We describe a refinement of the Seiberg-Witten topological quantum field theory (TQFT). We associate S^1-equivariant suspension spectra to three-manifolds with $b_1 = 0$, and maps between spectra to cobordisms. Different homology functors applied to the spectrum give rise to four different flavors of Seiberg-Witten Floer homology: nonequivariant, Borel, coBorel, and Tate.