Implement a landscape maintenance program

AHCPGD304

Overview

By the end of this topic, you should be able to:

- Interpret a landscape maintenance program
- Monitor and maintain landscape areas

Landscape maintenance program

- When developing or referring to a landscape maintenance program be sure to determine:
  - Scope of maintenance works to be undertaken
    - Understand what tasks are included and what are excluded (e.g. pruning, mowing, fertilisation, watering)
    - Understand what actions are permitted in the event of variations
  - Frequency of maintenance works (e.g. weekly, monthly, bi-monthly)
  - Standards of maintenance work (e.g. mowing heights)
  - Nominated contact person for any issues or questions

- To prepare for tasks, develop/use a site inspection checklist
  - This document will follow landscape maintenance program requirements

- Referring to the task requirements, you should be able to address potential WHS hazards, such as:
  - Injuries to your person
    - Wear Personal Protective Equipment [PPE] (e.g. gloves, work boots, sun protection)
  - Spread of pests/disease
    - Be discerning with the plant material recycled into mulch. Don't risk the spread of pests/disease.
  - Environment contamination
    - Be mindful of chemical spillage, run-off, spray drift and damage to off-target organisms

- Rectify and/or report hazards to your supervisor within a timely fashion – especially emergency situations

Maintaining landscape areas

- The aim of landscape maintenance tasks is to restore the site to full effectiveness
- This may involve remedial action (e.g. pruning)

Image: http://lavoieslandscape.com/projects/parker-before-after.jpg

Maintaining landscape areas

- The aim of landscape maintenance tasks is to restore the site to full effectiveness
- This may involve repair and/or replacement of landscape structures and features

Image; http://www.artnoire.net/gallery/hillside/1.jpg

Maintaining landscape areas

- The aim of landscape maintenance tasks is to restore the site to full effectiveness
- This may involve renovation of landscape structures and features

Image: http://blog.dcspub.com/media/2014/09/Backyard-Renovations-Before-And-After.jpg

Maintaining landscape areas

- The aim of landscape maintenance tasks is to restore the site to full effectiveness
- This may involve plant treatments (e.g. addressing pests, diseases, disorders or deficiencies)

Images: http://static.wixstatic.com/media/0de236_21855af9893a48e8a474b4ac8113f215.jpg_256
http://stewartslawn.com/wp-content/uploads/2014/07/iron-chlorosis-before-after-small.jpg

Maintaining landscape areas

- Take note of special characteristics of the range of plants in your landscaped area
  - Significant vegetation may be protected due to it being native, rare or have environmental/cultural/historical significance
  - Heritage trees are protected because of their cultural or natural heritage significance
    - These trees may be associated with an historical building
    - Trees themselves may also be solely protected

Refer to your local council to determine whether any plants in your landscaped area are protected

Maintaining landscape areas

- Become familiar with the optimal growing conditions for the range of plants in your landscaped area
  - Refer to the specific needs of plant species and cultivars
- Some general considerations include:

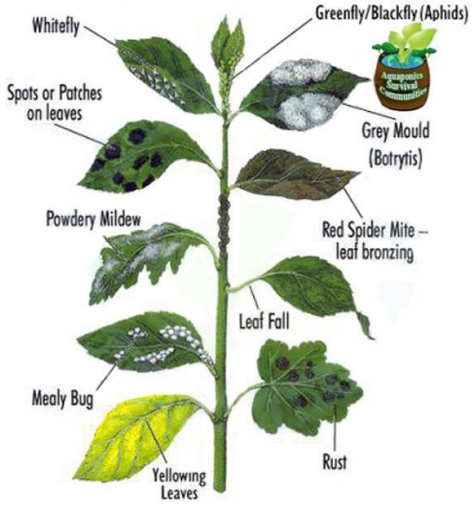
Sufficient light

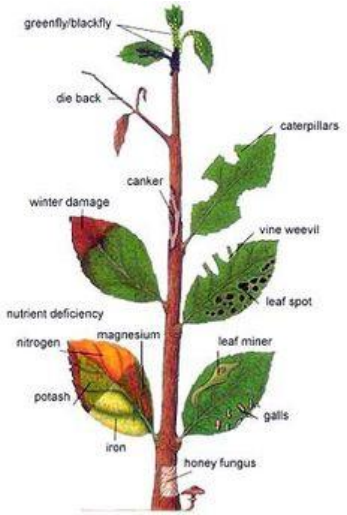
Sufficient water

Sufficiency & availability of nutrients

Source: https://www.planetnatural.com/wp-content/uploads/2012/12/plant-lighting-1.jpg
https://goldsealnews.files.wordpress.com/2011/05/watering-plants.jpg
https://lh3.googleusercontent.com/0muJR0_HNTr7bVvpvB0_6sXQ2ow2GYWpif2FNYZvUVN5i2ivMlcCubQ9xlAnCsWLiXzo=w300

- Understand common problems that occur for the range of plants in your landscaped area (e.g. pests, diseases, deficiencies):





Source: https://s-media-cache-ak0.pinimg.com/originals/ff/a5/18/ffa51831c7e79164875fc3be98556aab.jpg
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Plant pests

- Plants can be affected by a number of pests. For example:

Borers

Cowpea aphids

Cutworm

Citrus gall wasp

Leaf miners

Mealybugs

Rutherglen bug

Some pests are of such concern that you are legally required to report sightings to the Government

Plant diseases

- Diseases in plants can be caused by micro-organisms, such as:

Bacteria	Fungi	Viruses	Nematodes
Causing: • **Blights:** Chlorosis, browning and death of plant tissues (e.g. leaves, branches, twigs or flowers) • **Canker:** Appearance of dead tissue • **Galls:** Swollen masses of abnormal tissue • **Wilting:** Loss of rigidity of non-woody parts of plants	Causing: • **Canker:** Appearance of dead tissue • **Galls:** Swollen masses of abnormal tissue • **Ink spot:** Causes blackening of leaves and flower stems • **Mould/Mildew:** White powdery spots • **Rot:** Decay roots, stems, wood flowers, and fruit • **Rust:** Brown pustules on the underside of leaves with yellow speckling on the upper leaf • **Wilting:** Loss of rigidity of non-woody parts of plants	Causing: • **Canker:** Appearance of dead tissue • **Distortion** • **Scaling** • **Yellowing**	May transmit and acquire viruses by feeding on infected roots

- The major and trace plant nutrients

Major	Trace
Nitrogen (N) Phosphorus (P) Potassium (K) Sulfur (S) Calcium (Ca) Magnesium (Mg)	Copper (Cu) Zinc (Zn) Boron (B) Manganese (Mn) Iron (Fe) Chlorine (Cl) Molybdenum (Mo) Sodium (Na) Cobalt (Co) Vanadium (V) Silicon (Si)

Plant nutrition deficiencies

- Many plant nutrient issues can be visually identified. For example:

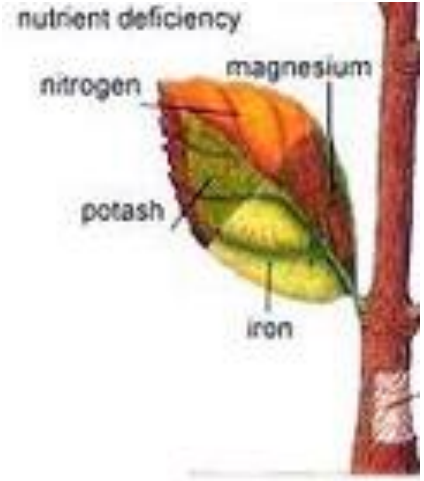
Nutrient	Deficiency
Nitrogen	• General chlorosis of older leaves (i.e. entire leaf changing from green to yellow) • Plant is stunted and wilts in normal weather
Magnesium	• Interveinal chlorosis, veins remain green • Dropping of old leaves • Smaller, woodier fruits of poor colour

Source: https://s-media-cache-ak0.pinimg.com/236x/14/61/a7/1461a71dcb3af934aef2853cc149e7c8.jpg

Plant nutrition deficiencies

- Many plant nutrient issues can be visually identified. For example:

Nutrient	Deficiency
Potassium (Potash)	• Deformed, stunted leaves • Weak stems • Fruits drop prematurely • Poorly developed roots • Older leaves become a lighter green colour with scorched edges • Young leaves show interveinal chlorosis (i.e. yellowing between veins)
Iron	• Leaves may turn pale yellow or white



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Soil pH

- Soil pH is a measure of the acidity or alkalinity in soils
  - You can test soil/media pH yourself using an over-the-counter kit or meter

- Soil pH affects plant nutrition
  - Having the correct soil pH is important for healthy plant growth
  - Soil pH affects the amount of a particular nutrient that can be taken up by plant roots

Treatment options

- There are a range of different treatment options, including:
  - Cultural
    - Involves manipulating farming practices to suppress pests/diseases/disorders, while promoting plant development
  - Biological
    - Makes use of the pest/disease's naturally occurring enemies, such as insects and pathogens (e.g. fungi and bacteria)
  - Chemical methods (i.e. herbicides)
    - These have varying modes of action (e.g. may speed up, stop or change the plant's normal growth patterns)
    - Can be selective (affects particular weeds) or non-selective (affects all plants)
  - Genetic
    - Planting pest-resistant varieties
  - Mechanical
    - Includes the use of covers/screens and vacuums
  - Physical
    - Includes hand weeding, slashing, burning, cutting, ripping

Maintaining landscape areas

- Integrated Pest Management (IPM) involves a range of methods to stop pests

- Integrated Pest Management involves using more than one method to control a particular problem
  - The aim is to lower long term risks to the environment (e.g. chemical resistance)
  - Well considered IPM is generally more cost-effective in the long run as well

Monitoring landscape maintenance tasks

- As part of monitoring landscape maintenance tasks, you are required to complete the following:
  - Evaluate the results of maintenance works undertaken
    - Determine if you have met the requirements of the program
  - Complete records for results of maintenance work
    - Record estimates and calculations
    - Identify if further action is required
    - Identify items that are beyond the scope of the maintenance program to the nominated contact person
      - Apply appropriate questioning and listening techniques
      - Be mindful of their background and abilities