FINAL TECHNICAL REPORT
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TITLE: THE QUATERNARY GEOLOGIC FRAMEWORK FOR THE CITY OF SEATTLE AND THE SEATTLE-TACOMA URBAN CORRIDOR: COLLABORATIVE RESEARCH WITH THE UNIVERSITY OF WASHINGTON AND THE U.S. GEOLOGICAL SURVEY

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ABSTRACT

This report covers the first and second years of an anticipated six-year project. Our investigations during the first two years represent the initiation of tasks that will continue throughout the six-year period.

This project focuses on the Quaternary framework of the Seattle area, because most of the central Puget Lowland has a recent sedimentary cover one hundred to over one thousand meters thick. We recognize five major components to develop this framework and to disseminate the resulting information:

1. Develop the regional stratigraphy and chronology for the central Puget Lowland;
2. Create a subsurface geologic database for the City;
3. Prepare new surficial geologic maps of the City;
4. Develop the geologic model (3-D map and database) of the City; and
5. Provide education and technical outreach.

At this stage in the project, we have accomplished the following tasks:

- Completion six 7.5-minute maps at 1:24,000 in the Seattle-Tacoma area, and two additional quadrangles within a few months of completion;
- Development and population of a database of existing subsurface geologic and geotechnical data that accommodates both spatial and nonspatial data by following a GIS-based approach;
- Near-completion of a surficial geologic map of the Seattle SW quadrangle at 1:12,000 scale; and
- Multiple short courses, field trips, technical presentations; formation of a technical advisory group for the project of the region's major consulting firms and public agencies.