Still Creek Catchment Landcare Group Inc

Survey Procdeures, Codes and Species Lists

Procedure for Testing Water

Method

- Use the Streamwatch Kits provided
- Use the Streamwatch Instruction Manual and notes
- Testers must be trained by Streamwatch or by Landcare members who have been trained by Streamwatch to ensure consistency of results
- For sample collection, two people must be present at remote sites. For close sites, notify someone before going.
- Main point will be at catchment exit, with additional points working back to where tributary creeks join.
- Test further to identify specific sources of pollution
- Follow the schedule for the 3 nominated sites, but there is flexibility within a few days
- Enter data, including rainfall data, into the Streamwatch website

Locations nominated to Streamwatch for testing monthly

- Still Creek above the high water mark near entry to Berowra Creek (catchment exit point)
- Still Creek above the waterfall at Mansfield Rd
- Charltons Creek above the waterfall near 18 Radnor Rd

Main locations designed to isolate sources of pollution

- Creek at Brabham valley at Still Creek confluence
- Dam water at old Dam (Max's Access)
- Near Barry's Place at Still Creek confluence
- Near Nick's Place at Still Creek confluence

Characteristics (ref Streamwatch Manual)

- pH (Standard Kit)
- Temperature (Standard Kit)
- Turbidity (Standard Kit)
- Electrical conductivity (Standard Kit)
- Available Phosphate (Advanced Kit)
- Faecal coliform (Advanced Kit new test method)
- Dissolved oxygen (Advanced Kit)

References

- Streamwatch Manual

Procedure for Surveying Vegetation

Method

- Use the Checklist: Weed Invasion Mapping as attached below based on the CMT 2000 Weed Guidelines
- The first priority weeds should be the "Weeds of National Significance" and the HSC "Weeds of Significance", to ensure that important and growing weeds are mapped, as in the lists below
- Surveyors must attend a training session to ensure consistency of results
- Teams of at least two people led by a person with species knowledge assisted by a scribe
- Convert data to digital for future use (method to be resolved)
- Location is each property, which can be sub-divided if vegetation varies
- Reference each data set using GPS Datum GDA94. If this is not supported in the equipment, then WGS84 can be used
- For surveys following streets, use John Hunt's paper maps to summarise the classification, put the details in the table "Still Creek Catchment Vegetation Survey Street View Details" and use the property addresses as the data reference (unless GPS and the standard sheets are preferred)
- Where paper maps and the Details table are used the following should apply:
    - Identify limit of visibility on map
    - Mark weed rating on map for both streets and the properties
    - Identify mowed areas using disturbance code "m" or "mx" and set gardens as "g" in the details sheet
    - For the three vegetation layers, on a sampling basis, identify 3 key natives and 3 major weeds by their codes from the list of weeds and native vegetation and referenced by address
    - Identify location of stormwater drains on map

Locations

Note this is intended only as a sample

- Follow all catchment roads
- Follow creeks where possible
- Two valley transects: Still and Charlton's creeks
- Supplement by other areas as opportunities arise

Opportunistic collection of data should be carried out

- Fauna: Distribution and abundance of mammals, birds, frogs, reptiles and insects eg. Scats collection, Photograph footprints and signs (tree scratching, nests and remains), Spotlighting, Call playback, Hair tubing
- Soil mapping and Sampling of Structure, Nutrient level, Profile, Erosion

References

- Vegetation maps from HSC
- National Park or HCMA species lists
- Property boundary maps from HSC
- John Hunt's species code list
- Council Species List
- National Park Species List
- Macquarie University: Radnor Road fire trail sampling

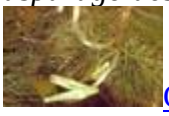
21 Weeds of National Significance Thumbnail Common Name Scientific Name


Prickly Acacia, Blackthorn, Prickly Mimosa, Black Piquant, Babul *Acacia nilotica*


Alligator Weed *Alternanthera philoxeroides*


Pond Apple, Pond-apple Tree, Alligator Apple, Bullock's Heart, Cherimoya, Monkey Apple, Bobwood, Corkwood *Annona glabra*


Bridal Creeper, Bridal Veil Creeper, Smilax, Florist's Smilax, Smilax Asparagus *Asparagus asparagoides*


Cabomba, Fanwort, Carolina Watershield, Fish Grass, Washington Grass, Watershield, Carolina Fanwort, Common Cabomba *Cabomba caroliniana*


Boneseed *Chrysanthemoides monilifera* subsp. *monilifera*


Bitou Bush *Chrysanthemoides monilifera* subsp. *rotundata*


Rubber Vine, Rubbervine, India Rubber Vine, India Rubbervine, Palay Rubbervine, Purple Allamanda *Cryptostegia grandiflora*


Hymenachne, Olive Hymenachne, Water Stargrass, West Indian Grass, West Indian Marsh Grass *Hymenachne amplexicaulis*


Lantana, Common Lantana, Kamara Lantana, Large-leaf Lantana, Pink Flowered Lantana, Red Flowered Lantana, Red-Flowered Sage, White Sage, Wild Sage *Lantana camara*


Mimosa, Giant Mimosa, Giant Sensitive Plant, ThornySensitive Plant, Black Mimosa, Catclaw Mimosa, Bashful Plant *Mimosa pigra*


Chilean Needle grass *Nassella neesiana*

Serrated Tussock, Yass River Tussock, Yass Tussock, Nassella Tussock (NZ) *Nassella trichotoma*


Parkinsonia, Jerusalem Thorn, Jelly Bean Tree, Horse Bean *Parkinsonia aculeata*


Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed *Parthenium hysterophorus*


Mesquite, Algaroba *Prosopis spp.*


Blackberry, European Blackberry *Rubus fruticosus aggregate*


Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow *Salix spp. except S.babylonica, S.x calodendron & S.x reichardtiji*


Salvinia, Giant Salvinia, Aquarium Watermoss, Kariba Weed *Salvinia molesta*


Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar *Tamarix aphylla*


Gorse, Furze *Ulex europaeus*

List of Weeds of National Significance

Common Name	Scientific Name
alligator weed	Alternanthera philoxeroides
athel pine	Tamarix aphylla
bitou bush / boneseed	Chrysanthemoides monilifera
blackberry	Rubus fruticosus agg.
bridal creeper	Asparagus asparagoides
cabomba	Cabomba caroliniana
Chilean needle grass	Nassella neesiana
gorse	Ulex europaeus
hymenachne	Hymenachne amplexicaulis
lantana	Lantana camara
mesquite	Prosopis spp.
mimosa	Mimosa pigra
Parkinsonia	Parkinsonia aculeata
parthenium weed	Parthenium hysterophorus
pond apple	Annona glabra
prickly acacia	Acacia nilotica ssp. indica
rubber vine	Cryptostegia grandiflora
salvinia	Salvinia molesta
serrated tussock	Nassella trichotoma
Willows except weeping willows, pussy willow and sterile pussy willow	Salix spp. except S. babylonica S. X calodendron and S. X reichardtii

Hornsby Council Weeds of Significances

Coolatai Grass	Hyparrhenia hirta	Grass
Alligator weed	**Alternanthera philoxeroides**	**Herb**
Boneseed	Chrysanthemoides rotundata	Herb
Giant Paspalum	Paspalum urvillei	Grass
Green Cestrum	Cestrum parqui	Shrub
Madeira Vine	Anredera cordifolia	Vines/Creepers
Montpellier Broom	Genista monspessulan	Shrub
Mother of Millions	Bryophyllum delagoense	Herb
St.John's wort	Hypericum perforatum	Herb
Tree of Heaven	Ailanthus altissima	Tree
Water Hyacinth	Eichomia crassipes	Herb

Weed Invasion Mapping
(fill this out for each zone in your site)

Date and assessor:

Veg Layer	**% weed cover score** <10% = **1** 10-30% = **2** 30-60% = **4** >60% = **8**	**Score (sum of 3 layers)**	**Weed class Zoning** **Class 1:** 3-5 = **green** **Class 2**: 6-9 = **blue** **Class 3:** 10-24 = **red**	**Location** Map ref: GeoLoc: Address:	**Circle Landscape** Flat valley Bottom Ridge-top Various
Canopy				**Circle Aspect** N NE E SE S SW W NW	
Shrub				**Knowledge level of assessor**: Low ☐ Medium ☐ High ☐	
Ground					

	Weed 1	Weed 2	Weed 2	Native 1	Native 2	Native 3
Canopy						
Shrub						
Ground						

Cause of weed invasion	**Symptoms**	**Tick**
Physical disturbance of soil (**s**) or (**g**)	Weeds established on bare soil. Use (**g**) for set gardens	
Imported soil (**f**)	Weeds established on imported soil containing weeds and nutrients	
Dumped garden refuse (**d**)	Weeds centred on dumped garden refuse	
Physical disturbance of vegetation (**v**)	Evident that mowing or trampling has allowed weed growth	
Impacts from storm water (**r**)	Growing in wet areas below stormwater : identify all drains	
Bird/ animal/ dispersion (**o**)	Weeds established in otherwise undisturbed area	
Wind (**w**)	Weeds in otherwise undisturbed area but animals not cause	
Water (**a**)	Weeds centred on creek where weeds present in headwaters	
Neighboring property (**n**)	Weeds spreading from neighbour's boundary	
Grassland or paddocks if mowed (**m**)	Grassland or paddocks if unmowed (**mx**)	

History
Past land use: grazing _ horticulture _ urban _ forestry _ industrial _ vacant Crown land _ Council/ public land _
Other:
Current use: grazing _ horticulture _ urban _ forestry _ industrial _ vacant Crown land _ Council/ public land _
Other:
Comments:
Scratch Map: Use reverse side if needed

STILL CREEK CATCHMENT VEGATATION SURVEY STREET VIEW DETAILS

Date	Page No.

Address		St	Summary						Canopy						Shrub						Ground						Comments
Street	No.	Pr	C	S	G	Sc	Cl	Codes	Weeds			Natives			Weeds			Natives			Weeds			Natives			