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## 2.0 RESOURCES OF THE SOUTH WAIKATO DISTRICT

### 2.1 Resources

The Resource Management Act 1991 promotes the sustainable management of natural and physical resources. The term "natural and physical resources" has a wide definition in the Act:

*“Natural and physical resources” includes land, water, air, soil, minerals, and energy, all forms of plants and animals (whether native to New Zealand or introduced), and all structures.*

This section of the District Plan identifies the resources of the South Waikato District and highlights the significant resource management issues facing the District. The significant resource management issues are the starting point for the development of the objectives and policies in the District Plan.

### 2.2 Resources of the District

Many of the resources described below can be identified on the following map of the South Waikato District.

#### 2.2.1 Land

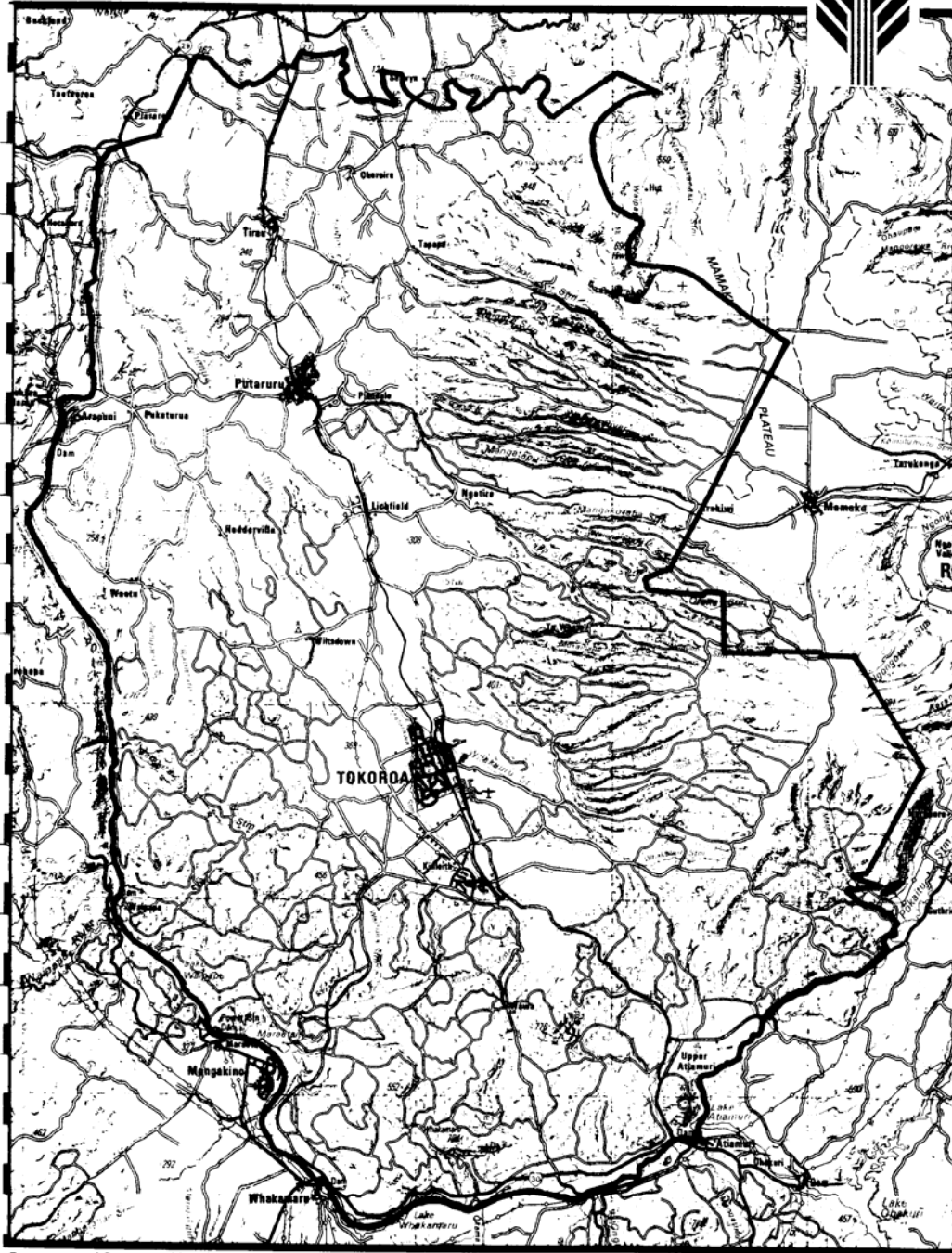
The South Waikato District Council covers an area of approximately 182,000 hectares. It comprises the areas of the former Tokoroa Borough, Putaruru Borough, a large part of the Matamata County, and small parts of the Waipa County and the Rotorua District. These areas were amalgamated on 1 November 1989 to form the South Waikato District.

The boundary of the District is formed by the Waikato River from the Atiamuri hydro dam up to the point where the Pairere Stream meets the Waikato River near the intersection of State Highways 1 and 29 at Piarere. The northern boundary of the District is irregular and is to the south of State Highway 29. The eastern boundary follows the crest of the Kaimai Range and the Mamaku Plateau to the Waikato River at Atiamuri. The boundaries of the South Waikato District are shown on the following map.

The South Waikato District can be divided into two distinct geographical areas of approximately equal size. These are the rolling areas to the north and west, and the plateau and hill country of the "Volcanic Plateau" to the south and east.



# South Waikato District Council





The northern areas are for the most part intensively farmed. The soils are very fertile, supporting dairying and a variety of crops, while the steeper lands are dominated by sheep and cattle farming. There is little undeveloped land in the area capable of conversion into farmland, however changes in land use indicate that farming is becoming more intensive with some cattle and sheep farms in the hill areas being converted to dairy units.

The more elevated southern parts of the District are subject to the same limitations for agriculture as other areas of the Volcanic Plateau. A cobalt deficiency in the soil which caused the "bush sickness" disease in stock led to the early abandonment of farming in the area and the establishment of exotic forest plantations. Although bush sickness can now be controlled, exotic forests continue to dominate land use in this area.

#### 2.2.2 **Geology and Minerals**

The District is underlain by a base comprised primarily of ignimbrite material derived from eruptions in the central volcanic region. The Mamaku Plateau to the east of the District and the undulating hill country in the south are mainly ignimbrite underlain by andesite. To the west, outcrops of Haparangi Rhyolite are evident as domes projecting through the ignimbrite. South-west of Putaruru, alluvial fragments of rhyolite, ignimbrite and pumice have formed gravel and sand deposits.

The geology of the District does not contain any sources of high value mineral deposits. However there are high volume - low value deposits which are of local significance and contribute to the overall resources of the District. Aggregates for building and road construction are the most important minerals being extracted in the District. For example, greywacke is quarried at Waotu which is approximately 15km to the south west of Putaruru on the banks of the Waikato River.

Redeposited pumice sands are found in several areas. Local sand requirements, predominantly for road works, are met by temporarily stripping the topsoil from small areas of farmland, extracting the sand, and then redepositing the original soil cover. Glassy rhyolites are used as a source of perlite, an insulating and sound proofing material, and these deposits occur along the southern boundary of the District. Other quarries are located within the District at Kinleith and north and west of the District at Okauia and Whitehall.



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There are a number of geothermal areas in the southern part of the District in the vicinity of Atiamuri, Whakamaru, Ongaroto and Mangakino. The exact extent and potential of these geothermal resources is not confirmed at this time. The District Plan recognises that investigations into the potential of these resources are continuing.

### 2.2.3 Soils

The soils of the District can be broadly classified into two major groups, the yellow brown loams, and the primary podzols.

The yellow brown loams are mostly located in the northern part of the District. They are friable soils with clays high in alumina and iron. For the most part they are derived from basic and intermediate volcanic ash and volcanic rocks, but some are derived from fine rhyolitic ash and alluvium partially mixed with andesitic material. Generally, they have developed under forest or scrub vegetation in areas where rainfall is greater than 1000mm per annum.

The primary podzols cover extensive areas in the south of the District and are known locally as "pumice soils". They are formed from comparatively young deposits of rhyolitic pumice and are peculiar in that the processes of soil formation are proceeding simultaneously with active weathering of raw pumice in all parts of the soil profile. Thus the development of horizons due to the conditioning effects of vegetation is out of step with the low degree of weathering of the mineral material of the soil.

For ease of assessment, the former National Water and Soil Conservation Organisation have divided land use capability into 8 classes (on the NZ Land Resource Inventory Worksheets) with 1 being the most productive and 8 being unsuitable for virtually all activities. The South Waikato District has been assessed as having the following proportions of the various classes.



**NZ Land Resource Inventory Classifications for South Waikato District**

<b>Class</b>	<b>Area (hectares)</b>	<b>Percentage (%)</b>
1	2,139	1.17
2	5,640	3.10
3	22,108	12.14
4	43,662	24.00
5	90	0.05
6	77,601	42.65
7	23,895	13.12
8	3,815	2.10
Towns, Rivers & Lakes	3,050	1.67
	<b>182,000</b>	<b>100%</b>

**2.2.4 Water**

Water is a plentiful resource within the South Waikato District. The District is bounded by the Waikato River on its southern and western boundaries and includes Lake Whakamaru, Lake Maraetai, Lake Waipapa, Lake Arapuni, and the upper reaches of Lake Karapiro. There are also numerous streams throughout the District with the Pokaiwhenua Stream, Oraka Stream, and the Waihou River having the greatest flows.

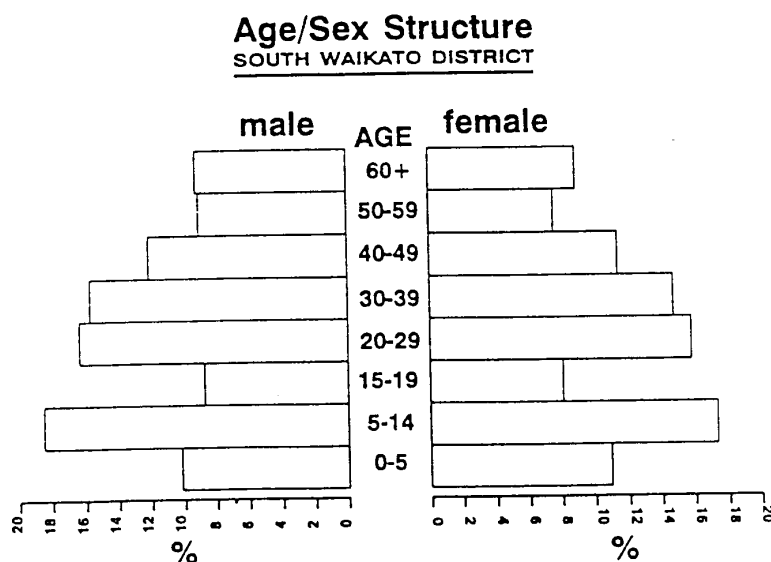
The South Waikato District has an annual average rainfall of 1650mm per year which falls fairly evenly throughout the year. Falls range from an average of 100mm in February to an average of 225mm in August.

Shallow bores tapping into water table aquifers provide a significant proportion of the water used in the District for domestic, commercial, and agricultural/horticultural purposes.



### 2.2.5 People

There were 26186 people living in the South Waikato District as at the 1991 Census. The following diagrams show main population characteristics of the District.

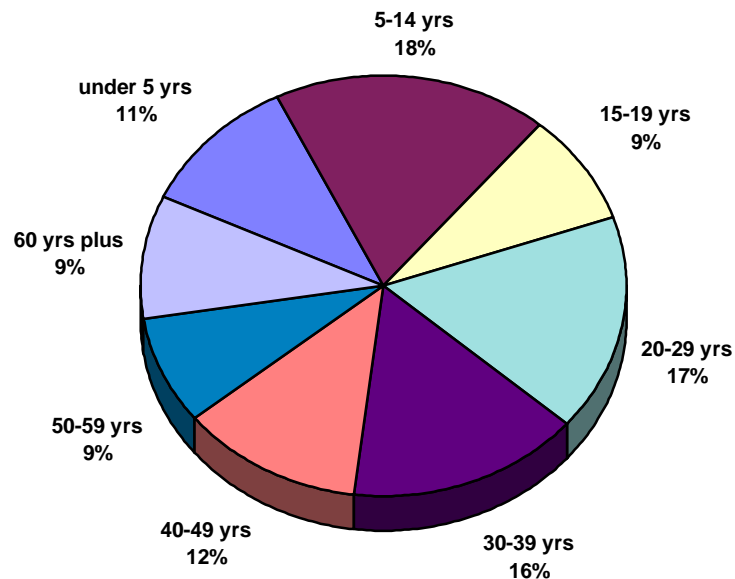


The above age sex structure diagram shows that there is a significant proportion of the population in the 20 - 49 age group (43%). There is also a significant proportion of school age children, i.e. the 5 - 14 age group. The District could be said to have a relatively youthful population structure.

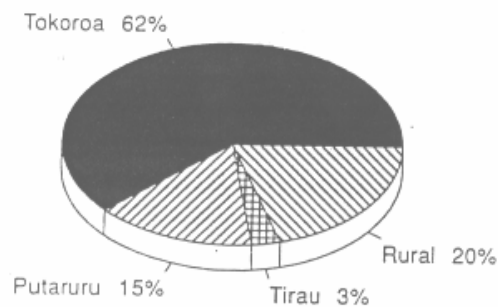


## POPULATION AGE STRUCTURE

### South Waikato District



## Geographical Distribution

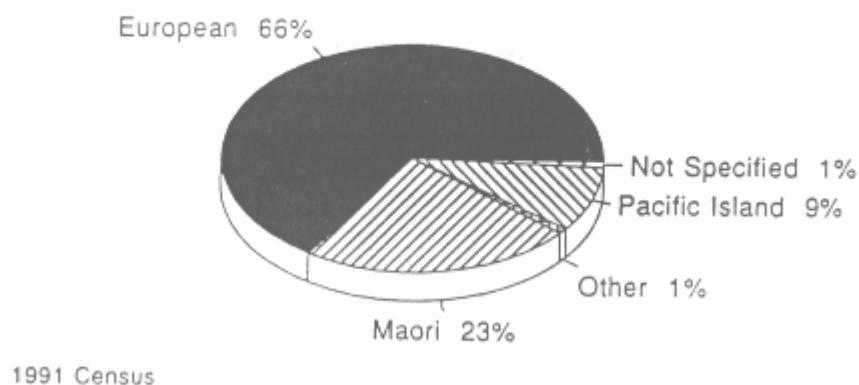


1991 Census

The geographical distribution identifies where various proportions of the population live within the District. As can be seen from the above pie diagram more than half the District's population (62%) live in Tokoroa. Putaruru makes up about 15% of the population and Tirau has about 3% of the population. The remaining 20% live in the rural areas (including small settlements) of the District.



## Ethnic Origin



The above pie diagram shows the ethnic origin of the people of the South Waikato District. It is notable that there is a high proportion of both Maori and Pacific Islanders relative to the proportions nationally.

### 2.2.6 Air

Clean air is an importance resource within the District and is essential for the health of the people within the District. Clean air also contributes to the visual amenity of the District.

### 2.2.7 Landscape and Amenity Values

The rural areas, dominated by forestry and pastoral farming, contribute to a distinctly rural landscape character of the South Waikato District. The rural landscape character is a resource that is considered to be important by the people of the District. A Landscape Assessment of the South Waikato District has been undertaken by the Royal Forest and Bird Protection Society of New Zealand Inc. While it is not part of this District Plan, the Landscape Assessment has assisted in the identification of landscape features within the District and the development of appropriate objectives and policies. The landscape and visual amenity of the District's urban areas is also an important resource to be managed in a sustainable manner.



### 2.2.8 Heritage and Ecological

The South Waikato District has numerous sites and areas of cultural, historic, ecological and/or scientific value. Many of these sites and areas are recorded in a Heritage and Ecological Inventory held by Council. In addition, there are numerous sites, features, and areas of cultural, traditional, or spiritual importance to the tangata whenua.

### 2.2.9 Structures and Infrastructure

The majority of the District has well developed structures and infrastructure to meet the needs of the people within the District. These structures and infrastructure include:

- (i) buildings and community facilities
- (ii) state highways and roads
- (iii) water supplies
- (iv) electricity
- (v) sewage reticulation
- (vi) telecommunications
- (vii) gas (in parts)

Approximately half of the land area within the District is planted in exotic forest and has resulted in the establishment of a major, nationally important, pulp and paper producing plant at Kinleith and sawmills at Putaruru and Tokoroa. Similarly, at Tirau and at Lichfield there are major dairy processing plants which process milk from the South Waikato region. These major resource developments based on primary resource processing have assisted the community in its economic development as has the District in providing the facilities and infrastructure that services the needs of its communities.

## 2.3 Significant Resource Management Issues

The South Waikato District Council is required under the Resource Management Act 1991 to define significant resource management issues as part of the review of the District Plan. Many of the resource management issues facing the South Waikato District were identified in the *South Waikato District Council - Review of District Plan: Discussion Document* (October 1992) under the following headings:



- (i) Water
- (ii) Major Land Uses
- (iii) Commercial and Industrial Development
- (iv) Social and Cultural Environment
- (v) Transportation

Each issue identified was discussed and a number of questions were posed for the community to consider.

The significant resource management issues facing the South Waikato District are identified below under several broad headings. Resource management issues are discussed in more detail throughout Part B and Part C of the District Plan.

The South Waikato District Plan must address these significant resource management issues and include objectives, policies, and methods to achieve the integrated management of the effects of the use, development, or protection of land and associated natural and physical resources of the District.

#### 2.3.1 **Communities**

As mentioned in Section 1.1 of the District Plan, the purpose of the Resource Management Act 1991 is to promote the sustainable management of natural and physical resources. In the Act, the definition of "sustainable management" includes a reference to enabling people and communities to provide for their social, economic and cultural wellbeing and for their health and safety.

A significant resource management issue that needs to be considered throughout the development of the District Plan is to ensure that resource management objectives, policies and methods are developed which will enable people and communities to provide for the needs (as mentioned above) in a manner that will promote the sustainable management of natural and physical resources.



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### 2.3.2 Land uses and Subdivision in the Rural Environment

A major issue facing the District is the sustainability of the rural environment. There are a range of land uses within the rural areas with the potential to have adverse effects on the environment or other activities within the rural environment.

The extent to which rural subdivision should be allowed is a major issue facing the District. Uncontrolled subdivision could result in significant areas of highly productive soils being used for comparatively un-productive purposes which could adversely affect the sustainability of the rural economy. A significant increase in the numbers of "lifestyle" blocks may change the rural landscape character. On the other hand a relaxation of subdivision controls may lead to an increase in rural population which would improve the viability of many rural services. Council has significantly relaxed the controls on subdivision in the District Plan. The central issue relating to land uses and subdivision in the rural environment is addressed in the District Plan to ensure that activities do not have any significant adverse effects on soils or the landscape and amenity of rural areas (discussed in Section 2.3.5 below) so as to safeguard the needs of present and future generations.

### 2.3.3 Water

Environment Waikato has the primary responsibility for the sustainable management of water within the District. However, the District Plan includes provisions to ensure that the water resources in the District are managed in a way so that water quality is maintained and enhanced while taking account of the cultural importance of water to the tangata whenua.

Potential conflicts between users of water within the District need to be avoided or resolved particularly in relation to the use of the surface of lakes and rivers.

### 2.3.4 Heritage and Ecological Protection

The sustainable management of natural habitats and sites of historic or cultural importance must be addressed in the District Plan. The central issue is to identify the most appropriate means of management or, in many cases, protection.



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### 2.3.5 **Landscape and Amenity Values**

The landscape and amenity values of the District have been identified by the community as a significant resource management issue. The landscape of the District and the features of the environment that contribute to the amenity of the District are important resources that need to be managed in a sustainable manner.

Appropriate objectives, policies, and methods need to be included in the District Plan to ensure that activities avoid, remedy, or mitigate any significant adverse effect on the landscape or amenity of the District.

Sections have been included in the District Plan relating to landscape, amenity, noise, signage and performance standards within each zone.

### 2.3.6 **Discharges and Emissions**

The control of discharges and emissions into the environment is primarily the responsibility of Environment Waikato. However, it is a significant resource management issue within the District and Council considers that the District Plan has a significant role to play in the control of environmental effects resulting from discharges and emissions. For example, Council can include provisions in the District Plan to ensure that activities are appropriately located and established in a manner that avoids, remedies or mitigates any significant adverse effects on the sensitive environments including effects on people.

### 2.3.7 **Tangata Whenua**

Recognising and understanding issues of cultural, traditional, or spiritual importance to the *tangata whenua* is a significant resource management issue facing the District. The principles of the Treaty of Waitangi need to be embodied in the District Plan so that a mutually beneficial partnership is promoted regarding the sustainable management of natural and physical resources within the District. To achieve this Council will consult with tangata whenua regarding relevant resource management issues.



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2.3.8 **Nuisance Effects**

Many of the provisions in the District Plan are included to avoid nuisance effects on people and their property resulting from activities, e.g. relating to shadowing, glare, privacy, amenity, and other potential effects from neighbouring properties.