SALVAGE AND TRANSPLANTATION BY PROJECT

Project Site	Transplant Date	End of Monitoring Period	Activity	Survey Start Date	# of individuals identified in pre-construction surveys	# Salvaged	Transplant Site	# Alive	# Dead	# Missing	# Seeds	Contractor/Permitted Individual	Comments
Tuberolabium guamense													
J-001B	10/1/17	10/1/18	Salvage & Transplant	8/14/2017	11,847	1186	FEA	777	409			HDR/McConnell	• FEA = Forest Enhancement Area • Project Complete
J-001B	11/1/17	11/1/18	Salvage & Transplant			1912	FEA	1451	461			HDR/McConnell	
J-001B	12/1/17	12/1/19	Salvage & Transplant			371	FEA	313	58			HDR/McConnell	
J-001B	2/1/18	2/1/19	Salvage & Transplant			1258	FEA	883	375			HDR/McConnell	
J-001B	3/1/18	3/1/19	Salvage & Transplant			273	FEA	158	115			HDR/McConnell	
P-103	7/1/18	7/1/19	Salvage & Transplant	3/7/2018	3,310 (see comments)	171	FEA	1075	105	10		Sundance/EA/ Demeulenaere	Salvage operations occurred within a portion of Test Well #1 and all of Test Well #2. Additional plant salvage will occur within Test Well #1 and the Pump Station. Date TBD.
P-103	8/1/18	8/1/19	Salvage & Transplant			1019	FEA					Sundance/EA/ Demeulenaere	
P-715	7/1/18	7/1/19	Salvage & Transplant	12/19/2017	50	67	FEA	60	2	6		Sundance/EA/ Demeulenaere	Orchid salvage and translocation was completed in July 2018.
P-102	10/1/18	10/1/19	Salvage & Transplant	5/14/2018	178 (98 mature, 80 seedlings)	100	FEA	89	11			SWCA/McConnell	The irrigation system's wire short circuited and prompted the irrigation to turn back on. We were notified by NAVFAC and was addressed and shut down immediately. The orchids have already passed their weaning stage.
Dendrobium guamense													
J-001B	10/1/17	10/1/18	Salvage & Transplant	8/14/2017	17	4	FEA	3	1			HDR/McConnell	Project is complete.
J-001B	2/1/18	2/1/19	Salvage & Transplant			16	FEA	15	1			HDR/McConnell	
Bulbophyllum guamense													
J-001B	10/1/17	10/1/18	Salvage & Transplant	8/14/2017	68	10	FEA	10	0			HDR/McConnell	Project is complete.
J-001B	12/1/17	12/1/18	Salvage & Transplant			61	FEA	61	0			HDR/McConnell	
Cycas micronesica													
J-001B	10/1/18	10/1/19	Salvage & Transplant	8/14/2017	8	6	FEA	4	2			HDR/Wescom	Six transplanted cycads are maintained and monitored weekly. Periodic rainfall is recorded on Guam after a prolonged drought. • Cycads #2, 3 and 4 continue to appear to be scale free and healthy. - On 19 August 2019 Cycad #4 was noted to have sprouting new leaves on a dormant pup, the pup is probably too small to survive separation from the main stem. - New leaf growth was also observed on 19 August 2019 on Cycads #2 and #3. • Cycad #8 continues to show no signs of life and has been determined dead. • Cycad #1 had been wilting and turning yellow over the past two months. - Scale had been present; however, imidacloptid (BioAdvanced insecticide) appears to be effective in controlling the scale since the scale has turned brown and is easily removed. No other pathogens have been observed. Another application of Bio Advanced was made to Cycads #1 and #9 on 17 June 2019. - On 22 July 2019 a developing male cone was observed emerging on Cycad #1. Given the weakened state of Cycad #1 and advice of a regional cycad expert, it was recommended to remove the male cone since it serves no biological function and will place additional stress on the plant. This recommendation was forwarded to the Navy, and USFWS. The USFWS initially declined to grant permission to remove the male cone. - On 19 August 2019 Cycad #1 was showing new leaf growth on a second stem. • Cycad #9 leaves began rapidly wilting and yellowing in June 2019, and the tree showed evidence (frass) of stem tunneling by the native stem longhorn beetle (Cerambycidae). Another application of Bio Advanced was made to Cycads #1 and #9 on 17 June 2019. The effectiveness of imidacloptid, the active ingredient in BioAdvanced, against the longhorn beetle larva is unknown, however no additional fresh frass has been observed. This cycad continues to be monitored closely. • The one-year of monitoring will be completed on 3 October 2019 and it is currently expected that 4 of the 6 cycads will be surviving. The 4 surviving cycads are expected to be #1 (at least one stem), #2, #3, and #4.
Heritiera longipetiolata													
P-715			Salvage & Transplant	12/19/2017	1		NPN				6 seeds	Sundance/EA/ Demeulenaere	NPN = Native Plant Nursery
Tabernaemontana rotensis													
P-715			Seed collection	12/19/2017	150		NPN				~ 1,392 seeds from 20 different T. rotensis trees	Sundance/EA/ Demeulenaere	Seed collection fieldwork is ongoing. • Tabernaemontana rotensis monitoring and high value tree (HVT) seed collection site visits took place on 7, 15, & 22 of August. • On 7, 15, & 22 August, 34, 38 & 45 T. rotensis trees were observed to be flowering, budding, or to have immature fruit, resp. • No T. rotensis fruits or seeds were ready to be collected. • ~ 0.55 pounds of HVT seeds were collected in August from six species. Total collected to date is approximately 1.13 pounds (HVT seeds collected in August have not been delivered to the nursery, so weights are subject to government acceptance).
Hypolimnas octocula mariannensis													
P-715	7/1/18	7/1/19	Salvage & Transplant	12/26/2017	See Comments	24	Northwest Field Ungulate Control Area					Sundance/EA/Fiedler	Life stages observed on E. calcareum included 72 eggs (over 50% were black), one adult, one empty chrysalis, and two larvae. Approximately 242 eggs (over 50% were black), one adult, and five empty chrysalises were recorded on P. pedunculata within the project footprint. Insect, ungulate, and slug feeding and grazing damages on both host plants in the project footprint were observed. Exact numbers of translocated life stages, and feeding & grazing damages will be recorded during translocation activities.
Partula radiolata													
J-755	1/9/19	1/9/20	Salvage & Transplant	2/1/2017	694	694	Haputo Ecological Reserve Area					HDR/Janeke	• The fourth snail fieldwork event began on 31 July and continued through August 21. The fieldwork focused on surveying the fenceline encroachment areas, the CVOC, the MOUT, and the Grenade Range. A new snail salvage area was identified in the Grenade Range, immediately south of other snail populations along the dirt road. No additional snails were translocated during the fourth fieldwork event. The results of all of the surveys in suitable snail habitat at the end of the fourth fieldwork event are shown in Attachment 1. • A fifth snail fieldwork and translocation event is expected in September/October. This fieldwork will survey the remaining suitable snail habitat in the construction footprint and then continue with translocation efforts.