



**Northern
Territory
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Department of Health
and Community Services

Mosquito Survey Alice Springs 4-5 September 2006

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MEB Branch Report

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1.0 INTRODUCTION

The Operations Manager and the Development Planning and Vector Control Officer of the Medical Entomology Branch (MEB) went to Alice Springs on 4-5 September 2006 to inspect the Alice Springs storm water drains and the Ilparpa swamp. The purpose of the MEB visit was to both make recommendations on storm water drain maintenance and rectification works required in Alice Springs and to inspect the Ilparpa swamp drainage system to reduce mosquito pest and disease potentials for the people of Alice Springs. MEB staff met with local EH staff, Fiona Smith and Philip Ahchee and a representative of the Alice Springs local Town Council (ASTC).

2.0 ALICE SPRINGS DRAIN INSPECTIONS

2.1 General

MEB staff inspected the Alice Springs stormwater drains on 4th and 5th September 2006, in liaison with Fiona Smith and Philip Ahchee from Alice Springs EH and Trevor Packham from the Alice Springs Town Council. All parties met at the Town Council Depot to discuss drain maintenance issues in Alice Springs.

The MEB was informed by Trevor Packham that ownership of the Alice Springs stormwater drains was an issue. The Alice Springs Town Council has been maintaining most of the Alice Springs drains in the interim as a public health measure. He is under the impression that Alice Springs drains were owned by DIPE. However, some of the drains have not been maintained either by the Council or DIPE. It was agreed to address the issue by outlining the ownership problems in correspondence to the Alice Springs Town Council and DIPE.

Currently the Alice Springs Town Council allocates \$50,000 per annum for drain maintenance in Alice Springs. This budget is used to employ a “super sucker” that clears drains of debris and silt. Drains in certain areas of town are targeted once a year. The Larapinta area will be targeted in the next six months.

A drain inspection was carried out on the morning of 4/9/06. Drains that have recently been maintained by the Council included parts of the Larapinta drain, Ellery drain, Bradshaw drain, Bloomfield drain, the drain along the Stuart Highway, Smith Street drain and parts of the Sadadeen drain. The Council assured the MEB that maintenance work will be carried out on the Todd River finger drains within the next two weeks.

Drains found in poor condition requiring maintenance or rectification works included the Railway yard drain, Bokhara drain, Larapinta drain, Undoolya drain, Sadadeen drain, Brown Street drain, Bloomfield drain and the Casino drain (see Appendix 2). It was agreed to address specific drain maintenance and rectification issues in correspondence to the Alice Springs Town Council and DIPE (see Appendices 1 and 3).

2.2 Bloomfield drain:

On 5th sep 2006 the MEB, Alice Springs EH and the Alice Springs Town Council inspected some of the Bloomfield drain site entry pits located close to the foot bridge opposite Milner Street (see Appendix 2). Relatively high numbers of *Culex quinquefasciatus* in this locality has been an issue in recent years, and the breeding source has not been previously located. Water was pooling at the end of the culvert and one of the pipes held water throughout its length under the footbridge. The second pipe was blocked by silt and most likely held water as well. Some rubbish was removed from the pipe and water containing mosquito larvae and pupae flowed out and pooled in front of the culvert.

One of the site entry pits at the corner of Milner and Bloomfield Street also held water. The local Council staff member informed MEB that it has been previously determined that the drain pipe collapsed in front of Lot 2907 along Bloomfield Street and was holding water. It was agreed to recommend fixing of the drain pipe to prevent further mosquito breeding and to recommend that the culvert was connected to the concrete drain invert to ensure free water flow and prevent water from pooling in front of the culvert. It was further agreed to clean the Bloomfield Street drain again using the “super sucker”.

2.3 Casino drain

On 5th September 2006 the Casino drain was inspected. The drain was overgrown with Typha reeds (bullrush) and holding water. Part of the drain, between the bridge and the Casino is owned by the Casino, while the other half is under DIPE responsibility. It was agreed to recommend to DIPE and the Casino manager for weediciding and removal of the Typha reeds, as well as lining the drain with a concrete invert, as a long term solution to ensure water flow.

3.0 ILPARPA SWAMP

On 4th September 2006 the MEB and Alice Springs EH inspected the PAWA sewage ponds and the Ilparpa swamp (see Appendix 2, Fig. 1). The sewage ponds were generally in good condition. However, ponds A and C required weediciding along the edges. It was agreed the Alice Springs EH would contact PAWA to request weediciding. Most of the Ilparpa swamp was dry with just a few pools left due to seepage from the ponds.

The MEB was advised that the plantation sprinklers east of ponds B were not in use any longer due to high maintenance issues, but discharge into the plantation was still carried out. At EP10 the “rocket” (dispersal machinery, see Appendix 2) was used to disperse treated effluent into Ilparpa swamp. To reduce pond levels, treated effluent is also dispersed by sprinklers at Blatherskite Park.

The finger drains and the Ilparpa swamp main outlet drain were found in good condition. However, the OUD south of Ilparpa Road, leading into St Mary's Creek requires maintenance work (vegetation clearing) to ensure free water flow (see Appendix 2).

4.0 OVITRAP PROGRAM

On 5th September 2006 it was agreed to establish an additional ovitrap outside the Alice Springs airport building. Alice Springs EH is to advise the airport management of the ovitrap.

5.0 CONCLUDING REMARKS

The Alice Springs stormwater drains were mostly dry at the time of the MEB visit due to lack of recent rainfall. Recent maintenance work has been carried out in some of the drains, but some drains were found in poor condition. The main issue to address is storm water drain ownership between the Alice Springs Town Council and DIPE. Of all drain maintenance and rectification works required, rectification of the Bloomfield Street drain and the Sadadeen drain should be made a priority. Correspondence was prepared and sent to the Alice Springs Town Council and DIPE in September 2006 (Appendix 3).

The Ilparpa swamp was mostly dry at the time of visit. However, overnight temperatures are starting to increase and no further discharge is recommended from the sewage ponds into Ilparpa swamp to prevent mosquito breeding. Excess effluent should be dispersed by sprinklers and other methods that do not lead to surface ponding. Any discharge into Ilparpa swamp should only be out of EP7 (ponds A), as the effluent will be drained out of the swamp through channels into St Marys Creek. It is recommended to dispose of as much effluent as possible through managed sprinkling during the summer months. Maintenance of the OUD south of Ilparpa Road is recommended to prevent water pooling and subsequent mosquito breeding.

APPENDIX 1

Maintenance required for each of the following drains is:

1. Bokhara Street drain

The vegetation needs to be removed and levels of the drain re-assessed to ensure free flow of water.

2. Larapinta Drive drain

The vegetation needs to be removed and levels of the drain re-contoured to ensure free flow of water. Concrete lining of the drain needs to be considered and a concrete invert is recommended to prevent water from sitting in the pipe (photo 11 & 12).

3. Bloomfield Street drain

The culvert opposite Milner Street holds water and mosquito breeding is frequently found (photo 1). The MEB is of the understanding that the drain pipe collapsed and is holding water opposite Lot 2907 (photo 2). The pipe needs to be fixed and the culverts desilted to ensure free flow of water. The concrete pad in front of the culvert needs to be lined up with the concrete invert of the Bloomfield drain to prevent water pooling (photo 1). Frequent mosquito breeding has been found in this drain. Thus, rectification of this drain should be made a priority.

4. Undoolya Street drain

The vegetation needs to be removed (photo 16) and the drop structure to be filled to prevent water pooling (photo 17).

5. Sadadeen Street drain

The vegetation needs to be removed and the drop structure to be filled to prevent water pooling (photo 15). The whole drain between the culvert (including the culvert) (photo 14) and the Todd River needs to be re-levelled to allow water to flow freely. After re-levelling the drain needs to be maintained and desilted on an annual basis. Rectification and annual maintenance of this drain should be made a priority.

6. Railway Yards drain

The drop structure opposite the railway yards is holding water (photo 13). As the water seems to pool in the drop structure only, it is recommended to treat this area with methoprene briquettes to prevent mosquito breeding.

7. Brown Street drain

The drain needs to be re-levelled to ensure free flow of water out of the culvert and along the drain (photos 5 & 6).

8. Casino drain

The part of the Casino drain under DIPE responsibility needs to be cleared of typha reeds and other vegetation (photos 7 & 8). It is recommended to weedicide the typha reeds twice within two weeks, with the weedicide mentioned above, before cleaning out the drain. The casino manager will be notified to maintain their part of the drain. A concrete invert is also recommended as a long term solution for this drain to ensure free flow of water.

9. OUD south of Ilparpa Rd

The area the OUD drains into between Ilparpa Rd and St Mary's Creek needs to be cleared of vegetation to ensure free flow of water into St Mary's Creek (photo 18).

APPENDIX 2



Photo 1: Pipe outlet into Bloomfield St drain opposite Millner Rd.



Photo 2: Site entry pit along Bloomfield St. Pipe collapsed and holding water in front of Lot 2907.



Photo 3: Site entry pit holding water on corner of Bloomfield St and Milner Rd.



Photo 4: Bloomfield St drain. Filled in drop structure.



Photo 5: Brown St drain.



Photo 6: Brown St drain drop structure.



Photo 7: Casino drain, overgrown with Typha and holding water.



Photo 8: Casino drain, overgrown with Typha and holding water.



Photo 9: Ellery St drain.



Photo 10: Ellery St drain, maintenance works carried out in Sep 06.



Photo 11: Larapinta drain.



Photo 12: Larapinta drain.



Photo 13: Railway Yard drain, drop structure holding water.



Photo 14: Sadadeen drain. Culvert holding water.



Photo 15: Sadadeen drain. Drop structure holding water.



Photo 16: Undoolya St drain.



Photo 17: Undoolya St drain drop structure.



Photo 18: Drainage area between OUD under Ilparpa Rd and St Mary's Creek.



Photo 19: Ilparpa swamp, EP7 drain outlet.



Photo 20: Ilparpa swamp finger drain, leading into OUD.



Photo 21: Ilparpa swamp finger drains, leading into OUD.



Photo 22: Ilparpa swamp main drain (OUD)



Photo 23: Ilparpa swamp, OUD leading into St Mary's Creek, south of Ilparpa Rd.



Photo 24: Ilparpa swamp, OUD south of Ilparpa Rd.



Photo 25: Ilparpa swamp, effluent dispersal at EP 10 overflow.



Photo 26: Ilparpa swamp, ponds B overflow.



Photo 27: Ilparpa swamp, ponds B overflow.