B.5 Design and Construction Schedule

Figure B.5-1 presents a preliminary, feasibility-level design and construction schedule for the NODOS/Sites Reservoir Project. The schedule is based on constructing Alternative D, which involves the largest facility sizes for dams, reservoirs, and pumping-generating plants. The schedule for Alternatives A, B, and C likely would have a similar duration, because these alternatives still include many of the same critical-path features in common with Alternative D that govern the schedule duration.

The Basis of Estimate Report for Sites Project Authority Project Alternative D (AECOM 2016b) contains the full schedule, which includes approximately 200 linked construction activities. The schedule presents a reasonable approach to construct the project, which accounts for the logical sequencing of the work, procurement of equipment, and reasonable durations to complete construction activities. Durations reflect the estimated labor and equipment spreads needed to complete activities, including earthwork, balancing the movement of excavated soil and rock to placement sites, supplying and placing all materials, erecting structures, and installing major equipment. Labor and equipment costs are reflected in the cost estimate.

The schedule presents construction activities with an assumed construction start date in late March 2022. Predecessor activities like design, permitting, packaging the work, and bidding the construction packages are not included because of the uncertainty in scheduling these activities between now and 2022. With hydroelectric generation as part of the project, the Federal Energy Regulatory Commission permitting process may also affect the actual start date.

As construction progresses, the critical path (or critical remaining work) moves between facilities. Completing the Sacramento River (Delevan Intake) and Sites Pumping/Generating Plants in early 2030 are the final critical activities to achieve project construction completion and begin pumping operations.

Filling the reservoir is not reflected in the schedule, due to the uncertainty in hydrological conditions at that time and the operating criteria that would be contained in the regulatory permits required for the project. It may be possible to begin filling the reservoir using natural runoff from Stone Corral and Funks Creeks, beginning with the 2028 and 2029 wet season. At this point, the dams are completed. Adequate storage would be available to accommodate a major storm event (including the PMF), and release facilities would be available at Sites Dam, if needed.
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Figure B.5-1. Design and Construction Schedule