



Department of Parks and Wildlife



RECOVERY TEAM ANNUAL REPORT

THREATENED ECOLOGICAL COMMUNITY RECOVERY TEAM

PROGRAM INFORMATION

Recovery Team	Sedgelands in Holocene swales and thrombolite community of Lake Richmond.
Reporting Period	March 2014-June 2015

Current membership

	Member	Representing
Chair	Ms Valerie English	Parks and Wildlife Species and Communities Branch
members	Dr Neil Gibson	Parks and Wildlife, Science and Conservation Division
member	Professor Phillip Jennings	Wetlands Conservation Society
member	Dr Ryan Vogwill	University of WA
member	Ms Kate Brown	Parks and Wildlife, Urban Nature
member	Mr Nathan Leslie	City of Rockingham
member	Ms Sonja Creese	City of Rockingham
member	Mr Bob Goodale	Community representative
member	Mr Tim Fisher	Parks and Wildlife, Regional Parks
member		Naragebup Environment Centre

Dates meetings were held	9 June 2015
---------------------------------	-------------

Highlights of achievements for calendar year suitable for publication in <i>WATSNU</i> . Provide 1-2 paragraphs summarising total number of new populations located, surveys completed, list major management actions etc	<p>Liaison continued about areas that contain the sedgeland or thrombolite community and are the subject of proposals for reservation or development. This included negotiations to minimise and ameliorate impacts with regard to development of land at East Rockingham Industrial Park, Dampier Drive Golden Bay, and the Mangles Bay Marina that occurs near Lake Richmond. Discussion about amended offsets for East Rockingham Industrial Park (IP14) were initiated.</p> <p>Under the direction of Parks and Wildlife's Regional Parks Branch major weed control works were initiated in Lakes Coo롱up and Walyungup targeting cottonbush, pampas grass, and <i>Juncus acutus</i> (sharp rush). Follow up work targeting figs and giant reed was completed. In Port Kennedy Scientific Park heavy cable fencing was installed to help prevent 4x4 damage to the sedgelands TEC and control of dune onion weed and Geraldton carnation weed control was completed to protect best condition occurrences of the TEC.</p>
--	--

	<p>The City of Rockingham completed weed control works and water quality monitoring, and removed rubbish at Lake Richmond.</p> <p>Parks and Wildlife staff surveyed areas of the sedgeland TEC in two areas of freehold land in Rockingham, and a foreshore reserve in Lancelin.</p> <p>Collection of data about microbialites, water quality and habitat types in Lake Richmond were completed by a Curtin PhD student.</p>
<p>List of recovery actions coordinated by Recovery Team Detail under the headings below the recovery actions undertaken during the reporting period. Provide separate detail for each species/community against each action.</p>	
<p>Monitoring and survey of existing and new populations/ occurrences, targeted surveys, critical habitat mapped etc.</p>	<p>Two lots offered as offsets for the proposed rail corridor in IP14 were surveyed by Species and Communities Branch and Perth Hills District. Opportunities for land acquisition were investigated through survey of the sedgeland TEC in two areas of freehold land in Lark Hill.</p> <p>Foreshore areas in Lancelin were surveyed by Species and Communities Branch and Perth Hills District and found to contain small occurrences of the sedgeland TEC.</p>
<p>Threat amelioration eg weed control/mapping, fencing/ repairs, fire management disease management, feral/ introduced animal control, installation of roadside markers</p>	<p>The following activities were completed under the direction of Parks and Wildlife's Regional Parks Branch:</p> <p>Port Kennedy Scientific Park Heavy cable fencing (700m) was installed and is proving highly successful in excluding vehicles from the sedgeland TEC adjacent to the northern boundary of the park.</p> <p>Weed control works – dune onion weed and Geraldton carnation weed control was completed in and around larger and best condition occurrences of the sedgeland TEC. Minor works on cottonbush were also completed.</p> <p>Ongoing maintenance of rock barriers on Port Kennedy Drive, and rubbish removal are ongoing.</p> <p>Ranger Patrols targeted off road vehicle activity in the Scientific Park.</p> <p>Lakes Coo롱gup and Lake Walyungup Parks and Wildlife accepted 0.9ha of land containing the sedgeland TEC adjacent to Warnbro Station from the Public Transport Authority who provided funds for a five year weed control program at the site.</p> <p>Major weed control works have begun targeting cottonbush, pampas grass, and <i>Juncus acutus</i>. Follow up work targeting figs and giant reed has been completed.</p> <p>The City of Rockingham completed weed control and revegetation, rubbish collection and water quality monitoring at Lake Richmond.</p>
<p>Conservation and research eg fire research, translocation, ex-situ conservation, revegetation/rehabilitation etc</p>	<p>A Curtin University postgraduate student completed studies of the Lake Richmond microbialites and habitat types, as follows:</p> <ul style="list-style-type: none"> • loggers indicate Lake Richmond is slightly brackish most of the time, and hydrology is modified by drains • types of microbialites were mapped (flat, domed, nodular, discoidal etc). • older thrombolites occur close to the sedgeland, with youngest structures being submerged. Most of the structures are old. • growth rates were measured in different zones. The balance between erosion and accretion determines growth rate or overall erosion • zonation of thrombolites occurs in response to exposure and dryness of flats • lake water chemistry is close to thresholds that will allow for carbonate precipitation most of the year, with measurements near the southern drain being more acidic (lower pH is required for calcification)

	<ul style="list-style-type: none"> • the microbial fabric changes over time, and there may be clay forming in mats in Lake Richmond now • lake level N and P are above and close to threshold guideline levels. Groundwater also contains nutrients.
<p>Liaison, education/provision of advice eg promotional material inc newspaper/ magazine articles, liaison with land managers/ owners, input to impact assessment, development of specific management plans, volunteers assisting with surveys/ monitoring etc.</p>	<p>In 2014-15, the recovery team continued to liaise with numerous groups including local government, industry and the local community to implement the recommendations in the recovery plan for the thrombolites, and the updated recovery plan for the sedgeland. In particular, members of the team were involved in negotiations to minimise impacts with regard to development of land, or in seeking to improve management of land at various sites, as follows.</p> <p>Amendments to the offsets proposed for IP14 were examined through collaboration between stakeholders including Parks and Wildlife and LandCorp.</p> <p>Liaison was continued with LandCorp about the Subdivision Guide Plan and Superlot Subdivision Guide Plan for the Lot 17 Bakewell Drive Port Kennedy sedgeland TEC occurrences.</p> <p>Regular liaison continued between Parks and Wildlife, the local community and City of Rockingham about weed control and other management issues at Lake Richmond.</p> <p>Liaison continued with Curtin University with regard results of postgraduate studies in Lake Richmond.</p>
<p>Land use/tenure changes eg covenants, acquisitions, changes in land use or listed purpose etc</p>	<p>Liaison was continued with LandCorp with regard to the boundary of the area to be proposed for reservation at IP14. Parks and Wildlife staff met with the developer's consultants with regard to offsets for Mangles Bay Marina including land acquisitions and rehabilitation.</p>
<p>Conservation status reviews for taxa/TECs eg nominations for additions, deletions or change in status to state threatened or priority lists; changes to EPBC list</p>	
<p>Recovery plans eg recovery plans/ IRPs drafted, approved, reviewed or updated</p>	<p>The Recovery Team recommended that the plan for Lake Richmond thrombolites be updated following provision of improved information from the postgraduate student projects that will help guide management.</p>
<p>Other actions completed</p>	<p>A representative from Naragebup and a hydrogeologist from UWA are new members of this team. Nathan Leslie and Sonja Creese are the new City of Rockingham representatives.</p>