diversity is used as an indicator of health, with low and a decreasing trend in diversity being signs that biological communities are in trouble and that conditions are getting worse.

In the Sacramento-San Joaquin estuary, many of the clear signals of an unhealthy estuary are not present. Dissolved oxygen concentrations are near saturation in most open areas of the delta and downstream embayments. Although there are documented cases of relatively high concentrations of some toxic materials such as diazinon and copper, there are few extensive fish kills and it has proven difficult to link concentrations of toxicants with environmental impacts at the individual, population, or community level. For a variety of reasons, including turbidity, hydraulics, and benthic grazing, eutrophication does not appear to be a major problem, although extensive growth of a few introduced aquatic weeds is creating boating and other problems in the delta. Finally, diversity of many of the animal communities, especially benthic invertebrates and euryhaline and freshwater fish, is undoubtedly higher now than it was before the Gold Rush.

In spite of the relatively good report card on the bay/delta system, there is a general impression that things are not all that rosy. Some of the reasons for the less than positive attitude are:

- During the recent drought, several fish species declined to record low numbers. The striped bass population, once the surrogate canary for the upper estuary, continues to remain at low numbers even after the drought has broken.
- Two fish using the estuary have been listed under the state and federal endangered species acts: delta smelt (threatened) and winter-run chinook salmon (endangered). Several more are being considered for listing.
- Much of the wetlands and riparian vegetation that formerly surrounded the bay/delta has been lost.
- Over the past 40 years, the amount of fresh water being diverted from the estuary has increased.
- Many of the fish and invertebrates now present in the system are recent introductions, and these introductions may be changing some of the fundamental food chain relationships that contributed to what appears to have been a more stable biological community of the 1950s and 1960s.

It may not be possible to put together a composite index of the environmental measurements needed to determine estuarine health, but knowledgeable people may be able to look at the status and trends of several key measurements and reach a qualitative conclusion as to its health. To this end we have assembled a few of the many measurements that might be used to make such a judgment. There is a minimum amount of text; we are leaving it to you to interpret the data presented.

Based partly on the response we receive about this status and trends issue, it may be an annual *Newsletter* feature. (It will probably be in April in subsequent years to help ensure that the data are available for presentation.) Comments, suggestions, and criticisms geared to making it useful are welcome. The most convenient transmittal mechanism is via e-mail to *rbrown@water.ca.gov* with a copy to *pcoulsto@delta.dfg.ca.gov.*

The 1995 Water Year

Maurice Roos, Chief Hydrologist, DWR

From 1987 through 1992, California endured 6 years of drought for the second time this century. The first 6-year drought was 1929-1934. The recent drought was broken in most parts of the state by the wet 1993, in which runoff was 125% of average. But 1994 was again critically dry, raising fears that the drought had resumed. Runoff was only 40% of average statewide. The officially designated "drought watch" of 1994 was finally washed out to sea in January and March 1995 by two large floods that made 1995 one of the wettest years this century and refilled all but a couple of the state's major reservoirs. This article provides information on water conditions and runoff in 1995 and some comparisons with previous years.

Water Supply

The water year began without any real surprises, except that November was relatively cold, with much snow in the mountains. November had about 130% of average precipitation. By the end of December, estimated statewide seasonal precipitation (since October 1, the beginning of the water year) was around 90% of average, and northern Sierra precipitation was about 95% of average. Then came a record January, and January, March, and June had triple normal precipitation. June doesn't matter much for water year totals, because its average precipitation is less than 2% of the annual total. January and March are expected to be wet, and the excess rainfall