Changes in Specific Conductance with Time

Constituents of concern in CBM discharge waters include the major ions (sodium, for example), which comprise most of the dissolved-solids concentration (salinity). Increases in the major-ion concentrations in streams can be indirectly measured as increases in stream specific conductance. Comparing patterns of specific conductance among sites and over a common period of time, such as that shown in figure 5, is one strategy that regulators can use to detect changes in water chemistry. These changes can then be examined relative to climatic patterns and CBM or other activities in the basin to evaluate whether any cause-and-effect linkages can be established. General observations on patterns in specific conductance are provided with each graph in figure 5.

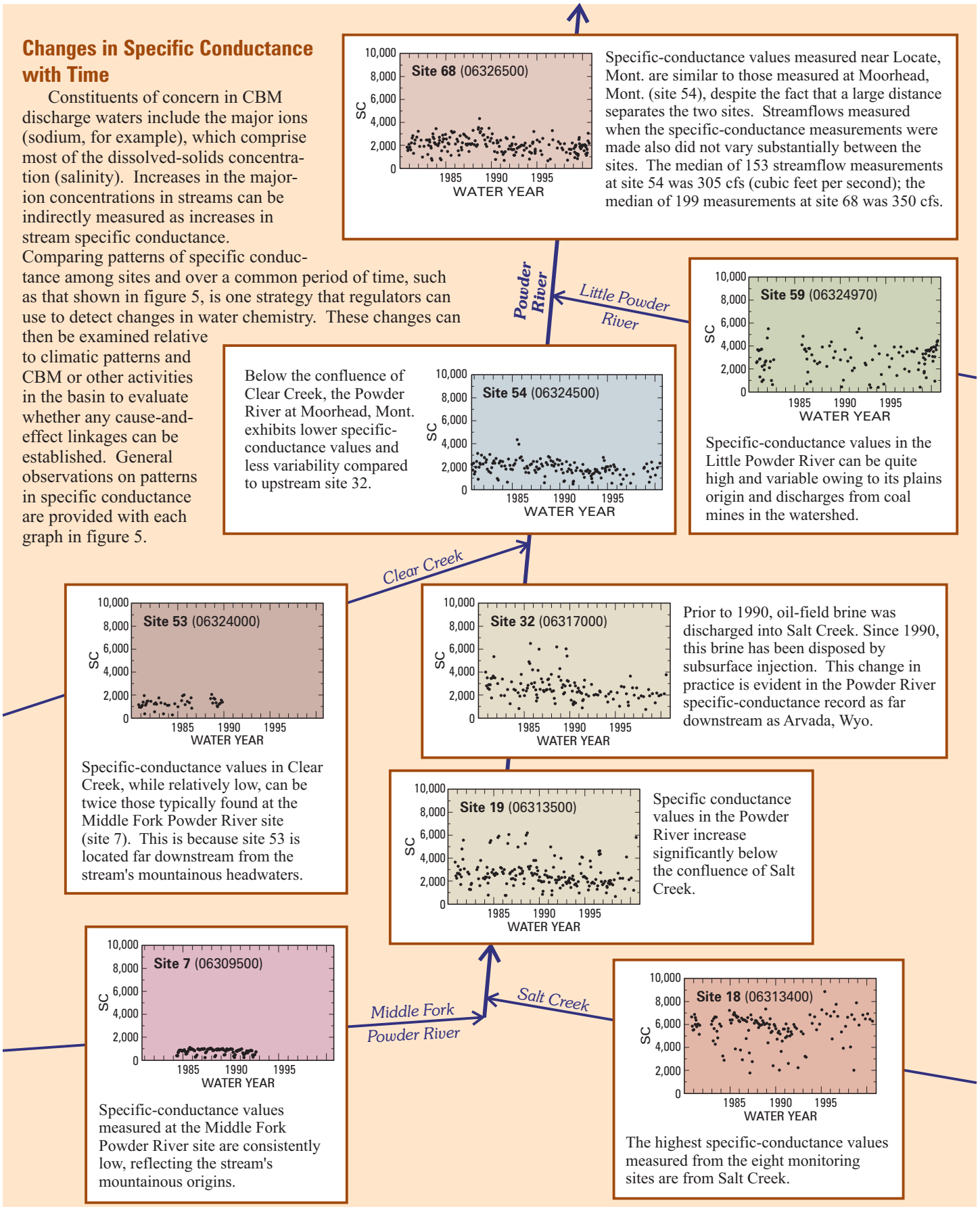

Figure 5. Time-series plots of specific conductance for selected sites in the Powder River Basin, Wyoming and Montana, 1981-2000 (SC = specific conductance in microsiemens per centimeter at 25 degrees Celsius).