**Scoring Sheet Summaries**

**Criteria for ranking Request for Qualifications for Professional Services for Hydraulic Modeling to Complete the Hydraulic Model for the Chehalis River**

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|---|---|
| **Date:** | |
| **Reviewer:** | |
| **Proposal:** | |
| **Total Score:** | |
| **Key Summary Comments** | |

**Scoring Sheet Tallies**

**Criteria for ranking Request for Qualifications for Professional Services for Hydraulic Modeling to Complete the Hydraulic Model for the Chehalis River**

| **1 (a). Demonstrated expertise and experience in hydraulic modeling** | **Score** | **Total Points Possible** |
|---|---|---|
| Does the submittal demonstrate specialized experience and technical competence in hydraulic, hydrologic, and water management engineering and design, utilizing state of the art methodology in the areas of structural, fluvial, dam, and hydraulics; hydrology, river engineering, sedimentation, sediment physical characterization; runoff estimation, reservoir systems analysis, development of hypothetical hydrographs, and basin hydrologic characterization; water quality data collection and analysis channel morphology evaluation and channel restoration engineering in the Pacific Northwest Region?<br><br>Is the aforementioned experience within the last three years?<br><br>Yes_____ No_____<br><br>If not, please explain. Feel free to note superlatives, as well. | | **8** |

| 1(b). Physical Hydraulic Modeling | Score | Total Points Possible |
|---|---|---|
| Does the submittal demonstrate performance of studies involving the construction and testing of physical hydraulic models, and prototype testing?<br><br>Yes_____ No_____<br><br>If not, please explain. Feel free to note superlatives, as well. | | 8 |
| Is there a demonstration of the ability to perform large model studies, including ability to build and test more than one model at a time?<br><br>Yes_____ No_____<br><br>If not, please explain. Feel free to note superlatives, as well. | | |
| Is there demonstration of expertise with a range of physical model types, including sectional models of hydraulic structures, general models of large dams, and sediment transport moveable bed models of river channels?<br><br>Yes_____ No_____<br><br>If not, please explain. Feel free to note superlatives, as well. | | |

| 1(c). Numerical Hydraulic Modeling | Score | Total Points Possible |
|---|---|---|
| Does the submittal demonstrate the development of numerical (1-D, 2-D and 3-D) models of hydraulic and riverine structures; water quality modeling of reservoirs and rivers; and sediment transport modeling in rivers and streams?<br><br>Yes_____ No_____<br><br>If not, please explain. Feel free to note superlatives, as well. | | **8** |
| Does the submittal demonstrate the utilization and application of model results to design channel restoration, instream flow enhancement, and habitat improvement projects in natural open channel river systems (i.e. relating habitat quantity and continuity to stage and flow); extrapolation of numerical model water quality parameters, bed material, and sedimentation?<br><br>Yes_____ No_____<br><br>If not, please explain. Feel free to note superlatives, as well. | | |

| **1 (d).** River Hydraulics and Sedimentation: | **Score** | **Total Points Possible** |
|---|---|---|
| Does the submittal demonstrate the following:<br>(1) River and overbank ground surveys and cross sections.<br>(3) Fluvial geomorphologic analysis and sediment transport analysis of rivers, streams, lakes, reservoirs, and estuaries, and development of sediment yield estimates for mountainous volcanic and non-volcanic watersheds typical of streams within the Seattle Districts geographic boundaries.<br>(4) Hydraulic analysis for water surface profiles and flooded area mapping of rivers and streams.<br><br>Yes_____ No_____<br><br>If not, please explain. Feel free to note superlatives, as well. | | **8** |

| 1 (e). Hydrology | Score | Total Points Possible |
|---|---|---|
| Does the submittal demonstrate the following:<br>(1) Hydrologic statistical and probability analyses, discharge, precipitation, risk and uncertainty evaluations; period-of-record hydrologic evaluations, ungaged basin evaluations, rainfall runoff analyses.<br>(2) Development of hypothetical storm hydrographs, development of Probable Maximum Precipitation (PMP) and Probable Maximum Flood (PMF) information, hydrograph analysis, spillway design hydrograph development, and reservoir routing analysis.<br>(3) Development and analysis of interior runoff hydrology behind levee systems and flood control structures to determine pumping and ponding volume requirements.<br>(4) Familiarity and experience with arid region stream hydrology, specifically thunderstorm-generated flood events, and also hydrologic characteristics of snowmelt-driven watersheds.<br>(5) Familiarity with future climate scenarios and GCMs as specified in the IPCC AR4. Familiarity with working with hydrologic modeling systems which are suitable for use with outputs from GCMs (i.e., spatially distributed models).<br><br>Yes_____ No_____<br><br>If not, please explain. Feel free to note superlatives, as well. | | 8 |

| **1 (f). Prototype Data Collection** | **Score** | **Total Points Possible** |
|---|---|---|
| Does the submittal demonstrate the following:<br>(1) Procurement and interpretation of hydro-survey data obtained from stilling basins, streams, and waterway channels for model development and condition assessment.<br>(2) Performance of Acoustic Doppler Current Profiler (ADCP) and Acoustic Doppler Velocimeter (ADV), Optical Backscatter Sensor (OBS) data collection, processing and interpretation of river velocities and flows around structures.<br>(3) NELAP/NELAC validated laboratory for WA/Sediment samples.<br><br>Yes_____ No_____<br><br>If not, please explain. Feel free to note superlatives, as well. | | **8** |

| 2 (a). Key personnel, experience and knowledge | Score | Total Points Possible |
|---|---|---|
| Evaluation of professional qualifications of personnel to be assigned to the project will consider education, training, registration, and longevity of relevant experience. Personnel provided for these services must be professional engineers with experience in hydraulic, hydrologic, geomorphologic, and coastal engineering and design projects. The following disciplines will be evaluated:<br>(1) Project Manager<br>(2) Hydraulic Engineer<br>(3) Geomorphologist<br>(4) Biologist<br>(5) Fisheries Engineer<br>(6) Civil Engineer<br>(7) Hydrologist/Hydrologic Engineer<br>(8) Engineering Technician<br>(9) CADD Specialist<br>(10) GIS Specialist.<br><br>Are each of the requisite personnel and their experience demonstrated?<br><br>Yes_____ No_____<br><br>If not, please explain. Feel free to note superlatives, as well.<br><br>Does the submittal demonstrate a level of expertise that would make it highly qualified for this criterion ?<br><br>Yes_____ No_____ | | **12** |

| 2 (b). Capacity to accomplish the work in the required time | Score | Total Points Possible |
|---|---|---|
| Does the submittal clearly demonstrate the capacity to perform multiple task orders concurrently in the required time, flexibility to add resources when required, and strength of project management to include communications, project tracking, and issue resolution?<br><br>Yes_____ No_____<br><br>If not, please explain. Feel free to note superlatives, as well.<br><br>Does the submittal demonstrate a level of expertise that would make it highly qualified for this criterion (c)?<br><br>Yes_____ No_____ | | **12** |

| 3 (a). Past Performance on contracts with respect to cost control, quality of work and compliance with performance schedules. | Score | Total Points Possible |
|---|---|---|
| Is there demonstration of past performance of contracts with government agencies and private industry with respect to cost control, quality of work, and compliance with performance schedules within the last ten years as determined from ACASS and other sources? Are there references past clients?<br><br>Yes_____ No_____<br><br>If not, please explain. Feel free to note superlatives, as well. | | 6 |

| 3 (b). Geographical location and knowledge of the locality of the project | Score | Total Points Possible |
|---|---|---|
| Does the submittal demonstrate knowledge of the performance of hydraulic modeling and prototype testing studies for design of migrant fish facilities, high head dam facilities, hydraulic control structures, and navigation facilities within the geographical boundaries of the Chehalis Basin?<br><br>Yes_____ No_____<br><br>If not, please explain. Feel free to note superlatives, as well.<br><br>Does the submittal demonstrate knowledge of Pacific Northwest Meteorology (climate and weather), runoff patterns, water quality, geography, and geology as they affect hydrologic, geomorphic, and design parameters for water resource evaluation and design?<br><br>Yes_____ No_____<br><br>If not, please explain. Feel free to note superlatives, as well. | | 6 |

| 3 (c). Design Quality Assurance | Score | Total Points Possible |
|---|---|---|
| Does the submittal describe quality control processes used by the firm?<br><br>Yes_____ No_____<br><br>If not, please explain. Feel free to note superlatives, as well.<br><br><br><br>Does the submittal describe a management approach that the firm would use on this contract if they are the selected firm?<br><br>Yes_____ No_____<br><br>If not, please explain. Feel free to note superlatives, as well.<br><br><br><br>Does the submittal address coordination of disciplines and subcontractors, and include organizational chart showing inter-relationship of management and design team components?<br><br>Yes_____ No_____<br><br>If not, please explain. Feel free to note superlatives, as well. | | 6 |

| **4. Public Outreach** | **Score** | **Total Points Possible** |
|---|---|---|
| Does the submittal demonstrate experience in working with tribal, state and local organizations and carrying out a public involvement process?<br><br>Yes_____ No_____<br><br>If not, please explain. Feel free to note superlatives, as well. | | 10 |