

TRIGGERS, THRESHOLDS AND CONTINGENCY ACTIONS FOR MANAGEMENT OF TEC / PEC VEGETATION

APPENDIX G TRIGGERS, THRESHOLDS AND CONTINGENCY ACTIONS FOR MANAGEMENT OF TEC / PEC VEGETATION

Triggers, thresholds and contingency actions for TEC / PEC vegetation included in this EMP are detailed in Table 1.

The number and type of contingency actions to be implemented in the case of trigger exceedance will depend upon various factors, including the state of the natural surrounding environment, the location of the trigger and the works undertaken at the time of the exceedance. The process followed in the event of a flooding or inundation threshold breach is displayed in Figure 1.

A reportable decline is considered where monitoring shows a 20 per cent decline in the species composition and / or health attributes of the TEC / PEC monitoring sites against the change at reference sites.

Table 1 Triggers, thresholds and contingency actions

MONITORING PARAMETER	TRIGGER	THRESHOLD	CONTINGENCY ACTION
Erosion	Evidence of new erosion in monitored TEC / PEC vegetation	Evidence of new erosion in monitored TEC / PEC vegetation	<ul style="list-style-type: none"> • Investigate the cause and raise an incident report if new erosion is caused by Proposal activities • Remedial action controls will be undertaken immediately to repair damage if required • Preventative actions such as modifications to infrastructure and additional engineering post-construction will be taken to prevent further non-compliance. These may include controls outside of monitored TEC / PEC vegetation to ensure no indirect impacts such as: <ul style="list-style-type: none"> - Application of fill/mulch - Installation of gabion cages - Installation of jute matting to secure bank. • A review will be conducted of management measures and/or further education of staff/contractors to ensure that all possible steps are taken to prevent any reoccurrence • Monitor the effectiveness of the control(s).
Flooding/inundation	TEC / PEC vegetation is inundated or flooded for 24 hours as a result of Proposal activities	TEC / PEC vegetation is inundated or flooded for three consecutive days as a result of Proposal activities	<ul style="list-style-type: none"> • Remedial action controls will be undertaken immediately to repair damage if required • Attempt to contain flooding if practicable (i.e. use of bunding to re-direct floodwaters away from TEC vegetation) • Determine if rehabilitation is required (i.e. if soil erosion is evident) in consultation with DBCA if within TEC / PEC areas. • Develop and implement a rehabilitation plan if necessary and consult the relevant government regulator as required • A review will be conducted of management measures and/or further education of staff/contractors to ensure that all possible steps are taken to prevent any reoccurrence • Monitor the effectiveness of the control(s).
Drying of Claypan TEC vegetation	Plant health scores decline by one health class relative to control sites in two consecutive monitoring periods	Drying continues to breach trigger levels two months after management / mitigation measures are implemented	<ul style="list-style-type: none"> • Investigate the cause and raise an incident report • Cease dewatering or other drying activities • Remedial action controls will be undertaken immediately to repair damage if required. This may include the application of water to TEC vegetation in consultation with DBCA • Preventative actions such as modifications to infrastructure and additional engineering post-construction will be taken to prevent further non-compliance • A review will be conducted of management measures and/or further education of staff/contractors to ensure that all possible steps are taken to prevent any reoccurrence • Monitor the effectiveness of the control(s).

MONITORING PARAMETER	TRIGGER	THRESHOLD	CONTINGENCY ACTION
Groundwater levels	25% variance from baseline	25% variance from baseline	<ul style="list-style-type: none"> Investigate the cause and raise an incident report if necessary. Include consideration of results from baseline monitoring and comparison with reference sites for the same period Refer to contingency actions for drainage structures (functioning of culverts etc) A review will be conducted of management measures and/or further education of staff/contractors to ensure that all possible steps are taken to prevent any reoccurrence Monitor the effectiveness of the control(s).
Water quality parameter(s)	Exceedance of ANZECC guideline values ¹ (slightly/moderately disturbed wetlands in the SW) and/or significant difference from baseline conditions in one monitoring period	Exceedance of ANZECC guideline values (slightly/moderately disturbed wetlands in the SW) and/or significant difference from baseline conditions in two consecutive monitoring periods	<ul style="list-style-type: none"> Investigate the cause and raise an incident report if necessary. Include consideration of results from baseline monitoring and comparison with reference sites for the same period Remedial action controls will be undertaken if required – to be determined based on likely cause eg spills, sedimentation or erosion A review will be conducted of management measures and/or further education of staff/contractors to ensure that all possible steps are taken to prevent any reoccurrence Preventative actions such as modifications to infrastructure and additional engineering post-construction will be taken to prevent further non-compliance Monitor the effectiveness of the control(s).
Fire	Sparks or unplanned fire resulting from Proposal activity that have the potential to impact TEC / PEC vegetation	Sparks or unplanned fire detected from project activity within 100 m of TEC / PEC vegetation	<ul style="list-style-type: none"> Implement emergency evacuation and response plans Investigate cause and raise an incident report Review management procedures.
Reportable decline	TEC / PEC vegetation health declined	TEC / PEC vegetation monitoring parameters have decreased greater than 20 per cent in comparison to the change at reference sites	<p>Reportable decline:</p> <p>If monitoring identifies that the TEC / PEC vegetation monitoring parameters have decreased (greater than 20 per cent) in comparison to the change at reference sites (reportable decline) the following will occur:</p> <ul style="list-style-type: none"> Review hydrological monitoring to confirm whether any incidents have occurred. If incidents have occurred, review these to determine their nature and extent and whether

¹ Suitability of ANZECC guidelines as triggers will be reviewed at the end of collection of baseline and if required site specific trigger values will be developed.

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			<p>they could have impacted the sampling sites. Implement Hydrological contingency actions as detailed in Section 2.4.2</p> <ul style="list-style-type: none"> • If there have been no environmental incidents recorded / occurred, assess monitoring sites and their adjacent area for evidence of other impacts, such as erosion or sedimentation, dumping of waste, dust accumulation on vegetation or an increase in weed species. Assess these impacts to determine whether they are likely to be sourced from the Project i.e. does the erosion extend from the Project boundary into the TEC or is there evidence of alternative pathways • Report findings to EPA / DBCA and implement management actions if impacts attributable to the Proposal are detected • Monitor effectiveness of management actions and recovery of TEC / PEC vegetation. Update / revise management measure if needed (impact persists despite management actions).

Figure 1 Threshold breach response process

