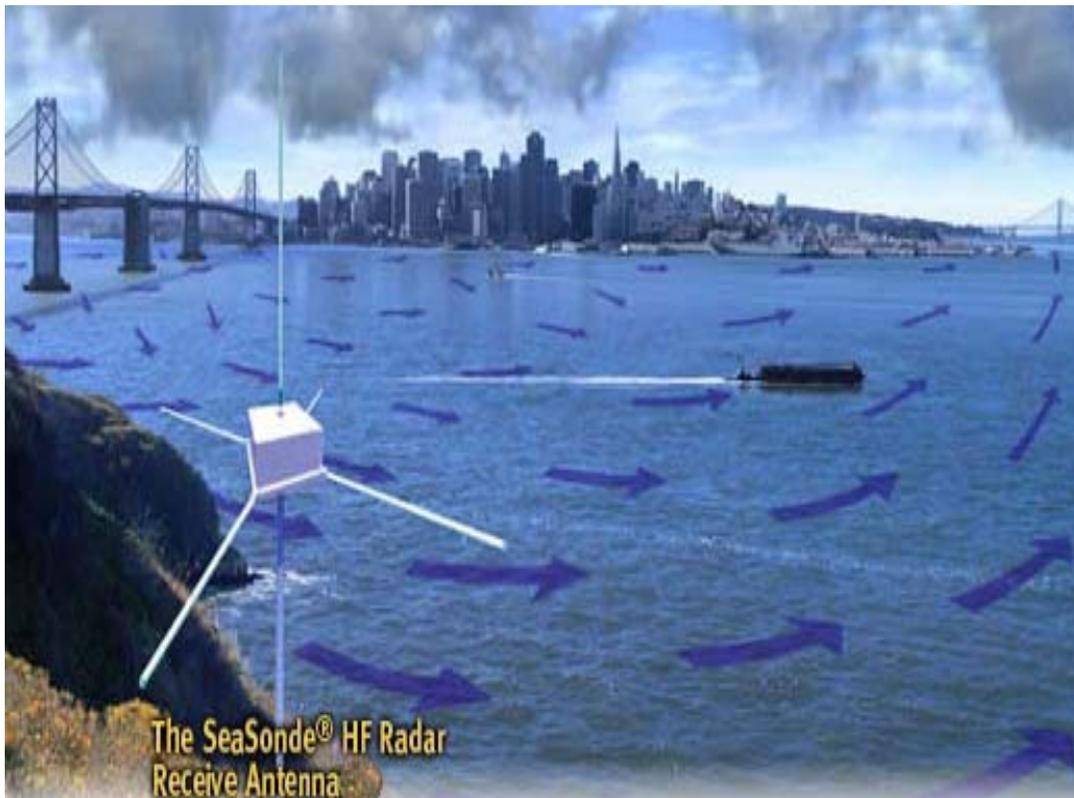


HF Rader systems use high-frequency radio to measure ocean surface currents. Two compact, whip antennas are placed at the coast, mounted no more than 50 m apart, and connected via cables to electronics that operate within an environmentally controlled shelter housing a personal computer and processing unit.

The Acoustic Doppler Current Profilers (ADCP) are moored in the water column and use underwater sound to measure vertical profiles of horizontal currents.





Each HF Radar unit produces a map of ocean current speeds approaching (or receding from) the radar site along radial lines emanating from the site. Because ocean current velocities are vector quantities, data from a single site are not sufficient to map the velocity field. To obtain surface current estimates, two or more sites are needed to provide overlapping speed estimates from different observation angles.

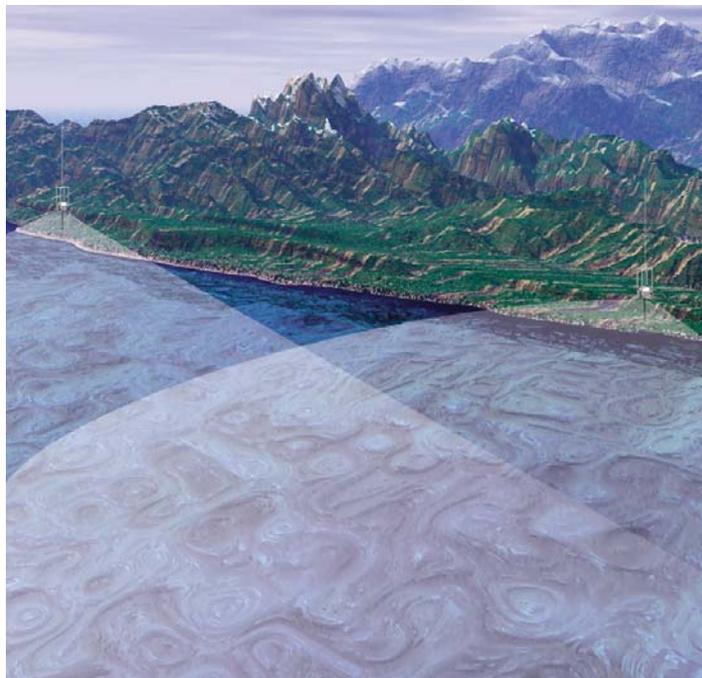


Exhibit 4