

Appendix 1: Rivers and lakes with values requiring protection

Table 15: Rivers and lakes with significant amenity and recreational values (relates to policies 19, 43 and 53)

River or lake	Recreational uses
Lake Waitawa (Forest Lakes)	kayaking, windsurfing, sailing
Ōtaki River	fishing, swimming, kayaking, canoeing, tubing, rafting, picnicking, camping
Waikanae River	fishing, swimming, camping
Kaiwharawhara Stream	picnicking, walking, running
Korokoro Stream	walking, running, mountain biking
Hutt River	fishing, swimming, kayaking, canoeing, tubing, rafting, power boating, radio controlled boats, jet skis, picnicking, walking, running, mountain biking
Pakuratahi River	fishing, swimming, picnicking
Akatarawa River	fishing, swimming, kayaking, bird watching, picnicking, walking, running, mountain biking, trail biking, horse riding, 4-wheel driving
Upper Gollan's Stream (including Butterfly Creek)	picnicking, tramping walking, running, bird watching
Wainuiomata River	fishing, swimming, canoeing, kayaking, walking, horse riding
Orongorongo River	fishing, tramping
Kohangapiripiri and Kohangatera Lakes	bird watching, picnicking, walking, mountain biking
Ruamāhanga River	fishing, swimming, kayaking, canoeing, tubing, rafting, power boating, jet skiing, picnicking, walking, duck shooting
Tauherenikau River	fishing, swimming, walking, picnicking, rafting
Waingawa River	fishing, swimming, kayaking, tubing, rafting, walking
Waiohine River	fishing, swimming, kayaking, canoeing, tubing, rafting, camping
Kopuaranga River	fishing
Waipoua River	fishing, swimming, running, trail biking
Henley Lake, Masterton	kayaking, dragon boating, radio controlled boats, picnicking, running, biking
Lake Wairarapa	fishing, kayaking, canoeing, boating, duck shooting, bird watching, walking, photography

Notes to Table 15

Rivers and lakes in the table are listed in the order of the location of their outflows to the coast going anti clock wise around the region from Lake Waitawa in the north west of the region.

The rivers and lakes included in Table 15 were identified in the Regional Freshwater Plan, and from a survey of recreational groups in the Wellington region carried out in November 2007.

The following threshold applies to rivers and lakes that are significant for their recreational use:

- is regarded as especially valuable by two or more recreational groups because of the quality of the opportunity and experience it affords;
- is used for two or more recreational activities by people from throughout the region or beyond; or
- is used by anglers on 100 or more days per year.

Table 16: Rivers and lakes with significant indigenous ecosystems (relates to policies 19 and 43)

River or lake	Criteria that identify rivers and lakes with significant indigenous ecosystems			
	High macroinvertebrate community health	Habitat for threatened indigenous fish species	Habitat for six or more migratory indigenous fish species	Inanga spawning habitat
All rivers on Kāpiti Island	all rivers			
Waitohu Stream		Stream and all tributaries	Stream and all tributaries	Reach of tidal influence
Ōtaki River	River and all tributaries	River and all tributaries	River and all tributaries	Reach of tidal influence
Mangaone Stream		Stream and all tributaries	Stream and all tributaries	Reach of tidal influence
Waimeha Stream		Stream and all tributaries	Stream and all tributaries	Reach of tidal influence
Waikanae River	River and tributaries above, and including, the Ngatiawa River	River and all tributaries	River and all tributaries	Reach of tidal influence
Wharemauku Stream		Stream and all tributaries	Stream and all tributaries	
Whareroa Stream		Stream and all tributaries	Stream and all tributaries	Reach of tidal influence
Wainui Stream		Stream and all tributaries	Stream and all tributaries	
Taupō Stream		Stream and all tributaries	Stream and all tributaries	Reach of tidal influence
Kākaho Stream			Stream and all tributaries	Reach of tidal influence
Horokiri Stream		Stream and all tributaries	Stream and all tributaries	Reach of tidal influence
Little Waitangi Stream		Stream and all tributaries	Stream and all tributaries	
Pauatahunui Stream		Stream and all tributaries	Stream and all tributaries	Reach of tidal influence
Duck Creek		Stream and all tributaries	Stream and all tributaries	Reach of tidal influence
Porirua Stream		Stream and all tributaries	Stream and all tributaries	Reach of tidal influence
Makara Stream		Stream and all tributaries	Stream and all tributaries	Reach of tidal influence

River or lake	Criteria that identify rivers and lakes with significant indigenous ecosystems			
	High macroinvertebrate community health	Habitat for threatened indigenous fish species	Habitat for six or more migratory indigenous fish species	Inanga spawning habitat
Oteranga Stream			Stream and all tributaries	
Karori Stream		Stream and all tributaries	Stream and all tributaries	
Ōwhiro Bay Stream		Stream and all tributaries	Stream and all tributaries	Reach of tidal influence
Kaiwharawhara Stream		Stream and all tributaries	Stream and all tributaries	
Korokoro Stream		Stream and all tributaries	Stream and all tributaries	
Hutt River	River and all tributaries above the Akatarawa River	Hutt River	Hutt River	Reach of tidal influence
Speedy's Stream		Stream and all tributaries	Stream and all tributaries	
Moonshine Stream		Stream and all tributaries		
Whakatikei River	River and all tributaries above the Wainui Stream			
Akatarawa River	River and all tributaries	River and all tributaries	River and all tributaries	
Pakuratahi River	River and all tributaries	River and all tributaries		
Stokes Valley Stream		Stream and all tributaries		
Days Bay Stream	Stream and all tributaries	Stream and all tributaries		
Lake Kohangapiripiri and Cameron Creek		Lake Kohangapiripiri and tributaries		
Lake Kohangatera and Gollans Stream		Lake Kohangatera, Gollans Stream and all tributaries	Lake Kohangatera, Gollans Stream and all tributaries	
Wainuiomata River	River and all tributaries excluding Black Creek	River and all tributaries excluding Black Creek	River and all tributaries excluding Black Creek	Reach of tidal influence
Orongorongo River	River and all tributaries	River and all tributaries	River and all tributaries	
Mukamukaiti Stream	Stream and all tributaries	Stream and all tributaries		
Wharepapa River	River and all tributaries	River and all tributaries		

River or lake	Criteria that identify rivers and lakes with significant indigenous ecosystems			
	High macroinvertebrate community health	Habitat for threatened indigenous fish species	Habitat for six or more migratory indigenous fish species	Inanga spawning habitat
Pounui Stream and Lake Pounui		Stream and all tributaries, including Lake Pounui	Stream and all tributaries, including Lake Pounui	
Battery Stream	Stream and all tributaries			
Lake Wairarapa		Lake Wairarapa	Lake Wairarapa	
Wairongomai River	River and all tributaries			
Burlings Stream	Stream and all tributaries		Stream and all tributaries	
Unnamed tributaries of Lake Wairarapa between easting 2692884, northing 5996151 and easting 2694063, northing 5996975	All rivers			
Brocketts Stream	Stream and all tributaries		Stream and all tributaries	
Cross Creek	Creek and all tributaries			
Prince Stream	Stream and all tributaries			
Abbots Creek	Creek and all tributaries	Creek and all tributaries		
Tauherenikau River	River and all tributaries		River and all tributaries	
Ruamāhanga River	River and all tributaries above, but not including, the Kopuaranga River	Ruamāhanga River	Ruamāhanga River	Reach of tidal influence
Waiohine River up to, and including, the Mangatarere Stream		River and all tributaries	River and all tributaries	
Waiohine River above, but not including, the Mangatarere Stream	River and all tributaries	River and all tributaries		
Waingawa River	River and tributaries above, and including, the Atiwhakatu Stream			
Waipoua River		River and all tributaries		

River or lake	Criteria that identify rivers and lakes with significant indigenous ecosystems			
	High macroinvertebrate community health	Habitat for threatened indigenous fish species	Habitat for six or more migratory indigenous fish species	Inanga spawning habitat
Ruakokopatuna River		River and all tributaries		
Waihora Stream	Stream and all tributaries	Stream and all tributaries		
Unnamed river on the true left bank of the Ruamāhanga River at easting 2704500 and northing 5988700		River and all tributaries		
Whangaehu River		River and all tributaries		
Tauanui Stream		Stream and all tributaries	Stream and all tributaries	
Turanganui River	River and all tributaries	River and all tributaries	River and all tributaries	
Putangirua Stream	Stream and all tributaries		Stream and all tributaries	
Makatukutuku Stream	Stream and all tributaries	Stream and all tributaries		
Pararaki Stream	Stream and all tributaries	Stream and all tributaries		
Otakaha Stream	Stream and all tributaries	Stream and all tributaries		
Mangatoetoe Stream	Stream and all tributaries			
Waitetuna Stream	Stream and all tributaries	Stream and all tributaries		
Whawanui River	River and all tributaries	River and all tributaries	River and all tributaries	
Opuawe River	River and all tributaries	River and all tributaries		
Awhea River	Unnamed tributaries on true left bank between easting 2720541, northing 5974877, and easting 2720409, northing 5967840;		River and all tributaries	
Oterei River	River and all tributaries	River and all tributaries	River and all tributaries	Reach of tidal influence
Rivers flowing to the coast between the Huariki Stream and the Rerewhakaaitu River	all rivers			
Unnamed river draining to the coast at easting 2736771, northing 5974877 (Devils creek)	all rivers			

River or lake	Criteria that identify rivers and lakes with significant indigenous ecosystems			
	High macroinvertebrate community health	Habitat for threatened indigenous fish species	Habitat for six or more migratory indigenous fish species	Inanga spawning habitat
Pahaoa River				Reach of tidal influence
	Unnamed tributary on the true left bank at easting 2742200 and northing 5992169			
	Unnamed tributary on the true left bank at northing 2739983 and easting 5991469			
	Tributaries on the true left bank between easting 2732790 and northing 5984194 and the coast.			
	Tributaries on the true right bank between easting 2733640 and northing 5981454 and the coast.			
Waiuru Stream	Stream and all tributaries			
Waiingaia Stream	Stream and all tributaries			
Huatokitoki Stream	Stream and all tributaries			
Kaimokopuna Stream	Stream and all tributaries			
Motuwaireka Stream			Stream and all tributaries	Reach of tidal influence
Whareama River		River and all tributaries		Reach of tidal influence
Castlepoint Stream			Stream and all tributaries	
Whakatiki River			River and all tributaries	Reach of tidal influence
Okau Stream	Stream and all tributaries			

River or lake	Criteria that identify rivers and lakes with significant indigenous ecosystems			
	High macroinvertebrate community health	Habitat for threatened indigenous fish species	Habitat for six or more migratory indigenous fish species	Inanga spawning habitat
Unnamed rivers draining to the coast between easting 2784666, northing 6038022 and easting 2784952, northing 6039543.	All rivers			
Mataikona River	Rivers on the true left bank between the Pakowhai River and easting 2785345 and northing 6046718, rivers on the true right bank of the between easting 2784611 and northing 6046207 and the coast		River and all tributaries	Reach of tidal influence

Notes to Table 16

Rivers and lakes in the table are listed in the order of the location of their outflows to the coast going anti clock wise around the region from the Waitohu Stream in the north west of the region. For streams that are not named on NZMS maps, grid references are given.

Rivers and lakes with significant indigenous ecosystems were selected using indicators of aquatic invertebrate community health, the diversity of indigenous migratory fish species, the presence of nationally threatened fish species and the location of inanga spawning habitat.

Aquatic invertebrate health was assessed using the Macroinvertebrate Community Index and the proportion of pollution sensitive mayfly, caddisfly and stonefly taxa. The relationship between these indices and indigenous vegetation cover in a catchment established the criteria of greater than 70 per cent indigenous vegetation cover in a catchment as having rivers and streams with significant ecosystems.

Rivers and streams in the eastern Wairarapa hill country are physically and biologically distinct from others parts of the region, but have less indigenous vegetation remaining. In order for rivers and streams in this area to be sufficiently represented in the list of rivers and lakes with significant indigenous ecosystems, criteria for indigenous vegetation cover has been lowered to 60 per cent for catchments east of the Ruamāhanga River.

The criterion for indigenous fish diversity is six or more migratory fish species recorded in the New Zealand freshwater fish database in a catchment. The criterion for habitat of threatened native fish species is numbers of shortjaw kokopu (*Galaxias postvectis*), giant kokopu (*Galaxias argenteus*) and dwarf galaxias (*Galaxias divergens*), as recorded in the New Zealand freshwater fish database.

Appendix 2: Regional urban design principles

The region's urban design principles are adapted from the New Zealand Urban Design Protocol and are as follows:

1. Context

Quality urban design sees buildings, places and spaces not as isolated elements but as part of the whole town or city.

In this regard quality urban design:

- (a) takes a long-term view
- (b) recognises and builds on landscape context and character
- (c) results in buildings and places that are adapted to local climatic conditions
- (d) provides for public transport, roading, cycling and walking networks that are integrated with each other and the land uses they serve
- (e) examines each project in relation to its setting and ensures that each development fits in with and enhances its surroundings
- (f) understands the social, cultural and economic context as well as physical elements and relationships
- (g) considers the impact on the health of the population who live and work there
- (h) celebrates cultural identity and recognises the heritage values of a place
- (i) ensures incremental development contributes to an agreed and coherent overall result.

2. Character

Quality urban design reflects and enhances the distinctive character and culture of our urban environment, and recognises that character is dynamic and evolving, not static.

In this regard quality urban design:

- (a) reflects the unique identity of each town, city and neighbourhood and strengthens the positive characteristics that make each place distinctive
- (b) protects and manages our heritage, including buildings, places and landscapes
- (c) protects public open space, and improves the quality, quantity and distribution of local open space over the long term
- (d) protects and enhances distinctive landforms, water bodies and indigenous plants and animals
- (e) creates locally appropriate, and where relevant, inspiring, architecture, spaces and places
- (f) reflects and celebrates our unique New Zealand culture and identity and celebrates our multicultural society.

3. Choice

Quality urban design fosters diversity and offers people choice in the urban form of our towns and cities, and choice in densities, building types, transport options, and activities. Flexible and adaptable design provides for unforeseen uses, and creates resilient and robust towns and cities.

In this regard quality urban design:

- (a) ensures urban environments provide opportunities for all, especially the disadvantaged
- (b) allows people to choose different sustainable lifestyle options, locations, modes of transport, types of buildings and forms of tenure
- (c) encourages a diversity of activities within mixed use developments and neighbourhoods
- (d) supports designs which are flexible and adaptable and which will remain useful over the long term
- (e) ensures public spaces are accessible by everybody, including people with disabilities.

4. Connections

Good connections enhance choice, support social cohesion, make places lively and safe, and facilitate contact among people. Quality urban design recognises how all networks – streets, railways, walking and cycling routes, services, infrastructure, and communication networks – connect and support healthy neighbourhoods, towns and cities. Places with good connections between activities and with careful placement of facilities benefit from reduced travel times and lower environmental impacts. Where physical layouts and activity patterns are easily understood, residents and visitors can navigate around the city easily.

In this regard quality urban design:

- (a) creates safe, attractive and secure pathways and links between centres and landmarks and neighbourhoods
- (b) facilitates green networks that link public and private open space
- (c) places a high priority on walking, cycling and public transport
- (d) anticipates travel demands and provides a sustainable choice of integrated transport modes
- (e) improves accessibility to public services and facilities
- (f) treats streets and other thoroughfares as positive spaces with multiple functions
- (g) provides formal and informal opportunities for social and cultural interaction
- (h) facilitates access to services and efficient movement of goods and people
- (i) provides environments that encourage people to become more physically active.

5. Creativity

Quality urban design encourages creative and innovative approaches. Creativity adds richness and diversity, and turns a functional place into a memorable place. Creativity facilitates new ways of thinking, and willingness to think through problems afresh, to experiment and rewrite rules, to harness new technology, and to visualise new futures. Creative urban design supports a dynamic urban cultural life and fosters strong urban identities.

In this regard quality urban design:

- (a) emphasises innovative and imaginative solutions
- (b) combines processes and design responses that enhance the experience we have of urban environments
- (c) incorporates art and artists in the design process at an early stage to contribute to creative approaches
- (d) values public art that is integrated into a building, space or place

- (e) builds a strong and distinctive local identity
- (f) utilises new technology
- (g) incorporates different cultural perspectives.

6. Custodianship

Quality urban design reduces the environmental impacts of our towns and cities through environmentally sustainable and responsive design solutions. Custodianship recognises the lifetime costs of buildings and infrastructure, and aims to hand on places to the next generation in as good or better condition. Stewardship of our towns includes the concept of kaitiakitanga. It creates enjoyable, safe public spaces, a quality environment that is cared for, and a sense of ownership and responsibility in all residents and visitors.

In this regard quality urban design:

- (a) protects landscapes, ecological systems and cultural heritage values
- (b) manages the use of resources carefully, through environmentally responsive and sustainable design solutions
- (c) manages land wisely
- (d) utilises 'green' technology in the design and construction of buildings and infrastructure
- (e) incorporates renewable energy sources and passive solar gain
- (f) creates buildings, spaces, places and transport networks that are safer, with less crime and fear of crime
- (g) avoids or mitigates the effects of natural and man-made hazards
- (h) considers the ongoing care and maintenance of buildings, spaces, places and networks
- (i) uses design to improve the environmental performance of infrastructure
- (j) considers the impact of design on people's health
- (k) provides a positive contribution to the environmental health of urban streams, the harbours, beaches and their catchments.

7. Collaboration

Towns and cities are designed incrementally as we make decisions on individual projects. Quality urban design requires good communication and coordinated actions from all decision-makers: central government, local government, professionals, transport operators, developers and users. To improve our urban design capability we need integrated training, adequately funded research and shared examples of best practice.

In this regard quality urban design:

- (a) supports a common vision that can be achieved over time
- (b) depends on leadership at many levels
- (c) uses a collaborative approach to design that acknowledges the contributions of many different disciplines and perspectives
- (d) involves communities in meaningful decision-making processes
- (e) acknowledges and celebrates examples of good practice
- (f) recognises the importance of training in urban design and research at national, regional and local levels.

Appendix 3: Definitions

1 in 100 year flood:	This return period ratio refers to the probability of a hazard event occurring in any given year. A 1 in 100 year probability means that a hazard event has a 1 per cent chance of occurring in a 12 month period (i.e. a 1 per cent annual exceedance probability – see below). Note that this means that more than one 100 year event may occur over the course of a century.
Abstraction:	Taking water from a water body.
Aeolian:	A term that relates to the wind, usually in reference to fine materials transported and deposited by the wind (e.g. wind blown sand, silt or loess). Can also be used to refer to the process of erosion by the wind, i.e. aeolian erosion. Aeolian processes commonly occur in dry conditions, in river beds and in coastal environments.
Aggradation:	A term used in geology for the accumulation of sediment in rivers and nearby landforms. Aggradation occurs when sediment supply exceeds the ability of a river to transport the sediment.
Aggregate:	A broad category of coarse particulate material used in construction, which includes sand, gravel, crushed stone, slag and recycled concrete as well as aggregates which have been modified by the addition of products such as cement or lime. Aggregates are a component of composite materials such as concrete and asphalt concrete.
Airshed:	Local air management areas, as gazetted by the Minister for the Environment on 1 September 2005, for air quality management purposes.
Amenity values:	As defined in the Resource Management Act. Those natural or physical qualities and characteristics of an area that contribute to people’s appreciation of its pleasantness, aesthetic coherence, and cultural and recreational attributes.
Annual exceedance probability:	A measure of the likelihood, usually expressed as a percentage, of a natural hazard event exceeding a particular magnitude. A 1 per cent annual exceedance probability event has a 1 per cent (or 1:100) chance of occurring at a location in any given year.
Bed:	As defined in the Resource Management Act. (a) in relation to any river— <ul style="list-style-type: none"> (i) for the purposes of esplanade reserves, esplanade strips, and subdivision, the space of land which the waters of the river cover at its annual fullest flow without overtopping its banks: (ii) in all other cases, the space of land which the waters of the river cover at its fullest flow without overtopping its banks; and (b) in relation to any lake, except a lake controlled by artificial means,— <ul style="list-style-type: none"> (i) For the purposes of esplanade reserves, esplanade strips, and subdivision, the space of land which the waters of the lake cover at its annual highest level without exceeding its margin: (ii) In all other cases, the space of land which the waters of the lake cover at its highest level without exceeding its margin; and (c) in relation to any lake controlled by artificial means, the space of land which the waters of the lake cover at its maximum permitted operating level; and (d) in relation to the sea, the submarine areas covered by the internal waters and the territorial sea.
Biological diversity: (or biodiversity)	As defined in the Resource Management Act. The variability among living organisms, and the ecological complexes of which they are a part, including diversity within species, between species, and of ecosystems.

Coastal environment:	Includes the coastal marine area and the adjacent landward environment, to the extent it has the following characteristics or attributes, (in accordance with policies 5 and 38): <ul style="list-style-type: none"> (a) any area or landform dominated by coastal vegetation or habitat (b) any landform affected by active coastal processes, excluding tsunami (c) any landscapes or features, including coastal escarpments, that contribute to the natural character, visual quality or amenity value of the coast (d) any site, structure, place or area of historic heritage value adjacent to, or connected with, the coastal marine area, which derives its heritage value from a coastal location.
Coastal feature:	A distinctive characteristic or part of the coastal environment that has arisen as a result of coastal processes.
Coastal hazards:	Coastal processes that have the potential to adversely affect human life, property or infrastructure including erosion, sedimentation, storm surge, inundation, tsunami.
Coastal marine area:	As defined in the Resource Management Act. The foreshore, sea bed and coastal water, and the air space above the water: <ul style="list-style-type: none"> (a) of which the seaward boundary is the outer limits of the territorial sea; (b) of which the landward boundary is the line of mean high water springs, except that where that line crosses a river, the landward boundary at that point shall be whichever is the lesser of: <ul style="list-style-type: none"> (i) one kilometre upstream from the mouth of the river; or (ii) the point upstream that is calculated by multiplying the width of the river mouth by five.
Coastal processes:	Dynamic natural, physical and ecological relationships and events, that are characteristically coastal in their occurrence, nature and effects, that act to shape a coastline, its landforms and features – such as, beaches, wave cut platforms – and including processes of: wave formation, breaking and dissipation; swash run-up; nearshore currents; sediment transport, erosion and deposition.
Coastal water:	As defined in the Resource Management Act. Sea water within the outer limits of the territorial sea and includes: <ul style="list-style-type: none"> (a) sea water with a substantial freshwater component; and (b) sea water in estuaries, fiords, inlets, harbours, or embayments.
Compact, well designed and sustainable regional form:	As described in Objective 22, section 3.9, table 9.
Consequences:	The effects on the community of a natural hazard event including injury or loss of life, damage to land, buildings and property, financial costs, and general business and social disruption.
Contact recreation:	Recreational activities that involve contact with water, including swimming and paddling.
Contaminant:	As defined in the Resource Management Act: Includes any substance (including gases, odorous compounds, liquids, solids, and micro-organisms) or energy (excluding noise) or heat, that either by itself or in combination with the same, similar, or other substances, energy, or heat — <ul style="list-style-type: none"> (a) When discharged into water, changes or is likely to change the physical, chemical, or biological condition of water; or (b) When discharged onto or into land or into air, changes or is likely to change the physical, chemical, or biological condition of the land or air onto or into which it is discharged.
Contaminated land:	As defined in the Resource Management Act: Land that has a hazardous substance in or on it that — <ul style="list-style-type: none"> (a) has significant adverse effects on the environment; or (b) is reasonably likely to have significant adverse effects on the environment.

Cultural assessment:	<p>A report prepared to consider and assess the potential impacts of an activity on the cultural values within an area.</p> <p>A cultural assessment may include, but is not limited to, Māori history, Treaty claims and settlements, presence of significant sites, social effects and recommendations for avoiding, remedying and mitigating adverse effects.</p>
DDT:	Dichloro-Diphenyl-Trichloroethane (DDT) is an organochlorine insecticide. It is a neuro-toxin and suspected carcinogen. It accumulates in the body, is highly persistent in the environment and is extremely toxic to aquatic life.
Density:	How compact development is in a given area. For example, the number of people per square kilometre, the variety of land uses or activities (mixed use development) per square kilometre, or square meters of retail space per square kilometre of land area.
District plan:	<p>As defined in the Resource Management Act.</p> <p>An operative plan approved by a territorial authority under Schedule 1; and includes all operative changes to such a plan (whether arising from a review or otherwise).</p>
Ecosystem:	Any system of interacting terrestrial and/or aquatic organisms within their natural and physical environment.
Ecosystem function:	The interactions between organisms and the physical environment, such as in nutrient cycling, soil development and water budgeting.
Ecotoxic contaminants:	Substances that are capable of causing ill health, injury or death to any living organism – such as heavy metals, polycyclic aromatic hydrocarbons, organochlorine pesticides and antifouling compounds.
Efficient allocation:	Includes economic, technical and dynamic efficiency
Environmental weeds:	Plant species outside their natural range that have invasive attributes and can alter ecological processes in indigenous ecosystems and habitats.
Ephemeral stream:	A stream that is not permanently flowing, or flows only during and after rain events.
Esplanade reserves:	<p>As defined in the Resource Management Act.</p> <p>A reserve within the meaning of the Reserves Act 1977 which is either a local purpose reserve within the meaning of section 23 of that Act, if vested in the territorial authority under section 239, or, a reserve vested in the Crown or regional council, under section 237D; and which is vested in the territorial authority, regional council, or the Crown for the purpose or purposes set out in section 229 of the Resource Management Act.</p>
Esplanade strips:	<p>As defined in the Resource Management Act.</p> <p>A strip of land created by the registration of an instrument in accordance with section 232 of the Resource Management Act for a purpose or purposes set out in section 229 Resource Management Act.</p>
Fault:	A fracture in the crust or between two large blocks of rock in which one side of the fracture has moved relative to the other. This movement can be vertical, horizontal or a combination of the two.
Fault rupture:	As stresses build along a fault due to movement either side of the fracture plane, a point is reached when the rocks are unable to accommodate the strain. When the shear strength of the rocks is exceeded, a fault will rupture. If this rupturing occurs rapidly, it results in an earthquake.
Fault trace:	Sometimes referred to as a fault line, is the visible surface expression of a fault that has ruptured the ground surface. Faults do not usually consist of a single, clean fracture and the term fault zone is used when referring to the area of deformation that is associated with the fault plane.
Fine particulate matter (PM ₁₀):	All material that is less than 10 microns in aerodynamic diameter. A micron is one thousandth of a millimetre.
Flushing flows:	High river flows, usually associated with rainfall, which flush out the river system. These can be artificially induced as a mitigation measure in rivers where flows have been lowered by dams or large abstractions.
Frequency:	A measure of the number of occurrences of a natural hazard event per a unit of time (e.g. 100 years).

Fresh water:	As defined in the Resource Management Act. All water except coastal water and geothermal water.
Groundwater:	Water that soaks into or through the ground and occupies pore spaces and cavities beneath the surface. This water can form an aquifer when it collects on an impermeable layer (for example rock, clay) that prevents further downward seepage.
Habitat:	An area with the appropriate combination of resources – such as, food, water, nesting sites, shelter – and environmental conditions – such as, temperature, humidity or shade – for the survival of a species.
Hapū	Sub-tribes of people, providing social and political units based on descent from a common ancestor.
Hard engineering:	Engineering works that use structural materials such as concrete, steel, timber or rock armour to provide a hard, inflexible edge between the land-water interface along rivers, shorelines or lake edges. Typical structures include groynes, seawalls, revetments or bulkheads that are designed to prevent erosion of the land.
Hazardous substances:	As defined in the Resource Management Act. Includes, but is not limited to, any substance defined in section 2 of the Hazardous Substances and New Organisms Act 1996 as a hazardous substance.
High risk:	Refers to events that are likely to cause moderate to high levels of damage to the subdivision or development, including the land on which it is situated. It applies to areas that face a genuine likelihood of experiencing significant damage in a hazard event – such as fault rupture zones, beaches that experience cyclical or long-term erosion, failure prone hill slopes, or areas that are subject to repeated flooding.
Highly productive agricultural land (Class 1 and II land):	Highly protective agricultural land is Class I and II land in the land use capability classes of the New Zealand Land Resources Inventory. The Inventory considers five physical factors most important in land management: rock type, soil type, slope, erosion and vegetation and describes land parcels or map units in these terms. In addition to listing the physical resources of the land, its ability to sustain different land uses is also assessed. This is known as the Land Use Capability and consists of three levels of detail. Land use capability Class I and II lands are described as: Class I – The best land, flat, free draining, well structured fertile soils suitable to sustain intensive horticulture with minimal inputs. Class II – Slight limitations to intensive arable use, e.g. slope and erosion.
Historic heritage:	As defined in the Resource Management Act. Those natural and physical resources that contribute to an understanding and appreciation of New Zealand's history and cultures, deriving from any of the following qualities: <ul style="list-style-type: none"> • archaeological • architectural • cultural • historic • scientific • technological and includes, <ul style="list-style-type: none"> • historic sites, structures, places, and areas • archaeological sites • sites of significance to Māori, including wāhi tapu, and • surroundings associated with the natural and physical resources.
Indigenous:	Originating naturally in a region or area.

Infrastructure:	<p>As defined in the Resource Management Act:</p> <p>Infrastructure includes:</p> <ul style="list-style-type: none"> (a) pipelines that distribute or transmit natural or manufactured gas, petroleum, or geothermal energy; (b) a network for the purpose of telecommunication as defined in section 5 of the Telecommunications Act 2001; (c) a network for the purpose of radiocommunication as defined in section 2(1) of the Radiocommunications Act 1989; (d) facilities for the generation of electricity, lines used or intended to be used to convey electricity, and support structures for lines used or intended to be used to convey electricity, excluding facilities, lines, and support structures if a person: <ul style="list-style-type: none"> (i) uses them in connection with the generation of electricity for the person's use; and (ii) does not use them to generate any electricity for supply to any other person; (e) a water supply distribution system, including a system for irrigation; (f) a drainage or sewerage system; (g) structures for transport on land by cycleways, rail, roads, walkways, or any other means; (h) facilities for the loading or unloading of cargo or passengers transported on land by any means; (i) an airport as defined in section 2 of the Airport Authorities Act 1966; (j) a navigation installation as defined in section 2 of the Civil Aviation Act 1990; (k) facilities for the loading or unloading of cargo or passengers carried by sea, including a port related commercial undertaking as defined in section 2(1) of the Port Companies Act 1988; (l) anything described as a network utility operation in regulations made for the purposes of the definition of "network utility operator" in section 166 of the Resource Management Act.
Intertidal zone:	The area of foreshore between mean low water mark and mean high water mark.
Intrinsic values:	<p>As defined in the Resource Management Act.</p> <p>In relation to ecosystems, means those aspects of ecosystems and their constituent parts which have value in their own right, including:</p> <ul style="list-style-type: none"> (a) their biological and genetic diversity; and (b) the essential characteristics that determine an ecosystem's integrity, form, functioning, and resilience.
Inundation:	The flooding of a land surface by water. This can result from: surface ponding in heavy rain due to impeded drainage; coastal flooding from storm surge or extreme high tides; sea level rise; tsunami; or river flooding due to heavy rain.
Iwi:	Tribes, groups of people linked by common ancestry and with common history.
Iwi authority:	<p>As defined in the Resource Management Act.</p> <p>The authority which represents an iwi and which is recognised by that iwi as having the authority to do so.</p>
Iwi management plan:	A planning document that is recognised by the iwi authority.
Kaitiakitanga:	<p>As defined in the Resource Management Act.</p> <p>The exercise of guardianship by tangata whenua of an area in accordance with tikanga Māori in relation to natural and physical resources. It includes the ethic of stewardship.</p>
Kāwanatanga:	Governance, as exercised by tangata whenua.

Key centres:	<p>Include the regionally significant centres identified in policy 30, as well as other significant local centres that a city or district council consider are integral to the functioning of the region's or a district's form. This includes centres identified for higher density and/or mixed use development in any Council growth and/or development framework or strategy. Examples of growth and/or development framework or strategies in the region are:</p> <ul style="list-style-type: none"> • the Upper Hutt Urban Growth Strategy • Wellington City Northern Growth Management Framework • Porirua Development Framework • Kapiti Coast: Choosing Futures Development Management Strategy and local outcomes statements contained in the Kapiti Coast Long-term Council Community Plan.
Kōiwi:	Human bones.
Lake:	<p>As defined in the Resource Management Act.</p> <p>Means a body of fresh water which is entirely or nearly surrounded by land.</p>
Land:	<p>As defined in the Resource Management Act.</p> <p>Includes land covered by water and the airspace above land; and, in a national environmental standard dealing with a regional council function under section 30 or a regional rule, does not include the bed of a lake or river; and, in a national environmental standard dealing with a territorial authority function under section 31 or a district rule, includes the surface of water in a lake or river.</p>
Landscape:	Landscape is the cumulative expression of natural and cultural elements, patterns and processes in a geographical area.
Local authority:	<p>As defined in the Resource Management Act.</p> <p>Means a regional council or territorial authority.</p>
Low energy receiving environments:	Aquatic environments with little flushing action from tides, river flows, or wave action. For example, protected harbours and bays.
Macroinvertebrate:	Small animals without backbones. Includes worms, molluscs, crustaceans and insect larvae.
Magnitude:	The size of a given natural hazard event. Can include a range of measures including, size of geographic area affected, extent of damage, and the annual exceedance probability of the event.
Mahinga kai:	The customary gathering of food and natural materials and the places where those resources are gathered.
Mahinga mātaītai:	Places to gather seafood.
Mana:	Respect, dignity, influence and/or authority associated with the energies and presences of the natural world, as well as of people. It is an essence, presence or energy and is linked to mauri and so can be lost, diminished or restored, innate, developed or won.
Manaakitanga:	Responsibilities for care of guests (manaaki).
Marae:	Communal meeting places where significant events are held and decisions made. Marae are important cultural institutions and facilities, and provide a base for hapū and iwi gatherings.
Mātaītai:	Area management tool that identifies an area as a place of importance for customary food gathering.
Mauri:	An energy or life force that tangata whenua consider exists in all things in the natural world, including people. Mauri binds and animates all things in the physical world. Without mauri, mana cannot flow into a person or object.
Mean high water springs:	The average of each pair of successive high waters during that period of about 24 hours in each semilunation (approximately every 14 days), when the range of tides is the greatest.
Mineral:	<p>As defined in the Resource Management Act.</p> <p>The same meaning as in section 2(1) of the Crown Minerals Act.</p>

Mixed use development:	A variety of compatible and complementary uses within an area. This can include any combination of residential, commercial, industrial, business, retail, institutional or recreational uses.
Natural features:	Elements or patterns arising as a result of natural processes.
National policy statement:	A statement issued under section 52 of the Resource Management Act.
National Priorities for Biodiversity Protection:	Types of ecosystems identified by central government as priorities for biological protection by local government under the Resource Management Act.
Natural hazard:	As defined in the Resource Management Act. Any atmospheric or earth or water related occurrence (including earthquake, tsunami, erosion, volcanic and geothermal activity, landslip, subsidence, sedimentation, wind, drought, fire, or flooding) the action of which adversely affects or may adversely affect human life, property, or other aspects of the environment.
New Zealand Coastal Policy Statement:	A statement issued under section 57 of the Resource Management Act.
New Zealand Urban Design Protocol:	A voluntary commitment to specific urban design initiatives by signatory organisations, which include central and local government, the property sector, design professionals, professional institutes and other groups. The Protocol aims to make our towns and cities more successful by using quality urban design to help them become: <ul style="list-style-type: none"> • competitive places that thrive economically and facilitate creativity and innovation • liveable places that provide a choice of housing, work and lifestyle options • a healthy environment that sustains people and nature • inclusive places that offer opportunities for all citizens • distinctive places that have a strong identity and sense of place • well-governed places that have a shared vision and sense of direction.
Ngā kai:	Traditional foods
Non-point source discharges:	Diffuse discharges of contaminants to air, water and land often from a range of sources and often not be attributable to an individual site or activity. Pastoral and cropping agriculture, silviculture and development of residential subdivisions (for example, construction of infrastructure, septic tanks) are common activities that generate non-point source discharges.
Pā:	A fortified village.
Papakāinga:	A village, ancestral settlement.
Peri-urban:	Refers to the immediate area around a settlement that is relatively unmodified by urban development and has characteristics associated with a rural landscape, but which may support activities arising from its accessibility or proximity to people – horse grazing, pony clubs, kennels and catteries, golf courses. Such areas typically come under pressure for urban development and encroachment by activities that compete with primary production in an otherwise rural area.
Point source discharge:	A discharge of contaminants where the point of discharge is identified.
Probability:	A statistical measure of the chance of occurrence of a natural hazard event. Often expressed as an Annual Exceedance Probability.
Protected species:	Species protected by the Wildlife Act 1953 and the Marine Mammals Protection Act 1978.
Public open space:	An area of land or water over which the public has right of access and is publicly owned and/or zoned for their recreational, ecological, landscape and/or heritage values.
Open space covenant with Queen Elizabeth the Second National Trust (QEII):	An open space covenant with Queen Elizabeth the Second National Trust (QEII) registered pursuant to section 22 of the Queen Elizabeth the Second National Trust Act 1977 on certificates of title. Open Space Covenants need to be approved by the Trust's Board of Directors, and they are typically fenced from stock and defined by survey prior to registration.

Rāhui:	A temporary restriction or ban.
Raingarden:	A planted depression that is designed to absorb rainwater run-off from water impervious urban areas like roofs, driveways, walkways, and compacted lawn areas.
Rangatiratanga:	Self determination.
Regional Focus Areas:	Regional focus areas are described and identified on pages 38 to 39 of the Wellington Regional Strategy, 2007.
Regional form:	The physical layout or arrangement of our urban and rural communities and how they link together. For example, transport networks (e.g. roads, rail, ports), and the patterns of residential, industrial, commercial and other uses alongside or around these networks, and in relation to the topography and geography of the region (e.g. its ranges and valleys, rivers, lakes and coastline). It includes the physical appearance or urban design, housing choice and density; and the arrangement of open spaces.
Regional plan:	As defined in the Resource Management Act. An operative plan (including a regional coastal plan) approved by a regional council or the Minister of Conservation under Schedule 1; and includes all operative changes to such a plan (whether arising from a review or otherwise).
Regionally significant centres:	The regionally significant centres are the: <ul style="list-style-type: none"> • Central business district in Wellington city; and • The sub-regional centres of: <ul style="list-style-type: none"> - Upper Hutt city centre - Lower Hutt city centre - Porirua city centre - Paraparaumu town centre - Masterton town centre; and • Suburban centres in: <ul style="list-style-type: none"> - Petone - Kilbirnie - Johnsonville
Regionally significant infrastructure:	Regionally significant infrastructure includes: <ul style="list-style-type: none"> • pipelines for the distribution or transmission of natural or manufactured gas or petroleum • strategic telecommunications facilities, as defined in section 5 of the Telecommunications Act 2001 • strategic radio communications facilities, as defined in section 2(1) of the Radio Communications Act 1989 • the national electricity grid, as defined by the Electricity Governance Rules 2003 • facilities for the generation and transmission of electricity where it is supplied to the network, as defined by the Electricity Governance Rules 2003 • the local authority water supply network and water treatment plants • the local authority wastewater and stormwater networks, systems and wastewater treatment plants • the Strategic Transport Network, as defined in the Wellington Regional Land Transport Strategy 2007-2016 • Wellington City bus terminal and Wellington Railway Station terminus • Wellington International Airport • Masterton Hood Aerodrome • Paraparaumu Airport • Commercial Port Areas within Wellington Harbour and adjacent land used in association with the movement of cargo and passengers and including bulk fuel supply infrastructure, and storage tanks for bulk liquids, and associated wharflines.
Renewable energy:	As defined in the Resource Management Act. Energy produced from solar, wind, hydro, geothermal, biomass, tidal wave and ocean current sources.

Residential activity:	The use of a premise for any domestic or related purpose by persons living in the premises alone or in the family and/or non-family groups, whether any person is subject to care, supervision or not. A place of residence is typically where a person sleeps and keeps their personal belongings.
Residual risk:	The risk to a subdivision or development that remains after implementation of risk treatment or hazard mitigation works.
Reverse sensitivity:	Reverse sensitivity means the vulnerability of an existing lawfully established activity to other activities in the vicinity which are sensitive to adverse environmental effects that may be generated by such existing activity, thereby creating the potential for the operation of such existing activity to be constrained.
Revetment:	A structure placed either parallel or perpendicular to a shoreline or riverbank in order to protect property or land from erosion. These are designed to be porous and are commonly built with rocks. This allows water to flow through the cavities, slowing and absorbing the energy from the water flow and allowing finer sediments to deposit in the pore spaces. Rip-rap, gabions, groynes and breakwaters are all types of revetment.
Review to a district or regional plan:	The review of a district or regional plans as set out in accordance with section 79 of the Resource Management Act.
Riffles:	A shallow, fast flowing section of a stream or river where the water velocity exceeds the upstream and downstream water velocity because of the steeper gradient or shallow depth.
Risk	A combination of the probability of a natural hazard and the consequences that would result from an event of a given magnitude. Commonly expressed by the formula: risk = hazard x vulnerability.
Riparian:	Any land that adjoins or directly influences or is influenced by, a water body.
River:	As defined in the Resource Management Act. A continually or intermittently flowing body of fresh water; and includes a stream and modified watercourse; but does not include any artificial watercourse (including an irrigation canal, water supply race, canal for the supply of water for electricity power generation, and farm drainage canal).
Rohe:	Tribal areas for iwi and hapū.
Rural areas (as at March 2009):	Rural areas (as at March 2009) include all areas not defined as the region's urban areas (as at March 2009).
Sedimentation:	The process of sediment deposition by wind or water, particularly in river, lake or coastal/marine environments.
Sensitive activities	Activities which suffer should they experience adverse effects typically associated with some lawful activities. For example, dust or noise from a quarry or port facility, noise in an entertainment precinct, smells from a sewage treatment facility. Activity considered sensitive includes, any residential activity, any early childhood education centre, and any hotel or other accommodation activity. It may also include hospitals, schools and respite care facilities.
Sewage:	The liquid wastes of a community, including toilet wastes and sometimes trade waste, before treatment. Sewage effluent is the liquid residue after treatment, and sewage sludge is the solid residue after treatment.
Significant mineral resources:	Deposits of minerals, the extraction of which is of potential importance in order to meet the current or future mineral needs of the region or nation.
Soft engineering:	Works such as beach nourishment and dune rebuilding that use non-structural materials (e.g. sand, cobbles, native plants) to mimic natural coastal features that can act to mitigate the impacts from natural hazards.
Special amenity landscapes:	Special amenity landscapes are distinctive, widely recognised and highly valued by the community for their contribution to the amenity of the district, city or region.
Storm surge:	A temporary elevation in water at the shoreline caused by a combination of low air pressure, large waves (wave set-up) and strong onshore winds (wind set-up). Storm surge can elevate water levels by over one metre. A storm tide occurs when a storm surge coincides with high tide.

Stormwater:	Water that accumulates as a result of rain, particularly during heavy or prolonged rainfall, and includes runoff from urban areas such as roads and roofs, whether flowing overland or in channels or pipes through a catchment.
Strategic public transport network:	The strategic public transport network is those parts of the region's passenger transport network that provide a high level of service along corridors with high demand for public transport. It connects the region's centres with the central business district in Wellington city. It includes the rail network and key bus corridors within Wellington region.
Subdivision of land:	Set out in section 218 of the Resource Management Act.
Swales:	Inter-dune depressions that occur between dune crests. Also refers to concave hollows that are designed to hold stormwater run-off and allow the water to soak into the ground.
Tangata whenua:	Māori with ancestral claims to a particular area of land and resources. Literally, translated as "people of the land." Iwi are tangata whenua of a particular rohe, while all Māori are tangata whenua of Aotearoa (New Zealand).
Taonga:	Treasures, valued resources, both tangible and intangible.
Taonga raranga:	Valued plants used for weaving, such as kiekie and pīngao.
Tauranga waka:	Canoe landing places.
Threatened species:	All species determined to be classified by the New Zealand Threat Classification System 2008 (or subsequent revisions) as Nationally Critical, Nationally Vulnerable, Nationally Endangered in the 'Threatened' category and all species determined to be classified as Declining, Relict, and Recovering categories of the 'At Risk' category. For biotic groups that have not been revised to conform with the New Zealand Threat Classification System 2008, all species determined to be classified by the New Zealand Threat Classification 2005 as Acutely Threatened and Chronically Threatened categories are included.
Tikanga:	Customary practices and values, typically followed in order to protect mauri and/or mana.
Travel demand management:	Includes a range of mechanisms designed to influence or change travel behaviour – such as road pricing tools and improvements to the efficiency of the existing transport network/s.
Tsunami:	A series of waves generated by the sudden displacement of a water surface. The three main generating mechanisms are submarine fault ruptures, landslides or volcanic activity. Most commonly occur in open ocean, but can also occur in harbours and lakes.
Urban areas (as at February 2009):	The region's urban areas (as at February 2009) include urban, residential, suburban, town centre, commercial, community, business and industrial zones identified in the Wellington city, Porirua city, Lower Hutt city, Upper Hutt city, Kāpiti coast and Wairarapa combined district plans.
Urban design:	Urban design is concerned with the design of the buildings, places, spaces and networks that make up our towns and cities, and the ways people use them. It ranges in scale from a metropolitan region, city or town down to a street, public space or even a single building. Urban design is concerned not just with appearances and built form but with the environmental, economic, social and cultural consequences of design. It is an approach that draws together many different sectors and professions, and it includes both the process of decision-making as well as the outcomes of design. Refer to Appendix 2 to read the urban design principles for the Wellington region.
Urban development:	Urban development is subdivision, use and development that is characterised by its planned reliance on reticulated services (such as water supply and drainage) by its generation of traffic, and would include activities (such as manufacturing), which are usually provided for in urban areas. It also typically has lots sizes of less than 3000 square metres.
Urupā:	Burial sites.
Vulnerability:	The exposure or susceptibility of a development, building, business or community to the effects from a natural hazard event.

Water body:	As defined in the Resource Management Act. Freshwater or geothermal water in a river, lake, stream, pond wetland, or aquifer, or any part thereof, that is not located within the coastal marine area.
Water harvesting:	Taking water from water bodies when the amount of water is plentiful, and storing it outside the water body.
Wāhi tapu:	Places of sacredness and immense importance for tangata whenua. Wāhi tapu areas can be prohibited or forbidden places, or private places, where permission should be sought for access, and protocols followed.
Wāhi tipūna:	Ancestral sites.
Wellington Regional Strategy:	The Wellington Regional Strategy is a sustainable economic growth strategy for the Wellington region developed by Wellington's nine local authorities, in conjunction with central government and the region's business, education, research and voluntary sector interests. It aims to make the Wellington region internationally competitive.
Wetland:	As defined in the Resource Management Act. Permanently or intermittently wet areas, shallow water, and land water margins that support a natural ecosystem of plants and animals that are adapted to wet conditions.
Whānau:	An extended family group.

Appendix 4: References

Bindoff, N.L., J. Willebrand, V. Artale, A. Cazenave, J. Gregory, S. Gulev, K. Hanawa, C. Le Quéré, S. Levitus, Y. Nojiri, C.K. Shum, L.D. Talley and A. Unnikrishnan, (2007) Observations: Oceanic Climate Change and Sea Level. In: Climate Change 2007: The Physical Science Basis. Contribution of Working Group I to the Fourth Assessment Report of the Intergovernmental Panel on Climate Change [Solomon, S., D. Qin, M. Manning, Z. Chen, M. Marquis, K.B. Averyt, M. Tignor and H.L. Miller (eds.)]. Cambridge University Press, Cambridge, United Kingdom and New York, NY, USA.

Carterton District Council (2006) Carterton District Council Long-term Council Community Plan 2006-2016. Carterton

Church, J., White, N., Coleman, R., Lambeck, K. & Mitrovica, J. (2004) Estimates of the regional distribution of sea level rise over the 1950-2000 period. *Journal of Climate*, 17 (13), 2609-2624

Department of Conservation (1994) New Zealand Coastal Policy Statement. Wellington. ISB 0-478-01589-S

Energy Efficiency and Conservation Authority (2006) Renewable Energy Assessment: Greater Wellington Region. Prepared by Sinclair Knight Merz. Auckland

Greater Wellington Regional Council (2001) Inanga Spawning Habitats in the Wellington Region. Wellington. Publication No. WRC/RP-T-01/59

Greater Wellington Regional Council (2003) Inanga spawning habitats in the Wellington Region - Part 2 - Wairarapa. Wellington. Publication No. GW WRC/RP-G-02/65

Greater Wellington Regional Council (2005) Measuring up: the state of the environment report for the Wellington region 2005. Wellington. Publication No. GW/ENV-G-05-278

Greater Wellington Regional Council (2006) Our region – their future: A discussion document on the review of the Regional Policy Statement for the Wellington Region. Wellington. Publication No. GW/RP-G-06/83

Greater Wellington Regional Council (2007) A sustainable region. Detailed information. Amended 2006-16 Ten-Year Plan (incorporating the 2006/7 Annual Plan). Wellington. Publication No. GW/SP-G-07/108

Greater Wellington Regional Council (2007). Wellington Regional Land Transport Strategy 2007-2016. Wellington. Publication No. GW/TSD-G-07/175

Greater Wellington Regional Council (2007). Wellington Regional Strategy: Internationally Competitive Wellington: A Sustainable Economic Growth Strategy for our Region. Prepared by the regions nine local authorities in association with Positively Wellington Business. Wellington. Publication No. GW/SP-G-07/01

Hannah, J. (2004) An updated analysis of long term sea level change in New Zealand. *Geophysical Research Letters*, 31, L03307

Hutt City Council (2006) Hutt City: Your City – Your Say: 2006 – 2017 Community Plan. Lower Hutt

- Holgate, S. & Woodworth, P. (2004) Evidence for enhanced coastal sea level rise during the 1990s. *Geophysical Research Letters*, 31, L07305
- Intergovernmental Panel on Climate Change (IPCC) (2007) *Climate Change 2007: The Physical Science Basis. Summary for Policymakers. Contribution of working group I to the fourth assessment report of the IPCC*, 18pp.
- Kapiti Coast District Council (2006) *Kapiti Coast Choosing Futures Community Plan 2006. Paraparaumu*
- Masterton District Council (2006) *Shaping our Future: Masterton District Long-term Council Community Plan. Masterton*
- Ministry of Economic Development (2007) *New Zealand Energy Strategy to 2050. Powering our future: Towards a sustainable low emissions energy system. Wellington*
- Ministry for the Environment (2005) *New Zealand Urban Design Protocol. Wellington. ME579*
- Ministry for the Environment (2007) *Protecting our Places – Introducing the national priorities for protecting rare and threatened native biodiversity on private land. ME799*
- Ministry for the Environment (2004) *Resource Management (National Environmental Standards relating to certain air pollutants, dioxins, and other toxics) Regulations 2004*
- Ministry for the Environment (2007) *Resource Management (National Environmental Standards for Sources of Human Drinking Water) Regulations 2007*
- Ministry for the Environment (2008) *Resource Management (National Environmental Standards for Telecommunication Facilities) Regulations 2008*
- Ministry for the Environment (2008) *National Policy Statement on Electricity Transmission*
- New Zealand Government (2007) *New Zealand Energy Efficiency and Conservation Strategy. ISBN 978-0-478-19502-6*
- Porirua City Council (2006) *Long-term Council Community Plan: Porirua City Council 2006 - 2016. Porirua City Council*
- South Wairarapa District Council (2007) *South Wairarapa Council Community Plan 2006 - 2016. Martinborough*
- Upper Hutt City Council (2006) *Long Term Council Community Plan (LTCCP) - upperhuttcity@2016. Upper Hutt*
- Waitangi Tribunal (1983) *Report of the Waitangi Tribunal on the Motunui-Waitara claim (Wai 6). Wellington. ISSN 0113-4124. ISBN 0-908810-03-02*
- Waitangi Tribunal (1984). *Report of the Waitangi Tribunal on the Kaituna River claim. Wellington. ISSN 0113-4124P. ISBN 0-908810-04-0*
- Waitangi Tribunal (1985) *Report of the Waitangi Tribunal on the Manukau claim (Wai 8). Wellington. ISSN 0113-4124. ISBN 0-908810-06-7*

Wellington City Council (2006) Wellington City Council Long-term Council Community Plan 2006/7 – 2016/7. Wellington

Wellington Regional Council (2000) The charter of understanding between Te Tangata Whenua o Te Upoko o te Ika a Maui and Wellington Regional Council. Wellington