King County

Invites Applications for the Position of:

Engineer III

Apply online at http://www.kingcounty.gov/jobs

King County is committed to equity and diversity in the workplace. In addition, the county is committed to recruiting and maintaining a quality workforce that shares our guiding principles: collaborative, service-oriented, results-focused, accountable, innovative, professional and fair and just.

OPENING DATE/TIME: 10/31/11 12:00 AM (GMT -8:00)

CLOSING DATE/TIME: 11/21/11 04:30 PM (GMT -8:00)

SALARY: $34.84 - $44.17 Hourly

LOCATION: King Street Center - 201 S Jackson St, Seattle

JOB TYPE: Career Service, Full Time, 40 hrs/week

DEPARTMENT: Department of Natural Resources & Parks - Water and Land Resources Division

JOB NUMBER: 2011MK01944

SUMMARY:

WHO MAY APPLY: This career service is open to the general public.

Contact: michelle.kobuki@kingcounty.gov or 206-296-8022 for questions related to this recruitment.

FORMS AND MATERIALS REQUIRED:

- A King County Application Form
- Resume and Cover Letter
- Answers to the attached supplemental questionnaire

JOB DESCRIPTION: This position is a part of a team of river engineers, scientists and planners in the River and Floodplain Management Unit that support the implementation of projects and programs identified in the 2006 King County Flood Hazard Management

Plan in support of the King County Flood Control Zone District. These positions will perform lead river and hydraulic engineering design and technical analyses for complex river and floodplain management projects and programs; conduct field investigations and assessments of river conditions and flood facilities; gather engineering data and related information necessary to scope technical studies; develop maintenance needs and conceptual designs for flood damage repair projects; and staff flood warning, emergency and disaster response activities to evaluate flood damages to river facilities as part of post-flood documentation. This position will be assigned to the Cedar/Sammamish River basin team, with the majority of work duties focused geographically. However there also will be opportunities to work across the County supporting the overall Rivers program. Additional information on the 2006 Flood Plan can be found at http://www.kingcounty.gov/environment/waterandland/flooding/documents/flood-hazard-management-plan.aspx and information on the King County Flood Control Zone District can be found at http://www.kingcounty.gov/environment/waterandland/flooding/flood-control-zone-district.aspx.

JOB DUTIES:

- Serve as the lead or a key project team member to conduct river engineering and technical analyses involving open channel hydraulics, floodplain and river conditions, flood and hazards and project designs.
- Collaborate with multi-disciplinary team to prepare flood hazard management project designs including the development of conceptual designs, the preparation of engineering plans and specifications, detailed project quantities, project costs, construction scheduling, techniques and sequencing.
- Oversee construction of flood protection facility repairs and flood hazard reduction projects, including coordination of work by contractors or County forces.
- Conduct field investigations and engineering assessments of flood facilities, such as levees and revetments, on the county's major rivers.
- Develop and oversee consultant contracts to support design, permitting, and construction oversight of capital projects; and engineering analyses related to river and floodplain management. Assist with development of scopes of work, schedules and budgets and conduct technical review of contractor deliverables.
- Collaborate with multi-disciplinary project staff to assess river, floodplain, and flood protection facility conditions and to develop recommendations for flood hazard management projects and programs.
- Review engineering and related technical work products prepared by County contractors, agencies, and other parties, including the review of digitally developed topographic mapping, river channel cross-section data, site surveys, hydrologic analyses and open channel hydraulic computer model outputs, operating and procedural manuals, facility design plans, and related engineering analyses associated with floodplain management programs and flood facilities.
- Collaborate with senior engineering and multi-disciplinary technical staff in flood emergency response actions, such as conducting problem site investigations, evaluating debris jams, documenting flood damages to County flood protection facilities and developing recommendations for flood response actions.
- Coordinate floodplain management and engineering activities with County and city staff, consultants, and local, state, federal and tribal agencies and organizations.

- Write technical reports and issue papers for various technical and non-technical audiences to summarize and convey project findings.
- Lead the review of complex floodplain development projects, including the review of engineering proposals, computer modeling reports and supporting engineering calculations prepared by private consultants and other parties. Assess the technical quality of engineering computations and calculations. Evaluate the completeness and quality of development proposals to determine their consistency with county floodplain management policies and associated flood hazard regulations.
- Present to and discuss technical information with managers and staff, project teams, tribal biologists and cultural resource specialists, landowners, elected officials, and other jurisdictions and agencies.
- Respond to data and information requests, provide analysis and review of floodplain management projects and proposed policies, and develop recommendations.
- Develop and support the development of grant applications by providing engineering expertise. Manage and administer grants and budgets for grant funded projects.
- Participate in flood warning and emergency response programs and activities.

EXPERIENCE, QUALIFICATIONS, KNOWLEDGE, SKILLS:

- Bachelor of Science in civil engineering, environmental engineering, water resources, or closely related field, and at least five years of increasingly responsible program and project management work that is applicable to the primary job functions of this position.
- Minimum three years of open channel hydraulic engineering, river mechanics, and/or floodplain management project design and construction management experience.
- Licensed Washington State professional civil engineer (P.E.) or licensed in another state with the ability to obtain Washington State license through reciprocity.
- Experience serving as technical lead/expert, providing technical guidance to others and working successfully in interdisciplinary and inter-jurisdictional technical teams on highly visible floodplain management and natural resources projects.
- Demonstrated ability to apply technical and engineering knowledge and modeling skills to problems and projects in open channel hydraulics and floodplain management.
- Knowledge and experience in implementation of flood risk reduction or related capital projects including planning, design, and construction management and oversight. Knowledge of relevant construction techniques and approaches. Proficiency in reading and interpreting design plans, specifications, drawings, and technical maps and documents.
- Experience in successfully managing projects, including preparing and monitoring scopes, budgets and schedules.
- Ability to review technical hydrologic and hydraulic studies and engineering reports for completeness and accuracy, and for conformance with County codes, standards and administrative policies and procedures.
- Experience in assessing flood hazard problems and needs in a river-scale setting including planning, permitting, designing, constructing, inspecting and monitoring flood hazard reduction projects.
- Experience in interpreting flood and channel migration hazard mapping and using federal Flood Insurance Rate Maps and Studies.
- Experience in conducting field investigations and evaluating river conditions.

- Experience in standard survey methods and experience using field equipment, such as Total Station, GPS, clinometers, and range finders.
- Ability to manage and provide quality assurance of consultant project tasks and deliverables.
- Experience in the preparation of reports and presentations to a wide variety of audiences, e.g., engineers, scientists, management/policy makers, and community members.
- Demonstrated ability to write and communicate technical, policy and political issues related to floodplain management issues in a clear and effective manner with varied levels of staff, consultants, business and professional groups, citizens and landowners.
- Demonstrated ability to work effectively and cooperatively across department lines and with senior level managers, supervisors, technical leads and program staff.
- Experience developing, applying and using contemporary hydrologic and hydraulic computer modeling applications, including HEC-RAS, HEC-FFA and HEC-GEORAS.
- Experience using AutoCAD, Arc-View GIS, MS-Excel, and MS-Word.
- Knowledge and understanding of the 2006 King County Flood Hazard Management Plan, the King County River and Floodplain Management program, and the King County Flood Control Zone District.
- Ability to work effectively in a rapidly evolving work environment that requires multi-tasking, planning and organizing work on a daily basis, responding to changing priorities and tight deadlines, and grasping and responding to complex issues quickly.
- Ability to take initiative and function independently on assigned projects, while keeping team members and stakeholders apprised of key issues and developments.
- Ability to work long hours outside conducting field work and occasionally in inclement weather.
- Demonstrated punctuality and dependability in daily attendance.

DESIRABLE KNOWLEDGE, SKILLS & ABILITIES:

- Master's of Science in civil engineering, environmental engineering, water resources, or closely related field; or technical degree or certification in related field such as geology, aquatic ecology, or resource planning and open channel hydraulic principles and geomorphic processes.
- Advanced knowledge and understanding of hydrologic and open channel hydraulic principles and geomorphic processes
- Experience working with federal, state and local agencies in floodplain management projects/programs and disaster response situations (e.g. Federal Emergency Management Agency) and environmental requirements (e.g. Endangered Species Act).
- Experience in responding to flood emergency situations and post-flood disaster response actions.
- Knowledge and experience working on river and floodplain projects and programs in the Cedar and Sammamish river basins in King County.

WORK ENVIRONMENT: Work is primarily performed in an office environment, with occasional time spent performing field site inspections. Participation in flood warning and emergency response programs and activities typically involve work in excess of 12 hours per day and during all hours of the day that may include evenings, weekends and holidays. Heavy workloads, deadline pressure and interruptions due to changing priorities are not uncommon.

SUPPLEMENTAL INFORMATION:

PHYSICAL REQUIREMENTS: This position requires the ability to conduct physical site inspections and evaluation, including during times of inclement weather

conditions. There is often a need to walk on uneven terrain, for extended periods of time. Field conditions include brushy, forested environments; river, stream and wetland corridors; and slippery, uneven surfaces and adverse outdoor weather conditions. Work tasks also may include in-water situations involving wading and the use of rafts or canoes.

NECESSARY SPECIAL REQUIREMENTS: A valid Washington State Driver's License or the ability to travel throughout the County in a timely manner. A final offer of employment will be contingent upon successfully passing a pre-employment physical examination.

Note: Online applications are preferred. However, if you cannot apply online, go to www.kingcounty.gov/jobs for other options.

If you need an accommodation in the recruitment process or an alternate format of this announcement, please inquire directly with the contact listed on the job announcement or the department's Human Resources Service Delivery Manager.

Engineer III Supplemental Questionnaire

* 1. Describe your experience as a key member of a multi-disciplinary project team that planned, designed and implemented a river facility (levee or revetment) repair project or flood risk reduction project. What role did you play and how did you interact with other staff to develop a comprehensive solution?

* 2. Describe your training and experience using different types of hydrologic and hydraulic models and analytical techniques related to rivers and streams. Give a brief description of an example where you analyzed a situation using standard hydrologic or open channel hydraulic computer modeling techniques, and used the results to inform a project or policy decision.

* 3. Describe your experience and the specific role that you've played in overseeing or inspecting large capital project construction in critical areas, especially along rivers and floodplains. Highlight your work experience in field directing construction, as well as with formal construction management and inspections.

* 4. Describe your experience in working in field situations associated with rivers or streams as related to the assessment of site conditions, investigation of flooding and erosion problems, scoping and designing project proposals and/or compiling monitoring data and documenting project monitoring requirements.

* Required Question