NASA Facts

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The Lake Beds

NASA Dryden Flight Research Center, a civilian tenant organization within the boundaries of Edwards Air Force Base, is on the northwest edge of Rogers Dry Lake, a 44-square-mile area used for aviation re-search and test operations. An additional 22 square miles of similar smooth clay surface is provided by nearby Rosamond Dry Lake.

Edwards Air Force Base is located in California's Mojave Desert about 100 miles northeast of Los Ange-les. The two unique natural resources help make the base a premier flight test facility.

Rogers Dry Lake is the largest of the two and has been used as the landing site for early Space Shuttle test and operational flights. Both lakebeds have been used for emergency and test landings of aircraft for more than 50 years. These natural flat surfaces have literally saved hundreds of aircrew lives and aircraft valued at millions of dollars because the lakebeds offer a broad expanse of hardened clay on which to land in emergency situations.

Rogers Dry Lake has been declared a National Historic Landmark by the National Park Service, U.S. De-partment of Interior, because of its role in the development of the nation's space program and in the devel-opment of aerospace systems.

The Dryden and Edwards complexes have been developed on the edge of Rogers Dry Lake. There are seven "drawn on" runways crisscrossing the surface of Rogers, with the longest extending 7 1/2 miles.

The main Edwards concrete runway is also located next to Rogers Dry Lake and combining this runway's 15,000 foot length with a 9,000 foot lakebed overrun gives pilots with an inflight emergency one of the longest and safest runways in the world. Rosamond Dry Lake is also used for routine flight test and re-search operations and for emergency landings.

The lakebeds are among the lowest points in the Antelope Valley and collect seasonal rain and snow runoff from surrounding hills and also from the San Gabriel Mountains to the south and Tehachapi Mountains to the west.

At one time the lakebeds contained water the year round, but due to changing geographical and weather patterns are void of vegetation and contain water only after infrequent rains or snow falls. The flatness of the lakebeds was revealed following a measurement of the Rosamond lakebed surface which has a curva-ture of less than 18 inches over a distance of 30,000 feet.

Use by aircraft of Rogers and Rosamond lakebeds dates back to the early 1930s when Army Air Corps aircraft from what is now March Air Reserve Base, near Riverside, Calif., used the lakebeds as a staging area for bombing and gunnery practice. During World War II, facilities were established adjacent to Rogers Dry Lake, than called Muroc Dry Lake, to train bomber and fighter crews for duty overseas.

During the early 1940s, a separate area at the north end of Rogers Dry Lake was chosen as the site to flight test the nation's first jet aircraft, the Bell XP-59A Airacomet. As the flight test program progressed, it became evident that the lakebed coupled with an average of 345 days a year of good flying weather was an ideal place for all phases of aircraft testing and permanent facilities began emerging.

As flight testing at the Air Force Flight Test Center (AFFTC) and NASA Dryden grew over the years, the natural surfaces of Rogers and Rosamond dry lakebeds took on even greater roles as sites for emergency landings, test and research.

For additional information about the lakebeds at Edwards Air Force Base, contact AFFTC public affairs at (661) 277-3510 (www.edwards.af.mil) or NASA Dryden public affairs at (661) 276-3449 or email PAO@dfrc.nasa.gov.