Some origins of eddies in the (northern hemisphere) oceans

**Counterclockwise eddies:**

Meandering of a current in the open ocean:

Meandering streams on land change evolve through time to cut off bends that become ox-bow lakes. Ocean currents can do the same, but the oceanic analog of the ox-bow lake is fluid and has momentum that continues its spin.

Emergence of a current into a more open region:

The dark red regions here can be land, or one of them can be a topographic high of the sea surface produced by dynamic topography.

Flow of a current around a barrier:

The dark red region here is most commonly an island.

**Clockwise eddies:**