



Figure 2. Observed mean current flow (small blue arrows) and the variability (shown as a green ellipse centered around the tip of the mean flow arrow) for near-surface currents (4-8 m below sea surface) measured between December 1989 and September 1991. The instrumentation was located at the red squares. Typically, the daily-averaged current originates at the station symbol (red squares) and flows toward any location within the ellipse. In general, the fluctuations are larger than the mean. The bold gray arrows indicate the overall direction of the residual drift. The mean wind during this period was from the west at about 0.1 dynes/cm<sup>2</sup> as measured at the Boston Buoy (see Geyer and others, 1992). The residual currents were weak (less than a cm/s) at Site A, and the low-frequency fluctuations were not strongly polarized. In contrast, the mean flow at Site B was stronger, and the low frequency fluctuations generally aligned parallel to the coast. Based on this flow pattern, currents observed at Site B were thought to provide a sensitive indicator of the baywide residual circulation pattern. The Massachusetts Water Resources Authority (MWRA) outfall is approximate only -- the diffuser is actually in line with the tunnel that departs from the north end of Deer Island.