

24 May 2017

California Board of Forestry & Fire Protection
Effectiveness Monitoring Committee



REQUEST TO JOIN EFFECTIVENESS MONITORING COMMITTEE AS AN AGENCY REPRESENTATIVE FOR THE CENTRAL VALLEY WATER QUALITY CONTROL BOARD

To whom it concerns,

It is my understanding that the departure of Mr. Rene Leclerc from the Central Valley Water Board has left an opening for an agency representative on the Board of Forestry's Effectiveness Monitoring Committee (EMC). This letter expresses my interest and intent to join the EMC as an agency representative for the Central Valley Regional Water Quality Control Board (Central Valley Water Board).

Attached is my resume, which provides in more detail my educational and professional background for your consideration. In brief, my engineering degrees provide me with a strong technical background, my experience in academia trained me in critical and objective assessments, and my experience in private consulting provided me with efficient and pragmatic approaches to solving problems. I believe my particular experience, skillset, and availability will make me a valuable participant of the EMC.

My current position at the Central Valley Water Board's Forest Activities Program is one where I provide agency review of timber harvest plans (THPs) from a water quality perspective. As such, I have a working knowledge of both the California Forest Practice Rules as well as the California Water Code. I have come to recognize that Mr. Leclerc participated in the EMC at a high level and that I would likely not be able to do so at his level. However, I have discussed with Mr. Leclerc the general duties and time commitments required of this position and, based on these discussions, I feel my qualifications and workload would allow me to contribute to the EMC in a constructive way.

If you have any further questions, please contact me; my contact information is provided below.

Sincerely,

Justin LaNier
Engineering Geologist, Forest Activities Program

Central Valley Regional Water Quality Control Board
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California Environmental Protection Agency

Central Valley Regional Water Quality Control Board

JUSTIN M. LANIER

OVERVIEW Engineering Geologist at the Central Valley Regional Water Quality Control Board seeking acceptance to the Board of Forestry and Fire Protection's Effectiveness and Monitoring Committee as an Agency Representative

- SKILLS & ABILITIES**
- ✓ Possesses over 12 years experience in quantitative hydrology, hydrogeology, and engineering assessments of water quality.
 - ✓ Experienced in assessing human impacts to stream ecosystems; specifically sediment erosion and transport, stream restoration practices, water quality assessments, and nutrient loading and cycling.
 - ✓ Possesses working knowledge of geomorphology, groundwater-surface water interactions, stream ecology, hydrology, and environmental tracer testing.
 - ✓ Supervised hydrologic field programs including surveying, well installation, tracer testing, aquifer testing, water quality monitoring, and assessments of groundwater-surface water interactions.
 - ✓ Expertise in fate and transport assessments of heat and chemicals in the environment including studies using organic dye, ionic solutions as well as stable isotope and radionuclides.

EXPERIENCE **ENGINEERING GEOLOGIST, CENTRAL VALLEY REGIONAL WATER QUALITY CONTROL BOARD**
May 2016 to present (1 year)

Reviews and inspects timber harvest plans (THP) for compliance with California Forest Practice Rules and the California Clean Water Act.

HYDROGEOLOGIST, CH2M HILL
March 2007 to April 2016 (9 years)

- Developed conceptual site models to support water quality assessments of groundwater flow and chemical fate and transport at contaminated sites.
- Conducted performance reviews of existing chemical collection systems and forecasted cleanup times for various remedial alternatives.
- Oversaw field data collection including well installation, aquifer testing, sample collection, and soil vapor extraction pilot testing.
- Worked as part of interdisciplinary teams to achieve common objectives

FACULTY RESEARCH ASSISTANT, OREGON STATE UNIVERSITY
June 2002 to December 2004 (2.5 years)

Delivered NSF-funded scientific research of ecohydrology studies focused on surface water-groundwater interactions through articles and oral presentations. Collaborated on research projects with U.S. Forest Service Pacific Northwest Research Station (PNW).

Conducted groundwater modeling, sample collection, and extensive fieldwork including surveying, piezometer installation, and tracer testing in streams and riparian aquifers.

EDUCATION

MASTER OF SCIENCE, CIVIL ENGINEERING. OREGON STATE UNIVERSITY. CORVALLIS, OREGON

Graduated December 2, 2006. **Thesis title:** *Changes in Hyporheic Exchange Flow Following Experimental Large Wood Removal in a Second Order, Low Gradient Stream, Chichagof Island, AK.* **Research Assistantship:** Fate, transport, and nutrient cycling of lotic NO₃.

BACHELOR OF SCIENCE, CIVIL ENGINEERING. OREGON STATE UNIVERSITY. CORVALLIS, OREGON

Graduated June 16, 2002. **Thesis title:** *Determining in-channel (dead zone) transient storage by comparing solute transport in a bedrock channel-alluvial channel sequence, Oregon.*

Highlighted coursework (graduate and undergraduate): Applied Hydrology, Geomorphology of Forests and Streams, Applied Fluvial Geomorphology, Soil Mechanics, Earth Structures (dams & levies), Heat and Solute Transport in Aquatic Environments, Water Quality of Forest Landscapes, Stream Ecology, Snow Hydrology, Water Quality Dynamics.

PUBLICATIONS

Wondzell, S. M., **J. LaNier**, and R. Haggerty. 2009. Reliability of groundwater flow models for simulating hyporheic exchange in small mountain streams. *Journal of Hydrology.*, 364, 142-151.

Wondzell, S. M., **J. LaNier**, R. Haggerty, Richard D. Woodsmith, and Richard T. Edwards. 2009. Estimating changes in hyporheic exchange flow following experimental wood removal in a small, low gradient stream using groundwater flow models. *Water Resources Research.*, 45, W05406, doi:10.1029/2008WR007214.

Gooseff, M.N., J.K. Anderson, S.M. Wondzell, **J. LaNier**, and R. Haggerty. 2006. A modeling study of hyporheic exchange pattern and the sequence, size, and spacing of stream bedforms in mountain stream networks, Oregon, USA. *Hydrological Processes*, 20(11): 2443-2457.

Gooseff, M.N., **J. LaNier**, R. Haggerty, and K. Kokkeler. 2005. Determining in-channel (dead zone) transient storage by comparing solute transport in a bedrock channel-alluvial channel sequence, Oregon. *Water Resources Research*, 41, W06014, doi:10.1029/2004WR003513.

PRESENTATIONS

LaNier J. M *Matrix Diffusion: An Updated Perspective of Contaminant Transport in Aquifers.* Presenter. CH2M HILL Technology Transfer Series. April 11, 2012.

LaNier J. M., Brown N.R. *Where Did My Reagent Go? A Case for Subsurface Tracer Studies.* Co-presenter. CH2M HILL Technology Transfer Series. March 28, 2012.

LaNier J. M., S. Wondzell, R. Woodsmith, R. Edwards, R. Haggerty. *Changes in Hyporheic Exchange Flow Following Experimental Woody Debris Removal Determined by Groundwater Flow Modeling.* Submitted Talk: American Geophysical Union Fall Meeting 2005, San Francisco, CA.

LaNier J. M., M. Gooseff, & R. Haggerty. 2004. *Determining in-channel transient storage by comparing solute transport in a bedrock channel - alluvial channel sequence, Lookout Creek basin, Oregon, USA.* Poster: American Geophysical Union Fall Meeting, 2004, San Francisco, CA.