

Natural wetland condition factors

There are FIVE wetland condition factors:

Class 1. No channelisation, surface flow evenly distributed. Fenced, well-vegetated.

Class 2. Surface flow evenly distributed. Unfenced. Lightly grazed by sheep. No/minor visible signs of pugging.

Class 3. No major channels. Unfenced. Lightly grazed by sheep or by 'set stocked' cattle in summer. Minor pugging damage.

Class 4. Signs of channelisation. Unfenced. Accessible by cattle. Signs of pugging damage.

Class 5. Highly channelised wetlands even if fenced. Deeply incised. Inflowing water by-passes vegetated, organic soils.

Examples



Location: Toenepi, Waikato

Condition description:

- surface flow evenly distributed
- unfenced
- grazed by cattle
- no evidence of pugging or channelisation

Class: 1

Photographer: Rien van de Weteringh



Location: Toenepi, Waikato

Condition description:

- surface flow evenly distributed
- unfenced
- grazed by cattle
- minor pugging & channelisation

Class: 2

Photographer: Rien van de Weteringh



Location: Glenross Rd, Hastings

Condition description:

- surface flow evenly distributed
- unfenced
- grazed by sheep
- minor pugging

Class: 2

Photographer: Kit Rutherford



Location: Puketapu Rd, Lake Taupo

Condition description:

- surface flow evenly distributed
- unfenced and grazed by cattle
- minor pugging damage

Class: 2

Photographer: Lucy McKergow



Location: Toenepi, Waikato

Condition description:

- no major channels through wetland
- unfenced and grazed
- dense vegetation
- fairly uniform flow distribution

Class: 2

Photographer: Rien van de Weteringh



Location: Toenepi, Waikato

Condition description:

- no major channels
- unfenced and grazed
- light, patchy vegetation
- fairly uniform flow distribution

Class: 3

Photographer: Rien van de Weteringh



Location: Whatawhata, Waikato

Condition description:

- no channelisation
- unfenced and grazed by sheep
- dense grass cover
- fairly uniform flow distribution

Class: 2

Photographer: John Quinn



Location: Whangamata Rd, Lake Taupo

Condition description:

- moderate channelisation (hard to see entering the vegetation)
- unfenced, margins grazed with moderate pugging
- dense vegetation

Class: 4

Photographer: Lucy McKergow



Location: Puketapu Rd, Lake Taupo

Condition description:

- highly channelised in foreground, less channelised upslope
- unfenced and grazed by cattle
- major pugging damage
- fairly uniform flow distribution

Class: 4

Photographer: Lucy McKergow



Location: Totara Park, Manukau City

Condition description:

- moderate channelisation
- unfenced
- grazed by cattle
- severe pugging damage

Class: 4

Photographer: Ron Ovenden



Location: Glenross Rd, Hastings

Condition description:

- moderate channelisation (hard to see without parting the grass)
- fenced and ungrazed
- dense vegetation
- fairly uniform flow distribution

Class: 4

Photographer: Kit Rutherford



Location: Puketapu Rd, Lake Taupo

Condition description:

- incised channel
- unfenced,
- grazed by cattle and sheep
- major pugging & channelisation

Class: 5

Photographer: Fleur Matheson



Location: Whangamata Rd, Lake Taupo

Condition description:

- highly channelised wetland with deeply incised channel
- unfenced, margins grazed with moderate pugging
- dense vegetation

Class: 5

Photographer: Lucy McKergow

Constructed wetland condition factors

There are THREE constructed wetland condition factors:

Class 1. Flow path length to width ratio >5 (2 or more stage wetland, with even elongated channel or serpentine path created using internal bunds), well vegetated with good dispersion and even flow through the majority of wetland and minimal channelisation or dead-zones.

Class 2. Single stage wetland with flow path length to width ratio >3 , well vegetated with even flow through majority of wetland and minimal channelisation or dead-zones).

Class 3. Single wetland with length to width ratio <3 . Still well vegetated, but with some potential for flow channelisation and short-circuiting.

Examples



Location: Toenepi, Waikato

Condition description:

- linear
- two stage (two wetlands in series)

Class: 1

Photographer: Chris Tanner



Location: Titoki, Northland

Condition description:

- linear
- two stage (pond _ wetland in series)

Class: 1

Photographer: Chris Tanner



Location: Kai Iwi, Northland

Condition description:

- long, linear
- well vegetated

Class: 1

Photographer: Chris Tanner



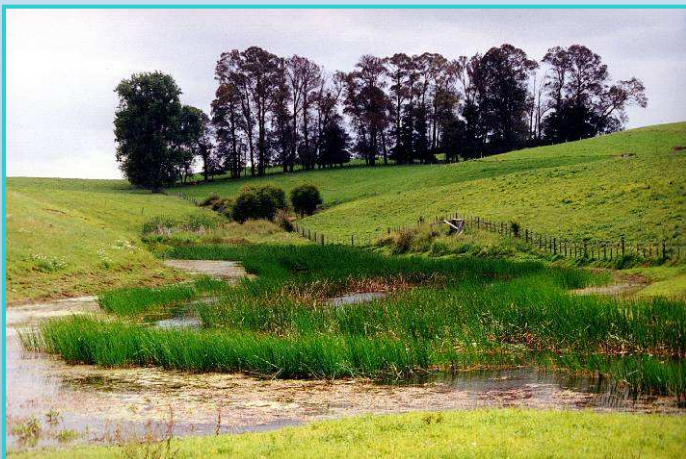
Location: Bog Burn, Southland

Condition description:

- single stage (one wetland)
- well vegetated

Class: 2

Photographer: Chris Tanner



Location: Waikeria, Waikato

Condition description:

- single stage (one wetland)
- dense vegetation

Class: 2

Photographer: Chris Tanner



Location: Hautapu, Waikato

Condition description:

- single stage (one wetland)
- dense vegetation

Class: 2

Photographer: Chris Tanner

Grass filter strip definition



Location: Brett Rd, Rerewhakaaitu

Condition description:

- dense grass barrier with high density of stems 0-5 cm
- filter strip on contour
- no channels visible

Photographer: Graham Timpany

Grass filter strip bypass

During a runoff event, do you observe narrow shallow channels forming in the paddocks? If yes, how much of the runoff is carried by these channels?
 none *bypass fraction* = 0 a bit *bypass fraction* = 0.25 half *bypass fraction* = 0.5 most *bypass fraction* = 0.75 all *bypass fraction* = 1

Examples



Location: Brett Rd, Rerewhakaaitu
Condition description:
 ▪ Highly channelised flow in paddock
Bypass fraction: 0.75

Photographer: Graham Timpany



Location: SH23, Waitetuna
Condition description:
 ▪ half channelised flow in paddock
Bypass fraction: 0.5

Photographer: Lucy McKergow



Location: SH23, Waitetuna
Condition description:
 ▪ a bit of channelised flow in paddock
Bypass fraction: 0.25

Photographer: Lucy McKergow