

Statement of Qualifications

I bring a unique combination of resilience, technical expertise, and interdisciplinary experience that aligns strongly with the Engineer role at the Department of Water Resources (DWR). Growing up in Eritrea under challenging conditions instilled in me adaptability, perseverance, and a deep appreciation for learning and collaboration—qualities I apply daily in my professional career.

I earned a B.S. in Mechanical Engineering with Great Distinction from the Eritrea Institute of Technology and an M.S. in Mechanical Engineering from Florida International University. My academic foundation includes thermodynamics, heat transfer, fluid mechanics, and computational modeling, supported by tools such as ANSYS, COMSOL, MATLAB, SolidWorks, and AutoCAD.

My professional background is equally diverse. As an Associate Mechanical Engineer at Beleza Thermal Power Plant, and during internships at Beleza Thermal Power Plant and Eritrea Equipment PLC, I designed and optimized HVAC components and supported inspections, overhauls, and repairs of mechanical systems, ensuring compliance with operational standards and safety codes. These early internship experiences laid the groundwork for my technical skills in troubleshooting, quality control, and preventive maintenance. Later, as a Research and Teaching Assistant at the Eritrea Institute of Technology and Florida International University, I deepened my expertise in design, modeling, and simulation while mentoring students and contributing to laboratory and research projects. Most recently, as a mechanical Engineer Intern at Alef Aeronautics, I contributed to the design, manufacturing, and testing of the suspension systems and composite structure for prototype flying vehicles, further expanding my experience in modern engineering applications.

These experiences reflect my ability to prepare designs and specifications, conduct inspections, develop reports, and implement corrective actions, all while ensuring compliance with safety and operational standards. They also highlight my skills in computational modeling, programming (Python, R, MATLAB), and data visualization, which directly support DWR's mission and technical needs.

I thrive in collaborative, multidisciplinary environments and excel in analyzing complex situations, communicating effectively, and delivering results under demanding conditions. I am also ready to support on-site inspections, fieldwork, and emergency operations as needed.

In summary, my academic excellence, professional versatility, and personal resilience position me to contribute effectively to DWR's mission of delivering safe, sustainable, and reliable water resources for California. I am eager to apply my engineering and modeling expertise to support the State Water Project and related initiatives.

Sincerely,
Kiflom B. Tesfamariam