

## Soil and Water Testing



Soil Services has a long history in soil testing and analysis. Since 1938, we have (as the former Soil Conservation Service) undertaken extensive research to develop more effective methods of conserving soil and water resources. With our proven track record and practical knowledge in the field, we are acknowledged as a New South Wales authority in the provision of soil and water testing.

### Why do you need Soil and Water testing?

Successful land management depends on informed use of soil and water resources. As the use of land becomes more intense, the need for land owners and managers to understand the characteristics and capability of their soil and water increases.

Soil and water testing is essential groundwork for effective planning and management, whether considering activities such as grazing, cropping, horticulture, effluent re-use, building development or rehabilitation of degraded sites.

The information provided by our testing laboratory enables:

- classification of urban and rural land capability;
- design of soil conservation works and farm water

- supply dams;
- seed and fertiliser recommendations for revegetation;
- diagnosis of soil problems such as salinity and acidity;
- determining suitability for effluent storage ponds and disposal areas;
- assessment of soil erosion and development of erosion and sediment control plans;
- soil classification, survey and mapping;
- assessment and management of contaminated sites;
- identification of acid sulphate soils;
- construction site assessment and assistance with building development applications;
- pollution and erosion impact appraisal; and
- soil and environmental monitoring.

### Our Advantage

Soil Services has a laboratory at our Scone Research Centre, and our staff have extensive knowledge and training in soil and water management. This means that we not only undertake the required tests, but we can also provide you with accurate interpretations and management recommendations from the test results.

Our testing laboratory is accredited under the National Association of Testing Authorities (NATA), in the field of Mechanical Testing. We handle on average 3,000 samples per year performing about 20,000 individual tests.

As a completely in-house testing facility, we provide the convenience of one-stop testing. This eliminates potential problems involving the collection of duplicate samples, splitting samples and double dispatches.

## Wide Range of Tests

Our laboratories cater for a wide range of soil tests – physical, engineering and chemical (including those for trace and toxic elements) – and water testing. Besides a basic soil test, our testing and analysis services encompass:

### **Soil Fertility**

Used to determine plant nutrient levels and fertiliser recommendations – including lime and gypsum – for pasture production, crops, rehabilitation of mine sites, and rehabilitation of degraded areas.

### **Revegetation**

The level of plant nutrients is critical to the success of revegetation programs. Specific problems, such as acidity, alkalinity, sodicity and salinity may also inhibit plant growth. In addition to our soil fertility tests, we can also determine fertiliser and gypsum application rates for rehabilitation of degraded sites.

### **Earthworks**

The percentage of clay, silt and sand present in soil material is crucial in the construction of earthworks such as dams. We can test to determine soil suitability and construction guidelines for earthworks.

### **Hydraulic Conductivity**

The hydraulic conductivity should also be assessed if a pond or dam is to be used for effluent storage.

### **Potential Acid Sulphate**

Soil containing pyrite (iron sulphide) is referred to as acid sulphate soil. Upon oxidation of the pyrite, significant acid can be produced. We can test to identify both acid sulphate and potential acid sulphate soils – even the extent of oxidation – and then provide management recommendations based on test results.

### **Water Quality**

Testing can be undertaken to determine the suitability of water samples for irrigation, as well as stock and domestic water supply. Standard tests include salinity, hardness, sodium absorption ratio, together with the concentration of iron, chloride, carbonate and bicarbonate.

## Want to know more?

For more information on how we can fulfil your soil and water testing requirements, please contact our Soil Services soil test laboratory (below) or visit our website on [www.lands.nsw.gov.au](http://www.lands.nsw.gov.au)

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