State NRM Program
FINAL REPORT
2011

Urgent Endangered Flora Recovery
Project 09021

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Science Division
Department Of Environment and Conservation

Department of
Environment and Conservation

State NRM Program

FINAL REPORT

1. Project Administration

a. Project contact details

State ID	Project # 7		
Project Title (Use the same title as in original Funding Agreement / Schedule)	**Urgent Endangered Flora Recovery (ID = 09021)**		
Organisation			
Project Contact	**Dr David Coates**	**Ph:** (08) 9334 0490 **Fax:** (08) **Mobile: 0439 969 404** **Email: dave.coates@dec.wa.gov.au**	
Contact Address	**DEC Science Division** **17 Dick Perry Ave, Kensington WA 6151**		

b. Project Duration

	Month Year		Month Year
Originally Planned Start Date	26 October 2009	Originally Planned Completion Date	26 October 2010
Actual Start Date	26 October 2009	Actual Completion Date	26 October 2010

c. Total Project Funding Details. Please provide information over the life of the project on the actual financial contributions of the various stakeholders in the project, as set out below.

	State NRM Program Funds	Interest	Other Cash Contributions (please identify the source)	In-kind Contributions (please identify the source)	**Total Funds**
Approved	**$424,000**				
Received	**$424,000**			**$51,500** (DEC staff) **$1,800** (AWC Research Scientist) **$3,400.00** (volunteer community members) **$4,000** (uwa student and volunteers) **$2,500** (DEC vehicle running)	**$487,200**
Expended					
Unspent					

d. Asset purchases. Please list the assets (>$5,000) purchased by the project including item, purchase date, cost and the disposal details.

Asset	Date of Purchase	Cost	Disposal Date	Disposal Details (who to and where did the funds go)	Comments
N/A					

e. Intellectual property. Has any intellectual property been created that has the potential for exploitation and/or commercialisation, and for which the Intellectual Property Rights should be legally protected under Statutory and/or Common Law? **No**

If **YES,** please describe

f. Audited Financial Statement. (Have you attached a copy of the audited financial statement?) This financial statement must be for the life of the project and must be signed by an auditor and a member of your organisation.

Yes

2. NRM Asset

a. Please list the NRM asset(s) addressed by this project (as per the project proposal).

15 Critically Endangered plant species from South-West WA – Geraldton to Albany and inland to Mt Gibson

b. Please identify where the asset is located, including the nearest town and direction from it, and GPS location if available

Acacia aprica: Hannington's Farm Read road, Coorow. 9km north east of Coorow [29° 50' 17.6" S, 116° 06' 02.12 'E]

Acacia awestoniana: Stirling Range National Park 80km north west of Albany [33^{o} 28' 53.3" S, 122^{o} 37' 41.5"E)

Acacia cochlocarpa: Gunyidi. 16km north of Wanneroo [UTM 50H 411729mE, 6664414mN]

Acacia imitans: Mount Gibson Station, 47km south west of Payne's Find [29°36'05.4" S, 117°25'00.3" E]

Acacia unguicula: Mount Gibson Station, 47km south west of Payne's Find [29°36'05.4" S, 117°25'00.3" E]

Banksia ionthocarpa subsp. ionthocarpa: Kalgan Plains Nature Reserve. 50 km north of Albany.

Daviesia glossosema: Counsel's seed orchard, Syred rd Kamballup. 46km north-northeast of Albany. [UTM 50H 594550mE, 6169750mN]

Daviesia pseudaphylla: Counsel's seed orchard, Syred rd Kamballup. 46km north-northeast of Albany. [UTM 50H 594550mE, 6169750mN]

Eremophila nivea: West Perenjori Nature Reserve. 8km west of Perenjori

Grevillea acropogon: Chariup Block, Tone Bridge. 33km north west of Frankland [34° 16' 7.40" S, 116° 44' 4.11'E]

Grevillea calliantha: Minyulo Nature Reserve. 12 km west north west of Dandaragan [30° 38' 28.1" S, 115° 34' 35.7'E]

Grevillea humifusa: Hill River Nature Reserve. 15km east of Jurien. [UTM 50H 30° 17' 47.1" S, 115° 12' 20.8' E]

Lambertia echinata subsp echinata: Alexander Bay Nature Reserve 84km east of Esperance [UTM 50H 482410mE, 6255367N] and Coolinup Nature Reserve 40km north east of Esperance [UTM 50H 435498mE, 6267465mN]

Lambertia orbifolia subsp. orbifolia: Redmond Timber Reserve 9km south of Narrikup [UTM 50H 554525mE, 6144630mN]

Persoonia micranthera: Luscombe's Seed Orchard 46km north of Albany and Counsel's seed orchard, Syred rd Kamballup 46km north-northeast of Albany. [UTM 50H 594550mE, 6169750mN]

c. Please identify all **investment priority areas you addressed. (**Please refer to your project proposal)

Reverse the decline to extinction of 5 Critically Endangered plant species
Enhance translocation based recovery of another 10 Critically Endangered species

3. Key Achievements

a. Provide a brief summary (in dot point form) of the key achievements of your project. Refer to the key activities described in the Project Proposal and investment objectives/outcomes in your project schedule

- New translocation sites for all 15 species involved in this project were located.
- Translocation proposals for 15 species were written and approved.
- Memorandums of Understanding documents were developed between 2 landholders and DEC.
- 5312 seeds were cleaned, treated and germinated at the Threatened Flora Seed Centre
- All seedlings were established at KPBG nursery.
- 15 new populations of Critically Endangered plant species were established.
- 1 existing translocated population of CR *Grevillea acropogon* was more than doubled in size through enhancement planting
- Monitoring of translocated populations of 15 CR plant species commenced and data entered into departmental databases.
- Threatened Flora Translocation workshop was held in February 2010 with 50 participants.
- Interpretive path and signage installed at the *Acacia awestoniana* translocation site.
- UWA PhD project initiated on ecophysiology of translocated plants involving the *Banksia ionthocarpa* subsp*. ionthocarpa* and *Acacia awestoniana translocations.*

b. Please identify any significant unforseen issues that arose, whether they were resolved or not.

None identified

c. Did your project proceed as you anticipated? If not, why not, and identify any lessons learnt as a result.

Project proceeded as anticipated.

d. Identify all milestones achieved in your project under the following headings. Use the milestones described in the project schedule.

Milestone	Describe how/when it was achieved
Survey for potential translocation sites and monitoring	This was completed by December 2009 with new sites located and secured for the species involved in this project. The majority of sites located are on DEC lands

	with two sites being located on private property. The translocation site selected for *Acacia unguicula* and *Acacia imitans* is located on a pastoral lease held by the Australian Wildlife Conservancy and the site selected for *Acacia aprica* is located on private property registered as 'Land for Wildlife' near Coorow. Translocation proposals for 15 Critically Endangered plant species have been approved and two Memorandum of Understanding documents between landholders and DEC have been developed. Monitoring of existing translocations of species involved in this project was also completed.
Collection and preparation of seed material	This was completed by the end of 2009 with 5,312 seedlings germinated at the TFSC and sent to KPBG.
Establishment of propagules in nursery	All seedlings were established at the KPBG nursery by the end of 2009. Seedlings remained at the nursery until picked up for translocation. Some loss of seedlings occurred due to a severe hail storm in March 2010
Establishment of new populations and infill planting	New populations of 14 Critically endangered plant species containing 3,851 plants were established at new sites by August 2010. These include; *Acacia aprica* *Acacia awestoniana* *Acacia imitans* *Acacia unguicula* *Acacia cochlocarpa subsp. cochlocarpa* *Banksia ionthocarpa subsp. ionthocarpa* *Daviesia glossosema* *Daviesia pseudaphylla* *Eremophila nivea* *Grevillea calliantha* *Grevillea humifusa* *Lambertia echinata subsp. echinata* *Lambertia orbifolia subsp. orbifolia* *Persoonia micranthera* One existing translocated population of *Grevillea acropogon* has been expanded with 215 additional plants and associated infrastructure. Water tanks and reticulation systems have been installed at all sites. Stands for water tanks have been erected at two sites. All plants have been permanently tagged. Fences were erected at nine sites, including a 0.5ha goat, rabbit and kangaroo proof fence at Mount Gibson Station. 520 individual cages have been made for plants at three sites. Plants at three sites were provided with jute weed matting. Building on the work funded by this project a research program involving DEC and University of Western Australia has commenced on two of the translocated species (*Acacia awestoniana* and *Banksia ionthocarpa* subsp*. ionthocarpa*). This program aims to investigate the approaches for assessing translocation success and the ecophysiology of translocated plants. A PhD student will be working on the project until 2013.

Commence monitoring of newly established populations	Monitoring of newly established populations has commenced, with the first monitoring of all species completed by August 2010.
Complete threatened flora translocation workshop	A threatened flora translocation workshop was held at the end of February 2010 with 50 participants attending from a broad range of backgrounds including land owners, various NGO organisations, State NRM bodies, State Government, environment consultancy groups and industry.

e. Identify the milestones not achieved in your project under the following headings. **Use the milestones described in the project schedule.**

Milestone	Describe why it was not achieved and what proportion was, if any
N/A	

f. Identify all outputs achieved in your project under the following headings. Use the outputs described in the project schedule.

Output	Output measure used	Output measure proposed	Output measure achieved
Establish new secure populations for 5 Critically endangered plant species	Populations	**5**	**5**
Consolidate previous translocations for another 10 Critically Endangered plant species	Populations	**10**	**10**
Facilitate continued monitoring and maintenance of 10 Critically Endangered plant species	Populations	**10**	**10**

g. Identify all outputs not achieved in your project under the following headings. Use the outputs described in the project schedule.

Output	Output measure used	Output measure proposed	Output measure achieved
N/A			

4. Use of Project Results

a. Where have your results been used now and where do you anticipate them being used in the future?

The new populations of translocated plants will continue to be monitored and maintained. The data obtained from monitoring and establishing these populations will be used to determine the success of these translocations over the coming years and to improve techniques in establishment and maintenance of viable populations of threatened plants.

Data obtained from the PhD project on the ecophysiology of translocated plants will be incorporated into the

candidate's thesis, published in peer reviewed journals and will also make a significant contribution to developing methodologies for ensuring translocation success.

b. Please list any benefits this project has provided to other groups.

This project has provided research and educational material, and translocated plants for study by the University of Western Australia as part of both a PhD project and an Honours project.

c. What media coverage or other publicity did you use during the project?

Interpretive path and signage near the Stirling Range National Park at the *Acacia awestoniana* translocation site.

d. Please name all publications/reports/data collection compiled with the funding from this project. ***Note: Two CD copies of all products completed as a result of this project must be provided with this Final Report***.

DEC (2010) Translocation proposal: Blunt Wattle - *Acacia aprica* - Fabaceae
DEC (2010) Translocation proposal: Stirling Range Wattle - *Acacia awestoniana* - Fabaceae
DEC (2010) Translocation proposal: Spiral fruited Wattle – *Acacia cochlocarpa* Meisn. ssp *cochlocarpa:* Fabaceae
DEC (2010) Translocation Proposal: Mount Gibson Wattle and Nyingarn Wattle – *Acacia imitans* and *Acacia unguicula* - Fabaceae
DEC (2010) Translocation Proposal Extension: Kamballup Dryandra -*Banksia ionthocarpa* ssp*. ionthocarpa* - Proteaceae
DEC (2010) Translocation Proposal: *Daviesia glossosema* and *Daviesia pseudaphylla* – Fabaceae
DEC (2010) Translocation Proposal Extension: Silky Eremophila – *Eremophila nivea* – Myoporaceae
DEC (2010) Translocation Proposal: Foote's Grevillea: *Grevillea calliantha* – Proteaceae
DEC (2010) Translocation Proposal: Spreading Grevillea: *Grevillea humifusa* – Proteaceae
DEC (2010) Translocation Proposal: Prickly Honeysuckle: *Lambertia echinata* ssp*. echinata* – Proteaceae
DEC (2010) Translocation Proposal: Round leafed Honeysuckle*: Lambertia orbifolia* ssp*. orbifolia* – Proteaceae
DEC (2010) Translocation Proposal: Small flowered Persoonia: *Persoonia micranthera* – Proteaceae
Dillon R, Adams E, Barrett S and Cochrane A (2010) *An adaptive management strategy help recover Western Australia flora*. Poster presented at the 8th National Australian Network for Plant Conservation held in Perth September 2010.

e. How will this information be maintained for future use by other interested partners?

5. Participation

a. How many people have been directly employed in your project?

Full time	2
Part time	1
Casual	3

b. How many people have been actively involved in your project? (Please provide details below)

Regular	16
Less regular	28

c. Which groups/organisations/agencies have been involved in the project? List all who contributed to the planning, implementation, administration or financial (in-kind and/or cash) aspects of the project, eg community groups, schools, research organisations, government (Commonwealth, State, Local), business, Indigenous groups. (Please include your own organisation)

Name of Group/organisation/ agency	Type of Involvement (eg full-time employees, casual employees, volunteers, equipment, investigations, development of activities)	Number of Participants (please split into full, part time and casual employees and volunteers)	Financial contributions
DEC	Full time employees Planning, administration and implementation	22	In Kind ($44,400)
DEC	Casual employees: Implementation	3	
DEC	Part time: Planning and implementation	3	In kinds ($7,100)
Albany Wildflower Society	Volunteers: Implementation	5	In kind ($3,000)
Esperance Wildflower Society	Volunteers: Implementation	2	In kind ($400)
University of Western Australia	Students: Implementation	5	In kind ($4000)
Australian Wildlife Conservancy	Full time employee: Planning and implementation	1	In kind ($1,800.00)

d. Future Action

Describe any future actions that are planned or are likely to arise as a result of this project.

How is your organisation planning to maintain the project after funding has ceased? (eg who is responsible for ongoing maintenance and operations?)

The translocations will be maintained and monitored as part of the works program for DEC permanent flora conservation officers and the part time permanent role of a research scientist in DEC's science division. Additional actions to increase the likelihood of translocation success such as augmentation will depend on additional funding.

f. Group Declaration

This report must be signed by the funding recipient's (the Proponent) Delegated Officer.

In order to maximise the benefits of this Funding, information relating to all projects funded by the State NRM Program is regarded as in the public domain and will be made available to the public on request except for information which needs to be kept confidential. Under privacy legislation, personal information cannot be divulged without the consent of those involved.

Do you consent to the inclusion of contact name and contact details in response to public information requests concerning this project? Yes [X] No [ ]

I declare that the information given on this form is complete and correct.

Signature of Proponent's Delegated Officer			
Name	Dr David Coates		
Position in Organisation	Senior Principal Research Scientist		
Date	12 July 2011	Contact Number(s)	9334 0490