

### **Exercise: Compiling the SEEAW Hybrid Account for water supply and use**

Use the data from the Australia Water Accounts and other information provided to populate the standard SEEAW Hybrid account for the supply and use of water.

You do not have all of the information needed or some of the information is combined (e.g. some data for the water supply and sewerage industries (ISIC 36 and 37) are combined, so do this as best you can. A blank table is found over the page.

For the missing or combined information think of ways you may be able to split the data or fill the data gaps. For the missing data think in terms of:

- Would the missing data currently exist?
  - If so where; and how would you get it?
- If the data do not exist, how could produce or estimate it?

#### **Resources:**

1. Australian physical supply table 2004-05 (attached)
2. Australian physical use table 2004-05 (attached)
3. Water Supply and Sewerage Industries: Summary of Operations and Industry Value Added; Australia, 2001-02 to 2004-05 (attached)
4. Tables from the Australian experimental monetary account 2004-05 (attached)

**Australian Bureau of Statistics**  
**4610.0 2004-05 Water Account, Australia**  
**WATER USE, Australia—2004-05**

	Use				Consumption
	Self-extracted	Distributed	Reuse	In-stream	
<b>Agriculture</b>					
Dairy farming	856993	1339473	79136	0	2275603
Vegetables	307033	132544	15796	0	455373
Sugar	404068	858767	6177	0	1269012
Fruit	306978	339315	1370	0	647662
Grapes	191363	522029	3655	0	717047
Cotton	1697245	122071	2194	0	1821509
Rice	224806	394158	11908	0	630872
<b>Livestock, pasture, grains &amp; other</b>					
Livestock	935396	100078	0	0	1035474
Pasture	1000850	887144	39898	0	1927892
Grains	461815	582098	118356	0	1162268
Other	195887	51337	1436	0	248659
Total	2593948	1620656	159689	0	4374293
<b>Total</b>	<b>6582435</b>	<b>5329012</b>	<b>279925</b>	<b>0</b>	<b>12191372</b>
Services to agriculture; hunting & trapping	3103	782	0	0	3885
Forestry and fishing	391580	23692	17483	385158	47596
<b>Mining</b>					
Coal mining	117503	31537	5933	32914	117803
Oil & gas extraction	30144	1565	0	19753	11956
Metal ore mining	337512	26150	1335	127560	229791
Other mining	43944	12951	0	3179	53716
Total	529103	72203	7268	183406	413266
<b>Manufacturing</b>					
Food, beverage & tobacco	76645	137039	1345	0	215029
Textile, clothing, footwear & leather	2451	12793	0	0	15244
Wood & paper products	52933	46176	129	0	99238
Printing, publishing & recorded media	92	6320	3	0	6416
Petroleum, coal, chemical & associated prod	14700	47974	7649	0	70304
Non-metallic mineral products	6490	13403	0	0	19893
Metal products	92742	60743	3885	0	146218
Machinery & equipment	101	15345	24	0	15469
Other manufacturing	7	1515	0	0	1522
Total	246162	341308	13035	0	589333
Electricity & gas	60171834	114720	6002	59867227	271220
Water supply, sewerage & draige services	11159809	2044529	38514	0	2083043
Other industries	467360	531419	60621	0	1059400
Household	232446	1874050	1767	0	2108263
Environment	0	1005277	0	0	0
<b>Total</b>	<b>79783832</b>	<b>11336992</b>	<b>424615</b>	<b>60435791</b>	<b>18767379</b>

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**Australian Bureau of Statistics**  
**4610.0 2004-05 Water Account, Australia**  
**WATER SUPPLY, Australia—2004-05**

	Supply			
	Self-extracted	Distributed	Reuse	Regulated discharge
Agriculture				
Dairy farming	0	0	0	
Vegetables	0	0	0	
Sugar	0	0	0	
Fruit	0	0	0	
Grapes	0	0	0	
Cotton	0	0	0	
Rice	0	0	0	
Livestock, pasture, grains & other				
Livestock	0	0	0	
Pasture	0	0	0	
Grains	0	0	0	
Other	0	0	0	
Total	0	0	0	
Total	0	0	0	
Services to agriculture; hunting & trapping	0	0	0	
Forestry and fishing	0	0	0	385159
Mining				
Coal mining	0	4255	0	50165
Oil & gas extraction	0	0	0	19811
Metal ore mining	0	7647	165	152552
Other mining	0	0	0	4220
Total	0	11902	165	226748
Manufacturing				
Food, beverage & tobacco	0	0	1040	88568
Textile, clothing, footwear & leather	0	0	0	
Wood & paper products	0	0	213	21307
Printing, publishing & recorded media	0	0	0	
Petroleum, coal, chemical & associated products	0	20	493	
Non-metallic mineral products	0	0	0	
Metal products	0	11152	0	
Machinery & equipment	0	0	0	
Other manufacturing	0	0	0	
Total	0	11172	1746	109875
Electricity & gas	0	154109	7471	59924125
Water supply, sewerage & drainage services	0	11159809	414115	1808832
Other industries	0	0	1118	
Household	0	0	0	
Environment	79783832	0	0	
<b>Total</b>	<b>79783832</b>	<b>11336992</b>	<b>424615</b>	<b>62454739</b>

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The following tables are all taken from the ABS publication “An Experimental Monetary Account for Australia 2004-05” see

<http://www.abs.gov.au/AUSSTATS/abs@.nsf/DetailsPage/4610.0.55.0052004-05?OpenDocument>

**1** MONETARY AND PHYSICAL DISTRIBUTED WATER SUPPLY, by industry—2004-05

	MONETARY UNITS .....	PHYSICAL UNITS .....
	<i>Distributed water (urban and rural)</i>	<i>Supply to other economic units</i>
<i>Industry</i>	\$m	GL
Agriculture, forestry and fishing	—	—
Manufacturing	na	8
Mining	na	5
Electricity and gas supply	na	1
All other industries	—	—
Water supply, sewerage and drainage	3 514	8 296

— nil or rounded to zero (including null cells)

Note: Monetary data in this table are considered experimental.

### 3 MONETARY AND PHYSICAL DISTRIBUTED WATER USE, by industry and households—2004-05

	EXPENDITURE ON WATER		PHYSICAL USE OF WATER	
	.....		.....	
	<i>Distributed water</i>	<i>Percent of total</i>	<i>Distributed water</i>	<i>Percent of total</i>
	\$m	%	GL	%
Intermediate consumption				
Agriculture, forestry and fishing	291	8	5 353	64
Manufacturing	232	6	341	4
Mining	53	2	72	1
Electricity and gas supply	91	3	115	2
Water supply, sewerage and drainage	2	—	23	—
Other industries	698	20	531	6
Total intermediate consumption	1 367	39	6 436	77
Final consumption by households	2 147	61	1 874	23
<b>Total use</b>	<b>3 514</b>	<b>100</b>	<b>8 310</b>	<b>100</b>

— nil or rounded to zero (including null cells)

Note: Differences in patterns of physical water use and of payments for water use observed between households and agriculture largely reflect different pricing policies and different costs of storage, treatment and delivery relating to categories of water used by urban and rural users.

Monetary data in this table are considered experimental.

### 7 KEY STATISTICS, WATER SUPPLY, SEWERAGE AND DRAINAGE SERVICES INDUSTRY—2004-05

	<i>Employment at end June</i>	<i>Wages and salaries (a)</i>	<i>Sales and service income (b)</i>	<i>Operating profit before tax</i>	<i>Industry gross value added</i>	<i>Wages and salaries per person employed</i>	<i>Industry gross value added per person employed</i>
	'000	\$m	\$m	\$m	\$m	\$000	\$000
2004-05	22.2	1 285	7 703	2 405	5 101	57.9	230

(a) Excludes the drawings of working proprietors

(b) Includes rent, leasing and hiring income

**10** WATER SUPPLY AND SEWERAGE INFRASTRUCTURE ASSETS, by  
State and territory—30 June 2005

	<i>Urban water infrastructure assets</i>	<i>Waste water &amp; sewerage infrastructure assets</i>	<i>Irrigation &amp; drainage infrastructure assets</i>	<i>Total</i>
	\$m	\$m	\$m	\$m
New South Wales &				
ACT	12 159	13 740	743	26 642
Victoria	8 281	8 803	2 740	19 824
Queensland	6 288	6 915	1 976	15 179
South Australia	4 441	3 424	308	8 173
Western Australia	3 079	3 749	367	7 195
Tasmania	846	725	47	1 618
Northern Territory	337	101	—	438
<b>Total</b>	<b>35 431</b>	<b>37 457</b>	<b>6 181</b>	<b>79 069</b>

— nil or rounded to zero (including null cells)

Note: Data in this table are considered experimental.

# 8 INDUSTRY GROSS VALUE ADDED FOR WATER USING INDUSTRIES—2004-05

	<i>Industry gross value added</i>	<i>Water consumption</i>	<i>Industry gross value added per GL water consumed</i>
	\$m	GL	\$m/GL
Agriculture	27 153	12 191	2
Mining			
Coal Mining	10 146	118	86
Oil and gas extraction	14 349	12	1 196
Metal ore mining	11 468	230	50
Other Mining(a)	3 982	53	75
<i>Total mining</i>	39 945	413	97
Manufacturing			
Food beverage and tobacco	18 551	215	86
Textile, clothing and footwear	2 827	15	188
Wood and paper products	6 479	99	65
Printing, publishing and recorded media	10 127	6	1 688
Petroleum, coal, chemical & associated products	12 956	70	185
Non-metallic, mineral products	4 951	20	248
Metal products	18 730	146	128
Machinery and equipment	19 078	16	1 192
Other manufacturing	4 070	2	2 035
<i>Total manufacturing</i>	97 769	589	166
Electricity and gas	14 933	271	55
Water supply, sewerage and drainage services	5 101	2 083	2
Other industries	711 667	1 059	672
<b>Total</b>	<b>896 568</b>	<b>16 606</b>	<b>54</b>

(a) Includes services to mining

**Australian Bureau of Statistics**

**From Cat No. 8226.0**

**Water Supply and Sewerage Industries: Summary of Operations and Industry Value Added; Australia, 2001-02 to 2004-05**

Period	Employment at end of June (Number)	Wages and salaries (\$m)	Sales and service income (\$m)	Funding from government for operational costs (\$m)	Capital work done for own use (\$m)	Change in inventories (\$m)	Purchases of goods and materials (\$m)	Other intermediate input expenses (\$m)	Industry value added (\$m)	Industry value added per person employed (\$'000)	Wages and salaries per person employed (\$'000)	Wages and salaries to service income (Ratio)	Sales and service income per person employed (\$'000)
2001-02	21822	1071	7250	564	442	0	1380	1992	4884	223.8	49.1	0.15	332.2
2002-03	22394	1189	7992	597	404	4	1519	2129	5350	238.9	53.1	0.15	356.9
2003-04	21463	1271	7679	574	459	0	1543	2082	5086	237	59.2	0.17	357.8
2004-05	22217	1285	7703	745	570	28	1636	2310	5101	229.6	57.9	0.17	346.7

n.p. not available for publication but included in totals where applicable, unless otherwise indicated



