of the:

- Resource Management Act 1991 (RMA), and
- The National Policy Statement of Freshwater Management (2014), and
- The Canterbury Regional Policy Statement, and
- Canterbury Regional Plan: Land and Water, and
- The Conservation General Policy, and
- The Canterbury Conservation Management Strategy, and
- Are in accordance with sound resource management practice, and
- Protecting the Canterbury Inanga freshwater fishery, and
- Protecting the habitat of Canterbury Mudfish (*Neochanna Burrowsis*), and
- Protecting the life-supporting requirements of native fish, and
- Protecting braided riverbed habitat and species, and
- Fostering recreation in Canterbury's back country

Further specific reasons and decisions sought are given in Attachment A to this submission. Where any decision sought in Attachment A seeks specific wording inserted in a specific place, the decision sought includes the following words:

'or words to like effect, and/ or in some other appropriate location in the Water Regional Plan.'

The submission also includes such consequential amendments as are necessary to give effect to this submission.

I wish to be heard in support of my submission.

If others make a similar submission, I will consider presenting a joint case with them at a hearing.


.....
Leonie Fechney
Conservation Partnerships Manager (Canterbury)
Christchurch

Pursuant to a delegation from the Director-General of Conservation
A copy of the delegation may be viewed at the Departmental offices located at
Conservation House Whare Kaupapa Atawhai, 18 - 32 Manners Street, Wellington
6011

Date 12/10/2015

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Page Number	Sub-section/Point	Oppose/support (in part or full)	Addition and Reason(s) where appropriate	
Tables 1a and 1b Freshwater outcomes for Canterbury's Rivers and Lakes				
4-3 and 4-4	Table 1a and 1b	Support in Part	Many of the river and lakebeds in Canterbury are Crown Land adjacent to Public Conservation Land, so these Crown land areas need to be included as well as the Public Conservation lake areas on a map so that the objective of the tables can be given effect.	Define in the Land and Water Plan maps which areas of Crown Land riverbed and lake bed are within the natural state waterbody area.
4-4	Table 1b Freshwater outcomes for Canterbury lakes	Oppose	Maori Lakes, and Lake Emily and Georgina should be maintained to the same trophic level as other High Country Lakes Trophic degradation of these lakes does not give effect to the NPS, RPS or Land and Water Plan Objectives and Policy and is inconsistent with the general principles of the CWMS.	Delete "4" as the TLI indicator for Maori Lakes, Lake Emily and Georgina and replace with "3.5
Section 5 - Region wide Rules				
5-3	Rule 5.7 and 5.8	Oppose in part	This provision does not enable wastewater (greywater) discharges from backcountry huts which have a less than minor effects. Greywater wastewater in small amounts has less cumulative effects than the discharge of N and P from farming activities that are the focus of ECan permitted rules to manage water quality.	Alter to: 5.7 The discharge of wastewater from an existing on-site wastewater treatment system onto or into land in circumstance where a contaminant may enter water is a permitted activity, provided the following conditions are met:

ATTACHMENT A
SUBMISSION ON THE PROPOSED PLAN

The following table sets out further details of the Director General's submission (with reasons) and the decisions sought with respect to the proposed Regional Plan: Land and Water Omnibus Plan Change 4.

(1) The specific provisions of the Proposed Plan Change that my submission relates to are:		(2) My submission is that:		(3) I seek the following decision(s) from Canterbury Regional Council:
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Section 2 – How the Plan works and definitions				
2-3	Definition of High Naturalness water Body	Support	These rules give effect to the RMA, NPS Freshwater) the RPS and the Canterbury CMS.	Retain
2-3	Inanga Spawning Body	Support	These rules give effect to the RMA, NPS Freshwater) the RPS and the Canterbury CMS.	Retain
2-4	Definition of Vegetation Clearance	Support	These rules give effect to the RMA, NPS Freshwater) the RPS and the Canterbury CMS.	Retain
Section 3 Objectives				
3-1	Objective 3.14	Support	These rules give effect to the RMA, NPS Freshwater) the RPS and the Canterbury CMS.	Retain

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			<p>The Department manages as part of its Canterbury Hut network, approximately 60 dishwashing sinks and 22 hand basin sinks. The rule as drafted would require the Department to obtain up to approximately 100 resource consents for discharges for greywater wastewater.</p> <p>In Southland this activity is provided for as a permitted activity within limits. The Department and other Hut providers through their hut maintenance programme suggest that a design specification for maintenance can be designed for all Canterbury Huts by 31 December 2023</p> <p>Reasons</p> <ol style="list-style-type: none"> 1. Condition 5 (c) contradicts the purpose of the rule 2. Condition 5 (g) is void for want of certainty. The groundwater depth will change throughout the year and is dependent on rainfall. 3. Use of the on-site domestic AS/NZ Standard 1547:2012 is not appropriate for backcountry hut wastewater. 4. Backcountry hut greywater wastewater 	<p>(i) <u>The discharge consists of contaminants associated with domestic or back country hut wastewater only; and</u></p> <p>(ii) <u>The onsite system was installed and operational prior to 6 October 2015; and</u></p> <p>(iii) <u>The discharge does not exceed 2 m³ per day; and</u></p> <p>(iv) <u>The discharge site is onto or into a site that is equal to or greater than 4 hectares in area; and</u></p> <p>(v) <u>Inflow or infiltration of stormwater, other surface water and groundwater to the system is minimised; and</u></p> <p>(vi) <u>For backcountry huts, the greywater treatment and disposal system is operated and maintained within the system design specification for maintenance, which shall be provided to ECan by 31 December 2023, or</u></p> <p>(vii) <u>For domestic systems the treatment and disposal system is compliant with section 6.3 of New Zealand Standard AS/NZ</u></p>

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			<p>should be provided for as a permitted activity rule as the effects are minor or less as the amounts of wastewater are small.</p> <p>5. The Department and Other Hut providers could work at providing a design specification for greywater wastewater for all it's facilities and Canterbury and provide a design specification for maintenance by 31 December 2023, and this can be the specification the systems are maintained.</p>	<p>1547:2012- On site Domestic Wastewater treatment</p> <p>(viii) The discharge is not into or onto land :</p> <p>a) Where there is an available sewage network; or</p> <p>b) That is listed as an archaeological site; or</p> <p>c) Within 20 meters of any surface waterbody or the Coastal Marine Area; or</p> <p>d) Within 50 meters of a bore used for water abstraction; or</p> <p>e) Within a Community Drinking-water protection zone as set out in schedule 1 of this plan; and</p> <p>vii) <u>The discharge does not result in wastewater being visible on the ground surface; and</u></p> <p>viii) The discharge does not contain any hazardous substance.</p> <p>5.8 The discharge of wastewater from new on-site wastewater treatment system onto or into land in circumstance where a contaminant may enter</p>

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<p>Page Number</p>		<p>Oppose/support (in part or full)</p>	<p>Addition and Reason(s) where appropriate</p>	
				<p>water is a permitted activity, provided the following conditions are met:</p> <p>(i) <u>The discharge consists of contaminants associated with domestic or back country hut wastewater only; and</u></p> <p>(ii) The discharge is not located within an area where residential density exceeds 1.5 dwellings per hectare and total population is greater than 1000 persons; and</p> <p>(iii) <u>The discharge does not exceed 2 m³ per day; and</u></p> <p>(iv) The discharge site is onto or into a site that is equal to or greater than 4 hectares in area; and</p> <p>(v) <u>In flow or infiltration of stormwater, other surface water and groundwater to the system is minimised; and</u></p> <p>(vi) <u>For backcountry huts, the greywater treatment and disposal system is operated and maintained within the system design specification for</u></p>

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				<p><u>maintenance; or</u></p> <p>(vii) For domestic systems, the treatment and disposal system is compliant with section 6.3 of New Zealand Standard AS/NZ 1547:2012- On site Domestic Wastewater treatment</p> <p>(viii) The discharge is not into or onto land :</p> <p>f) Where there is an available sewage network; or</p> <p>g) That is listed as an archaeological site; or</p> <p>h) Within 20 meters of any surface waterbody or the Coastal Marine Area; or</p> <p>i) Within 50 meters of a bore used for water abstraction; or</p> <p>j) Within a Community Drinking-water protection zone as set out in schedule 1 of this plan; and</p> <p>vii) <u>The discharge does not result in wastewater being visible on the ground surface; and</u></p> <p>viii) The discharge does not contain any hazardous substance.</p>

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5-4	Stock exclusion Rules 5.68A-5.71	Support	These rules give effect to the RMA, NPS Freshwater, and the RPS, and protect the habitat of inanga/whitebait	Consequential new definitions of : (i) On site backcountry hut wastewater system and (ii) On site domestic wastewater treatment system “ May be required” .
5-6	Rule 5.77 Drainage Water	Oppose in part	<ol style="list-style-type: none"> Drainage systems can be a major source of contamination to freshwater. Tile drains has been identified by Otago Regional Council. Any rule that allows a permitted activity discharge must meet the requirements of section 70 1 (c-g) requirements of the RMA, The location of the drainage systems need to be mapped and the outlet position identified for ECan, so that the 	<p>Amend rules 5.77 and 5.78 as follows:</p> <p>The discharge of drainage water from a drainage system into a river is a permitted activity, provided the following conditions are met:</p> <p>1 The discharge of land drainage water is only from a</p>

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			<p>mixing zone can be identified, and the cumulative effects of such discharges managed.</p> <p>3. The discharge to a lake or natural wetland is inappropriate as they lack the dilution effect of a river or stream,</p>	<p>drainage system, the full spatial extent which existed at 3 July 2004; and</p> <p>2. The concentration of:</p> <p>(a) total suspended solids in the discharge does not exceed 50 g/m; and</p> <p>(b) Un ionised hydrogen sulphide in the discharge does not exceed 0.005 g/m²; and</p> <p>3. The discharge beyond the mixing zone as defined in Schedule 5, does not produce</p> <p>(a) conspicuous oil or grease or films, scums or foams, or floatable or suspended materials; or</p> <p>b) any conspicuous change in the colour or visual clarity; and</p> <p>(c) <u>any emission of objectionable odour; or</u></p> <p>(d) <u>the rendering of fresh water unsuitable for consumption by farm animals, or</u></p> <p>(e) <u>any significant adverse effect on aquatic life; and</u></p> <p>4. The discharge does not:</p> <p>(a) Occur within a Community Drinking-water Protection zone as set out in schedule 1; or</p> <p>(b) Contain any hazardous substance, and</p> <p>5 <u>The location of the drain outlet position is mapped and provided to ECan by 31 December 2020,</u></p>

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5-12	Bores Rules 5.103-5.104A	Support	These rules give effect to the RMA, NPS Freshwater, and the RPS, and enable emergency fire-fighting by allowing for temporary construction and decommissioning of emergency fire-fighting galleries A default minimum flow of 50% of the 7-day mean annual low flow (7DMALF) does: <ul style="list-style-type: none"> • Not provide for the life supporting capacity of freshwater ecosystems, and • is inconsistent with section 5 of the 	5.78A The discharge of drainage water from a drainage system into a river lake or wetland that does not meet the conditions of Rule 5.77 is a discretionary activity, provided the following condition is met 1. <u>Where the location of the surface and sub-surface drains and outlet position is mapped and provided to ECan</u> 5.78B The discharge of drainage water from a drainage system into a river lake or wetland that does not meet the conditions of Rule 5.78A is a non-complying activity.
5-17	Take and Use of Surface water Rule 5.123	Oppose in Part		Retain Replace condition 2 "50% of the 7-day mean annual low flow (7DMALF)" with: "100% of the 7day mean annual low flow (7DMALF)"

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			<p>RMA, and</p> <ul style="list-style-type: none"> Is inconsistent with Objective A1 of the NPS (Freshwater) This default minimum flow provides too low a life-supporting capacity for freshwater species, while granting too high a reliability for out of stream abstractors. Is inconsistent with Objective 7.2.1 and Policy 7.3.4 of the RPS, and Is inconsistent with Principles 2, 4, 5 and 8 of the CWMS Does not avoid, remedy or mitigate adverse effects of water takes on the freshwater environment. 	
5-20	Structures rules 5.135 141B	Support	These rules give effect to the RMA, NPS (Freshwater) the RPS and the Canterbury CMS,	Retain.
5-24	Rule 5.146 Fine Sediment removal	Support in part	<p>Reason</p> <p>This activity has the potential to cause adverse effects on freshwater species and fish spawning and therefore should be confined to the summer period to avoid adverse effects</p> <ul style="list-style-type: none"> The bird breeding season for riverbed birds starts in August, 	<p>Add a new condition 5:</p> <p>5. <u>"The activity occurs between October and March"</u></p>
5-25	Rule 5.148 Gravel from	Support in Part		Alter condition 4 to read:

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	Lake and Riverbeds		<p>so rules managing extraction to avoid bird displacement should start on the 31 July.</p> <ul style="list-style-type: none"> • If the period 1 February to 31 July is applied to all rivers this would protect birds from disturbance at breeding time and there would be no need for condition 10 to manage gravel excavation under condition 4 a). • It is likely that lay gravel extractors will not be able to identify if birds are nesting within 100 meters of the vicinity of gravel extraction. • Confining this gravel take to a set time period will make ECan compliance far clearer and simple. It is better that a time period sets the rules and people can work within them than having conditions that may require expert advice. 	<p>a) "In the bed of any river or lake does not exceed 5 m3 in any 12 consecutive months, <u>and occurs between 1 February and 31 July only</u>; or</p> <p>b) Replace "August" with "<u>July</u>"</p> <p>c) Replace "August" with "<u>July</u>"</p> <p>5 Add after excavated, "<u>and the ground is levelled</u>".</p> <p>If the above relief is accepted, then condition 10 is not required.</p>

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5-28	Vegetation and Lake beds Rules 5.163 to 5.166	Support in Part	Reason The person or agency responsible for the river or lakebed should be mentioned to be consistent with condition two provisions for flood control.	Add a new condition 11 No vegetation shall be disturbed, removed, damaged or destroyed without the prior written permission of the person or agency responsible for the management of the river or lakebed.
Schedules				
16-4	Schedule 5 Mixing Zones	Support	Reason 1. Clarifies the mixing zone for river and artificial watercourses.	Retain
16-5	Schedule 8 Regional wide water Quality limits	Support	Reason This provision establishes regional limits within the Plan as required under the NPS (Freshwater), Part II of the Act, and the RPS.	Retain.
16-6	Schedule 9 Assessment of Stream Depletion Effects	Support	Reason Establishes regional limits within the Plan as required under the NPS (Freshwater), Part II of the Act, and the RPS.	1. Retain.

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16-8	Schedule 17 Inanga Sites	Support	<p>Reason</p> <p>1 Identifies Inanga/ Whitebait Habitats to be sustainably managed by being excluded from a range of permitted activity rules 1 March to 1 June inclusive.</p> <p>2 Gives effect to section 6 (ab) Conservation Act.</p> <p>3 Gives effect to RPS Policy 10.3.2 (7)</p>	<p>1. Support the schedule and maps as notified, and</p> <p>2. Add the threatened Canterbury mudfish (<i>Neochanna burrowsius</i>) from enclosed schedule 1 table 1 and map to schedule 17 as a threatened species deserving of inclusion on the schedule, and</p> <p>3. Add the other two threatened native fish species lowland longjaw galaxias (<i>Galaxias cobitinis</i>) and bignose galaxias (<i>Galaxias macronasus</i>) in table 2 and three from schedule 1 into Schedule 17</p>
Proposed Maps				
	Proposed Maps	Support	<p>Reason</p> <p>1. Gives effect to protecting Inanga/Whitebait spawning sites as outlined in RPS Policy 10.3.2 (7).</p> <p>2. Giving effect to RPS Schedule 10.3.2 (7) requires the addition of Canterbury mudfish habitat.</p>	<p>1. Retain</p> <p>2. Add the threatened Canterbury mudfish (<i>Neochanna burrowsius</i>) from enclosed schedule 1 table 1 and map to schedule 17 as a threatened species deserving of inclusion</p>

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				<p>on the schedule, and</p> <p>3. Add the other two threatened native fish species lowland longjaw galaxias (<i>Galaxias cobitinis</i>) and bignose galaxias (<i>Galaxias macronasus</i>) in table 2 and three from schedule 1 into Schedule 17</p>

Schedule of Threatened Fish
Table 1. Schedule of known Canterbury mudfish (*Neochanna burrowsius*) locations in Canterbury.

Catchment	Location	Topo50 Downstream	Topo50 Upstream
Ashley River	Tutaepatu Lagoon	BW24 761 027	BW24 762 035
Ashley River	Taranaki Creek	BW24 761 053	BW24 759 037
Waimakariri River	Peacock Springs	BX23 624 870	BX23 607 875
Waimakariri River	Eyre River tributary	BW22 299 047	BW22 293 053
Waimakariri River	Mounseys Stream tributary	BW22 268 059	BW22 265 060
Waimakariri River	Mounseys Stream tributary	BW22 266 061	BW22 266 064
Waimakariri River	Mounseys Stream tributary	BW22 258 065	BW22 255 074
Waimakariri River	Mounseys Stream tributary	BW22 258 062	BW22 257 061
Waimakariri River	Mounseys Stream tributary	BW22 257 062	BW22 256 062
Waimakariri River	Mounseys Stream tributary	BW22 256 062	BW22 255 062
Waimakariri River	Mounseys Stream tributary	BW22 255 063	BW22 239 064
Waimakariri River	Mounseys Stream tributary	BW22 255 063	BW22 239 065
Waimakariri River	Coopers Creek tributary	BW22 300 056	BW22 295 059
Avon River	Travis Wetland	BX24 748 851	BX24 747 851
Avon River	Christchurch Botanical Gardens	BX24 693 800	BX24 693 801
Avon River	Mahaanui District Office Office	BX24 641 791	BX24 641 791
Selwyn River	Selwyn River tributary	BX23 453 641	BX23 431 651
Selwyn River	Hororata River tributary	BX22 225 733	BX22 223 737
Selwyn River	Mitchells Road Springs	BX22 222 737	BX22 219 739
Selwyn River	Hororata River tributary	BX22 219 742	BX22 209 769
Selwyn River	Hororata River tributary	BX22 195 755	BX22 170 778
Selwyn River	Cordys Stream	BX21 155 783	BX21 139 794
Selwyn River	Hororata River	BX21 153 782	BX21 139 789

Selwyn River	Washpen Creek Water Race	BX21 026 780	BX21 021 781
Selwyn River	Blacks Stream	BX22 211 875	BW22 209 904
Selwyn River	Waianiwanawa River tributary	BX22 194 857	BX22 186 864
Selwyn River	Waianiwanawa River	BX22 176 860	BW21 124 910
Selwyn River	Waianiwanawa River tributary	BX22 175 862	BX22 169 866
Selwyn River	Waianiwanawa River tributary	BX22 175 862	BX22 187 866
Selwyn River	Oyster Gully Stream	BX22 172 869	BX21 151 879
Selwyn River	Oyster Gully Stream tributary	BX22 161 880	BX21 160 883
Selwyn River	Bush Gully Stream	BX22 168 890	BX21 143 890
Selwyn River	Auchendale Pond	BX22 178 894	BX22 178 894
Selwyn River	Cairn Hill Stream	BW22 179 909	BW21 159 912
Selwyn River	Waianiwanawa River tributary	BW21 158 921	BW21 142 921
Selwyn River	Coaltrack Road Water Race	BX22 245 737	BX22 232 757
Selwyn River	Surveyors Stream	BX21 138 846	BX21 134 856
Selwyn River	Wairiri Stream tributary	BX21 112 838	BX21 062 811
Selwyn River	Steventon Stream	BX21 092 881	BX21 076 890
Selwyn River	Irwell River	BX23 411 649	BX23 400 656
Selwyn River	Boundary Creek	BX23 407 624	BX22 384 644
Selwyn River	Unnamed spring	BX22 381 634	BX22 377 636
Selwyn River	SDC Ellesmere stockwater race and drainage network	BX23 474 582	BX22 351 617
Selwyn River	Doyleston Drain	BY23 480 533	BY23 479 534
Ashburton River	Wheatstone Drain	BY21 034 231	BY21 033 234
Ashburton River	Lake Hood drain	BY21 016 305	BY21 016 304
Ashburton River	Riverbridge Trust Wetland	BY20 914 467	BY20 913 470
Blees Drain	ADC Stockwater race Blees Drain	BY21 030 214	BY21 014 211
Russells Road Drain	Waitai Wetland	BY21 979 203	BY21 984 206
Parakanoi Drain	Parakanoi Drain tributary	BY21 938 244	BY21 939 264
Deals Drain	Deals Drain Tributary	BY20 913 257	BY20 912 259
Hinds River	Fifty Link Drain	BY20 904 211	BY20 877 252
Hinds River	Clearwell Spring	BY20 786 400	BY20 780 407
Hinds River	Hackthorne Road Ford	BY20 767 434	BY20 768 438
Hinds River	Oakleys Road Ford	BY20 754 455	BY20 750 456
Hinds River	Hinds River North Branch	BY20 740 485	BY20 735 496

Hinds River	Hinds River North Branch tributary	BY20 711 537	BX20 703 544
Hinds River	Hinds River North Branch tributary	BX19 655 598	BX19 654 599
Dobsons Drain	Dobsons Drain	BZ20 905 136	BZ20 888 150
Opitahi River	Rangatira Creek	BZ19 563 052	BZ19 513 061
Washdyke	Papaka Stream	BZ19 536 928	BZ19 522 933
Pareora River	Pareora River tributary	CA19 570 721	CA19 551 732
Pareora River	South Burn and Pleasant Valley creeks	CA19 566 716	CA19 505 718
Pareora River	Brasells Bridge Spring	CA19 520 745	CA19 516 754
Pareora River	Gordons Stream	CA19 465 785	CA18 414 723
Pareora River	Taiko Stream	BZ19 449 862	BZ18 423 902
St Andrews	Lyalldale Creek	CA19 573 696	CA19 538 700
Horseshoe Bend Stream	Springbank Stream	CA19 544 615	CA19 539 630
Horseshoe Bend Stream	Horseshoe Bend Stream	CA19 542 600	CA19 485 610
Makikihiri River	Teschemakers Creek	CA19 482 584	CA19 440 634
Geaneys Creek	Geaneys Creek	CA19 538 548	CA19 449 554
Waihao River	Hook Swamp	CA19 538 548	CA19 522 538
Waihao River	Wallaces Culvert Creek	CA19 486 537	CA19 485 536
Waihao River	Wainono Lagoon	CA19 537 496	CA19 537 496
Waihao River	Hook River tributary	CA19 463 513	CA19 451 520
Waihao River	Waituna Stream	CA19 526 478	CA18 423 489
Waihao River	Waituna Stream tributary	CA19 502 471	CA19 466 474
Waihao River	Waikokopara Stream	CB18 435 421	CB18 401 387
Waihao River	Buchanans Creek	CB19 518 398	CB19 511 395
Morven Drain	Sinclairs Creek	CB19 526 368	CB19 515 367
Morven Drain	Sinclairs Creek	CB19 491 368	CB19 489 369
Morven Drain	Dog Kennel Stream	CB19 450 312	CB18 429 314
Waitaki River	Whitneys Creek tributary	CB19 462 284	CB19 454 286
Waitaki River	Waikakahi Stream Drain	CB19 448 273	CB19 450 276
Waitaki River	Mt Harris Stream	CB18 396 314	CB18 389 327
Waitaki River	Ryde Stream	CB18 383 316	CB18 369 322
Waitaki River	Welcome Creek	CB19 495 228	CB19 494 228
Waitaki River	Waitaki River tributary	CB19 471 236	CB19 469 235

Waitaki River	Waitaki River tributary	CB19 468 235	CB19 460 234
Waitaki River	Waitaki River tributary	CB19 449 239	CB19 447 239
Waitaki River	Waitaki River tributary	CB18 309 280	CB18 284 293

Table 2. Schedule of known lowland longjaw galaxias (*Galaxias cobitinis*) locations in Canterbury.

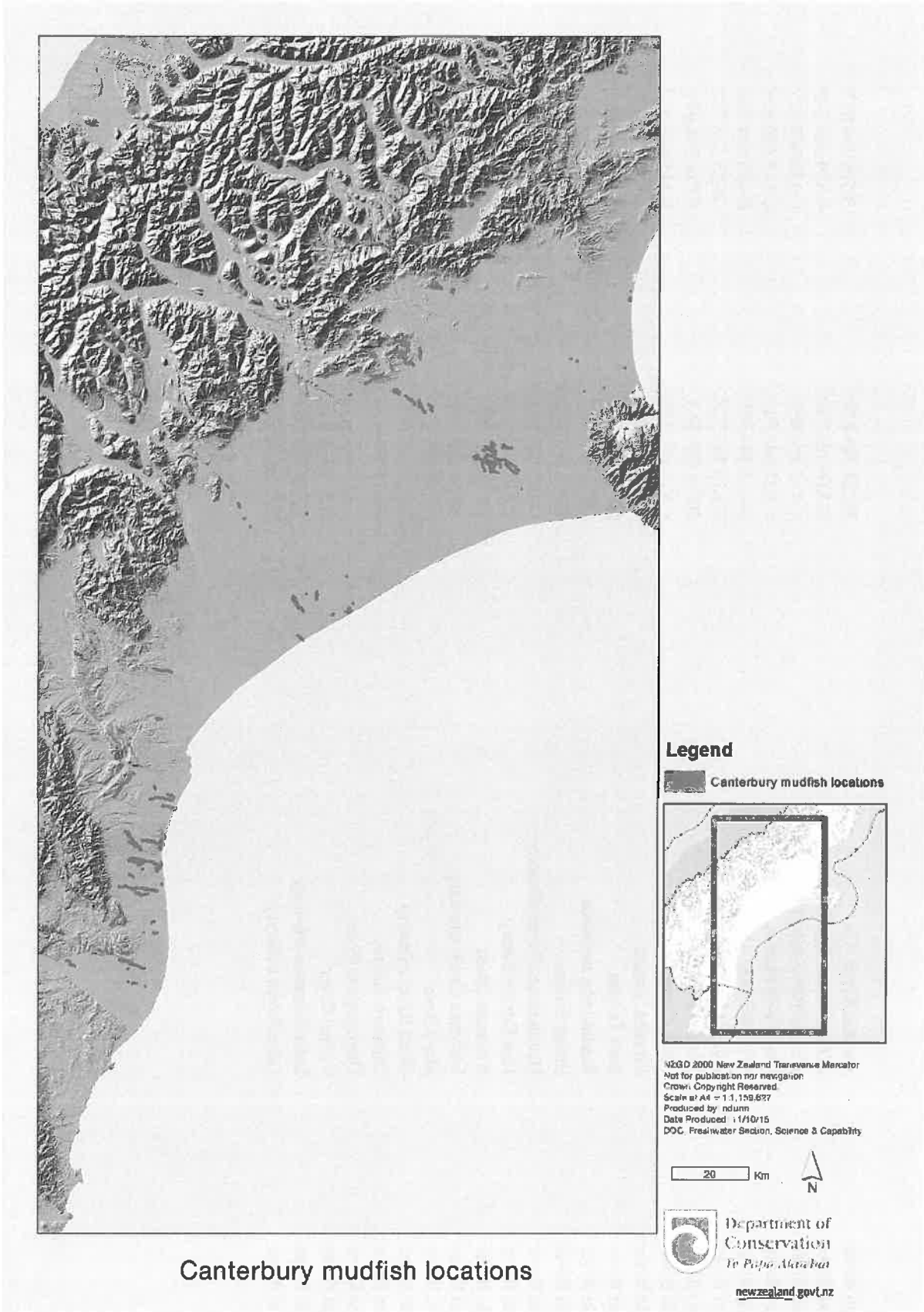
Catchment	Location	Topo50 Downstream	Topo50 Upstream
Waitaki River	Hakataramea River tributary	CA17 020 465	CA17 023 466
Waitaki River	Cabbage Tree Gully Stream	BZ17 135 832	BZ17 153 838
Waitaki River	Nessing Stream	BZ17 135 832	BZ17 157 847
Waitaki River	Edward Stream	BY17 003 191	BY17 069 302
Waitaki River	Ohau River tributary	BZ15 701 916	BZ15 691 925
Waitaki River	Fraser Stream	BZ15 641 992	BZ15 631 993
Waitaki River	Chain Hill Stream	CA15 644 710	CA15 626 695
Waitaki River	Ahuriri River tributary	BZ14 296 963	BZ14 303 981
Waitaki River	Ahuriri River	CA15 618 714	CA15 545 701
Waitaki River	Otamatapaio River	CA15 612 516	CA15 613 486
Waitaki River	Corbies Creek	CA15 686 596	CA15 697 576

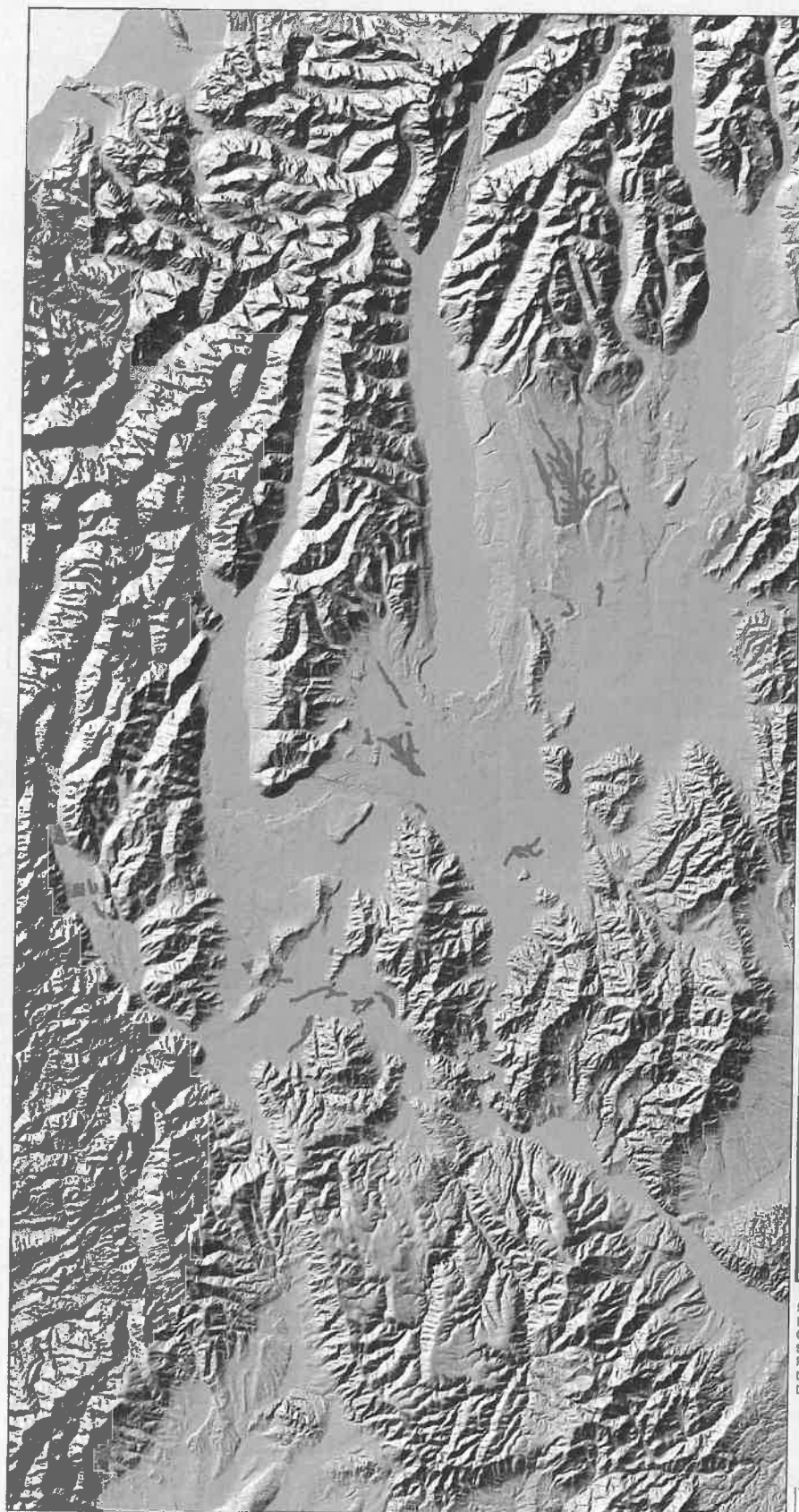
Table 3. Schedule of known bignose galaxias (*Galaxias macronasus*) locations in Canterbury.

Catchment	Location	Topo50 Downstream	Topo50 Upstream
Waitaki River	Ahuriri River	CA15 618 714	CA15 555 706
Waitaki River	Ahuriri River	CA14 349 796	BZ14 319 833

Waitaki River	Ahuriri River	BZ14 305 878	BZ14 294 897
Waitaki River	Ahuriri River East Branch	CA14 384 739	CA14 384 740
Waitaki River	Ahuriri River tributary	CA15 668 691	CA15 648 717
Waitaki River	Chain Hill Stream	CA15 644 711	CA15 625 695
Waitaki River	Willow Burn	CA15 598 759	CA15 601 765
Waitaki River	Ahuriri River tributary	CA15 556 728	CA15 546 730
Waitaki River	Ahuriri River tributary	BZ14 296 963	BZ14 296 978
Waitaki River	Clark Creek	CA15 682 598	CA15 679 600
Waitaki River	Edward Stream	BY17 003 191	BY17 069 302
Waitaki River	Fork Stream	BY16 865 381	BY16 865 381
Waitaki River	Ruataniwha wetlands	BZ15 693 957	BZ15 649 997
Waitaki River	Fraser Stream	BZ15 641 992	BZ15 631 993
Waitaki River	Hakataramea River tributary	CA17 020 465	CA17 023 466
Waitaki River	Hen Burn tributary	CA15 509 737	CA15 512 751
Waitaki River	Irishman Creek	BY16 864 239	BY16 821 350
Waitaki River	Irishman Creek tributary	BZ16 888 146	BZ16 889 170
Waitaki River	Mary Burn	BZ16 836 111	BZ16 854 149
Waitaki River	Ohau River tributary	BZ15 701 916	BZ15 691 925
Waitaki River	Omarara Stream	CA15 579 688	CA15 555 650
Waitaki River	Otamatapaio River	CA15 612 515	CA15 612 508
Waitaki River	Twizel River	BZ15 678 032	BZ15 647 080
Waitaki River	Lake Benmore tributary	BZ16 789 860	BZ16 829 875
Waitaki River	Lake Poaka tributary	BZ15 684 012	BZ15 676 015

Threatened Fish Maps



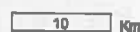


Legend

 Bignose galaxias locations



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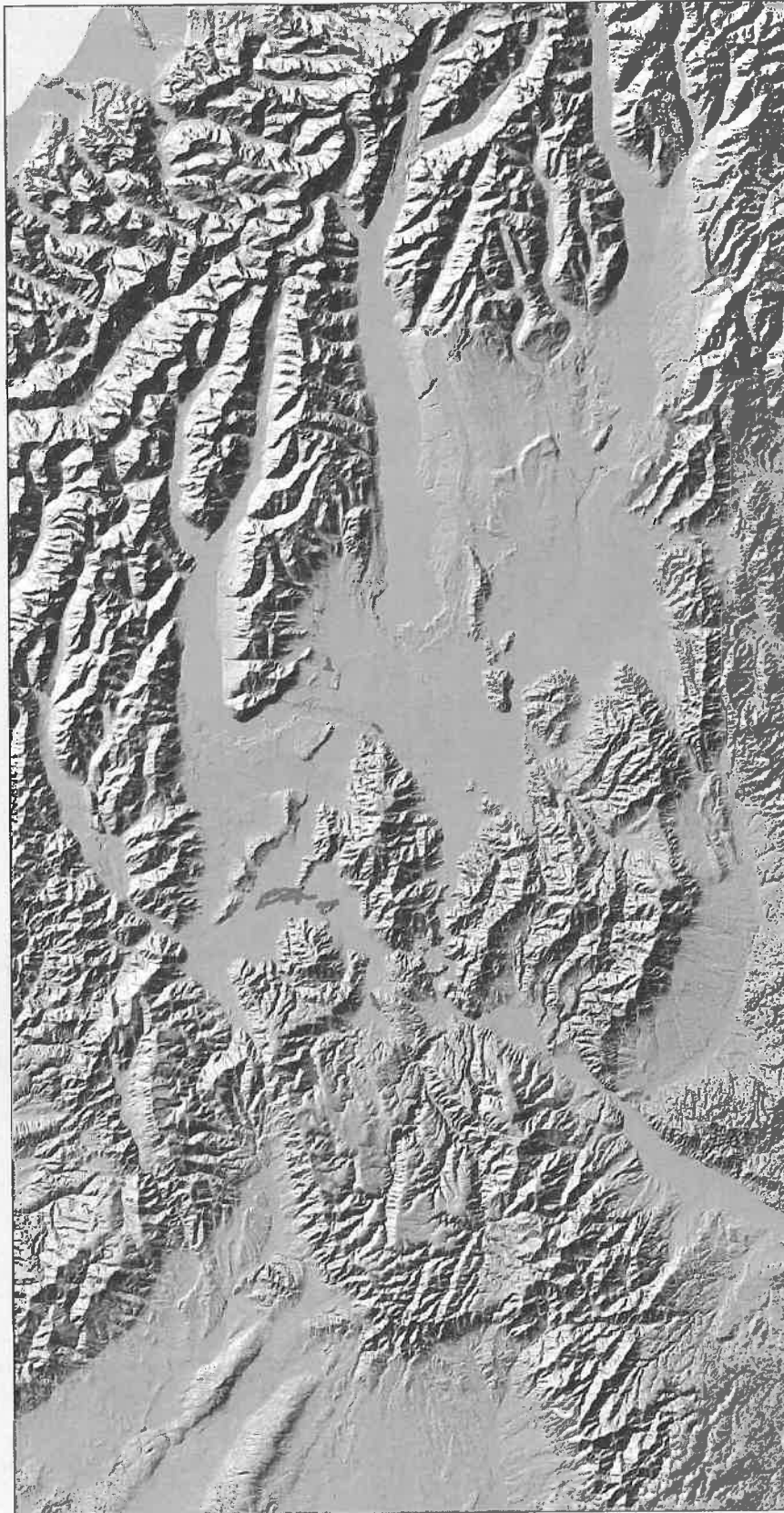
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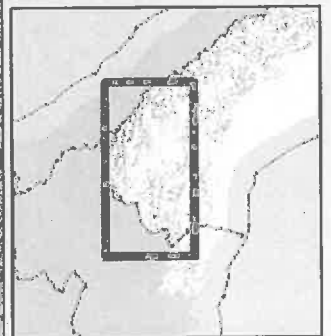
Bignose galaxias locations



Lowland longjaw galaxias locations

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Lowland longjaw galaxias locations



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10 Km



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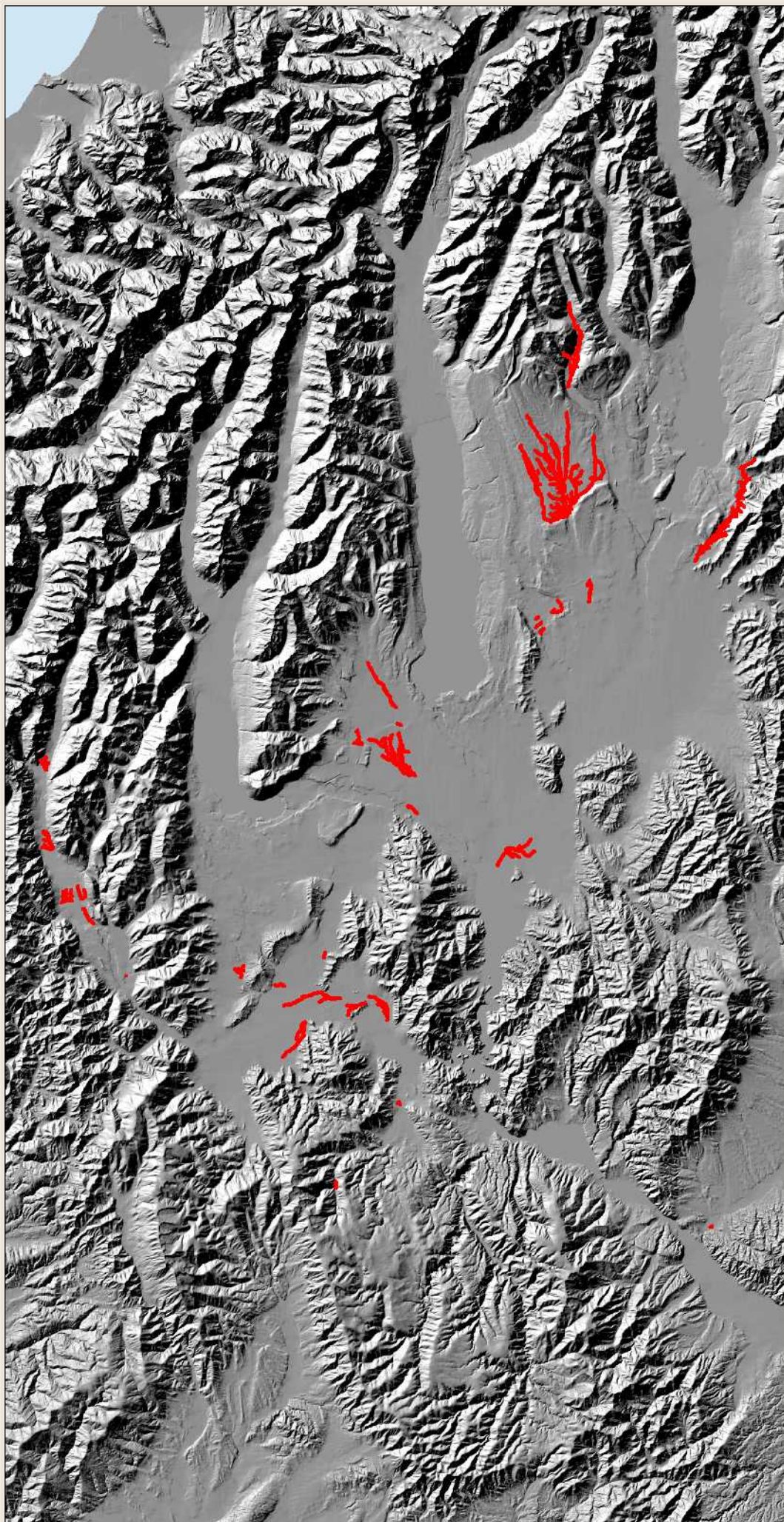
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From: [Herb Familton](#)
To: [Mailroom Mailbox](#); [Jason Holland](#)
Subject: FW: ECan LWRP Plan Change 4 files
Date: Monday, 12 October 2015 4:39:37 p.m.

Enc colour maps of the fish species so that it is easier to read.

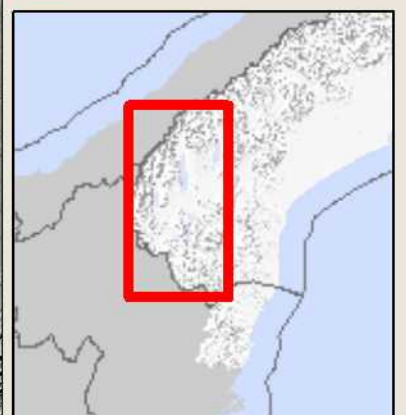
herb

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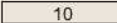


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 Bignose galaxias locations



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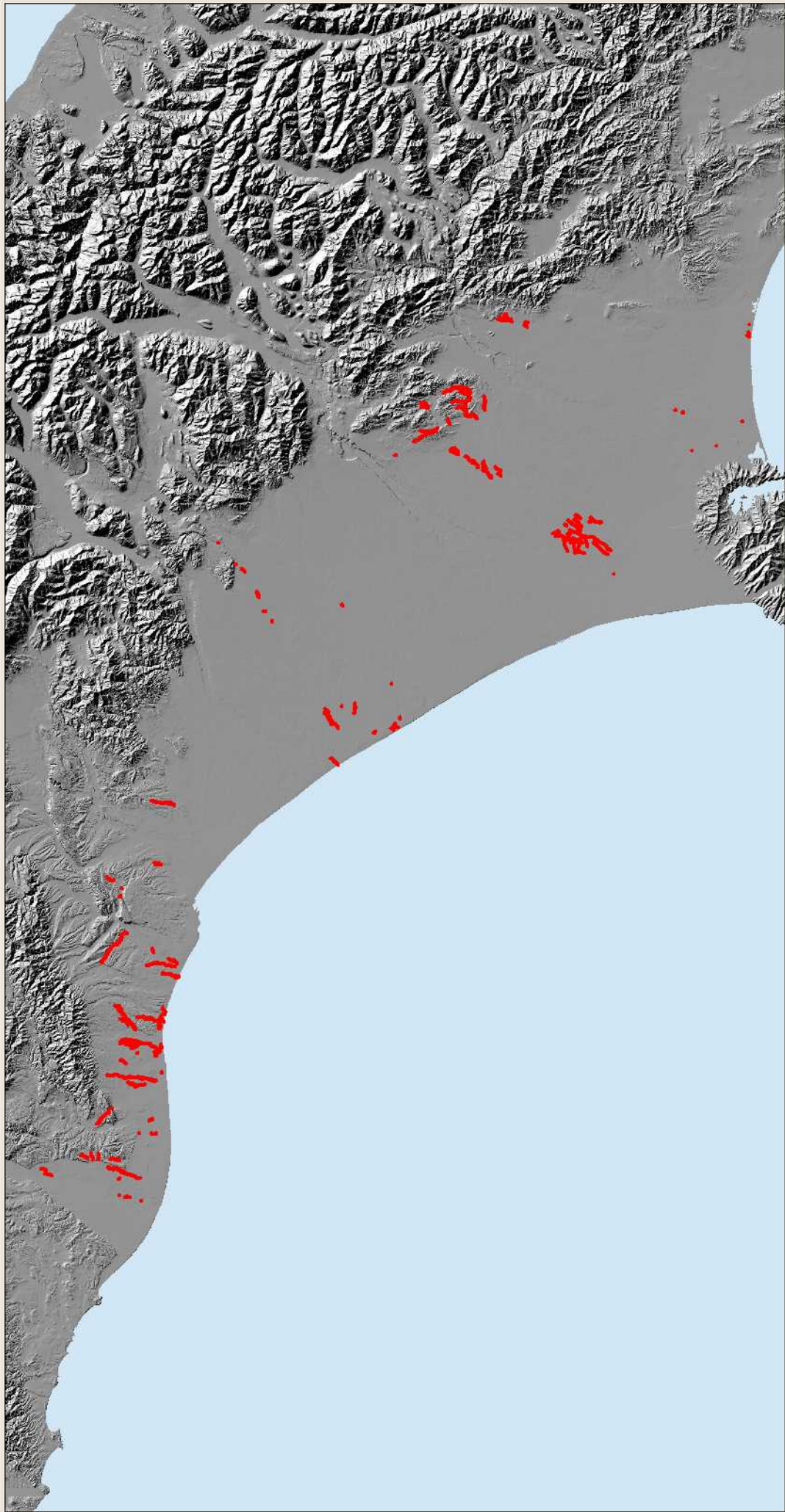


Bignose galaxias locations




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Legend

 Canterbury mudfish locations



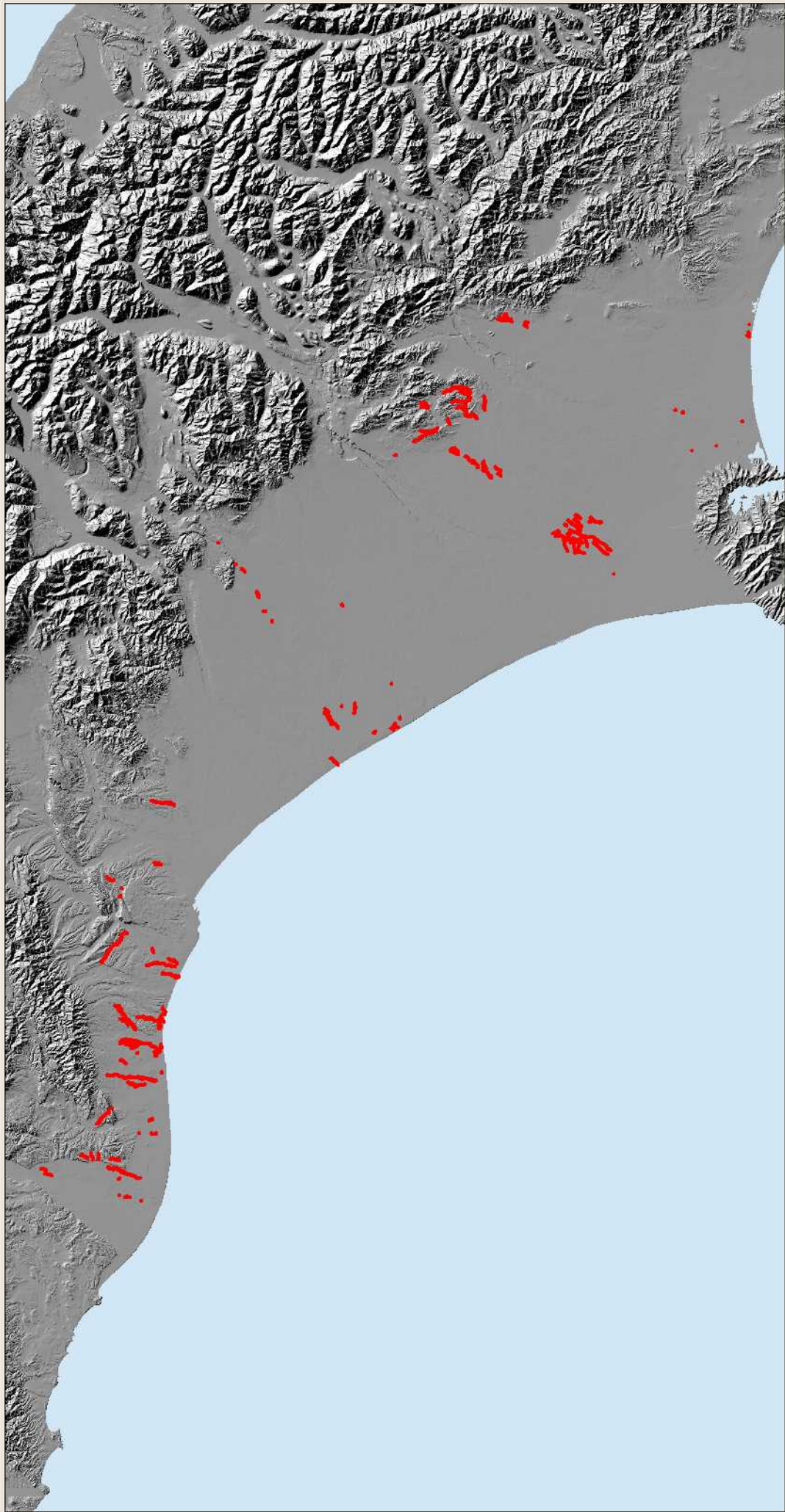
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Canterbury mudfish locations



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 Canterbury mudfish locations



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Canterbury mudfish locations