

Management Options

Within the PPWP CMA region the salinity hazard posed by this GFS is relatively minor, although there are particular areas where the hazard is concentrated. Where salinity does occur it is often in areas (Pakenham and Clyde North) that were naturally waterlogged and probably brackish. Salinity control in these circumstances would aim at reducing (but not eliminating) the extent and magnitude of waterlogging and salinity.

The Quaternary sediments often occur in parts of the landscape that are transitional between fractured rock uplands and broader plains and lowlands, and are therefore influenced by the hydrological processes occurring in these neighbouring landscapes. Owing to their limited lateral extent, the management of salinity in the Quaternary sediments will have minimal impact on downstream GFSs.

In some areas of primary salinity, particular management strategies may be needed to retain the biodiversity values. Indigenous halophytic ecologies generally have a high conservation value, and are especially important in the larger estuarine wetlands of Port Phillip Bay and Western Port Bay.

| Dryland agriculture options for managing salinity in local flow in the Quaternary sediments. | | |
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| Salinity focus: Pakenham, Clyde Nth | | |
| Options | Treatments | Comments |
| Biological Management of recharge | Perennial pastures | Low impact – salinity affected alluvial plains interpreted to be naturally waterlogged. Rainfall above 700mm. |
| | Crop management | Low impact– rainfall above 700mm |
| | Trees/woody vegetation | Low to moderate impact– some potential for recharge and waterlogging control on plains/swamps, but requiring high density revegetation (unlikely) |
| Engineering intervention | Surface drainage | Low impact– little ability to intercept surface water except on gradient footslopes. Disposal issues |
| | Groundwater pumping | Low impact– limited opportunities, but where asset protection makes it warranted. Shoestring sand aquifers where identifiable present potential pumping sites |
| Productive uses of saline land and water | Salt tolerant pastures | Moderate impact– waterlogging tolerance required on flats. |
| | Halophytic vegetation | Low to Moderate impact– generally poorly suited to climate |
| | Saline aquaculture | Low impact– not suited to environs |
| | Salt harvesting | Low impact– groundwater is not sufficiently saline |
| | Others | Consider revegetating low lying areas with indigenous waterlogging and salt tolerant trees (e.g. Melaleuca). See OPUS database (NDSP) |

Management implications given projected land use

Development pressures are apparent at both the Pakenham (urbanisation) and Clyde North (waste water re-use) salinity affected locations. Both regions are predisposed to broad areas of shallow watertable and surface waterlogging. This has significant implications for the viability of both forms of development, and could lead to preclusion of development in some instances. Where development does occur it may need to be engineered to withstand local conditions, and may need to avoid applying additional hydrological loadings across the landscape.