1. Identification Information

**Data Set Name:** Northland Flood Susceptible Land

**Data Set Abstract:** The layer denotes areas of floodplain, alluvial soil and peat basins that are considered susceptible to flooding.

**Dataset Purpose:** The objective of publishing these indicative data is to alert people to a potential hazard, enabling any decisions on the development or use of the land to be made having due regard to the risks involved.

The data does not attempt to differentiate on the grounds of probability of the land being flooded, that is, the data does not distinguish between land that is likely to flood frequently and land that may only flood on rare occasions. That sort of detail is the subject of ongoing investigation and where the information is available it will be held in the relevant District Council’s Hazards Database.

**Supplemental Information:** Some of the areas so defined are on the floodplains of rivers for which more detailed information is available or will become available over the next five to ten years. This data is held on a Hazards Database and may be inspected at the offices of the Far North District Council or the Northland Regional Council.

**Access Constraints:** Creative Commons Licence Attribution 3.0

**Use Constraints:** Due to the scale of mapping, there will be some land within the areas so defined that may well be free from flooding, just as there will be land outside of the areas defined as flood-susceptible that is subject to flooding.

The data from which these data has been derived has been surveyed and recorded at a scale of 1:50,000. The data should not be enlarged or used at any more detailed scale.

**Data Set Credit:** This dataset was derived by Bob Cathcart, Northland Regional Council from the Fundamental Soils of New Zealand dataset (published by LandCare Research).

**Data Set Originator:** Northland Regional Council

**Publication Date and Edition:** August 2009

**Progress:** Complete

**Update Frequency:** As needed

2. Data Set Contact Details

**Contact Organisation:** Northland Regional Council
3. Data Quality

Source Information:
- Source scale: 1:50,000
- Type of source material: GIS Shapefiles

Data Acquisition Method(s): This dataset was derived by Bob Cathcart, Northland Regional Council from the Fundamental Soils of New Zealand dataset (published by LandCare Research).

4. Attribute Information

Attribute titles, values and descriptions:

Soil types per category

Category 1 - RECENT SOILS

Soils on the banks of rivers and in narrow valleys where floodwaters are moving and where sand and silt have been and continue to be deposited by floodwaters.

<table>
<thead>
<tr>
<th>Soil Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WF</td>
<td>Whakapara silt loam and clay loam</td>
</tr>
<tr>
<td>WFm</td>
<td>Whakapara mottled clay loam</td>
</tr>
<tr>
<td>Wfa</td>
<td>Whakapara sand</td>
</tr>
<tr>
<td>MF</td>
<td>Mangakahia silt loam and clay loam</td>
</tr>
<tr>
<td>MFm</td>
<td>Mangakahia mottled clay loam</td>
</tr>
</tbody>
</table>

Category 2 – ESTUARINE CLAYS (Gleysols)

These are areas on higher terraces that are flooded less frequently, may be on the alluvial fans where streams emerge from adjoining hills, or may include basins where runoff is trapped, causing ponding. Included in this category are smaller basins and lower, frequently flooded areas amongst less frequently flooded higher terraces. (The terrace levels are easily defined on detailed scale data or onsite)

<table>
<thead>
<tr>
<th>Soil Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>KA</td>
<td>Kaitaia clay loam **(1)</td>
</tr>
<tr>
<td>Kay</td>
<td>Kaitaia peaty clay loam</td>
</tr>
<tr>
<td>KP</td>
<td>Kaipara clay and clay loam</td>
</tr>
<tr>
<td>KPy</td>
<td>Kaipara peaty clay loam</td>
</tr>
</tbody>
</table>

Category 3 - SOILS OF THE UNDULATING TERRACES AND LOWLANDS

Soils formed from organic matter laid down in swamps. Included in this category are areas which may be above flood level at the present time, but as the peat dries out and “shrinks” (oxidises), the land settles, increasing the risk of it being flooded.

<table>
<thead>
<tr>
<th>Soil Code</th>
<th>Description</th>
</tr>
</thead>
<tbody>
<tr>
<td>WO</td>
<td>Whareora clay loam **(2)</td>
</tr>
<tr>
<td>WOa</td>
<td>Whareora sand</td>
</tr>
<tr>
<td>KM</td>
<td>Kohumaru clay **(3)</td>
</tr>
<tr>
<td>KO</td>
<td>Kamo clay loam</td>
</tr>
<tr>
<td>KOI</td>
<td>Kamo silt loam</td>
</tr>
</tbody>
</table>
**Category 4 - ORGANIC SOILS (SOILS OF COASTAL SAND DUNE COMPLEXES AND SWAMPY BASINS)**

(Estuarine Flats)

Soils formed from organic matter laid down in swamps. Included in this category are areas which may be above flood level at the present time, but as the peat dries out and “shrinks” (oxidises), the land settles, increasing the risk of it being flooded.

- RK  Ruakaka peaty sandy loam
- RKd  Ruakaka loamy peat
- RKv  Ruakaka peaty silt loam
- RKu  Ruakaka fine sandy peat
- OG  Otonga peaty clay loam
- OGd  Otonga loamy peat
- OR  Otakairangi peaty clay loam
- ORd  Otakairangi loamy peat
- PZ  Parore peaty sandy loam

**Category 5 - SOILS OF THE ESTUARY EDGES AND FORMER LAKE BEDS (GleyPodzols)**

These are flat areas that may be affected by ponding or by high tides

- TCa  Takahiwai sand
- TC  Takahiwai clay
- TCy  Takahiwai peaty clay loam
- TCya  Takahiwai peaty sand
- YUa  Waipu peaty sand
- YUay  Waipu peaty sand
- OE  Ohia sand
- OEy  Ohia peaty sand
- TZ  Tawharanui sand
- TZY  Tawharanui peaty sand
- KK  Kaikino sand
- TEKm  Te Kopuru sand, wet phase

**NOTES:**

1. Kaitaia clay loam on the Awanui River floodplain includes both low-lying land and higher (+2.0 metres) terraces.

2. Whareora clay at various locations is found in association with either Whakapara silt loam and clay loam, where Whareora clay is on the higher terraces and the younger Whakapara soil is on the lower floodplain, or with a gleyed or peaty soil (Waipu) where the latter soil is in a basin trapped behind the higher terrace. The scale at which the maps are published means that the soil types, and therefore the more or less flood susceptible land cannot be differentiated. On the ground, the terrace levels can be identified. (Examples – Oromahoe, floodplain of the Manaia Stream near the intersection of Oromahoe Road and SH10, and Kaingaroa, floodplain and terraces of the Mangatete River, alongside Duncan Road)

3. Kohumaru clay appears as slightly higher terraces on the floodplain of the Awanui River between Papanapua and Kaitaia. At the scale of mapping, both the soils maps and the District Plan, it is not possible to differentiate between the lower terraces, some of the higher terraces that are subject to flooding in a major flood and the even higher terraces that are above flood level. The more detailed survey and modelling work on the Awanui River will define those areas that are subject to flooding and this data will be recorded in the hazards database

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5. **Metadata Reference**

**Metadata date:** 20092608

**Contact Organisation:** NRC
6. Further Metadata Information

Related Information: NZFSL – Landcare Research Ltd