

CENTRAL BASIN MUNICIPAL WATER DISTRICT

FEBRUARY 4, 2004 - Water Resources

Morse, Apodaca

FEBRUARY 23, 2004 - Board Meeting

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INFORMATION CALENDAR

WATER TRIVIA 3

SUMMARY:

As winter continues to drop snow and rain on various parts of California, it is a good reminder of how much we depend on the winter bounty to supply our surface water and groundwater needs for the remainder of the year. With that knowledge, here are some more interesting water trivia facts that may provide a different perspective about our water supplies.

Glacier Facts

- Glaciers store about 75% of the world's freshwater;
- The Antarctic Icecap contains nearly 2% of the world's total supply of fresh water - making it the largest supply of fresh water;
- 10% of the world's land area is covered with glaciers - over 15,000,000 square kilometers;
- During the last ice age, glaciers covered 32% of the total land area. The sea level was about 400 feet lower than it is today;
- Antarctic ice is over 4,200 meters thick in some areas;
- Glacier ice crystals can grow to be as large as baseballs;
- If all land ice melted, the sea level would rise approximately 70 meters worldwide;
- Almost 90% of an iceberg is below water - only about 10% shows above water; and
- The Antarctic ice sheet has been in existence for at least 40 million years.

Physical Facts

- The amount of water in our atmosphere is over 10 times as much as the water in all the rivers together in the world;
- Fresh, uncompacted snow is usually 90-95% trapped air;
- Water has the highest surface tension among common liquids;
- Once evaporated, a water molecule spends ten days in the air;
- Water expands about 9% when it freezes; and
- In a 100-year period, an average water molecule spends 98 years in the ocean, 20 months as ice, about 2-weeks in lakes and rivers, and less than a week in the atmosphere.

Water Supply

- 87% of the water leaving Colorado flows out of the Colorado River Basin toward the Pacific Ocean;
- More than 70% of California's annual runoff (water entering and flowing in rivers and from rain and snowfall) originates north of Sacramento;
- Of all the rain and snow that falls in California each year, about two-thirds evaporate or is used by native plants and trees. Of the remaining runoff, 46% goes straight back to the environment through our rivers and streams;

- On average, 75% of California's average rainfall of 23 inches falls between November and March. Half falls between December and February;
- Average rainfall in the Los Angeles Basin is approximately 15-inches per year;
- Current water supplies to California's farms, homes, and businesses is 14% less than 1990 levels, although populations continue to grow (a 54% increase is expected in population between 1990 and 2020);
- About 75% of the state's urban and agricultural demand for water occurs south of Sacramento; and
- Nearly 2% of U.S. homes have no running water.

Water Science

- The natural rotation of the Earth has been altered slightly by the 10 trillion tons of water stored in reservoirs over the past 40 years.

Water Pollution

- Approximately 500,000 tons of pollutants pour into lakes and rivers each day in the U.S.;
- About 11% of nationwide pollutants in rivers originate from storm sewers and urban runoff;
- Four quarts of oil can cause an 8-acre oil slick if spilled or dumped down a storm sewer; and
- One gallon of gasoline can contaminate approximately 750,000 gallons of water.

Water Use

- Water used for electricity production increased almost 500% from 1950 to 1990.
- Households turn on water faucets an average of 70 times daily;
- One water drip a second can waste 2,000 gallons a year;
- Within California, 46% of water is used by the environment, 43% on farms, and 11% in homes and businesses;
- In California, the majority of environmental water use is in the north, whereas farms, homes, and businesses are concentrated in the Central Valley, San Francisco Bay, and Southern California; and
- California farmers use slightly less water than they did 30 years ago, yet produce 67% more crops.

Water Quality

- If you filled a glass full of water from the Great Salt Lake, when it evaporated, it would leave behind 1-inch of salt; and
- The Great Salt Lake ranges in salinity from 5% to almost 30% based on elevation; approximately 20% salt is a typical average.

FISCAL IMPACTS:

Not applicable.

ENVIRONMENTAL COMPLIANCE:

Not applicable.

COMMITTEE STATUS:

This item was reviewed by the Water Resources Committee on February 4, 2004 and agendaized to the February 23, 2004 Board meeting as information for discussion.

RECOMMENDED MOTIONS:

This item is for information only.

LIST OF EXHIBITS:

None.

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