SIR REGIONAL CATCHMENT STRATEGY

Annual Report 2003/2004

PROGRAM: SIALM

PROJECT NO: 14998

PROJECT TITLE: Increasing Water Use Efficiency Through Strategic Water Harvesting – Shepparton Irrigation Region (Drainage Nutrient Removal Incentive Scheme)

SCHEME BACKGROUND:

The Drainage Nutrient Removal Incentive Scheme was introduced in April of 1998 to encourage landowners to construct strategically located storages (drainage nutrient removal systems) to collect and use regional drainage water. The water and nutrients collected can be used productively, and are not lost to areas of the catchment where they may cause problems such as blue green algae blooms. These storages can increase the volume of water available to the irrigator and reduce the amount of nutrient rich water entering our catchments.

PROJECT TARGETS:

Long term:

- 1. Increase the amount of nutrient-rich water diverted from regional drains and used productively on farm by 25%.
- **2.** Capture 10,000 ML of water savings from regional and farm drainage to be used for maximum public benefit.
- 3. Improve irrigation management across 50% of the newly drained SIR in the next 5 years.
- 4. Contribute significantly to the Goulburn Broken Water Quality Strategy goal of reducing phosphorous and nitrogen drain loads by 50% by 2016 through decreasing the amount of poor quality (high nutrient/salt) water leaving the catchment and flowing into environmentally sensitive waterways.

Short term:

- 1. Construct 6 storages per year providing a storage capacity of approximately 3,600 ML.
- Divert 7,200 ML of water from the regional drainage system to prevent flows into the River Murray and improve water use efficiency on 4,500 hectares of irrigated land.
- 3. Retain 3.5t of Phosphorous and 14.0t of Nitrogen within the catchment.

4. Improve water use efficiency on individual properties, save irrigation water for other uses such as environmental flows and protect the catchment from poor quality drainage water

PROGRESS AGAINST TARGETS:

For the past couple of years the SIR has suffered dry conditions and the low rainfall and low irrigation water allocations has resulted in a reduced occurrence of high flow conditions in drains.

With the low rainfall, only 2 storages were constructed this year. The storages were spaced around the SIR with 1 storage at Tallygaroopna, a 120 ML and a 200 ML storage at Strathmerton. . Another 4 were planned for this year but with conditions uncertain they were postponed and will be completed next financial year.

There were 4 new applications this year and all were approved at the Surface Water Management Working Group. One constructed this year, a 200ML storage at Strathmerton. The remaining 3, a 220ML storage at Strathmerton, a 100ML storage at Strathmerton and a 50ML storage at Echuca were approved for the 2004/2005 financial year and two have begun construction. In addition to the 3 new applications, there are currently a further 3 approved applications waiting to construct.

Since the scheme commenced the total number of high flow storages built in the SIR, within the GBCMA area, with assistance from the incentive scheme is 23, with a storage capacity of 4,363 ML.

| | Expected | | | | Actual | | | | | | | | | |
|--------|----------|--------------|--------|------|------------|-------|-------|----------|------|----------|----------------|-----------------------|-----------|-------------|
| | No | | | | | No | | | | | | | Total | Cost - |
| | Const | Grai | nts | Tota | l(Inc GST) | const | Gra | nts Paid | | GST | Total C 200 | Grants Paid 3/2004 | Landowner | (estimates) |
| July | 0 | \$ | - | \$ | - | 0 | \$ | - | \$ | - | \$ | - | \$ | - |
| Aug | 0 | \$ | - | \$ | - | 0 | \$ | - | \$ | - | \$ | - | \$ | - |
| Sep | 1 | \$ | 20,000 | \$ | 22,000 | 0 | \$ | - | \$ | - | \$ | - | \$ | - |
| Oct | 0 | \$ | - | \$ | 22,000 | 0 | \$ | - | \$ | - | \$ | - | \$ | - |
| Nov | 0 | \$ | - | \$ | 22,000 | 0 | \$ | - | \$ | - | \$ | - | \$ | - |
| Dec | 2 | \$ | 40,000 | \$ | 66,000 | 0 | \$ | - | \$ | - | \$ | - | \$ | - |
| Jan | 0 | \$ | - | \$ | 66,000 | 0 | \$ | - | \$ | - | \$ | - | \$ | - |
| Feb | 0 | \$ | - | \$ | 66,000 | 1 | \$ 16 | ,428.03 | \$1 | 1,642.80 | \$ 18 | ,070.85 | \$ 72,4 | 00.00 |
| March | 0 | \$ | - | \$ | 66,000 | 0 | \$ | - | \$ | - | \$ | - | \$ | - |
| April | 0 | \$ | - | \$ | 66,000 | 0 | \$ | - | \$ | - | \$ | - | \$ | - |
| May | 0 | \$ | - | \$ | 66,000 | 0 | \$ | - | \$ | - | \$ | - | \$ | - |
| June | 3 | \$ | 60,000 | \$ | 132,000 | 1 | \$ 20 | ,000.00 | \$ 2 | 2,000.00 | \$ 22 | ,000.00 | \$ 230, | 00.00 |
| Totals | 6 | \$1 2 | 20,000 | \$ | 132,000 | 2 | \$ 36 | ,428.03 | \$3 | 3,642.80 | \$ 40 | ,070.85 | \$ 302, | 400.00 |

GRANT EXPENDITURE 2003/2004



PROJECT SALARY AND OPERATING EXPENDITURE 2003/2004

| | | BUDGET | EXPENDITURE | CARRY FORWARD |
|----------------|--|-----------------------|----------------------|------------------|
| 12923 14998 | Strategic Water Manag NAP (salaries) Strategic Water Manag | \$67,100 \$100,000 | \$67,100 \$36,430 | \$0 \$63,570 |
| | (Grants) | | | |
| | TOTAL | \$167,100 | \$61,670 | \$63,570 |

RESULTS FROM DNRIS 2003/2004:

During July 2004, a majority of landholders with systems constructed were contacted to determine the volumes of water collected and used for irrigation. Samples of the water were taken and tested for salinity and phosphorous levels.

| Water Service | ML Capacity | Volume | Phosphorous | Salt Saved | |
|------------------|-------------|---------------|----------------|------------|--|
| Area | Constructed | Diverted (ML) | Saved (tonnes) | (tonnes) | |
| Central Goulburn | 1,658 | 1,985 | 1 | 631 | |
| Murray Valley | 1,315 | 2,010 | 3 | 518 | |
| Shepparton | 1,240 | 2,360 | 1 | 200 | |
| Rochester (GBCMA | 150 | 100 | 0 | 0 | |
| Section) | | | | | |
| Total | 4,363 | 6,455 | 5 | 1,349 | |

** Samples were not obtained from all 23 storages.

Nearly all of the 23 storages were able to divert and store water during 2003/2004, which is an improvement on last year's numbers of only16 out of 21. A majority of the storages had water stored in them going into the 2003/2004 season due to the rain that fell during July 2003.

Other Works Carried out by the Project Team:

- Project staff wrote a paper tilted "The Benefits and Costs of Drainage Nutrient Removal Systems"
- Project staff were involved in the organisation and running of the DPI site at Stanhope Field Days informing landowners of incentives available in the SIR.
- Project staff conducted Saltwatch activities with Echuca West Primary School, Lockington Primary School and also involved in Matter of Salt day run at Tatura by Dhurringile LAP staff.
- Project staff were involved in Careers Day Out informing high school students on careers in DPI/DSE.
- Project staff continually attended Surface Water Management Working Group
- Project staff became member of Community Monitoring Steering Committee (Goulburn Murray Landcare Network run committee for Waterwatch and Nutrients in Drains projects)
- Project staff completed Certificate IV in Workplace Training and Assessment and ran training days with other DPI team members as part of course.
- Project staff commenced work with the Community Surface Water Management Program.

PRESENTATIONS TO CONFERENCES/WORKSHOPS:

- Project staff spoke/presented at the ANCID Conference in Shepparton on the written paper "The Benefits and Costs of Drainage Nutrient Removal Systems".
- Project staff spoke/presented to Murray Irrigation Limited staff on the 2 day Community Surface Water Management Program workshop/trip to Finley/Deniliquin.
- Project staff were involved in discussions with Minister Bob Cameron when he visited the Echuca DPI office.

GROUPS HOSTED BY PROJECT STAFF:

- There were no groups hosted by Project staff this year

PUBLICATIONS:

- An article was submitted for inclusion in Pumpers Trumpet (targeting groundwater users)

GEOGRAPHIC INFORMATION SYSTEMS:

This year has seen the continued use of Geographic Information Systems (GIS) to map where storages have been constructed and where storages are planned for the future. All Local Area Plan (LAP) boundaries have been added to the map to indicate any storages which fall into these areas. At present 9 of 23 constructed storages fall into a LAP boundaries.

| | Actual – since 1998 | | | | | | |
|---------------------|---------------------|---------|-----------------|--|--|--|--|
| LAP AREA | No | ML of | TOTAL | | | | |
| | | storage | COST (incl GST) | | | | |
| Bunbartha/ | 2 | 180 | \$33,307.49 | | | | |
| Karimba/Zeerust | | | | | | | |
| Nathalia & District | 4 | 1050 | \$66,000 | | | | |
| Cornella | 0 | - | - | | | | |
| Dhurringile | 0 | - | - | | | | |
| Invergordon | 1 | 150 | \$22,000 | | | | |
| Nanneella | 0 | - | - | | | | |
| Muckatah/ Naring | 1 | 65 | \$21,517.86 | | | | |
| Wyuna | 1 | 250 | \$20,000.00 | | | | |
| TOTAL | 9 | 1695 | \$162,825.35 | | | | |

CONCLUSION:

Despite or as a result of, the drought and resulting conditions ie, low water allocations, low rainfall, interest in the DNRIS increased with several new applications.





A 200ML storage built 2003/2004 at Strathmerton.

