DATA TABLE 21

# 100 Largest Desalination Plants Planned, in Construction, or in Operation—January 1, 2005

## Description

Desalination provides fresh water through various processes. Chapter 3 provides an update on the status of desalination worldwide. This table shows the 100 largest plants proposed, in construction, or in operation as a function of capacity, location, source of water, and estimated construction and operation dates, as of January 1, 2005. These plants represent more than 40 percent of all desalination capacity. This table includes desalination plants that use seawater, brackish water, river, pure, and other sources of water, not exclusively seawater desalination plants. Extreme care should be taken in using these figures, because many of the largest plants in this database are not in operation, or even under construction—only proposed. Indeed, it is likely that many of these plants will not be built, or will be built at a far later date than indicated in this table.

## Limitations

These data were collected from a wide range of sources, from desalting plant suppliers to plant operators to urban planners, and therefore depend on the accuracy of the information supplied. This list includes plants that have been ordered but never built, built and never operated, operated but then shut down, or are still operating. For example, one of the largest plants on this list is a plant that is supposed to begin construction in the San Francisco, California, region in 2006 at a capacity of 454,000 cubic meters per day. No such plant is even close to construction anywhere in California (see Chapter 3). A separate list of plants that are in operation is not available, but we estimate that more than half of the plants in the table will not be in operation in 2006.

## Source

Wangnick/GWI. 2005. 2004 *Worldwide desalting plants inventory.* Global Water Intelligence. Oxford, England. (Data provided to the Pacific Institute and used with permission.)

**DATA TABLE 21** 100 Largest Desalination Plants Planned, in Construction, or in Operation, January 1, 2005

| Country | Location | Total Capacity ($m^3/d$) | Source of Water | Estimated Construction Start | Planned Operation Year |
|---|---|---|---|---|---|
| Saudi Arabia SA | Shuaiba III | 880,000 | SEA | 2004 | 2007 |
| Saudi Arabia SA | Ras Al-Zour | 800,000 | SEA | 2004 | 2007 |
| Saudi Arabia SA | Al Jobail II Ex | 730,000 | SEA | 2004 | 2007 |
| UAE AE | Jebel Ali M | 600,000 | SEA | 2008 | 2011 |
| Kuwait KW | Al-Zour North | 567,000 | SEA | 2004 | 2007 |
| UAE AE | Shuweihat | 455,000 | SEA | 2001 | 2004 |
| UAE AE | Shuweihat 2 | 454,600 | SEA | 2004 | 2006 |
| USA US | CA SanFrancisco | 454,200 | SEA | 2006 | 2008 |
| UAE AE | Fujairah II | 454,000 | SEA | 2004 | 2007 |
| UAE AE | Qidfa | 454,000 | SEA | 2004 | 2006 |
| Saudi Arabia SA | Al Jobail | 408,600 | SEA | 2004 | 2007 |
| Israel IL | Ashkelon | 395,000 | SEA | 2001 | 2004 |
| Saudi Arabia SA | Shuaiba III | 390,908 | SEA | 2000 | 2003 |
| UAE AE | Jebel Ali L-2 | 363,200 | SEA | 2004 | 2007 |
| USA US | TX Pt. Comfort | 340,650 | SEA | 2004 | 2006 |
| UAE AE | Jebel Ali L-1 | 317,800 | SEA | 2003 | 2005 |
| UAE AE | Jebel Ali N | 300,000 | SEA | 2010 | 2013 |
| Kuwait KW | Sulaibya | 300,000 | WASTE | 2001 | 2003 |
| India IN | Minjur Chennai | 300,000 | SEA | 2005 | 2006 |
| UAE AE | Taweelah B III | 295,490 | SEA | 2005 | 2008 |
| UAE AE | Fujairah | 295,100 | SEA | 2001 | 2003 |
| UAE AE | Umm Al Nar | 284,125 | SEA | 2000 | 2002 |
| USA US | PR Puerto Rico | 284,000 | SEA | 2004 | 2006 |
| UAE AE | Mirfa | 277,000 | SEA | 2004 | 2007 |
| Bahrain BH | Hidd 3 | 272,400 | SEA | 2004 | 2006 |
| Saudi Arabia SA | Al Jobail I Ext | 272,000 | SEA | 2004 | 2007 |
| Saudi Arabia SA | Al Jobail III | 272,000 | SEA | 2004 | 2006 |
| Saudi Arabia SA | Al Khobar IV | 272,000 | SEA | 2004 | 2006 |
| Saudi Arabia SA | Shuaiba IV | 272,000 | SEA | 2004 | 2007 |
| USA US | CA Orange Count | 265,000 | RIVER | 2004 | 2007 |
| USA US | CA Fountain Val | 264,950 | WASTE | 2004 | 2006 |
| Libya LY | Tripoli | 250,000 | SEA | 2004 | 2006 |
| UAE AE | Taweelah A1 Ext | 239,680 | SEA | 2000 | 2003 |
| UAE AE | Taweelah C RO | 227,300 | SEA | 2003 | 2006 |
| Saudi Arabia SA | Ras Az Zawr | 227,000 | SEA | 2004 | 2006 |
| Qatar QA | Ras Laffan | 227,000 | SEA | 2006 | 2009 |
| Kuwait KW | Subiya 2 | 227,000 | SEA | 2004 | 2006 |
| Kuwait KW | Subiya | 227,000 | SEA | 2003 | 2007 |
| USA US | CA Carlsbad | 189,250 | SEA | 2005 | 2008 |
| USA US | CA Huntington B | 189,250 | SEA | 2004 | 2006 |
| USA US | CA San Diego | 189,250 | SEA | 2004 | 2006 |
| UAE AE | Jebel Ali K II | 182,000 | SEA | 2000 | 2002 |
| Saudi Arabia SA | Al Bahah I | 182,000 | SEA | 2004 | 2006 |
| Qatar QA | Ras Laffan | 182,000 | SEA | 2001 | 2004 |
| Qatar QA | Ras Laffan 2 | 181,840 | SEA | 2004 | 2007 |
| UAE AE | Fujairah | 170,000 | SEA | 2001 | 2004 |

*continues*

**DATA TABLE 21** *continued*

| Country | Location | Total Capacity ($m^3$/d) | Source of Water | Estimated Construction Start | Planned Operation Year |
|---|---|---|---|---|---|
| Spain ES | Malaga | 165,000 | BRACK | 2001 | 2003 |
| Kuwait KW | Shuwaikh | 163,000 | SEA | 2004 | 2006 |
| Saudi Arabia SA | Al Wasia | 153,000 | BRACK | 2002 | 2004 |
| Israel IL | Negev Arava | 152,000 | BRACK | 2004 | 2006 |
| USA US | FL Boca Raton | 151,400 | RIVER | 2001 | 2003 |
| Libya LY | Benghazi South | 150,000 | SEA | 2004 | 2006 |
| Spain ES | Murcia | 147,000 | SEA | 2003 | 2004 |
| Jordan JO | Zara Maain | 145,344 | BRACK | 2003 | 2005 |
| Jordan JO | Zara Maain | 145,000 | BRACK | 2003 | 2005 |
| China CN | Yantai | 143,000 | SEA | 2004 | 2006 |
| Israel IL | Ashdod | 137,000 | SEA | 2004 | 2007 |
| Israel IL | Hadera-Caesarea | 136,260 | SEA | 2004 | 2007 |
| Singapore SG | Singapore I | 136,000 | SEA | 2003 | 2005 |
| Iraq IQ | | 130,000 | BRACK | 2004 | 2005 |
| Mexico MX | Hermosillo | 128,690 | SEA | 2001 | 2004 |
| Australia AU | WA Perth | 123,300 | SEA | 2004 | 2006 |
| Spain ES | Carboneras | 120,000 | SEA | 2000 | 2001 |
| Singapore SG | Ulu Pandan | 116,000 | WASTE | 2004 | 2006 |
| UAE AE | Umm Al Nar IWPP | 115,244 | SEA | 2003 | 2007 |
| Egypt EG | Sinai | 113,650 | SEA | 2004 | 2006 |
| Trinidad To. TT | Point Lisas | 113,636 | SEA | 2000 | 2002 |
| Saudi Arabia SA | Tabuk I | 113,636 | SEA | 2004 | 2007 |
| USA US | FL Palm Beach 3 | 113,550 | RIVER | 2002 | 2004 |
| UAE AE | Jebel Ali G RO | 113,500 | SEA | 2005 | 2007 |
| Kuwait KW | Al-Zour North | 113,500 | SEA | 2004 | 2006 |
| Saudi Arabia SA | Shuqaiq II | 109,000 | SEA | 2004 | 2006 |
| USA US | TX El Paso | 104,088 | BRACK | 2004 | 2006 |
| USA US | CA Dana Point | 102,195 | SEA | 2004 | 2006 |
| UAE AE | Mirfa | 102,000 | SEA | 2000 | 2001 |
| Algeria DZ | Algiers Djinet | 100,000 | SEA | 2004 | 2006 |
| Algeria DZ | Algiers Zeralda | 100,000 | SEA | 2004 | 2006 |
| Algeria DZ | Mostaganem | 100,000 | SEA | 2004 | 2007 |
| USA US | TX Brownsville | 94,625 | SEA | 2005 | 2007 |
| USA US | TX Freeport | 94,625 | SEA | 2005 | 2007 |
| USA US | FL Tampa Bay II | 94,625 | SEA | 2004 | 2007 |
| USA US | TX Corpus Chris | 94,625 | SEA | 2004 | 2006 |
| USA US | FL Tampa Bay | 94,625 | SEA | 2001 | 2003 |
| USA US | FL S. Miami Hei | 94,625 | RIVER | 2004 | 2006 |
| Pakistan PK | Karachi | 94,625 | SEA | 2004 | 2006 |
| Pakistan PK | Gwadar | 94,625 | BRACK | 2004 | 2006 |
| Iran IR | Bandar Imam | 93,600 | BRACK | 2000 | 2002 |
| Singapore SG | Bedok | 92,000 | SEA | 2004 | 2006 |
| Saudi Arabia SA | Buraydah | 91,000 | SEA | 2003 | 2004 |
| Qatar QA | Ras Abu Font B1 | 91,000 | SEA | 2004 | 2007 |
| Oman OM | Barka | 90,920 | SEA | 2000 | 2003 |
| Algeria DZ | Arzew | 88,888 | SEA | 2003 | 2005 |
| Algeria DZ | Arzew | 88,000 | SEA | 2001 | 2003 |

| Country | Location | Total Capacity ($m^3/d$) | Source of Water | Estimated Construction Start | Planned Operation Year |
|---|---|---|---|---|---|
| Israel IL | Haifa | 83,270 | SEA | 2004 | 2006 |
| Israel IL | Palmachin | 83,270 | SEA | 2004 | 2006 |
| Israel IL | Palmahim | 83,270 | SEA | 2003 | 2006 |
| Israel IL | Ashdod | 82,190 | SEA | 2003 | 2006 |
| Israel IL | Shomrad | 82,190 | SEA | 2003 | 2006 |
| Libya LY | Azzawiya | 80,000 | SEA | 2004 | 2006 |
| Libya LY | Misurata | 80,000 | SEA | 2004 | 2006 |
| **Total Capacity** | | **21,404,184** | | | |