



These projects are part of the Lower Lakes Bioremediation and Revegetation Project funded by the Australian Government and supported by the South Australian Department for Environment and Natural Resources



## Community Monitoring

## Lower Lakes Community Acid Sulfate Soil Monitoring Project

### Vegetation Monitoring of the Community Revegetation Project

### Fixed Photo Point Monitoring

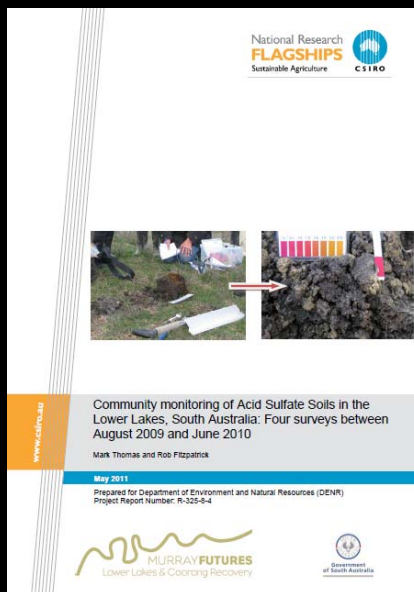
## Lower Lakes Community Acid Sulfate Soil Monitoring Project



- 51 sites monitored 3 monthly
- 90 Community Volunteers
- 322 survey visits
- With 3 or more sampling sites at each survey site with 3 standard layers of soil tested (0-5; 5-30 and >30cm)
- 943 sites sampled

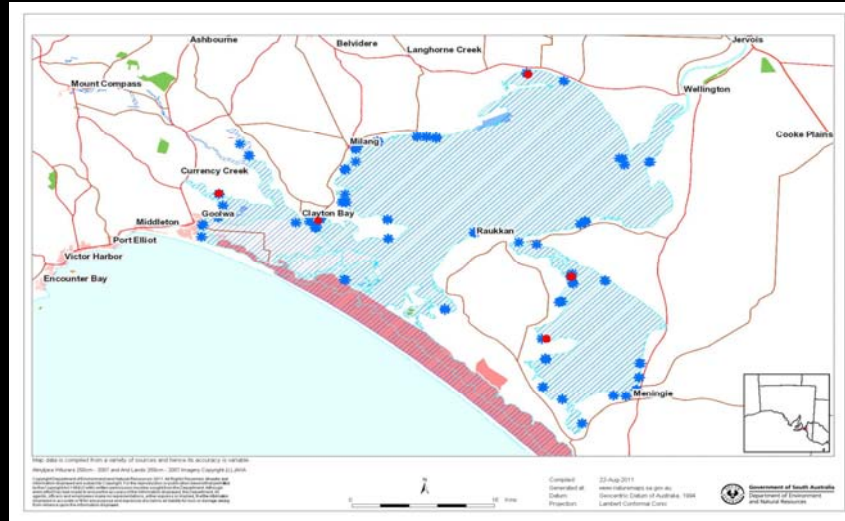


- By Round 6, December 2010 all sites had been inundated
- Original survey sites were still sampled where possible.
- 2762 soil layers described, pH tested and collected for further analysis and posterity by CSIRO
- 5 sites will continue to be monitored by the GWLAP



<http://www.clw.csiro.au/publications/science/2011/SAF-community-monitoring-ASS-lower-lakes.pdf>

# Community Soil Monitoring Sites



3. BALLASTONE PUMPING SHED CURRENCY CREEK BSD								
SITE 1 E 0301140 N 6072856 SITE 2 E 0301141 N 6072860 SITE 3 0301131 N 6072914								
SITE 4 E 0301132 N 6072947 (between site 3 & shoreline)								
	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
	11/08/2009	20/11/09	3/02/2010	6/06/2010	9/09/2010	9/12/2010	11/04/2011	23/06/2011
Water level			0.01 AHD					
WATER PH	5.3	7.45	8.4	7.5	7.4	7.6	7.7	7.7
WATER EC	6700uS/cm	10600uS/cm	16500uS/cm	19800uS/cm	11500uS/cm	6200uS/cm	2900uS/cm	4400uS/cm
SITE 1	WP 22							
TOP 5cm - PH	5	7.4	8	7.5	7.8	7.7	7.4	7.1
5 - 30cm - PH	3.9	7.1	5.9	7.8	6.1	5.3	5.8	6.8
> 30cm - PH	4.5	8.1	8	7.8	7.7	6.8	7.4	6.8
SOIL EC	1750uS/cm	1740uS/cm	1940uS/cm	1920uS/cm	2000uS/cm	680uS/cm	720uS/cm	550uS/cm
SITE 2	WP 23							
TOP 5cm - PH	5	7.9	6.7	6.8	6.8	6.8	7.1	7.4
5 - 30cm - PH	3.3	7.1	5.7	8.4	5.2	6.1	5.8	6.8
> 30cm - PH	3.3	7.9	6.3	7.6	5.1	4.7	7.1	6.8
SOIL EC	1600uS/cm	1060uS/cm	2200uS/cm	2300uS/cm	1880uS/cm	1080uS/cm	420uS/cm	540uS/cm
SITE 3	WP24							
TOP 5cm - PH	2.5	3.6	6.5	5.4	6.5	5.7	5.8	6.8
5 - 30cm - PH	2.5	3	3.7	4.4	4.5	4.2	4.2	4.5
> 30cm - PH	2.5	3	4.6	4.4	3.9	4.5	3.9	4.2
SOIL EC	2600uS/cm	1310uS/cm	1870uS/cm	1940uS/cm	880uS/cm	790uS/cm	270uS/cm	410uS/cm
SITE 4								
TOP 5cm - PH	N/A	N/A	N/A	6.8	7.4	4.7	7.1	7.4
5 - 30cm - PH	N/A	N/A	N/A	4.4	4.4	3.8	4.5	4
> 30cm - PH	N/A	N/A	N/A	4.7	4.4	3.9	3.9	3.9
SOIL EC	N/A	N/A	N/A	2100uS/cm	1450uS/cm	1150uS/cm	410uS/cm	610uS/cm

4. BOGGY LAKE NORTH BNH GPS # 7								
SITE 1 E 0335071 N 6090586 SITE 2 E 0335053 N 6090658 SITE2B 0335052 N6090699 SITE 3 E 335035 N 6090731								
	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
	ROUND 1	ROUND 2						
	NOT DONE	NOT DONE	4/12/2009	28/05/2010	23/09/2010	16/12/2010	30/03/2011	15/06/2011
WATER PH			3	3.3	6.8	6.8	7.4	7.4
WATER EC			9160uS/cm	8000uS/cm	3300uS/cm	2700uS/cm	780uS/cm	590uS/cm
calcium carbonate							90mg/L	80mg/L
SITE 1								
TOP 5cm - PH			2.5	3	N/A	N/A	4.2	6.1
5 - 30cm - PH			2.5	2.2	N/A	N/A	3.3	3.6
> 30cm - PH			2.2	2.2	N/A	N/A	3.3	3.6
SOIL EC			3900uS/cm	1610uS/cm	N/A	N/A	730uS/cm	150uS/cm
SITE 2								
TOP 5cm - PH			2.2	3	N/A	3.9	3.9	6.8
5 - 30cm - PH			2.2	2.5	N/A	2.5	3.3	3.6
> 30cm - PH			1.9	2.2	N/A	3	3	3.6
SOIL EC			4700uS/cm	2200uS/cm	N/A	980uS/cm	860uS/cm	120uS/cm
SITE 2 B								
TOP 5cm - PH			N/A	N/A	3.9	N/A	N/A	N/A
5 - 30cm - PH			N/A	N/A	3	N/A	N/A	N/A
> 30cm - PH			N/A	N/A	3	N/A	N/A	N/A
SOIL EC			N/A	N/A	700uS/cm	N/A	N/A	N/A
SITE 3								
TOP 5cm - PH			3.3	3.9	3	4.2	4.2	5.8
5-30cm - PH			3	3.6	2.2	3.1	3.3	4.2
>30cm - PH			3	3.6	2.2	2.8	3.6	3.6
SOIL EC			1160uS/cm	130uS/cm	940uS/cm	890uS/cm	590uS/cm	70uS/cm

33. NARRUNG NARROWS NNS								
SITE 1 E 0341588 N 6064518 SITE 2 E 0341548 N 6064455 SITE 3 0341496 N 6064315 SITE 4 E 0341685 N 6064779								
	DATE	DATE	DATE	DATE	DATE	DATE	DATE	DATE
	8/06/2009	24/11/09	19/3/10	14/06/2010	11/09/2010	23/12/2010	5/04/2011	27/06/2011
WATER PH			N/A	N/A	N/A	7.1	7.7	8.1
WATER EC	1000uS/cm		N/A	N/A	N/A	2300uS/cm	5300uS/cm	2200uS/cm
SITE 1 WP #								
TOP 5cm - PH	7.4	7.9	5	5	5.8	7.4	7.4	7.1
5 - 30cm - PH	7.4	7	5.3	3.9	4.4	3	3.6	3.3
> 30cm - PH	7.4	6.8	4.7	3.3	3	3	3	3.3
SOIL EC	1600 uS/cm		4200uS/cm	2800uS/cm	2800uS/cm	1120uS/cm	1720uS/cm	550uS/cm
SITE 2 WP #								
TOP 5cm - PH	7.4	5.8	5	5.5	7	7.4	7.1	6.8
5 - 30cm - PH	4.7	5.5	5.8	4.7	5.3	3.3	4.5	4.2
> 30cm - PH	5	5.5	5.5	4.4	4.5	2.5	3.3	3.6
SOIL EC			4600uS/cm	2600uS/cm	930uS/cm	930uS/cm	330uS/cm	800uS/cm
SITE 3 WP #								
TOP 5cm - PH	7.1	5	5.8	5.3	5.8	7.1	7.1	6.8
5-30cm - PH	6.5	5	5	4.7	5.3	4.7	4.2	4.2
>30cm - PH	6.8	5	5	4.4	3.6	3.6	3.6	3.9
SOIL EC			4000uS/cm	2000uS/cm	6100uS/cm	780uS/cm	680uS/cm	900uS/cm
SITE 4								
TOP 5cm - PH	N/A	6.8	7.7	5.8	6.5	N/A	N/A	N/A
5-30cm - PH	N/A	7.1	7.1	5.5	6.1	N/A	N/A	N/A
>30cm - PH	N/A	8.3	7.7	4.7	5.8	N/A	N/A	N/A
SOIL EC	N/A	2400/22.4	3600uS/cm	2200uS/cm	2800uS/cm	N/A	N/A	N/A

## Vegetation Monitoring of the Community Revegetation Project



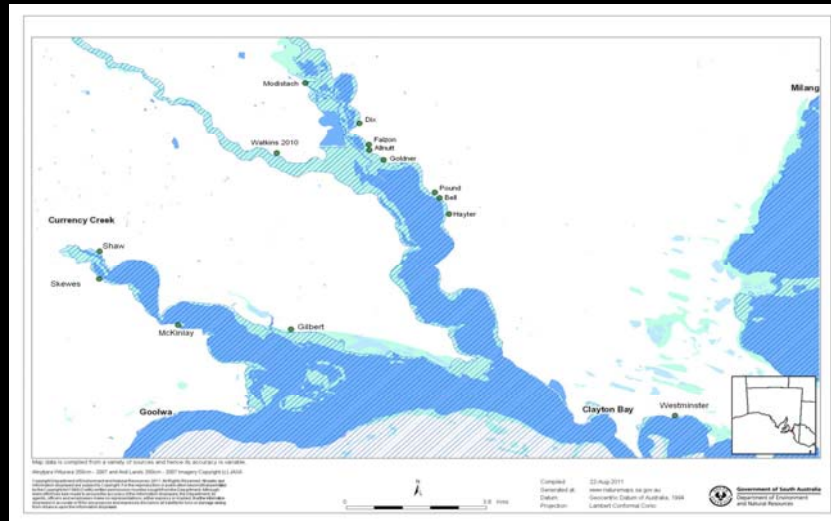
## Vegetation Monitoring

### Survivorship on Community Revegetation Project

- 15-20% of plants in each zone surveyed
- 9 Conservation & Land Management Students involved with project
- 14 x 2010 sites surveyed
- 16 x 2011 sites – photo points in place
- 30 sites to be surveyed in Sept/Oct 2011



# Vegetation Monitoring Sites Round 1 2010 Tributary sites



## Fixed Photo Point Monitoring



- 16 community sites around the Lower Lakes on public reserves
- 3 sites on private property
- Publication on the GWLAP website
- Photos emailed through to the GWLAP for processing before being sent to the CLMM team.





## Fixed Photo Monitoring Point Sites





## Boggy Lake East



## Lakeshore Erosion



## Establishing Reed Bed Trials









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