RECOVERY TEAM ANNUAL REPORT
THREATENED SPECIES AND/OR COMMUNITIES RECOVERY TEAM

Recovery Team	THROMBOLITE (STROMATOLITE-LIKE MICROBIOLITE) COMMUNITY OF A COASTAL BRACKISH LAKE (**LAKE CLIFTON**) RECOVERY TEAM
Reporting Period	**Calendar year 2009**

Current membership

Member		**Representing**
Chair	David Mitchell	Nature Program Leader, DEC Swan Region
Exec Officer	Jill Pryde	DEC Species & Communities Branch
	Jim Lane	DEC Science Division
	Stephen Dutton	Ranger, Yalgorup National Park
	Dr Brenton Knott	University of Western Australia
	Fiona O'Connor	Coordinator, Lake Clifton Landcare Group
	Adam Harbeck/Natalie Lees proxy for Jane O'Malley	City of Mandurah
	Amanda Willmott now replaced by Elizabeth Bonner	Ramsar Initiative Coordinator, Peel-Harvey Catchment Council
	Anthony Barr	CSIRO (corresponding member)
	Dr Matt Forbes	DEC Hydrologist
Invited guest	Jennifer Alexander (nee Paton)	PhD candidate (supervised by Prof Jacob John), Curtin University

Dates meetings were held	No formal meetings were held. A field day was held on 1 April 2009.
One to two paragraph summary of achievements suitable for *WATSNU*	**Summary** • The Minister for the Environment, Water, Heritage and the Arts, has listed the Lake Clifton threatened ecological community as critically endangered under the Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act). The purpose of listing this ecological community is to help prevent its decline and to provide support to on-ground efforts that ensure its long-term survival. Listing this ecological community as endangered under the EPBC Act means that any new activity that is likely to have a significant impact on the ecological community will need to be referred to the Department for assessment and approval. Funding will now be available to landholders and the community through the Australian Government's 'Caring for our Country' package. Thanks to everyone involved with this nomination and a special thanks to those in the Peel Harvey Catchment Council. • A field day was held in April for the team and other interested people with the aim of providing a forum to enable informal discussion and to visit sites of interest which some members have not had the opportunity to see in the past. Jennifer Alexander provided an update on her research - monitoring the health of the thrombolites and

	related water sampling activities. Sites visited included locations of the data loggers and a rain gauge and hydrological sampling sites (by Matt Forbes); tuart revegetation trial sites set up by Katinka Ruthrof of the Tuart Health Research Group (Murdoch University). Katinka is currently looking at the hydrological links of tuart health and health of Lake Clifton. Steve Dutton provided detailed historical information in relation to the lime kilns and location of where limestone was extracted in the past from the lake bed. The group was also briefed on a new project to gather information for the coastal strip (west of Old Coast Road) between Dawesville and Binningup with the aim of the EPA developing a position on land use in the area. Fiona O'Conner provided a rundown on activities by the Lake Clifton Friends Group that included weeding and revegetation.
List of actions undertaken by Recovery Team	**Hydrological monitoring** • Matt Forbes continues to download data from the rain gauge that was installed within private property on the east side of Lake Clifton and from data loggers installed at the boardwalk to measure EC, water level, temp and pH. He also periodically checks Loggers installed in a shallow bore on lake edge. • Jim Lane continues to monitor the water level, salinity, pH and nutrient status at Lake Clifton each year. • Peel-Harvey Catchment Council has compiled an application "Protecting the Critically Endangered Community at Lake Clifton" to submit under the Caring for Country investment proposal for 2010-2011 that aims to establish baseline information about the thrombolite community, water quality and buffer vegetation around Lake Clifton. If the proposal is funded access to the lake and rehabilitation works will be the on-ground works targeted, and an awareness raising program to encourage local residents to reduce nutrient input and groundwater extraction activities.
Assessment of progress towards meeting criteria for success (from Recovery Plan)	Until the monitoring strategy has been in place for a specific time, it will be difficult to assess recovery against criteria for success for the TEC.
Assessment against criteria for failure (from Recovery Plan)	The current Interim Recovery Plan (IRP) covers the period 2004-2009 and states that the criteria for failure are significant and sustained detrimental changes to water quality or water levels in Lake Clifton, significant decline in area of living thrombolites, major shift in composition of the microbial community. It cannot currently be determined conclusively if any of the thrombolites are alive.

Publications published in relation to Lake Clifton

John, J, Hay. M, Paton, J. (2009). Cyanobacteria in benthic microbial communities in coastal salt lakes in Western Australia. In Algological Studies, 130 Stutttgart.