Schedule H: Coastal Marine Area[^] Activities and Water Management

Schedule H is a component of the Regional Coastal Plan.

The coastal marine area[^] (CMA) is as defined in the RMA. This Schedule comprises:

- **Part A:** CMA Boundaries: Figures H:1A-H:2A show a regional overview of the CMA and Figures H:3A-H:9A depict the location of the *mouth*^ and the cross-river CMA boundary of identified *rivers*^. These figures also show the Estuary *Water Management Sub-zones** relevant to Part C.
- **Part B:** Activity Management Areas: Figures H:10A-H:13A show the Port and Protection Activity Management Areas and the part of the General Activity Management Area in the vicinity of the Port. Table H.1 lists the ecological and other important characteristics in the Protection Activity Management Areas.
- **Part C:** Water Quality Management: *Water Management Zone** and *Sub-zones**, Values, management objectives, and *water*^ quality targets: Tables H.2-H.7. Note that the Estuary *Water Management Sub-zones** are shown in Figures H:3A to H:9A.

Area	Figure	Description of Area
Coastal Marine Area [^]	H:1A	The west coast CMA, beaches and some rivers^ of the
		Manawatu-Wanganui Region
	H:2A	The east coast CMA and some rivers [^] of the Manawatu-
		Wanganui Region
Coastal Marine Area [^] - river [^] mouths [^] and	H:3A	Kai lwi Stream and Mowhanau Stream
cross-river CMA boundaries.	H:4A	Whanganui River and Whangaehu River
	H:5A	Turakina River and Rangitikei River
	H:6A	Manawatu River and Hokio Stream
These figures also show the Estuary Water	H:7A	Ohau River and Waikawa Stream
Management Sub-zones* relevant to Part C.	H:8A	Akitio River and Owahanga River
	H:9A	Wainui River
Activity	H:10A	Port Activity Management Area
Management Areas		Protection Activity Management Areas:
	H:11A	Whanganui River and Whangaehu River
	H:12A	 Turakina River and Rangitikei River
	H:13A	Manawatu River and Cape Turnagain

A description of the figures contained in this Schedule is provided below.

Part A: CMA Boundaries

Figures H:1A-H:2A depict the extent of the CMA within the Manawatu-Wanganui Region. On the open coast, the CMA extends from the line of mean high water springs (MHWS) seaward to the 12 nautical mile outer limit of the *territorial sea*^.

Figures H:3A-H:9A depict the *mouth*[^] of identified *rivers*[^] as was agreed between the Minister of Conservation, the *Territorial Authorities*[^] and the Regional Council in 1994 in accordance with s2 RMA. The figures additionally show where the CMA boundary lies up the identified *rivers*[^] (which include streams). That is called the cross-river CMA boundary in this schedule.

For any *river*[^] which is not shown in the figures, the location of the *mouth*[^] was agreed between the Minister of Conservation, the *Territorial Authorities*[^] and the Regional Council in 1994 to be a straight line representing a continuation of the line of MHWS on each side of the *river*[^]. The upstream location of the cross-river CMA boundary on these *rivers*[^] is not mapped, but it is consistent with s2 RMA. It is the lesser of:

- (a) one kilometre upstream from the *mouth*[^] of the *river*[^]; or
- (b) the point upstream that is calculated by multiplying the width of the *river*[^] *mouth*[^] by five.

The rules^ in Chapter 17 apply to the CMA.

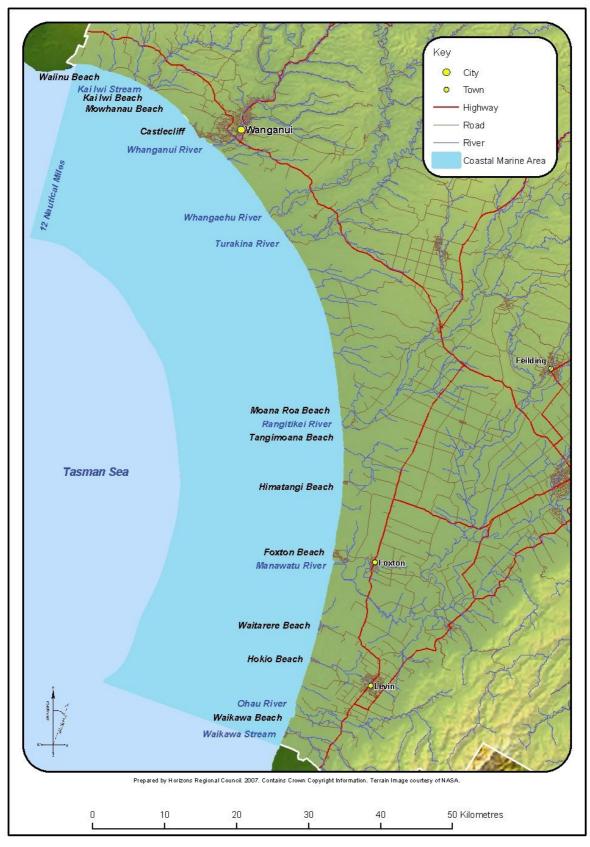


Figure H:1A West Coast CMA and some Rivers^ of the Region



Figure H:2A East Coast CMA and some Rivers^ of the Region

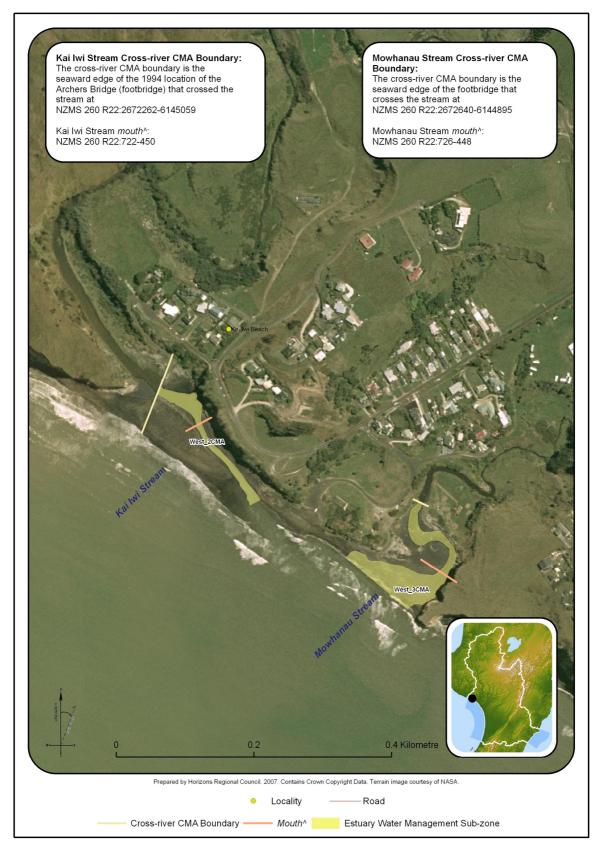


Figure H:3A Kai Iwi Stream and Mowhanau Stream *mouth*^ locations, cross-river CMA boundaries and extent of the Estuary *Water Management Sub-zones* *

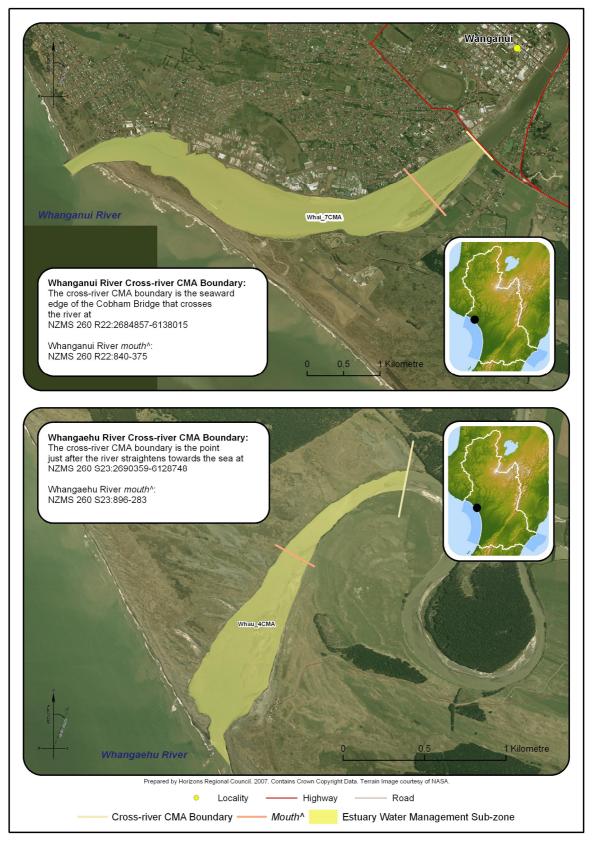


Figure H:4A Whanganui River and Whangaehu River *mouth*[^] locations, cross-river CMA boundaries and extent of the Estuary *Water Management Sub-zones* *

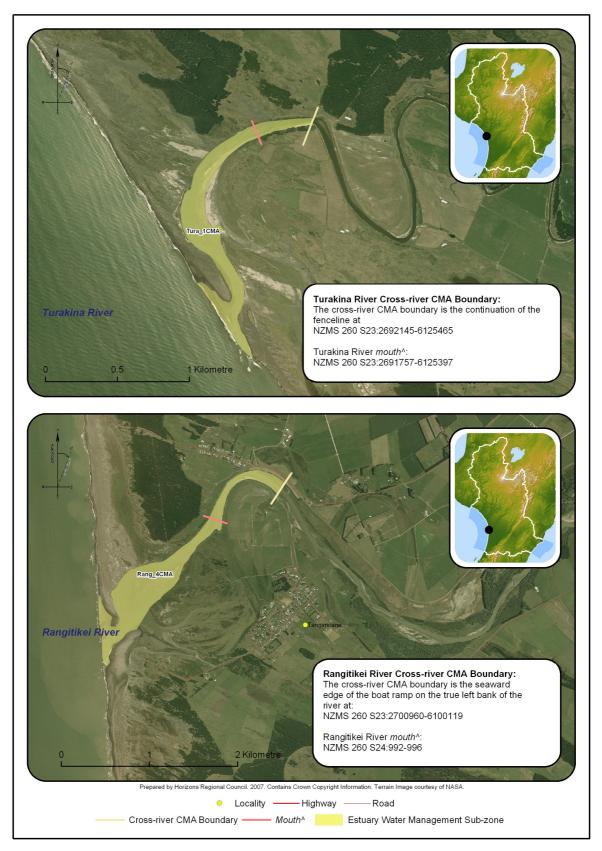


Figure H:5A Turakina River and Rangitikei River *mouth*[^] locations, cross-river CMA boundaries and extent of the Estuary *Water Management Sub-zones* *

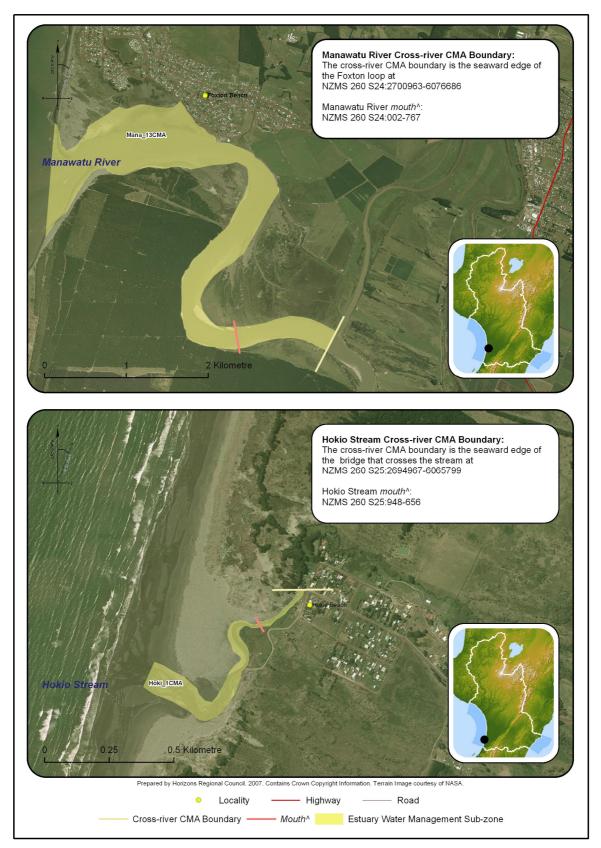


Figure H:6A Manawatu River and Hokio Stream *mouth*[^] locations, cross-river CMA boundaries and extent of the Estuary *Water Management Sub-zones* *

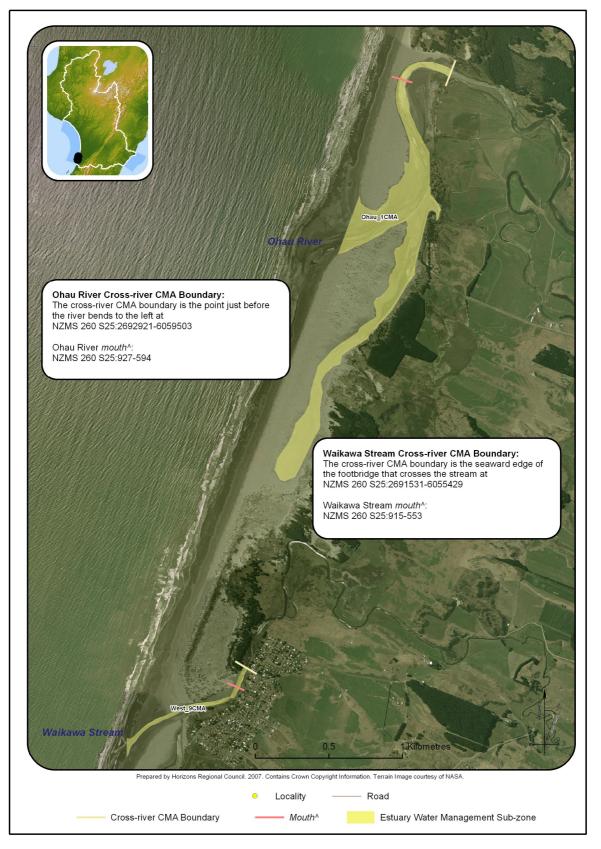


Figure H:7A Ohau River and Waikawa Stream *mouth*[^] locations, cross-river CMA boundaries and extent of the Estuary *Water Management Sub-zones* *



Figure H:8A Akitio River and Owahanga River *mouth*[^] locations, cross-river CMA boundaries and extent of the Estuary *Water Management Sub-zones* *

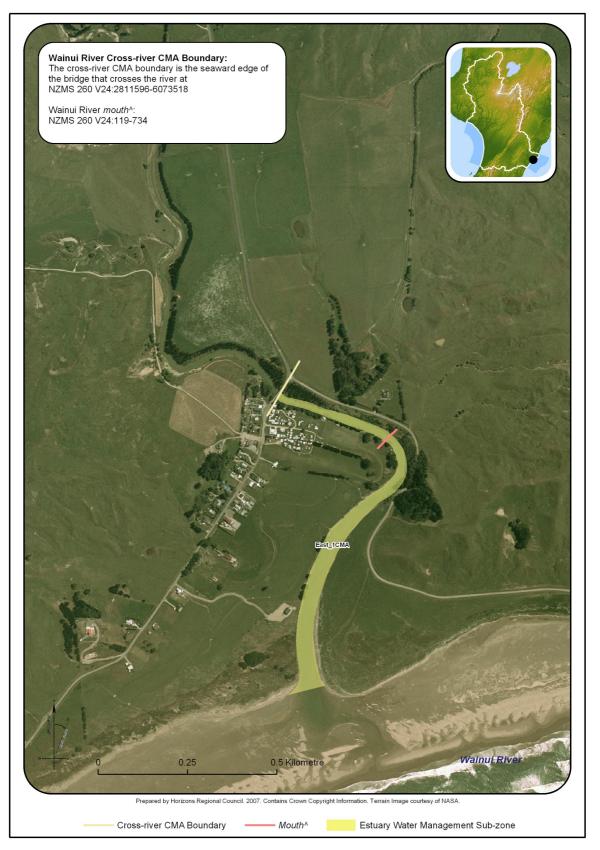


Figure H:9A Wainui River *mouth*[^] location, cross-river CMA boundary and extent of the Estuary *Water Management Sub-zone* *

Part B: Activity Management Areas

This Plan includes three different Activity Management Areas being the Port, Protection and General Activity Management Areas. These Activity Management Areas delineate discrete areas of the CMA within which different presumptions apply regarding the protection, use and development of the *foreshore*^ and seabed.

The Port Activity Management Area is depicted in Figure **H:10A**. There are some *rules*^A in Chapter 17 which apply specifically to this Area.

For clarification:

- the Port Activity Management Area extends 50 m to the outside of the river^A training wall as shown in Figure H:10A.
- the identified dredging and discharge areas relate to Rule 17-23 and indicate that these activities are considered under this *rule*[^] (and not as a *restricted coastal activity*[^] under Rule 17-24).

The Protection Activity Management Areas are shown in Figures H:11A-13A.

There are some *rules*[^] in Chapter 17 which apply specifically to these Areas.

For clarification:

- the landward edge of each Protection Activity Management Area is the line of MHWS
- the seaward boundary of the Cape Turnagain Protection Activity Management Area extends seaward for a maximum distance of 100 m
- the characteristics relating to each Protection Activity Management Area and as referred to in Policy 9-2 of the Regional Policy Statement are shown in Table H.1 below. It is these characteristics that have led to each Area being identified as a Protection Activity Management Area and regard must be had to the characteristics by decision-makers considering use and development proposals in those Areas.

The General Activity Management Area is not mapped. It comprises the entire CMA except those parts of the CMA covered by the Port Activity Management Area and the various Protection Activity Management Areas. In the Whanganui River, the General Activity Management Area includes part of the CMA comprising a band of 100 m from the line of MHWS of the northern bank of the River, as well as a band of 50 m from the edge of the Port Activity Management Area and includes the *river*^ entrance between the South Mole and the North Mole and northern *river*^ bank as shown in Figure **H:10A**.

Protection Activity Management Area	Ecological and other important characteristics
Whanganui River	 Nationally important as a nursery for freshwater and estuarine species Nationally important ecosystem for bird species Nationally important strategic <i>site*</i> for migratory bird species Provides habitat for threatened species Important roosting and feeding area for wading birds (especially shellfish beds) Important feeding and breeding ground for many fish species (especially access ways for <i>whitebait*</i> and lamprey) Corliss Island has a saltmarsh fringe and is important for hawks

Table H.1: Protection Activity Management Areas: ecological and other important characteristics



Protection Activity Management	Ecological and other important characteristics
Area	
	 Languard Bluff comprises a nationally important sequence of Pleistocene sedimentary strata and pectin shells Coastal landforms and adjacent dunes are important nesting habitat
Whangaehu River	 Nationally important strategic <i>site</i>* for migratory bird species Provides habitat for threatened bird species Important roosting and feeding area for wading birds Regionally important for its high degree of naturalness Note: The Whitiau Scientific Reserve is located adjacent to the true right bank of the estuary There is a dense concentration of archaeological sites adjacent to the estuary
Turakina River	 Nationally important strategic site* for migratory bird species Provides habitat for threatened bird species Important roosting and feeding habitat for wading birds Regionally distinct vegetation communities Regionally important for its high degree of naturalness Locally rich in archaeological sites
Rangitikei River	 Contains regionally important plant species Regionally important for bird species Regionally important for saltmarsh communities and estuarine native turf species Provides habitat for rare and threatened bird species Important roosting and feeding area for wading birds Important for <i>whitebait</i>* spawning
Manawatu River	 Nationally important as a nursery for freshwater and estuarine species Internationally important strategic <i>site</i>* for migratory bird species Provides habitat for rare and threatened bird species Important roosting and feeding area for wading birds Contains regionally important plant species Internationally recognised as a <i>wetland</i>^ of international importance under the RAMSAR Convention Regionally important for its high degree of naturalness and diversity
Cape Turnagain	 Important haul out area for marine mammals Important feeding, roosting and breeding area for birds (especially blue penguins) Site* of high value to iwi* Site* of geological importance

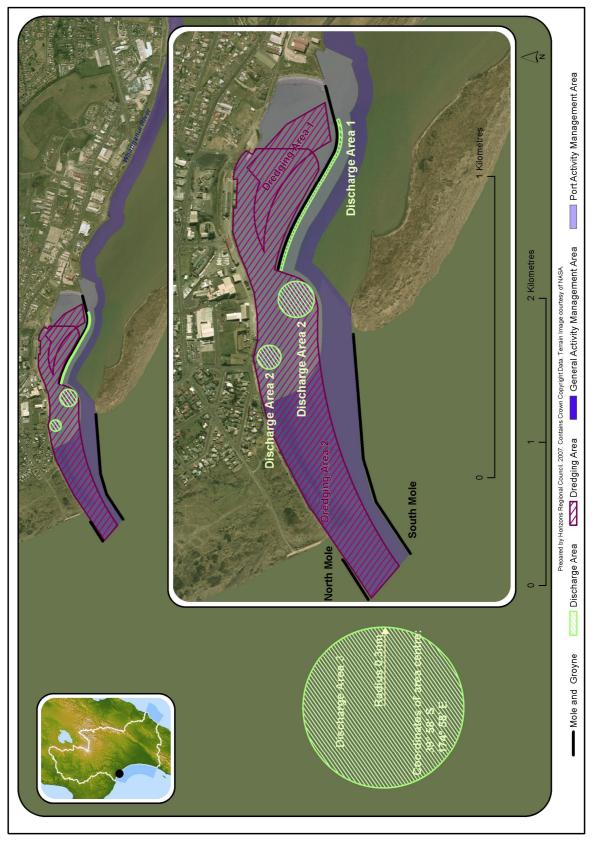


Figure H:10A Port Activity Management Area



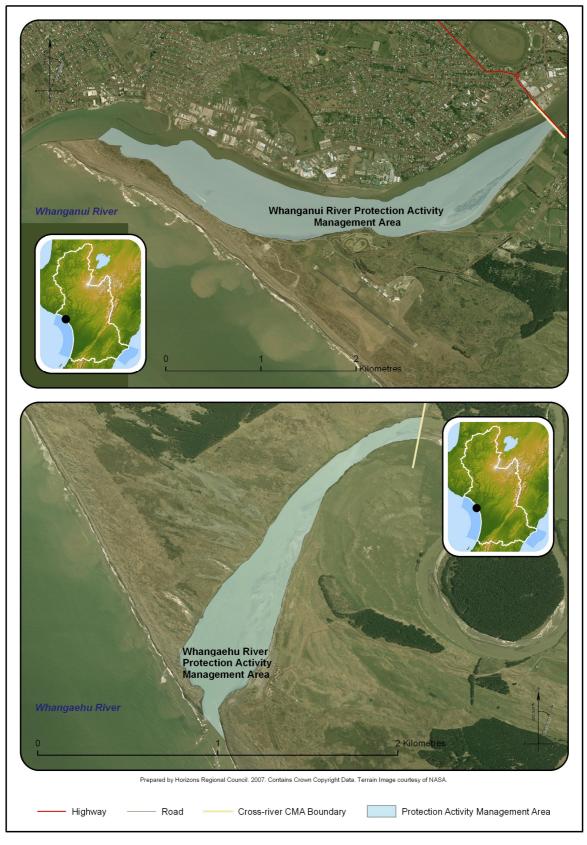


Figure H:11A Protection Activity Management Areas

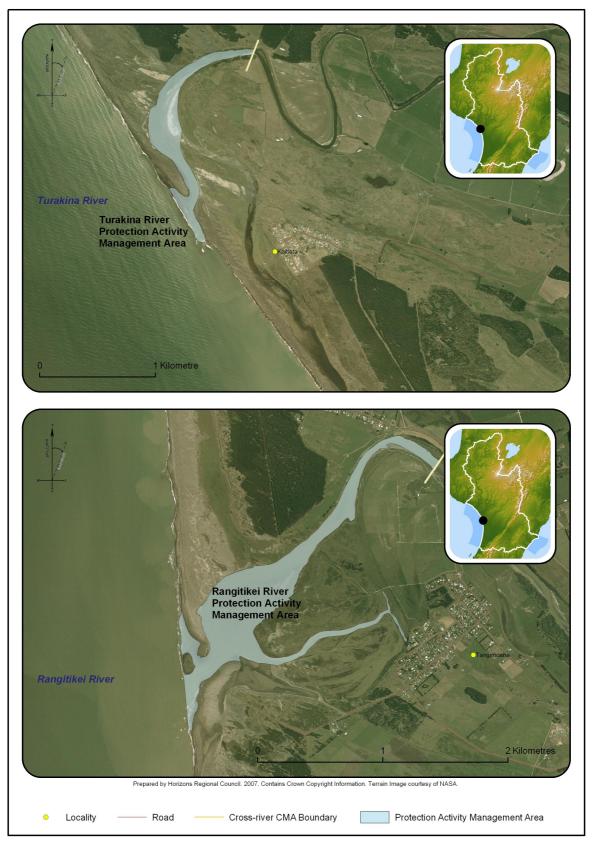


Figure H:12A Protection Activity Management Areas



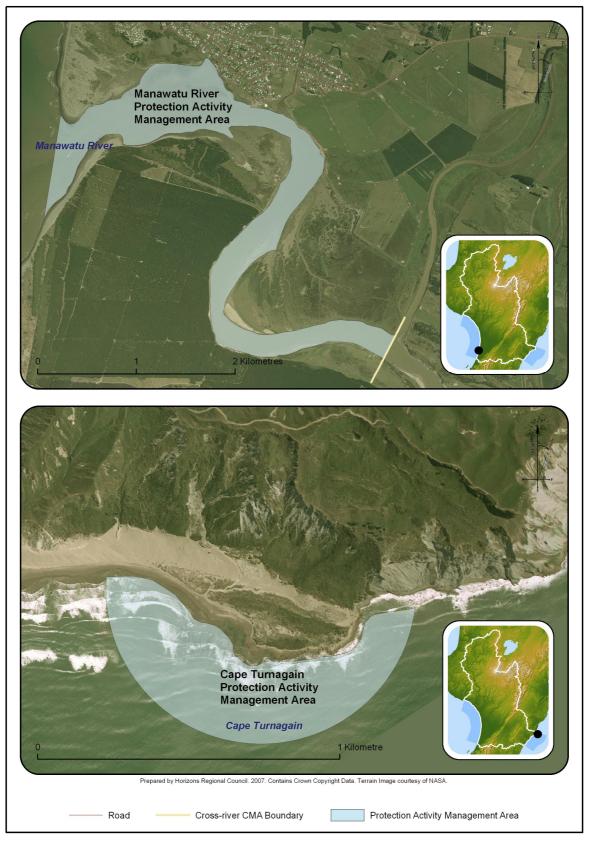


Figure H:13A Protection Activity Management Areas

Part C: Water Quality Management.

Water Management Zones* and Sub-zones*, Values, Management Objectives and Water^ Quality Targets

For *water*[^] quality management purposes, the CMA is divided into:

- (a) one Seawater Management Zone* which comprises the entire CMA other than the Estuary Water Management Sub-zones*
- (b) 13 Estuary *Water Management Sub-zones** associated with specified estuary *waters*^ as shown on Figures H:3A to H:9A. The term *Sub-zone** is used because the estuary *waters*^ are part of a larger *Water Management Zone** for each *river*^ (see Schedule AA).

List of Tables relating to the Seawater Management Zone* and Estuary Sub-zones*:

Table Number	Description
Table H.2	Seawater Management Zone* and Estuary Water Management Sub-zones*: Values and Management Objectives
Table H.3	Seawater Management Zone* and Estuary Water Management Sub-zones*: Where the Values apply
Table H.4	Estuary Water Management Sub-zones*: Water^ Quality Definitions
Table H.5	Estuary Water Management Sub-zones*: Water^ Quality Targets
Table H.6	Seawater Management Zone*: Water^ Quality Definitions
Table H.7	Seawater Management Zone*: Water^ Quality Targets

Table H.2: Seawater Management Zone* and Estuary Water Management Sub-zones*: Values and Management Objectives

The following Values and Management Objectives apply in the Seawater Management Zone* and Estuary Water Management Sub-zones* listed in Table H.3.

Value group	Values		Management Objective								
	LSC	Life-supporting Capacity	The CMA supports healthy aquatic life / ecosystems								
	SOS-A	Sites of Significance - Aquatic	Sites of significance for indigenous aquatic biodiversity within the CMA are maintained or enhanced								
Ecosystem Values	SOS-R	Sites of Significance - Riparian	Sites of significance for indigenous riparian biodiversity within the CMA are maintained or enhanced								
	IS	Inanga Spawning	The CMA sustains healthy inanga spawning and egg development								
	WM	Whitebait* Migration	The CMA is maintained or enhanced to provide safe passage of inwardly migrating juvenile native fish known collectively as <i>whitebait</i> *								
	CR	Contact Recreation	The CMA is suitable for contact recreation								
Recreational and	Am	Amenity	The amenity values of the CMA are maintained or enhanced								
Cultural Values	Mau	Mauri*	The mauri* of the CMA is maintained or enhanced								
	SG	Shellfish Gathering	The CMA is suitable for shellfish harvesting								
	SOS-C	Sites of Significance - Cultural	Sites of significance for cultural values are maintained								
Water^ Use	IA	Industrial Abstraction	The CMA is suitable as a <i>water</i> [^] source for industrial abstraction or use								
Social and Economic	CAP	Capacity to Assimilate Pollution	The capacity of the CMA to assimilate pollution is not exceeded								
Values	EI	Existing Infrastructure [^]	The integrity of existing infrastructure [^] is not compromised								

Table H.3: Seawater Management Zone* and Estuary Water Management Sub-zones*: Where the Values apply

Legend:

Table Headings: LSC: Life-supporting Capacity; SOS-A: Sites of Significance - Aquatic; SOS-R: Sites of Significance - Riparian; IS: Inanga Spawning; WM: Whitebait* Migration; CR: Contact Recreation; Am: Amenity; Mau: Mauri*; SG: Shellfish Gathering; SOS-C: Sites of Significance - Cultural; IA: Industrial Abstraction; CAP: Capacity to Assimilate Pollution; EI: Existing Infrastructure^

Key for LSC Classes: **M**: Marine; **LM**: Lowland Mixed; **HSS**: Hill Soft Sedimentary; **HM**: Hill Mixed; **LS**: Lowland Sand The LSC Classes are listed as the geology of the catchment influences *water*^A quality and life-supporting capacity

Water Management	Estuary Water	Zone-wide Values												
Zone*	Management Sub-zone*	LSC	SOS-A	SOS-R	IS	WM	CR	Am	Mau	SG	SOS-C	IA	CAP	El
Seawater Management Zone* (entire CMA excluding Estuary Water Management Sub-zones*)	N/A	М			~	~	~	~	~	~		~	~	~
Coastal Manawatu (Mana_13)	Manawatu Estuary (Mana_13CMA) See Figure H:6A	LM		√ 1, 2	~	~	~	~	~		√ 4	~	~	~
Coastal Rangitikei (Rang_4)	Rangitikei Estuary (Rang_4CMA) See Figure H:5A	LM		√1	~	~	~	~	~			~	~	\checkmark
Lower Whanganui (Whai_7)	Whanganui Estuary (Whai_7CMA) See Figure H:4A	LM		√ 1, 2	~	~	~	~	~			~	~	~
Coastal Whangaehu (Whau_4)	Whangaehu Estuary (Whau_4CMA) See Figure H:4A	HSS		√ 1, 2	~	~	~	~	~			\checkmark	~	~
Turakina (Tura_1)	Turakina Estuary (Tura_1CMA) See Figure H:5A	HSS		√ 1, 2	~	~	~	~	~			\checkmark	~	~

1 Gravel and sand (dotterel)

2 Mud / silt habitat and estuarine roosts (waders)

3 Shortjaw kokopu and redfin bully

4 Density of cultural and historical sites* of significance including wāhi tapu* and taonga*. Details of the particular location of these sites* are available from Rangitaane o Manawatu.

Water Management	Estuary Water	Zone-wide Values												
Zone*	Management Sub-zone*	LSC	SOS-A	SOS-R	IS	WM	CR	Am	Mau	SG	SOS-C	IA	CAP	El
Ohau (Ohau_1)	Ohau Estuary (Ohau_1CMA) See Figure H:7A	HM		√ 1, 2	✓	~	~	~	~			~	~	~
Lake Horowhenua (Hoki_1)	Hokio Estuary (Hoki_1CMA) See Figure H:6A	LS			~	~	~	~	~			~	~	~
Owahanga (Owha_1)	Owahanga Estuary (Owha_1CMA) See Figure H:8A	HSS					~	~	~			~	~	~
East Coast (East_1)	Wainui Estuary (East_1CMA) See Figure H:9A	HSS		√ 2			~	~	~			~	~	~
Akitio (Akit_1)	Akitio Estuary (Akit_1CMA) See Figure H:8A	HSS			\checkmark	~	~	~	~			~	~	~
Kai lwi (West_2)	Kai lwi Estuary (West_2CMA) See Figure H:3A	HSS			✓	~	~	~	~			~	~	~
Mowhanau (West_3)	Mowhanau Estuary (West_3CMA) See Figure H:3A	LM			✓	~	~	~	~			~	~	~
Waikawa (West_9)	Waikawa Estuary (West_9CMA) See Figure H:7A	НМ	√3	√ 1, 2		~	~	~	~			~	~	~

Gravel and sand (dotterel)
 Mud / silt habitat and estuarine roosts (waders)
 Shortjaw kokopu and redfin bully

Table H.4: Estuary Water Management Sub-zones*: Water^ Quality Definitions

The *water*[^] quality targets for the Estuary *Water Management Sub-Zones*^{*}, as defined in **Table H.5**, must read as follows (the numerical values in Table H.5 are indicated by [...])

Abbreviations used in T Header	able H.5 Sub-header	Full wording of the target
Temp (°C)	<	The temperature of the <i>water</i> ^A must not exceed [] degrees Celsius.
DO (%SAT)	>	The concentration of dissolved oxygen must exceed [] % of saturation.
Algal biomass Chl a (mg/m ³)	<	The annual average algal biomass must not exceed [] milligrams of chlorophyll a per cubic metre.
Macro-algae (% cover)	<	The maximum cover of visible shore surface by macro-algae must not exceed []%.
DRP (g/m ³)	<	The annual average concentration of dissolved reactive phosphorus (DRP) when the <i>river</i> ^A flow is at or below the 20 th flow exceedance percentile* must not exceed [] grams per cubic metre.
SIN (g/m³)	<	The annual average concentration of soluble inorganic nitrogen (SIN) ¹ when the <i>river</i> [^] flow is at or below the 20 th flow exceedance percentile [*] must not exceed [] grams per cubic metre.
Ammoniacal nitrogen ² (g/m ³)	<	The average concentration of ammoniacal nitrogen must not exceed [] grams per cubic metre.
Tox.	%	For toxicants not otherwise defined in these targets, the concentration of toxicants in the <i>water</i> ^A must not exceed the trigger values for coastal waters defined in the 2000 ANZECC guidelines Table 3.4.1 as the level of protection for [] % of species. For metals the trigger value must be adjusted for hardness and apply to the dissolved fraction as directed in the table.
<i>E.coli /</i> 100 ml	< 50 th %ile	The concentration of Escherichia coli must not exceed [] per 100 millilitres 1 November - 30 April (inclusive) when the river^ flow is at or below the 50 th flow exceedance percentile*.
	< 20 th %ile	The concentration of Escherichia coli must not exceed [] per 100 millilitres year round when the river^ flow is at or below the 20th flow exceedance percentile*.
Euphotic depth	%Δ	The euphotic depth must not be reduced by more than []%.
	%Δ	The visual clarity of the water ^A measured as the horizontal sighting range of a black disc must not be reduced by more than [] %.
Visual clarity (m)	>	The visual clarity of the water ^A measured as the horizontal sighting range of a black disc must equal or exceed [] metres when the river ^A is at or below the 50 th flow exceedance percentile [*] .

¹ Soluble Inorganic Nitrogen (SIN) concentration is measured as the sum of nitrate nitrogen, nitrite nitrogen and ammoniacal nitrogen or the sum of total oxidised nitrogen and ammoniacal nitrogen

² Ammoniacal nitrogen is a component of SIN. SIN standards should also be considered when assessing ammoniacal nitrogen concentrations against the standards

Table H.5: Estuary Water Management Sub-zones*: Water^ Quality Targets

The following water^ quality targets apply to the Estuary Water Management Sub-zones*

Water Management Zone*	Estuary Sub-zone*	Temp (°C)	DO (%SAT)	Algal Biomass	Macro- algae	DRP (g/m³)	SIN (g/m³)	Ammoniacal Nitrogen (g/m³)	Tox.	E.coli / 1	00 ml	Euphotic Depth	Visual Clarity (m)	Visual Clarity (m)	
Zone		<	>	Chl a (mg/m ³)	% cover	<	<	<	%	<50 th <20 th %ile %ile		%Δ	>	%Δ	
Coastal Manawatu (Mana_13)	Manawatu Estuary (Mana_13CMA)	24	70	4	5	0.015	0.444	0.400	95	260	550	10	1.2	20	
Coastal Rangitikei (Rang_4)	Rangitikei Estuary (Rang_4CMA)	24	70	4	5	0.015	0.167	0.400	95	260	550	10	1.2	20	
Lower Whanganui (Whai_7)	Whanganui Estuary (Whai_7CMA)	24	70	4	5	0.015	0.167	0.400	95	260	550	10	1.2	20	
Coastal Whangaehu (Whau_4)	Whangaehu Estuary (Whau_4CMA)	22	70	4	5	0.015	0.167	0.400	95	260	550	10	1.2	20	
Turakina (Tura_1)	Turakina Estuary (Tura_1CMA)	22	70	4	5	0.015	0.167	0.400	95	260	550	10	1.2	20	
Ohau (Ohau_1)	Ohau Estuary (Ohau_1CMA)	22	70	4	5	0.010	0.110	0.400	95	260	550	10	1.2	20	
Lake Horowhenua (Hoki_1)	Hokio Estuary (Hoki_1CMA)	24	70	4	5	0.015	0.167	0.400	95	260	550	10	1.2	20	
Owahanga (Owha_1)	Owahanga Estuary (Owha_1CMA)	22	70	4	5	0.015	0.167	0.400	95	260	550	10	1.2	20	
East Coast (East_1)	Wainui Estuary (East_1CMA)	22	70	4	5	0.015	0.167	0.400	95	260	550	10	1.2	20	
Akitio (Akit_1)	Akitio Estuary (Akit_1CMA)	22	70	4	5	0.015	0.167	0.400	95	260	550	10	1.2	20	
Kai lwi (West_2)	Kai lwi Estuary (West_2CMA)	22	70	4	5	0.015	0.167	0.400	95	260	550	10	1.2	20	
Mowhanau (West_3)	Mowhanau Estuary (West_3CMA)	24	70	4	5	0.015	0.167	0.400	95	260	550	10	1.2	20	
Waikawa (West_9)	Waikawa Estuary (West_9CMA)	22	70	4	5	0.010	0.167	0.400	95	260	550	10	1.2	20	

Table H.6: Seawater Management Zone*: Water^ Quality Definitions

The water^A quality targets for the Seawater Management Zone*, as defined in Table H.7, must read as follows (the numerical values in Table H.7 are indicated by [...])

Abbreviations u Header	sed in Table H.7 Sub-header	Full wording of the target
DO (%SAT)	>	The concentration of dissolved oxygen must exceed [] % of saturation.
Algal biomass Chl a (mg/m ³)	<	The annual average algal biomass must not exceed [] milligrams of chlorophyll <i>a</i> per cubic metre.
TP (g/m ³)	<	The annual average concentration of total phosphorus must not exceed [] grams per cubic metre.
TN (g/m ³)	<	The annual average concentration of total nitrogen must not exceed [] grams per cubic metre.
Ammoniacal nitrogen (g/m ³)	<	The average concentration of ammoniacal nitrogen must not exceed [] grams per cubic metre.
Tox.	%	For toxicants not otherwise defined in these targets, the concentration of toxicants in the <i>water</i> ^A must not exceed the trigger values for coastal waters defined in the 2000 ANZECC guidelines Table 3.4.1 for the level of protection of [] % of species. For metals the trigger value must be adjusted for hardness and apply to the dissolved fraction as directed in the table.
	%Δ	The visual clarity of the water ^A measured as the horizontal sighting range of a black disc must not be reduced by more than [] %.
Visual clarity (m)	>	The visual clarity of the water ^A measured as the horizontal sighting range of a black disc must equal or exceed [] metres.
Estancesi	1 November - 30 April (inclusive)	The concentration of enterococci must not exceed [] per 100 millilitres 1 November - 30 April (inclusive).
Enterococci	1 May - 31 October (inclusive)	The concentration of enterococci must not exceed [] per 100 millilitres 1 May - 31 October (inclusive).
Faecal coliforms	<	The median concentration of faecal coliforms must not exceed [] per 100 millilitres.
Faecal comonns	90 th %ile	The 90 th percentile concentration of faecal coliforms must not exceed [] per 100 millilitres.

Table H.7: Seawater Management Zone*: Water^ Quality Targets

The following water^ quality targets apply to the Seawater Management Zone*

Management Zone	DO (%SAT)	Algal Biomass	TP (g/m³)	TN (g/m³)	Ammoniacal Nitrogen (g/m³)	Tox.	Visual Clarity (m)		Clarity		Enterococci		Faecal C	coliforms
	>	Chl a (mg/m ³)	<	<	<	(%)	>	%Δ	1 Nov - 30 April	1 May - 31 Oct	<	90 th %ile		
Seawater Management Zone*	90	3	0.010	0.060	0.060	99	1.6	20	140	280	14	43		

Schedule H